

**Township  
of  
Oro-Medonte**

**Community Halls Renovations**

**for  
Carley Community Hall,  
Eady Community Hall,  
Hawkestone Community Hall  
and  
Jarratt Community Hall**

**ARCHITECTURAL SPECIFICATIONS**

**148 Line 7 South  
Twp. Oro-Medonte, Ontario**

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May 2019

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**INVITATION:**

**The Corporation of the Township of Oro-Medonte**

TOWNSHIP OF ORO-MEDONTE  
BID NO. OCS2019-10

SEALED BIDS, with the submission label **“TOWNSHIP OF ORO- MEDONTE BID TENDER OCS2019-10”** affixed to your envelope, shall be stamped and received by the Township of Oro-Medonte, 148 Line 7 South, Oro, ON L0L 2E0, no later than (14:00:00 hours) 2:00:00 p.m. local time, on Thursday June 27, 2019.

TOWNSHIP OF ORO-MEDONTE  
ORO-MEDONTE COMMUNITY HALLS – RENOVATIONS

*Proposed renovations to four existing Community Halls in Carley, Eady, Hawkestone and Jarratt to include but is not limited to work as described on the accompanying Tender Documents with the purpose of upgrading these facilities to meet the requirements of the Ontario Building and Fire Code.*

**A MANDATORY BIDDERS ATTENDANCE SITE MEETING will be held at the  
Township Offices at  
148 Line 7 South, Oro, ON, (meet in the Front Entrance Lobby)  
10:00:00 a.m. Tuesday, June 18, 2019.**

Tender packages are available on the Township of Oro-Medonte website [www.oro-medonte.ca](http://www.oro-medonte.ca) and Biddingo [www.biddingo.com](http://www.biddingo.com).

Bidders should address any discrepancies, errors and/or omissions in the Bid Document, or if they be in doubt as to any part thereof, to the following parties:

Robert Mitchell or Mark Milne  
Davenport Architectural Corp  
705-718-2465 / 705-722-4899  
office@davenportgroup.ca

**or**

Shawn Binns, Operations and Community Services  
Township of Oro- Medonte  
705-487-2171 ext 2127  
[sbinns@oro-medonte.ca](mailto:sbinns@oro-medonte.ca)

The Corporation of the Township of Oro-Medonte reserves the right to accept or reject any option, and also reserves the right to accept other than the lowest Bid and to cancel this Call for Bids at any time.

## 1.0 **DEFINITIONS:**

The following definitions apply to the interpretation of the Bid Documents:

1. **“Addenda or Addendum”** means such further additions, deletions, modifications or other changes to any Bid Documents.
2. **“Bid Documents”** means collectively all of the documents comprising the Call for Bids, namely Part I to VII, inclusive.
3. **“Bid or Bid Form”** means the Bid in the form prescribed by these Bid Documents and completed and submitted by a Bidder(s) in response to and in compliance with the Call for Bids and the Bid Documents and for the purpose of entering into the Contract with the Owner in the event of award.
4. **“Bid Irregularities”** means any Bid that has a Bid Irregularity describes in Part I, Instructions to Bidders, shall be dealt with in compliance with Procurement By-law Number 2004-112
5. **“Bid Security and Contract Security”** means the Bid Security documentation referred to and described in Part I, Instructions to Bidders.
6. **“Bidder”** means the legal entity submitting a Bid or Bid Form.
7. **“Call for Bids”** means the Call for Bids on the terms and conditions set forth in the Bid Documents.
8. **“Closing Time”** means the time specified in Part 1, Instructions to Bidders, Section 1, by which all Bid submissions shall be received and stamped by the Owner.
9. **“Contract”** means the agreement in writing governing the Supply and Services, which has been executed by the Owner and successful Supplier following acceptance by the Owner of the successful Bid submission.
10. **“Council”** means the elected Council for the Township of Oro-Medonte.
11. **“Owner”** The Corporation of the Township of Oro-Medonte, as the case may be, and as identified in the Call for Bids, and Bid Documents and for the purpose of the award and execution and performance of the Contract shall mean the entity awarding the Contract.
12. **“Responsible Bidder”** means a Bidder whose reputation, past, performance, and business and financial capabilities are such that the Bidder would be judged by appropriate authority to be capable of satisfying an organization’s needs for a specific contract. See Award - Consideration for Award.
13. **“Responsive Bidder”** means a Bidder whose Bid does not vary from the specifications and terms set out in the invitation for Bids.
14. **“Sub-Contractor”** means a legal entity approved by the Owner undertaking the execution of a part of the Work pursuant to an agreement with the Bidder, and includes both “brokers” and “subcontractors”.
15. **“Supplier”** means the successful Bidder to whom the Contract is awarded and undertaking the execution of the Contract.
16. **“Supply”** means to Supply the necessary tools, material, equipment, and product to satisfy the Bid requirements.
17. **“Work”** means Work/service performed to meet a demand to comply with the conditions of the Contract, delivery dates, specifications and technical assistance.
18. **“Working Day”** means Monday thru Friday inclusive by excluding Saturday and Sunday and any recognized Statutory holiday.

\*\*\*END OF SECTION\*\*\*

## **1.0 INSTRUCTION TO BIDDERS**

### **1.1. BID CLOSING TIME**

1.1.1 The Bid Form, sealed with the submission referencing Tender **OCS2019-10** affixed to your envelope, shall be received; date and time stamped, and be in the possession of The Corporation of the Township of Oro-Medonte, no later than 2:00 p.m. (14:00:00 hours) local time, on the specified closing date. Late bids shall not be accepted; however, they shall be time and date stamped and returned to the Bidder unopened.

1.1.2 The Corporation of the Township of Oro-Medonte Bid Recording Clock determines the Closing Time of the Bid Call.

### **1.2. BID PREPARATION AND SUBMISSION**

1.2.1 All Bids shall be submitted in the Bid format provided by the Owner in the Bid Documents.

1.2.2 Bids delivered in person or by a courier service, without a reference to the specified tender on the envelope, or if the Bid fails to be delivered to the designated location by the Bidder or courier service may be rejected. Bids that are not delivered on time shall result in the Bid being rejected. Bid Forms submitted and received by facsimile shall not be accepted and shall result in the Bid being rejected.

1.2.3 Courier Service Delivery of the Bid submission Envelope/Package through a Courier Service shall be the responsibility of the Bidder and shall result in the submission being rejected where;

- 1) Bid submission Envelope/Package is delivered to a location other than which is stated on the envelope/package and fails to be delivered to the Township of Oro-Medonte prior to the closing date and time; and/or
- 2) Bid submission Envelope/Package which is enclosed in the Courier Envelope that does not state, "BID DOCUMENT ENCLOSED" and is not removed from the Courier's Envelope prior to the closing date and time; and/or
- 3) Bid submission Envelope/Package is delivered later than the closing date and time.

1.2.4 Amendments by telephone, facsimile, email or letter to a Bid or Bid Form already submitted shall not be accepted or considered.

1.2.5 The Bid Form shall be signed in the space(s) provided by a duly authorized official of the entity bidding. If a joint Bid is submitted, it shall be signed on behalf of each of the Bidders and if the signing authority for both Bidders is vested in one individual, he/she shall sign separately on their behalf. Signatures on behalf of non-incorporated bodies or by individuals shall be witnessed. In the case of an incorporated company, the corporate seal should be affixed to the Bid Form adjacent to the authorized signature.

### 1.3. BID SECURITY & CONTRACT SECURITY

#### 1.3.1 BID BOND/DEPOSIT (TO BE INCLUDED WITH BID)

The Bidder shall provide a Bid Bond or a Certified Cheque in the amount of 10% of the Total Stipulated Price. The Bid Deposit shall be procured by, and at the expense of the Bidder. The Bid Deposit shall be forfeited to the Owner if the Bidder declines to enter into a formal contract in the amount tendered, or as adjusted according to the separate prices included in the tender if the Bidder is awarded the contract. Bonding shall be provided only by a Surety licensed and qualified to function in the Province of Ontario

#### 1.3.2 AGREEMENT TO BOND

This Tender does not required an Agreement to Bond for either a Performance or Labour and Material Bond.

### 1.4. WITHDRAWAL OF BIDS

#### 1.4.1 Open to Acceptance

Each Bid is irrevocable and shall be open to acceptance by the Owner until the successful Supplier executes the formal Contract or until sixty (60) Working days after the Closing Time, whichever event occurs first. The Owner may at any time within that period, without notice, accept a Bid whether any or any other Bid has been previously accepted or not

#### 1.4.2 Withdrawal of Bids Prior to Bid Closing

- 1) A Bidder may request that their Bid be withdrawn prior to the Closing Time on the date of the Call for Bids. Withdrawal requests shall be directed to the Director, Recreation and Community Services or designate, on the Bidder's stationery, by letter, telegram, and facsimile or in person.
- 2) Telephone requests shall not be considered.

#### 1.4.3 Withdrawal of Bids during Bid Opening

- 1) In some instances, multiple Bids for various projects are closed and opened on the same day. If a Bidder has submitted bids for several projects opening on the same day, and their Bid is the lowest on a particular project, he/she may withdraw any of their remaining bids, for projects not yet opened. A Bid may only be withdrawn by the low Bidder at the conclusion of reading out of the existing bid and prior to the commencement of the opening of the next Bid call. If more than one Bid is read out under the same name for the same Contract and no withdrawal notice has been received, the Bid contained in the envelope bearing the latest date and time shall be considered the intended Bid. The first Bid received shall be considered withdrawn and returned to the Bidder.

### 1.5. BID OPENING

#### 1.5.1 Bid Opening

- 1) Bids shall be opened after the Closing Time. The Bidders Name and the Unofficial Total Bid Price shall only be read out at the Bid Opening. The unofficial results of the three (3) lowest Bids will be available the following day.

1.5.2 Action on "Unknown" Bids at Bid Opening

1) Bid submissions that do not have the BID NUMBER/PROJECT DESCRIPTION on the envelope shall be opened and placed with the appropriate Bid.

1.5.3 Additional Information

1) Additional information, other than what is requested in the Bid, shall be placed in a separate envelope/or package and marked, "ADDITIONAL INFORMATION" and attached to the outside of the Bid envelope. The Additional Information submitted in the manner described above, may or may not be taken into account by the Owner during the evaluation of the Bids. Additional Information envelope/package "shall not" be opened in public.

1.6. BID IRREGULARITIES

1.6.1 The following Bid Irregularities shall be dealt with as follows:

1) Item Description Action:

- a. Late bids. Automatic rejection
- b. Bids submitted in other than the Original Bid Form Format. Automatic rejection
- c. Bid completed in other than in ink or in a typed format (no photocopies).  
Automatic rejection
- d. Bids not complete. Automatic rejection
- e. Addendums not acknowledged. Automatic rejection unless every change set out in the addendums issued is clearly visible on the bid submitted OR the relevant addendum issued is solely for the purpose of revising a closing date. Two (2) working days will be given for initialling.
- f. Bidders not attending mandatory site meeting. Automatic rejection.
- g. Alterations, additions, deletions or qualifying statements made to or provided with the Bid Form. Automatic rejection
- h. Strikeouts, erasures or overwrites not initialled by an authorized person.  
Automatic rejection if it relates to a price on the bid form. Two (2) working days will be given for initialling in other instances.



1.7. CHECKING OF BIDS

1.7.1 Bids opened are checked by the staff to ensure that;

1. The required security, as required, is properly executed and equal to the Bid requirements.
2. All Bids submitted shall comply with the Bid Documents. All Bid Irregularities shall be dealt in the manner described in the Bid Document.
3. All arithmetic extension calculations are correct.
4. Where there is an obvious error in the extended price the unit price stipulated shall govern and shall be calculated accordingly with the estimate quantity. For greater certainty, any failure by a Bidder to insert a unit price where required shall be deemed to be a \$ "0" value.
5. All items as specified have been Bid on.
6. No claims or litigation proceedings have been instituted by the Bidder or in turn by the Owner to the Bidder.
7. In any of the above circumstances where there are obvious or patent errors such as misplaced decimals, the Owner shall consider the intent of the Bidder.

1.8. AWARD

1.8.1 Contract award shall be communicated by written notification from the Owner to the successful Bidder.

1.8.2 The Bidder acknowledges that the Owner shall have the right to reject any, or all, Bids for any reason, or to accept any Bid, which the Owner in its sole unfettered discretion deems most advantageous to itself. The lowest, or any, Bid shall not necessarily be accepted. All Awards are subject to the approval of Committee, Council (if applicable) and the availability of funds.

1.8.3 Consideration for award

1. Consideration for Award shall only be undertaken in relation to Bidders who are determined by the Owner to be a Responsible Bidder, and has satisfied all Bid Requirements.

1.8.4 Owner hereby reserves the right, privilege, entitlement and absolute discretion, and for any reason whatsoever to:

1. Accept a Bid, which is not the lowest Bid submission, or reject a Bid that is the lowest Bid even if it is the only Bid received;
2. Cancel this Call for Bids at any time, either before or after the Closing Date /Time;
3. Accept the Bid deemed most favourable to the interests of the Owner or that may provide the greatest value advantage and benefit to the Owner based upon and not limited to:
  - a. Price
  - b. Manufacturer product
  - c. Ability
  - d. Quality of Work (guarantees and warranties)
  - e. Service (service depot location)
  - f. Past experience
  - g. Past performance
  - h. Completion history (including extended completion dates)
  - i. Qualification
  - j. Accept or reject any and all Bids, whether in whole or in part

4. With the exception of Part I, Instructions to Bidder, “Bid Irregularities”, waive any informalities, requirements, discrepancies, errors, omissions, or any other defects or deficiencies in any Bid Form or Bid submission;
  5. Award any part of any Bid;
  6. Accept or reject any unbalanced, irregular, or informal Bids; or  
Reject any Bidder who is involved in litigation with the Corporation of the Township of Oro-Medonte
  7. Reject any Bidder who was a Consulting firm involved in preparing or assisting in developing the scope of work and/or specifications for the respective project.
- 1.8.5 The Owner reserves the right to consider, during the evaluation of Bids:
1. Information provided in the Bid itself;
  2. Information provided in response to enquiries of credit, experience and industry references set out in the Bid;
  3. Information received in response to enquiries made by the Owner of third parties apart from those disclosed in the Bid in relation to the reputation, reliability, experience and capabilities of the Bidder;
  4. The manner in which the Bidder provides services to others;
  5. The experience and qualification of the Bidder’s senior management, and project management;
  6. The compliance of the Bidder with the Owner’s requirements and specifications; or
  7. The Bidder acknowledges that the Owner may rely upon the criteria, which the Owner deems relevant; even through such criteria may not have been disclosed to the Bidder. By submitting a Bid, the Bidder acknowledges the Owner’s rights under this Section and absolutely waives any right, or cause of action against the Owner and its consultants, by reason of the Owner’s failure to accept the Bid submitted by the Bidder, whether such right or cause of action arises in Contract, negligence, or otherwise.
- 1.8.6 Verification of Safety Performance
1. Bidders for consideration of possible contract award shall be required to submit a recent copy of their NEER or CAD-7 Statement upon request.
- 1.8.7 Award to one or more Bidders
1. The Owner reserves the right to award the Contract in its entirety or in part, to one or more Bidders, in accordance with the Bid Call, where more than one primary Supplier is provided for.
- 1.8.8 Bidder Profile
1. A Bidder shall submit, in addition to any information required to be included in a Bid Form submission, if requested, evidence of experience, ability, quality of Work service, past experience, and qualifications necessary to meet satisfactorily the requirements set forth or implied in the Bid Documents.
- 1.8.9 Approvals
1. The Bidders acknowledge that the Work, or portions thereof, are subject to the procurement and issuance of certain permits, authorizations, licenses, easements and other approvals (the Approvals) as may be required from third parties, including applicable government agencies, under applicable laws, statutes & regulations in order to commence and perform the Work. In the event, and to the extent, any such Approvals are not issued in order to permit commencement or performance of the Work, the Owner reserves the right to either:

- a. Not award the Contract and cancel the Call for Bids; or
- b. Award the Contract in whole or in part, subject to the right of the Owner to cancel all or part of the Contract at any time after award in the event any required Approvals cannot be obtained; or
- c. Delay the consideration of the award of the Contract until such time as the required Approvals have been obtained.

1.9. EXECUTION OF CONTRACT UPON AWARD

1.9.1 The Successful Bidder, if any, in the presence of the Clerk and Mayor or designate, shall sign the Contract Agreement (CCDC-2) in triplicate (3), within seven (7) Working Days of written notification of acceptance. Should the Awarded Bidder either; attempt to withdraw their Bid Form submission, or fail to or refuse to execute the Contract and/or provide the necessary documentation, within the time specified, the successful Bidders' Bid Security shall be forfeited and retained and applied for use by the Owner. The following documents, as listed, shall be submitted prior to or at the time of signing:

- a. Owners Standard Insurance Certificate Form (attached in Appendices, shall be sent or faxed to the Owner by the Insurance Company directly)
- b. Contract Security – None Applicable
- c. A current copy of the Workplace Safety and Insurance Certificate of Clearance (shall be sent or faxed to the Owner by WSIB directly)

1.10. BIDDER'S STATEMENT OF UNDERSTANDING

1.10.1 It is understood that the Bidders have carefully examined all of the Bid Documents and have carefully examined the Work to be performed under the Contract if awarded. The Bidder also understands and accepts the said Bid Documents, and for the prices set forth in the Bid, hereby offers to furnish all labour, machinery, tools, apparatus and other means of implementation, and materials to complete the terms and conditions and requirements in strict accordance with the Bid Documents.

1.11. ERRORS AND OMISSIONS

1.11.1 No oral interpretation shall be effective to modify any provisions of these Bid Documents. Any modification or clarification shall be by written Addendum only issued by the Township of Oro-Medonte. The Addendum(s) shall form part of the Bid Documents.

1.12. PRICE COMPONENTS

1.12.1 Taxes

1. The Owner is subject to payment of Harmonized Taxes (excise and H.S.T.) taxes imposed by the Provincial and Federal Governments. Should there be any approved variation in any tax or duty imposed by the Province of Ontario or the Government of Canada, which becomes directly applicable to the goods/services to be purchased or provided during the term of this Contract, the Bidder and the Owner mutually agree to allow the appropriate increase or decrease in the prices as of the date they become effective. The onus is on the Bidder to bring to the Owner's attention any such changes.
2. The Bidder shall allow in their prices for all Sales Taxes that they may be required to pay on materials and equipment to be utilized or expended in the construction of the Works. Exception being; where the Bidder is in the position to claim for Sales Tax Rebate on the material used. It is the Bidder's responsibility to obtain up-to-date directives.

1.12.2 Transportation and Delivery Charges

1. Prices documented shall be net prices including transportation and delivery charges fully prepaid by the Bidder to any specified destination within the corporate limits of the Owner, unless a breakdown is requested on the Bid Form.

1.13. SET OFF CLAUSE

1.13.1 The Supplier hereby agrees that any monies owing to the Owner may at any time be set-off against but not limited to, any property taxes (or any penalties and/or interest thereon) owing at the time such monies become due and payable to the Supplier.

1.14. FREEDOM OF INFORMATION

1.14.1 All Bids submitted to the Owner become the property of the Owner and as such, are subject to the "Municipal Freedom of Information and Protection of Privacy Act."

1.15. ACCESSIBILITY

1.15.1 The development of strategic actions to remove (where possible) and prevent barriers to access for people with disabilities. The Ontarians with Disabilities Act, 2001 and the Corporate Accessibility Plan require that when deciding to purchase goods or services, Building Construction and equipment, the Owner is to have regard to the accessibility for persons with disabilities to the goods or services. As such, the Owner is committed to accessibility principles and is taking steps to improve accessibility within the Township in accordance with the Act.

1.15.2 Contracted Employees, third party employees, agents and others which provide customer service on behalf of the Township of Oro-Medonte are legally responsible with the provisions outlined in Ontario Regulation 429/07 with respect to training. The Contractor shall ensure that such training includes, without limitation, a review of the purposes of the Act and requirements of the regulation, as well as instruction regarding all matters set out in the regulation. By signing the Form of Tender, the contractor has agreed to be in full compliance with this regulation. Additionally the Contractor will review and acknowledge the Township Of Oro-Medonte policy for Accessible Customer Service.

1.16. "GREEN" PROCUREMENT POLICY

1.16.1 The Owner's goals and objectives will be proactive with regard to protecting the environment. The Owner encourages "Best Value Purchasing" of environmentally friendly products, services, material and equipment. "Best Value Purchasing" allows the Owner to incorporate a broader variety of considerations, including performance and environmental attributes, when evaluating bid submissions.

1.17. BRIBERY/FRAUD

1.17.1 Should any prospective Bidders or any of their agents give or offer any gratuity or to attempt to bribe any employee of the Township of Oro-Medonte, or to commit fraud, the Owner shall be at liberty to cancel the prospective Bidder's submission or Contract and to rely upon the Contract Surety submitted for compensation if applicable.

1.18. CANCELLATION

1.18.1. In the event the successful Supplier does not comply with the specifications, terms and conditions, and scope of the Document, at any time throughout the duration of the Contract, the Contract shall be cancelled in accordance with the terms contained herein.

1. The Contract may be cancelled by the Owner upon non-performance of Contract terms; however, in doing so, the Owner does not waive its right to rely upon any obligations or commitments agreed to by the Supplier as part of their Contract. The

Supplier remains liable for the difference between the next acceptable Contract of goods and/or service Bid prices.

2. Where there is a question of non-performance, payment in whole or in part may be withheld at the discretion of the Owner. This action shall not prevent the Owner from taking early payment discounts otherwise applicable.
3. If the Work/Service is incomplete the Owner reserves the right to draw from the Contract surety to complete the said Work/Service to the Owner's specifications.

#### 1.18.2 Eligibility to Bid

1. The Owner reserves the right to remove from future eligibility to submit bids to the Owner, any Bidder that is in breach of its obligations.

### 1.19. EVALUATION OF PERFORMANCE

1.19.1 Upon completion of the Contract, the Owner may complete an evaluation of the Suppliers' performance. A copy of this evaluation may be given to the Supplier. The evaluation shall be placed on file. This information may be made available to persons requesting Owner references for the Supplier and also may be reviewed and may form part of the criteria when awarding future bids by the Owner. The Supplier hereby authorizes the maintenance and release of this information.

### 1.20. INSURANCE

1.20.1 The Contractor upon award of the contract shall at its own expense obtain and maintain Insurance until the termination of the contract, with insurers acceptable to the Owner, the following insurance, and provide evidence thereof:

1. Comprehensive general liability insurance on an occurrence basis for an amount of not less than Five Million Dollars (\$5,000,000) and shall include the Owner, The Corporation of the Township of Oro-Medonte, as an Additional Insured with respect to the Contractor's operations, acts and omissions relating to its obligations under this Agreement, such policy to include, but not be limited to, non-owned automobile liability; personal injury; broad form property damage; blanket contractual liability; owners and contractors protective liability; products and completed operations liability; contingent employers' liability; and, cross liability and severability of interest clauses.
2. Automobile liability insurance for an amount not less than Two Million Dollars (\$2,000,000) on forms meeting statutory requirements covering all licensed vehicles used in any manner in connection with the performance of the terms of this Agreement.

1.20.2 The Contractor shall be entirely responsible for the cost of any deductible that is maintained in any insurance policy.

1.20.3 The policies shown above shall be endorsed to provide the Owner with not less than 30 Days' written notice of cancellation, change or amendment restricting coverage.

1.20.4 The Contractor shall not commence work under this contract until such time as evidence of insurance on the Owner's standard certificate attached in the Appendices has been filed with and approved by the Owner. The Contractor shall provide evidence of the continuance of this insurance at each policy renewal date for the duration of the contract.

1.20.5 The Owner reserves the right to request such higher limits of insurance or other types of policies appropriate to work as the Owner may reasonably require.

1.21. INDEMNIFICATION

1.21.1 The Contractor shall indemnify and save harmless the Owner against and from all actions, causes of action, interest, claims, demands, costs, damages, expenses or loss that the Owner may bear, suffer, incur, become liable for or be put to by reason any damage to property or injury or death to persons by reason of, arising out of or in consequence of breach, violation or non-performance by the Contractor of any provision of the Agreement, or by reason of or arising out of the use of the premises or in connection with the work covered by this Contract, or by reason of, or arising out of any act, neglect or default by the Contractor or of any of its agents or employees or any other person or persons, in, on, or about the premises.

1.22. DAMAGE CLAIMS

1.22.1 The Proponent shall protect the Work and the Owner's property from damage and shall be responsible for any damage, which may arise as the result of his operations under the contract.

1.23. WORKPLACE SAFETY AND INSURANCE BOARD (WSIB)

1.23.1 The Supplier shall submit to the Owner, prior to the issuance of the Contractor's last payment of each year, and at any other time when requested to do so, a statement from the Workers' Safety Insurance Board that all of the assessments the Contractor or any Subcontractor is liable to pay under the Worker's Safety Insurance Board Act or successor legislation have been paid. Bidders who have independent Operator Status under the WSIB Act shall submit a complete Independent Operator Status Questionnaire upon being awarded the Contract.

1.24. SCHEDULE OF ITEMS AND UNIT PRICES

1.24.1. The Bidder also understands and accepts that the quantities shown in the Bid Document are approximate estimates only and are subject to increase, decrease or deletion entirely if found not to be required.

1.25. PROVISIONAL ITEMS AND QUANTITIES

1.25.1 Items listed in the Bid Form as "Provisional Items", may or may not be required for completion of the Work called for under the Contract. The necessity and/or actual quantities of these items shall be determined by the Owner as the Work progresses. Should any of these items be required, the Supplier shall be compensated on the basis of the unit prices(s) quoted. In the event that any or all of these items are found not to be required, the Supplier may not claim extra payment for loss of anticipated profits.

1.26. COMPLETION DATE AND LIQUIDATED DAMAGES

1.26.1 This contract shall be completed as indicated in the Form of Bid.

1.26.2 If the time limit is not sufficient to permit completion of the work by the Contractor working a normal number of hours each day or week on a single shift basis, it is expected that additional shifts shall be required throughout the life of the contract to the extent deemed necessary by the Contractor to insure the work shall be completed within the time limit specified. Any additional costs occasioned by compliance with these provisions shall be considered to be included in the prices bid for the various items of work and no additional compensation shall be allowed. Therefore, working time shall be charged until the date of acceptance of the work by the Corporation, at which time all work required in the Contract, including all final clean-up and trimming shall be completed.

1.26.3 It is agreed by the parties to the Contract that in case all the work called for under the Contract is not finished or completed within the number of working days or the completion date as set forth in the Form of Bid, damage shall be sustained by the Corporation and that it is and shall be impracticable and extremely difficult to ascertain and determine the actual damage, which the Corporation shall sustain in the event of and by any reason of such delay and the parties hereto agree that the Contractor shall pay to the Corporation the sum of Six Hundred Dollars (\$ 600.00) for liquidated damages for each calendar day delay in finishing the work in excess of the number of working days or the completion date prescribed and it is agreed that this amount is an estimate of the actual damage to the Corporation which shall accrue during the period in excess of the prescribed completion date or the number of working days.

1.26.4 The Corporation may deduct any amount due under this paragraph from any monies that may be due or payable to the Contractor on any account whatsoever. The liquidated damages payable under this paragraph are in addition to and without prejudice to any other remedy, action or any other alternative that may be available to the Corporation.

1.26.5 Extension of contract time may be considered by the Contract Administrator in accordance with the provisions of the Contract.

1.27. ENQUIRIES

1.27.1 Bidder is to submit all enquiries in writing no later than two (2) Working days prior to the Bid closing date. Enquiries may be faxed or emailed contact for bidding procedures, on the first page of this bid documents.

1.28. ADDENDUM/ADDENDA

1.28.1 Addendum/Addenda if required issued by Township of Oro-Medonte and related to said Contract shall hereby form part and parcel of the said Contract. Failure to acknowledge Addendum/Addenda issued (Tender Form 00310) may result in a non-compliant bid. All Addendum/Addenda should be issued to the Bidders before forty eight (48) hours of Closing Time. It is the responsibility of the Bidder to have received all Addendum/Addenda.

\*\*\*END OF SECTION\*\*\*

**FORM OF TENDER**

Project Number: OCS2019-10

Project Title: Oro Community Halls – Renovations

Location (Owner): 148 Line 7 South, Oro, ON

Submitted To: Corporation of the Township of Oro-Medonte (Owner)

We, \_\_\_\_\_ of \_\_\_\_\_ having examined the  
(Company Name) (Business Address)

Bid Documents, and Addenda No. \_\_\_\_\_ to No. \_\_\_\_\_ inclusive, all as issued by Davenport Architectural Corp (*Consultant*) and having visited the Project Site; hereby offer to enter into a Contract to perform the Work required by the Bid Documents for the stipulated price of

\_\_\_\_\_ Dollars

(\$ \_\_\_\_\_ inclusive of HST) in Canadian funds, which price includes any specified cash and contingency allowances and the applicable taxes in force at this date except as may be otherwise provided in the Bid Documents.

**Appendices to Bid:**

The information on Subcontractors, Unit Prices, Alternative Prices and Separate Prices as called for in the Bid Documents is provided in the attached Appendices and forms an integral part of this Bid.

**Declarations:**

We hereby declare that:

- (a) we agree to perform the Work in compliance with the drawings and specifications and submit a completion date of \_\_\_\_\_ 2019;
- (b) no person, firm or corporation other than the undersigned has any interest in this Bid or in the proposed Contract for which this Bid is made;
- (c) this Bid is irrevocable and open to acceptance for a period of sixty (60) days from the date of bid closing.



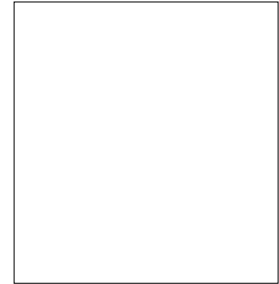
Signatures:

Signed, sealed and submitted for and on behalf of:

Company: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Street Address or Postal Box Number)

\_\_\_\_\_  
(City, Province & Postal Code)



(Apply SEAL above)

Signature: \_\_\_\_\_

Name & Title: \_\_\_\_\_  
(Please Print or Type)

Witness: \_\_\_\_\_

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 2019

N.B. Where legal jurisdiction or Owner requirement calls for proof of authority to execute this Bid, proof of such authority in the form of a certified copy of a resolution naming the person or persons in question as authorized to sign this Bid for and on behalf of the Corporation or Partnership should be attached.

Project Number: OCS2019-10  
Project Title: Oro Community Halls – Renovations  
Location (Owner): 148 Line 7 South, Oro, ON

Bid Submitted by:

SEPARATE PRICES:

The following are our Separate Prices for the Work listed hereunder. Such work and amounts are **NOT** included in our Stipulated Price but includes all taxes, overhead and profit if accepted.

| Description of Separate Price Work  | Separate Price (\$)<br>Amount |
|---|-------------------------------|
| 1. Provide a separate price for the removal of the paint from the existing metal ceiling, the repainting of the metal ceiling and the removal of the existing acoustical tile suspended ceiling system as per the work described for the Eady Community Hall. |                               |
| 2. Provide a separate price for the excavation, damproofing, weeping tile, backfill and restoration of grade for the north and west basement walls of Jarratt Community Hall.   |                               |
| 3.  |                               |





## **1.0 GENERAL**

### **1.1 SECTION INCLUDES**

- .1 Title and description of Work.
- .2 Work by others.
- .3 Work sequence.
- .4 Contractor use of premises.

### **1.2 WORK COVERED BY CONTRACT DOCUMENTS**

- .1 Work of this Contract comprises of the construction of various renovations, both interior and exterior as outlined in the Tender Drawings and Specifications. The 'Work' primarily includes the retrofit of Carley Community Hall, Eady Community Hall, Hawkestone Community Hall and Jarrett Community Hall, all located in the Township of Oro-Medonte. The work is primarily architectural with some structural work and is intended to address fire safety issues to bring these facilities in compliance with the Fire Code for assembly occupancies.
- .2 Revise finishes including ceilings, and wall treatments to ensure acceptable flamespread ratings for both assembly and lobby areas in several facilities.
- .3 Improve the Eady Community Hall with spray foam insulation in the attic of the original facility.
- .4 Install a new asphalt shingle roof on the Jarratt Community Hall.
- .5 Minor Site work includes the regarding and making good some drainage swales to help mitigate long term building damage.
- .6 Minor masonry maintenance to Carley Community Hall for window sills that are damaged.
- .7 Minor Barrier-free work includes upgrades to existing barrier-free facilities which do not comply with minimum community standards and are as noted on the drawings. . Some minor improvements to life safety for the Hawkestone Community Hall for the front stairs and the basement exit stairs to provide acceptable exiting for the occupants.

### **1.3 WORK BY OTHERS**

- .1 It is the intent of the Municipality to perform some portions of work, from time to time whilst this construction contract is in effect. Those elements of work are not described in these documents, but the contractor is expected to work with the forces of the Municipality and vice versa in an expedient and helpful manner. If any disputes arise from this arrangement, they will be settled as per the provisions of the contract.

#### **1.4 LOCATION OF THE SITES**

- .1 Carley Community Hall: 396 (370) Warminster Sideroad, Moonstone, ON L0K 1N0
- .2 Eady Community Hall: 73 Eady Station Road, Eady, ON, LOK 1E0
- .3 Hawkestone Community Hall: 3 Allan Street, Hawkestone, ON, L0L 1T0
- .4 Jarrett Community Hall: 837 Horseshoe Valley Road, Jarrett, ON, L0K 1E0

#### **1.5 SITE ACCESS**

- .1 The sites can be accessed from land road on which they face. All facilities have a parking lot for parking. Hawkestone Community Hall has a parking lot that is paved in asphalt.

#### **1.6 WORK SEQUENCE**

- .1 Construct Work in stages to accommodate Owner's operation. Contractor will have access to the site during regular daily working hours Monday to Friday or as specifically arranged with the Municipality. Time limit of work will be as per Contractor's schedule in the accepted Tender submission.

#### **1.7 CONTRACTOR USE OF PREMISES**

- .1 Contractor has unrestricted use of site until Substantial Performance.
- .2 Contractor shall limit use of premises for Work, to allow;
  - .1 Partial owner occupancy.
  - .2 Work by owners own forces.
- .3 Coordinate use of premises under direction of Architect and/or Engineer.
- .4 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

#### **1.8 REFERENCES AND CODES**

- .1 Ontario Building Code of Canada (OBC) 2012 including all amendments.
- .2 Perform Work in accordance with Ontario Building Code of Canada (OBC) and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .3 Meet or exceed requirements of:
  - .1 Contract documents.
  - .2 Specified standards, codes and referenced documents.

**1.9 HAZARDOUS MATERIAL DISCOVERY**

- .1 Asbestos: Demolition of spray or trowel-applied asbestos can be hazardous to health. Should material resembling spray or trowel-applied asbestos be encountered in course of demolition work, immediately stop work and notify Engineer.
- .2 Asbestos inventory report is available for inspection from the Municipality.

**1.10 BUILDING SMOKING ENVIRONMENT**

- .1 Smoking is prohibited in all work places within Municipal buildings.

\*\*\*END OF SECTION\*\*\*

## **GENERAL INSTRUCTIONS**

### **1.0 GENERAL**

#### **1.1 CONTRACT DOCUMENTS**

1. All Contract Documents, together with all amendments, are complementary — work specified on any of the Drawings or in any Sections of the Specifications is deemed to include all modifications and/or additions to related work, so that the Project can be fully completed for its intended purpose.

#### **1.2 SCOPE AND SUBDIVISION OF WORK**

1. Reference in the Contract Documents to "approval", "direction", "selection" or other similar words, including the various forms derived there from, means that the required acceptance and/or instructions shall be given by the Consultant.
2. The word "provide" means that both the supply and installation of products and/or services shall be included in the Work.
3. Whenever in these Specifications work is requested to be rectified, repaired, made good or replaced, it shall be done so without any cost to the Owner.
4. Whenever in these Specifications the term "and/or" is used, the Consultant's decision shall govern which one of the possible meanings is to be derived from the sentence where that term occurs.
5. The various Sections of the Specifications shall not be considered to establish contractual limits for work done by the various contractors or subcontractors.
6. All Sections of Division 1 shall form an integral part of each Section of the Specifications.
7. Whenever in these specifications or the drawings, a building material is marked "existing", it is part of the existing building. When it is not noted as existing, it is part of the work to be supplied and installed.
8. The "Work Included" sections in the specification are meant only as a guide for the Contractor and does not remove the responsibility from the Contractor to do a complete examination of the documents and the site and the site conditions to determine the full extent of the work. The Contractor is to supply all materials for the completion of the work. All materials are to be installed in a completely operating condition. The Contractor is to furnish all labour and equipment needed to carry out the installation of the work.

#### **1.3 ITEMS SUPPLIED BY OWNER**

1. Items to be purchased by the Owner and supplied to the site are identified on the drawings and/or in the enclosed specifications.
2. Coordinate and schedule the delivery of these items for timely incorporation into the Work. Items should be delivered when required, neither too early or late.
3. Provide suitable protection to items after installation.

#### **1.4 DISCREPANCIES AND OMISSIONS**

1. If the Contractor finds discrepancies in, or omissions from the Drawings, Specifications or other Contract Documents or has any doubt as to the meaning or intent of any part thereof the Consultant shall be notified at once. The Consultant will send written instructions of explanations. Neither the Owner nor the Consultant will be responsible for oral instructions.



## 1.5 EXAMINATION

1. Make a careful examination of the area of the Work, and investigate and be satisfied as to all matters relating to the nature of the Work to be undertaken, as to the means of access and egress thereto and therefrom, as to the obstacles to be met with, as to the rights and interests which may be interfered with during the construction of the Work, as to the extent of the Work to be performed and any and all matters which are referred to in the Drawings, Specifications and other Contract Documents, or which are necessary for the full and proper understanding of the Work and the conditions under which it will be performed.
2. Contractor is held to have examined site and building(s) and ascertained extent and nature of conditions affecting performance of Work before tendering, including location of concealed/buried services that may have to be protected, removed or relocated.
3. Before commencement of Work and/or ordering of equipment and materials thoroughly investigate all conditions related to the site and the construction of the existing building.
4. Plan work to accommodate all requirements and limitations discovered by the above investigation so that the work can be completed without any inconvenience or additional costs.
5. The details of existing conditions and construction are based on the information available at the time of the preparation of the contract documents. If during construction, conditions are revealed which differ from the assumed conditions, advise the Consultant before proceeding.
6. Each subcontractor is to examine the substrate their work is to attach to, including a thorough examination of the drawings, specifications and the general contractor's as-builts, to determine whether the substrate is compatible with their work. The initiation of their work confirms their thorough examination and acceptance of the substrate.

## 2.0 PRICE AND PAYMENT

### 2.1 GENERAL

1. All prices described in this Section shall include the total cost of materials, labour, tools, equipment, fees, insurance, testing, preparation of drawings, submittals, calculations, supervision, inspections, deliveries, traveling, out-of-town accommodations, rentals, duties, taxes, head office and site office overheads, profits and all other direct and indirect expenses required to fully perform the specified work. HST is not included in prices.
2. The cost of changes to Work not covered by Itemized Prices, Alternative Prices, Unit Prices or Separate Prices shall be established by using current labour rates, including mandatory benefits, prevailing local market prices of materials and/or equipment, taxes, specific fees related to the change only, and overhead and profit.
3. The overhead referred to in this Section is deemed to include all costs of:
  1. Operating head office and site facilities.
  2. Head office and site personnel other than the labourers doing the actual work.
  3. Custom duties, basic permits and other licenses required by jurisdictional authorities.
  4. Insurance and warranties.
  5. Administration, supervision and coordination.

6. Calculations, inspections, testing.
7. Deliveries, transportation, traveling, out-of-town accommodations.
8. Hand and small power tools required for the efficient completion of the work.

## 2.2 CHANGES TO WORK

1. The standard documentation for effecting changes in the Work shall be as follows:
  1. Consultant's Contemplated Change Order and Change Directive as appropriate. These forms are issued to the Contractor with necessary Drawings, Schedules, Details and Specifications.
  2. Contractor's Quotation submitted to the Consultant showing amount by which the Contract Sum should be adjusted by way of increase or decrease if the change is Ordered, and also the affect, if any on the Contract Time.
  3. Consultant's Formal Change Order issued to the Contractor on Standard Form after Owner's approval.
2. Standard Form of Contemplated Change Order, Change Directive and Change Order may be seen at the Consultant's office during normal working hours.
3. Any costs related to preparation of the necessary documentation and estimating for changes/contemplated changes are deemed to be included in the specified profit and overhead.
4. Quotations submitted in response to Consultant's Contemplated Change Order or Change Directive shall be fully detailed and itemized to facilitate checking and processing by the Consultant.
5. The following maximum mark-ups for overhead and profit may be applied as appropriate to the net costs assessed as above where the effect of the proposed change is an increase in the Contract Sum:
  1. Work carried out by the Contractor's own forces: 10% overhead and profit combined.
  2. Work carried out by a Subcontractor: 10% overhead and profit combined.
  3. Contractor's mark-up on Subcontractor's Work: 5% overhead and profit combined.
  4. Credits to the Owner's account: Contractors and Subcontractors overhead and profit shall not be deducted."
6. The intention is that quotations submitted in response to Contemplated Change Order shall be fair and reasonable and reflect current market prices in line with prices in original Tender. The Contractor shall check subcontractor's quotations for compliance with this requirement before submission to Consultant.

## 3.0 PROJECT COORDINATION

### 3.1 GENERAL REQUIREMENTS

1. Coordinate the Work of all Sections, including those of mechanical and electrical.
2. Cooperate and coordinate with other Contractors and ensure that Subcontractors and trades cooperate and coordinate their work to have the Work performed expeditiously and to be satisfactory in all respects at completion. Ensure cooperation of workers in laying out and performing Work. Maintain efficient and continuous supervision.

3. Ensure that Subcontractors and trades cooperate with other Subcontractors and trades whose work links to or is affected by their own work. Ensure that minor adjustments are made to make adjustable work fit fixed work.
4. Review all Contract Documents and advise the Consultant of any possible conflict before commencing the Work, ordering of materials or preparing shop drawings.
5. Coordinate the work of the various Sections so that all surfaces and/or components of Work will be properly prepared, finished, cured and/or installed, to interface with subsequent Work without reducing the specified quality of that Work.
6. Pay particular attention to types of ceiling construction and clearances throughout, especially where recessed fixtures are required. Coordinate Work with other Contractors and Subcontractors wherever ventilation ducts or piping installations occur to ensure that conflicts are avoided.
7. Commencement of Work will constitute acceptance of site conditions and previously completed work.

### 3.2 PROTECTION AND MAKING GOOD

1. Protect adjacent property, existing building and Work from any damage.
2. In case of damage to active services or utilities, notify the Owner, Consultant and respective authorities immediately and make all required repairs under direction of Owner, Consultant and respective authorities. Carry out repairs to such damaged services and utilities continuously to completion, including working beyond normal working hours.

### 3.3 CUTTING AND PATCHING

1. Include all necessary cutting and patching to complete the Work.
2. Fit construction tightly to all penetrations by accurate cutting and/or patching and patch and seal all voids to assure full effectiveness of all air and vapour barriers, and thermal, acoustic and fire separations.
3. Make patches invisible in all exposed to view surfaces.
4. Remove and replace defective and non-conforming work.
5. Restore work with new products in accordance with requirements of Contract Documents.
6. Provide openings in non-structural elements of work for penetrations of mechanical and electrical work.
7. Execute work by methods to avoid damage to other work, and which will provide proper surfaces to receive patching and finishing.
8. Employ original installer to perform cutting and patching for materials exposed to view.
9. Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed with masonry materials without prior approval.
10. Refinish surfaces to match adjacent finishes: for continuous surfaces refinish to nearest intersection; for an assembly, refinish entire unit.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

### 1.1 ADMINISTRATIVE REQUIREMENTS

1. Make all required submittals to Consultant with reasonable promptness and in an orderly sequence so as to not cause delay in the Work. No extension of Contract Time will be allowed if submissions are not made in ample time.
2. Work affected by the submittals shall not proceed until review is complete.
3. Review submittals prior to submission to the Consultant. Assure that necessary requirements have been determined and verified and that each submittal has been checked and coordinated with the requirements of the Work and the Contract Documents and has been stamped, signed, dated and identified as to the specific project or submittal will be returned without being examined and shall be considered rejected.
4. Verify that field measurements and affected adjacent Work are coordinated.
5. Contractor's responsibility for errors and omissions in submission is not relieved by Consultant's review of submittals.
6. Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant's review.
7. Rework and/or replace without any cost to the Owner any work resulting from failure to verify that information shown on shop drawings conforms to the requirements defined in Contract Documents, and/or to highlight deviations from the specified details.

### 1.2 SHOP DRAWINGS AND PRODUCT DATA

1. Drawings shall be copies of original drawings prepared by Contractor, Subcontractor, supplier or distributor, for the Work of the Contract which illustrate appropriate portions of the Work; showing fabrication layout, setting or erection details as specified in appropriate Sections. Provide Drawings on same size sheets as Contract Drawings generally.
2. Submit Shop Drawings with transmittal forms listing the name of the manufacturer, the job, the Drawing number, the number of copies and reference in the Specification to which the Shop Drawings refer.
3. Submit to Consultant, and to authorities having jurisdiction as required, documents identified to be submitted for review. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time or extra costs and no claim for extension of Contract Time or increase to Contract Price by reason of such default will be allowed. Final approval of authorities having jurisdiction, where required, shall be obtained prior to submitting shop drawing or other documentation to Consultant.
4. Make changes in shop drawings as the Consultant may require, consistent with Contract Documents. When resubmitting, notify the Consultant in writing of any revisions other than those requested.
5. Submit Shop Drawings to the Consultant a minimum of three (3) white prints. After review, the Consultant(s) will retain one white print and return the other white prints to the Contractor. On completion of the revisions, one complete set of new white prints of Shop Drawings used for construction shall be supplied to the Consultant, unless otherwise specified.

### 1.3 CONTRACTOR'S RESPONSIBILITY

1. Check and certify as correct Shop Drawings, Product Data and Samples prior to submission.
2. Verify:
  - a. Field measurements.
  - b. Field construction criteria.
  - c. Catalogue numbers and similar data.

3. Coordinate each submittal with requirements of Work and Contract Documents.
4. Notify Consultant, in writing at the time of submission of any deviations in submittal from requirements of Contract Documents. Allow adequate time for response and appropriate action.
5. Each shop drawing or catalogue sheet shall be date stamped and signed by the Contractor to indicate that he has checked the drawing for conformance with all requirements of the Contract documents, that he has coordinated this equipment with other equipment to which it is attached and/or connected and that he has verified all dimensions to ensure the proper installation of equipment within the available space and without interference with the work of other trades. Ensure that electrical co-ordination is complete before submitting drawings for approval

#### 1.11 COST BREAKDOWN

1. Submit complete cost breakdowns of Work within ten (10) Working Days of award of Contract.
2. Include subtotals for sub trade work.
3. Identify general conditions, overhead and profit and cash allowances, separately.
4. Identify HST as a single separate item.

#### 2.0 PRODUCTS

Not applicable

#### 3.0 EXECUTION

Not applicable

\*\*\*END OF SECTION\*\*\*

## **1.0 GENERAL**

### **1.1 WORKMANSHIP**

1. The work of all Sections shall be fabricated and installed in accordance with the best practice by craftsmen skilled in the work of the respective Section. Unless otherwise specified, the manufacturer's latest printed instructions shall be rigidly complied within the methods and materials to be used in the installation of the work. The Consultant shall be notified in writing if these Specifications and/or Drawings conflict in any way with manufacturer's instructions. The Consultant will then rule which specifications shall be followed. If applicable, a copy of those instructions shall be made available at job site.
2. Provide a system of quality control to ensure that the minimum standards specified herein are attained.
3. Bring to the attention of the Consultant any defects in the Work or departures from the Contract Documents which may occur during construction. The Consultant will decide upon corrective action and state his recommendations in writing.

### **1.2 JURISDICTIONAL AUTHORITIES**

1. Comply with requirements of all federal, provincial and municipal authorities having the right to enforce the laws at the place of this Project.
2. Comply with applicable provincial Health and Safety regulations.
3. Comply with the applicable provincial workplace materials safety information legislation. Make application and pay for any other permits, licenses, inspections, examinations and fees required for the Work.

### **1.3 CONSTRUCTION REQUIREMENTS**

1. Conform to the most restrictive requirements of the National Building Code and the Ontario Building Code. Conform to the provincial Health and Safety legislation for Construction Projects and to the Ontario Fire Code, and all other applicable Codes and building by-laws, hereinafter referred to as Codes. Conform to the requirements of the authorities having jurisdiction.
2. Nothing contained in the Drawings or Specifications shall be so construed as to be in conflict with any law, by-law of regulation of the municipal, provincial or other authorities having jurisdiction. Work shall be performed in conformity with all such laws, by-laws and regulations.
3. Consider Contract forms, codes, specifications, standards, manuals, and installation and application instructions referred to in these Specifications to be the latest published editions at the date of submission of the tender unless otherwise stated in the Specifications or otherwise required by the authorities having jurisdiction.
4. Construct the Work in accordance with the contract documents where these requirements exceed the requirements of the authorities and regulations noted above.

## 1.6 FIRE RATINGS

1. Where a material, component or assembly is required to be fire rated, the fire rating shall be as determined or listed by one of the following testing authorities acceptable to the authorities having jurisdiction:
  - a. Underwriters' Laboratories of Canada
  - b. Factory Mutual Laboratories
  - c. The National Research Council of Canada
  - d. The National Board of Fire Underwriters
  - e. Warnock Hersey Professional Services.
2. Where reference is made to only one testing authority, an equivalent fire rating as determined or listed by another of the aforementioned testing authorities is acceptable if approved by authorities having jurisdiction. Obtain and submit such approval of authorities, in writing, when requesting acceptance of a proposed equivalent rating or test design.

## 1.7 LIFE AND SAFETY

1. Ensure that all life and fire safety features called for in the Contract Documents are supplied and installed to meet safety standards established by the jurisdictional authorities and underwriters for life safety, fire prevention and fire protection. The Contractor shall ensure that the Work of Subcontractors is properly coordinated to achieve the intent of this Specification.
2. Maintain access to building for firefighting purposes, to satisfaction of Fire Department.
3. Provide fire extinguishers as required by code.
4. Comply with additional safety regulations imposed by an authorized representative of the Owner.
5. Keep exits from the existing building free from obstructions.
6. Maintain continuation of fire separations and protections in existing building.
7. Assume all responsibilities designated for the Constructor in the provincial Health and Safety legislation.

## 1.8 ENVIRONMENTAL CONTROL

1. Conform to all requirements established by jurisdictional authorities for environmental and pollution control.
2. Prevent dust from spreading to adjacent areas in the building. Coordinate location of dust screens with the Owner.

## 1.9 INSPECTION

1. The Owner and the Consultant shall have access to the work. If part of the work is in preparation at locations other than the Place of the Work, access shall be given to such work whenever it is in progress.
2. The Consultant may order any part of the Work to be examined if such Work is suspected to be not in accordance with the Contract Documents. Correct such Work and pay the cost of examination and correction.

## 1.10 EQUIPMENT/SYSTEM

1. Submit adjustment and balancing reports for mechanical and electrical systems.
2. Refer to mechanical and electrical specifications for definitive requirements.

\*\*\*END OF SECTION\*\*\*

## **1.0 GENERAL**

### **1.1 FINAL CLEANING**

1. When the Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for the performance of the remaining Work.
2. Remove waste products and debris and leave the Work clean and suitable for immediate occupancy by Owner without further cleaning.
3. When the Work is Totally Performed, remove surplus products, tools, construction machinery and equipment. Remove waste products and debris other than that caused by the Owner or other Contractors.
4. Remove waste materials and debris from the site at regularly scheduled times as coordinated with the Owner.
5. Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
6. Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, mechanical and electrical fixtures. Replace broken, scratched or disfigured glass. Remove protective materials and labels.
7. Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, floors and ceilings.
8. Vacuum clean and dust building interiors, behind grilles, louvers and screens. Vacuum carpet and flooring.
9. Wash, wax, seal, shampoo or prepare floor finishes, as recommended by the manufacturer of the various flooring materials.
10. Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
11. Clean equipment and fixtures to a sanitary condition. Replace filters of heating, ventilating and air conditioning units if operated during construction.

### **1.2 OPERATION AND MAINTENANCE MANUALS**

1. Submit as further defined in other sections three (3) copies of operation and maintenance manuals.
2. Bind contents in a three-ring, hard-covered binder. Organize contents into applicable categories of Work, parallel to Specification Sections. Mark each Section by labelled tabs and dividers.

### **1.3 RECORD DRAWINGS**

1. Consultant will provide electronic AutoCAD files for record drawing purposes. Obtain "as-built" drawings from Trades and consolidate.
2. Maintain project "as-built" record drawings and record accurately significant deviations from Contract Documents caused by Site conditions and changes ordered by Consultant.
3. Mark "as-built" changes in AutoCAD format with hard copy print out.
4. Show actual locations of the following on as-built drawings:
  - a. Access doors and panels;
  - b. Concealed piping, conduit and equipment including items provided for future use;
  - c. Field changes of dimension and detail;



5. Final completion of Project Record Drawings shall be a condition precedent to the issuance of Consultant's final payment certificate.
6. Upon Contract completion and prior to final inspection:
  - a. On AutoCAD format CAD files supplied by the Consultant, produce digital record drawings.
  - b. Digital record drawings shall include all architectural drawings.
  - c. Make changes to these digital drawings to reflect as constructed conditions. Circled areas with references to applicable Change Orders and other instructions are not acceptable.
  - d. On each drawing add a box in the title block labelled, "CERTIFIED AS-BUILT", with a line and space for signature and date. Each record drawing, after revisions, will be signed and dated by the Contractor.

#### 1.4 WARRANTIES

1. Each trade shall warrant material and workmanship for a period of one (1) year from date of Substantial Performance, unless otherwise specified or indicated.
2. Warranties to the Owner shall commence at Substantial Performance of the entire Project as certified by the Consultant.

#### 1.5 MAINTENANCE MATERIALS

1. Provide Owner with extra materials, for future maintenance use, as specified in Trade Sections of the Specification.

\*\*\*END OF SECTION\*\*\*

## **1.0 GENERAL**

### **1.1 REFERENCES**

- .1 ASTM D698, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (600 kN-m/m<sup>3</sup>).

### **1.2 PROTECTION**

- .1 Protect existing trees, landscaping, natural features, buildings, pavement, surface or underground utility lines which are to remain. If damaged, restore to original condition unless directed otherwise.
- .2 Maintain access roads to prevent accumulation of mud on roads.

## **2.0 PRODUCTS**

### **2.1 MATERIALS**

- .1 Use excavated or graded material existing on site as fill for grading work and back-filling if approved by Consultant. Where more fill is needed, use Top Soil to provide for additional grading.
- .2 Refer Section 02 40 86 for Top Soil.
- .3 Refer to Section 02 49 10 for Seeding.

## **3.0 EXECUTION**

### **3.1 SITE PREPARATION**

- .1 Store removed material in location on Site as determined by Consultant and as noted in Section 01 77 00 Closeout for cleaning.
- .2 Strip lot base material to depth of native founding material. Avoid mixing granular base material with native soils to remain.
- .3 Dispose of unused topsoil as directed by Consultant off site.

### **3.2 GRADING**

- .1 Rough grade to levels, profiles, and contours allowing for surface treatment as indicated on drawings.
- .2 Slope rough grade away from building 1:50 minimum (2% slope).
- .3 Prior to placing fill over existing ground, scarify surface to depth of 150 mm. Maintain fill and existing surface at approximately same moisture content to facilitate bonding.
- .4 Compact filled and disturbed areas to Standard Proctor Density to ASTM D698, as follows:
  - .1 90% under landscaped areas.
  - .2 98% under paved and walk areas.
- .5 Do not disturb soil within branch spread of trees or shrubs to remain.

### **3.3 TESTING**

- .1 Inspection and testing of soil compaction will be carried out by testing laboratory designated by ULC. Provide testing only at the written request of the Consultant.
- .2 Costs of tests will be paid by owner.

### **3.4 SURPLUS MATERIAL**

- .1 Remove surplus material and material unsuitable for fill, grading or landscaping off site as directed by Consultant.

\*\*\*END OF SECTION\*\*\*





## **1.0 GENERAL**

### **1.1 WORK INCLUDED**

1. Demolition of existing partitions as shown on drawings.
2. Removal of existing ceilings and floor coverings as shown on drawings.
3. Cutting and patching of existing building as required for installation of new work.

### **1.2 STANDARD**

1. Comply with Ontario Building Code, Part 8, Construction Safety Measures at Construction and Demolition sites, and Provincial requirements.
2. Conduct a waste audit and develop a waste management plan for the impacted materials to allow for identification of and reuse, recycling and reduction of demolition waste material in accordance with Ontario Provincial Regulation prior to any demolition works. Copies of audit and management plans are to be submitted to the Consultant for approval prior to commencing demolition.

### **1.3 MATERIALS AND PRODUCTS REMOVED FROM EXISTING BUILDING**

1. Refer to drawings for existing items that are designated to be carefully removed and reinstalled or relocated.
2. All existing items that are identified to be removed and not reinstalled shall be carefully removed and handed over to the Owner when requested.
3. Materials resulting from demolition and not required to be retained shall be removed promptly from site and disposed of in accordance with requirements of authorities having jurisdiction.
4. Materials that are to be removed from the site and can be reused should be sent to the appropriate facility.

### **1.4 JOB CONDITIONS**

1. Visit and examine the site and note all conditions affecting the Work. Establish procedures for demolition, disposal of materials and protection of adjoining materials and properties.
2. Owner assumes no responsibility for actual condition of items or structures to be demolished. Conditions existing at the time of commencement of Contract will be maintained by Owner insofar as practicable.

### **1.5 EXISTING SERVICES**

1. Before commencing work, establish location and extent of service lines in area of work and notify Engineer of findings.

### **1.6 PROTECTION**

1. Keep noise, dust, and inconvenience to Owner to minimum.
2. Protect building systems, services and equipment.
3. Provide, erect and maintain barricades, lighting, guardrails and other protective devices as required by authorities having jurisdiction and as required to give full protection to the public, to workers employed on the demolition and to the adjacent building areas.
4. Coordinate with Municipal Authorities and Utilities as required for removal of equipment and services.
5. Repair or replace any damaged materials.

## **2.0 PRODUCTS**

Not applicable.

## **3.0 EXECUTION**

### **3.1 DEMOLITION — GENERAL**

1. Furnish labour, materials, tools, plant, scaffolding, chutes and services required or incidental to the completion to the full intent of the Drawings and Specifications, for the execution of all demolition and protection work.
2. Dispose of demolished materials where noted and to municipal requirements.
3. Leave work in safe condition at the end of each day's work, so that no part of the structure is in danger of toppling, collapsing or falling.
4. During demolition operations, work wetted sufficiently to prevent dust and dirt rising.
5. Do not burn materials on site.

### **3.2 CEILINGS AND WALLS**

1. Remove existing ceilings and wall finishes as shown in drawings.
2. Remove existing walls or portions thereof, where indicated and provide openings where required. Cut surfaces in smooth, uniform, straight, plumb lines.
3. When removing ceilings, remove entire ceiling systems including hangers and remove hangers used for support of light fixtures in such areas.
4. Take precautions to adequately support structure, provide bracing required for safety and execution of the work. Coordinate with structural requirements.

### **3.3 MISCELLANEOUS DEMOLITION**

1. Remove millwork items, ceramic tile, fitments, food service equipment and other such components only where noted to do so.
2. Remove debris.
3. Remove wall and floor finishes where noted.
4. Remove fixtures, doors and frames where indicated in drawings.

### **3.5 SALVAGED AND REUSED ITEMS**

1. Carefully remove for reuse items designated on the drawings
2. Properly label, store and protect these items.
3. Turn over any items removed but not reused in the work, as required by the Owner.

### **3.6 CLEANUP AND REPAIR**

1. Upon completion of demolition remove tools, equipment, and debris from site. Remove protections and leave interior areas broom clean and site in condition acceptable to Consultant.
2. Repair and make good demolition performed in excess of that required Repair soiled or damaged surfaces.

\*\*\*END OF SECTION\*\*\*

**1.0 GENERAL**

**1.1 RELATED**

- .1 Section 02 31 10 - Site Grading
- .2 Section 02 40 86 - Topsoil Placement and Grading

**1.2 SCHEDULING**

- .1 Seed after frost has left ground.
- .2 Schedule to complete work in one area before proceeding to next area.
- .3 Schedule completion of work immediately prior to mulching.

**2.0 PRODUCTS**

**2.1 GRASS SEED**

- .1 Canada "Certified" seed, "Canada No. 1 Lawn Grass Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
  - .1 Grass seed mixture.
    - .1 55 % Creeping Red. Fescue
    - 27 % Canadian Bluegrass
    - 15 % Perennial Rye Grass
    - 3 % Clover

**2.2 WATER**

- .1 Free of impurities that would inhibit germination and growth.
- .2 Supplied by Owner at designated source.

**2.3 FERTILIZER**

- .1 To Canada "Fertilizers Act" and "Fertilizers Regulations".
- .2 Complete synthetic, slow release with 35% of nitrogen content in water-insoluble form.

**2.4 MULCH**

- .1 Made from newsprint, raw cotton fibre and straw, fibers 15 -25 mm - majority of mulch to be straw.



### 3.0 EXECUTION

- 3.1 WORKMANSHIP**
- .1 Do not perform work under adverse field conditions such as frozen soil, excessively wet or dry soil or soil covered with snow, ice or standing water.
  - .2 Remove and dispose of weeds; debris; stones 50 mm in diameter and larger; soil contaminated by oil, gasoline and other deleterious materials; off site.
- 3.2 SEED BED PREPARATION**
- .1 Verify that grades are correct. If discrepancies occur, notify Consultant and do not commence work until instructed by Consultant.
  - .2 Fine grade surface free of humps and hollows to smooth, even grade, to contours and elevations indicated to tolerance of plus or minus 15 mm, surface draining naturally.
  - .3 Cultivate fine grade approved by Engineer to 25 mm depth immediately prior to seeding.
- 3.3 SEED PLACEMENT**
- .1 For manual seeding:
    - .1 Use "Cyclone" type manually operated seeder.
    - .2 Use manually operated, water ballast, landscaping type, smooth steel drum roller. Ballast as directed by Consultant.
    - .3 Use equipment and method acceptable to Consultant.
  - .2 On cultivated surfaces, sow seed uniformly at rate of:
    - .1 0.05 kg/m<sup>2</sup> lawn grass mixture.
  - .3 Blend applications 150 mm into adjacent grass areas to form uniform surfaces.
  - .4 Sow half of required amount of seed in one direction and remainder at right angles.
  - .5 Embed seed into soil to depth of 10 mm. Not less than 85% of seed to be placed at specified depth and covered by soil.
  - .6 Consolidate mechanically seeded areas by rolling area if soil conditions warrant or if directed by Engineer with equipment approved by Consultant immediately after seeding.

- .7 Consolidate manually seeded areas by rolling area with equipment approved by Engineer immediately after seeding.
- .8 Sow during calm wind conditions.
- .9 Water with fine spray to avoid seed wash-out. Water to ensure penetration of minimum 50 mm.
- .10 Protect seeded areas against damage. Remove this protection after lawn areas have been accepted by Consultant.

### **3.4 MULCH**

- .1 Place mulch over seeded surfaces to completely cover new bed.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

- 1.1 STANDARD .1 Concrete materials and methods of construction: to CAN/CSA-A23.1 unless otherwise specified.
- 1.2 INSPECTION .1 Concrete testing: to CAN/CSA-A23.2 by testing laboratory designated and paid for by owner. Accelerated test methods will apply.
- .2 Give Consultant minimum 24 h notice before each concrete pour.
- 1.3 REFERENCES .1 Division 1, General Requirements shall apply.
- .2 Review and comply with O.B.C. These minimum material and performance standards shall apply as if repeated here.
- 1.4 SUMMARY OF WORK .1 Exterior slabs, ramps and sidewalks as noted on the drawings.

## 2.0 PRODUCTS

- 2.1 MATERIALS .1 Portland cement: to CAN/CSA-A5, Type 10.
- .2 Reinforcing bars: to CAN/CSA-G30.18, Grade 400.
- .3 Welded steel wire fabric: to CSA G30.5-M1.
- .4 All other concrete materials: to CAN/CSA-A23.1.
- 2.2 MIX PROPORTIONS .1 Method: Alternative (1) of CAN/CSA-A23.1.
- .2 Cement type: as specified under 2.1.
- .3 Minimum 28 day compressive strengths and exposure classifications:  
.1 Pavements, walks, curbs and exposed site concrete: 32 MPa; C-2.  
.2 All other concrete: 25 MPa; C-4.
- .4 Nominal size of coarse aggregate: Clause 14 of CAN/CSA-A23.1-09.
- .5 Slump: to Table 6 of CAN/CSA-A23.1.

- .6 Air content: all concrete to contain purposely entrained air in accordance with Table 10 of CAN/CSA-A23.1.
- .7 Admixtures: to Clause 6 of CAN/CSA-A23.1. Do not use chloride based admixtures.

### 3.0 EXECUTION

#### 3.1 INSERTS

- .1 Cast in sleeves, ties, slots, anchors, reinforcement, frames, conduit, bolts, waterstops, joint fillers and other inserts required to be built-in.

#### 3.2 FINISHES

- .1 Formed surfaces exposed to view: sack rubbed finish in accordance with CAN/CSA-A23.1.
- .2 Pavements, walks, curbs and exposed site concrete: screed to plane surfaces and float using aluminum, magnesium, or wood floats. Round edges and provide joint spacing using standard tools. Trowel smooth followed by lightly brushed non-slip finish.

#### 3.3 CURING

- .1 Cure and protect concrete in accordance with CAN/CSA-A23.1, except that curing compounds shall not be used where bond is required by subsequent topping or coat

\*\*\* END OF SECTION \*\*\*

## 1.0 GENERAL

- 1.1 Related Work**
- .1 Section 04 05 12: Masonry Mortar and Grout
  - .2 Section 07 92 00: Joint Sealing
- 1.2 References**
- .1 ASTM .1 Canadian Standards Association (CSA)
    - .1 CSA A179 Mortar and Grout for Unit Masonry.
  - .2 Canadian General Standards Board (CGSB)
    - .1 CAN/CGSB-37.2 Emulsified Asphalt, Mineral-Colloid Type, Unfilled, for Dampproofing and Waterproofing
- 1.3 Samples**
- .1 Submit samples of replacement stones after Bid period and before award of Contract as per Section 01 33 00 – Submittals.
  - .2 Indicate materials, core thickness, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.
- ## 2.0 PRODUCTS
- 2.1 Materials**
- .1 Cut Stone:
    - .1 Dress face of stone to match existing stonework after unit is roughly sized to slot.
- 2.2 Anchors, Ties, Sealants**
- .1 Anchors, cramps, dowels: stainless steel type 304 if indicated.
  - .2 Asphalt emulsion: to CAN/CGSB-37.2.
  - .3 Sealants as per Section 07 92 00.
- ## 3.0 EXECUTION
- 3.1 Preparation**
- .1 Move and lift stone units using means to prevent damage. Submit stone units dropped or impacted to Consultant for inspection and approval. Do not make holes or indentations for Lewises or dogs on face or top side of stone.

- .2 Indicate bedding planes of stone units. Duplicate bedding marks on usable pieces of cut stone.
  - .3 Cover adjacent plant material and fragile surfaces.
- 3.2 Removal of Existing Stone**
- .1 Rake out mortar joints of stones which are split through, have failed in compression and been crushed, are spalling, or are indicated on the accompanying drawings.
  - .2 Remove loose material from deteriorated stones. Create level surface 50 mm from masonry face for setting of stone face plates.
  - .3 Clean dust, mortar and stone fragments from slot.
- 3.3 Cutting/Sizing**
- .1 Use calipers, squares and levels to measure hole for new stone. Allow for mortar joints of thickness to match existing being replaced.
  - .2 Provide 1:10 slope on top face of stone unit, sloping down to front face.
- 3.4 Inserting New Stone**
- .1 Clean stone by washing with water and natural fibre brush before laying.
  - .2 Dampen surfaces of slot and apply mortar.
  - .3 Lay heavy stones and projecting stones after mortar in courses below has hardened sufficiently to support weight.
  - .4 Prop and anchor projecting stones until wall above is set.
  - .5 Set large stones on water soaked softwood wedges to support stone in proper alignment until mortar has set. Remove wedges when dry, do not break off.
  - .6 Remove mortar dropping from face of stone before mortar is set. Sponge stone free of mortar along joints as work progresses.
  - .7 Use non-ferrous anchors to fix stone face plates as indicated.
  - .8 Install anchors, dowels and cramps.
  - .9 Set stones plumb, true, level in full bed of mortar with vertical joints flushed full except where otherwise specified. Completely fill anchor, dowel and lifting holes.

**3.5 Filling  
Joints/Pointing**

- .1 Fill joints and point: in accordance with Section 04 05 12 – Mortar.
- .2 Keep new mortar wet for 2 days to cure it.

**3.6 Stone Schedule**

- .1 Removal and replacement of existing stone window sills at the Carley Community Hall.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

- 1.1 Related Work** .1 Section 04 03 42 – Replacement of Stone.
- 1.2 References** .1 CSA A179-04, Mortar and Grout for Unit Masonry.
- 1.3 Samples** .1 Submit shop drawings in accordance with Section 01 33 00 Submittal Procedures
- 1.4 Existing Conditions**
- .1 Investigate possible structural problems and report before beginning masonry work.
  - .2 Study pointing styles on the existing Structure and methods of reproducing them, and submit sample for approval before starting work.
  - .3 Examine horizontal and vertical joints to determine which were struck first and whether they are same style, as well as other aspects of workmanship which establish authenticity of original work.
- 1.5 Environmental**
- .1 Execute work when ambient temperature is above 10 degrees Celsius  
When ambient temperature is below 10 degrees Celsius care and heat work as directed by Architect.
  - .2 Prepare and maintain temperature of mortar between 10 and 50 degrees until used.

## 2.0 PRODUCTS

- 2.1 Materials**
- .1 Use same brands of materials and source of aggregate for entire project.
  - .2 Mortar and grout: CSA A179.
  - .3 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.
  - .4 Colour: ground coloured natural aggregates or metallic oxide pigments.
  - .5 Mortar for exterior stone masonry above grade:
    - .1 Loadbearing: Type S based on Proportion specifications.
    - .2 Non-loadbearing: Type N based on Proportion specifications.



- .6 Coloured mortar: use colouring admixture not exceeding 10% of cement content by mass, or integrally coloured masonry cement, to produce coloured mortar to match approved sample.
- .7 Non-staining mortar: use non-staining masonry cement for cementitious portion of specified mortar type.
- .8 Grout: to CSA A179, Table 3.
- .9 Restomix Repointing Mortar: to CSA A179-04 may be used in lieu of separate component mixed mortars for repointing only and if colour matching can be successfully made. Not to be used for bedding mortar.
- .10 Betomix Plus type O: to CSA A179-04 may be used in lieu of separate component mixed mortars for the installation or jointing of masonry elements.
- .11 Betomix 1-1-6: to CSA A179-04 may be used in lieu of separated hydrated lime and hydraulic cement, where only sand and water are need to be added separately.

## 2.2 Mixes

- .1 Colour: Mix grout to semi-fluid consistency.
- .2 Coloured mortars: Incorporate colour into mixes in accordance with manufacturer's instructions.
  - .1 Use clean mixer for coloured mortar.
- .3 Pointing mortar: Prehydrate pointing mortar by mixing ingredients dry, then mix again adding just enough water to produce damp unworkable mix that will retain its form when pressed into ball. Allow to stand for not less than 1 hour nor more than 2 hours then remix with sufficient water to produce mortar of proper consistency for pointing.

## 3.0 EXECUTION

### 3.1 Construction

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

### 3.2 Cleaning

- .1 Remove droppings and splashing using clean sponge and water.
- .2 Clean masonry with low pressure clean water and soft natural bristle brush.

### 3.3 Schedule

- .1 Grout new limestone masonry sills where required.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

**1.1 RELATED WORK** .1 Section 06 10 11: Rough Carpentry

- 1.2 REFERENCES**
- .1 ASTM A53 Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
  - .2 ASTM A307 Specification for Carbon Steel Bolts and Studs.
  - .3 CGSB 1-GP-181M Coating, Zinc-Rich, Organic, Ready Mixed.
  - .4 CAN/CSA-G40.21-M Structural Quality Steels.
  - .5 CSA G164-M Hot Dip Galvanizing of Irregularly Shaped Articles.
  - .6 CAN/CSA-S16.1-09 Limit States Design of Steel Structures.
  - .7 CSA W59 Welded Steel Construction (Metal Arc Welding).

- 1.3 SHOP DRAWINGS**
- .1 Submit shop drawings in accordance with Section 01 33 00 Submittal Procedures
  - .2 Indicate materials, core thickness, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.

## 2.0 PRODUCTS

- 2.1 MATERIALS**
- .1 New, beams, posts, steel lintels, brackets, stirrups and plates: to CAN/CSA-G40.21, Grade 350W. Sizes as noted on drawings.
  - .2 Bolts and anchor bolts: to CAN3-G40.21-04. Anchor bolts to conform to ASTM A307 and remainder to conform to ASTM A325. All bolts to be galvanized.
  - .3 Galvanizing: hot dipped with zinc coating 600 g/m<sup>2</sup> to CSA G164 where indicated on the drawings.
  - .4 Paint to be zinc-chromate primer conforming to CGSB 1-GP-40d, structural steel primer or CISC/CPMA Standard 2-75 primer.
  - .5 Welding materials: to CSA W59-03 (R2008). Welding shall only be undertaken by Companies certified to the requirements of CSA Standard W47.1.

## **2.2 FABRICATION**

- .1 Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.
- .2 Where possible, fit and shop assemble work, ready for erection.
- .3 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.

## **3.0 EXECUTION**

### **3.1 ERECTION**

- .1 Do welding work in accordance with CSA W59 unless specified otherwise.
- .2 Companies to be certified under Division 1 or 2.1 of CSA W47.1 for fusion welding, CSA W55.3 for resistance welding.
- .3 Provide certification that all welded joints are certified by Canadian Welding Bureau.
- .4 Erect metalwork square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
- .5 Provide suitable means of anchorage acceptable to Engineer such as dual bolts sized as indicated.
- .6 Exposed fastening devices to match finish and be compatible with material through which they pass.
- .7 Make field connections with high tensile bolts to CAN/CSA-S16.1.
- .8 Touch-up exposed surfaces with rust inhibiting primer where burned by field welding or scraped as per Section 09 91 00: Painting .

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

### 1.1 REFERENCES

- .1 Particular requirements for National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber (latest version).
- .1 Related Sections
  - .1 Section 07 26 00 - Vapour Retarder (Air Barriers)
  - .2 Section 05 50 00 - Metal Fabrications
  - .3 Section 06 20 00 - Finish Carpentry

### 1.2 QUALITY ASSURANCE

- .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood identification: by grade mark in accordance with applicable CSA standards.

## 2.0 PRODUCTS

### 2.1 LUMBER MATERIAL

- .1 Dimensional lumber: unless specified otherwise, softwood, eastern white cedar #1, eastern white spruce #1 and spruce-pine-fir #2 or better, S-Dry, moisture content 19% or less in accordance with following standards:
  - .1 CAN/CSA-O141.
  - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Glued end-jointed (finger-jointed) lumber is not acceptable.
- .3 Framing and board lumber: in accordance with OBC Part 4.
- .4 Furring, blocking, nailing strips, grounds, rough bucks, curbs, fascia backing and sleepers:
  - .1 Board sizes: "Standard" or better grade.
  - .2 Dimension sizes: "Standard" light framing or better grade.
- .5 Beams and Columns - dressed eastern white spruce #1 and fir #1 or built-up wood as noted on drawings. Parallam, Glulam or Microlam where noted on drawings.
- .6 Pressure Treated Wood (PTWD): for unprotected structural members exterior to building (fences, posts, railings, etc.) CSA 080 Series-08.. Process to 10% moisture for base plates on ground floor framing and stud walls supported on concrete. All pressure treated wood products to conform to CSA 08-08 use category UC4.1 group D (ACQ-C or D or CA-B preservative treatments are acceptable). Borate treated wood is not acceptable.

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## 2.2 PLYWOOD MATERIALS

- .1 Douglas fir plywood (DFP): to CSA O121, standard construction. Dimensions as per drawings.
- .2 Canadian softwood plywood (CSP): to CSA O151, standard construction. Dimensions as per drawings.

## 2.3 ACCESSORIES

- .1 Exterior wall sheathing paper: to CAN/CGSB-51.32 spun-bonded olefin.
- .2 Nails, spikes and staples: to CSA B111.
- .3 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.
- .5 Wood Preservative - Green Pentox, by Osmose Wood Preserving Company of Canada Limited (brush applied).
- .6 Dampproof Membrane: .152 mm polyethylene film 'super six' type I.
- .7 Sill Gasket: 150mm Ethafoam sill gasket by Dow Corning.
- .8 Brackets, Stirrups, Angles and Plates: as noted on drawings and as per Section 05 50 00.

## 3.0 EXECUTION

### 3.1 INSTALLATION

- .1 Comply with requirements of OBC 2012 Part 4 supplemented by following paragraphs.
- .2 Include grounds, blocking, sleepers, furring, nailers, and other rough framing; located and secured to suit site conditions; and adequate for intended support. Do not assume that Drawings show required work exactly or completely. Ensure that appropriate supports are installed for cabinetwork, accessories, plumbing fixtures, valances, drapery tracks, grab bars and railings, and other similar items requiring attachment.
- .3 Install members true to line, levels and elevations, square and plumb.
- .4 Construct continuous members from pieces of practical length.
- .5 Install spanning members with "crown-edge" up.
- .6 Install wall and roof sheathing in accordance with requirements of OBC.

- .7 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding, electrical equipment mounting boards, washroom accessories and other work as required.
- .8 Install furring to support finish materials applied vertically where there is no blocking and where sheathing is not suitable for direct nailing.
- .9 Preservative Treatment: To cut ends and bore holes in pressure treated out door wood, and all exterior structure and wood exposed to concrete and masonry, apply one coat.

### **3.2 ERECTION**

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity. Install anchor bolts at min. 1800 mm o.c. or as noted on drawings.
- .2 Countersink bolts where necessary to provide clearance for other work. Bore holes in true lines of same size as bolts and drive bolts through. Use washers at bolt and lag screw heads, and at nuts; tighten when installed and again before concealed or at Project completion.
- .3 Stud Bridging: Provide horizontal solid bridging between wall studs as shown on structural drawings.
- .4 Install sill gaskets between exterior wall, sill plates and top of foundation.
- .5 Install fascia backing framing, nailers, curbs, cants and other wood supports as required and secure using galvanized steel fasteners.
- .6 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.

\*\*\*END OF SECTION\*\*\*

## **1.0 GENERAL**

- 1.1 Division 1, General Requirements shall apply.
- 1.2 Review and comply with O.B.C.  
These minimum material and performance standards shall apply as if repeated here.
- 1.3 Install: Windows (Skylights), Doors and frames supplied by Sections 08 11 13. Finish Hardware supplied by Section 08 71 10.
- 1.4 Store and install wood materials protected from damage, where relative humidity does not exceed 55%.
- 1.5 Submit samples for various trims and rails in accordance with Section 01 33 00.

## **2.0 PRODUCTS**

- 2.1 Wood - Grade marked under rules of National Grades Authority for softwoods and similarly as applicable for hardwoods: Finish Work and Trim; select Factory or Yard Lumber, clean where surfaces given transparent finish, sound where painted, unless otherwise specified: for framing work; Structural Lumber, Appearance Grade. Species for each application is indicated under EXECUTION or on Drawings.
- 2.2 Plywood
  - .1 Eastern Spruce (SPF): CSA -0121, sanded, Good two sides where each side is exposed to view and Good/Solid where one side is exposed to view, urea formaldehyde free
  - .2 Hardboard: to CAN/CGSB-11.3, Type 2.

## **3.0 EXECUTION**

- 3.1 Examine previous construction to ensure adequacy of grounds, blocking, strapping, framing and other surfaces before finish work begins, and make deficiencies good. Verify by site measurements that access for shop fabricated work is assured.
- 3.2 Co-operate to ensure that fastenings set by others are provided and located, that work supplied by others is installed to their specifications, and that those responsible for back priming are notified in sufficient time to schedule their work.
- 3.3 Brace Work where required and remove when no longer needed.
- 3.4 Cut and fit work with clean, sharp profiles, and closely fitted joints. Install trim or filler panels to close gaps as noted on drawings.
- 3.5 Metal Door Frames & Screens: Install metal frames supplied as approved through submission process 01 33 00.

- 3.6 Doors - Install after finishing of walls. Fit with 2.4 mm clearance at jambs and head, and undercut to approval of Architect to allow for air circulation and clearance for intended floor covers. Trim hinge side to fit, and level latch side.
- 3.7 Insulated and or Thermally Broken Steel Entrance Doors and Frames - Install in accordance with manufacturer's recommendations.
- 3.8 Hardware - Install finishing hardware supplied by Section 08 71 10 and other hardware required for installation and function of work of this Section. Accurately locate and cut for hardware using tools and jigs recommended by supplier. Adjust to function as intended.
- 3.9 Adjust doors and hardware to operate smoothly and without binding. Adjust doors to fit tightly and to remain in place at all stages of opening. Lubricate hardware as recommended by supplier.
- 3.10 Clean hardware as recommended by supplier, clean wood to leave free from finish defects on any exposed surface.

#### 4.0

#### SCHEDULE

- 4.1 Miscellaneous Trim:
  - .1 Provide miscellaneous trim pieces such as 1/4 rounds, 1/2 rounds, back bands, crown moulding, flat stock, astragals, burlaps, brick/shingle moulds, panel moulds, door stops, cove moulds, and casings. Species to be consistent with adjacent materials and sized where noted on drawings.

\*\*\*END OF SECTION\*\*\*



## 1.0 GENERAL

- 1.1 RELATED SECTIONS
- .1 Cast in Place Concrete - 03 05 10
  - .2 Joint Sealing – 07 92 00
  - .3 Vapour Retarders (Air Barriers) – 07 26 00
- 1.1 REFERENCES
- .1 CAN/CGSB-51.20 Thermal Insulation, Polystyrene, Boards and Pipe Covering.
  - .2 CGSB 51-GP-23 Thermal Insulation, Spray in Place
  - .3 CAN/ULC S102-10 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
  - .4 CAN/ULC S127-07 - Standard Corner Wall Method of Test for Flammability Characteristics of Non-Melting Building Materials.
  - .5 CAN/ULC S705.1-01, including amendment 1 & 2 - Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density - Material – Specification.
  - .6 CAN/ULC S705.2-05 - Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density - Application.
  - .7 Refer to relevant sections of the OBC latest version.
- 1.3 HANDLING
- .1 Store insulation in dry areas, protected from traffic, wetting, and other adverse environmental conditions. Store insulation board flat, to prevent both edge damage and placing of materials on top of piles.
  - .2 Protect insulation subject to damage from water, freezing, sunlight, and similar adverse environmental conditions during and following installation and until permanent protection is completed.
- 1.4 PROTECTION
- .1 Ventilate area to receive insulation by introducing fresh air and exhausting air continuously during and 24 hour after application to maintain non-toxic, unpolluted, safe working conditions.
  - .2 Provide temporary enclosures to prevent spray and noxious vapours from contaminating air beyond application area.
  - .4 Protect workers as recommended by insulation manufacturer.
  - .5 Protect adjacent surfaces and equipment from damage by overspray, fall-out, and dusting of insulation materials.

## 2.0 PRODUCTS

- 2.1 INSULATION
- .1 Expanded polystyrene: to CAN/CGSB-51.20, Type 4 for foundation, thickness as indicated, ship-lapped edges. Only polystyrene insulation listed on CGSB Qualified Products List (41 GP Series) are acceptable for use on this project.

- .2 Glass Fibre Insulation: CSA A 101 Type 1A, by Fibreglass Canada Inc. Batt insulation to thickness specified. Increment of 140mm at RSI-3.5.
- .3 Non-expanding spray polyurethane foam insulation to: CAN/ULC S705.1, including amendment 1 & 2 closed cell ,and CGSB 51-GP-23, Class [1]. Spray-applied rigid cellular polyurethane foam air barrier and thermal insulation, medium density: Standard of acceptance is WALLTITE ECO.

Performance Requirements:

- .1 Water Vapour Permeance ASTM E96: 42 ng/Pa-s-sq m
- .2 Flame Spread Classification CAN/ULC S102: Flame Spread < 500, Smoke Developed <500.
- .3 Hot Surface Performance ASTM C411: Passed when exposed to 93 deg C for 96 hours.
- .4 Fungi Resistance ASTM C1338: No fungal growth after 28 days.
- .5 Long Term Thermal Resistance (LTTR): Conform to the following when tested to CAN/ULC S770.
- .6 RSI 1.95 @ 50 mm (R11.24 @ 2 inches).
- .7 RSI 3.00 @ 75 mm (R17.32 @ 3 inches).
- .8 RSI 4.12 @ 100 mm (R23.73 @ 4 inches).

Physical Requirements:

- .1 Colour: Purple with Indicator Dye Technology.
- .2 Density ASTM D1622: Minimum 29 kg/cu m (1.8 lb/cu ft).
- .3 Compressive Strength ASTM D1621: 186 kPa (27.0 psi).
- .4 Tensile Strength ASTM D1623: 241 kPa (35.0 psi).
- .5 Open Cell Content ASTM D2856: 8.0 %.
- .6 Water Absorption ASTM D2842: 1.2 % by volume.

## 2.2 ACCESSORIES

- .1 Insulation clips: impale type, perforated 50 x 50 mm cold rolled carbon steel 0.8 mm thick, adhesive back, spindle of 2.5 mm diameter annealed steel, length to suit insulation, 25 mm diameter washers of self locking type.

## 3.0 EXECUTION

### 3.1 WORKMANSHIP

- .1 Install insulation after building substrate materials are dry.
- .2 Install insulation to maintain continuity of thermal protection to building elements and spaces.
- .3 Cut and trim insulation neatly to fit spaces. Butt joints tightly, offset vertical joints. Use only insulation boards free from chipped or broken edges. Use largest possible dimensions to reduce number of joints.
- .4 Do not enclose insulation until it has been inspected and approved by Engineer.

3.2 EXAMINATION

- .1 Examine substrates and immediately inform Engineer in writing of defects.
- .2 Prior to commencement of work ensure:
  - .1 Substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris.

3.3 PERIMETER  
FOUNDATION  
INSULATION

- .1 Interior application: extend boards 1200 mm vertically below bottom of finish grade, installed on inside face of perimeter foundation walls.

3.4 SPRAY FOAM  
INSULATION

- .1 Apply insulation to clean surfaces in accordance with CAN/ULC-S705 and CGSB 51-GP and manufacturer's printed instructions. Use primer where recommended by manufacturer.
- .2 Apply insulation by spray method, to a uniform monolithic density without voids, in lifts not exceeding 50 mm thickness in a single pass.
- .3 Overlap air barrier transition membranes and other air/vapour barrier materials to ensure continuity of building envelope.
- .4 Finished surface of foam to be free of voids and imbedded foreign objects.
- .5 Remove masking materials and over spray from adjacent areas immediately after foam surface has hardened.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

- 1.1 REFERENCES
- .1 CAN/CGSB-51.34 Vapour Barrier, Polyethylene Sheet, for Use in Building Construction.
  - .2 Review and comply with OBC latest version.
  - .3 It is a requirement of the design of the building to provide an integral, monolithic impermeable air retarder/vapour retarder system that resists the diffusion of water vapour and air movement under the action of a difference in vapour and air pressure at the inner face of the insulation. Exercise extreme care that the continuity of the air barrier vapour retarder system is maintained over the entire insulated area and that it extends across all junctions of dissimilar materials. Co-ordinate and co-operate with other trades where materials serving purpose of air barrier vapour retarder about the materials of this section.
- 1.2 RELATED SECTIONS
- .1 Section 07 92 00: Joint Sealants
  - .2 Section 06 10 11: Rough Carpentry

## 2.0 PRODUCTS

- 2.1 SHEET  
VAPOUR RETARDER
- .1 Polyethylene film: to CAN/CGSB-51.34, 0.15 mm thick.
- 2.2 SHEET  
AIR BARRIER
- .1 'Tygar' Building Paper Air Infiltration Retarder as manufactured by Reemay Inc. Ultra violet protected and meets CCMC Report No. 11754-R. BOCA Report No. 79-34.
- 2.2 SELF ADHERING  
AIR BARRIER
- .1 'Perm-A-Barrier' self adhering air barrier as manufactured by W.R Grace & Co. together with all accessories and primers necessary for a complete installation. Other similar products by Bakor or Blue Skin are acceptable.
- 2.3 ACCESSORIES
- .1 Joint sealing tape: air resistant pressure sensitive adhesive tape, type recommended by vapour barrier and air barrier manufacturer, 50 mm wide for lap joints and perimeter seals, 25 mm wide elsewhere. 3M Brand Conventional Contractors Sheathing Tape acceptable standard.
  - .2 Sealants: acoustical sealant compatible with vapour barrier.
  - .3 Staples: minimum 6 mm leg.

### 3.0 EXECUTION

#### 3.1 INSTALLATION

- .1 Ensure services are installed and inspected prior to installation of retarder.
- .2 Install sheet vapour retarder on warm side of exterior wall, and ceiling assemblies prior to installation of interior finish to form continuous retarder.
- .3 Install air barrier from top to bottom of exterior envelop of building. Sheet type on plywood substrates and Self Adhering Type on masonry substrates. Smooth out wrinkles downward toward base plate. Staples are to be 450mm apart into structural material.
- .4 Use sheets of largest practical size to minimize joints.
- .5 Inspect for continuity. Repair punctures and tears with sealing tape before work is concealed.

#### 3.2 EXTERIOR SURFACE OPENINGS

- .1 Cut sheet vapour retarder to form openings and ensure material is lapped and sealed to door and window rough openings. Staple to framing through sealant and lap with air barrier sheeting.

#### 3.3 PERIMETER SEALS

- .1 Seal perimeter of sheet vapour retarder as follows:
  - .1 Apply continuous bead of acoustical sealant to substrate at perimeter of sheets.
  - .2 Lap sheet over sealant and press into sealant bead.
  - .3 Install staples through lapped sheets at sealant bead into wood substrate.
  - .4 Ensure that no gaps exist in sealant bead. Smooth out folds and ripples occurring in sheet over sealant.
- .2 Seal perimeter of sheet air barrier as follows:
  - .1 Fasten sheet to foundation with Goodyear Plio-Nail Construction Adhesive 1.1 lbs/in or approved equal.
  - .2 Apply contractors tape to corners, joints, flashings, header areas, sill plates and where lapped with vapour retarder. Overlap tape at corners to ensure seal.

### 3.4 LAP JOINT SEALS

- .1 Seal lap joints of sheets for vapour barrier as follows:
  - .1 Attach first sheet to substrate.
  - .2 Apply continuous bead of acoustical sealant over solid backing at joint for vapour retarders.
  - .3 Lap adjoining sheet minimum 150 mm.
  - .4 Install staples through lapped sheets at sealant bead (where applicable) into wood substrate.
  - .5 Ensure that no gaps exist in sealant bead. Smooth out folds and ripples occurring in sheet over sealant.

\*\*\*END OF SECTION\*\*\*

## **1.0            GENERAL**

### **1.1      Review and comply with O.B.C.:**

#### **.1            Section 9.27    Roofing**

These minimum material and performance standards shall apply as if repeated here. This Section contains, but is not limited to requirements affecting the following:

- .1            Section 9.26.2 Materials**
- .2            Section 9.26.4 Flashings at Intersections**
- .3            Section 9.26.5 Eave Protection**
- .4            Section 9.26.6 Underlay beneath Shingles**

- 1.2      Additionally, meet requirements of Section 07 92 00 for sealants. Install metal flashings for roofing supplied by Section 07 62 00.**
- 1.3      Reference CAN/ULC S-107 Class C and CAN3- A 123.5. Asphalt Shingle Application on Roof Slopes 1:3 and steeper. Canadian Standards Association (CSA): Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.**
- 1.4      Co-ordinate Work of this Section with Work of: Divisions 15 and 16 for mechanical and electrical Work installed on or through roofing.**
- 1.5      Store roofing materials under cover when Work is not in progress. Ensure that shingles, roll roofing, underlayment and cement are stored, preceding application, to maintain temperature of materials above 16 degrees C.**
- 1.6      Do not damage edges of shingles or roll goods during handling.**

## **2.0            PRODUCTS**

- 2.1      Compatibility between roofing materials in essential.**
- 2.2      Shingles: fiberglass-based, mineral surfaced, asphalt, CSA -A123.5, 25 year warranty, Class C, triple-tab strip. Colour, texture and profile to owners selection. Submit samples to owner for approval. Provide shingles suitable for slopes of 4 in 12 & greater, 12.2/10 sqm as manufactured by Owens Corning and CRC (IKO).**
- 2.3      Sheathing Paper Underlayment: No 15, plain asphalt saturated, organic felt to CAN/CGSB - 51-32 and CSA A123.3.**
- 2.4      Eave Protection: vertical wall & valley underlay to be Ice & Water Shield by Grace Construction Products or equivalent. Self adhesive, in 915mm wide rolls, 0.9mm rubberized asphalt laminated to 0.1mm polyethylene film with removable paper backing.**

- 2.5 Roofings Cement: No. 19 to CGSB 37-GP-4Ma.
- 2.6 Drip Edge: extruded profile of unplasticized polyvinyl chloride of min. thickness of 0.8mm. or prefinished metal purpose made.
- 2.7 Prefinished Metal Valley Flashing: to ASTM A653/A653M.
- 2.8 Nails: To CSA -B111 of galvanized steel, sufficient length to penetrate 19mm into deck.
- 2.9 Staples: Chisel point galv. steel 25mm crown 1.5mm thick, sufficient length to penetrate 20mm into deck.
- 2.10 Vent Stack collar: one piece neoprene, 500 mm<sup>2</sup> deck flange, size to suit vent, sealed to stack with flexible, non-shrink collar.
- 2.11 Plastic Cement: cutback asphalt to CAN/CGSB-37.5.
- 2.12 Ridge Vent: continuous under shingle, PVC ridge vent as manufactured by Ridgemaster Plus or Duraflo.
- 2.13 Roof Louvres: prefinished metal or PVC roof louvers number and location as shown on drawings. As manufactured by Duraflo 6065 Slant Back.
- 2.14 Hip and Ridge cap: fiberglass asphalt shingles.
- 2.15 Starter Strip: fiberglass asphalt shingles.

### **3.0 EXECUTION**

#### **3.1 Application**

- .1 Do shingle work in accordance with CAN- A123.5, OBC and CRCA Specification except where specified otherwise.
- .2 Install drip edge along eaves, overhang 12mm, with minimum 50mm flange extending onto roof decking. Nail to deck at 400mm o/c.
- .3 Install eave, valley and vertical wall protection as follows:
  - .1 Eave: extending minimum 800mm inside of inner face of wall below. Lapped min. 100mm where multiple widths required.
  - .2 Valley: 2 widths, lapped 100mm, extending approx 815mm both sides of valley.
  - .3 Walls: extending 400mm on to roof and 515mm up vertical surface or as conditions will allow.
- .4 Apply sheathing paper underlayment over entire roof surface, top lapping 150mm.



- .5 Flash around all protrusions through roof.
- .6 Install bottom step flashing (soaker flashing), interleaved between shingles at vertical junctions. Step flashing shall be capped with prefinished metal flashing as per Section 07 62 00.
- .7 Install shingles on sloping roofs and as indicated on the drawings.
- .8 Apply prefinished metal flashing over valley protection and vertical wall protection.
- .9 Install roof louvers, continuous undershingle ridge vents and vents to locations and numbers as noted on drawings and to manufacturer's written instructions.

\*\*\* END OF SECTION \*\*\*

## 1.0 GENERAL

- 1.1 RELATED SECTIONS
- .1 Section 06 10 11- Rough Carpentry.
  - .2 Section 07 31 00 - Asphalt Shingles.
  - .3 Section 07 92 00 - Joint Sealing
- 1.2 REFERENCES
- .1 ANSI B18.6.4 Screws, Tapping and Metallic Drive, Inch Series, Thread Forming and Cutting.
  - .2 CGSB 93-GP-4 Siding, Soffits and Fascia, Steel, Galvanized, Pre-finished.
  - .3 CGSB 93-GP-5 Installation of Metal Residential Siding, Soffits and Fascia.
- 1.3 SAMPLES
- .1 Submit samples in accordance with Section 01 33 00: Submittal Procedures
  - .2 Submit samples of siding material, of colour and profile specified.

## 2.0 PRODUCTS

- 2.1 METAL CLADDING AND COMPONENTS
- .1 Flashings, drips, facings and exposed trim: to CGSB 93-GP-4, Class plain.  
To meet or exceed Series 8000, 24 ga by Vic West or approved equal.
    - .1 Finish coating: Class F1S.
    - .2 Colour: to Engineers selection from standard range.
    - .3 Profile: to suit intended purpose.
  - .2 Copper Covered Lead Flashing Material: as distributed by Heather and Little Ltd, Markham Ontario.
- 2.2 EAVE TROUGHS AND DOWNPIPES
- .1 Project does not have eave troughs or downpipes.
- 2.3 ACCESSORIES
- .1 Exposed trim: inside corners, outside corners, cap strip, drip cap, undersill trim, starter strip and window/door trim of same material, colour and gloss as cladding, with fastener holes pre-punched.
- 2.4 FASTENERS
- .1 Nails: to CSA B111. Screws to ANSI B18.6.4. Purpose made cadmium plated steel.

- .2 Hook (lock) strips, copings and similar Work: 24 ga., in lengths of approx. 2.500 m, continuous, with 6 mm between lengths and fastened at 300 mm o.c

### 3.0 EXECUTION

#### 3.1 INSTALLATION

- .1 Install cladding in accordance with CGSB 93-GP-5, and manufacturer's written instructions
- .2 Install continuous starter strips, inside and outside corners, edgings, drip, cap, sill and window/door opening flashings.
- .3 Install outside corners, fillers and closure strips with carefully formed and profiled work.
- .4 Install flashings and drip edges as indicated.
- .5 Assist in location and setting of reglets when requested.
- .6 Under sheet metal installed over masonry or wood, apply roofing felt as sheet metal is installed, with joints lapped 100 mm and turned up 150 mm at edges where horizontal surfaces intersect vertical surfaces. Over felt install building paper.
- .7 Maintain joints in exterior cladding, true to line, tight fitting, hairline joints.
- .8 Attach components in manner not restricting thermal movement. Do not form open joints or pockets that fail to drain water.
- .9 Fasten and secure Work with concealed fasteners and lock seam joints. Use exposed fasteners only where impossible to conceal; space them evenly and locate unobtrusively. Do not use pop rivets.
- .10 Caulk junctions with adjoining work with exterior sealant, in accordance with Section 07 92 00.
- .11 Cleaning: remove completely from surfaces and crevices flux residue, other deposits, stains and protections, and wash visible metal left unpainted.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

1.1 Division 1, General Requirements, shall apply.

1.2 Review and comply with O.B.C:

- .1 Section 9.6: Doors
- .2 Section 9.7: Windows
- .3 Section 9.27: Siding (wood)

These minimum standards shall apply as if repeated here. This Section contains, but is not limited to requirements affecting the following:

- .4 Section 9.6.4: Exterior Doors
- .5 Section 9.7.4: Caulking of Windows
- .6 Section 9.27.4: Caulking

1.3 Apply this Section to govern for caulking included in all other sections.

1.4 Proceed with caulking only when air, substrate, and material temperatures are above minimum established by manufacturer's specifications, and surfaces in contact with sealant are completely dry and clean.

1.5 For caulking of air and vapour retarders also refer to Drawings.

1.6 Samples: Prepare sample joints at site with specified sealant materials for approval. Approved samples shall represent minimum acceptable standard for Work.

1.9 Affidavits: In lieu of samples and testing procedures required by CGSB Specification, submit manufacturer's name for materials to be supplied for Project with manufacturer's affidavits that they meet applicable CGSB Specification.

1.8 Provide an extended warranty of one (1) year beyond the standard one year for the Work of this Section.

## 2.0 PRODUCTS

2.1 Exterior Sealant: Two component urethane based to CAN/CGSB-19.13 Type 2, Class B. To be equal to Dow 780 or Dymeric as manufactured by Tremco Canada Limited Colour to match adjacent surfaces.

2.2 Interior Caulking: Paintable Acrylic apply at interior edges of exterior openings and exposed joints of dissimilar materials. Acceptable material is Mono-Lastomeric by Tremco. Colour to adjacent surfaces.

- 2.3 Acoustical Sealant: To meet or exceed Tremco Acoustical Sealant as manufactured by Tremco Canada Limited or otherwise approved for use with Vapour Retarders.
- 2.4 Primer: of type recommended by sealant manufacturer and specifically designed to suit sealant and surface conditions.
- 2.5 Sealant Backing: Round polyethylene rod, 25% wider than joint width.
- 2.6 Void Filler: Glass fibre, loose wool.
- 2.7 Cleaning Material: For surfaces to receive sealants: as recommended by the manufacturer of the sealant.
- 2.8 Mix materials in accordance with manufacturer's recommendations.
- 2.9 Non-expanding urethane foam as manufactured by Tremco.
- 2.10 Firestopping: two part silicone elastomeric sealant. Note that this material is to be used for openings less than 15mm in width. Follow the submittal procedure for product approval by consultant as per section 01 33 00.

### 3.0 EXECUTION

- 3.1 Examine joints before caulking to ensure that configuration, surfaces and widths are suitable for sealant and service, and that execution of caulking and performance of sealants will not be adversely affected. Defective Work resulting from application to unsatisfactory joint conditions will be considered the responsibility of those performing the Work of this Section.
- 3.2 Prepare joints by brushing, scrubbing, scraping or grinding inner face surfaces to remove loose mortar, dust, oil, grease, oxidation, mill scale, and other materials which will affect adhesion and integrity of sealant. Wipe down metal surfaces with clean cellulose sponges or rags soaked in solvent compatible with sealant, and dry with clean cloths. Ensure that surfaces have not been coated with releasing agents, coatings, or other treatments, or that, if present, they are entirely removed.
- 3.3 Prime inner face surfaces of joints as necessary for substrate, in accordance with sealant manufacturer's specification to provide full adhesion and to prevent staining of face surfaces at joint.
- 3.4 Sealant depths shall be:
  - .1 6 mm for joints up to 12 mm wide;
  - .2 9 mm for joints between 12 and 19 mm wide;
  - .3 10 to 12 mm for joints between 19 and 25 mm wide;
  - .4 19 mm for joints between 25 and 50 mm wide.

Do not caulk joints wider than 19 mm unless directed by Owner or indicated on Drawings.

- 3.5 Pack joints tightly with sealant backing set at specified depth. Fill other voids with filler.
- 3.6 Fill joints with sealant in accordance with manufacturer's specifications using pressure guns. Fill joints full width, and allow for building construction tolerances in the work.
- 3.7 Finish joints smooth, free of wrinkles, air pockets, and embedded foreign materials.
- 3.8 At painted surfaces caulk after painting, matching sealant colour with that of paint.
- 3.9 Remove from surfaces of other Work sealant smears, droppings, and masking tape immediately after caulking.
- 3.10 Clean surfaces soiled by work of this Section. Make good other Work cleaning has damaged under Work of this Section.
- 3.11 Caulking Schedule:
  - .1 Caulk all joints under Work of this Section, except for those specified under Work of other Sections, to ensure weather tightness of building, in accordance with O.B.C. Section 9.20 and Section 9.27 and as indicated on Drawings.
  - .2 Joints in conjunction with flashing and sheet metal, shall be caulked with Dymeric sealant, as specified under Work of Section 07 62 00.
  - .3 Caulk around pipes or other elements that pass through non-fire rated walls or roofs with sealant as recommended by manufacturers specifications.
  - .4 Caulk around pipes, conduits, ducts or other elements that pass through floor, wall or roof assemblies shown as being through a required fire rated assembly with fire caulking where the gap is less than 10mm . Caulk/seal or patch around pipes, ducts, conduits or other elements that pass through larger openings in use grout or cementitious filler.
  - .5 Non-expanding urethane foam insulation/sealant to be used between closures and rough openings.
  - .6 Before caulking, fill spaces deeper than 12mm with bedding material packed tightly in place to within 9mm of finished surfaces. Bedding material shall be non staining.

\*\*\* END OF SECTION \*\*\*

## 1.0 GENERAL

- 1.1 RELATED SECTIONS
- .1 Section 07 92 00: Joint Sealing & Fire Stopping.
  - .2 Section 08 71 10: Door Hardware.
  - .3 Section 06 20 00: Finish Carpentry
- 1.2 REFERENCES
- .1 Canadian Steel Door and Frame Manufacturers' Association (CSDFMA). Specifications for Commercial Steel Doors and Frames.
  - .2 ASTM A366 Specification for Steel, Carbon, Cold-rolled sheet, Commercial Quality.
  - .3 CAN4 S104M Fire Tests of Door Assemblies.
  - .4 DAN4 S105M Fire Door Frames.
  - .5 NFPA 80 Fire Doors and Windows.
- 1.3 SHOP DRAWINGS
- .1 Submit shop drawings in accordance with Section 01 33 00: Submittal Procedures
  - .2 Indicate each type of frame and door material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, and openings.

## 2.0 PRODUCTS

- 2.1 MATERIALS
- .1 Steel Door Frames: to ASTM A568 and A653
    - .1 Hot dipped galvanized steel sheet: to ASTM A 527 coating designation to ASTM A 525, ZF75, minimum base steel thickness in accordance with CSDFMA Table 1 - Thickness for Component Parts;
    - .2 1.6mm cold rolled steel, welded frames at exterior assemblies.
    - .3 1.6mm knock down steel frames at interior assemblies;
    - .4 chemically cleaned & factory primed with rust inhibiting primer;
    - .5 Mortised, reinforced, drilled and tapped for standard hardware. Including anchors, bumpers, hinges and strike;
    - .6 Include ULC badge attached to frame where fire rating required;
    - .7 Include PVC thermal break at exterior frames;
    - .8 Include removable center mullion at exterior double doors.

- .2 Hollow Metal Doors: to ASTM A568 and A653.
  - .1 Door face sheets - 1.2mm base thickness, wipe coat galv. steel, in accordance with CSDFMA Table 1 - Thickness for Component Parts;
  - .2 Min. face sheet thickness applies to doors not otherwise requiring heavier gauges to meet specified fire rating.
  - .3 Mortised, reinforced, drilled and tapped for hardware as specified in Section 08 71 10.
  - .4 Include anchors and bumpers.
  - .5 Fire labeled as specified on drawings.
  - .6 Insulated, thermally broken at exterior with PVC top caps to CGSB-41-GP-19Ma.
  
- 2.2 DOOR CORE MATERIALS
  - .1 Interior Doors:
    - .1 Honeycomb construction to be structural small cell, 24.5mm maximum kraft paper 'honeycomb', weight: 36.3 kg per ream min., density: 16.5 kg/m<sup>3</sup> min. sanded to required thickness.
  - .2 Exterior Doors;
    - .1 Insulated core, 'z' stiffeners, thermal break.
  
- 2.3 PRIMERS
  - .1 Touch-up prime CAN/CGSB-1.181.
  
- 2.4 ACCESSORIES
  - .1 Door silencers: single stud rubber/neoprene type.
  - .2 Top caps: pvc.
  - .3 Prepare for hardware supplied by Section 08 71 10.
  
- 2.5 FRAMES FABRICATION GENERAL
  - .1 Fabricate frames in accordance with CSDFMA specifications.
  - .2 Frames: 1.6 mm knocked-down at interior doors and 1.6mm welded / thermally broken at exterior doors, type construction.
  - .3 Blank, reinforce, drill and tap frames for mortised, templated hardware, using templates provided by finish hardware supplier. Reinforce frames for surface mounted hardware.
  - .4 Prepare frame for door silencers, 3 for single door, 2 at head for double door.
  - .5 Manufacturer's nameplates on frames and screens are not permitted.
  - .6 Conceal fastenings except where exposed fastenings are indicated.
  - .7 Provide factory-applied touch up primer at areas where zinc coating has been removed during fabrication.



- 2.6 FRAME ANCHORAGE
- .1 Provide appropriate anchorage to floor and wall construction.
  - .2 Locate each wall anchor immediately above or below each hinge reinforcement on hinge jamb and directly opposite on strike jamb.
  - .3 Provide 2 anchors for rebate opening heights up to 1520 mm and 1 additional anchor for each additional 760 mm of height or fraction thereof.
- 2.7 FRAMES: KNOCKED-DOWN TYPE
- .1 Ship knocked-down type frames unassembled.
  - .2 Provide frames with mechanical joints which inter-lock securely and provide functionally satisfactory performance when assembled and installed in accordance with CSDFMA Recommended Installation Guide for Steel Doors and Frames.
  - .3 Securely attach floor anchors to inside of each jamb profile.
- 2.7 FRAMES: WELDED TYPE
- .1 Ship welded frames pre-assembled.
  - .2 Provide frames with finished welded joints which provide functionally satisfactory performance when installed in accordance with CSDFMA Recommended Installation Guide for Steel Doors and Frames.
  - .3 Securely attach floor anchors to inside of each jamb profile.
  - .4 Provide removable centre frame mullion in double door sets where indicated otherwise provide integrated astragal system.
- 2.8 DOOR FABRICATION GENERAL
- .1 Form each face sheet for exterior doors from 1.2 mm sheet steel with polyurethane core laminated under pressure to face sheets.
  - .2 Form each face sheet for interior doors from 1.2 mm sheet steel with honeycomb core laminated under pressure to face sheets.
  - .3 Fabricate doors with longitudinal edges locked seam. Seams: fill with metallic paste filler and sand to a uniform smooth finish.
  - .4 Blank, reinforce, drill doors and tap for mortised, templated hardware
  - .5 Reinforce doors where required, for surface mounted hardware. Provide inverted, recessed, spot welded channels to top and bottom of interior doors. Provide flush steel top caps to exterior doors.

- .6 Provide factory-applied touch-up primer at areas where zinc coating has been removed during fabrication.
- .7 Manufacturer's nameplates on doors are not permitted.

### 3.0 EXECUTION

#### 3.1 INSTALLATION GENERAL

- .1 Install doors and frames to CSDFMA Installation Guide.

#### 3.2 FRAME INSTALLATION

- .1 Set frames plumb, square, level and at correct elevation.
- .2 Secure anchorage and connections to adjacent construction.
- .3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm wide. Remove temporary spreaders after frames are built-in.
- .4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.
- .5 Caulk perimeter of frames between frame and adjacent material.

#### 3.3 DOOR INSTALLATION

- .1 Install doors and hardware in accordance with templates and manufacturer's instructions and Section 08 71 10 Door Hardware.
- .2 Adjust operable parts for correct function.
- .3 Installation is by Section 06 20 00 – Finish Carpentry.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

1.1 Division 1, General Requirements, shall apply.

1.2 Review and comply with O.B.C.:

- .1 Section 9.6: Doors
- .2 Section 9.9: Means of Egress
- .3 Section 9.10: Fire Protection

These minimum material and performance standards shall apply as if written here.

1.3 Related Sections:

- .1 Section 08 71 10: Door Hardware
- .2 Section 06 20 00: Finish Carpentry

1.4 Store doors on site, flat, identified with labels indicated installed location and use, where they will not be damaged, and install them only when risk of damage by subsequent Work is minimal.

1.5 Extended Guarantee: four years in addition to standard one year warrantee, issued in the Owner's name guaranteeing the doors against all defects in materials. Submit in accordance with Section 01 33 00: Submittals.

1.6 Installation of this Section with Section 06 20 00: Finish Carpentry.

1.7 Submittals: Submit the shop drawings as a reference to the consultant's documents, indicating the openings for glazing and other purposes, where required.

## 2.0 PRODUCTS

2.1 Door materials and door fabrication compliant to CSA 0132.2.

2.2 Solid Core (SC) Interior Wood Doors:

Refer to Drawings for locations. Solid core doors: Solid particleboard under a 3 mm lauan face or 3 mm masonite face for paint. Total thickness 45 mm. to meet or exceed O.B.C Standard for 20 min. fire resistance rating without a label. Standard of acceptance: 8300 series from Baillargeon.

2.3 Prepare door for glazing where indicated in Door Schedule. Glazing to be 6mm clear tempered glass single pane. Provide glazing stops.

2.4 Provide door stops to all interior doors and as required by Hardware Schedule.

- 2.5 Bevel vertical edge of single acting doors 3mm in 50mm on lock side and 1.5mm in 50mm on hinge side.
- 2.6 Hollow Metal Frames to be supplied under Section 08 11 13 for these doors.

### **3.0 EXECUTION**

- 3.1 Installation of doors is performed under Work of Section 06 20 00.
- 3.2 Hardware for these doors is supplied under work of Section 08 71 00.
- 3.3 Adjust hardware to correct function.
- 3.4 Re-adjust doors and hardware just prior to completion of building to function freely and properly.
- 3.5 Ensure that when installed in an opening requiring a 20 min. F.R.R. closure bottom of door to not have more than a 1/4" gap.

\*\*\* END OF SECTION \*\*\*

## 1.0 GENERAL

- 1.1 RELATED WORK
- .1 Section 08 11 13: Metal Doors and Frames.
  - .2 Section 06 20 00: Finish Carpentry
- 1.2 REFERENCE STANDARDS
- .1 Standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association.
- 1.3 HARDWARE LIST
- .1 Submit contract hardware list, product cuts and schedule in accordance with Section 01 33 00: Submittal Procedures, this section and the Door Hardware Schedule noted on the drawings.
  - .2 Indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.
  - .3 Hardware list shall be verified by the Architect, upon submission by the Contractor. Final list must be approved prior to execution by the Contractor.
  - .4 Supply of hardware as noted in Hardware Schedule; installation of hardware is by Section 06 20 00 Finish Carpentry.
- 1.4 MAINTENANCE DATA
- .1 Provide operation and maintenance data for door closers, locksets, door holders and fire exit hardware for incorporation into manual specified in Section 01 77 00: Closeout Procedures.
- 1.5 MAINTENANCE MATERIALS
- .1 Supply two sets of wrenches for door closers and locksets.

## 2.0 PRODUCTS

- 2.1 HARDWARE ITEMS
- .1 Only door locksets and latchsets listed on CGSB Qualified Products List are acceptable for use on this project.
  - .2 Use one manufacturer's products only for all similar items.

- 2.2 DOOR HARDWARE
- .1 Locks and latches:
    - .1 Bored and pre-assembled locks and latches: to CAN/CGSB-69.17, series 4000 bored lock, grade 1, designed for function as stated in Hardware Schedule.
    - .2 Lever Knobs: plain design to accessible standards.
    - .3 Roses: round.
    - .4 Normal strikes: box type, lip projection not beyond jamb.
    - .5 Cylinders: key into keying system as directed.
  - .2 Butts and hinges:
    - .1 Butts and hinges: to CAN/CGSB-69.18, designated by letter A and numeral identifiers, followed by size and finish, listed in Hardware Schedule.
  - .3 Door Closers and Accessories:
    - .1 Door controls (closers): to CAN/CGSB-69.20, designated by letter C and numeral identifiers listed in Hardware Schedule, size in accordance with CAN/CGSB-69.20, table A1. Delayed closing action to meet accessibility standards.
  - .4 Exit devices: to CAN/CGSB-69.19, ANSI A156.3 type ULC, function rim device, grade 1, modern design, finished to sprayed aluminum. Non-handed, field sizable, latch bolt deadlocking, hex key dogging, 19mm throw latch bolt. Exterior trim to be 2.4mm steel escutcheon, c/ 'D' handle and thumb latch. Cylinder to be keyed as required by owner.
  - .5 Auxiliary locks and associated products: to CAN/CGSB-69.21, designated by letter E and numeral identifiers listed in Hardware Schedule.
    - .1 Dead bolt, type mortise bolt, throw 25mm, 6 pin cylinder. Key into keying system as directed.
  - .6 Auxiliary hardware: to CAN/CGSB-69.32, designated by letter L and numeral identifiers listed in Hardware Schedule.
    - .1 Crash chain door guard/stop.
  - .7 Thresholds: 150 mm wide x full width of door opening, extruded aluminum mill finish, serrated surface, with thermal break of rigid PVC, with lip.
  - .8 Weatherstripping:
    - .1 Head and jamb seal: Extruded aluminum frame and solid closed cell neoprene insert, clear anodized finish.
    - .2 Door bottom seal: Extruded aluminum frame and closed cell neoprene sweep, clear anodized finish.

- 2.3 FASTENINGS
- .1 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.
  - .2 Exposed fastening devices to match finish of hardware.
  - .3 Use fasteners compatible with material through which they pass.
- 2.4 KEYING
- .1 Doors to be keyed differently as directed. Prepare detailed keying schedule in conjunction with Engineer and owner.
  - .2 Provide keys in duplicate for every lock in this Contract.
  - .3 Provide construction cores.
  - .4 Provide all permanent cores and keys to owner.

### **3.0 EXECUTION**

- 3.1 INSTALLATION INSTRUCTIONS
- .1 Furnish metal door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.
  - .2 Furnish manufacturers' instructions for proper installation of each hardware component.
  - .3 Install hardware to standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association.
  - .4 Remove construction cores when directed by Consultant; install permanent cores and check operation of all locks.
  - .5 Verify that installed hardware functions properly and ensure that it is adjusted accordingly to ensure satisfactory operation.
  - .6 Installation of doors and door hardware is by Section 06 20 00 – Finish Carpentry.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

- 1.1 Division 1, General Requirements, shall apply.
- 1.2 Review and comply with Ontario Building Code latest version.
  - .1 Section 9.29: Interior Wall and Ceiling Finishes

These minimum material and performance standards shall apply as if written here. This Section contains but is not limited to requirements affecting the following:

  - .1 Subsection 9.29.2: Waterproof Wall Finish
  - .2 Subsection 9.29.5: Gypsum Board Finish (Taped Joints)
- 1.3 Co-ordinate this Section with the Work of Section:
  - .1 Section 07 26 00: Air Barrier and Vapour Retarder
  - .2 Section 07 21 00: Thermal Insulation
  - .3 Section 07 92 00: Joint Sealing
- 1.4 Tolerances: Install Work within 3 mm maximum in 3 m and 1.6mm maximum in any running 300mm.
- 1.5 Store packaged wallboard flat, protected from moisture and with edges protected from damage, and metal accessories protected from bending and denting.
- 1.6 Maintain temperature minimum 10°C, maximum 21°C for 48 hours prior to and during application of gypsum boards and joint treatment, and for at least 48 hours after completion of joint treatment.
- 1.7 Proceed with Work only in areas closed and protected against weather, completely dried out with no further installation of damp construction contemplated, and maintained above 10 degrees C during installation and until materials have cured.
- 1.8 Install: Access panels supplied by Division 15 and frames supplied by Division 16.
- 1.9 Do work in accordance with CSA A82.31 except where specified otherwise.

## 2.0 PRODUCTS

- 2.1 Gypsum Board:
  - .1 To CSA A-82-27 and ASTM C36,
  - .2 1200mm wide x maximum practical length ends square cut, edges beveled.
  - .3 12.7 mm standard for general use, on non-fire rated walls to underside of ceiling.
  - .4 15.8 mm standard for general use, on non-fire rated walls and ceilings.
  - .5 12.7 mm Type C fire rated at ceilings and walls as noted in assemblies. Note Type C gypsum board has replaced 12.7 mm Type X and has been designed by industry to be used in any assembly where noted in SB2 or SB3.



- .6 15.8 mm Type X fire rated at fire rated partitions and underside of roof and ceiling structures and as noted in assemblies.
- .5 Water resistant board: to CSA A82.27 regular, 15.9 mm thick standard of acceptance is 'Aquatough' by CGC.
- 2.2 Miscellaneous Metal:
  - .1 Furring runners, hangers, tie wires, inserts anchors: to CSA A 82-30 galv.
  - .2 Drywall channels: 0.55mm core thickness, galvanized steel channels for corner attachment of gypsum board. Attach with screws.
- 2.3 Corner and Casing Beads: To ASTM C 1047 .55mm (25 ga), galvanized, J and angle type, Universal 300 Series.
- 2.4 Screws: To CSA A82.31 and ASTM C 1002. Self-drilling, self-tapping, case-hardened, Phillips head, with corrosion resistant finish; #6 x 25 mm for one thickness of board and #7 x 41 mm for double thickness, or as indicated otherwise. Suitable for metal studs.
- 2.5 Bracing Channels: 18 ga. 38 x 19 mm cold rolled steel galvanized.
- 2.6 Tie Wire: 16 gauge annealed and galvanized steel.
- 2.7 Joint Filler: To CSA A82.31 and ASTM C 475, 'Ready-Mix', free of asbestos fibre as recommended by manufacturer of gypsum board and to Architect's approval.
- 2.8 Control Joints: Crimped, roll-formed zinc, as CGS-093, or two casing beads set with gap for movement and backed with flexible air seal membrane.
- 2.9 Joint Reinforcement: 50 mm wide minimum perforated kraft paper by Canadian Gypsum Company Limited or approved equal.

### **3.0 EXECUTION**

- 3.1 Install work to ASTM C 840 minimum standard, rigid, secure, square, level, and plumb; frame and erect to maintain dimensions and contours indicated. Make allowance for thermal and structural movement.
- 3.2 Do not begin ceiling installation until Work of other trades above ceilings has been completed.
- 3.3 Ceiling bulkheads to be furred for gypsum board faced vertical bulkheads within and at termination of ceilings. Frame around openings, access panels, grilles, diffusers and lighting with suitable members.
- 3.4 Measure and pre-cut openings for all penetrations (eg. electrical boxes) to maintain integrity of vapour retarder.
- 3.5 Space drywall furring channels at right angles to main structure at not more than 300mm o.c.

- 3.6 Reinforce ceilings and walls and furring channels for surface mounted cabinetwork, fixtures, fittings.
- 3.7 Apply drywall with screws driven slightly below the surface leaving a shallow dimple.
- 3.8 Install wallboard into reveals, alcoves, and closets.
- 3.9 Provide control joints in walls, partitions, and ceilings at maximum spacing of 9 M in each direction, at perimeters of ceilings where they abut walls and other vertical surfaces, at junctions between different substrates, and where indicated otherwise.
- 3.10 Finish edges of gypsum board in the exposed Work using approved casing bead/corner bead. Provide edging at all junctions with dissimilar materials.
- 3.11 Provide edging members of one length mitre and fit corners and junctions accurately and free from rough edges. Secure casing beads at 300 mm on center maximum.
- 3.12 Tape and fill all joints. Finished joints will be accepted with a camber not greater than 0.8 mm. Apply successive coats mechanically 250 mm wide on both sides of butt joints. Apply 3 coats of filler over joints and all fastenings. Sand lightly with fine sandpaper when dry to leave smooth.
- 3.13 Remove droppings and excess joint compound from gypsum wallboard and adjacent surfaces before it sets.
- 3.14 Clean off beads, casing, and other metal trim, and leave all surfaces ready for specified finishes.
- 3.15 Door head seams not to be located at corners of door frames.
- 3.16 Fire proof exhaust ducts from top of ceiling to u/s of roof deck to meet local codes and regulations.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

- |                                |    |  |
|--------------------------------|----|--|
| 1.1 RELATED SECTIONS           | .1 | Section 09 21 16: Gypsum Wall Board.   |
|                                | .2 | Section 06 10 11: Rough Carpentry  |
|                                | .3 | Section 06 20 00: Finish Carpentry   |
| 1.2 REFERENCES                 | .1 | Canadian Standards Association (CSA)<br>.1 - CSA B111, Wire Nails, Spikes and Staples.   |
|                                | .2 | Canadian General Standards Board (CGSB)<br>.1 CAN/CGSB-92.1, Sound Absorptive Prefabricated Acoustical Units.  |
|                                | .3 | Underwriters Laboratories of Canada (ULC)<br>.1 CAN/ULC-S102-07, Surface Burning Characteristics of Building Materials.  |
| 1.3 SAMPLES                    | .1 | Submit samples of each type acoustical units in accordance with Section 01 33 00 Submittal Procedures.   |
| 1.4 REGULATORY REQUIREMENTS    | .1 | Submit certificate stating that suspended ceiling systems provide adequate support for electrical fixtures, as required by current bulletin of Electrical Safety Authority.  |
|                                | .2 | Fire-resistance rated floor/ceiling and roof/ceiling assembly: certified by a Canadian Certification Organization accredited by Standards Council of Canada. Installation of the ACT system must maintain the existing fire separation provided by the existing ceiling. |
| 1.5 ENVIRONMENTAL REQUIREMENTS | .1 | Permit wet work to dry before commencement of installation.  |
|                                | .2 | Maintain uniform minimum temperature of 15°C and humidity of 20 - 40% before and during installation.  |
|                                | .3 | Store materials in work area 48 hours prior to installation.   |
| 1.6 MAINTENANCE MATERIALS      | .1 | Provide one extra materials carton of acoustic units in accordance with Section 01 77 00 Closeout Submittals.  |

- .2 Extra materials to be from same production run as installed materials.
- .3 Clearly identify each type of acoustic unit, including colour and texture.
- .4 Store extra materials where directed.

## 2.0 PRODUCTS

### 2.1 MATERIALS

- .1 Intermediate heavy duty system to ASTM C635-95.
- .2 Acoustic units: model #1729 Fine Fissured from Armstrong, colour white, dimensions 24" x 48" x 5/8", flat, square edge, mineral fibre, max. flame spread rating <25 and max. smoke <50, STC min. 35, butt regular edge detail.
- .3 Suspension system: non-fire rated, one two directional exposed tee bar grid, including continuous wall angle moulding. Prelude 15/16" in hot dipped galvanized steel, colour-matched to the tile. Contractor may reuse existing suspension system where applicable.
- .4 Exposed Grid: exposed tee bar grid components, cold rolled steel, zinc coated, shop painted, satin sheen, white, interlocking, main and cross tee of double web with rectangular bulb, depth governed by span, 25mm exposed face. Contractor may reuse existing grid system where applicable.
- .5 Wall Edge Trim: 26mm x 26mm formed steel angle, electric galvanized white satin sheen finish. To match existing.
- .6 Staples, nails and screws: to CSA B111 non-corrosive finish as recommended by acoustic unit manufacturer.
- .7 Hanger Wire: 3mm galvanized soft annealed steel wire.
- .8 Hold down clips: purpose made clips to secure tile to suspension system, approved for use in fire-rated systems.
- .9 Retroclip: 20 gauge steel clip for attaching cross Tees to main tees after the cross tee tongue has been removed.
- .11 Accessories: splices, clips, wire ties, retainers and wall moulding flush reveal, to complement suspension system components, as recommended by system manufacturer.

### 3.0 EXECUTION

- 3.1 EXAMINATION .1 Do not install acoustical panels and tiles until work above ceiling has been inspected by Consultant.
- 3.2 INSTALLATION .1 Install acoustical panels and tiles in ceiling suspension system in accordance with ASTM C636-96 except where specified otherwise.
- .2 Co-ordinate suspension system with related components.
- .3 Install acoustic units parallel to building lines with edge unit not less than 50% of unit width.
- .4 Cut acoustic units to fit adjacent work. Butt joints tight, terminate edges with moulding. No cut tiles less than 8" wide shall be accepted.
- .5 Support suspension system main runners at 1200mm o.c. maximum with hangers from structure. Assembly shall support super-imposed loads. Maximum permissible deflection, 1/360th of span to ASTM C635-95 deflection test.
- .6 Attach cross member to main runner to provide rigid assembly.
- .7 Install suspension assembly to manufacturer's written instructions.
- 3.3 INTERFACE WITH OTHER WORK .1 Co-ordinate ceiling work to accommodate components of other sections, such as light fixtures, diffusers, speakers, equipment, to be built into acoustical ceiling components.

\*\*\*END OF SECTION\*\*\*

1.0

GENERAL:

1.1 Division 1, General Requirements, shall apply.

1.2 Review and comply with O.B.C.:

.1 Section 9.30: Flooring.

These minimum material and performances standards shall apply as if written here.

1.3 Provide additional material at close-out for Owners use, 1 box, pattern and type of flooring material for future maintenance. Identify each box. Maintenance material to be same production run as installed material.

1.4 Maintenance Instructions:

Provide detail regarding maintenance of the flooring and incorporate them into the final close-out documentation.

1.5 Quality Control:

Provide the manufacturer's warrantee on the materials against any manufacturing defects for a period of 5 years from the date of the provisional acceptance of the work.

2.0

PRODUCTS:

2.1 Provide material from same production run for one area, and from same manufacturer for entire Project.

2.2 Vinyl Composite Tile (V.C.T.):

.1 C.S.A. Standard A126.1, Type A 3.0 mm (1/8") thick. 305 mm x 305mm, Essentials series from Mannington Commercial or Armstrong equivalent.

2.3 Vinyl Base (V): to CAN/CSA- A136.5

.1 Shall be by Johnsonite.

.2 Vinyl cove base 100mm high, 2.4mm thick, min. 1200mm lengths, at VCT areas, including premoulded end stops and external corners.

.3 Separate performed vinyl bases at interior and exterior corners to be used with cove base.

2.4 Filler white premix latex:

.1 As recommended by each adhesive and flooring manufacturer for applicable subfloor.

2.5 Primer and Adhesive:

.1 As recommended by each flooring manufacturer for each subfloor condition.

- 2.6 Wax/Sealer:
  - .1 Wax to CAN/CGSB-25.21. 2 coats.
  - .2 Sealer to type recommended by flooring manufacturer to CAN/CGSB-25.20.
- 2.7 Cleaner:
  - .1 Neutral chemical compound that will not damage tile or affect its colour.
- 2.8 Transitions:
  - .1 VCT-to-carpet transitional moulding: Johnsonite, CTA-22-D, colour Pearl
  - .2 VCT-to-ceramic transitional moulding: Johnsonite, CTA-22-HL, colour Pearl

### 3.0 EXECUTION:

- 3.1 Environmental requirements - Proceed with floor laying only when surfaces, materials and air temperatures have been maintained between 21 and 32°C for 72 hours preceding installation and will be so maintained during installation and for 7 days following.
- 3.2 Protection - Barricade areas where flooring is completed and otherwise protect newly installed flooring until adhesive has set. After flooring has set, and until Project completion, co-ordinate work to ensure that floors are not damaged by traffic. Ensure that flooring is not subject to any static loads during the week following installation.
- 3.3 Ensure that surfaces are clean and dry. Remove dirt, soil, oil, grease and other deposits from surfaces to receive resilient flooring materials.
- 3.4 Fill cracks and depressions with filler and level to smooth surface. Level and prepare the substrate with a finishing concrete or floor leveler to receive the flooring. The top of the finishing must be level with the top of the carpet and ceramic finishing; acceptable grade between the finishings: 1/4" over 3'0".
- 3.5 Vinyl Composite Tile (VCT) Flooring:
  - .1 Lay tile from center of area to perimeter with joints closely butted.
  - .2 Apply adhesive uniformly over surfaces, at rate recommended by manufacturer. Use only waterproof type adhesive in all areas where plumbing fixtures or floor drains are installed.
  - .3 Lay tile with through joints on major room axis.
  - .4 Lay tile with half-staggered joints with grain running in same direction as through joints.
- 3.7 Install bases in lengths as long as possible, not in runs made up of short lengths.
- 3.8 Install thresholds with supplied fasteners or finishing nails at termination of flooring where edges are exposed to view.

- 3.9 Maintenance Instructions - Submit cleaning, waxing and finishing instructions for each installed material to Contractor for his information in final cleaning and waxing and later submission to Owner.
- 3.10 Finish flooring in accordance with manufacturer's recommendations.
- 3.11 Final cleaning and two coats wax required or as specified in Section 01 77 00. Clean all traces of adhesive from the baseboard using a solvent intended for that purpose by the manufacturer.
- 3.12 Protect finish flooring before, during and after installation from construction damage.
- 3.13 For vinyl and rubber baseboards and mouldings, use the longest possible lengths. The use of a series of cut pieces shall not be permitted, even in places where they will not be visible.
- 3.14 On inside and outside corners, use the parts manufactured for that purpose by the baseboard and moulding manufacturer.

\*\*\* END OF SECTION \*\*\*



## 1.0 GENERAL

### 1.1 QUALITY ASSURANCE

- .1 Standard of Acceptance:
  - .1 Walls. No defects visible from a distance of 1000 mm at 90 degrees to surface.
  - .2 Ceilings. No defects visible from floor at 45 degrees to when viewed using final lighting source.
  - .3 Final coat to exhibit uniformity of colour and uniformity of sheen across full surface area.

### 1.2 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00 Submittals.

### 1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver and store materials in original containers, sealed, with labels.
- .2 Observe manufacturer's recommendations for storage and handling.
- .3 Store materials and supplies away from heat generating devices.
- .4 Store materials and equipment in a well ventilated area with temperature range 7°C to 30°C.
- .5 Fire Safety Requirements:
  - .1 Store oily rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.
  - .2 Handle, store, use and dispose of flammable and combustible materials in accordance with the National Fire Code of Canada.

### 1.4 ENVIRONMENTAL REQUIREMENTS

- .1 Provide continuous ventilation during and after application of paint.
- .2 Apply paint finishes only when temperature at location of installation can be satisfactorily maintained within manufacturers recommendations.
- .3 Substrate and ambient temperature must be within limits prescribed in paint standard and by manufacturer to approval of Engineer.
- .4 Provide temporary heating where permanent facilities are not available to maintain minimum recommended temperatures.
- .5 Apply paint finish only in areas where dust is no longer being generated by related construction operations such that airborne particles will not affect the quality of the finished surface.
- .6 Apply paint only when surface to be painted is dry, properly prepared.

## 2.0 PRODUCTS

### 2.1 MATERIALS

- .1 Qualified products: only paint materials listed on the CGSB Qualified Products List are acceptable for use on this project. Standard of acceptance includes:
  - .1 Para Paints;
  - .2 Benjamin Moore Paints;
  - .3 Sherwin Williams Paints;
  - .4 Sico Paints;
  - .5 Minwax Stain;
  - .6 Old Master' Stain.
- .2 Concrete floor sealer standard of acceptance shall be 'Superseal' as manufactured by G.H. Woods Ltd.
- .3 Paint materials for each coating formula to be products of a single manufacturer.
- .4 Low odour products. Whenever possible, select products exhibiting low odour characteristics. If two products are otherwise equivalent, select the product with the lowest odour.
- .5 Room colour schedule will be provided by Engineer upon award of contract. Colour to be from contractor's selected manufacturer's standard colour range.

### 2.2 INTERIOR FINISHES

- .1 Formula 1 (Acrylic Latex): for gypsum and cement board walls apply:
  - .1 one coat latex primer-sealer.
  - .2 two coats semi-gloss acrylic latex.
- .2 Formula 2 (Acrylic Latex): for gypsum board ceilings apply:
  - .1 one coat latex primer-sealer.
  - .2 two coats flat acrylic latex ceiling white.
- .3 Formula 3 (Alkyd): for interior painted wood apply:
  - .1 one coat enamel undercoat.
  - .2 two coats semi-gloss enamel.
- .4 Formula 4 (Stain): for natural wood, open grain apply:
  - .1 One coat wood filler paste, 1-GP-103;
  - .2 One coat oil (solvent) based stain.
  - .3 Three coats clear, satin finish, polyurethane coating.
- .5 Formula 5 (Alkyd): for interior unit masonry apply:
  - .1 One coat latex block filler.
  - .2 Two coats alkyd enamel - semi-gloss.

- .5 Formula 6 (Alkyd): for galvanized and zinc coated metal apply:
  - .1 one coat cementitious primer.
  - .2 two coats semigloss enamel.
- .6 Formula 7 (Alkyd): for interior factory primed painted metal apply:
  - .1 one coat alkyd enamel under coat.
  - .2 two coats interior alkyd enamel semi-gloss.
- .7 Formula 8 (Alkyd): for piping and conduit. Paint where exposed to view to match adjacent finished or unfinished surfaces.
  - .1 one coat zinc chromate primer;
  - .2 one coat alkyd enamel undercoat; (not required on interior);
  - .3 one coat alkyd enamel.
- 2.3 EXTERIOR FINISHES
  - .1 Formula 9 (Alkyd): for galvanized and zinc coated metal apply:
    - .1 one coat cementitious primer.
    - .2 two coats Alkyd gloss enamel.
  - .2 Formula 10 (Alkyd): for exterior painted ferrous metal apply:
    - .1 one coat zinc chromate primer (omit if by fabricator);
    - .2 two coats alkyd gloss enamel.
  - .3 Formula 11 (Stain): for exterior stained wood apply:
    - .1 Two coats exterior, oil based, semi-transparent stain. 1-GP-145b
    - .2 Back prime and edge prime with one coat prior to installation.
- 3.0 EXECUTION**
- 3.1 GENERAL
  - .1 Perform all painting operations in accordance with CAN/CGSB-85.100 except where specified otherwise.
  - .2 Apply all paint materials in accordance with paint manufacturers written application instructions.
- 3.2 PREPARATION
  - .1 Remove electrical cover plates, light fixtures, surface hardware on doors, door stops, bath accessories and all other surface mounted fittings and fastenings prior to undertaking any painting operations. Store for re-installation after painting is completed.
- 3.3 PROTECTION
  - .1 Protect existing building surfaces not to be painted from paint spatters, markings and other damage. If damaged, clean and restore such surfaces as directed by Engineer.
  - .2 Cover or mask floors, windows and other ornamental hardware adjacent to areas being painted to prevent damage and to protect from paint drops and splatters. Use non-staining coverings.

- .3 Protect items that are permanently attached such as Fire Labels on doors and frames.
  - .4 Protect factory finished products and equipment.
- 3.4 EXISTING CONDITIONS
- .1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to Engineer all damage, defects, unsatisfactory or unfavourable conditions before proceeding with work.
- 3.5 CLEANING
- .1 Clean all surfaces to be painted as follows:
    - .1 Remove all dust, dirt, and other surface debris by wiping with dry, clean cloths.
    - .2 Wash surfaces with solution of T.S.P. and clean warm water using a stiff bristle brush to remove dirt, oil and other surface contaminants.
    - .3 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.
  - .2 Sand existing surfaces with intact, smooth, high gloss coatings to provide adequate adhesion for new finishes.
- 3.6 SURFACE PREPARATION
- .1 Prepare plaster and wallboard surfaces to CGSB 85-GP-33. Fill minor cracks with plaster patching compound.
  - .2 Prepare wood surfaces to CGSB 85-GP-1. Surfaces
    - .1 Use CGSB 1-GP-126 vinyl sealer over knots resinous areas.
    - .2 Apply wood paste filler to nail holes and cracks.
    - .3 Tint filler to match stains for stained woodwork.
  - .3 Touch up shop paint primer on steel with CGSB 1-GP-40 to CGSB 85-GP-14.
- 3.7 SURFACE PREPARATION – METAL
- .1 Clean new metal surfaces to be painted by: removing rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with the following:
    - .1 Solvent cleaning: SSPC-SP-1.
    - .2 Hand tool cleaning: SSPC-SP-2.
    - .3 Power tool cleaning: SSPC-SP-3.
  - .2 Clean existing metal surfaces to be repainted by: removing loose, cracked, brittle or non-adherent paint, rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with following:
    - .1 Scrape edges of old paint back to sound material where remaining paint is thick and sound, feather exposed edges.

- .2 Solvent cleaning: SSPC-SP-1.
- .3 Hand tool cleaning: SSPC-SP-2.
- .4 Power tool cleaning: SSPC-SP-3.

- .3 Remove traces of blast products from surfaces, pockets and corners to be painted.
- .4 Touch up shop primer to CGSB 85-GP-10 with primer as specified in applicable section.
- .5 Prepare galvanized steel and zinc coated steel surfaces to CGSB 85-GP-16.
- .6 Prepare new steel surfaces exposed normally to dry conditions to CGSB 85-GP-14.
- .7 Prepare previously painted steel surfaces exposed normally to dry conditions to CGSB 85-GP-15.

### 3.8 MIXING PAINT

- .1 Mix ingredients in container before and during use and ensure breaking up of lumps, complete dispersion of settled pigment, and uniform composition.
- .2 Thin paint for spraying according to manufacturer's instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Engineer.

### 3.9 APPLICATION

- .1 Method of application to be as approved by Engineer. Conform to manufacturer's application instructions unless specified otherwise.
- .2 Brush application:
  - .1 Work paint into cracks, crevices and corners. Paint surfaces not accessible to brushes by spray, daubers or sheepskins.
  - .2 Brush out runs and sags.
  - .3 Remove runs, sags and brush marks from finished work and repaint.
- .3 Spray application:
  - .1 Provide and maintain equipment that is suitable for intended purpose, capable of properly atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
  - .2 Keep paint ingredients properly mixed in containers during paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.
  - .3 Apply paint in a uniform layer, with overlapping at edges of spray pattern.

- .4 Brush out immediately all runs and sags.
- .5 Use brushes to work paint into cracks, crevices and places which are not adequately painted by spray.
  
- .4 Apply each coat of paint as a continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .5 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .6 Sand and dust between each coat to remove visible defects.
- .7 Finish closets and alcoves as specified for adjoining rooms.
- .8 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.
  
- 3.10 RESTORATION
  - .1 Clean and re-install all hardware items that were removed before undertaken painting operations.
  - .2 Remove protective coverings and warning signs as soon as practical after operations cease.
  - .3 Remove paint splashings on exposed surfaces that were not painted. Remove smears and spatter immediately as operations progress, using compatible solvent.
  - .4 Protect freshly completed surfaces from paint droppings and dust to approval of Engineer. Avoid scuffing newly applied paint.
  - .5 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by Engineer.

\*\*\*END OF SECTION\*\*\*

## 1.0 GENERAL

- 1.1 RELATED WORK .1 Section 06 20 00: Finish Carpentry
- 1.2 DELIVERY,  
STORAGE & HANDLING .1 Deliver and store components in protective wrapping and protect from damage.
- 1.3 PREPARATION .1 Obtain information and templates from supplier as required for installation of components.
- .2 Supply anchors, inserts and built-in fasteners installed by the Work of other Sections.
- .3 No trademarks or labels will be accepted on exposed finished surfaces.
- .4 Insulate between dissimilar metals, and metal and masonry to prevent electrolysis.
- 1.4 SAMPLES .1 Submit samples, shop drawings as described in Section 01 33 00: Submittal Procedures.

## 2.0 PRODUCTS

- 2.2 MISCELLANEOUS  
SPECIALTIES SCHEDULE .1 Fire Extinguishers (FE):
- .1 in locations indicated on Drawings.
- .2 shall be 10 1b ABC multi-purpose, dry chemical extinguisher.
- .3 refer to drawings and where discrepancy occurs drawings shall take precedent for locations only. If no units are shown on drawings then provide one extinguisher per building, per storey and one located in mechanical room.

- .3 Identifying Devices:
  - .1 provide in each building, where the occupant load is required to be posted, a permanent plastic sign, black letters on a white background, approximately 8”in height x 10” in length identifying the building and the maximum occupant load of the facility for each floor;

### 3.0 EXECUTION

- 3.1 INSTALLATION
  - .1 Supplier shall provide information and templates required to install products.
  - .2 Install products to meet manufacturer's recommendations.
  - .3 Verify that installed products function properly.
  - .4 Refinish damaged or defective Work only if allowed by Consultant.
  - .5 Installation is by Section 06 20 00 – Finish Carpentry.

\*\*\*END OF SECTION\*\*\*