

PROJECT MANUAL

ISSUED FOR TENDER

VOLUME I

**PROJECT: JEAN AUGUSTINE SECONDARY SCHOOL (CREDIT VALLEY NO. 2 SS)
BRAMPTON, ONTARIO**

OWNER: PEEL DISTRICT SCHOOL BOARD

OWNER'S TENDER NUMBER: L17 - 4130

**CONSULTANT: CS&P ARCHITECTS INC.
2345 YONGE STREET, SUITE 200
TORONTO, ONTARIO M4P 2E5
TELEPHONE: 416-482-5002**

CONSULTANT'S PROJECT NUMBER: 11014.06

DATE: October 5, 2017





SUBCONSULTANTS:

LANDSCAPING:

**GRAHAM HESS AND ASSOCIATES INC.
482 DORLAND ROAD
OAKVILLE, ONTARIO L6J 6B1
TELEPHONE: 905-845-5151
FAX: 905-845-9527**

MECHANICAL & ELECTRICAL:

**ELLARD-WILLSON ENGINEERING LIMITED
260 TOWN CENTRE BLVD., SUITE 202
MARKHAM, ONTARIO L3R 8H8
TELEPHONE: 905-940-3100
FAX: 905-940-2139**

DISCIPLINE	SEAL & SIGNATURE
<p>ARCHITECTURAL</p> <p>This seal governs all Documents and Sections of these Specifications except for Sections/Divisions listed below.</p>	
<p>LANDSCAPING</p> <p>This seal governs:</p> <p>Section</p> <ul style="list-style-type: none"> 32 14 13 Precast Unit Paving 32 91 21 Planting Mix 32 92 23 Sodding 	
<p>MECHANICAL</p> <p>This seal governs mechanical Specification Divisions listed on drawings provided by Ellard-Willson</p>	
<p>ELECTRICAL</p> <p>This seal governs electrical Specification Divisions listed on drawings provided by Ellard-Willson</p>	

PROJECT: CREDIT VALLEY NO. 2 SECONDARY SCHOOL

SECTION 00 01 07

PROJECT NO: 11014.06

SEALS

END

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SECTION 00 01 10

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PART 1 – INTRODUCTION

1.1 INVITATION TO BIDDERS

This Invitation to Tender (“ITT”) is an invitation by the Peel District School Board (the “Board”) to pre-qualified prospective bidders to submit bids for the provision of Jean Augustine Secondary School Additional Tender and Work, as further described in Part 2 – The Deliverables (the “Deliverables”).

The Board’s jurisdiction is located to the west of Toronto and has boundaries which extend to highway #9 in the north, highway #50 and Etobicoke Creek in the east, Lake Ontario in the south

and Winston Churchill Boulevard in the west. The Board operates 209 elementary schools and 37 secondary schools with a total enrolment of approximately 153,700 students. The Board has a full time staff complement of approximately 15,670.

For further information about the Board please visit www.peelschools.org.

For the purposes of this procurement process, the "Board Contact" shall be: Michael Arruda

For the purposes of this procurement process, the "CS&P Architects Contact" shall be: Cassandra Murphy

Documents can be found on the FTP site using the below following information.

<ftp.csparch.com>

Username: JASSTender2

Password: 110140602

1.2 TYPE OF CONTRACT FOR DELIVERABLES

The selected bidder will be required to enter into an agreement with the Board for the provision of the Deliverables in the form attached as Appendix A to the ITT. It is the Board's intention to enter into the Form of Agreement based on the referenced Appendix A to the ITT with only 36 legal entities. It is anticipated that the agreement will be executed on or around July 6, 2017.

1.3 AGREEMENT ON INTERNAL TRADE

Bidders should note that procurements falling within the scope of Chapter 5 of the Agreement on Internal Trade are subject to that chapter but that the rights and obligations of the parties shall be governed by the specific terms of each particular tender call. For further reference, please see the Internal Trade Secretariat website at http://www.ait-aci.ca/index_en.htm.

[End of Part 1]

PART 2 – THE DELIVERABLES

2.1 DESCRIPTION OF DELIVERABLES

The ITT is an invitation to submit offers for the provision of Jean Augustine Secondary School Additional Tender and Work, as further described in Appendix E – ITT Particulars – Section A (The Deliverables).

2.1.1 PROJECT SCOPE:

- Minor Revisions and Additional work to the existing Jean Augustine Secondary School
- Revisions to existing Courtyards A & B
- Painting and revisions to Dramatic Arts Room

- Ceiling condition in Exercise/Dance/Drama Room

2.2 MATERIAL DISCLOSURES

Bidders should refer to Appendix E – ITT Particulars – Section B (Material Disclosures).

[End of Part 2]

PART 3 – EVALUATION OF BIDS

3.1. TIMETABLE AND SUBMISSION INSTRUCTIONS

Bidders must submit their bids according to the following timetable and instructions:

3.1.1 TIMETABLE

Issue Date of ITT	October 5, 2017
Mandatory Site Visit	October 11, 2017
Deadline for Questions	October 19, 2017
Deadline for Issuing Addenda	October 23, 2017
Submission Deadline	October 26, 2017 at 2:00 p.m. Toronto Time. Submissions that are date and time stamped in the Purchasing Department on the closing date at 2:01 p.m. Toronto Time or later will be rejected.

The ITT timetable is tentative only, and may be changed by the Board at any time.

Mandatory site visit was at Jean Augustine Secondary School at 10:00 a.m. in front of main office on October 11, 2017. Only the bidders that attended this visit are allowed to bid.

3.1.2 BIDS MUST BE SUBMITTED IN PRESCRIBED MANNER

Bids must be submitted at:

Peel District School Board
Atrium, Main level
5650 Hurontario Street
Mississauga, Ontario L5R 1C6

Bidders must submit 1 hard copy in a sealed package.

Bids are to be prominently marked with the ITT title and number (see ITT cover page), with the full legal name and return address of the bidder and with the Submission Deadline.

Onus and responsibility rests solely with the bidder to deliver its bid to the exact location (including floor, if applicable) indicated in the ITT on or before the Submission Deadline. The Board does not accept any responsibility for submissions delivered to any other location by the bidder or its delivery agents. Bidders are advised to make submissions well before the deadline. Bidders making submissions near the deadline do so at their own risk.

3.1.3 BIDS MUST BE SUBMITTED ON TIME AT PRESCRIBED LOCATION

Bids must be submitted at the location set out above on or before the Submission Deadline. Bids submitted after the Submission Deadline will be rejected.

3.1.4 AMENDMENT OF BIDS

Bidders may amend their bids prior to the Submission Deadline by the same method as prescribed for submission of bids. Any amendment should clearly indicate which part of the bid the amendment is intended to replace.

3.1.5 WITHDRAWAL OF BIDS

Bidders may withdraw their bids prior to the Submission Deadline by providing the Board with written notice prior to the Submission Deadline.

3.1.6 BIDS IRREVOCABLE AFTER SUBMISSION DEADLINE

Bids shall be irrevocable for a period of ninety (90) days running from the moment that the Submission Deadline lapses.

3.2 STAGES OF BID EVALUATION

The Board will conduct the evaluation of bids in the following two (2) stages:

3.2.1 STAGE I

Stage I will consist of a review to determine which bids comply with all of the mandatory requirements. Bids that do not comply with all of the mandatory requirements as of the Submission Deadline will, subject to the express and implied rights of the Board, be disqualified and not evaluated further.

3.2.2 STAGE II

Stage II will consist of a review of all compliant bids to determine the lowest price.

3.3 STAGE I – MANDATORY REQUIREMENTS AND SUBMISSION

3.3.1 SUBMISSION DEADLINE

Other than inserting the information requested on the mandatory submission forms set out in the ITT, a bidder may not make any changes to any of the forms. Any bid containing any such changes, whether on the face of the form or elsewhere in the bid, may be disqualified.

3.3.2 SUBMISSION FORM (APPENDIX B)

Each bid must include a Submission Form (Appendix B) completed and signed by an authorized representative of the bidder.

3.3.3 RATE BID FORM (APPENDIX C)

Each bidder must include a Rate Bid Form (Appendix C) completed according to the instructions

contained in the form as well as the following instructions:

- (a) rates shall be provided in Canadian funds, inclusive of all applicable duties and taxes except for HST, which should be itemized separately; and
- (b) rates quoted by the bidder shall be all-inclusive and shall include all labour and material costs, all travel and carriage costs, all insurance costs, all costs of delivery to the Board, all costs of installation and set-up, including any pre-delivery inspection charges, and all other overhead, including any fees or other charges required by law.

A bid that includes conditional, optional, contingent or variable rates that are not expressly requested in the Rate Bid Form may be disqualified.

By submitting a bid, a bidder is deemed to confirm that it has prepared its bid with reference to all of the provisions of the Form of Agreement attached as Appendix A and has factored all of the provisions of Appendix A, including insurance and indemnity requirements, into its pricing assumptions or calculations.

3.3.4 TERMS AND CONDITIONS (APPENDIX D)

The bidder acknowledges the terms and conditions presented as Appendix D form part of the contract.

3.3.5 OTHER MANDATORY REQUIREMENTS

- i) Bid Bond:

Each bid must include a Bid Bond payable to Peel District School Board. This bond must be 5% of the bid value.

Agreement to Bond from an approved bonding company for a 50% performance bond and a 50% labour and material payment bond.

The bidder acknowledges and agrees to comply with the special provisions specified with respect to the wording/and or conditions under which the Performance bond may be invoked and remain in force as a Maintenance bond.

Use the latest edition of CCDC approved bond forms.

3.4 STAGE II – REVIEW OF SUBMITTED PRICING

Upon completion of Stage I for all bidders, the pricing submitted by each bidder will be evaluated in accordance with Appendix E – ITT Particulars – Section C (Evaluation of Pricing). Subject to the Board's reserved rights, the bidder with the lowest pricing will be selected to enter into the Form of Agreement attached as Appendix A to this ITT in accordance with Section 4.

3.5. TIE SCORE

In the event of a tie score, the selected bidder will be determined by way of a coin toss.

[End of Part 3]

PART 4 – TERMS AND CONDITIONS OF THE ITT PROCESS

4.1 GENERAL INFORMATION AND INSTRUCTIONS

4.1.1 BIDDERS TO FOLLOW INSTRUCTIONS

Bidders should structure their bids in accordance with the instructions in the ITT. Where information is requested in the ITT, any response made in a bid should reference the applicable section numbers of the ITT where that request was made.

A bidder who submits conditions, options, variations or contingent statements to the terms as set out in the Form of Agreement, either as part of its bid or after receiving notice of selection, may be disqualified.

4.1.2 BIDS IN ENGLISH

All bids are to be in English only.

4.1.3 BOARD'S INFORMATION IN ITT ONLY AN ESTIMATE

The Board and its advisers make no representation, warranty or guarantee as to the accuracy of the information contained in the ITT or issued by way of addenda. Any quantities shown or data contained in the ITT or provided by way of addenda are estimates only and are for the sole purpose of indicating to bidders the general size of the work. It is the bidder's responsibility to avail itself of all the necessary information to prepare a bid in response to the ITT.

4.1.4 BIDDERS SHALL BEAR THEIR OWN COSTS

The bidder shall bear all costs associated with or incurred in the preparation and presentation of its bid, including, if applicable, costs incurred for interviews or demonstrations.

4.2 COMMUNICATION AFTER ISSUANCE OF ITT

4.2.1 BIDDERS TO REVIEW ITT

Bidders shall promptly examine all of the documents comprising the ITT, and

- (a) shall report any errors, omissions or ambiguities; and
- (b) may direct questions or seek additional information

in writing by email to the Board Contact on or before the Deadline for Questions. All questions submitted by bidders by email to the Board Contact shall be deemed to be received once the email has entered into the Board Contact's email inbox. No such communications are to be directed to anyone other than the Board Contact. The Board is under no obligation to provide additional information.

It is the responsibility of the bidder to seek clarification from the Board Contact on any matter it considers to be unclear. The Board shall not be responsible for any misunderstanding on the part of the bidder concerning the ITT or its process.

4.2.2 ALL NEW INFORMATION TO BIDDERS BY WAY OF ADDENDA

The ITT may be amended only by an addendum in accordance with this section. If the Board, for any reason, determines that it is necessary to provide additional information relating to the ITT,

such information will be communicated to all bidders by addenda. Each addendum forms an integral part of the ITT.

Such addenda may contain important information, including significant changes to the ITT. Bidders are responsible for obtaining all addenda issued by the Board. In the Submission Form (Appendix B), bidders should confirm their receipt of all addenda by setting out the number of each addendum in the space provided.

4.2.3 POST-DEADLINE ADDENDA AND EXTENSION OF SUBMISSION DEADLINE

If any addendum is issued after the Deadline for Issuing Addenda, the Board may at its discretion extend the Submission Deadline for a reasonable amount of time.

4.2.4 VERIFY, CLARIFY AND SUPPLEMENT

When evaluating responses, the Board may request further information from the bidder or third parties in order to verify, clarify or supplement the information provided in the bidder's bid. The response received by the Board shall, if accepted by the Board, form an integral part of that bidder's bid.

4.2.5 NO INCORPORATION BY REFERENCE

The entire content of the bidder's bid should be submitted in a fixed form, and the content of websites or other external documents referred to in the bidder's bid will not be considered to form part of its bid.

4.2.6 BID TO BE RETAINED BY THE BOARD

The Board will not return the bid or any accompanying documentation submitted by a bidder.

4.2.7 ITT INCORPORATED INTO BID

All of the provisions of this ITT are deemed to be accepted by each bidder and incorporated into each bidder's bid.

4.3 SELECTION AND EXECUTION OF AGREEMENT

4.3.1 SELECTION OF BIDDER

Notice of selection by the Board to the selected bidder shall be in writing. The selected bidder shall execute the Agreement in the form attached as Appendix A to this ITT and satisfy any other applicable conditions of this ITT within ten (10) business days of notice of selection. This provision is solely to the benefit of the Board and may be waived by the Board at its sole discretion.

4.3.2 FAILURE TO ENTER INTO AGREEMENT

In addition to all of the Board's other remedies, if a selected bidder fails to execute the Agreement or satisfy any other applicable conditions within ten (10) business days of notice of selection, the Board may, in its sole and absolute discretion and without incurring any liability, withdraw the selection of that bidder and proceed with the selection of another bidder.

4.3.3 NOTIFICATION TO OTHER BIDDERS

Once a contract is executed between the Board and a bidder, the other bidders may be notified directly in writing and shall be notified by public posting in the same manner that the ITT was originally posted of the outcome of the procurement process and the award of the contract.

4.3.4 DEBRIEFING

Bidders may request a debriefing after receipt of a notification of award. All requests must be in writing to the Board Contact and must be made within sixty (60) days of notification of award. The intent of the debriefing information session is to aid the bidder in presenting a better bid in subsequent procurement opportunities. Any debriefing provided is not for the purpose of providing an opportunity to challenge the procurement process.

4.3.5 BID PROTEST PROCEDURE

After a respondent has availed themselves of a debriefing, if they still have concerns with the outcome of the ITT process, they may bring a formal bid protest challenge to the Board. In order to commence the bid protest process, a respondent should send a written request containing the information set out below to the Board Contact within ten (10) days of the date of the debriefing:

- The name and address of the respondent;
- Clear identification of which procurement process the protest concerns;
- Identification of the respondent's specific concerns with the outcome of the bid process; and
- A precise statement of the relevant facts, the respondent's arguments and any supporting documentation.

The Board will respond in accordance with Section 14 of its Procurement Regulations.

4.4 PROHIBITED COMMUNICATIONS AND CONFIDENTIAL INFORMATION

4.4.1 PROHIBITED BIDDER COMMUNICATIONS

The bidder shall not engage in any Conflict of Interest communications and should take note of the Conflict of Interest declaration set out in the Submission Form (Appendix B). For the purposes of this Section, "Conflict of Interest" shall have the meaning ascribed to it in the Submission Form (Appendix B).

4.4.2 BIDDER NOT TO COMMUNICATE WITH MEDIA

A bidder may not at any time directly or indirectly communicate with the media in relation to the ITT or any contract awarded pursuant to the ITT without first obtaining the written permission of the Board Contact.

4.4.3 CONFIDENTIAL INFORMATION OF BOARD

All information provided by or obtained from the Board in any form in connection with the ITT either before or after the issuance of the ITT

- (a) is the sole property of the Board and must be treated as confidential;
- (b) is not to be used for any purpose other than replying to the ITT and the performance of any

subsequent contract;

- (c) must not be disclosed without prior written authorization from the Board; and
- (d) shall be returned by the bidders to the Board immediately upon the request of the Board.

4.4.4 CONFIDENTIAL INFORMATION OF BIDDER

A bidder should identify any information in its bid or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by the Board, and any proposed restrictions on disclosure specified, excluding unit pricing information as well as the total dollar value of the bid. The confidentiality of such information will be maintained by the Board, except as otherwise required by law or by order of a court or tribunal and except as hereinafter set out. Bidders are advised that their bids will, as necessary, be disclosed on a confidential basis, to the Board's advisers retained for the purpose of evaluating or participating in the evaluation of their bids. In addition and for the purposes of a report to the Trustees of the Board, pricing information as well as total dollar value of the bid may be reported in a public report and will not be considered confidential. Further, the Board may be ordered by the Information and Privacy Commissioner under the provisions of the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M56, as amended, to disclose additional information identified by a bidder as proprietary and confidential. The bidder acknowledges that any personal or confidential information which bidders provide is being collected and will be used exclusively for the purposes of analyzing, evaluating and assessing bids submitted. If a bidder has any questions about the collection and use of personal information pursuant to the ITT, questions are to be submitted to the Board Contact.

4.4.5 INAPPROPRIATE CONDUCT

The Board may prohibit a supplier from participating in a procurement process based on past performance or based on inappropriate conduct in a prior procurement process, and such inappropriate conduct shall include but not be limited to the following: (a) the submission of quotations containing misrepresentations or any other inaccurate, misleading or incomplete information; (b) the refusal of the supplier to honour its pricing or other commitments made in a proposal or bid; or (c) any other conduct, situation or circumstance, as solely determined by the Board, that constitutes a Conflict of Interest. For the purposes of this Section, "Conflict of Interest" shall have the meaning ascribed to it in the Submission Form (Appendix B).

4.5 RESERVED RIGHTS, LIMITATION OF LIABILITY AND GOVERNING LAW

4.5.1 BOARD'S RESERVED RIGHTS

The Board reserves the right to.

- (a) make public the names of any or all bidders;
- (b) request written clarification or the submission of supplementary written information in relation to the clarification request from any bidder and incorporate a bidder's response to that request for clarification into the bidder's bid;
- (c) assess a bidder's bid on the basis of
 - (i) a financial analysis determining the actual cost of the bid when considering factors

including quality, service, price and transition costs arising from the replacement of existing goods, services, practices, methodologies and infrastructure (howsoever originally established);

- (ii) information provided by references;
 - (iii) the bidder's past performance on previous contracts awarded by the Board;
 - (iv) the information provided by a bidder pursuant to the Board exercising its clarification rights under this ITT process; or
 - (v) other relevant information that arises during this ITT process;
- (d) waive formalities and accept bids that substantially comply with the requirements of this ITT;
 - (e) verify with any bidder or with a third party any information set out in a bid;
 - (f) check references other than those provided by any bidder;
 - (g) disqualify any bidder whose bid contains misrepresentations or any other inaccurate or misleading information;
 - (h) disqualify any bidder or the bid of any bidder who has engaged in conduct prohibited by this ITT;
 - (i) disqualify a bidder for any conduct, situation or circumstance that constitutes a Conflict of Interest, as solely determined by the Board. "Conflict of Interest" shall have the meaning ascribed to it in the Submission Form (Appendix B);
 - (j) make changes, including substantial changes, to this ITT provided that those changes are issued by way of addenda in the manner set out in this ITT;
 - (k) select any bidder other than the bidder whose bid reflects the lowest cost to the Board;
 - (l) cancel this ITT process at any stage;
 - (m) cancel this ITT process at any stage and issue a new ITT for the same or similar deliverables;
 - (n) accept any bid in whole or in part; or
 - (o) reject any or all bids;

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

4.5.2 LITIGATION HISTORY WITH THE BOARD

The Board may, in its absolute discretion, reject a bid submitted by the bidder prior to or after the bid opening, if the bidder:

- (a) is, or has in the past been, a party to litigation with the Board; or

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

For the purposes of this section, the phrase, "litigation with the Board" includes cases in which the bidder or prospective bidder or any of the parties named above, have advised the Board in writing of their intention to commence litigation, or have commenced or have advised the Board of their intention to commence an arbitral proceeding against the Board.

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

4.5.3 LIMITATION OF LIABILITY

By submitting a bid, each bidder agrees that

- (a) neither the Board nor any of its employees, advisors or representatives will be liable, under any circumstances, for any claim arising out of this bidding process including but not limited to costs of preparation of the bid, loss of profits, loss of opportunity or for any other claim; and
- (b) the bidder waives any claim for any compensation of any kind whatsoever, including claims for cost of preparation of the bid, loss of profit or loss of opportunity by reason of the Board's decision to not accept the bid submitted by the bidder, to award a contract to any other bidder or to cancel this bidding process, and the bidder shall be deemed to have agreed to waive such right or claim.

4.5.4 GOVERNING LAW AND INTERPRETATION

The terms and conditions in this Part 4 – Terms and Conditions of ITT Process (a) are included for greater certainty and are intended to be interpreted broadly and separately (with no particular provision intended to limit the scope of any other provision); (b) are non-exhaustive (and shall not be construed as intending to limit the pre-existing rights of the parties); and (c) are to be governed by and construed in accordance with the laws of the province of Ontario and the federal laws of Canada applicable therein.

[End of Part 4]

APPENDIX A – FORM OF AGREEMENT

Stipulated Price Contract – Standard Document PDSB 2011 and Agreement between the Board and Contractor

APPENDIX B – SUBMISSION FORM

1. BIDDER INFORMATION

Please fill out the following form, and name one person to be the contact for the ITT response and for any clarifications or amendments that might be necessary.

Please fill out the following form, and name one person to be the contact for the ITT response and for any clarifications or amendments that might be necessary.	
Full Legal Name of Bidder:	
Any Other Relevant Name under Which the Bidder Carries on Business:	
Street Address:	
City, Province/State:	
Postal Code:	
Phone Number:	
Fax Number:	
Company Website (If Any):	
ITT Contact Person and Title:	
ITT Contact Phone:	
ITT Contact Facsimile:	
ITT Contact E-mail:	

2. OFFER

The bidder has carefully examined the ITT documents has a clear and comprehensive knowledge of the Deliverables required under the ITT. By submitting a bid, the bidder agrees and consents to the terms, conditions and provisions of the ITT, including the Form of Agreement and offers to provide the Deliverables in accordance therewith at the rates set out in the Rate Bid Form.

3. MANDATORY FORMS

The bidder encloses herewith as part of the bid the mandatory forms set out below:

FORM	INITIAL TO ACKNOWLEDGE
Submission Form B	
Rate Bid Form C	
Bid Bond and Agreement to bond AS PER 3.3.5	

Notice to bidders: There may be forms or other technical requirements required in the ITT other than those set out above. See the Mandatory Requirements section of the ITT for a complete listing of mandatory forms.

4. RATES

The bidder has submitted its rates in accordance with the instructions in the ITT and in the Rate Bid Form set out in Appendix C.

5. ADDENDA

The bidder is deemed to have read and accepted all addenda issued by the Board prior to the Deadline for Issuing Addenda. The onus remains on bidders to make any necessary amendments to their bids based on the addenda. The bidder is requested to confirm that it has received all addenda by listing the addenda numbers or, if no addenda were issued, by writing the word "None" on the following line: _____ . Bidders who fail to complete this section will be deemed to have received all posted addenda.

6. CONFLICT OF INTEREST

For the purposes of this section, the term "Conflict of Interest" means

(a) in relation to the ITT process, the bidder has an unfair advantage or engages in conduct, directly or indirectly, that may give it an unfair advantage, including but not limited to (i) having, or having access to, confidential information of the Board in the preparation of its bid that is not available to other bidders, (ii) communicating with any person with a view to influencing preferred treatment in the ITT process (including but not limited to the lobbying of decision makers involved in the ITT process), or (iii) engaging in conduct that compromises, or could be seen to compromise, the integrity of the ITT process; or

(b) in relation to the performance of its contractual obligations contemplated in the contract that is the subject of this procurement, the bidder's other commitments, relationships or financial interests (i) could, or could be seen to, exercise an improper influence over the objective, unbiased and impartial exercise of its independent judgment, or (ii) could, or could be seen to, compromise, impair or be incompatible with the effective performance of its contractual obligations.

If the box below is left blank, the bidder will be deemed to declare that (a) there was no Conflict of Interest in preparing its bid; and (b) there is no foreseeable Conflict of Interest in performing the contractual obligations contemplated in the ITT.

Otherwise, if the statement below applies, check the box.

- The bidder declares that there is an actual or potential Conflict of Interest relating to the preparation of its bid, and/or the bidder foresees an actual or potential Conflict of Interest in performing the contractual obligations contemplated in the ITT.

If the bidder declares an actual or potential Conflict of Interest by marking the box above, the bidder must set out below details of the actual or potential Conflict of Interest:

The following individuals, as employees, advisers, or in any other capacity (a) participated in the preparation of our bid; AND (b) were employees of the Board and have ceased that employment within twelve (12) months prior to the Submission Deadline:

Name of Individual:
Job Classification:
Department:
Last Date of Employment with the Board:
Name of Last Supervisor:
Brief Description of Individual's Job Functions:
Brief Description of Nature of Individual's Participation in the Preparation of the Bid:

(Repeat above for each identified individual)

The bidder agrees that, upon request, the bidder shall provide the Board with additional information from each individual identified above in the form prescribed by the Board.

7. BID IRREVOCABLE

The bidder agrees that its tender shall be irrevocable for a period of ninety (90) days following the **SUBMISSION DEADLINE**.

8. DISCLOSURE OF INFORMATION

The bidder hereby agrees that any information provided in this bid, even if it is identified as being supplied in confidence, may be disclosed where required by law or if required by order of a court or tribunal. The bidder hereby consents to the disclosure, on a confidential basis, of this bid by the Board to the Board's advisers retained for the purpose of evaluating or participating in the evaluation of this bid.

9. EXECUTION OF AGREEMENT

The bidder agrees that in the event its bid is selected by the Board, in whole or in part, it will finalize and execute the agreement in the form set out in Appendix A to this ITT in accordance with the terms of this ITT.

Signature of Witness

Signature of Bidder Representative

Name of Witness

Name and Title

Date:

I have authority to bind the bidder

[End of Appendix B]

PROJECT: CREDIT VALLEY NO. 2 SECONDARY SCHOOL

SECTION 00 21 13

PROJECT NO: 11014.06

INSTRUCTIONS TO BIDDERS

APPENDIX C – RATE BID FORM

Bidder hereby offers to furnish all materials, labour, plant and equipment to perform all duties and services called for by the ENTIRE WORK INCLUDING ALL TRADES for the Project as outlined in the stipulated sum of:

\$ _____

H.S.T. EXTRA but including all excise taxes, custom duties, insurance, freight, exchange, and all other applicable charges.

The Tender amount includes the total Contingency Allowance of:

\$ 25,000.00

And/or

The Tender amount includes the total Cash Allowance of:

\$ 5,000.00

H.S.T. is not to be included in the total for the Contingency or Cash Allowances.

ALTERNATIVE PRICES

ITEM OF WORK	VALUE
---------------------	--------------

(a) List alternative price to the following scope of work detailed in the accompanying drawings:

1) Remove and dispose of existing Vinyl Tile and install new Rubber Tile Flooring in Dramatic Arts Room 1055.	\$.....
---	---------

Please note alternate pricing values are to be included within the final tender price. PDSB reserves the right to omit (and therefore subtract) any of the alternate prices listed above from the tender cost should this scope of work be deleted from the contract.

APPENDIX D – TERMS AND CONDITIONS

ARTICLE 1 – INTERPRETATION

1.01 Defined Terms

When used in the Agreement, the following words or expressions have the following meanings:
“**Authority**” means any government authority, agency, body or department, whether federal, provincial or municipal, having or claiming jurisdiction over the Contract; and “**Authorities**” means all such authorities, agencies, bodies and departments;

“**Board Confidential Information**” means all information of the Board that is of a confidential nature, including all confidential information in the custody or control of the Board, regardless of whether it is identified as confidential or not, and whether recorded or not, and however fixed, stored, expressed or embodied, which comes into the knowledge, possession or control of the

Supplier in connection with the Contract. For greater certainty, Board Confidential Information shall: (a) include: (i) all new information derived at any time from any such information whether created by the Board, the Supplier or any third-party; (ii) all information (including Personal Information) that the Board is obliged, or has the discretion, not to disclose under provincial or federal legislation or otherwise at law; but (b) not include information that: (i) is or becomes generally available to the public without fault or breach on the part of the Supplier of any duty of confidentiality owed by the Supplier to the Board or to any third-party; (ii) the Supplier can demonstrate to have been rightfully obtained by the Supplier, without any obligation of confidence, from a third-party who had the right to transfer or disclose it to the Supplier free of any obligation of confidence; (iii) the Supplier can demonstrate to have been rightfully known to or in the possession of the Supplier at the time of disclosure, free of any obligation of confidence when disclosed; or (iv) is independently developed by the Supplier; but the exclusions in this subparagraph shall in no way limit the meaning of Personal Information or the obligations attaching thereto under the Contract or at law;

“Education Act” means the *Education Act*, R.S.O. 1990, c. E.2, as amended.

“Industry Standards” include, but are not limited to (a) the provision of any and all labour, supplies, equipment and other goods or services that are necessary and can reasonably be understood or inferred to be included within the scope of the Contract or customarily furnished by Persons providing Deliverables of the type provided hereunder in similar situations in Ontario and; (b) adherence to commonly accepted norms of ethical business practices, which shall include the Supplier establishing, and ensuring adherence to, precautions to prevent its employees or agents from providing or offering gifts or hospitality to any person acting on behalf of or employed by the Board;

“Intellectual Property” means any intellectual, industrial or other proprietary right of any type in any form protected or protectable under the laws of Canada, any foreign country, or any political subdivision of any country, including, without limitation, any intellectual, industrial or proprietary rights protected or protectable by legislation, by common law or at equity;

“MFIPPA” means the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. M56, as amended;

“Person” if the context allows, includes any individuals, persons, firms, partnerships or corporations or any combination thereof;

“Personal Information” means recorded information about an identifiable individual or that may identify an individual;

“Proceeding” means any action, claim, demand, lawsuit, or other proceeding;

“Rates” means the applicable price, in Canadian funds, to be charged for the applicable Deliverables, as set out in the Contract, representing the full amount chargeable by the Supplier for the provision of the Deliverables, including but not limited to: (a) all applicable duties and taxes; HST to be shown separately as indicated (b) all labour, materials, equipment, tools, facilities, licenses, permits and approvals costs; (c) all travel and carriage costs; (d) all insurance costs; and (e) all other overhead including any fees or other charges required by law;

“Record”, for the purposes of the Contract, means any recorded information, including any Personal Information, in any form: (a) provided by the Board to the Supplier, or provided by the Supplier to the Board, for the purposes of the Contract; or (b) created by the Supplier in the performance of the Contract;

“Requirements of Law” mean all applicable requirements, laws, statutes, codes, acts, ordinances, orders, decrees, injunctions, by-laws, rules, regulations, official plans, permits, licenses, authorizations, directions, and agreements with all Authorities that now or at any time hereafter may be applicable to either the Contract or the Deliverables or any part of them;

“Supplier” means the party who is contracted to supply goods, services or construction to the Board and specifically identified in the Contract Award Letter. A supplier may be a manufacturer, distributor, contractor, tradesman, consultant, or other;

“Term” means the period of time from the effective date set out in the Contract up to and including the earlier of: (i) the completion of the contract (ii) the date of termination of the Contract in accordance with its terms;

ARTICLE 2 – NATURE OF RELATIONSHIP BETWEEN THE BOARD AND THE SUPPLIER

2.01 Representatives May Bind the Parties

The parties represent that their respective representatives have the authority to legally bind them to the extent permissible by the Requirements of Law.

2.02 Supplier Not a Partner, Agent or Employee

The Supplier shall have no power or authority to bind the Board or to assume or create any obligation or responsibility, express or implied, on behalf of the Board. The Supplier shall not hold itself out as an agent, partner or employee of the Board. Nothing in the Contract shall have the effect of creating an employment, partnership or agency relationship between the Board and the Supplier (or any of the Supplier’s directors, officers, employees, agents, partners, affiliates, volunteers or subcontractors).

2.03 Responsibility of Supplier

The Supplier agrees that it is liable for the acts and omissions of its directors, officers, employees, agents, partners, affiliates, volunteers and subcontractors. This paragraph is in addition to any and all of the Supplier’s liabilities under the Contract and under the general application of law. The Supplier shall advise these individuals and entities of their obligations under the Contract and shall ensure their compliance with the applicable terms of the Contract. In addition to any other liabilities of the Supplier pursuant to the Contract or otherwise at law or in equity, the Supplier shall be liable for all damages, costs, expenses, losses, claims or actions arising from any breach of the Contract resulting from the actions of the above mentioned individuals and entities. This paragraph shall survive the termination or expiry of this Contract.

2.04 Duty to Disclose Change of Control

In the event that the Supplier undergoes a change in control the Supplier shall immediately disclose such change in control to the Board and shall comply with any terms and conditions subsequently prescribed by the Board resulting from the disclosure.

2.05 Conflict of Interest

The Supplier shall: (a) avoid any Conflict of Interest in the performance of its contractual obligations; (b) disclose to the Board without delay any actual or potential Conflict of Interest that arises during the performance of its contractual obligations; and (c) comply with any requirements prescribed by the Board to resolve any Conflict of Interest. In addition to all other contractual rights or rights available at law or in equity, the Board may immediately terminate the Contract upon giving notice to the Supplier where: (a) the Supplier fails to disclose an actual or potential Conflict of Interest; (b) the Supplier fails to comply with any requirements prescribed by the Board to resolve a

Conflict of Interest; or (c) the Supplier's Conflict of Interest cannot be resolved. This paragraph shall survive any termination or expiry of the Contract.

2.06 Contract Binding

The Contract shall ensure to the benefit of and be binding upon the parties and their successors, executors, administrators and their permitted assigns.

ARTICLE 3 – PERFORMANCE BY SUPPLIER

3.01 Use and Access Restrictions

The Supplier acknowledges that unless it obtains specific written preauthorization from the Board, any access to or use of the Board property, technology or information that is not necessary for the performance of its contractual obligations with the Board is strictly prohibited. The Supplier further acknowledges that the Board may monitor the Supplier to ensure compliance with this paragraph. This paragraph is in addition to and shall not limit any other obligation or restriction placed upon the Supplier.

3.02 Condonation Not a Waiver

Any failure by the Board to insist in one or more instances upon strict performance by the Supplier of any of the terms or conditions of the Contract shall not be construed as a waiver by the Board of its right to require strict performance of any such terms or conditions, and the obligations of the Supplier with respect to such performance shall continue in full force and effect.

3.03 The Board Rights and Remedies and Supplier Obligations Not Limited to Contract

The express rights and remedies of the Board and obligations of the Supplier set out in the Contract are in addition to and shall not limit any other rights and remedies available to the Board or any other obligations of the Supplier at law or in equity.

3.04 Supply to Comply with *Tobacco Control Act*

Without limiting the generality of 4.02, the Supplier shall comply with the *Tobacco Control Act*, and ensure that its employees and/or subcontractors do not smoke on and in any of the Board's property, including schools, offices, administrative buildings, warehouses, other Board facilities, and non-Board vehicles on Board property.

3.05 Supplier to Comply with the Board's Accessibility Requirements

The Supplier covenants and agrees to ensure that the Deliverables provided hereunder are consistent with the *Ontario Human Rights Code* ("OHRC"), the *Ontarians Disabilities Act, 2001* ("ODA") and the *Accessibility for Ontarians with Disabilities Act, 2005* ("AODA") and their respective regulations in order to achieve accessibility for Ontarians with disabilities. Without limiting the generality of the foregoing, the Supplier covenants and agrees to comply with the Board's accessibility standards, policies, practices and procedures, as same may be in effect during the term of the Agreement and apply to the Deliverables to be provided hereunder by the Supplier.

3.06 Access to the School Site

Where the Supplier or any of its employees, subcontractors are required to access school sites during regular hours of school operation must contact the school office upon arrival for further instruction. The Supplier shall ensure that it obtains clearance from the school Principal or designate to gain access during the hours in which the site is occupied with students. The Supplier is prohibited from having vehicular access immediately before or after school, during opening or dismissal periods and during recess or lunch period. Where the Supplier is granted permission to access a site during those particular times in which the playgrounds and general exterior premises are occupied by students, the vehicle being used by the Supplier or any of its employees or

subcontractors must be accompanied by an adult who will walk with the vehicle to its required destination.

3.07 The Board's Policy #51 – Human Rights

The Board is committed to hosting a work and educational environment in which everyone is treated with respect, and no one is subject to discrimination. This commitment stems from the Board's own philosophy and the Board's obligations under the Ontario Human Rights Code. The During the term of the Contract, the Supplier shall ensure that its employees and subcontractors behave in a manner that is appropriate, respectful, and consistent with the provisions of the Ontario Human Rights Code and comply with the Board's Policy # 51 – Human Rights during the term of the Contract.

Any breach of the Ontario Human Rights Code or the Board's Policy #51 by the Supplier, its employees or subcontractor will result in the removal of that person or persons from the Board's premises. In addition, the breach of these conditions by the Supplier, its employees and subcontractors could result in the termination of the Contract and/or the barring of the Supplier and its subcontractors from entering into subsequent contracts with the Board.

ARTICLE 4 – CONFIDENTIALITY AND MFIPPA

4.01 Confidentiality and Promotion Restrictions

Any publicity or publications related to the Contract shall be at the sole discretion of the Board. The Board may, in its sole discretion, acknowledge the Deliverables provided by the Supplier in any such publicity or publication. The Supplier shall not make use of its association with the Board without the prior written consent of the Board. Without limiting the generality of this paragraph, the Supplier shall not, among other things, at any time directly or indirectly communicate with the media in relation to the Contract unless it has first obtained the express written authorization to do so from the Board.

4.02 Board Confidential Information

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

4.03 Restrictions on Copying

The Supplier shall not copy any Board Confidential Information, in whole or in part, unless copying is essential for the provision of the Deliverables. On each copy made by the Supplier, the Supplier must reproduce all notices that appear on the original.

4.04 Injunctive and Other Relief

The Supplier acknowledges that breach of any provisions of this Article may cause irreparable harm to the Board or to any third-party to whom the Board owes a duty of confidence, and that the injury to the Board or to any third-party may be difficult to calculate and inadequately compensable in damages. The Supplier agrees that the Board is entitled to obtain injunctive relief (without

proving any damage sustained by it or by any third-party) or any other remedy against any actual or potential breach of the provisions of this Article.

4.05 Notice and Protective Order

If the Supplier or any of its directors, officers, employees, agents, partners, affiliates, volunteers or subcontractors become legally compelled to disclose any Board Confidential Information, the Supplier will provide the Board with prompt notice to that effect in order to allow the Board to seek one or more protective orders or other appropriate remedies to prevent or limit such disclosure, and it shall co-operate with the Board and its legal counsel to the fullest extent. If such protective orders or other remedies are not obtained, the Supplier will disclose only that portion of the Board Confidential Information which the Supplier is legally compelled to disclose, only to such person or persons to which the Supplier is legally compelled to disclose, and the Supplier shall provide notice to each such recipient (in co-operation with legal counsel for the Board) that such Board Confidential Information is confidential and subject to non-disclosure on terms and conditions equal to those contained in the Contract and, if possible, shall obtain each recipient's written agreement to receive and use such Board Confidential Information subject to those terms and conditions.

4.06 MFIPPA Records and Compliance

The Supplier and the Board acknowledge and agree that MFIPPA applies to and governs all Records and may require the disclosure of such Records to third parties. Furthermore, the Supplier agrees (a) to keep Records secure; (b) to provide Records to the Board within seven (7) calendar days of being directed to do so by the Board for any reason including an access request or privacy issue; (c) not to access any Personal Information unless the Board determines, in its sole discretion, that access is permitted under MFIPPA and is necessary in order to provide the Deliverables; (d) not to directly or indirectly use, collect, disclose or destroy any Personal Information for any purposes that are not authorized by the Board; (e) to ensure the security and integrity of Personal Information and keep it in a physically secure and separate location safe from loss, alteration, destruction or intermingling with other records and databases and to implement, use and maintain the most appropriate products, tools, measures and procedures to do so; (f) to restrict access to Personal Information to those of its directors, officers, employees, agents, partners, affiliates, volunteers or subcontractors who have a need to know it for the purpose of providing the Deliverables and who have been specifically authorized by a the Board representative to have such access for the purpose of providing the Deliverables; (g) to implement other specific security measures that in the reasonable opinion of the Board would improve the adequacy and effectiveness of the Supplier's measures to ensure the security and integrity of Personal Information and Records generally; and (h) that any confidential information supplied to the Board may be disclosed by the Board where it is obligated to do so under MFIPPA, by an order of a court or tribunal or pursuant to a legal proceeding and the provisions of this paragraph shall prevail over any inconsistent provisions in the Contract.

4.07 Audit

In addition to any other rights of inspection the Board may have under statute or otherwise, the Board, its authorized representatives or an independent auditor identified by the Board may, at its own expense, during business hours and upon twenty-four hours' notice to the Supplier, enter upon the Supplier's premises, at the Board's discretion, to inspect and copy any of the Records. The Supplier must permit the Board to exercise its rights under this section. Contractor shall retain all Records applicable to this contract for a period of 7 years.

4.08 Survival

The provisions of this Article shall survive any termination or expiry of the Contract.

ARTICLE 5 – INTELLECTUAL PROPERTY

5.01 The Board Intellectual Property

The Supplier agrees that all Intellectual Property and every other right, title and interest in and to all concepts, techniques, ideas, information and materials, however recorded, (including images and data) provided by the Board to the Supplier shall remain the sole property of the Board at all times.

5.02 No Use of the Board Insignia

The Supplier shall not use any insignia or logo of the Board except where required to provide the Deliverables, and only if it has received the prior written permission of the Board to do so.

ARTICLE 6– INDEMNITIES AND INSURANCE

6.01 Proof of WSIB Coverage

The Supplier warrants and agrees that it has complied with and will comply with, and ensure that any subcontractors comply with, all applicable occupational health and safety laws and regulations in relation to the performance of the Supplier's obligations under this Contract.

If the Supplier is subject to the Workplace Safety and Insurance Act ("WSIA") or the *Workplace Safety and Insurance Amendment Act, 2008* ("Bill 119"), the Supplier shall submit a valid clearance certificate of Workplace Safety and Insurance Board ("WSIB") coverage to the Board before commencing the performance of the Deliverables. In addition, the Supplier shall, from time to time during the Term and at the request of the Board, provide additional WSIB clearance certificates. The Supplier covenants and agrees to pay when due, and to ensure that each of its subcontractors pays when due, all amounts required to be paid by it/its subcontractors, from time to time during the Term, under the WSIA and/or the WSIAA, failing which the Board shall have the right, in addition to and not in substitution for any other right it may have pursuant to the Contract or otherwise at law or in equity, to pay to the WSIB any amount due pursuant to the WSIA or the WSIAA unpaid by the Supplier or its subcontractors and to deduct such amount from any amount due and owing from time to time to the Supplier pursuant to the Contract together with all costs incurred by the Board in connection therewith.

6.02 Evidence of Insurance

The Supplier must provide the Board with evidence of all required insurance when and as required by the Board. The Board reserves the right to cancel this Contract at any time, without notice, if the Supplier fails to carry and keep in full force and effect such insurance.

6.03 Additional Insurance

The Supplier must obtain, maintain and pay for any additional insurance, which the Supplier is required by law to carry, is required by the Board to carry or which the Supplier considers necessary to cover risks not otherwise covered by insurance specified in this Agreement in the Supplier's sole discretion.

ARTICLE 7– CRIMINAL BACKGROUND CHECKS

7.01 Criminal Background Checks

School boards in Ontario are required by provincial legislation to ensure that all service providers on contract with the Board or school and other individuals who, potentially, have direct and regular contact with Ontario students, are cleared by a criminal background check covering convictions, charges and occurrences that would be revealed by the long version vulnerable persons search of the automated criminal records system maintained by the RCMP at the Canadian Police Information Centre ("Criminal Background Check"). Service providers are not authorized to provide their services to schools or attend on Board property unless they have completed a satisfactory

Criminal Background Check which the Supplier is to retain in its Records at its head office or principal place of business. If the services provided by the Supplier involve direct and regular contact with students, the Supplier will be required to obtain satisfactory Criminal Background Checks for all such persons who may have direct and regular contact with students.

ARTICLE 8 - EVALUATION

8.01 Supplier Performance Evaluation

Supplier performance may be evaluated through the completion of a Supplier Performance Evaluation Form at the end of a contract or a Supplier Occurrence Form that may be issued during the contract performance period. Poor performance as noted in either of these documents may result in the Supplier being ineligible for future contracts with the Board.

APPENDIX E – ITT PARTICULARS

A. THE DELIVERABLES

[Jean Augustine Secondary School Additional Tender and Work] attached

B. MATERIAL DISCLOSURES

1. STIPULATED PRICE CONTRACT AGREEMENT

The bidder if successful will enter into the Stipulated Price Contract (attached as Appendix A) if notified in writing by the Board within ninety (90) calendar days from the closing date of the tender.

2. BID BOND/AGREEMENT TO BOND/LETTER OF CREDIT

To be considered, the bid must be accompanied by a bid bond in the amount of:

\$ 5% of the bid price

Made out in the name of Peel District School Board

and an:

Agreement to Bond from an approved bonding company for a 50% performance bond and a 50% labour and material payment bond.

The bidder acknowledges and agrees to comply with the special provisions specified with respect to the wording/and or conditions under which the Performance bond may be invoked and remain in force as a Maintenance bond.

On completion of the work the Performance Bond shall remain in force as a Maintenance Bond for a period of one (1) year from the date of acceptance of the building by the Board. It shall form a guarantee of workmanship and materials for the one (1) year period.

Use the latest edition of CCDC approved bond forms.

3. OCCUPANCY REQUIREMENTS

The bidder acknowledges and agrees to comply with the terms and conditions of the Project

Occupancy Requirements as outlined in the Board's Stipulated Price Contract referenced in Appendix A.

4. CONSTRUCTION SCHEDULE

Upon notification of acceptance (by the Board) to the successful bidder via Letter of Intent the bidder agrees to proceed with construction of the Work within ten (10) calendar days of receiving such notification and will complete all work ready for full legal occupancy and substantial performance as outlined in the ITT documents.

In the event that such direction does not occur within ten (10) days following the closing date of the ITT and such direction does not occur until the eighty ninth (89) day following the closing date, the bidder shall not be entitled to a delay claim.

The bidder undertakes as part of this ITT to:

- a) Have the building (s) "Fit for Occupancy by: January 08, 2017
- b) Have the building(s) and site work completed by: January 08, 2017
- c) Have the contract completed in its entirety by: February 01, 2017

5. The bidder confirms that all appropriate costs such as winter heat, inclement weather protection and all overtime costs for all trades to meet the aforementioned schedule have been included in the tender price submitted to achieve this date.

6. LIST OF SUBCONTRACTORS

It is acknowledged that the bidder proposes to use subcontractors and/or suppliers to perform work of this contract. The bidder confirms that such subcontractors chosen by the bidder to perform the work have been investigated by the bidder to confirm their reliability and competence to carry out the work in accordance with the contract documents. The bidder further agrees that no changes may be made without the express written approval of the Board.

Extra costs to the contract will not be considered for the subcontractor/supplier substitution regardless of the reason, except where substitution is requested by the Board

7. FEES FOR CHANGES IN WORK

The bidder acknowledges and agrees that the fees referred to in the Requirement of the Stipulated Price Contract attached as Appendix A will apply to changes in the Contract not covered by unit prices.

8. SUPPLEMENTARY INFORMATION FORM

The three (3) top ranked bidders will be requested to submit the Supplementary Information Form as presented by the Architect within a (24-48) hour period after the close of the tender. This form may include the following information:

- i) Cost breakdown (site work, renovation cost, addition cost)
- ii) List of subcontractors/Suppliers and Installers)

iii) Unit prices

Failure to submit the required supplementary information forms as requested may result in the non-consideration of your bid.

9. BID/CONTRACT/DRAWING AND SPECIFICATION DOCUMENTS

All documents associated with this tender call may be obtained from the Consultant listed below:

CS&P Architects Inc.
2345 Yonge Street, Suite 200
Toronto, Ontario M4P 2E5
Telephone: 416-482-5002

One set of bid documents can be obtained by bidders upon receipt of a refundable deposit by certified cheque in the amount of \$200.00.

Bidders may request two (2) sets only. Request for a set must be received by email to cmurphy@csparch.com by 4:00pm October 9, 2017.

The deposit of \$200 will be refunded to unsuccessful bidders. if bid documents are returned to the Consultant complete, undamaged, unmarked and reusable within ten (10) days of notice of award or rejection of all bids. Failure to return the documents as outlined may result in the forfeiture of your deposit.

Documents are provided for bidding purposes only, their use does not confer license or grant for other purposes.

10. GRATUITOUS PAYMENTS

The Board shall not entertain requests for gratuitous payments arising from errors alleged to have been made in a tender which the Board has accepted.

11. BUILDING PERMIT AND OTHER ASSOCIATED FEES

The building permit has been applied for by the Consultant and shall be paid for by the Board. The successful bidder will pay all other necessary fees, deposits and charges related to municipal, provincial and federal requirements. The successful bidder is responsible for determining the amounts of these permits.

12. AWARDING OF WORK FOR MULTIPLE SITES

The Board reserves the right to award contractors only the amount of work which the Board is confident can be completed on schedule by the successful bidder. In order to expedite the completion of work within the terms of the contract the Board may distribute awards from bids at its sole and unfettered discretion. The decision of the Board is final.

13. WSIB/INSURANCE

The successful bidder will provide proof of WSIB coverage and applicable insurances as outlined in the Stipulated Price Contract prior to commencing work identified under this tender call.

14. MANDATORY SITE MEETING

PROJECT: CREDIT VALLEY NO. 2 SECONDARY SCHOOL

SECTION 00 21 13

PROJECT NO: 11014.06

INSTRUCTIONS TO BIDDERS

A mandatory site meeting will be held on October 11, 2017 at 10:00am. at Jean Augustine Secondary School.

All potential bidders to meet in front of the main office and await direction from the Board representative(s). Failure of the potential bidder to be present and signed in from the time the meeting is called to order until the meeting is adjourned will result in the non-consideration of your bid. In addition to signing in, the potential bidders will be required to sign out at the adjournment of the meeting as called by the Board representative(s).

14. LIST OF PREQUALIFIED BIDDERS

- .1 Only general contract bidders that attended the mandatory site meeting are permitted to submit a bid.

END

PROJECT: CREDIT VALLEY NO. 2 SECONDARY SCHOOL

SECTION 00 41 13

PROJECT NO: 11014.06

FORM OF TENDER

1. TENDER INFORMATION

Please see Appendix C - Rate Bid Form in Section 00 21 13 Instructions to Bidders.

END

PROJECT: CREDIT VALLEY NO. 2 SECONDARY SCHOOL

SECTION 00 43 95

PROJECT NO: 11014.06

SUPPLEMENTARY INFORMATION FORM

Submit this Supplementary Information Form to the Consultant within 24 hours of the close of General Tenders, if so requested.

1. TENDER INFORMATION

NAME OF BIDDER:
NAME OF PROJECT: Additional Tender & Work at Jean Augustine Secondary School 500 Elbern Markell Drive, Brampton, Ontario

CONSULTANT'S PROJECT NUMBER: 11014.06

BOARD'S TENDER NUMBER: L17-4130

TO: The Peel District School Board 5650 Hurontario Street Mississauga, Ontario L5R 1C6

2. UNIT PRICES

I/We the undersigned agree that the Board may use the following unit prices for additional work, and that all unit prices, unless specifically indicated, are for complete work, in place, supplied and installed in accordance with applicable contract requirements and that unit prices listed include all overhead and profit mark-up. I/we agree that the credits for deleted work shall be no less than 80% of the prices listed hereunder. I/We, the undersigned agree that the Board shall have the right to negotiate the cost of additional work instead of using the unit prices listed hereunder. Prices listed hereunder do not include HST.

Table with 3 columns: ITEM OF WORK, EXTRA, and UNIT OF MEASURE. Rows include EXCAVATION & BACKFILLING with sub-items (a) MACHINE EXCAVATION, (b) HAND EXVACATION, (c) TRENCHING, and (d) GRANULAR BACKFILL.

PROJECT: CREDIT VALLEY NO. 2 SECONDARY SCHOOL

SECTION 00 43 95

PROJECT NO: 11014.06

SUPPLEMENTARY INFORMATION FORM

- 1) by hand \$...../m³
- 2) by machine \$...../m³

Attach additional sheets and supporting documentation.

2. FINISHES

- 1) Painting \$...../m²
- 2) Acoustic Ceiling Tile \$...../m²

Attach additional sheets and supporting documentation.

3. LANDSCAPE

- 1) Precast Unit Paving \$...../m²
- 2) Topsoil/ Planting Mix \$...../m³

Attach additional sheets and supporting documentation.

4. LABOR

- 1) Supervisor \$...../h
- 2) General skilled worker \$...../h
- 3) Unskilled worked \$...../h
- 4) Skilled worker (foreman) \$...../h
- 4) Operator (machinery) \$...../h

Attach additional sheets and supporting documentation.

5. EQUIPMENT RENTAL RATES

- 1) Scissor Lift \$...../h

Attach additional sheets and supporting documentation. All additional anticipated equipment should be attached as supporting documentation prior to the start of construction. Equipment rentals should be minimized to the timeframe in which the equipment is needed. Additional costs that have not used rented equipment are subject to rejection.

PROJECT: CREDIT VALLEY NO. 2 SECONDARY SCHOOL

SECTION 00 43 95

PROJECT NO: 11014.06

SUPPLEMENTARY INFORMATION FORM

Signature of Authorized Signing Officer

Date

Print Name & Title of Signing Officer

END

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of the Agreement Between Board and Contractor, Definitions and Requirements of the Stipulated Price Contract - PDSB 2011 (hereinafter referred to as General Conditions) and the Supplementary Conditions.
- .2 Division 1 requirements apply to all Sections of Work.

1.2 SUMMARY OF WORK

- .1 Completion of Courtyard A & B
- .2 Painting of Ceiling and Walls in Dramatic Arts Room 1055 and addition of curtain track (curtains to be provided by the board).
- .3 Ceiling condition in Exercise/Dance/Drama Room. Extend acoustic ceiling tiles to stage opening and use custom CGC metal trim profile to bridge ceiling tbar and curtain track partition.

1.3 PRODUCTS SUPPLIED BY BOARD

- .1 Where products are supplied by the Board for incorporation into work of this Contract, the Contractor shall do the following:
 - .1 Unload and handle products at site.
 - .2 Promptly inspect delivered products, and give written report to Consultant on condition of all items received.
 - .3 Pay demurrage charges.
 - .4 Install, connect and finish products as specified.
 - .5 Remove packaging material from site and clean products.

1.4 EXAMINATION

- .1 Examine the site, existing premises and surrounding areas and be fully informed as to the conditions and limitations under which the work has to be executed. Claims for additional costs will not be entertained with respect to conditions which could reasonably have been ascertained by prior inspection.
- .2 Prior to commencement of work, make careful examination of previously executed work, existing conditions, levels, dimensions and clearances. Promptly advise Consultant of unsatisfactory preparatory work and substrate conditions; commencement of work implies acceptance of conditions.

1.5 DIVISION OF WORK

- .1 Work specified in the Specification has been divided into technical Sections for the purpose of ready reference. Division of work among Subcontractors and suppliers is solely the Contractor's responsibility and Consultant assumes no responsibility to act as an arbiter to establish subcontract limits between Sections or Divisions of work.

1.6 METRIC PROJECT

- .1 This project is based on The International System of Units (SI). Measurements are expressed in metric (SI) units and depending on the progress made in the various sectors of the industry are either hard or soft converted units.
- .2 All metric units specified shall be taken to be the minimum acceptable unless otherwise noted.
- .3 It is the Contractor's responsibility to check and verify with manufacturers and suppliers on the availability of materials and products in either metric or imperial sizes.
- .4 Where a material or product cannot be obtained in the metric size specified, provide the next larger imperial size available.
- .5 Where both metric and imperial sizes or dimensions are shown, the metric size or dimension shall govern.

1.7 PROTECTION

- .1 Ensure that no damage is caused to existing structures, buildings, foundations, pavement, fences, curbs, grounds, plants, property, utilities, services, finishes during the progress of Work. Repair and make good any damage caused at no extra cost to Board to the complete satisfaction of the respective property owners and authorities having jurisdiction. Do not proceed with repairs or remedial work without written permission of the Consultant. Only trades specifically capable of performing the work will be allowed to make remedial or repair work.
- .2 Keep surfaces to receive finished flooring dry and free from oil and grease. Stockpiling of damp or wet building materials and use of mixing boxes or water buckets without protecting floors from moisture gain by approved means, is prohibited.
- .3 Keep municipal roads clean of mud and debris resulting from construction traffic.
- .4 Prevent soiling of pavement due to spillage, mixing of material or any other cause. Make good any damage caused.
- .5 Protect new work from damage with suitable protective coverings.
- .6 Do not permit materials to come in contact with other materials if such conditions may result in corrosion, staining, discolouration or deterioration of the completed Work. Provide compatible, durable separators where such contact is unavoidable.
- .7 Protect work during periods of suspension, regardless of reason for suspension.

1.8 SAFETY AND SECURITY

- .1 Be responsible for security of all areas affected by work of this Contract until taken over by Board. Take steps to prevent entry to the Work by unauthorized persons and guard against theft, fire and damage by any cause.
- .2 Maintain fire protection for work. Store paints and volatile substances in a separate and controlled location and inspect frequently. Inspect temporary wiring, drop cords, extension cables for defective insulation or connections frequently. Remove combustible wastes frequently. Prohibit smoking in work areas.

- .3 Do not cut, bore or sleeve through any load bearing member, new or existing, without Consultant's written authorization, unless specifically indicated on Drawings.

1.9 USE OF SITE

- .1 Accept full responsibility for assigned work and storage areas from the time of Contract award until Substantial Performance of the Work.
- .2 Check means of access and egress, rights and interests which may be interfered with. Do not block lanes, roadways, entrances or exits. Direct construction traffic as directed by municipality.
- .3 Where encroachment beyond property limits is necessary make arrangement with respective property owners.
- .4 Access to site is from Elbern Markell Drive only.

1.10 SLEEVES, SUPPORTS, AND FASTENERS

- .1 Unless specified in other Sections, furnish, set and secure inserts, hangers, sleeves, fasteners, adhesives, anchors and other supports and fittings required for proper installation of work.
- .2 Use exposed metal fastenings and accessories of same texture, colour and finish as base metal on which they occur.
- .3 Select appropriate type of anchoring and fastening devices and in sufficient quantity and in such manner as to provide positive permanent anchorage of unit to be anchored in position. Keep exposed fasteners to a minimum, evenly spaced and neatly laid out.
- .4 Fasteners shall be of permanent type. Do not use wood plugs.
- .5 Fasteners which cause spalling or cracking of material to which anchorage is being made shall not be used.
- .6 Fasteners in contact with preservative pressure treated wood shall be stainless steel.

1.11 CONCEALMENT

- .1 Conceal ductwork, piping, conduit and wiring located in finished areas, in ceiling spaces and furred construction unless specifically noted to be exposed.
- .2 If any doubt arises as to means of concealment, or intent of Contract Documents in this connection, request clarification from Consultant before proceeding with portion of work in question.

1.12 ACCESS DOORS

- .1 Install access doors and inspection panels supplied by Divisions 21 to 28 inclusive.

1.13 CUTTING AND PATCHING

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SECTION 01 19 00

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GENERAL REQUIREMENTS

- .1 Do all cutting, patching and making good to leave in a finished condition and to make the several parts of the work come together properly. Coordinate work to keep cutting and patching to a minimum.
- .2 Regardless of which Section of work is responsible for any portion of cutting and patching, in each case tradesmen qualified in work being cut and patched shall be employed to ensure that it is correctly done.
- .3 Any cost caused by omission or ill-timed work shall be borne by party responsible therefore.
- .4 Do not endanger any work by cutting, digging or otherwise altering, and do not cut nor alter any loadbearing element without written authorization by Consultant. Provide bracing, shoring and temporary supports as required to keep construction safely supported at all times.
- .5 Cut holes carefully and not larger than required after they are located by Sections requiring them, using suitable equipment and tools.
- .6 Patching and making good shall be done by trade specialists in material to be treated, and shall be made undetectable in finished work.

END

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ALLOWANCES

1.1 GENERAL

- .1 Cash allowance for this project is \$5,000.00 (five thousand dollars).
- .2 Contingency allowance for this project is \$25,000.00 (twenty-five thousand dollars).

END

1.1 PRE-CONSTRUCTION MEETING

- .1 Immediately prior to construction, upon notification attend at location of Board's choice, pre-construction meeting, along with authoritative representatives of certain key subcontractors as specifically indicated in the conference notice.
- .2 Purpose of meeting is as follows:
 - .1 Review project communications procedures.
 - .2 Review contract administration requirements including submittals, payment and change order procedures.
 - .3 Identify all critical points on construction schedule for positive action.
 - .4 Identify any product availability problems and substitution requests.
 - .5 Establish site arrangements and temporary facilities.
 - .6 Review Consultant's inspection requirements.
 - .7 Review any points which, in Board's, Consultant's and Contractor's opinion, require clarification.

1.2 SITE MEETINGS

- .1 Prior to the commencement of the Work, the Contractor together with the Consultant shall mutually agree to a sequence for holding regular site meetings.
- .2 Organize and chair site meetings. Ensure that persons, whose presence is required, are present and that relative information is available to allow meetings to be conducted efficiently.
- .3 Record minutes of each meeting and promptly distribute copies to be received by all participants not later than seven days after meeting has been held.

1.2 SUPERVISION

- .1 Employ an experienced and qualified supervisor who shall devote his time exclusively to the work of this Contract and who shall be in complete charge of the work from commencement to Total Performance. A working foreperson will not be acceptable. The supervisor shall not be changed after commencement of work without the Consultant's approval.
- .2 Supervise, direct, manage and control the work of all forces carrying out the work, including subcontractors and suppliers. Carry out daily inspections to ensure compliance with the Contract Documents and the maintenance of quality standards. Ensure that the inspection staff includes personnel competent in supervising the mechanical and electrical trades.

1.2 PROGRESS RECORD

- .1 Maintain on site, permanent written record of progress of work. Record shall be open to inspection by Consultant at all times and copy shall be furnished to Consultant upon request.
- .2 This record shall show weather conditions, dates of commencement, progress and completion of various trades and items of work. Particulars pertaining to erection and removal of forms, pouring of concrete, installation of roofing and other critical or major components as well as number of employees of various trades and type and quantity of equipment employed daily, shall be noted.

- .3 Display a copy of the construction schedule in the site office from start of construction to completion. Superimpose actual progress of work on schedule at least once each week.

1.2 **AS-BUILT DRAWINGS**

- .1 Obtain and keep on site at all times a complete and separate set of black line white prints.
- .2 Note clearly, neatly, accurately and promptly as the work progresses location of services, piping, conduits, ductwork embedded in concrete/masonry, concealed in ceilings, walls and furring and underground services below building and outside of building, where such services are not in locations shown on drawings.
- .3 Accurate location, depth, position, size and type of concealed and underground services, both inside and outside shall be included as part of these as-built drawings.
- .4 As-built drawings shall be available for review at each site meeting.
- .5 Refer to Section 01 77 00 for requirements on submission of as-built drawings.

1.2 **DOCUMENTS ON SITE**

- .1 Contractor's field office shall at all times contain a complete set of Contract Documents (Drawings and Specifications) with all addenda, site instructions, change orders, reviewed shop drawings and samples, colour schedule, paint materials schedules, hardware list, progress reports and meeting minutes.

END

1.1 LINES & LEVELS

- .1 Verify all elevations, lines, levels and dimensions as indicated and report errors, any conflicts, or inconsistencies to the Consultant before commencing work or as soon as discovered.
- .2 Arrange to have building base lines laid out by an Ontario Land Surveyor.
- .3 Accurately lay out work and establish lines and levels in accordance with requirements of Contract Documents.
- .4 Set up, maintain and protect permanent reference points and provide general dimensions and elevations for all Sections of Work.

1.2 DIMENSIONS

- .1 Check and verify dimensions wherever referring to work. Dimensions, when pertaining to work of another Section, shall be verified with Section concerned. Details and measurements of work which is to fit or conform with work installed shall be taken at site.
- .2 Do not scale Drawings. If there is ambiguity, lack of information or inconsistency, immediately consult Consultant for directions. Be responsible for extra costs involved through the disregarding of this notice.
- .3 Walls, partitions and screens shall be considered as extending from floor to underside of structural deck unless specifically indicated otherwise.

1.3 LOCATION OF FIXTURES

- .1 Location of fixtures, apparatus, equipment, fittings, outlets, conduits, pipes and ducts shown or specified, but not dimensioned, shall be considered approximate.
- .2 Consult with Consultant to establish exact location. Any relocation caused by Contractor's failure to consult with Consultant shall be done by Contractor as part of work. Where job conditions require reasonable changes in indicated locations and arrangements, make changes at no additional cost.
- .3 Conserve space and coordinate with work of other Sections to ensure that ducts, pipes, conduits and other items will fit into allocated wall and ceiling spaces, while ensuring adequate space for access and maintenance.
- .4 Where ducts, piping and conduits are permitted to be exposed they shall be neatly and uniformly laid out parallel to adjacent building lines and parallel to each other where they run in the same direction. Review exposed installations with Consultant prior to start of work. At no cost to Owner make changes to exposed work as directed by the Consultant where such work is not installed in accordance with Consultant's prior review.
- .5 Except where locations are specifically noted, install exposed mechanical and electrical fixtures including outlets, switches, thermostats, panels and other items, located on walls, in orderly and neatly laid out manner, lining up with each other and grouped together where possible. Review installation with Consultant prior to start of rough-in work. Relocate at no cost to Owner any work which does not meet this requirement.

1.4 INTERFERENCE AND COORDINATION DRAWINGS

- .1 Prepare interference and equipment placing drawings to ensure that all components will be properly accommodated within the spaces provided.
- .2 Prepare drawings to indicate coordination and methods of installation of a system with other systems where their relationship is critical. Ensure that all details of equipment apparatus, and connections are coordinated.
- .3 Ensure that clearances required by jurisdictional authorities and clearances for proper maintenance are indicated on drawings.
- .4 Upon Consultant's request submit copies of interference drawings to Consultant.

1.5 SLEEVING AND INSERT SETTING DRAWINGS

- .1 Prepare sleeving drawings for work of Division 15 and 16, showing size and location of all penetrations through load bearing elements. Submit sleeving drawings to Consultant for review not less than 15 days prior to construction of affected elements.
- .2 Prepare insert setting drawings for work to be cast into concrete and/or mortared into masonry elements. Submit insert setting drawings to Consultant for review not less than 15 days prior to construction of affected elements.

1.6 DRAINAGE

- .1 Lay out and construct work to ensure that positive drainage is provided to roof drains, floor drains, site drains and catch basins, as set in their final position, preventing undrained areas and ponding.
- .2 Ensure that allowable construction tolerances and structural deflection do not cause ponding of water.
- .3 Report to Consultant in writing prior to executing work affected, in case adequate drainage cannot be provided.

END

1.1 GENERAL

- .1 Unless specified otherwise, make all submissions to the Consultant at his office.
- .2 Make all submissions required by the Contract Documents with reasonable promptness and in orderly sequence so as to cause no delay in the work.

1.2 RELATED WORK

- .1 Submission of maintenance, operation and record documents: Section 01 77 00
- .2 Submission of maintenance materials: Section 01 77 00
- .3 Submission of Certificates of Compliance: Section 01 77 00

1.3 CONSTRUCTION SCHEDULE

- .1 Within 14 days of Contract award, submit in format acceptable to Consultant, minimum four copies of Contractor's critical path construction schedule, using suitable computer scheduling software, such as "MS Project" or "Primavera".
- .2 Schedule proposed by the Contractor shall be based on the following assumptions:
 - .1 Critical path base line is considered by Contractor as reasonable and achievable.
 - .2 Schedule is based on resources which have been committed for this project by Contractor and will be readily available when needed.
- .3 Schedule is based on normal range of weather conditions, as documented by official weather records.
- .4 Schedule shall show:
 - .1 Commencement and completion dates of Contract.
 - .2 Commencement and completion dates of construction stages/phases, if any.
 - .3 Commencement and completion dates of each trade. Major trades shall be further broken down as directed by Consultant; generally follow Specification format.
 - .4 Order and delivery dates for major or critical equipment.
 - .5 Critical dates for shop drawing/sample submissions.
 - .6 Any other information relating to orderly progress of Contract, considered by Contractor or Consultant to be pertinent.
- .5 Submit copy of schedule showing actual progress, to Consultant once a month, concurrently with application for payment. Consultant, together with Contractor, shall review construction progress once a month during or immediately following regular site meeting, or more often as directed by Consultant.
- .6 Update construction schedule, whenever changes occur, in manner and at times acceptable to Consultant. Include with each update a written report of activity progress reflected in the revised critical path schedule, and the corrective actions which have been or are to be taken to maintain progress on the schedule in the future, anticipated delay,

resource availability, schedule changes, and work to be completed in the next 2 month period.

- .7 Plot actual construction progress son schedule at least once a week.

1.4 SHOP DRAWING

- .1 Submit shop drawings required by Contract Documents, in accordance with requirements of GC 40 SHOP DRAWINGS.
- .2 Prepare shop drawings in metric measurements only. Shop drawings containing imperial measurements will be rejected.
- .3 Maximum size of shop drawings shall be 900 mm x 1200 mm to permit red line photocopy reproduction.
- .4 Shop drawings requiring professional engineer's seal and signature but submitted without, will be rejected and returned to Contractor "Not Reviewed".
- .5 Shop drawings which require the approval of a legally constituted authority having jurisdiction shall be submitted by Contractor to such authority for approval. Such shop drawings shall receive final approval of authority having jurisdiction before Consultant's final review.
- .6 Unless otherwise directed by the Consultant, submit digital file or the following number of prints for each shop drawing required:
 - .1 Architectural shop drawings: 2 prints.
 - .2 Structural, mechanical, electrical shop drawings: 3 prints.
- .7 After review Consultant will return to Contractor marked-up digital file or one print of shop drawings. Contractor shall arrange and pay for prints required for distribution to subcontractors, suppliers, and site office.
- .8 No work requiring a shop drawing submission shall be commenced until the submission has received Consultant's final review.
- .9 The Consultant's review is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that the Consultant approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and this review shall not relieve the Contractor of his responsibility for meeting the requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.

1.5 SAMPLES

- .1 Submit samples required by Contract Documents and as directed by the Consultant.
- .2 Unless indicated otherwise submit samples in duplicate.
- .3 Submit samples with identifying labels bearing material or component description, manufacturer's name and brand name, Contractor's name, project name, location in which material or component is to be used, and date.

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SUBMITTALS

- .4 Prepay any shipping charges involved for delivering samples to destination point and returning to point of origin if required.
- .5 No work requiring a sample submission shall be commenced until the submission has received Consultant's final review.

END

1.1 PERMITS, LICENCES, FEES

- .1 Where permits, licenses and inspection fees are required by authorities having jurisdiction for specific trade functions, they shall be obtained by particular subtrade responsible for that work.
- .2 The Board will apply and pay for municipal building permit. Contractor shall pick up building permit. Review building permit set with Consultant immediately following receipt of building permit and jointly determine whether or not changes to Contract are required.
- .3 Be responsible for ensuring that no work is undertaken which is conditional on permits, approvals, reviews, licenses, fees, until all applicable conditions are met. No time extension will be allowed for delay in obtaining necessary permits.
- .4 Report to the Consultant in writing any condition which would prohibit granting of any permit or approval before work affecting such items is commenced.
- .5 Notify the Ontario Ministry of Labour of intended work of this Contract as required by the Occupational Health and Safety Act. One copy of the "Notice of Project" shall be handed to Consultant.
- .6 Give notice of completion of project prior to occupancy, as required by applicable legislation.

1.2 BUILDING CODE, BY-LAWS, REGULATIONS

- .1 Carry out work in accordance with requirements of the Ontario Building Code, latest issue, including all amendments and revisions.
- .2 Comply with requirements, regulations and ordinances of other jurisdictional authorities.
- .3 Where it is necessary to carry out work outside property lines, such as sidewalks, paving or concrete curbs, comply with applicable requirements of jurisdictional authorities.
- .4 Promptly submit written notice to Consultant, of observed variance of Contract Documents from requirements of Building Code and authorities having jurisdiction. Assume responsibility for work known to be contrary to such requirements and performed without notifying Consultant.

1.3 SAFETY REQUIREMENTS

- .1 Be governed by pertinent safety requirements of Federal or Provincial Governments and of municipal bodies having authority, particularly the Ontario Construction Safety Act, and regulations of Ontario Ministry of Labour, and work in conjunction with proper safety associations operating under the authority of Ontario Workplace Safety and Insurance Act.
- .2 Do not, in the performance of the work, in any manner endanger the safety or unlawfully interfere with the convenience of the public.
- .3 Comply with Construction Safety Requirements by Peel District School Board, attached hereinafter (2 pages).

1.4 FIRE PROTECTION REQUIREMENTS

- .1 Refer to technical Sections of Specifications and Drawings for fire protection requirements.

- .2 Test methods used to determine fire hazard classification and fire endurance rating shall be as required by Ontario Building Code.
- .3 Upon request, furnish to Consultant with evidence of compliance with project fire protection requirements.
- .4 Materials and components used to construct fire rated assemblies and materials requiring fire hazard classification shall be listed and labelled, or otherwise approved, by fire rating authority. Labelled materials and their packaging shall bear fire rating authorities label showing product classification.
- .5 Fire rated door assemblies shall include doors, frame, anchors and hardware and shall bear label of fire rating authority showing opening classification and rating.
- .6 Materials having a fire hazard classification shall be applied or installed in accordance with fire rating authority's printed instructions.
- .7 Fire rated assemblies shall be constructed in accordance with applicable fire test report information issued by fire rating authority. Deviation from fire test report will not be allowed.
- .8 Construct fire rated assemblies as continuous, uninterrupted elements except for permitted openings. Extend fire rated walls and partitions from floor to underside of structural deck above.
- .9 Fill and patch voids and gaps around openings and penetrations in and at perimeter of assemblies so as to maintain continuity and to produce a fire resistant smoke tight seal, acceptable to jurisdictional authorities.

1.5 HAZARDOUS MATERIALS

- .1 Comply with provisions of the Occupational Health and Safety Act as amended to include WHMIS (Workplace Hazardous Materials Information System).
- .2 Ensure that Material Safety Data Sheets (MSDS) are available on site prior to first delivery to site of any controlled material or substance, including but not necessarily limited to the following:
 - .1 Leadfree solder.
 - .2 Resilient flooring.
 - .3 Fertilizers.
 - .4 Pesticides and herbicides.
 - .5 Sealants/caulking materials.
 - .6 Painting and finishing materials.
 - .7 Glues and adhesives.
 - .8 Any other products which may give off air borne particles during and/or after installation.
- .3 Maintain on site for duration of Contract a hazardous materials log containing all required MSDS.
- .4 Log shall be open for inspection for Board, Consultant and all personnel on site.

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SECTION 01 41 00

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REGULATORY REQUIREMENTS

- .5 Ensure that workers are instructed in the purpose and content of MSDS.
- .6 The following shall not be used in the work of this Contract:
 - .1 Asbestos and asbestos containing materials.
 - .2 Solder containing lead.
 - .3 Paint/coating materials containing lead and/or mercury.
- .7 Refer to Section 01 77 00 for requirements on Certificates of Compliance.

1.6 WASTE MANAGEMENT

- .1 Comply with applicable regulations of the Ministry of Environment governing waste management.
- .2 Prepare and submit waste audit waste reduction and source separation plans in accordance with requirements of jurisdictional authorities.

END

.1 When the following abbreviations are used in the Contract Documents, they shall have the meanings shown.

ABBREVIATION	MEANING
AA	ALUMINUM ASSOCIATION
AAMA	ARCHITECTURAL ALUMINUM MANUFACTURERS` ASSOCIATION
AASHO	AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS
ACI	AMERICAN CONCRETE INSTITUTE
AGA	AMERICAN GAS ASSOCIATION
AIA	AMERICAN INSTITUTE OF ARCHITECTS
AIMA	ACOUSTICAL & INSULATING MATERIALS ASSOCIATION
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AMCA	AIR MOVING AND CONDITIONING ASSOCIATION INC.
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWI	ARCHITECTURAL WOODWORK INSTITUTE (USA)
AWMAC	ARCHITECTURAL WOODWORK MANUFACTURERS ASSOCIATION OF CANADA
AWS	AMERICAN WELDING SOCIETY
CCA	CANADIAN CONSTRUCTION ASSOCIATION
CCRC	CANADIAN CODE FOR RESIDENTIAL CONSTRUCTION
CEC	CANADIAN ELECTRICAL CODE
CFUA	CANADIAN FIRE UNDERWRITERS ASSOCIATION
CGA	CANADIAN GAS ASSOCIATION
CGSB	CANADIAN GENERAL STANDARDS BOARD
CIQS	CANADIAN INSTITUTE OF QUANTITY SURVEYORS
CISC	CANADIAN INSTITUTE OF STEEL CONSTRUCTION
CITC	CANADIAN INSTITUTE OF TIMBER CONSTRUCTION
CLA	CANADIAN LUMBERMEN`S ASSOCIATION
CMHC	CANADA MORTGAGE & HOUSING CORPORATION
COFI	COUNCIL OF FOREST INDUSTRIES OF BRITISH COLUMBIA
CPCI	CANADIAN PRESTRESSED CONCRETE INSTITUTE
CRCA	CANADIAN ROOFING CONTRACTORS ASSOCIATION
CSA	CANADIAN STANDARDS ASSOCIATION
CSC	CONSTRUCTION SPECIFICATIONS CANADA
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE (USA)
CSPI	CORRUGATED STEEL PIPE INSTITUTE
CSSBI	CANADIAN SHEET STEEL BUILDING INSTITUTE
CUA	CANADIAN UNDERWRITERS` ASSOCIATION
CWB	CANADIAN WELDING BUREAU
CWC	CANADIAN WOOD COUNCIL
DND	DEPARTMENT OF NATIONAL DEFENCE, CANADA
FM	FACTORY MUTUAL ENGINEERING CORPORATION
FS	FEDERAL SPECIFICATION (USA)
IES	ILLUMINATING ENGINEERING SOCIETY
IGMAC	INSULATED GLASS MANUFACTURERS ASSOCIATION OF CANADA
LTIC	LAMINATED TIMBER INSTITUTE OF CANADA

ABBREVIATION	MEANING
MIA	MARBLE INSTITUTE OF AMERICA
MPI	MASTER PAINTERS INSTITUTE
MPMDD	MODIFIED PROCTOR MAXIMUM DRY DENSITY
NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (USA)
NBFU	NATIONAL BOARD OF FIRE UNDERWRITERS
NBC	NATIONAL BUILDING CODE OF CANADA
NBS	NATIONAL BUREAU OF STANDARDS (USDC)
NEMA	NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NHLA	NATIONAL HARDWOOD LUMBER ASSOCIATION (USA)
NLGA	NATIONAL LUMBER GRADES AUTHORITY
NRC	NATIONAL RESEARCH COUNCIL
OPSS	ONTARIO PROVINCIAL STANDARD SPECIFICATIONS
PCA	PORTLAND CEMENT ASSOCIATION
PCI	PRESTRESSED CONCRETE INSTITUTE
RAIC	ROYAL ARCHITECTURAL INSTITUTE OF CANADA
SDI	STEEL DECK INSTITUTE
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SPMDD	STANDARD PROCTOR MAXIMUM DRY DENSITY
SSPC	STEEL STRUCTURES PAINTING COUNCIL
TTMAC	TERRAZZO, TILE & MARBLE ASSOCIATION OF CANADA
ULC	UNDERWRITERS' LABORATORIES OF CANADA
ULI	UNDERWRITERS' LABORATORIES, INC. (USA)
USAS	UNITED STATES OF AMERICA STANDARDS INSTITUTE
WSIB	WORKPLACE SAFETY AND INSURANCE BOARD

END

1.1 INDEPENDENT INSPECTION AND TESTING

- .1 Requirements specified in this Section apply to independent inspection and testing specified under technical Specification Sections.
- .2 Requirements specified in this Section do not apply to the following:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations and orders of public authorities.
 - .2 Testing, adjustment and balancing of mechanical and electrical systems and equipment.
 - .3 Inspection and testing performed exclusively for Contractor`s convenience.
 - .4 Tests specified in Division 2 to 16 inclusive, to be included in Contract such as mill tests, certificates of compliance and testing to be carried out by Contractor under direction of Consultant.
- .3 Failure by independent testing agency to detect defective work or materials shall not in any way prevent later rejection, when such defect is discovered, nor shall it obligate Consultant for final acceptance.
- .4 Testing agency is expected to do the following:
 - .1 Act on a professional and unprejudiced basis and carry out inspection and testing functions to establish compliance with requirements of Contract Documents.
 - .2 Check work as it progresses and prepare reports stating results of tests and conditions of work and state in each report whether specimens tested conform to requirements of Contract Documents, specifically noting deviations.
 - .3 Distribute reports as follows:
 - .1 Board: 1 copy
 - .2 Consultant: 1 copy
 - .3 Subconsultants affected: 1 copy
 - .4 Contractor: 2 copies
 - .5 Building Department: 1 copy
- .5 Testing agency is not authorized to amend or release any requirements of Contract Documents, nor to approve or accept any portion of work.
- .6 Contractor shall do the following:
 - .1 Notify testing agency minimum 48 hours in advance of operations to allow for assignment of personnel and scheduling of tests without causing delay in work.
 - .2 Provide testing agency with access to work at all times.
 - .3 Supply material samples for testing.
 - .4 Supply casual labour and other incidental services required by testing agency.
 - .5 Provide facilities for site storage of samples.

PROJECT: CREDIT VALLEY NO. 2 SECONDARY SCHOOL

SECTION 01 45 00

PROJECT NO: 11014.06

QUALITY CONTROL

- .7 When initial inspection and testing indicates non-compliance with Contract Documents, any subsequent reinspection and retesting occasioned by non-compliance shall be performed by same testing agency and cost thereof borne by Contractor.

1.2 TOLERANCES

- .1 Unless specific tolerances are required by a Section of the Specification or a referenced standard, meet the following tolerances for installed work:
- .1 "plumb" shall mean plumb within ± 3 mm in 3 m of true plumb.
 - .2 "level" shall mean level within ± 3 mm in 3 m of true level.
 - .3 "square" shall mean within ± 30 seconds of true 90° .
 - .4 "straight" shall mean within ± 3 mm in 3 m under a 3 m straightedge.

END

1.1 GENERAL

- .1 Temporary facilities will be provided by the Board within the existing Jean Augustine Secondary School.

1.2 TEMPORARY COMMUNICATIONS

- .1 Provide site telephone service for duration of contract until completion. Contact person, email and phone number should be provided.
- .2 Provide and maintain in operation on site equipment and services to send and receive e-mails for duration of Contract.

1.3 TEMPORARY FIRST-AID FACILITIES

- .1 Provide site equipment and medical facilities necessary to supply first-aid service to injured personnel in accordance with regulations of the Workers Compensation Act and Occupational Health and Safety Act. Maintain facilities for duration of Contract.

1.4 TEMPORARY FIRE PROTECTION

- .1 Provide and maintain in proper working order at least six fire extinguishers on each floor, prominently placed, until completion of work.
- .2 Fire extinguishers shall be minimum 9 kg 4A 60BC type.
- .3 Remove fire extinguishers from site, upon completion of work or when directed by Consultant.
- .4 Where gas welding or cutting is to be done within 3 m or above combustible material, or above space that may be occupied by persons, interpose shields of non-combustible material. Tanks supplying gases for welding or cutting shall be placed at no greater distance from the work than is necessary and shall be securely fastened in an upright position. Such tanks shall be free from exposure to the sun or high temperature.

1.5 CONSTRUCTION AIDS

- .1 Provide temporary stairs, ladders, ramps required for movement and placing of materials, equipment and personnel.
- .2 Provide mechanical hoisting equipment and fully qualified operators as required during construction.
- .3 Erect required scaffolding independent of walls, arranged to avoid interference with work of other Sections as much as possible.
- .4 Provide and maintain required shoring and bracing in accordance with Construction Safety Act and other applicable regulations.
- .5 Shoring and all false work over one tier in height shall be designed and shall bear the stamp of a registered professional engineer, having experience in this field.
- .6 The use of explosive power tools will not be permitted under any circumstances unless equipped with a device which positively prevents free flight of the stud.

1.6 BARRIERS

- .1 Protect public and workers from injury.
- .2 Provide and maintain required hoardings, barricades, guardrails, and lightguards in accordance with applicable regulations.
- .3 Provide around assigned work and storage areas minimum 1800 mm high chain link fence as follows:
 - .1 Line posts: pipe or tee type, at max. 3 m o.c.
 - .2 Corner and gate posts: minimum 90 mm pipe.
 - .3 Fabric: 50 mm mesh, 3.7 mm wire.
 - .4 Lockable gates for personnel and vehicle access.
 - .5 Finish: hot dip galvanized.
 - .6 Maintain fence in good order throughout construction period; remove when directed by Consultant.

1.7 TEMPORARY CONTROLS

- .1 Provide protective coverings to protect work against damage caused by weather, including but not necessarily limited to rain, snow, ice, wind, frost and excessive heat.
- .2 Provide wind breaks and sun shades to allow proper setting and curing of cementitious materials.
- .3 Protect building materials from freezing.
- .4 Prevent sprayed materials from contaminating air beyond application area, by providing temporary enclosures.
- .5 Cover or wet down dry materials and rubbish to prevent blowing dust and debris.
- .6 Prevent tracking of mud and dirt from site onto paved roads. Provide and maintain stabilized vehicle egress point (mud mat), constructed of coarse granular material. Place additional granular material as required to maintain access/egress points in proper working order. Clean mud and dirt from paved road at end of each day by shoveling or sweeping and subsequent washing. Dispose of mud and dirt in a controlled disposal area.

1.8 TEMPORARY DRAINAGE

- .1 Provide and maintain adequate temporary pumping and drainage systems to keep excavations and structures free of water. Prevent flow of surface water into excavations. Locate sumps away from carrying soil in suspension in sufficient quantity to cause settlement of adjacent earth. Provide sufficient standby equipment to ensure continuity of pumping systems.
- .2 Control drainage on site to prevent flooding, erosion and run-off onto adjacent properties as a result of construction operations.
- .3 Dispose of water containing silt in suspension in accordance with requirements of jurisdictional authorities.

- .4 Conform to sedimentation and erosion control requirements of the conservation authority having jurisdiction. Provide and maintain until completion of work or until directed by Consultant to be removed, sediment control devices at catch basins, drainage courses and at other locations on site as directed.

1.9 SIGNS

- .1 Except as specified here do not erect any signs unless approved by the Consultant.
- .2 Erect signs relating to safety on the work, or mandatory regulation notices.
- .3 Prior to commencement of work wherein hazardous or volatile cements, coatings, or substances are used, barricade entire area and post adequate number of "NO SMOKING" signs.

1.10 TEMPORARY ACCESS AND WORKING MAT

- .1 The Contractor will be responsible for supplying and installing all floor and wall protection measures for the existing Jean Augustine Secondary School. Any damages created during construction and have failed to provide adequate protection will be at the expense of the contractor to fix and replace.

END

1.1 PRODUCT QUALITY

- .1 Products supplied for work shall be new and as far as possible and unless otherwise specified, of Canadian manufacture.
- .2 Materials used for temporary facilities are not required to be new, provided they are structurally sound and in suitable and safe operating condition.

1.2 STANDARDS AND TERMINOLOGY

- .1 Where a standard has been adopted by these Specifications, incorporate minimum requirements of such standard into the work. Where requirements of Specifications are more stringent than those of the standard, follow more stringent requirements.
- .2 Reference to standards, specifications, handbooks and manufacturer's catalogues refer to latest edition thereof and all amendments or revisions applicable at tender closing date, unless date suffix is included with document number.
- .3 Wherever words "acceptable", "approved", "satisfactory", "selected", "directed", "designated", "permitted", "inspected", "instructed", "required", "submit", or similar words or phrases are used in standards or elsewhere in Contract Documents, it shall be understood, that "by (to) the Consultant" follow, unless context provides otherwise.
- .4 Where the word "provide" is used in these Contract Documents, it shall be taken to mean "supply and install" unless specifically noted otherwise.

1.3 CERTIFICATION

- .1 Building materials, components and elements specified without the use of trade or proprietary names shall meet requirements specified.
- .2 If requested by Consultant, submit evidence of meeting requirements specified. Evidence shall consist of certification based on tests carried out by an independent testing agency.
- .3 Certification based on previous tests for same materials, components or elements is acceptable. Certification shall be in form of written test reports prepared by testing agency.

1.4 AVAILABILITY AND SUBSTITUTIONS

- .1 Products which are specified by their proprietary names or by part or catalogue number form the basis for Contract. No substitutes for these may be used without Consultant's approval in writing.
- .2 Where it is found that specified materials have become unavailable for incorporating into work, notify Consultant immediately of proposed substitution.
- .3 Proposed substitution shall be any top quality product considered by Consultant to be of equal quality and value to that specified, and suitable for purpose intended.
- .4 Products proposed as substitutions, and which are considered by Consultant to be suitable for purpose intended, but which are in his opinion of lesser value and quality than those specified shall only be accepted as substitution if reasonable credits are allowed for their use.
- .5 In order to substantiate equivalency of proposed materials, products or processes, submit samples, printed product descriptions, test data, installation instructions, standards, certification, sample, guarantee/warranty forms, list of successful projects incorporating such

proposals, and similar information requested by Consultant.

- .6 Whenever a substitute is proposed, any change to contract price as a result of acceptance of proposed product shall include any adjustments to adjacent structure or space in order to accept minor differences in size or weight between proposed items and corresponding specified items.
- .7 Prevent any substitution or request for substitution from delaying construction progress in any way.
- .8 Requests for substitution resulting from failure to place orders in time will not be entertained. Be responsible for ordering products in time to ensure their required delivery; bear all costs for failure to comply with these requirements.
- .9 Upon Consultant's request submit copies of material and equipment purchase orders.

1.5 PRODUCT DELIVERY, HANDLING AND STORAGE

- .1 Suitably pack, crate and protect products during transportation to site to preserve their quality and fitness for the purpose intended.
- .2 Store products in original, undamaged condition with manufacturer's labels and seals intact until they are being incorporated into completed work.
- .3 Handle and store materials in accordance with manufacturer's and supplier's recommendations and so as to ensure preservation of their quality, appearance and fitness for work.
- .4 Arrange materials so as to facilitate prompt inspection, and remove faulty, damaged or rejected materials immediately from site.

1.6 PRODUCT DELIVERY SCHEDULE

- .1 It is the responsibility of the Contractor to ensure that the supplier or distributor of materials specified or alternatives accepted, which he intends to use, has materials on the site when required. The Contractor shall obtain confirmed delivery dates from the supplier.
- .2 The Contractor shall contact the Consultant immediately upon receipt of information indicating that any material, item, will not be available on time, in accordance with the original schedule, and similarly it shall be the responsibility of all subcontractors and suppliers to so inform the Contractor.
- .3 The Consultant reserves the right to receive from the Contractor at any time, upon request, copies of actual purchase or work orders of any material or products to be supplied for the work.
- .4 If materials and products have not been placed on order, the Consultant may instruct such items to be placed on order, if direct communication in writing from the manufacturer or prime suppliers is not available indicating that delivery of said material will be made in sufficient time for the orderly completion of the Work.
- .5 The Consultant's review of purchase orders or other related documentation shall in no way release the Contractor, or his subcontractors and suppliers of their responsibility for ensuring the timely ordering of all materials and items required, including the necessary expediting, to complete the work as scheduled in accordance with the Contract Documents.

1.7 WORKMANSHIP

- .1 All work shall be carried out in accordance with the best trade practice, by workers skilled in the type of work concerned.
- .2 Products, materials, systems and equipment shall be applied, installed, connected, erected, used cleaned and conditioned in accordance with the applicable manufacturer's printed directions.
- .3 Where specified requirements are in conflict with manufacturer's written directions, follow manufacturer's directions, but inform Consultant in writing prior to proceeding with affected work. Where specified requirements are more stringent than manufacturer's directions, comply with specified requirements.

END

1.1 GENERAL

- .1 Be responsible for cleanliness of assigned work areas to satisfaction of Consultant. Maintain work areas in neat and orderly condition at all times.
- .2 Periodically, or when directed by the Consultant, remove from work areas rubbish and waste materials.
- .3 Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- .4 Use cleaning material only on surfaces recommended by cleaning material manufacturer.

1.2 CLEANING DURING CONSTRUCTION

- .1 Remove debris, packaging and waste materials frequently.
- .2 Keep dust and dirt to an acceptable level, as directed.
- .3 Remove oily rags, waste and other hazardous substances from premises at close of each day, or more often if required.
- .4 Clear sidewalks of snow and ice, adjacent to construction site.

1.3 FINAL CLEANING

- .1 Upon completion of work, thoroughly clean all surfaces and components. Provide professional cleaning by a recognized, established cleaning company, to allow Owner to occupy without further cleaning except where specifically indicated otherwise.
- .2 Resilient flooring shall be broom swept only. Board will wet mop and wax/polish resilient floors. Board reserves the right to reject resilient flooring or portions thereof on account of defects which only become apparent after washing and waxing/polishing of floors.
- .3 Do not use sealers/waxes/polishes on tile and other hard surface floors prior to reviewing products and methods of application with Board and obtaining Board=s approval. Strip floors which have received finishing materials without Board=s approval.
- .4 Remove stains, dirt and smudges from finished surfaces.
- .5 Clean exposed finished surfaces in accord with respective material manufacturer's recommendations.
- .6 Clean mechanical and electrical fixtures and other fittings of labels, wrappings, paper and other foreign material.
- .7 Replace heating, ventilation and air conditioning filters if units were operated during construction.
- .8 Clean ducts, blowers and coils if heating, ventilating and air conditioning systems were operated without filters during construction.
- .9 Remove from work areas all waste and surplus materials.
- .10 Remove snow and ice from driveways, parking areas and walks.

1.4 DISPOSAL OF WASTE MATERIALS

- .1 All waste materials resulting from demolition and construction activities belong to the Contractor and shall be removed and legally disposed unless clearly stated otherwise.
- .2 Separate recyclable/reusable materials to maximum extent possible from general waste stream and transport to recycling/reuse facilities.
- .3 Fires and burning of waste or materials is not permitted on site.
- .4 Do not buy waste or materials on site.
- .5 Do not dispose of liquid waste or volatile materials into watercourses, storm or sanitary sewers.

END

1.1 REFERENCE STANDARD

- .1 Comply with provisions of OAA, OCGA "A Guide to Project Closeout Procedures", November 2010 except as modified in these Specifications.

1.2 OPERATING AND MAINTENANCE MANUALS

- .1 No operating and maintenance manuals will be needed.

1.3 AS-BUILT DRAWINGS

- .1 Prior to final payment submit as-built drawings specified in Section 01 31 00.
- .2 Clearly and prominently mark each drawing AS-BUILT DRAWING prepared by _____ (name of Contractor).

1.4 MAINTENANCE MATERIALS

- .1 Deliver to the location directed by Consultant maintenance materials as required elsewhere in these Specifications. Obtain receipt for delivered materials and submit copy of receipt to Consultant.
- .2 Package materials so that they are protected from damage and loss of essential properties.
- .3 Label packaged materials for proper identification of contents and project name.

1.5 OPERATING INSTRUCTIONS

- .1 Prior to requesting Substantial Performance, at a time acceptable to Board and Consultant, but not before operating and maintenance data has been reviewed and accepted by Consultant, instruct designated Boards representatives in the operation and maintenance of all systems and equipment.
- .2 Arrange training sessions for each type of operating system and equipment. Sessions shall be conducted by qualified instructors and shall be of sufficient duration and depth to adequately instruct participants.
- .3 Throughout the training sessions make reference to reviewed operation and maintenance manuals to familiarize participants with the data provided.
- .4 Prepare an attendance record for each training session, to be signed by each participant upon conclusion of session. Show date and time of session, subject of session and name, title, and organization of each participant. Submit a copy of each record to Consultant.
- .5 Subcontractor whose work is subject of training session and Contractor shall be represented during training session by qualified personnel.

1.6 CERTIFICATES OF COMPLIANCE

- .1 Submit Certificates of Compliance, prior to the application for Substantial Performance, for each of the following items:
 - .1 An affidavit relative to the use of lead free solder for all domestic water lines, regardless of location.

- .2 Products for which Material Safety Data Sheets have been submitted and accepted.
- .3 Other Work/Products identified in the Contract Documents as requiring a Certificate of Compliance.
- .4 Each Certificate of Compliance shall indicate names and addresses of the project, the Board, the date of issue, product description including name, number, manufacturer, with a statement verifying that the Work/Product installed meets specified requirements and, if applicable, complies with the submitted and accepted Material Safety Data Sheets.
- .5 Each Certificate of Compliance shall be issued on the subcontractor=s letterhead, properly executed, under whose work the respective Work/Product has been provided.
- .6 Each Certificate of Compliance shall be endorsed by the Contractor with his authorized stamp/ signature. Ensure that submissions are made to allow sufficient time for review without delaying progress of scheduled completion.
- .7 The Completion Security Account will not be paid to the Contractor without submission of all required affidavits and requested material and safety data sheets.

1.7 INSPECTION AND ACCEPTANCE OF WORK

- .1 Prior to requesting Substantial Performance submit the following:
 - .1 Three copies of operating and maintenance manuals (one copy of all manuals must be submitted for Consultants review minimum 6 weeks prior to requesting Substantial Performance).
 - .2 Two copies of inspection and acceptance certificates required from regulatory agencies.
 - .3 Keys, in accordance with requirements of Section 08710.
 - .4 Certificates of compliance.
- .2 Advise the Consultant in writing, when work has been substantially completed. If Consultant agrees that this stage has been reached, prepare a complete list of deficiencies and submit this list to Consultant.
- .3 On receipt of the above deficiency list in a satisfactory form, the Consultant, accompanied by Subconsultants, the Contractor and the Owner, if deemed desirable, will carry out an inspection of the Project.
- .4 Add to the deficiency list, in accordance with Consultant's directions, any additional deficiencies which are identified during inspection and reissue updated deficiency list.
- .5 Upon completion, inspection and acceptance of work, Owner will take over and occupy completed work. Refer to Supplementary Conditions for procedures relating to certification of Substantial Performance and release of holdback.

1.8 FINAL PAYMENT

- .1 Prior to claiming Final Payment do the following:
 - .1 Submit one complete set of as-built drawings.

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SECTION 01 77 00

PROJECT NO: 11014.06

PROJECT CLOSEOUT

- .2 Submit one complete set of reviewed shop drawings, folded to 8 1/2" X 11" size, contained in heavy duty manila envelopes, numbered and labelled. Follow specification format with no more than one Section per envelope.
- .3 Submit maintenance materials.
- .4 Submit final air and water balancing reports.
- .5 Submit a final accounting of all approved changes to the Contract Price.

1.9 WARRANTY INSPECTION

- .1 The Contractor shall organize a warranty inspection to take place two weeks prior to the expiration of the standard one-year warranty. The Consultant, subconsultants and trade contractors, the Contractor, and the Board's representatives shall attend.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Painting: Section 09 91 00

1.3 WORK SUPPLIED BUT NOT INSTALLED

- .1 Supply following items for installation under other Sections of work: Anchor bolts, bearing plates, sleeves and other inserts to be built into concrete and masonry elements and required for anchorage and support of metal fabrications.
- .2 Supply other Sections with instructions, and if required, templates, necessary for accurate setting of insets and components.

1.4 QUALITY ASSURANCE

- .1 Quality of work: the work of this Section includes the following categories:
 - .1 Architectural metal work: includes all metal work which is exposed to view. It requires fabrication to the highest quality standards, producing finest appearance, meeting the following requirements:
 - .1 Fastenings/anchorages: concealed.
 - .2 Flatness tolerance: free of perceptible waves, bows, dimples, oilcanning and other visual defects.
 - .3 Joints: straight, tightfitting, hairline.
 - .4 Welded connections: continuously welded, ground, filled if necessary and polished smooth.
 - .2 Miscellaneous metals: includes all concealed metal components, where structural integrity is more important than appearance.
- .2 Upon completion of installation of lighting grid, submit certification by professional engineer responsible for design of these components, verifying that they have been installed in accordance with reviewed shop drawings.
- .3 Qualifications of Welders: Welding shall be performed by fabricator certified under CSA W47.1-03.

1.5 SUBMITTALS

- .1 Submit detailed shop drawings of all metal fabrications required, showing profiles, members, fastenings, thicknesses, finishes and other pertinent data.
- .2 Site dimensions should be verified before ordering custom aluminum trim for above the stage opening in Exercise/Dance/Drama Room. Shop drawings for the aluminum trim should be provided to the Consultant for approval prior to ordering.

- .3 Sample of aluminum trim should be ordered by Contractor from CGC to ensure trim fits prior to ordering final pieces.

1.6 PRODUCT HANDLING

- .1 Deliver, handle and store fabricated components to prevent permanent distortion, corrosion and damage.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Aluminum trim in Exercise/Dance/Drama Room at stage opening: Provided by CGC. Custom "U" profile as seen in drawings. 6100mm (L)x 64mm (W) x 210mm (H) dimensions to be verified on site prior to ordering. Colour of trim should match suspension system colour as specified in Section 09 51 13 Acoustic Panel Ceilings.

2.1 FABRICATION GENERAL

- .1 3 pieces of the aluminum trim will be cut down onsite into 3 even pieces to fit the opening above the stage. Tight fit and hairline seems between the aluminum trim pieces themselves, between the curtain track and aluminum pieces, and between the aluminum trim and the existing concrete block wall.
- .2 Fabricate components in the shop in largest size practicable to minimize field jointing.
- .3 Fabricate components square, straight, true, free from warpage and other defects. Accurately cut, machine files and fit joints, corners, copes and mitres.
- .4 Reinforce fabricated components to safely withstand expected loads.
- .5 Make joints in built-up sections with hairline joints in least conspicuous locations and manner.
- .6 Make allowance for thermal expansion and contraction when fabricating exterior work.
- .7 Joints shall be welded unless otherwise indicated and unless details of construction do not permit welding. Exposed welds shall be continuous and shall be ground smooth.
- .8 Close exposed open ends of tubular members with welded on steel plugs.
- .9 Where work of other Sections is to be attached to work of this Section, prepare work by drilling and tapping holes, as required to facilitate installation of such other work.
- .10 Work of this Section, supplied for installation under other Sections, shall be prepared as required ready for installation by: drilling, countersinking and tapping holes, forming shapes and cutting to required sizes.
- .11 Grind off mill stampings and fill recessed markings on steel components left exposed to view.

2.7 FINISHES

- .1 Thoroughly clean steel of loose scale, rust, oil, dirt and other foreign matter. Suitably prepare steel surfaces by power tool cleaning to receive specified finishes.
- .2 Grind smooth sharp projections.

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METAL FABRICATIONS

- .3 Remove oil and grease by solvent cleaning.
- .4 Apply coatings in the shop and before assembly. Where size permits, galvanize components after assembly.
- .5 Shop apply coat of primer to interior components after fabrication except where galvanized or zinc rich paint finish is required.
- .6 Apply coat of bituminous enamel to contact surfaces of metal components in contact with cementitious materials and dissimilar metals.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Install components plumb, square, straight and true to line. Drill, cut and fit as necessary to attach this work to adjoining work.
- .2 Provide temporary supports and bracing required to position components until they are permanently anchored in place.
- .3 Securely anchor components in place; unless otherwise indicated, anchor components as follows:
 - .1 To concrete and solid masonry with expansion type anchor bolts.
 - .2 To hollow construction with toggle bolts.
 - .3 To thin metal with screws or bolts.
 - .4 To thick metal with bolts or by welding.
 - .5 To wood with bolts or lag screws.
 - .6 Fill space between railing members and sleeves with non-shrink grout.
- .4 Provide all components required for anchoring. Make anchoring in concealed manner wherever possible. Make exposed fastenings, where approved by Consultant, neatly and of same material, colour, texture and finish as base metal on which they occur. Keep exposed fastenings evenly spaced.
- .5 Dissimilar metals and metals in contact with cementitious elements shall have contact surfaces coated with bituminous paint or be isolated by other means as approved by Consultant.
- .6 After installation, clean and refinish injured finishes, welds, bolt heads and nuts. Refinish with zinc rich paint or primer to match original finish.

3.2 SCHEDULE OF COMPONENTS

- .1 Provide components made of steel unless otherwise indicated. Unless otherwise shown provide:
 - .1 Interior components: alkyd primer.
- .2 Provide the following components:

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METAL FABRICATIONS

- .1 Aluminum trim in Exercise/Dance/Drama Room at stage opening.
- .2 Curtain track as specified in Section 11 61 33.19 Curtain Systems.
- .3 Miscellaneous steel angles, plates and lintels required but not included on Drawings.
- .4 Other metal fabrications required and not specifically covered in other Sections.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Sealants other than specified herein: Section 07 92 00

1.3 DESCRIPTION

- .1 Include in work of this Section all firestopping required except for firestopping and smoke seals within mechanical assemblies (i.e. inside ducts, dampers) and electrical assemblies (i.e. inside bus ducts) which shall be provided as part of work of Divisions 23 and 26 respectively. Firestopping and smoke seals around outside of such mechanical and electrical assemblies, where they penetrate fire rated separations, shall be part of work of this Section.
- .2 Firestop and seal (draft-tight) gaps, control joints, expansion joints and penetrations in fire rated assemblies, including assemblies with a zero rating, against passage of fire, smoke, gasses, firefighter's hose stream and, where designated, passage of liquids. Smoke seal at angle support at fire dampers.

1.4 QUALITY ASSURANCE

- .1 Work of this Section shall be carried out by a firm specialized in the type of work specified herein. Use competent installers, experienced, trained and approved by material or system manufacturer for application of materials and systems being used. Installers shall have minimum 5 years experience in installation of firestopping materials.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver materials to site in manufacturer's sealed and labelled containers.
- .2 Store materials in protected location prior to use, in accordance with manufacturer's directions.

1.6 ENVIRONMENTAL CONDITIONS

- .1 Conform to manufacturer's recommended temperatures, relative humidity and substrate moisture content for storage, mixing, application and curing of firestopping materials.

1.7 SUBMITTALS

- .1 Prior to start of work submit list of proposed firestopping and smoke seal materials together with suitable documentation to verify that specified requirements will be met. Provide the following information as applicable to this Project.
 - .1 ULC assembly number certification.
 - .2 required temperature rise and flame rating.
 - .3 hose stream rating (where applicable).
 - .4 thickness.

- .5 proposed installation methods.
- .6 material of firestopping and smoke seals, primers, reinforcements, damming materials, reinforcements and anchorages/fastenings.
- .7 size of opening.
- .8 adjacent materials.
- .2 Upon Consultant's request submit samples of materials.
- .3 Upon completion of work submit written certification that work of this Section has been carried out in accordance with specified requirements.

PART 2 - PRODUCTS

2.1 SYSTEMS

- .1 Firestopping and smoke seal systems shall be:
 - .1 tested in accordance with CAN/ULC-S115-11.
 - .2 listed by ULC or other fire testing agency approved by jurisdictional authorities.
 - .3 capable of providing fire resistance rating not less than that required by surrounding assembly.
 - .4 comply with F, FT and/or FTH rating as required by OBC.
- .2 Firestopping and smoke seals for vertical fire separations shall meet ULC designation PJ, JF and HW as required for respective location.

2.2 MATERIALS

- .1 Firestopping and smoke seal materials:
 - .1 Provide materials which are:
 - .1 PCB and asbestos-free.
 - .2 of easily identifiable colour, except where used in exposed location.
 - .3 suitable for intended application.
 - .4 compatible with adjacent materials.
 - .2 Provide elastomeric type materials at locations requiring future re-entry (such as cable) and at penetrations for ducts and other mechanical items requiring sound and vibration control.
 - .3 Sealant type materials shall be non-sagging for vertical surfaces and self-levelling for level floors.
- .2 Primer: as recommended by firestopping material manufacturer for specific substrate and use.

- .3 Damming and back-up materials, support and anchoring devices: non-combustible, in accordance with tested assembly and as recommended by manufacturer.

2.3 MIXING

- .1 Mix materials at correct temperatures and in accordance with manufacturer's directions.

PART 3 - EXECUTION

3.1 PREPARATION

- .1 Remove combustible material and loose material detrimental to bond from edges of penetration. Clean, prime or otherwise prepare substrate material to manufacturer's recommendation.
- .2 Do not apply firestop material to surfaces previously painted or treated with sealer, curing compound, water repellent to other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.
- .3 Verify openings, dimensions and surfaces conform to fire and smoke seal assembly.
- .4 Protect adjacent surfaces from marring or damage.
- .5 Prime surfaces in accordance with manufacturer's directions.
- .6 Remove insulation from area of insulated pipe and duct where such pipes or ducts penetrate fire separation unless ULC certified assembly permits such insulation to remain within assembly.
- .7 Provide temporary damming, forming, packing and bracing materials necessary to contain firestopping. Upon completion, remove forming and damming materials not required to remain as part of system.
- .8 Examine sizes, anticipated movement and conditions of opening and penetration to establish correct system and depth of backup materials and of firestopping material required.

3.2 INSTALLATION

- .1 Seal penetrations through and gaps in fire rated separations in accordance with ULC listing for tested system selected.
- .2 Apply firestopping materials in accordance with manufacturer's instructions and tested designs. Apply with sufficient pressure to properly fill and seal openings to ensure continuity and integrity of fire separation. Tool or trowel exposed surfaces as required.
- .3 Remove excess compound promptly as work progresses and upon completion.
- .4 Unless otherwise indicated or permitted by Consultant recess firestopping and smoke seals in exposed locations to permit installation of decorative sealant by Section 07 92 00.
- .5 Do not cover materials until full cure has taken place.
- .6 Provide firestopping and smoke seal systems at following locations, without being limited to:
 - .1 At all openings, voids and penetrations through all floor slabs except openings within

shafts constructed with a fire resistance rating and slabs on granular fill.

- .2 At all openings, voids, control joints and penetrations through fire rated masonry, concrete and gypsum board walls, partitions and shaft walls.
 - .3 At all openings, voids, penetrations installed for future use through fire rated masonry, concrete and gypsum board walls, partitions and shaft walls.
 - .4 Around mechanical and electrical assemblies penetrating fire rated assemblies.
 - .5 Between perimeter of all floor and roof slabs and exterior wall construction.
 - .6 Between curtainwall and adjacent assemblies.
 - .7 Between tops of all fire rated walls and partitions and underside of floor or roof slabs.
 - .8 At building expansion joints.
- .7 Curing: cure materials in accordance with manufacturer's directions.

3.3 FIELD QUALITY CONTROL

- .1 Upon Consultant's request, manufacturer's representative shall inspect work of this Section and confirm in writing that it complies with specified requirements.
- .2 Request Consultant's review of installed systems before they are covered by other work.
- .3 Owner may arrange and pay separately for inspection and testing of work of this Section by independent agency as directed by Consultant.

END

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Acoustic caulking at gypsum board elements: Section 09 21 16

1.3 DEFINITION

- .1 Caulking = Sealant.

1.4 QUALITY ASSURANCE

- .1 Sealants must be installed by qualified caulking contractor with minimum five years experience and proven record of being able to produce good quality work.
- .2 Use only sealants which are proven to be compatible with materials they are in contact with. Notify Consultant prior to start of work should any sealant specified be considered unsuitable for the purpose intended.

1.5 SUBMITTALS

- .1 Submit detailed and complete product data for each product required.
- .2 Submit duplicate, minimum 150 mm long cured samples of each type sealant in colours selected by Consultant.

1.6 PRODUCT HANDLING

- .1 Deliver sealants to site in sealed containers bearing manufacturer's name, brand name of sealant and reference standard to which sealant complies.
- .2 Store materials in a dry area having an ambient temperature within limitations recommended by material manufacturer.

1.7 JOB CONDITIONS

- .1 Unless otherwise specified, apply sealants when air temperature is between 10°C and 25°C. When air temperature is above 25°C or below 10°C follow sealant manufacturer's recommendations regarding application.
- .2 Co-ordinate work of this Section with that of Section 09 91 00. Prior to start of work review installation procedures with Consultant, where caulking is located adjacent to painted surfaces.

1.8 WARRANTY

- .1 At no cost to the Owner remedy any defects in work, including work of this and other Sections, due to faults in materials and/or workmanship provided under this Section appearing within a period of 2 years from date of Substantial Performance.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Sealants
 - .1 Exterior vertical joints: two-part medium modulus silicone sealant with joint movement capability of $\pm 50\%$; up to 3 custom colour selected by Consultant: ASTM C920, Type S, Grade NS, Class 25, uses NT, G, A, 0: standard of acceptance: Dow Corning 790 Silicone Building Sealant.
 - .2 Exterior and interior horizontal joints: multi-component, self levelling, chemically curing polyurethane: ASTM C920, Type M, Grade P, Class 25: Standard of acceptance: Tremco THC-900.
 - .3 Interior vertical joints: one part acrylic latex with joint movement capability of $\pm 7\frac{1}{2}\%$, paintable: ASTM C834, Type OP, Grade -18°C, standard of acceptance: Tremflex 834.
 - .4 Interior wet locations: mildew-resistant silicone formulated with fungicide: ASTM C920, Type S, Grade NS, Class 25, Used NT, G, A: standard of acceptance: Dow Corning 786 Mildew Resistant Silicone Sealant.
 - .5 Sealant colours: selected by Consultant from full range of manufacturer's colours.
- .2 Primers, thinners, cleaners: As recommended by sealant manufacturer, non-staining type.
- .3 Premoulded backup for sealant: Non-gassing foam rope, compressed 25% when in joint: Sof-Rod by Tremco or Cera Rod by W.R. Meadows.
- .4 Bond breaker: Polyethylene tape, self-adhering one side.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Examine joints to be caulked and report in writing to the Consultant any defects in work of other Sections which would impair installation, performance and warranty of sealants.
- .2 Do not commence installation of sealants until conditions are acceptable.
- .3 Start of work implies acceptance of conditions.

3.2 PREPARATION

- .1 Clean and prepare joints to be caulked to produce clean sound surfaces for sealant adhesion.
- .2 Remove dust, oil, grease, water, frost, loose mortar and other foreign matter. Remove loose particles by blowing joint out with compressed air.
- .3 Chemically clean non-porous surfaces such as metal and glass, taking care to wipe solvents dry with a clean cloth. Use solvents recommended by sealant manufacturer.
- .4 Clean porous surfaces such as masonry, concrete and stone by mechanical abrading.
- .5 Surfaces adjacent to joints to be primed and which may be stained by primer shall be

masked with tape before primer is applied.

- .6 Prime joints in accordance with sealant manufacturer's recommendations. Apply primer before installing premoulded backup.
- .7 Install premoulded backup in joints 6 mm and more in width. Roll rope type backup into joint, do not stretch or braid. Install bond breaker in joints less than 6 mm in width.
- .8 Protect adjacent surfaces from stains and contamination. Make good any damage caused.

3.3 APPLICATION

- .1 Apply sealants under pressure using suitable equipment. Gun nozzle shall be of proper size to fit, and seal joint.
- .2 Force sealant into joints in full bead, making certain that void free contact is made with sides of joint. Tool joints to produce a slightly concave surface.
- .3 Caulking must appear as a concave recessed joint, free of ridges, wrinkles and embedded foreign matter. Caulking shall not spread or bulge beyond surfaces on each side of joint.
- .4 Apply sealants in accordance with following table:

<u>Joint Width:</u>	<u>Sealant Depth:</u>
5mm	5mm
10mm	5mm
15mm	7mm
20mm	10mm
25mm	12mm

- .5 Vent exterior joints in accordance with Consultant's directions.

3.4 CLEANING

- .1 As work progresses, remove sealant smears and stains from adjacent surfaces. Use cleaning method recommended by sealant manufacturer.
- .2 Leave adjacent surfaces in neat and clean condition.

3.5 SCHEDULE

- .1 Apply sealant at the following exterior locations:
 - .1 Between dissimilar materials in exposed locations except where specifically indicated otherwise.
 - .2 Expansion joints (except where expansion joint covers are required).
 - .3 Control joints in masonry elements.
 - .4 Below door thresholds (two beads).

- .5 At perimeter of door steel door and screen frames and louvre frames.
- .6 At penetrations through exterior building elements.
- .7 Where indicated.
- .2 Apply sealant at the following interior locations:
 - .1 Between dissimilar materials in exposed locations except where specifically indicated otherwise.
 - .2 Perimeter of steel door and screen frames.
 - .3 Control joints in masonry elements, and joints between bearing and non-bearing masonry walls.
 - .4 Control joints in gypsum board surfaces.
 - .5 Control joints in ceramic tile surfaces.
 - .6 Expansion joints, except where covered with expansion joint cover.
 - .7 Perimeter of firehose cabinets, access panels, electrical panels, and control panels.
 - .8 Between walls and drinking fountains, hand basins, wash fountains, urinals.
 - .9 Between countertops/vanities and lavatories.
 - .10 Between floors and WC's.
 - .11 Between countertops/vanities and wall.
 - .12 Where shown.
- .3 At interior locations use acrylic emulsion sealant except:
 - .1 At floor control joints use polyurethane for floors.
 - .2 At interior wet locations (vanities/countertops, at plumbing fixtures and at ceramic wall tile control joints) use silicone sealant.
 - .3 Where expected joint movement exceeds movement capability of acrylic emulsion sealant use sealant specified for exterior use, as directed by Consultant.

END

sPART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Caulking, except as specified herein: Section 07 92 00
- .2 Painting: Section 09 91 00

1.3 DEFINITIONS

- .1 Drywall = gypsum board.

1.4 QUALITY ASSURANCE

- .1 Interior metal framing and furring: comply with applicable requirements of ASTM C754 and ASTM C840 unless otherwise shown.
- .2 Gypsum board application and finishing: Comply with requirements of ASTM C840, unless otherwise shown.
- .3 Gypsum board surfaces exposed to view shall meet Gypsum Association GA 214-10 Recommended Levels of Gypsum Board Finish "Level 4".
- .4 Exterior soffits: Withstand minimum positive and negative pressure 1 kPa with maximum deflection of 1/360 of distance between supports.
- .5 Gypsum board elements that are permanently attached to structures, and their support attachments, shall be designed and constructed to resist the effects of seismic motions in accordance with applicable regulatory requirements.

1.5 SUBMITTALS

- .1 Submit detailed and complete product data for each product required.
- .2 Submit shop drawings showing provisions and details to accommodate seismic motions in accordance with applicable regulatory requirements and framing system for exterior soffits. Shop drawings shall bear seal and signature of a professional engineer licensed to practice in Ontario.

1.6 PRODUCT HANDLING & STORAGE

- .1 Handle gypsum board panels to prevent damaged and broken edges.
- .2 Store materials in dry place so as to preserve their quality and fitness for work.

1.7 JOB CONDITIONS

- .1 Install and finish gypsum board when ambient temperature is between 14 and 22°C. Maintain this temperature range in areas to receive gypsum board for 24 hours before and

during application and until joint cement and adhesives are fully cured.

- .2 Apply gypsum board after building has been completely enclosed. Ensure that work to be concealed by gypsum board has been installed, tested, inspected and approved before starting work.

PART 2 - PRODUCTS

2.1 FRAMING, FURRING AND TRIM

- .1 Unless otherwise specified provide framing, and frame members of minimum 0.5 mm core thickness steel hot dip galvanized (wipe coat) to ASTM A653. Framing and furring members supporting abuse resistant board and cementitious board shall be 0.9 mm thick. Studs larger than 92 mm in depth and exterior soffit framing shall be minimum 0.9 mm thick.
- .2 Studs: channel shaped screw-on type: depth as indicated; with knurled supporting flanges at least 34 mm wide; with service pass-through holes at 610 mm o.c. in web.
- .3 Top and bottom runners: channel sections, 35 mm legs. Depth to suit studs.
- .4 Rough furring members: 38 x 19 x 1.2 mm and 19 x 13 x 1.2 mm galvanized steel channels.
- .5 Furring and strapping members to receive gypsum board: 19 mm deep channel shaped section with outstanding flanges and 35 mm wide knurled supporting face.
- .6 Corner beads: beaded angle with perforated flanges.
- .7 Casing beads: channel shaped; beaded corners.
- .8 Hangers: minimum 3 mm galvanized steel wire.
- .9 Tie wire: minimum 1.5 mm soft annealed galvanized steel.
- .10 Metal control joint section: bellows shaped section with perforated flanges.
- .11 Reveals and feature strips: to profiles indicated: Fry Mouldings, Gordon or Pittcon Softforms.

2.2 GYPSUM BOARD

- .1 Exposed gypsum board for interior use: tapered edge: ASTM C 1396.
- .2 Unexposed gypsum board for interior use: backing board: ASTM C 1396.
- .3 Fire rated gypsum board: Type 'X' board: ASTM C 1396.
- .4 Abuse resistant gypsum board: ASTM C 1278; Fiberock VHI by CGC, or equivalent product by CertainTeed.
- .5 Backer board for ceramic tile: ASTM C 1178; Dens Shield by Georgia Pacific, or Aqua Tough by CGC, or equivalent product by CertainTeed.
- .6 Moisture resistant gypsum board: ASTM C1396: M2Tech by CertainTeed or equivalent product by CGC.

2.3 CEMENTITIOUS BOARD

- .1 Board for paint finish:
 - .1 Board: polymer modified, fibreglass mesh reinforced concrete board, 12 mm thick, tapered edges: Perma Base by Unifix.
 - .2 Joint tape: 75 mm wide alkali resistant fibreglass mesh tape.
 - .3 Joint compound: acrylic based: Acryjoint by Unifix.
 - .4 Fill coat: Acrybase by Unifix.
- .2 Board for textured finish or backing for ceramic tile: Durock by CGC 12 mm thick, or equivalent product by other manufacturer approved by Consultant.

2.4 FASTENING & FINISHING MATERIALS

- .1 Drywall screws: ASTM C 1102 and C954; self-drilling, self-tapping, case hardened. Use cadmium or nickel plated screws to fasten cementitious board and tile backer board.
- .2 **Laminating adhesive: CGC Durabond 90 compound by CGC, or equivalent product by CertainTeed.**
- .3 Joint tape: 50 mm perforated type.
- .4 Joint filler and topping cement: Casein, vinyl or latex base, slow setting.

2.5 ACOUSTICAL MATERIALS

- .1 **Acoustic Insulation: ASTM C665, Type 1, Acoustical Fire Batt AFB by Roxul, or equivalent product by Fibrex, or Quiet Zone by Owens Corning, or Sustainable Insulation NoiseReducer Sound Control Batts by CertainTeed.**
- .2 Caulking: to ASTM C 1396.: Acoustical Sealant by Tremco, or CGC Acoustical Sealant.
- .3 Steel deck closures: Emseal 25V Expanding Foam sealant, sized and shaped to fit flutes.

2.6 SHAFT WALL ASSEMBLIES

- .1 Vertical:
 - .1 Metal frames, ULC labelled Gypsum Board Shaftwall System by CGC Ltd. or Westroc Industries Ltd. or equivalent product by other manufacturer approved by Consultant.
- .2 Horizontal:
 - .1 **Canadian Gypsum Co. (CGC) Horizontal Shaft Wall Assembly, consisting of 25 mm thick CGC shaft wall liner and three layers of 12.5 mm thick Sheetrock Firecode "c" panels, fitted and fastened with metal studs, channels, runners, screws, anchors, trim and sealants as recommended by manufacturer, or equivalent product by CertainTeed.**
 - .2 Fire resistance rating: 2 hours, unless indicated otherwise.

- .3 Special approval: Building Materials Evaluation Commission #89-1-118, dated May 10, 1989.

PART 3 - EXECUTION

3.1 METAL FRAMING

- .1 General
 - .1 Framing and furring indicated is schematic and shall not be considered exact or complete. Location and spacing of members, bracing, supports and securement shall be in accordance with referenced standards as required to provide complete and finished work.
 - .2 Make provision for supporting recessed and surface mounted fixtures and equipment. Provide additional framing, supports and stiffeners as required.
 - .3 Neatly frame around recessed fixtures and openings.
 - .4 Examine mechanical and electrical Drawings and co-ordinate with Divisions 21 to 28 to determine openings required.
 - .5 Make provisions in accordance with reviewed shop drawings to accommodate seismic movements.
- .2 Partitions
 - .1 Unless specified or shown otherwise, extend steel studs to underside of structural slab above.
 - .2 All steel studs shall be spaced at 400 mm maximum.
 - .3 Install runner channels at top and bottom of partition and secure to supporting building elements at maximum 610 mm o.c.
 - .4 At partition corners extend one runner channel to end of corner and butt other runner channel; allow clearance for gypsum board thickness; do not mitre runner channels.
 - .5 Install steel studs vertically; fix studs to bottom runner channels by crimping or screwing on both sides of stud.
 - .6 Install additional studs as detailed and required at partition intersections, openings and terminations at dissimilar materials. Place studs not more than 50 mm from abutting walls, openings and each side of corners.
 - .7 Stiffen partitions over 2400 mm in height at mid point with at least one 19 mm horizontal bracing channel extending full length of partition.
 - .8 Where indicated, provide sliding track top connection to accommodate deflection or creep of structural framing without causing cracking of gypsum board.
- .3 Ceilings and Soffits
 - .1 Erect suspension and furring system level with a maximum tolerance of (+) (-) 3 mm

over a 3000 mm length.

- .2 Suspension system shall support ceiling assemblies, with maximum deflection of $L/360$, L being span between supports.
 - .3 Hangers for suspended ceilings shall support grillage independent of walls, columns, pipes and ducts. Space hangers at maximum 1220 mm o.c. along rough furring members and not more than 150 mm from ends.
 - .4 Space rough furring members at maximum 915 mm and not more than 150 mm from perimeter walls. Space rough furring members at maximum 600 mm o.c. at areas with cementitious board.
 - .5 Space furring channels transverse to runner channels at maximum 610 mm o.c. except at exterior soffits and at interior areas with cementitious board, and secure to each support with clip or saddle tie with 2 loops of tie wire. Install furring channels so as not to contact perimeter walls. Space furring channels at maximum 400 mm o.c. for support of cementitious board.
 - .6 Where ductwork, piping and other elements within ceiling spaces interfere with direct suspension of ceiling from structure, install additional framing securely fastened to main structure to accommodate proper hanging of ceiling.
 - .7 At exterior soffits suspend soffit framing with metal studs and brace system to withstand positive and negative wind pressures without detrimental effects. Fasten furring members to surrounding walls. Space primary furring channel at max. 610 mm o.c. Provide Z-shaped furring members at max. 400 mm o.c. Use minimum 1.2 mm thick framing members.
- .4 Bulkheads, Coves
- .1 Frame to profiles shown, rigid, square, true to line and securely fastened to supporting building elements.
 - .2 Space furring members to receive gypsum board at maximum 610 mm o.c.
 - .3 Provide rough framing and bracing members as required to ensure stability and accuracy of work.

3.2 GYPSUM BOARD INSTALLATION

- .1 Unless otherwise specified, erect gypsum board vertically or horizontally, whichever results in fewer end joints.
- .2 Locate board end joints over supporting members.
- .3 Cut and fit gypsum board as required to accommodate other work.
- .4 Unless otherwise shown or specified, extend gypsum board on both sides of partitions to underside of structural slab above. Fasten gypsum board to studs, not to top channel. Allow for 13 mm deflection.
- .5 Provide corner beads at external corners.

- .6 Provide casing beads around openings and where gypsum board abuts dissimilar material and construction.
- .7 Fasten gypsum board to supports with screws spaced at maximum 305 mm o.c.
- .8 Adhesive bonded gypsum board; apply 13 x 13 mm ribbons of laminating adhesive to back side of board, parallel to long dimension; space adhesive ribbons at maximum 150 mm o.c. temporarily brace boards until complete adhesive bond develops.
- .9 In areas requiring gypsum board ceiling, gypsum board shall extend over the whole ceiling area including furred and pipe spaces.
- .10 Where double layer gypsum board is required, screw fasten second layer through first, into framing, offset joints.

3.3 GYPSUM BOARD FINISHING

- .1 Tape and fill exposed joints, fastener heads, edges, corners, to produce an acceptable surface ready for decoration.
- .2 Conceal exposed flanges of corner beads, casing beads and other trim sections with at least 3 coats of cement, feathered out minimum 200 mm.
- .3 Fill depressions at fastener head with cement, then apply 2 additional coats of cement to produce smooth, level surface.
- .4 Treat joints using 3 coat method as follows:
 - .1 Apply thin uniform layer of cement and embed joint tape.
 - .2 Immediately apply thin skim coat of cement over tape and allow to dry.
 - .3 Apply 2 additional coats of cement. Allow first coat to dry before applying second coat.
- .5 Sand each coat of topping cement with fine sandpaper as required to produce smooth surface. Do not sand paper face of gypsum board.
- .6 Finish concealed joints at fire rated and at acoustically insulated gypsum board elements. Provide tape and one coat of cement.

3.4 CEMENTITIOUS BOARD

- .1 Screw fasten board to each supporting member at maximum 300 mm o.c.
- .2 Finish cementitious joints at locations scheduled to be painted with 3-step joint finishing system as recommended by board manufacturer. Apply fill coat over entire board surface to achieve smooth, uniform surface, ready for painting. Provide corner and casing beads similar to gypsum board installation.

3.5 CONTROL AND RELIEF JOINTS

- .1 Control Joints

- .1 Provide control joints where shown and at maximum 10 m o.c.
- .2 Break continuity of gypsum board and framing system at control joints; install continuous metal control joint section.

.2 Relief Joints

- .1 Provide relief joints where shown and where gypsum board assemblies abut dissimilar construction. Provide channel type reveal moulding.
- .2 Where indicated provide other reveals, and feature strips. Install in accordance with manufacturer's directions, plumb, level, accurately aligned at joints and securely fastened to supporting work.

3.6 SOUND CONTROL

.1 Partitions:

- .1 Provide acoustical insulation in gypsum board partitions as indicated on Drawings. Unless otherwise noted provide 50 mm thick insulation.
- .2 Provide 2 bead caulking system around horizontal and vertical perimeters of partitions. Apply continuous sealant beads at each side of horizontal runner tracks and vertical end studs, between gypsum board and adjacent construction.
- .3 Caulk around objects such as electrical outlets, light switches, electrical and mechanical panels and boxes, grilles, and other objects penetrating. Caulk behind metal control joint sections.
- .4 Provide steel deck closures to fill steel deck flutes, where sound rated, non-fire rated partitions abutt steel deck.

3.7 ASSOCIATED WORK

- .1 Install access doors supplied by Divisions 15 and 16. Build doors into gypsum board flush and parallel to walls and securely fastened.

3.8 SHAFT WALL ASSEMBLIES

- .1 Install shaft wall assemblies in locations indicated and where necessary to maintain required fire separation.
- .2 Install assemblies in accordance with manufacturer's directions, meeting required fire resistance rating.

3.9 SCHEDULE

- .1 Provide Type 'X' gypsum board at fire rated elements.
- .2 Unless otherwise specified or shown, provide 16 mm thick standard gypsum board.
- .3 Provide abuse resistant gypsum board, 16 mm thick, where shown.
- .4 Provide cementitious board where indicated.

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GYPSUM AND CEMENT BOARD

- .5 Provide tile backer board at gypsum board partitions/furring with tile finish.
- .6 Provide moisture resistant gypsum board at moist/wet locations and where shown.
- .7 Use foil back gypsum board at upper layer of exterior soffits.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Mechanical fixtures: See drawings provided by Ellard-Willson for mechanical specification divisions
- .2 Electrical fixtures: See drawing provided by Ellard-Willson for electrical specification divisions

1.3 QUALITY ASSURANCE

- .1 Comply with applicable requirements of ASTM C636, Heavy Duty, unless indicated otherwise.
- .2 Acoustic panel ceilings and their support attachments, shall be designed and constructed to resist the effects of seismic motions in accordance to local jurisdiction with applicable regulatory requirements.

1.4 SUBMITTALS

- .1 Submit detailed and complete product data for each product required.
- .2 Submit shop drawings showing provisions and details to accommodate seismic motions in accordance with applicable regulatory requirements. Shop drawings shall bear seal and signature of a professional engineer licensed to practice in Ontario.
- .3 Submit statement from suspension system manufacturer verifying that suspension system will support light fixtures within deflection criteria in referenced standards.
- .4 Samples: Submit two samples of each type of acoustical panel specified; size: 300mm x 300mm. Upon Consultant's request submit samples of suspension system components.
- .5 Maintenance materials: Provide Board one carton (12 pieces) of LAP.4. Obtain receipt and submit copy to Consultant.

1.5 PRODUCT STORAGE

- .1 Store material in dry place, keep free of dampness.

1.6 JOB CONDITIONS

- .1 Install ceiling systems after building has been completely enclosed and not before cementitious building elements are complete and cured and humidity levels are acceptable in the opinion of the Consultant.
- .2 Ensure that work to be concealed by ceiling systems has been installed, tested, inspected and approved before starting work.
- .3 Co-ordinate with Divisions 21 to 28 for work to be built into work of this Section.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Acoustic Panels
 - .1 Acoustic panel (LAP.4): 25 mm thick cloth faced fibreglass board, square edge: "Premier Nubby" by CGC or equivalent product by Armstrong or CertainTeed. Nominal panel size 610 x 1220 mm, colour: white.
- .2 Suspension system: Standard exposed grid system; "Prelude" by Armstrong or DX Quick Release by CGC, or equivalent product by Chicago Metallic or CertainTeed:
 - .1 Main tees: 38 x 25 mm bulb section, minimum 0.4 mm thick cold rolled galvanized steel.
 - .2 Cross tees: 25 mm wide, minimum 0.4 mm thick cold rolled galvanized steel; profile designed to limit deflection to 1/360 of span; designed to have suitable detail to rest on, automatically engage, level and lock to main tee.
 - .3 Wall moulding: pre-finished minimum 25 mm exposed face galvanized steel angle shape. Use preformed corner mouldings. Provide special flexible type moulding for use at round columns.
 - .4 Hangers: minimum 2.5 mm (No. 12 SWG) galvanized steel wire.
 - .5 Carrying channels: minimum 1.2 mm thick cold rolled galvanized steel channels 38 x 13 mm.
 - .6 Finish for exposed metal surfaces: satin enamel; colour to match ceiling panels.
- .3 Accessories: Splicers, fasteners, clips as required to provide complete and finished work: manufacturer's standard types.

PART 3 - EXECUTION

3.1 CEILING LAYOUTS

- .1 Lay out ceilings in accordance with reflected ceiling plans and symmetrical within each area to obtain uniform borders. Where layout is not shown install ceilings as directed by Consultant.
- .2 Finished work shall be plumb, level and square with adjoining work.

3.2 SUSPENSION SYSTEM

- .1 Suspend ceilings directly from structural members not from ducts, pipes, conduits.
- .2 Erect suspension systems level with a maximum tolerance of 3 mm over 3 m length.
- .3 Install main tees in accordance with module size. Suspend at maximum 1220 mm o.c.
- .4 Install cross tees perpendicular to main tees in accord with module size. Interlock with main tees.
- .5 Hangers for suspended ceilings shall support grillage independently of walls, columns, pipes

and ducts. Space hangers at maximum 1220 mm o.c. along supporting grillage and not more than 150 mm from ends.

- .6 Make provisions for carrying fixtures occurring on and in suspended ceilings. Install additional hangers and reinforcing to ensure that loads being carried do not compromise integrity of system. Frame around fixtures and openings as required.
- .7 Where ductwork, piping and other elements within ceiling spaces interfere with direct suspension of ceiling from structure, install additional framing securely fastened to main structure to accommodate proper hanging of ceiling.
- .8 Exposed members shall be as long in length as possible to minimize joints. Distribute joints to prevent clustering in one area. Joints shall be made square, tight and flush so that exposed faces of intersecting members are on same plane.
- .9 Joints in suspension system members shall be reinforced with splines or other suitable method.
- .10 Install perimeter moulding at abutting vertical surfaces.
- .11 Make provisions to accommodate seismic movements in accordance with reviewed shop drawings.

3.3 ACOUSTIC PANELS

- .1 Install panels so that work is clean and unmarked.
- .2 Neatly cut and fit panels as required to suit ceiling layout and accommodate other work.
- .3 Recessed items shall replace or be centered on panel unless otherwise indicated.

3.4 CLEANING

- .1 After installation, clean and touch up minor surface defects on acoustical panels and gypsum board panels.
- .2 Remove damaged and badly marked units which in the opinion of the Consultant cannot be satisfactorily touched up and replace with new unmarked material.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

1.3 SUBMITTALS

- .1 Submit manufacturer's colour samples of rubber tile flooring for the approval of the Consultant and Peel District School Board's (PDSB) representative(s).
- .2 Submit maintenance instructions with recommended maintenance methods and procedures for inclusion into maintenance manual.
- .3 Provide the Board with two full cartons of rubber tile used for future maintenance and repair. Provide transfer receipt of two full cartons post-construction to Client and Consultant.

1.4 PRODUCT STORAGE

- .1 Store flooring materials in areas of application for at least 48 hours prior to installation.

1.5 JOB CONDITIONS

- .1 Maintain minimum 21° C air temperature at flooring installation area for 3 days prior to, during and for 48 hours after installation.
- .2 Protect installed flooring against damage with heavy paper, plastic or plywood coverings. Do not place static loads on newly installed flooring until minimum 7 days after installation.

1.6 WARRANTY

- .1 Provide warranty letters for maintenance and warranty manual post-construction.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Signature Sports Floor RubberDeck. Centre Tile, 3/8" x 24" x 24". Black. Signature Sports Floor Rubberdeck will be used unless alternate has been approved by Consultant and PDSB.
- .2 Primers, fillers, adhesives: as recommended by flooring material manufacturer.
- .3 Cleaning materials: As recommended by flooring material manufacturer.

PART 3 - EXECUTION

3.1 CONDITION OF SUBSTRATES

- .1 Existing Vinyl Tile in Dramatic Arts Room 1055.
- .2 Surfaces to receive new rubber tile flooring shall be dry, true, even and smooth, and free of paint, grease and oil.

3.2 PREPARATION

- .1 Existing Vinyl Tile to be removed and disposed from the Dramatic Arts Room 1055.
- .2 Preparation of subfloor is to be performed as per manufacturer's instructions.
- .3 Level depressions, cracks and joints in subfloor with non-shrinking type filler compatible with bonding adhesive.
- .4 If recommended by adhesive or tile manufacturer, prime substrates. Apply primer in accord with manufacturer's directions.

3.3 UNDERLAYMENT

- .1 Where resilient flooring abuts other flooring of different thickness, provide cementitious underlayment allowing for smooth and level transition between finished floor surfaces.
- .2 Mix, apply and finish underlayment in accordance with manufacturer's recommendations.

3.4 FLOOR INSTALLATION GENERAL

- .1 Install resilient flooring materials to patterns indicated and/or as directed by Consultant and in accordance with material manufacturer's current printed directions.
- .2 Scribe flooring to walls, columns, cabinets, floor outlets and other appurtenances to produce tight joints. Extend flooring into recesses and closets.
- .3 Locate change to different floor finish.
- .4 Provide vinyl reducing strip where floor covering terminates exposing edge of floor.
- .5 No additional trades should be performing work in the Dramatic Arts Room 1055 while the floor is settling.
- .6 Contractors should provide floor protection to avoid settled floor from needing repair.

3.5 RESILIENT TILE INSTALLATION

- .1 Lay out each area to be tiled symmetrically square with axis of room to provide perimeter tiles as least one half tile in width.
- .2 Distribute tiles having varying shades or pattern evenly over floor area to obtain uniform effect. Abrupt variations will not be permitted. Tile joints shall be flush, uniform, in moderate contact and in straight lines.
- .3 Immediately after installation, roll entire floor tile to ensure adhesion in accordance with tile and adhesive manufacturer's recommendations.

3.6 RESILIENT BASE

- .1 Damages to the existing resilient base will be repaired following rubber tile flooring installation.
- .2 Adhesive apply cove base to vertical surfaces so that gaps do not occur behind base, so that front lip of base cove bears firmly and uniformly on floor surfaces and so that good and

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permanent bond is produced between base and surface to which it is applied.

- .3 Use full length pieces where practicable; accumulated short lengths not permitted. Provide preformed external corners, mitre inside corners; butt intermediate joints flush without gaps.

3.7 **CLEANING**

- .1 Wash resilient floors and leave them clean, free of building materials, rubbish, paint, adhesives, stains and spills.
- .2 Board will be responsible for final cleaning, sealing and waxing of resilient floors. Board reserves the right to reject rubber flooring work for defects.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

1.3 QUALITY ASSURANCE

- .1 Comply with provisions of The Master Painters Institute's (MPI) Architectural Painting Specification Manual latest issue, referenced herein as the MPI Manual.
- .2 Work of this Section shall be carried out by qualified workers only, who have a valid Provincial Tradesman Qualification Certificate of Proficiency.

1.4 LIST OF MATERIALS AND SAMPLES

.1 List of Materials

- .1 Before ordering materials, submit written request in form acceptable to Consultant for approval of paint materials. List materials proposed and surfaces to be covered. State manufacturer's name and brand name and product code of each material.
- .2 Do not order material or commence work until list of paint is approved by Consultant.

.2 Samples

- .1 Submit two 200 x 250 mm colour draw downs of each paint colour coated with manufacturer's paint system to confirm colour match with colour chips supplied by Consultant.
- .2 Submit samples of natural and stained finishes on each species and grade of wood to receive such finishes.
- .3 Prepare sample panels of each wall and ceiling paint system specified, as directed.

1.5 PRODUCT HANDLING

- .1 Deliver paint materials to site in sealed original labelled containers bearing manufacturer's name, brand name, type of paint and colour designation.
- .2 Store materials in strict accordance with manufacturer's recommendations.
- .3 Do not store paints, stains, varnishes, rags, or equipment inside building. Maintain separate workshop/storage shed for duration of work by this Section.

1.6 JOB CONDITIONS

- .1 Comply with requirements of the MPI Manual and as specified herein.
- .2 Environmental Conditions
 - .1 Maintain temperature in interior areas to receive coatings between 15°C and 25°C for

at least 24 hours before, during application and until coatings have cured after application. Apply exterior coatings only when temperature is above 10°C.

- .2 Do not apply exterior coatings during periods of precipitation nor when precipitation is imminent.
 - .3 Do not apply coatings under direct sunlight during hot weather.
 - .4 Adequately ventilate areas where coatings are being applied. Maintain a reasonably dust-free atmosphere for duration of work.
- .3 Protection
- .1 Protect adjacent surfaces not scheduled to receive coatings from damage.
 - .2 Remove electrical plates, surface hardware, fittings and fastenings prior to painting operations. These items shall be carefully stored, cleaned and replaced on completion of work in each area. No solvent shall be used to clean hardware that will remove permanent lacquer finish on these items.
 - .3 Mask labels and specification plates occurring on equipment to be painted.
 - .4 Post "wet coating" signs and "no smoking" signs while work is in progress and while coatings are curing.
 - .5 Keep oily rags, wastes and other combustible materials in closed metal containers and remove at end of each work day. Take every precaution to avoid spontaneous combustion.
- .4 Work Schedule
- .1 Unless otherwise permitted, apply coatings only after all other Sections have completed their work.
 - .2 Co-ordinate work of this Section with that of Section 07 92 00 and review order of installation with Consultant where sealants are installed adjacent to painted surfaces.
 - .3 If it becomes necessary for the Board to occupy areas of the building prior to their completion, schedule work of this Section to hours when students and staff have vacated building.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Acceptable products: as per MPI Manual, and as specified herein. Rosco Tough Prime Matte Black to be used. Substitutions need to be confirmed by the Consultant.
- .2 Materials for each paint system shall be from single manufacturer.
- .3 Paints shall be factory mixed unless otherwise specified, except any coating in paste or power form, or to be field-catalyzed shall be fieldmixed in accordance with manufacturer's directions.

- .4 Epoxy paint: two part epoxy polyamide system. Colours selected by Consultant may be deep tones.

2.2 FINISHES

- .1 Paint colours and other finishes will be selected by Consultant. Do not start work until after receiving colour schedule.
- .2 Colours selected by the Consultant will not necessarily be from manufacturer's standard colours.
- .3 A variety of colours may be used. Consultant may select different colours for different elements such as ductwork, bulkheads, exposed decks, slabs and structural steel. Some colours may be deep tone.
- .4 Confirm gloss levels for all surfaces with Consultant before starting work. Unless otherwise indicated, allow for semi-gloss finish.

PART 3 - EXECUTION

3.1 CONDITIONS OF SUBSTRATES

- .1 Sound, non-dusting, and free of grease, oil, dirt, and other matter detrimental to adhesion and appearance of coatings.
- .2 Temperature: minimum 12°C.
- .3 Moisture content: maximum 12%. Test for moisture content using moisture meter.
- .4 Alkalinity: test cementitious substrates for alkalinity. Use method recommended by coating manufacturer.
- .5 Whiteboards within the Dramatic Arts Room 1055 are to be removed prior to painting. Staff of Jean Augustine to advise which whiteboards are to be removed. Patching and sanding of anchor holes from the removed whiteboard is to be completed prior to painting.

3.2 PREPARATION OF SUBSTRATES

- .1 Prepare substrates in accordance with MPI Manual.
- .2 All substrates: clean as required to produce an acceptable surface. If wood, metal or any other surface to be finished cannot be put in proper condition for finishing by cleaning, sanding and filling as specified, notify Consultant in writing or assume responsibility for and rectify any unsatisfactory finish resulting.
- .3 Wood generally: clean soiled surfaces; sand off smooth and dust off; putty nail holes, splits, scratches, after prime coat has been applied and dried; colour putty to match finish; putty stained wood after stain application.
- .4 Wood for paint: clean knots, pitch streaks and sappy sections of residue and seal with sealer before applying prime coat.
- .5 Wood for transparent finish: clean knots, pitch streaks and sappy sections of residue and seal

with white shellac; seal after applying stain. Apply filler to open grained woods, prior to application of stain unless directed otherwise by Consultant. Do not apply satin varnish coat until Consultant has inspected and approved gloss varnish coat.

- .6 Bare ferrous metal: remove rust and scale; wash with solvent; chemically clean; apply coat of metal primer.
- .7 Previously primed metal: remove rust, oil, grease and loose shop paint by washing or wire brushing; make good shop coat; feather out edges of touchup.
- .8 Zinc coated metal provide light brush blasting in accordance with SSPC-SP7.
- .9 Unit masonry & concrete: fill minor cracks, holes and fissures with non-shrinking filler and smooth to a flush surface. Texture filled areas to match surrounding surface.
- .10 Gypsum board: fill minor cracks, holes and imperfections with patching plaster; allow to dry and sand smooth; sand taped joints and remove dust.
- .11 Alkaline surfaces: wash and neutralize using proper type of solution compatible with paint to be used.
- .12 Fill joints between different materials, junction of trim pieces and other similar conditions with non-shrinking filler and sand smooth to ensure a tight fit, without holes or cracks.

3.3 BACK PRIMING

- .1 Back prime wood scheduled for paint or enamel finish immediately on arrival at site with interior or exterior primer as applicable.
- .2 Back prime wood scheduled for stain, varnish or natural finish immediately on arrival at site with gloss varnish reduce 25% with mineral spirits.

3.4 APPLICATION OF COATINGS

- .1 Apply paint by industry accepted standards and as referenced in the MPI Manual.
- .2 Spray painting may be permitted where deemed of advantageous and shall be subject to Consultant's approval. When spray painting is permitted, use only airless spray guns. Consultant may prohibit use of spray painting at any time for such reasons as carelessness, poor masking or protective measures, drifting paint fog, disturbance to other trades or failure to obtain a uniform satisfactory finish.
- .3 Applied and cured coatings shall be uniform in of thickness, sheen, colour and texture and free of brush or roller marks, sags, crawls and other defects detrimental to appearance and performance.
- .4 Regardless of the number of coats specified for any surface, apply sufficient paint to completely cover and hide substrate and to produce a solid uniform appearance.
- .5 Thoroughly mix materials before application. Use same brand of paint for primer, intermediate and finish coats.
- .6 Touch up suction spots after application of first coat. Sand lightly between coats with fine

sandpaper.

- .7 Each coat of finish shall be dry and hard before succeeding coats are applied with a minimum of 24 hours between coats, to achieve an anchor for required finish. Do not proceed with any coat until the last preceding coat is approved by the Consultant and inspector.
- .8 Stained woodwork shall be covered with a uniform coat of stain and wiped off if required. Wood shall have uniform shade. Match stain so that dissimilar woods have uniform finished appearance.
- .9 Apply epoxy coating system in accordance with manufacturer's directions.
- .10 Spray paint cementitious wood fibre acoustical wall and ceiling panels. Paint ceiling panels prior to their installation.

3.5 PATCHING

- .1 Prior to takeover of project by Owner, inspect work of this Section and touch-up or refinish damaged finishes and finishes unsatisfactory to Consultant and the inspector.

3.6 SCHEDULE OF FINISHES

- .1 General Requirements
 - .1 All ceilings and walls of the Dramatic Arts Room 1055 are to be painted in Rosco Tough Prime Matte Black.
 - .2 Paint exposed surfaces of building materials, services and equipment, except those which are prefinished in factory and except those which are located in areas designed as not requiring painting.
 - .3 Comply with the following requirements except in areas designed as not requiring painting:
 - .1 Paint behind surface mounted fixtures on walls and ceilings with full coats of paint.
 - .2 Paint walls behind wall mounted heating units with full coats of paint.
 - .3 Paint inside surfaces of light coves white.
 - .4 Finish top and bottom edge of doors, trim, projections and other work as specified for surrounding work whether above sight lines or not.
 - .5 Finish edges of doors to match face of door. Refinish edges of doors after fitting.
 - .6 Finish drawers on all sides, inside and outside. Unless otherwise indicated finish drawers with two coats of varnish.
 - .7 Paint tops, bottoms and edges of shelves with full specified coats, whether exposed to view or not.

- .8 Paint interior of ducts at grilles and diffusers with two coats of flat black paint, so that duct interior is not visible when grilles and diffusers are installed.
- .9 Paint piping, ducts and conduits in colours matching background wall or ceiling colours, unless otherwise directed by the Consultant. Ducts in mechanical rooms require only one finish coat in addition to primer. Other exposed ductwork to receive two finish coats.
- .10 Paint gas piping whether exposed to view or not, with high-visibility yellow-orange paint selected by Consultant.
- .11 Unless otherwise indicated paint steel handrails with epoxy paint.
- .3 Where finishing formula for surfaces requiring painting is not included herein, follow recommendations of MPI Manual, Premium Grade
- .2 Interior Finishing: System references listed hereunder are based on Chapter 3 – Section 2 of the MPI Manual and shall be MPI Premium Grade unless otherwise indicated.
 - .1 Concrete (vertical surfaces): INT 3.1A
 - .2 Concrete block: INT 4.2A
 - .3 Metal, prime painted: INT 5.1Q
 - .4 Metal, zinc coated: INT 5.3A
 - .5 Woodwork, painted: INT 6.3U
 - .6 Woodwork, stained and varnished (transparent finish): INT 6.4E
 - .7 Gypsum board (walls, partitions): INT 9.2A
 - .8 Gypsum board (ceilings and bulkheads): INT 9.2A
 - .9 Exposed piping, wrapped: INT 10.1A
 - .10 Exposed piping and conduit, unwrapped: INT 5.3A or 5.1Q or 5.5H
 - .11 Exposed ductwork, insulated: INT 10.1A
 - .12 Metal, epoxy coated: INT-12-D (Custom Grade)
 - .13 Concrete floors: INT-9-B
 - .14 Cementitious wood fibre acoustical panels: 2 coats alkali-resistant latex.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

1.3 QUALITY ASSURANCE

1.4 LIST OF MATERIALS AND SAMPLES

- .1 Samples
 - .1 Submit track system for review and approval by Consultant during shop drawing process.
 - .2 Rough drapery track layout to be marked and lined along ceiling with removable tap for PDSB and Consultant's review. Tap should not mark or destroy acoustic ceiling tiles once removed.

1.5 PRODUCT HANDLING.

- .1 Store materials in strict accordance with manufacturer's recommendations.

1.6 WORK INCLUDED

- .1 This specification requires the supply and installation of the curtain track in the Dramatic Arts Room 1055 at Jean Augustine secondary School.

1.7 SCOPE OF WORK

- .1 Drapery System – supply and installation of the curtain track to be provided while curtains are not included within the contract. Peel District School Board to provide their own curtains for the room.
- .2 All equipment shall be of professional or industrial quality. Consumer and “Pro-sumer” level equipment shall not be considered acceptable for this project.

PART 2 - PRODUCTS

2.1 ROOM DESCRIPTION

- .1 The Dramatic Arts Room 1055 is to be used as a performance and rehearsal space for the students of Jean Augustine Secondary School. The room should be able to be sectioned off by curtains (provided by Board) or the existing dividing wall panels.

2.2 GENERAL

- .1 The space shall have walk-draw tracking systems.

2.3 TRACK

- .1 Track path as indicated in drawings.
- .2 Item: Standard Duty Drapery Track
- .3 Quantity: 2 continuous track sections as indicated on the drawings.
- .4 Length: See drawings

2.4 PRODUCT SPECIFICATIONS

- .1 Standard Duty Curved Drapery Track (walk Draw): All standard duty drapery track located within the facility shall have the following performance criteria:
 - .1 2-1/2" I-beam, with 1" top, intermediate and bottom flanges, extruded from 6063-T5 aluminium
 - .2 24' or greater unspliced in lengths
 - .3 Suspend track on 5' maximum centres with two-piece clamp hanger formed from 11 gauge steel. Provide 2' overlap at center, rigidly separated by two overlap clamps. Where lengths exceed 24', connect tracks with 8" long, two-piece splicing clamp on 8 gauge steel.
 - .4 Provide single carriers, spaced on 12" centers, constructed of two Derlin wheels fastened parallel to formed steel carrier body with swivel hook for attachment of curtain. Attach Nylatron wear strips at contact points between carriers and track to minimize friction and noise. Install two neoprene bumpers between the carriers to further reduce noise.
 - .5 Master carriers shall be two single carrier assemblies joined by a steel pivot body with two cord clamps for anchoring operating line.
 - .6 Black operating line shall be 1/4" diameter, stretch-resistant rope with spun polyester outer jacket double braided or solid polyester core. Cord to be attached to master carrier (s) to allow for easy to walk draw operation.
 - .7 All steel components shall be zinc plated to resist corrosion.
- .2 Screw Pin Shackle
 - .1 Sized to handles 10.1 load safety factor
 - .2 Grade 6 rated
 - .3 Forged – quenched and tempered with alloy pins
 - .4 Workingload limit and grade "6" permanently shown on every shackle
 - .5 Hot dip galvanized or self coloured

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- .6 Fatigue rated
- .7 Shackle can be furnished proof tested with certificates to designated standards such as ABS, DNV, Lloyds, or other certification.
- .8 Approved for use at -40 degree C (-40 degree F) to 204 degree ZC (400 degree F).
- .9 Shackles are quenched and tempered and can meet DNV impact requirements if 42 joules (31 ft. Lbs) at -20 degree (-4 degree F).
- .10 Sizes 1/2f-25t meet the performance requirements of N13889:2003.
- .11 Meets or exceeds all requirements of ASME B30.26.
- .3 Trim Chain
 - .1 All trim chain located within the facility shall have the following minimum performance criteria. Trim chains shall be 24" (600mm) long, made of 1/4" plated, grade 30 Proof Coil chain. The trim chain will have a working load of 500 lbs.
- .4 1/4" Wire Rope Sling:
 - .1 All 1/4" wire rope slings need to include sized to handle 10:1 load safety factor, be terminated on both ends with thimbles and nicropress sleeves. Constructed of 1/4", 6x19 wire rope construction, have Fibre core construction and use Galvanized steel.

PART 3 - EXECUTION

3.1 DRAPERY

- .1 No drapes or curtains are included in this contract. The Peel District School Board is to provide drapes or curtains.

3.2 TRACK

- .1 Curved track to be installed at the outer edge of the room as shown in the drawings. Provide track hangers to be wall mounted. Track carriers to be included for drapery on 12" centres.
- .2 In situations where no adjacent wall is present for mounting (centre of the room) track hangers will be hung and anchored from the ceiling structure above. Holes cut into acoustic ceiling tiles to account for the track hangers should be cut tight to the suspension system. Hole sizes should create hair line seams with suspension system intersection. Any supports required needs to be engineered and included in tender bid.
- .3 Finish craftsmanship of all holes and cut edges created by all anchoring and suspension systems should be smooth.
- .4 Track to be centred on Acoustic Ceiling Panel.
- .5 Track path should not collide or overlap with existing walls, mechanical, or electrical fixtures.

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.6 Dimensions of track path to be measured and verified on site.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Precast Unit Paving 31 14 13

1.3 QUALITY CONTROL

- .1 Testing agency may do any or all of the following as directed by the Consultant in accordance with requirements of Section 01 45 00:
 - .1 Determine at what depth existing soil is capable of supporting fill and superimposed loads without deleterious settlement.
 - .2 Carry out grain size analysis on samples of each type of granular fill to ensure that proper material is being placed.
 - .3 Determine the quantity of water to be added to or removed from each type of fill to attain correct moisture content for compaction and maximum density.
 - .4 Determine the in-site density and moisture content of compacted fills.

1.4 EXAMINATION

- .1 Visit and examine the site and note all characteristics and features affecting the work of this Section. No allowance will be made for difficulties encountered or expense incurred resulting from conditions known or visible at the time of tendering.

1.5 SOIL CONDITIONS

- .1 No soil report will be required but verification to existing conditions in Courtyards A & B are needed.
- .2 Garbage and debris within Courtyards A & B should be removed prior to beginning work. Any material left from previous construction should be removed and disposed (brick, concrete waste, garbage, miscellaneous metals, etc.).

1.6 JOB CONDITIONS

- .1 If excavation reveals unexpected subsurface conditions, advise Consultant immediately.
- .2 Do not place fill material when temperature is at or below 0°C, nor while either fill material or subgrade is frozen.
- .3 Stockpile each type of fill material separately to prevent integration. Stockpile granular materials so as to prevent segregation.
- .4 As much as possible schedule excavation and filling operations during dry periods only.
- .5 Minimize deterioration of subgrade, particularly when operating during unfavourable weather conditions or when working in wet soil. Use special designated traffic lanes, build temporary roads, reduce traffic to half-loads or take other suitable measures.

PART 2 - PRODUCTS

2.1 FILL MATERIAL

- .1 Fill type 1: Clean, hard, durable, crushed rock or stone, free of shale, clay, organic matter or other deleterious substances: Granular 'A', OPSS 1010.
- .2 Fill type 2: Clean, hard, durable aggregate free of shale, clay, organic matter or other deleterious substances: Granular 'B', Type 1, OPSS 1010, fill used below slabs on grade shall be modified to ensure that 100% passes 50 mm sieve.
- .3 **Fill type 3: Native selected, soil, excavated on this site, provided moisture content of fill is controlled and provided fill is capable of being compacted to required density; free of organic matter, roots, debris, stones larger than 50 mm diameter and free of other deleterious matter.**
- .4 Fill type 4: Granular or sandy material: OPSS 1010.05.04 "Select Subgrade Material."
- .5 Fill type 5: clean sand.
- .6 Moisture content of fill shall be within 2% of the Optimum Moisture Density Test (ASTM D698).
- .7 Obtain all fill materials from sources approved by Consultant.

PART 3 - EXECUTION

3.1 ROUGH GRADING

- .1 Cut and fill to levels required for paved, sodded and landscaped areas. Make allowance for depth of finishes and base courses.
- .2 Remove boulders and cobbles where encountered.
- .3 Establish and maintain line and grade stakes for duration of grading operations.
- .4 Conform to grades and contours indicated. Uniformly slope grade between elevations shown unless otherwise indicated. Provide slopes in accordance with the following requirements:
 - .1 Driveway Grades: min. 2.0% max 4.0%
 - .2 Parking Lot Grades: min. 2.0%
max. 3.0% perpendicular to parking bay
max. 4.0% parallel to parking bay
 - .3 Sidewalks: min. 2.0% crossfall, max 3.5% crossfall
 - .4 Soft Landscaped Areas: min. 2.5%, max 25%
 - .5 Drainage Swales: min. 0.5% (preferably 1.0%)
- .5 Smoothly slope top and toe of slopes and banks.
- .6 Excavate and remove existing soft soil fill below paved areas.

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ROUGH GRADING

- .7 Compact existing subgrade below paved areas from the surface to 98% SPMDD. Subexcavate loose, soft and excessively wet areas and areas containing organic material, and fill with suitable fill compacted to 98% SPMDD.
- .8 Establish subgrade parallel to the finished grades indicated and shape in such a manner to permit drainage. Shape subgrade below paved areas to drain to perimeter drains or catch basins.
- .9 Fill, where required, in accordance with requirements for backfilling specified below.
- .10 Grade areas to a tolerance of ± 75 mm.
- .11 Provide the following fill materials:
 - .1 Below paved areas Type 3 or 5.
 - .2 Below sodded, landscaped areas: Type 3.
- .11 Place fill materials in layers not exceeding 300 mm uncompacted thickness and compact each layer providing the following minimum densities:
 - .1 Below paved areas: 98% SPMDD.
 - .2 Below landscaped, sodded areas: 95% SPMDD.
- .12 Remove and replace fill until compaction test reports by the independent inspection agency are satisfactory to the Consultant.

3.2 COMPLETION

- .1 Upon completion, remove all surplus excavated and graded materials from the site, and leave site clean and tidy.

END

PART 1 - GENERAL

1.1 RELATED WORK

- .1 Rough Grading: Section 31 22 13

1.2 SUBMITTALS

- .1 Submit sample of precast unit specified.

1.3 JOB CONDITIONS

- .1 Lay base course when weather is dry and only on dry substrate and only when ambient temperature is above 0° C.
- .2 Ensure subgrade is smooth and profile conforms to finished grade.

1.4 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM C 117-04, Standard Test Method for Materials Finer Than 75-[mu] m (No. 200) Sieve in Mineral Aggregates by Washing.
 - .2 ASTM C 136-06, Standard Method for Sieve Analysis for Fine and Coarse Aggregates.
 - .3 ASTM 902-10, Standard Specifications for Pedestrian and Light Traffic Paving Brick.
 - .4 ASTM D 698-07, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft0lb/ft³ (600kN-m/m³).
 - .5 ASTM C 902-10, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft0lb/ft³ (2,700kN-m/m³).
- .2 Canadian General Standards Board (CGSB).
 - .1 can/cgsb-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
 - .2 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wie, Metric.
 - .3 Canadian Standards Association (CSA International)
 - .1 CSA A23. 1/A23.2-09, Concrete Materials and Methods of Construction/Methods of Test for Concrete.
 - .2 CSA-A231.1-06, Precast Concrete Paving Slabs.

1.5 SUBMITTALS

- .1 Submit following product test data:
 - .1 Unit paver test data.
- .2 Submit full size sample of each type and colour of paving unit.

PART 2 - PRODUCTS

1.6 MATERIALS

- .1 Mantoulin Curbing by Stoneline (905 mm x 180 mm x 150 mm) for Courtyard A.
- .2 Courtyard Precast Unit pavers: Uniform material, colour, size and from one manufacturer, to CSA-A231., plain face. Colours from a standard pallet from the manufacturer Unilock – Hollandstone and Umbriano series. Colour samples to be supplied for approval.
 - .1 Submit samples of precast pavers for approval.
 - .2 Type 1 (Courtyard A and Courtyard B main pavers): Umbriano – Summer Wheat (400 mm x 400 mm x 70 mm paver size)
 - .3 Type 2 (Courtyard A and Courtyard B edging and accent pavers): Series 3000 - Black Granite (100 mm x 200 mm x 70 mm paver size).
- .3 Courtyard Base: Crushed stone or gravel base: consisting of hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious material.
 - .1 Gradations: to OPSS 1010 Granular A

PART 3 - EXECUTION

3.1 COURTYARD PRECAST PAVERS PREPARATION

- .1 PROTECTION
 - .1 Prevent damage to buildings, landscaping curbs, sidewalks, plant beds. Make good any damage.
 - .2 Provide access to building at all ties. Coordinate paving schedule to minimize interference with normal use of premises.

3.2 COURTYARD SUBDRAINAGE

- .1 Ensure that subgrade preparation conforms to levels and compaction required to allow for installation of granular base.
- .2 Remove and dispose of topsoil, organic soils, fill and other components as required to accommodate precast paving.
- .3 Compact subgrade to minimum 98% Standard Proctor Density per ASTM D 698.

3.3 COURTYARD GRANULAR BASE

- .1 Base minimum compacted thickness: 200 mm or as indicated on drawings.
- .2 Spread and compact crushed stone or gravel base in uniform layers not exceeding: 100 mm compacted thickness.
- .3 Compact and roil alternately to obtain smooth, even and uniform compacted granular base

and ensure conformity of grades with finish surface.

- .4 Shape and roll alternately to obtain smooth, even and uniformly compacted granular base and ensure conformity of grades with finish surface.
- .5 Apply water as necessary during compaction to maintain the optimum moisture content and obtain specified density. If granular base is excessively moist, remove it and install more granular material to rid it of sponginess.
- .6 In areas not accessible to rolling equipment, compact to specified density with approved mechanical tampers.
- .7 Ensure top of granular base does not exceed plus or minus 6 mm over 3 m straightedge.

3.4 BEDDING SAND

- .1 Place and spread bedding sand to 30 mm compacted thickness or as indicated on drawing.
- .2 Maximum thickness after compaction: 30 mm.
- .3 Use material other than bedding sand to compensate for depressions that exceed specified tolerances in surface of base.
- .4 Do not use joint sand for bedding sand.

3.5 SURFACE COURSE

- .1 Ensure bedding sand and granular base are not saturated prior to placement of unit pavers.
- .2 Install unit paving true to grade on the bedding sand, in location layout and pattern as indicated.
- .3 Where required, cut units accurately without damaged edges.
- .4 Pre-Compact bedding sand maybe required prior to setting precise concrete paving slabs due to large sizes or pavers.
- .5 Precast concrete paving slabs.
 - .1 Install paving slabs with 3mm wide joints.
 - .2 Compact and level slabs with min. 22 kN force mechanical plate vibrator use minimum 19 mm thick plywood or neoprene pad under plate compactor and over slabs until units are true to grade and free of movement.
 - .3 Do not compact unit paving within 1 m of unrestrained edges.
 - .4 Fill spaces between pavers by sweeping in sand.
 - .5 Pass mechanical plate vibrator over until paving to achieve compaction of sand in joints. Ensure joints are full at completion of compaction.
 - .6 At completion of each work day, ensure work within 1 m of laying face is left fully compacted with sand filled joints.
 - .7 Surface of finished pavement: free from depression exceeding 3mm as measured

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PRECAST UNIT PAVING

with 3 m straight edge.

3.6 **CLEANINUP**

- .1 Sweep surface clean and check final elevations for conformance to drawings.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Rough grading: Section 31 22 13

1.3 DEFINITIONS

- .1 "Compost" A mixture of soil and decomposing organic matter used as a fertilizer, mulch, or soil conditioner. Compost is processed organic matter containing 40% or more organic matter as determined by the Walkley-Black or LOI test. Product must be sufficiently decomposed (i.e. stable) so that any further decomposition does not adversely affect plant growth (C.N ratio below (25) (50)), and contain no toxic or growth inhibiting contaminants. Composed bio-solids must meet the requirements of the Guidelines for Compost Quality, (Category (A) (b) produced by the Canadian Council of the Ministers of the Environment (CCME), January 1996.
- .2 "Planting mix" consists of placing and spreading topsoil to the depths specified, for planter areas.
- .3 "Fine Grading" consists of shaping and smoothing the planting mix surface to the finished grades, eliminating surface irregularities, to achieve a smooth even surface and consistent depth.
- .4 "Fertilizing" consists of applying and working, the specified fertilizer into the soil profile.
- .5 "Raking Out" consists of hand raking areas to remove minor surface irregularities.
- .6 "Imported Planting Mix: Submit nutrient analysis, acidity analysis and herbicide residue (known as "Garden Package") analysis for topsoil obtained off site. Testing should be carried out by the soil supplier. The contractor is to warrant that the planting mix supplied to the site is that from which representative samples were taken.
- .7 Planting mix shall be tested by an approved prior to delivery to site. All planting mix must conform to the sample provided.

1.4 QUALITY ASSURANCE

- .1 Test reports: certificated test reports showing compliance with specified performance characteristics and physical properties.
- .2 Planting mix shall be tested for N.P.K, minor elements, acidity (pH), herbicide, atrazine (only for important topsoil), organic matter content, clay/silt/sand/gravel composition or texture, and fertilizer requirements.
- .3 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .4 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation Instructions and warranty requirements.
- .5 Contractor shall pay for all testing and retesting costs, as well as any remedial additives and

action requires to conform to the soil profile specified.

1.5 SITE CONDITIONS

- .1 Do not proceed with any work under this section without the consultant's prior approval of the sub grade.
- .2 Do not proceed with spreading or fine grading of planting mix when the site or material is saturated or wet.
- .3 Do not proceed with work unless all garbage and debris has been removed from the planters placed there during the original construction and the subgrade has been scarified.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Do not dispose of unused soil amendments into sewer systems, into streams, onto ground or in locations where it will pose health or environmental hazard.

PART 2 - PRODUCTS

2.1 SOURCE QUALITY CONTROL

- .1 Advise the Consultant of sources of imported planting mix proposed to be utilized with sufficient lead time for testing.
- .2 Contractor is responsible for amendments to supply planting mix as specified.

2.2 PLANTING MIX

- .1 Provide the following planting soil mixture thoroughly mixed and shredded to a fine, even texture.
 - 1 parts sandy black loam
 - 1 part well rotted manure
 - 1 part peat moss

- OR -

Triple Mix
- .2 Planting mix shall contain the following:
 - .1 Topsoil: Black fertile and friable sandy loam with minimum 4% organic matter content prior to mixing, with acidity value between pH 6.0 and 7.5, free from admixtures of subsoil, clay pumps, stones or roots over 50mm in diameter, free from toxic substances or any other foreign matter which would inhibit growth. Soil to be finely screened.
 - .2 Manure: well rotted, unleached sheep manure not less than 8 months and no more than 2 years old, free of harmful chemicals and injurious substances.
 - .3 Peat Moss: Partially decomposed fibrous or cellular stems of sphagnum mosses with porous to spongy fibrous texture and with a pH ranging from 4.5 to 6.0. The peat moss shall be supplied shall be free of decomposed colloidal residue, wood sulphur

and iron and shall be finely shredded into particles not larger than 6mm.

- .4 Bonemeal: Commercial, clean bonemeal, finely ground and containing a minimum 5% nitrogen and 20% phosphoric acid.
- .5 Fertilizer: Inorganic, complete fertilizers containing not less than 60% area-formaldehyde.

PART 3 - EXECUTION

3.1 SURFACE PEPARATONS

- .1 Scarify the rough grade, to a depth of 100 mm prior to placement of planting mix.
- .2 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage.

3.2 PLACING AND SPREADING OF PLANTING MIX

- .1 Place planting mix in planter areas in sufficient quantity to allow for a finished and compacted depth of 450mm.
- .2 Compaction for planter areas is to be 85% S.P.S., consistent throughout the areas.

3.3 FERTILIZING

- .1 Add fertilizer in accordance with soil analysis report and bonemeal at 2.2 kg per m³.
- .2 Apply fertilizer of the specified ratio and rate and thoroughly work into the planting mix.

3.4 FINISH GRADING

- .1 Fill planters level with the top of the concrete or precast planter edge to allow for settlement.
- .2 The finished surface is to be smooth and even raked finish.
- .3 Prepare loose friable bed by means of cultivation and subsequent raking.

3.5 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Rough grading: Section 31 22 13
- .2 Precast Unit Paving Section 32 14 13

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Flexible pipe: Big "O" 404, perforated flexible pipe with filter wrap, 100 mm diameter, unless otherwise shown: by the Bid "O" Drain Tile Co. Ltd.
- .2 Drainage course aggregate: screened pea gravel 6 to 13 mm or 19 mm clear stone.

PART 3 - EXECUTION

3.1 LAYOUT

- .1 Establish grades and inverts from appropriate bench marks. Lay out lines as shown on Drawings. Existing subdrainage versus additional subdrainage noted on drawings.
- .2 Slope drainage pipes at least 0.1%. Pipe grade shall not vary more than 10% of internal diameter of drain pipe within a given run. Such deviation shall be gradual and over a distance of not less than 10 m.
- .3 Lay pipe in straight lines; turn corners using 45 degree bends.

3.2 INSTALLATION: GENERAL

- .1 Coordinate work of this Section with that of Section 31 22 13.
- .2 Do not place pipe in direct contact with rigid materials such as rock, brick, wood. Do not use grade stakes, stones, masonry or concrete fragments or any type of shim under pipe.
- .3 Join pipe sections by means of snap, insert or split couplings. Provide end plugs on open ends of pipe runs at high points. Provide fittings such as elbows, bends, tees, adapters, reducers, as required to form a complete drainage system.
- .4 Install perforated pipe with holes and coupling slots facing down.
- .5 Aggregate materials shall be damp when placed. If necessary, spray with water using fog nozzle to assist hydraulic consolidation.
- .6 Place aggregate materials by hand around and above pipe in successive 150 mm lifts. Consolidate each lift by tamping moderately; prevent damage to pipes.
- .7 Do not cover pipes until inspected and approved by Consultant.
- .8 Connect drainage pipes to storm drainage system as indicated.

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SUBDRAINAGE

3.3 FLEXIBLE PIPE DRAINAGE SYSTEM

- .1 Provide minimum 300 mm wide trenches. Place minimum 100 mm thick aggregate bedding at bottom of trench.
- .2 Place drainage pipe on top of bedding and inspect filter wrap to ensure that it is not damaged.
- .3 Backfill trench with drainage course aggregate and compact; avoid damage to pipe. Surround drainage pipe with minimum 100 mm thick drainage course aggregate.

3.4 SCHEDULE

- .1 Provide subdrainage at the following locations.
 - .1 Where shown in drawings.

END