



## **BID DOCUMENTS**

Issued for Tender

### **Roof Replacement EN023-03147**

#### **Sechelt Aquatic Centre (SAC)**

5500 Shorncliffe Ave  
Sechelt, BC

#### **Gibsons and Area Community Centre (GACC)**

700 Park Rd, Gibsons, BC

##### **Owner:**

Sunshine Coast Regional District  
1975 Field Rd  
Sechelt, BC V7Z 0A8

##### **Prepared By:**

Entuitive Corporation  
1075 W. Georgia Street, Suite 1020  
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**END OF SECTION**

**1 PART 1 – GENERAL**

**1.1 APPLICATION**

1.1.1 The Contract shall be governed by the CCDC 2-2020 – Stipulated Price Contract, with amendments as described in these Supplementary Conditions.

1.1.2 All articles contained herein shall be read in conjunction with the General Conditions of the CCDC 2-2020 document.

1.1.3 Where a General Condition or paragraph of the CCDC 2-2020 is deleted by the Supplementary Conditions, the numbering of the remaining General Conditions or paragraph shall remain unchanged, unless stated otherwise herein, and the numbering of the deleted item will be retained, unused.

**2 PART 2 – SUPPLEMENTARY CONDITIONS**

**2.1 DEFINITIONS**

2.1.1 In CHANGE DIRECTIVE, delete “within the general scope of the Contract Documents”.

**2.2 GC 1.1 CONTRACT DOCUMENTS**

2.2.1 In 1.1.4, add “except for that which could have been reasonably identified when pricing the Work” at the end of the first sentence.

**2.3 GC 1.4 ASSIGNMENT**

2.3.1 Delete 1.4.1 and replace it with the following:

“The Contractor shall not assign the Contract, or any portion thereof, without the prior written consent of the Owner. The Owner shall be entitled to assign the Contract to a corporation, partnership or other entity (the “Assignee”). Upon the assumption by the Assignee of the Owner’s obligations under the Contract, the Owner shall be released from its obligations under the Contract.”

**2.4 GC 1.5 EXAMINATION OF THE DOCUMENTS AND THE SITE**

2.4.1 Add GC 1.5 EXAMINATION OF THE DOCUMENTS AND THE SITE as follows:

“1.5.1 The Contractor declares and represents that in tendering for the Work, and in entering into a Contract with the Owner for the performance of the Work, it has either investigated for itself the character of the Work to be done and all local conditions, including the locality of any utility which can be determined from the records or other information available at the offices of any person, partnership, corporation, including a municipal corporation and any board or commission thereof having jurisdiction or control over the utility that might affect its tender or its acceptance of the Work, or that, not having so investigated, the Contractor has assumed and does hereby assume all risk of conditions now existing or arising in the course of the Work which might or could make the Work, or any items thereof more expensive in character, or more onerous to fulfil, than was contemplated or known when the tender was made or the Contract signed.

1.5.2 The Contractor also declares that in tendering for the Work and in entering into this Contract, the Contractor did not and does not rely upon information furnished by the Owner or any of his agents or servants respecting the nature or confirmation of the ground at the site of the Work, or the location, character, quality or quantity of the materials to be removed or to be employed in the construction of Work, or the character of the construction machinery and equipment or facilities needed to perform the Work, or the general and local performance of the work under the Contract and expressly waives and releases the Owner from all claims with respect to the said information with respect to the Work.”

2.5 **GC 1.6 TIME IS OF THE ESSENCE OF THE CONTRACT**

2.5.1 Add GC 1.6 TIME IS OF THE ESSENCE OF THE CONTRACT as follows:

“1.6.1 All time limits stated in the Contract Documents are of the essence of the Contract.”

2.6 **GC 2.2 ROLE OF THE CONSULTANT**

2.6.1 In 2.2.3, add “The presence of such project representatives on the site will not abrogate any of the Contractor’s responsibility to perform the Work as required by the Contract Documents.”

2.6.2 In 2.2.6, delete “except with respect to GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER”.

**2.7 GC 2.5 PUBLICITY RELEASES**

**2.7.1 Add GC 2.5 PUBLICITY RELEASES as follows:**

“2.5.1 The Contractor shall not release, or allow to be released by others, to the public, except as required by regulatory authorities, any information on the Contract without the prior written consent of the Owner. The Contractor shall submit to the Owner for review and consent a written copy of the information proposed to be released.”

**2.8 GC 2.6 CONFIDENTIALITY**

**2.8.1 Add GC 2.6 CONFIDENTIALITY as follows:**

“2.6.1 The Contractor shall not, except as is required to carry out its obligations, duties, responsibilities or liabilities under the Contract, divulge any confidential information communicated to or acquired by it in the course of carrying out its obligations, duties, responsibilities or liabilities under the Contract. No confidential information shall be used by the Contractor on any other project without the prior written approval of the Owner. The Contractor shall not have any proprietary rights to or interest in the confidential information, nor shall the Contractor have any right to license such information to any Subcontractor, Supplier or other third party. The term “confidential information” as used herein shall mean all information which the Contractor receives, either directly or indirectly, from the Owner or from the Consultant, except:

- .1 information which the Contractor can demonstrate is, at the time of disclosure, already known to the Contractor;
- .2 information which at the time of disclosure is or thereafter becomes a part of the public domain through no act or omission on the part of the Contractor; and
- .3 information which is disclosed to the Contractor by a third party without a covenant of confidentiality.

2.6.2 The Contractor may disclose the confidential information to those of its employees, Subcontractors or Suppliers to whom disclosure is required for the performance of their respective responsibilities, duties, obligations and liabilities under the Contract, provided the Contractor informs each such employee, Subcontractor or Supplier as to the confidential nature of such information and each such employee, Subcontractor or Supplier has properly assumed confidentiality obligations identical in principle with those herein. The Contractor shall require each such employee, Subcontractor or Supplier to treat the confidential information as confidential and not to disclose such information to any person other than in accordance with the terms of this Contract.

2.6.3 The Contractor covenants and agrees that the confidentiality covenant contained herein shall survive the termination or discharge of the Contract and extend for a period of two (2) years following the date of such termination or discharge.”

## 2.9 **GC 3.1 CONTROL OF THE WORK**

2.9.1 Add 3.1.3 as follows:

“The Contractor shall carry out the Work to meet or exceed the minimum requirements of the Contract, governing codes, regulations, or bylaws, and accepted industry practice of competent, reputable contractors experienced in similar Work.”

## 2.10 **GC 3.4 CONSTRUCTION SCHEDULE**

2.10.1 In 3.4.1.1, add “, including a Products delivery schedule with respect to the Products whose delivery is critical to the schedule for the Work or are required under the Specifications to be included in the Products delivery schedule.”

2.10.2 Add 3.4.1.4 as follows:

“complete the Work in accordance with the construction schedule.”

2.10.3 Add 3.4.1.5 as follows:

“the Owner or Consultant may direct the Contractor to suspend work that causes unreasonable or excessive disruption, until acceptable solutions or alternatives are approved to allow the work to proceed.”

2.11        **GC 3.5 SUPERVISION**

2.11.1       In 3.5.1 insert “at all times” after “attendance” in the first line.

2.12        **GC 3.6 SUBCONTRACTORS AND SUPPLIERS**

2.12.1       Add 3.6.7 as follows:

“The Contractor shall not change any of the Subcontractors or Suppliers proposed by it in writing and accepted by the Owner at the signing of the Contract without the Owner’s consent or change any subcontracts for the performance of the Work without the prior written consent of the Owner.”

2.12.1       Add 3.6.8 as follows:

“The Contractor covenants that each subcontract which the Contractor enters into for the purpose of performing the Work shall expressly provide for the assignment thereof to the Owner (at the option of the Owner) and the assumption by the Owner of obligations of the Contractor thereunder, upon the termination of the Contract and upon written notice by the Owner to the other parties to such subcontracts, without the imposition of further terms or conditions; provided, however, that until the Owner has given such notice, nothing herein contained shall be deemed to create any contractual or other liability upon the Owner for the performance of obligations under such subcontracts and the Contractor shall be fully responsible for all of its obligations and liabilities (if any) under such subcontracts.”

2.13        **GC 3.7 LABOUR AND PRODUCTS**

2.13.1       Delete the second sentence of 3.7.3 and replace it with the following:  
“All Products and workmanship shall be in every respect meet or exceed the quality and performance of those specified and the Work shall be performed in accordance with the best modern practice. Whenever the Contract Documents, or directions of the Consultant admit of a reasonable doubt about what is permissible, and when they fail to state the quality of any Work, the interpretation that requires the best quality of Work is to be followed.”



2.13.2 Add 3.7.4 as follows:

“The cost for overtime required beyond the normal working day to complete individual construction operations of a continuous nature, such as pouring or finishing of concrete or similar work, or work that the Contractor elects to perform at overtime rates without the Owner requesting it shall not be chargeable to the Owner.”

2.13.3 Add 3.7.5 as follows:

“The Owner and the Contractor acknowledge and agree that the beneficial ownership of any portion of the Products required by the Contract Documents to be incorporated and form part of the Work shall pass to the Owner immediately upon payment or upon incorporation thereof as part of the Work, whichever first occurs. For greater certainty, title to Products delivered, but not installed, shall pass to the Owner when paid for. The Contractor agrees to promptly execute and deliver to the Owner, from time to time as the Owner may require, any further documentation required to identify, evidence, perfect or protect the Owner’s beneficial, or registered, interest in the Products. Notwithstanding the foregoing, the Contractor acknowledges and agrees that it shall continue to bear the risk of loss or damage with respect to the Work until the date of acceptance of the Work by the Owner in accordance with the Contract Documents.”

2.14 **GC 3.9 OPERATIONAL RISKS**

2.14.1 Add GC 3.9 OPERATIONAL RISKS as follows:

“3.9.1 The position of all pole lines, conduits, water mains, sewers and other underground and overground utilities and structures is not necessarily shown in the Contract Documents, and, where shown, the accuracy of the position of such utilities and structures is not guaranteed and the Owner disclaims all liability with respect to same. Before starting Work, the Contractor shall inform themselves of the exact locations of such utilities and structures and shall be liable for damages to them as a result of any act or omission, whether or not the result of negligence, by those for whom the Contractor is responsible. Unless otherwise specified, the Contractor shall temporarily support or relocate such utilities and structures, or temporarily remove them, and restore them, to the satisfaction of the owners of the utilities and structures. The Contractor waives any claim and releases the Owner and the agents of

the Owner from all liability for damages suffered as a result of such contract drawings.

2.15        **GC 3.10 NON-INTERFERENCE WITH OWNER'S OPERATIONS**

2.15.1      Add GC 3.10 NON-INTERFERENCE WITH OWNER'S OPERATIONS as follows:

“3.10.1 In performing the Work in accordance with the Contract Documents, the Contractor agrees that it shall not, except with the prior written consent of the Owner, interfere with any of the Owner's or any third party's existing facilities and ongoing operations or other operations located in the area adjacent to, in the vicinity of or proximate to the Place of Work, including, without limitation, any common or concourse areas, walkways or loading docks.”

2.16        **GC 5.1 FINANCING INFORMATION**

2.16.1      Delete GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER.

2.17        **GC 5.2 APPLICATIONS FOR PAYMENT**

2.17.1      In 5.2.1, replace “Owner and the Consultant simultaneously” with “Consultant”.

2.17.2      Delete and replace 5.2.3 with the following:

“The amount claimed shall be for the value, proportionate to the amount of the Contract, of Work performed and Products delivered to the Place of Work and incorporated into the Work as of the last day of the payment period. No amount claimed shall include Products not incorporated into the Work (whether delivered to the Place of the Work or not), except when prior financial and/or security arrangements are made and agreed to by the Contractor, Owners, and Consultant”.

2.17.3      In 5.2.7, add “For work completed under allowances, include applicable timesheets and supporting invoices. Attach an updated construction schedule with all applications for payment.”

2.17.4      In 5.2.8, add “These applications for payment will only be considered for substantial Product costs, and if the Contractor obtains pre-approval from the Owner.”

2.17.5 Add 5.2.9 as follows:

“Applications for payment will only be considered received if submitted completely, with all required supporting documentation, as determined by the Consultant.”

2.18 **GC 5.3 PAYMENT**

2.18.1 In 5.3.1.2, replace “and the Consultant of the application for payment” with “of the Consultant’s certificate for payment”.

2.18.2 Add 5.3.1.3 as follows:

“If the Contractor fails to provide the statutory declaration and evidence of compliance with worker’s compensation legislation as required by GC 5.2 – APPLICATIONS FOR PAYMENT or GC 10.4 – WORKERS’ COMPENSATION, the Owner shall not be required to make payments to the Contractor”.

2.19 **GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK**

2.19.1 In 5.4.4, replace “GC 5.3 – PAYMENT” with “GC 5.2 – APPLICATIONS FOR PAYMENT”.

2.20 **GC 5.5 FINAL PAYMENT**

2.20.1 In 5.5.2, add to the end of the paragraph “The Work shall not be deemed complete until all submittals, warranty certificates, or other documents listed in the Contract Documents are delivered and confirmed to be satisfactory.”

2.21 **GC 6.1 OWNER’S RIGHT TO MAKE CHANGES**

2.21.1 Add 6.1.3 as follows:

“If any change or deviation in, or omission from, the Work is made by which the amount of Work to be done is decreased, or if the whole or any portion of the Work is dispensed with, the Owner shall not be liable to the Contractor for any costs or damages whatsoever including, without limitation, any indirect, consequential or special damages, such as loss of profits, loss of opportunity or loss of productivity.”

2.22 **GC 6.3 CHANGE DIRECTIVE**

2.22.1 In 6.3.6.3, add "The Contractor's fee shall not exceed 15% of the Contractor's actual cost."

2.23 **GC 6.5 DELAYS**

2.23.1 In 6.5.1 and 6.5.2, add to the end of each paragraph ", provided that the Owner shall not be liable for any indirect, consequential, or special damages, including, without limitation, loss of profits, loss of opportunity or loss of productivity resulting from such delay."

2.23.2 Add 6.5.3.5 as follows:

"Notwithstanding the foregoing, the Contractor shall use its best efforts to minimize the impact of such event upon the performance of the Work and Contract Time."

2.23.3 Add 6.5.6 as follows:

"If the Work should be behind schedule for a reason other than as described in paragraphs 6.5.1 to 6.5.5, or if any of the Subcontractors or Suppliers delay the progress of any portion of the Work necessary to complete the Work on schedule, the Contractor shall use all possible and, if necessary, extraordinary measures to bring the Work back on schedule. The Contractor shall exercise all reasonable means within its discretion, such as directing any Subcontractors or Suppliers creating delays to increase their labour forces and equipment, to improve the organization and expediting of the Work, or to work overtime as may be necessary. The Contractor shall provide any additional supervision, coordination and expediting, including overtime by its own personnel as may be required to achieve this end. The costs and expenses incurred by the use of such measures and overtime shall be borne by the Contractor and/or its Subcontractors or Suppliers."

2.24 **GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT**

2.24.1 In 7.1.5.3, delete "however, if such cost of finishing the Work is less than the unpaid balance of the Contract Price, the Owner shall pay the Contractor the difference;".

2.24.2 Renumber 7.1.6 as 7.1.7 and insert a new 7.1.6 as follows:

“The Owner may terminate the Contract at any time for any reason. In such event, the Owner shall pay for the Work performed up to the effective date of termination, mobilization and demobilization costs (or a reasonable portion of such costs if the Contractor had not fully mobilized) and for such additional costs (if any) directly related to such termination which are a reasonable consequence of the termination. The Owner shall not be liable to the Contractor for any other costs or damages whatsoever arising from such early termination of the Contract, including, without limitation, any indirect, consequential, or special damages, such as loss of profits, loss of opportunity or loss of productivity.”

2.24.3 Add 7.1.8 as follows:

“The terms of the Contract, which expressly or by their nature are intended to survive the termination or discharge of the Contract, including, without, limitation, GC 2.6 – CONFIDENTIALITY, shall survive such termination or discharge.”

2.25 **GC 7.2 CONTRACTOR’S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT**

2.25.1 In 7.2.2, change the number “20” to “90”.

2.25.2 Delete 7.2.3.1.

2.25.3 In 7.2.3.4, delete “except for GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER”.

2.25.4 In 7.2.5, add “as determined by the Consultant”.

2.26 **GC 9.1 PROTECTION OF WORK AND PROPERTY**

2.26.1 Delete and replace 9.1.1.1 with “errors or omissions in the Contract Documents which the Contractor could not reasonably have discovered by applying the proper level of care and diligence; or”.

2.26.2 In 9.1.2, add “and as indicated in GC 3.9 - OPERATIONAL RISKS”.

2.26.3 Renumber 9.1.3 and 9.1.4 as 9.1.4 and 9.1.5 respectively and insert a new 9.1.3 as follows:

“The Contract Price shall include all necessary protective equipment or materials required to prevent damage to the Work, the Owner’s property or property adjacent to the Place of Work.”

**2.27 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES AND MATERIALS**

**2.27.1 Add 9.2.10 as follows:**

“The Contractor, Subcontractors and Suppliers shall not bring on to the Place of the Work any toxic or hazardous substances and materials except as needed in order to perform the Work. If such toxic or hazardous substances or materials are required, storage in quantities sufficient to allow work to proceed to the end of any current work week only shall be permitted. All such toxic and hazardous materials and substances shall be handled and disposed of only in accordance with all laws and regulations that are applicable at the Place of the Work.

**2.27.2 Add 9.2.11 as follows:**

“The Contractor shall indemnify and hold harmless the Owner, its parent, subsidiaries and affiliates, the Consultant and their respective officers, directors, agents and employees from and against any and all liabilities, costs, expenses, and claims resulting from bodily injury, including death, and damage to property of any person, corporation or other body politic, that arises from the use by the Contractor, Subcontractors and Suppliers of any toxic or hazardous substances or materials at the Place of the Work.”

**2.28 GC 9.4 CONSTRUCTION SAFETY**

**2.28.1 In 9.4.1, add “Comments made by the Owner or Consultant related to construction safety shall not replace the Contractor’s responsibility”.**

**2.28.2 Add 9.4.6 as follows:**

“Without restricting the generality of paragraph 3.5.1, the Contractor acknowledges that it is the “Prime Contractor” within the project area within the meaning of the applicable health and safety legislation and the Contractor undertakes to carry out the duties and responsibilities of the Prime Contractor with respect to the Work. The Contractor shall indemnify and hold harmless the Owner and Consultant from any liability for claims, damages or penalties, including reasonable legal fees to defend any offences, arising from the

Contractor's failure to comply with the duties, responsibilities and obligations of the Prime Contractor."

**2.29 GC 10.1 TAXES AND DUTIES**

2.29.1 In 10.1.2, add "The Contractor shall provide a detailed breakdown of additional taxes if requested by the Owner in a form satisfactory to the Owner. Profit and overhead shall not be included in the increase or decrease in costs incurred by the Contractor due to changes in the aforementioned taxes and duties."

**2.30 GC 10.2 LAWS, NOTICES, PERMITS, AND FEES**

2.30.1 Delete the first two sentences of 10.2.5 and replace with the following:

"The Contractor shall be responsible for verifying that the Contract Documents are in compliance with the applicable laws, ordinances, rules, regulations, or codes related to the Work. If, subsequent to the date of the date of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the Contract Documents, the Contractor shall notify the Consultant in writing requesting direction immediately upon such variance or change becoming known."

2.30.2 In 10.2.6, delete "knowing it to be".

2.30.3 Add 10.2.8 as follows:

"The Contractor shall furnish all certificates that are required or given by the appropriate governmental authorities as evidence that the Work as installed conforms with the laws and regulations of authorities having jurisdiction, including certificates of compliance for the Owner's occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the Work, in the event that such governmental authorities furnish such certificates."

**2.31 GC 10.3 PATENT FEES**

2.31.1 In 10.3.2, add "by the Owner" after "supplied to the Contractor."

**2.32 GC 11.1 INSURANCE**

2.32.1 Delete 11.1.1.3.

2.32.2 Delete 11.1.1.5.

2.32.3 Delete 11.1.1.6.

2.33 **GC 12.3 WARRANTY**

2.33.1 In 12.3.1, 12.3.3, 12.3.4, and 12.3.6, replace “one year” with “five years”.

2.33.2 In 12.3.5, add “The carrying out of the replacement work and making good of defects shall be executed at such times as convenient with the Owner which may entail overtime work on the part of the Contractor. Additional charges for overtime work in this regard must be borne by the Contractor.”

2.33.3 Add 12.3.7 as follows:

“Any material or equipment requiring excessive servicing during the warranty period (or free maintenance period, if applicable) shall be considered defective and the warranty (or free maintenance period) shall be deemed to take effect from the time that the defect has been corrected so as to cause excessive servicing to terminate.”

2.33.4 Add 12.3.8 as follows:

“Following Ready-For-Takeover, and without limiting the Contractor’s warranty under this GC 12.3, the Contractor shall assign to the Owner, to the extent assignable, the benefit of all warranties and guarantees relating to the construction of the Work. The assignment shall expressly reserve the right of the Owner to make any claims under such warranties and guarantees and such assignment shall in no way prejudice any rights of or benefits accruing to the Owner pursuant to such warranties and guarantees.”

2.33.5 Add 12.3.9 as follows:

“The provisions of GC 12.3 – WARRANTY shall not deprive the Owner of any action, right or remedy otherwise available to it for the Contractor’s failure to fulfill its responsibility under the Contract and shall not be construed as waiver of claims in favour of the Contractor or as a limitation on the time in which the Owner may pursue such other action, right or remedy. The warranties set forth in this Contract are supplemental to and do not limit or preclude the application of any of the conditions and warranties, express or implied, by law or trade usage.”



2.34        **GC 13.1 INDEMNIFICATION**

2.34.1       Delete 13.1.1, 13.1.1.1, and 13.1.1.2, and replace with the following:

“Without restricting the parties’ obligation to indemnify respecting toxic and hazardous substances, patent fees and defect in title claims all as described in GC 13.1 INDEMNIFICATION, the Contractor shall indemnify and hold harmless the Owner, its board, its parent, subsidiaries and affiliates, the Consultant and their respective officers, directors, agents and employees from and against claims, demands, losses, damages, actions, suits, or proceedings (hereinafter called “claims”), by third parties that arise out of, or are attributable to, the acts or omissions of the Contractor, its employees, Subcontractors, Suppliers or any other person for whom it is in law responsible.”

2.34.2       Delete 13.1.2.

2.34.3       Delete 13.1.3.

2.35        **ADD “PART 14 OTHER PROVISIONS” AS FOLLOWS:**

2.35.1       “GC 14.1 CONSTRUCTION LIENS

- 14.1.1       In the event that a lien is registered against the Place of Work arising out of the Work, and provided the Owner has paid all amounts properly owing under the Contract, the Contractor shall, at its own expense:
- .1            within 10 calendar days of being notified of the lien, ensure that any and all claims for lien are discharged, released, or vacated by the posting of security or otherwise; and
  - .2            in the event that the Contractor fails to conform with the requirements of paragraph 14.1.1, the Owner may fulfil those requirements and deduct from any amount owing to the Contractor, all costs and associated expenses, including the costs of posting security and all legal fees associated with discharging or vacating the claim for lien and defending the action. If there is no amount owing by the Owner to the Contractor, then the Contractor shall reimburse the Owner for all of the said costs and associated expenses.”

**END OF SECTION**

**1 PART 1 - GENERAL**

**1.1 GENERAL**

- 1.1.1 The Contractor and sub-contractors shall be knowledgeable in the work of the contract and shall have a minimum of five (5) years of proven experience for projects of similar size and complexity.
- 1.1.2 The Contractor shall provide all labour, equipment and products required, necessary or normally recognized within respective trade practices, as necessary for the proper and complete execution of the Work.
- 1.1.3 No signs or advertisements of any description, other than those regarding safety, caution, and instructions shall be permitted on site without the express approval of the Owner and Consultant. If permitted, Contractor to pay all costs with providing, erecting, maintaining and removing signage at the direction of the Consultant.
- 1.1.4 The building will remain occupied and in service during construction. Cooperate with the Owner in scheduling operations to minimize conflict and utility usage.

**1.2 EXAMINATION**

- 1.2.1 Report any conditions or defects encountered on site which may adversely affect the performance of the work. Do not commence with the work until such conditions or defects have been investigated and corrected.
- 1.2.2 Commencement of the work implies acceptance of surfaces and conditions. No claim for damages or resulting extra work will be accepted where such conditions were known, visible or reasonably inferable at the time of bidding.
- 1.2.3 If the Contractor exposes conditions which are in contravention with applicable regulatory codes or requirements of the Authorities Having Jurisdiction, unsafe or in any way less than the acceptable industry standard for the particular item, the Contractor must immediately notify the Consultant before proceeding with further Work. The Consultant will review the condition and issue the appropriate instruction.
- 1.2.4 Ascertain the location of any services buried in the structure prior to cutting and take protective measures. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated, without written approval of consultant.
- 1.2.5 Prevent overloading of any existing component or any part of the Project.

- 1.2.6 The Owner or Consultant will not be liable for any difficulties encountered or expenses incurred resulting from any condition known, or visible, at the time of bidding.
- 1.2.7 Check and verify on site all dimensions, details and measurements required for any part of the work, which is to fit to or conform to work already installed.
- 1.2.8 Report immediately, in writing to the Owner, all incidents of damage to the installations by vandals or others prior to acceptance.

## **2 PART 2 - WORK RESTRICTIONS**

### **2.1 WORK HOURS**

- 2.1.1 Perform work on site:
  - 2.1.1.1 In Gibsons: From Monday to Friday from 7:00am to 8:00pm only (excluding statutory holidays) unless otherwise pre-approved by the Owner. Work that produces significant noise or vibration shall not be permitted to start until 8:00am.
  - 2.1.1.2 In Sechelt: From Monday to Friday from 7:00am to 9:00pm only (excluding statutory holidays) unless otherwise pre-approved by the Owner. Work that produces significant noise or vibration shall not be permitted to start until 8:00am.
  - 2.1.1.3 On Saturdays if pre-approved by the Owner.
  - 2.1.1.4 In accordance with noise control bylaws of the authority having jurisdiction.

### **2.2 EXISTING SERVICES**

- 2.2.1 Prior to commencement of Work, establish the location and the extent of service lines in the area of Work and notify the Owner of the findings and take protective measures. Locate property lines as necessary.
- 2.2.2 Protect and maintain existing active services.
- 2.2.3 Where unknown services are encountered, immediately advise the Consultant and confirm the findings in writing.
- 2.2.4 Immediately notify the Owner and the Consultant when services are damaged. Inform the appropriate authorities and take all necessary measures for the

immediate reinstatement of services. Make good all damages to existing utility lines resulting from the Work.

- 2.2.5 Notify Owner and utility companies of intended interruption of services and obtain required permission. Keep duration of interruptions to a minimum.

2.3 **USE OF THE PREMISES**

- 2.3.1 Do not encumber the site with materials or equipment. Obtain and pay for all additional storage or work areas needed for operations.

- 2.3.2 Limit areas of work and storage to areas agreed to with the Owner.

- 2.3.3 Maintain full entry and exit facilities at all times. Keep all existing egress routes free from materials, equipment and obstructions of all kinds.

- 2.3.4 Provide and maintain adequate access to project site from the street. Maintain access roads, sidewalk crossings, ramps and construction runways, overhead covers and hoarding as may be required for access to the areas of the work or protection for the public and buildings.

- 2.3.5 Maintain public safety and traffic control precautions at all times, using qualified persons to control all Contractor activities, vehicles, equipment, and public pedestrian and vehicle traffic that are coming to and from the site or passing along the vicinity of the site access locations.

- 2.3.6 Provide and maintain access to permanent fire extinguishing equipment, and emergency and fire vehicles.

- 2.3.7 Provide access for garbage/recycling trucks, or other vehicles required by the Owner for regular building operation.

- 2.3.8 Be responsible for all damage caused by the Work to the interior finishes, cladding, roofing structure, landscaping (shrubs, bushes, grass, sidewalks etc.), or other existing property, and rectify any damages. Make good all damage to original pre-construction condition or better.

- 2.3.9 Be responsible for security of the work area. If the work area is less secure than it was before construction and reasonable measures to secure the area were not taken, the Contractor shall be responsibility for any resulting damages (e.g., theft, vandalism, property damage).

- 2.3.10 The Owner will provide the Contractor with two (2) parking stalls for use during construction. These stalls may be used for vehicle parking or material storage.

- 2.3.11 With Owner approval, parking may be permitted on site provided it does not disrupt continuing operation of the facility.
- 2.3.12 Smoking cigarettes, e-cigarettes, marijuana, or similar is prohibited on the Owner's property.
- 2.3.13 Maintain work areas in tidy condition, free from accumulation of waste products and debris. Remove waste materials from site at regularly scheduled times or dispose of as directed by Consultant. Do not burn waste materials.
- 2.3.14 Provide minimum 48 hours' written notice when access to the building interior is required, indicating the date and duration of access, requirements of the occupant, any other precautions, and Contractor contact information should the occupant have questions or concerns.

### **3 PART 3 – PROJECT MANUAL DOCUMENTS**

#### **3.1 SPECIFICATIONS AND DRAWINGS**

- 3.1.1 Generally, the Drawings indicate graphically, the dimensions and location of components and equipment. Specifications indicate specific components, assemblies, and identify quality.
- 3.1.2 Drawings, specifications, diagrams and schedules are complementary, each to the other, and what is required by one (1), to be binding as if required by all.
- 3.1.3 Drawings provided in the Contract are for conveying the general intent of the Work, including the extent of existing construction and remedial work as far as is practical.
  - 3.1.3.1 Quantities derived from the drawings are to be used at the Contractor's own risk.
  - 3.1.3.2 No extra payments/credits will be considered from shortages/surpluses in material, manpower or equipment resulting from quantities derived from the drawings. It is expected that the Contractor will have taken sufficient on-site measurements to confirm quantities to their satisfaction prior to Bid submission.
- 3.1.4 The existing construction shown on the drawings has been determined from available records and may not represent the actual site conditions in all locations. The Contractor may encounter site conditions which may vary slightly from those shown on the drawings and unless such conditions are found to be significantly

different by the Consultant, the Contractor will not be entitled to any change in Contract Price or Contract Time.

3.1.5 Where the drawings do not illustrate specific details for portions of the Work, construct such portions to match the new or existing work as applicable.

3.1.6 Division of the Work among subcontractors, suppliers, or others is solely the Contractor's responsibility. The Consultant assumes no responsibility to function or act as an arbiter to establish subcontract scope or limits between sections or divisions of Work.

### 3.2 CASH ALLOWANCES

3.2.1 Do not proceed with work that will result in an expenditure to a cash allowance without written approval from the Consultant.

3.2.2 Do not exceed a cash allowance amount without approval via Change Order.

### 3.3 CONTINGENCY ALLOWANCES

3.3.1 Do not proceed with work that will result in an expenditure to a contingency allowance without written approval from the Consultant.

3.3.2 Work may be billed to a contingency allowance as a fixed price or on a time and material basis, as approved by the Consultant prior to work proceeding.

3.3.3 Contractor labour billed to a contingency allowance shall be in accordance with hourly rates submitted in Section 00 41 13.

3.3.4 Total mark-up for overhead/profit for material or subcontractor costs billed to a contingency allowance shall not exceed 15% of the Contractor's cost.

3.3.5 Do not exceed a contingency allowance amount without approval via Change Order.

## 4 PART 4 - PROJECT MANAGEMENT AND COORDINATION

### 4.1 COORDINATION

4.1.1 The Specifications are divided into Divisions and Sections for convenience only. The Contractor, not the Documents, shall establish the lines of demarcation and assign tasks to qualified Trades.

4.1.2 All work related to skilled trades (e.g., electrical, mechanical, plumbing, HVAC, gas fitting) shall be carried out by a certified trade professional.

4.1.3 Ensure that subcontractors cooperate and coordinate with other subcontractors whose work attaches to, or is affected by, their work.

4.1.4 Coordinate the Work such that the Consultant is afforded the opportunity to review all aspects of the Work.

#### 4.2 **PROJECT MEETINGS**

4.2.1 Provide physical space and make arrangements for meetings on site, unless otherwise agreed to by the Consultant.

4.2.2 The Contractor's project manager and site supervisor shall attend a start-up meeting prior to mobilizing on site and regular meetings throughout the duration of construction. The Consultant and Owner will be in attendance at meetings.

#### 4.3 **SUPERVISION**

4.3.1 Provide a designated experienced supervisor on site throughout the project for consultation and supervision purposes. The supervisor shall not be changed without 72 hours written notice to the Owner and provided that the proposed individual meets the Owner's approval.

4.3.2 Site supervisor is intended to be on site full-time during construction and assist with handling of day-to-day activities including (but not limited to) coordination of trades, deliveries, maintaining safe access and egress, ongoing strict quality control and assurance, coordinating reviews and Requests-For-Information with the Consultant, and other duties as required. The intention is that the supervisor maintains a safe worksite and coordinates all activities. The supervisor shall be proficient in written and verbal English communication.

#### 4.4 **ON-SITE DOCUMENTS**

4.4.1 Maintain at job site, one copy each of the following:

4.4.1.1 Contract drawings, specifications, addenda, site instructions, and amendments.

4.4.1.2 Reviewed shop drawings.

4.4.1.3 Change orders and other Contract modifications.

4.4.1.4 Field and material test reports.

4.4.1.5 Permits.



- 4.4.1.6 Notice of Project.
- 4.4.1.7 Health and Safety Plan, procedures, and minutes of all site safety meetings.
- 4.4.1.8 Copy of approved Work schedule.
- 4.4.1.9 Manufacturers' installation and application instructions.

#### 4.5 **CONSTRUCTION SCHEDULE**

- 4.5.1 Subsequent to the schedule provided with the Bid Form, provide in horizontal Gantt bar chart form (or other form accepted by the Consultant), a schedule detailing progress stages and final completion of the work within the time period required by the Contract Documents.
- 4.5.2 Update schedule to reflect the progress of the Work on a monthly basis. Submit with progress payment application or as directed by the Consultant.
- 4.5.3 Periodically and whenever requested by the Consultant, review progress in relation to the schedule and employ such methods or work as may be required in order to meet the specified time of completion.
- 4.5.4 If the Contractor fails to complete the Work by the Contract Time due to conditions under their control, the Owner reserves the right to deduct from the Contractor's payment reasonable costs incurred by the Owner as a result of the delay.

#### 4.6 **START-UP SUBMITTALS**

- 4.6.1 Before mobilizing on site, submit to the Consultant:
  - 4.6.1.1 Signed Contract.
  - 4.6.1.2 Notice of Project filed with Workers' Compensation Board.
  - 4.6.1.3 Workers' Compensation Board status.
  - 4.6.1.4 Names, addresses and telephone numbers of the site supervisor and other responsible persons who may be contacted for emergency and other reasons during non-working hours.
  - 4.6.1.5 Detailed construction schedule.

4.6.1.6 Pre-construction record, including a full photographic documentation of existing conditions at any areas that may be affected by the Work. No mobilization is to proceed until this record is completed and submitted. If access equipment is required to inspect the areas, provide the pre-construction record immediately after equipment is set-up and safe for use. Include notes if applicable to any pre-existing conditions.

4.6.2 Within 15 days of written notice of award, submit to the Owner:

4.6.2.1 Performance and Labour and Material Bond, each in the amount of 50% of the contract price, covering the performance of the work including the successful Proponent's obligations during the maintenance period, issued by a surety licensed to carry on the business of suretyship in the province of British Columbia and in a form acceptable to the Regional District; or

4.6.2.2 A bank draft, in the amount of 20% of the total contract price. The bank draft less 5% of the total contract price will be returned 60 days after the completion of the contract which will be held until the end of the maintenance period; or

4.6.2.3 A letter of credit, in the amount of 20% of the total contract price, without a termination date. The letter of credit will be returned 60 days after the completion of the contract and after the issuance of a letter of credit for the warranty period, without a termination date in the amount of 5% of the total contract price which will be held until the end of the maintenance period.

## 5 **PART 5 - HEALTH, SAFETY AND REGULATORY REQUIREMENTS**

### 5.1 **HEALTH AND SAFETY**

5.1.1 Be solely responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.

5.1.2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

5.1.3 Contractor shall provide a worker trained in first aid procedures on the site at all times during the performance of the Work. Provide a first aid station.

- 5.1.4 Provide and maintain necessary perimeter protection including hoarding, guards, covers, lights, and warning signs in accordance with requirements of the Authority Having Jurisdiction.
- 5.2 **FIRE PROTECTION**
- 5.2.1 Provide all temporary fire protection equipment as required and maintain in good order throughout the construction period.
- 5.2.2 Provide all supervision and watches as needed throughout the construction period during and after hot work.
- 5.3 **REGULATORY REQUIREMENTS**
- 5.3.1 The laws of the place of the work shall govern the work. Work to meet or exceed the requirements of specified standards, referenced documents, and applicable codes or bylaws. Should conflicts arise between one document or authority and another, obtain clarification from the Consultant before proceeding with Work. Generally, the most stringent requirement will govern.
- 5.3.2 Except where a reference standard is specifically dated in the specifications, references to standards will be taken to mean the latest edition in effect at the date of Bid closing. In the case of standards (dated or not) which appear in the specifications, and which are referenced in the applicable building code, the specific edition of the standard referenced in the code governs. Where a standard is revised, supplemented or amended after award of the Contract, carry out the Work in accordance with latest edition of such standards. If the revision to the standard is such that a revision to the Contract Price is necessary, notify the Consultant immediately, prior to proceeding with the work.
- 5.3.3 Give the required notices and comply with the laws, ordinances, rules, regulations or codes which are or become in force during the performance of the work and which relate to the work, to the preservation of public health and to construction safety.
- 5.3.4 If the Contractor knowingly performs or allows work to be performed that is contrary to any laws, ordinances, rules, regulations or codes, the contractor is responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations or codes.

- 5.3.5 The Contractor shall pay for and obtain all trade permits, street permits, power line protection, damage deposits, etc. as required to carry out the Work. Such costs shall be included in the Bid.

## **6 PART 6 - QUALITY CONTROL**

### **6.1 QUALITY OF WORK**

- 6.1.1 Overall quality control and quality assurance will be the responsibility of the Contractor. The Consultant will assist in determining minimum requirements but is not responsible for ensuring that these requirements are fully implemented throughout the Work. The Consultant retains ultimate authority in determining if the Work is considered to be in adherence to the Contract Documents.

- 6.1.2 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Do not employ anyone unskilled in their required duties. Consultant reserves right to require dismissal from site any workers deemed incompetent or careless.

- 6.1.3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Consultant, whose decision is final.

### **6.2 INSPECTION AND TESTING**

- 6.2.1 Pay costs associated with, and be responsible for, obtaining all inspections, tests, and certificates, as required by the local municipality.

#### **6.2.2 Review by Consultant**

- 6.2.2.1 Give timely notice when any phase of the Work is ready for review by Consultant. A minimum of two (2) working days' notice is required.
- 6.2.2.2 The Consultant's general review during construction is undertaken to inform the Owner of the Contractor's performance and shall in no way augment the Contractor's quality control or relieve the Contractor of contractual responsibility.
- 6.2.2.3 Provide access to the Consultant to facilitate review of the Work at no extra cost to the Owner or the Consultant.

6.2.2.4 Should additional work and/or visits by the Consultant be required because of the Contractor's failure to perform in accordance with the Contract Documents, or if additional design or drafting time is required by the Consultant to provide/review corrective measures caused by the Contractor's failure to perform in accordance with the Contract Documents, the Contractor shall reimburse the Consultant at the standard hourly rate of the Consultant's Representative plus travel, equipment and material costs plus G.S.T. where applicable.

#### 6.2.3 Testing Procedures

6.2.3.1 Notify appropriate agency and Consultant in advance of requirements for tests, in order that attendance arrangements can be made.

6.2.3.2 Provide labour and facilities required for on-site testing.

### 7 PART 7 - PRODUCT REQUIREMENTS

#### 7.1 PRODUCT QUALITY

7.1.1 Products incorporated in Work shall be new, not damaged or defective, of best quality (compatible with specification requirements) for purpose intended. If requested, provide evidence as to type, source and quality of Products provided.

7.1.2 Defective Products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility but is precaution against oversight or error. Remove and replace defective Products at own expense and be responsible for delays and expenses caused by rejection.

7.1.3 Should any dispute arise as to quality or fitness of Products, decision rests strictly with Consultant.

7.1.4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.

7.1.5 Permanent labels, trademarks and nameplates on Products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

## 7.2 **AVAILABILITY**

- 7.2.1 Immediately upon signing Contract, review Product delivery requirements and anticipate foreseeable supply delays for any items.
- 7.2.2 If delays in supply of Products are foreseeable, notify Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- 7.2.3 In event of failure to notify Consultant at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Consultant reserves right to substitute more readily available Products of similar character, at no increase in Contract Price or Contract Time.

## 7.3 **MANUFACTURER'S WRITTEN INSTRUCTIONS**

- 7.3.1 Unless otherwise indicated in specifications, handle, store, install, and protect Products to manufacturer's written instructions. Store Products with seals and labels intact and legible.
- 7.3.2 Notify Consultant in writing, of conflicts between specifications and manufacturer's instructions, so that Consultant may establish course of action. Where minimum requirements differ, the more stringent shall apply.
- 7.3.3 Improper installation or erection of Products, due to failure in complying with these requirements, authorizes Consultant to require removal and re-installation at no increase in Contract Price or Contract Time.

## 8 **PART 8 - PRODUCT EXCHANGE PROCEDURES**

### 8.1 **SUBSTITUTIONS**

- 8.1.1 Substitutions will be considered when requested to the Consultant at least 10 working days prior to the intended application. Request for Substitution form at the end of this Section must be used by the Contractor.
- 8.1.2 A request for substitution constitutes a representation that the Contractor:
  - 8.1.2.1 Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
  - 8.1.2.2 Will provide the same warranty for the Substitution as for the specified Product.

8.1.2.3 Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.

8.1.2.4 Waives claims for additional costs or time extension which may subsequently become apparent.

8.1.2.5 Will reimburse Owner for review or redesign services associated with re-approval by authorities.

8.1.3 Consultant reserves the right to reject any substitution for any reason and will notify the owner.

## 8.2 **ALTERNATIVES**

8.2.1 Alternatives quoted on Bid Forms will be reviewed and accepted or rejected at the Owner's option. Accepted alternatives will be identified in the Owner-Contractor Agreement.

8.2.2 Coordinate related work and modify surrounding work to integrate the Work of each alternative.

## 9 **APPENDIX A**

### 9.1 **REQUEST FOR SUBSTITUTION FORM**

9.1.1 2 pages, attached

**END OF SECTION**

# ENTUITIVE

## Request for Substitution Form

ENTUITIVE PROJECT NAME	_____	PREPARED BY	_____
ENTUITIVE PROJECT NO.	_____	COMPANY	_____
SPECIFICATION SECTION	_____	DATE	_____
PRODUCT/SYSTEM	_____		

Overall Information	
SPECIFICATION TITLE	_____
SPECIFICATION SECTION	_____
ARTICLE/PARAGRAPH	_____

Request For Substitution								
SPECIFIED PRODUCT	_____		MANUFACTURER	_____				
PROPOSED SUBSTITUTION	_____		MANUFACTURER	_____				
INSTALLER	_____							
PRICE VARIANCE	_____							
SCHEDULE IMPACT	_____							
HISTORY	<input type="checkbox"/>	New Product	<input type="checkbox"/>	2-5 Yrs Old	<input type="checkbox"/>	5-10 Yrs Old	<input type="checkbox"/>	10+ Yrs Old
<input type="checkbox"/>	<p>Point-By-Point comparison attached:</p> <p>All components and accessories are listed for direct comparison of both the specified basis of design and proposed product/system.</p> <p>Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request,</p> <p>Applicable portions of the data are clearly identified/highlighted,</p> <p>Attached data also includes a description of any changes to the Contract Documents that the proposed substitution will require for its proper installation.</p>							
<input type="checkbox"/>	The same warranty and/or bonds will be furnished for proposed substitution as for specified product.							

*This Request for Substitution certifies that the Contractor has fully investigated the noted product/system and determined them to be equal or superior in all respects to the specified performance requirements.*



# ENTUITIVE

Reason for Substitution

Submitted By:		For Consultant Use Only:	
Name:	_____	APPROVED	<input type="checkbox"/>
Company:	_____	REJECTED	<input type="checkbox"/>
Date:	_____	APPROVED AS NOTED	<input type="checkbox"/>
Email:	_____	ADDITIONAL INFORMATION REQUIRED	<input type="checkbox"/>
Phone:	_____	Reviewed by:	_____
Attachments: _____ PAGES		Date:	_____
		Remarks	_____
			_____
			_____
			_____
			_____

End of Request for Substitution

*This Request for Substitution certifies that the Contractor has fully investigated the noted product/system and determined them to be equal or superior in all respects to the specified performance requirements.*

## 1 PART 1 – SECHELT AQUATIC CENTRE (SAC)

### 1.1 DESCRIPTION OF THE WORK

1.1.1 Work under this Contract includes roof replacement of the SAC. This includes removal and replacement of the low sloped roofing system, including the gutters, scuppers, downspouts, membranes, fascia, flashing, and other accessories. It also includes optional removal and replacement of the R2 roof and the roof over the top of the slide.

1.1.2 The Work shall begin by Spring 2025 and reach Ready-for-Takeover by the end of the year.

### 1.2 BASE SCOPE OF WORK

#### 1.2.1 General

1.2.1.1 **Access and Mobilization:** Mobilize all labour, equipment, and materials required to conduct the Work. Upon completion, conduct final cleaning and demobilization.

1.2.1.2 **Site Protection:** Provide and maintain necessary site protection as specified in the Contract Documents and required by the authorities having jurisdiction.

1.2.1.3 **Hazardous Material Testing:** Provide any necessary hazardous material testing as required by WorkSafeBC before demolition work. Provide test reports to Consultant.

1.2.1.4 **Permits:** Obtain the necessary trade and/or street permits as required to carry out the Work.

#### 1.2.2 Roofing

1.2.2.1 **Roof 1:** Remove and dispose of existing low sloped roofing system, including but not limited to membranes, insulation, sheet metal flashings, vents, and plumbing stacks, to expose the existing steel deck below. Check slope of existing substrate and notify Consultant of any areas where slope is less than 2% to drain. Replace low-sloped roof assembly as indicated in the drawings with a 2-ply SBS modified bitumen roofing system (refer to Section 07 52 00). Include related components such as cover board, insulation, sheet metal flashings,

and tie-ins. Include new roof insert drains, scuppers, vents, plumbing stacks, and other accessories as required.

1.2.2.2      **Mechanical:** Temporarily move any mechanical equipment to replace the roofing membrane and flashing. Obtain approval from Owner if temporary mechanical equipment removal will cause disruption to building operations.

1.2.3      **Bonding:** Provide bonding as described in Section 01 00 00.

### 1.3      **SEPARATE PRICES**

1.3.1      **RCABC RoofStar Guarantee:** Provide the additional costs for a 10-year and 15-year RCABC RoofStar Guarantee for the work performed at SAC. The Contractor shall include the cost of the Guarantee Fee and Performance Reviews.

1.3.2      **Roof 2 and 3:** Provide a lump sum cost to replace the upper level roof (Roof 2) and the small roof at the top of the slide (Roof 3), down to the steel deck at SAC.

## 2      **PART 2 – GIBSONS AND AREA COMMUNITY CENTRE (GACC)**

### 2.1      **DESCRIPTION OF THE WORK**

2.1.1      Work under this Contract includes roof replacement of the GACC. This includes removal and replacement of the low sloped roofing system, including the scuppers, gutters, downspouts, membranes, fascia, flashing, and other accessories.

2.1.2      The Work shall begin by Spring 2025 and reach Ready-for-Takeover by the end of the year.

### 2.2      **BASE SCOPE OF WORK**

#### 2.2.1      **General**

2.2.1.1      **Access and Mobilization:** Mobilize all labour, equipment, and materials required to conduct the Work. Upon completion, conduct final cleaning and demobilization.

2.2.1.2      **Site Protection:** Provide and maintain necessary site protection as specified in the Contract Documents and required by the authorities having jurisdiction.

2.2.1.3 **Hazardous Material Testing:** Provide any necessary hazardous material testing as required by WorkSafeBC before demolition work. Provide test reports to Consultant.

2.2.1.4 **Permits:** Obtain the necessary trade and/or street permits as required to carry out the Work.

## 2.2.2 Roofing

2.2.2.1 **Roof 1, 2, 3, and Lower Entrance Canopy:** Remove and dispose of existing low sloped roofing system, including but not limited to membranes, sheet metal flashings, vents, and plumbing stacks, to expose the existing insulation below. Check slope of existing substrate and notify Consultant of any areas where slope is less than 2% to drain. Replace low-sloped roof assembly as indicated in the drawings with a 2-ply SBS modified bitumen roofing system (refer to Section 07 52 00). Include related components such as cover board, sheet metal flashings, and tie-ins. Include new roof insert drains, scuppers, vents, plumbing stacks, and other accessories as required.

2.2.2.2 **Roof 4:** Remove and dispose of existing low sloped roofing system, including but not limited to membranes, insulation, sheet metal flashings, vents, and plumbing stacks, to expose the existing steel deck below. Check slope of existing substrate and notify the Consultant of any areas where slope is less than 2% to drain. Replace low-sloped roof assembly as indicated in the drawings with a 2-ply SBS modified bitumen roofing system (refer to Section 07 52 00). Include related components such as cover board, insulation, sheet metal flashings, and tie-ins. Include new roof insert drains, scuppers, vents, plumbing stacks, and other accessories as required.

2.2.2.3 **Mechanical:** Temporarily move any mechanical equipment to replace the roofing membrane and flashing. Obtain approval from Owner if temporary mechanical equipment removal will cause disruption to building operations

2.2.2.4 **Skylights:** Remove and reinstate the existing skylights, as required for roofing tie-ins. Take care to protect and not damage existing interior finishes around skylights. Apply new rough opening membrane on existing wood curbs and include new sheet metal flashings, interior finishes repairs (primed and paint-ready), and related sealants.

2.2.3 **Finishes**

2.2.3.1 **Cladding and Trim:** Remove and replace existing wood and fibre cement siding, fascia, and trim boards at work areas where indicated on drawings, as required for roofing tie-ins. Retain and do not damage existing metal and insulated metal panel (IMP) cladding. Provide new colour-matched cladding accessories as required, such as gasketed screws for metal cladding.

2.2.4 **Bonding:** Provide bonding as described in Section 01 00 00.

2.3 **SEPARATE PRICES**

2.3.1 **RCABC RoofStar Guarantee:** Provide the additional costs for a 10-year and 15-year RCABC RoofStar Guarantee for the work performed at GACC. The Contractor shall include the cost of the Guarantee Fee and Performance Reviews.

**END OF SECTION**

**1 PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

1.1.1 Administrative and procedural requirements for submittals during the construction stage.

1.1.2 Refer to technical sections for additional submittal requirements.

**1.2 ADMINISTRATIVE REQUIREMENTS**

1.2.1 Submit with reasonable promptness and in orderly sequence so as to not cause delay in work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed. Contractor to allow 10 working days for Consultant to review submittals.

1.2.2 Engineered submittals shall be sealed by a professional engineer registered to practice in the place of work.

1.2.3 Contractor's engineer shall have a minimum professional liability insurance coverage of \$2,000,000 per occurrence.

1.2.4 Submittals not stamped, signed, dated, identified for the specific project, and attesting to their being reviewed may be returned without being examined and shall be considered rejected.

1.2.5 Colour submittals must be provided as physical material samples.

1.2.6 Contractor to review submittals for accuracy and completeness prior to submission to the Consultant. This review represents that all necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of work and contract documents.

1.2.7 Notify the Consultant, in writing at time of submission, identifying deviations from requirements of contract documents and stating reasons for deviations.

**1.3 REVIEW AND APPROVAL**

1.3.1 The Consultant reserves the right to reject incomplete or otherwise unsatisfactory submittals without completing a detailed review.

- 1.3.2 When requested by the Consultant, the Contractor shall make requested changes to submittals and resubmit. Any changes made during resubmission that were not requested by the Consultant must be clearly identified during resubmission.
- 1.3.3 Submittal review by the Consultant does not relieve the Contractor of responsibility for errors or omissions or to comply with the contract documents and applicable building codes.
- 1.3.4 Comments made by the Consultant on submittals shall not change the Contract Price unless agreed to by the Owner in writing.
- 1.3.5 Work affected by submittal shall not proceed until review is complete and submittal is approved by consultant in writing.
- 1.4 **SHOP DRAWINGS**
- 1.4.1 Shop drawings are considered engineered submittals.
- 1.4.2 Shop drawings shall be project-specific and incorporate interface detailing with adjacent building components where applicable.
- 1.4.3 Indicate location, layout, dimensions, materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- 1.4.4 Contractor is responsible for product dimensions and must verify site conditions and coordination with adjacent work.

**END OF SECTION**

**1 PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

1.1.1 Administrative and procedural requirements for field mock-ups during the construction stage.

1.1.2 Refer to technical sections for additional mock-up requirements.

**1.2 ADMINISTRATIVE REQUIREMENTS**

1.2.1 Contractor shall provide the required mock-ups promptly and in orderly sequence such that the timing does not delay the construction schedule. Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed. Contractor to provide Consultant a minimum notice of five (5) working days for mock-up review.

1.2.2 Mock-ups shall be made with pre-approved materials and construction methods.

1.2.3 Mock-up locations shall be pre-approved by the Consultant.

1.2.4 Mock-ups may remain part of the finished construction, unless otherwise specified.

**1.3 REVIEW AND APPROVAL**

1.3.1 Consultant reserves the right to reject incomplete or otherwise unsatisfactory mock-ups without completing a detailed review.

1.3.2 Mock-ups that do not comply with the contract documents may be rejected by the Consultant and additional mock-ups may be required.

1.3.3 Mock-ups may be reviewed by the Owner for non-technical purposes, such as to confirm colour and/or overall finished appearance.

1.3.4 Consultant may request a manufacturer's representative review mock-ups and provide written approval.

1.3.5 Consultant will require field testing of mock-ups to check compliance with the contract documents and applicable building codes. Contractor to repair any damage resulting from testing at no additional cost.



- 1.3.6 Mock-up review by the Consultant does not relieve the Contractor of responsibility for errors or omissions or to comply with the contract documents and applicable building codes.
- 1.3.7 Comments made by the Consultant on mock-ups shall not change the contract price unless agreed to by the Owner in writing.
- 1.3.8 Contractor must not proceed with general construction without Consultant written approval for the related mock-up.
- 1.3.9 Once approved by the Consultant, the mock-up shall represent the minimum standard of work for the related component. The same materials and methods must be used for general construction.

**END OF SECTION**

**1 PART 1 - GENERAL**

**1.1 TEMPORARY UTILITIES**

- 1.1.1 Provide temporary utilities in order to execute the work expeditiously. Remove from site all such work after use.
- 1.1.2 Water supply is available to the limit of the existing service in the building on site and will be provided for construction usage, as directed by the owner. Use of the water service will be permitted only so far as the supply provided to the building occupants is not restricted. The Owner will pay for utility charges at prevailing rates.
- 1.1.3 Be responsible for damage to work due to failure in providing adequate heat and ventilation protection during construction. Provide temporary heat and ventilation as required to facilitate progress of work, protect work and products against dampness, cold, and condensation, provide ambient temperatures and humidity levels for storage, properly install and cure materials, and meet health regulations for safe working environment.
- 1.1.4 Take any and all necessary precautions to prevent fumes, odours, dust, and deleterious matter entering areas adjacent to the work.
- 1.1.5 The Contractor may use power from the building's common electrical room or exterior electrical receptacles, provided the power draw does not negatively impact building operations. The building's power may be used for temporary lighting and operating of power tools only. The Contractor will provide and pay for temporary power sources or connections required to carry out the Work, including electric cranes and other equipment requiring temporary power in excess of above noted requirements.
- 1.1.6 If temporary construction, materials, or equipment obstruct the property's existing lighting or natural lighting, provide and maintain temporary lighting.

**1.2 CONSTRUCTION FACILITIES AND TEMPORARY CONSTRUCTION**

- 1.2.1 Provide construction facilities and temporary construction in order to execute the work expeditiously. Remove from site all such work after use make good all areas affected by the use of construction facilities and temporary construction.
- 1.2.2 Supply, install, and maintain construction barriers to limit unauthorized access to the work areas.

- 1.2.3 Provide dust tight barriers to localize dust generating activities, and for protection of workers, finished areas of work and public.
- 1.2.4 Provide sanitary facilities for work force in accordance with governing regulations and ordinances. Keep sanitary facilities secure, clean, and fully stocked with the necessary supplies at all times.
- 1.2.5 Consult with the Owner regarding provisions of on-site parking for construction personnel.
- 1.2.6 Provide and maintain any scaffolding, ladders, temporary stairs, temporary guards, and fall protection/arrest system required to complete the work and for the use of the Consultant in the review of the work.
- 1.2.7 Where exterior building components are removed, exposing components that would normally be protected from weather, provide temporary weather protection as required to protect property from adverse weather, such as wind, rain, and snow.
- 1.2.8 Follow applicable Codes, Bylaws, and Standards related to temporary structures and access equipment. Coordinate and obtain a structural load review by a Professional Engineer before imposing additional loads on existing building structures. If required, provide any necessary shoring, which shall be designed and reviewed by a Professional Engineer.

**END OF SECTION**

**1 PART 1 - GENERAL**

**1.1 SUBSTANTIAL PERFORMANCE**

1.1.1 Submit a request for substantial performance in writing to the Consultant. Include the following:

1.1.1.1 Itemized list of work remaining to be completed, including dollar value.

1.1.1.2 Itemized list of deficient work to be rectified, including dollar value.

1.1.1.3 Updated schedule confirming final completion date of the Work.

1.1.2 Commencement of Lien Periods: The date of publication of the certificate of Substantial Performance of the Work shall be the date for commencement of the lien period, unless required otherwise by the lien legislation applicable at the Place of the Work.

**1.2 FINAL WALKTHROUGH**

1.2.1 Once the work is complete and all deficiencies have been corrected, arrange and attend a final walkthrough of the project site to review the final condition of the site and completion of the work. The Consultant and Owner will attend the final walkthrough.

1.2.2 If outstanding items are found during final walkthrough, complete outstanding items and request reinspection.

**1.3 RELEASE OF HOLDBACK**

1.3.1 Prior to invoicing for release of holdback, submit to the Consultant the warranty documentation in the specifications.

**END OF SECTION**

**1            PART 1 – GENERAL**

**1.1          SECTION INCLUDES**

1.1.1        Warranty information, which should be read in conjunction with the CCDC-2 and Supplementary Conditions.

1.1.2        Refer to technical sections for additional warranty requirements.

**1.2          WARRANTIES**

1.2.1        Contractor shall provide a minimum 5-year labour and material warranty on all the Work.

1.2.2        Warranty certificates shall be completed in the Owner's name and registered with the respective manufacturer. List subcontractor and supplier where applicable.

1.2.3        Warranty periods shall commence from the date of Ready-for-Takeover, unless otherwise agreed to by the Owner.

1.2.4        Unless stated otherwise, the Contractor's warranty shall include all labour and material required to correct defects reported during the warranty period, as determined by the Consultant.

1.2.5        The warranty shall include pre-mature failure and all performance and aesthetic related issues as determined by the Consultant.

1.2.6        The warranty excludes excessive wear and tear, as determined by the Consultant.

1.2.7        If available manufacturer warranties do not meet the warranty requirements specified in the Contract Documents, the Contractor shall notify the Consultant in writing prior to completing the related work.

**END OF SECTION**

**1            PART 1 – GENERAL**

**1.1           SECTION INCLUDES**

- 1.1.1           Framing with dimensional lumber (i.e., lumber of 38 mm or greater but less than 114 mm in smallest dimension).

**1.2           REFERENCE STANDARDS**

- 1.2.1           ASTM F1667 "Driven Fasteners: Nails, Spikes, and Staples", or CSA B111 "Wire Nails, Spikes and Staples".
- 1.2.2           National Lumber Grades Authority (NLGA) Standard Grading Rules For Canadian lumber.

**1.3           DELIVERY, STORAGE, AND PROTECTION**

- 1.3.1           Protect wood framing from weather during transit to Project site.
- 1.3.2           Stack wood products flat with spacers beneath and between each bundle to provide air circulation.
- 1.3.3           Protect wood products from weather by covering them with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

**1.4           MOCK-UPS**

- 1.4.1           Prepare a mock-up of the roof deck framing reinforcing for Consultant review, prior to commencing general installation.

**2            PART 2 – PRODUCTS**

**2.1           DIMENSIONAL LUMBER FRAMING**

- 2.1.1           Grading rules: Lumber to be graded by an agency certified by NLGA. All softwood lumber shall conform to CSA O141 and CSA O86. Factory mark each piece of lumber with grade stamp of grading agency unless noted otherwise.
- 2.1.2           Dimensional lumber to be SPF Grade No. 1 or 2, unless noted otherwise.
- 2.1.3           Maximum moisture content: 19% unless noted otherwise.

## **2.2 FASTENERS**

- 2.2.1 Where wood framing is not exposed to weather (during or after construction), provide fasteners with bright coating, hot-dip zinc coating complying with ASTM A153, or of Type 304 stainless steel.
- 2.2.2 Where wood framing is exposed to weather (during or after construction), in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153 or of Type 304 stainless steel.
- 2.2.3 Nails, spikes, and staples: Should comply with ASTM F1667; use nails of sufficient length so that not less than half of their length penetrates into the second framing member.
- 2.2.4 Power-driven fasteners: Fasteners with a CCMC or ICC-ES evaluation report acceptable to authorities having jurisdiction.
- 2.2.5 Through bolts and anchor bolts: ASTM A307, Grade A; with ASTM A563 hex nuts and, where indicated, flat washers, hot dip galvanized to ASTM A153.
- 2.2.6 Wood screws: ASME B18.6.1 unless noted otherwise.
- 2.2.7 Lag screws: ASME B18.2.1.
  - 2.2.7.1 All lag screws to be machined threaded, not cast threaded.
  - 2.2.7.2 Pre-drilled hole sizes in wood members for lag screws to be in accordance with CSA O86.
  - 2.2.7.3 Lag screws are acceptable only where specifically indicated. Do not substitute lag screws for self-tapping wood screws.

## **2.3 MISCELLANEOUS MATERIALS**

- 2.3.1 Moisture barrier:
  - 2.3.1.1 Asphalt-impregnated building paper.
  - 2.3.1.2 Closed-cell foam gasket material, 6mm thick
  - 2.3.1.3 Polyethylene, 6 mil thick.
  - 2.3.1.4 Saturated felt roll roofing.

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**3            PART 3 – EXECUTION**

**3.1           EXAMINATION**

3.1.1           Examine supporting construction in areas to receive wood framing, for compliance with requirements, installation tolerances, and other conditions affecting performance of the Work.

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

**3.2           INSTALLATION**

3.2.1           Comply with Part 4 of the BC Building Code unless noted otherwise.

3.2.2           Provide temporary shores, guys, braces, and other supports during erection to keep wood framing secure, plumb, and in alignment against wind loads, seismic loads, temporary construction loads, and loads equal in intensity to design loads.

3.2.2.1           Any failure to make proper and adequate provisions for stresses during erection shall be solely the responsibility of the Contractor.

3.2.2.2           Fasteners required for erection purposes are the responsibility of the Contractor and are to be included in the bid.

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

3.2.4           Set wood framing to required levels and lines, with members plumb, true to line, cut, and fitted.

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

3.2.6           Install sill sealer gasket to form continuous seal between sill plates and foundation walls. At all other locations where wood framing abuts concrete or masonry construction, provide moisture barrier.

3.2.7           Use common steel wire nails unless noted otherwise.

3.2.7.1           Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials.

3.2.7.2           Make tight connections between members.

3.2.7.3           Install fasteners without splitting wood.



3.2.7.4 Drive nails snug but do not countersink nail heads unless noted otherwise. Fastener head penetration shall not exceed 2 mm.

3.2.8 Substitution of common nails with power-driven nails of the same length and diameter is acceptable. Substitution of power-driven nails of smaller diameter is permitted only with the Consultant's approval.

3.2.9 Install fasteners straight. Bent fasteners will not be accepted.

3.2.10 Do not leave framing exposed to precipitation or snow.

### **3.3 FIELD QUALITY CONTROL**

3.3.1 Notify Consultant to review new or repaired framing 48 hours prior to concealing.

**END OF SECTION**

**1            PART 1 – GENERAL**

**1.1           SECTION INCLUDES**

1.1.1           Substrate preparation and installation of self-adhered membrane.

**1.2           QUALITY ASSURANCE**

1.2.1           All work to be in accordance with the manufacturer's published installation instructions.

**1.3           SUBMITTALS**

1.3.1           Submit product data sheets for all materials to be used for Consultant review and approval prior to purchasing.

**1.4           DELIVERY, STORAGE, AND PROTECTION**

1.4.1           Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.

1.4.2           Store products in weather protected environment, clear of ground and moisture.

**1.5           SITE CONDITIONS**

1.5.1           Do not apply membrane on damp, wet, or frozen surfaces, or when rain or snow are forecasted.

1.5.2           Follow manufacturer requirements for acceptable application temperatures of primer and membrane.

**1.6           MOCK-UP**

1.6.1           Construct one (1) mock-up for each condition where the self-adhered membrane is being installed, including skylight rough openings and under sheet metal flashings. Allow for Consultant review prior to commencing general installation.

**1.7           WARRANTY**

1.7.1           Provide a minimum 5-year manufacturer warranty on material defects.

## 2 **PART 2 – PRODUCTS**

### 2.1 **SELF-ADHERED MEMBRANE (HIGH TEMPERATURE)**

- 2.1.1 Not in contact with plasticized vinyl or polyurethane coatings. Supply one (1) of the following vapour impermeable, bitumen-based, high temperature self-adhered membranes:

MANUFACTURER	PRODUCT
Henry	Blueskin PE 200 HT
Protecto Wrap	Rainproof-40
Soprema	Lastobond Shield HT
Or pre-approved alternative.	

### 2.2 **SELF-ADHERED MEMBRANE (VAPOUR PERMEABLE)**

- 2.2.1 Vertical applications, not in contact with plasticized vinyl or polyurethane coatings. Supply one (1) of the following vapour permeable self-adhered membranes:

MANUFACTURER	PRODUCT
Henry	Blueskin VP
Protecto Wrap	Protecto wall VP
Soprema	Soprasedal Stick VP
Or pre-approved alternative	

### 2.3 **PRIMER**

- 2.3.1 Use primer as recommended by the membrane manufacturer. Primer to be of the same manufacturer as the waterproofing membrane, unless otherwise approved by Consultant.

### 2.4 **TERMINATION SEALANT**

- 2.4.1 Termination sealant to be recommended by the membrane manufacturer for the application. Use products from the same manufacturer as the membrane, unless otherwise approved by the Consultant.

2.4.2 Acceptable products for impermeable membranes:

MANUFACTURER	PRODUCT
Henry	925 BES Sealant
Protecto Wrap	JS160H Mastic
Soprema	Sopramastic
Or pre-approved alternative	

3 **PART 3 – EXECUTION**

3.1 **PREPARATION**

- 3.1.1 Remove existing membrane and finishes to provide bare substrate.
- 3.1.2 Verify substrate surfaces are sound and free of frozen matter, dampness, loose particles, foreign matter, large voids, sharp/rough edges, or other damage detrimental to adhesion or application of membrane system.
- 3.1.3 Clean and prepare surfaces to receive membrane in accordance with manufacturer's written instructions.
- 3.1.4 Protect adjacent surfaces not designated to receive membrane.
- 3.1.5 Membrane to be fully backed and not bridge any gaps wider than 6mm. Notify Consultant if the condition of the substrate or detailing will require membrane to bridge gaps larger than 6mm.
- 3.1.6 Ensure bitumen-based self-adhered membranes will not contact incompatible materials, such as plasticized vinyl or polyurethane coatings. Notify the Consultant immediately for direction if work appears to require contact between incompatible materials.

3.2 **APPLICATION**

- 3.2.1 Prime substrate surfaces to manufacturer's written instructions. Prime only the area which is expected to be covered with membrane in one working day. Re-prime any areas not covered with membrane in 24 hours.
- 3.2.2 Install self-adhered membrane, shingle lapped for positive drainage.
- 3.2.3 Overlap seams a minimum of 75mm.
- 3.2.4 Apply even pressure to entire membrane firmly in accordance with manufacturer's recommendations.

3.2.5 Avoid wrinkles, fish-mouths, and air pockets. The Consultant may require that any wrinkles, fish-mouths, or air pockets be cut and covered with a patch of self-adhered membrane. Use termination sealant to seal edges of membrane patch.

3.2.6 On horizontal surfaces, seal membranes edges with termination sealant.

3.2.7 Seal items protruding or penetrating through the membrane using termination sealant.

### 3.3 **CLEANING AND PROTECTION**

3.3.1 Remove excess primer or other material from surfaces not designated to receive membrane.

3.3.2 Cover self-adhered membrane as soon as possible.

3.3.3 Do not leave self-adhered membrane exposed to UV longer than recommended by the manufacturer.

### 3.4 **FIELD QUALITY CONTROL**

3.4.1 The Consultant will perform field adhesion testing. Testing will occur a minimum of 24 hours after installation to allow membrane bond to develop. Repair adhesion tests at no additional cost.

**END OF SECTION**

1 **PART 1 – GENERAL**

1.1 **SECTION INCLUDES**

1.1.1 Supply and installation of exterior fibre cement cladding.

1.2 **SITE CONDITIONS**

1.2.1 Store, handle and install materials in accordance with manufacturer's written recommendations.

1.2.2 Material shall be stored flat, in original packaging, elevated from the ground, and covered to prevent contact with water.

1.2.3 Do not allow material to become saturated with water.

1.2.4 Allow material to acclimatize to the outside environment for at least 24 hours before installation.

1.2.5 Do not install cladding during rain or snow or if there is frost or dew on surfaces.

1.3 **MOCK-UP**

1.3.1 Provide mock-ups of installed fibre cement trim for review by the Consultant prior to commencing general installation.

1.4 **WARRANTY**

1.4.1 Provide a 30-year manufacturer warranty on material defects.

2 **PART 2 – PRODUCTS**

2.1 **FIBRE CEMENT TRIM**

2.1.1 Acceptable products: HardieTrim by James Hardie Building Products.

2.1.1.1 Thickness: 19 mm

2.1.1.2 Width: Match existing wood trim

2.1.2 Trim to be factory-primed on all sides.

2.2 **FASTENERS**

2.2.1 Fasteners to be hot dipped galvanized or stainless steel and shall not cause galvanic corrosion with materials they are in contact with.

2.2.2 Fasteners shall provide a minimum of 25mm embedment into framing.

2.2.3 Where fasteners will be exposed, 16 gauge finishing nails shall be used.

2.2.4 Where fasteners will be concealed, 6d common nails may be used.

### 2.3 **PATCHING COMPOUND**

2.3.1 Use one of the following patching compounds to fill fastener holes or repair small dents/chips in the cladding:

2.3.1.1 DAP CrackSHOT Spackling Paste

2.3.1.2 LePage Polyfilla Multi-Surface Repair

2.3.1.3 Pre-approved alternative

## 3 **PART 3 – EXECUTION**

### 3.1 **PREPARATION**

3.1.1 Verify that surfaces to receive cladding are structurally sound and free of defects that may compromise installation, such as uneven surfaces.

3.1.2 Cladding boards shall be installed as architectural/decorative features only and shall not be used in place of a structural member.

3.1.3 Take care to contain dust while cutting boards. Contain dust and prevent it from entering occupied interior spaces or areas open to pedestrian use.

### 3.2 **INSTALLATION**

3.2.1 Install cladding and accessories in accordance with manufacturer's published instructions.

3.2.2 Ensure all sides of boards are primed prior to installation, including sides that will be concealed from view. Where factory-primed boards are cut, prime cut edges before installation.

3.2.3 Install boards level, plumb, or matching existing sloped lines.

3.2.4 Horizontal trim joints to be beveled.

3.2.5 Vertical trim joints to be sloped to drain outwards.

- 3.2.6 Seal joints between trim pieces and interfacing with adjacent building components with exterior-grade sealant, as directed by the Consultant.
- 3.2.7 Ensure fasteners are driven straight, not bent, and finished flush. Take care to avoid overdriving fasteners.
- 3.2.8 Where approved by the Consultant, fill minor overdriven fasteners or other small chips/dents with patching compound. Do not use sealant as a filler or to conceal fastener heads.
- 3.2.9 The Consultant reserves the right to reject cladding that has been damaged during the Work and direct the Contractor to replace the cladding at no additional cost to the Owner.

**END OF SECTION**



**1 PART 1 – GENERAL**

**1.1 SECTION INCLUDES**

1.1.1 Supply and install of 2-ply modified bitumen roofing membrane and related accessories.

**1.2 QUALITY ASSURANCE**

1.2.1 All work to be in accordance with the manufacturer's published installation instructions.

1.2.2 Follow the Roofing Contractors Association of British Columbia (RCABC) Roofing Practice Manual (RPM) and these specifications. Where requirements differ, the more stringent shall govern.

1.2.3 Obtain primary materials from a single manufacturer. All accessory materials to be as recommended or accepted by the primary manufacturer.

**1.3 SUBMITTALS**

1.3.1 Provide product data sheets for all roofing materials and accessories to be installed.

1.3.2 Provide colour samples of materials that will remain exposed.

1.3.3 Submit reports attesting the roofing system was tested in accordance with CSA A123.21-14 – Standard Test Method for the Dynamic Wind Uplift Resistance of Membrane- Roofing Systems. If the CSA test is not available for the tested assembly, provide an engineering judgement letter confirming equivalent performance is achieved. Roofing system to be installed to withstand sustained wind uplift pressures as required by applicable building codes.

1.3.4 Wind Loads for GACC

AREA	WIND LOAD (FACTORED)
Roof Corner	-4.7 kPa
Roof Edge	-2.4 kPa
Roof Field	-1.8 kPa
Parapet Corner (Suction)	-5.2 kPa
Parapet Edge (Suction)	-2.9 kPa
Corner and Edge (Pressure)	2.4 kPa

1.3.5 Wind Loads for SAC

AREA	WIND LOAD (FACTORED)
Roof Corner	-2.9 kPa
Roof Edge	-1. kPa
Roof Field	-1.0 kPa
Parapet Corner (Suction)	-3.7 kPa
Parapet Edge (Suction)	-2.1 kPa
Corner and Edge (Pressure)	1.7 kPa

1.3.6 Shop drawings for sloped insulation package.

1.4 **DELIVERY, STORAGE, AND PROTECTION**

1.4.1 Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.

1.4.2 Store products in weather protected environment, clear of ground and moisture.

1.4.3 Stand roll materials on end.

1.5 **SITE CONDITIONS**

1.5.1 Do not apply membrane on damp, wet, or frozen surfaces, or when rain or snow are forecasted.

1.5.2 Follow manufacturer requirements for acceptable application temperatures.

1.5.3 Before commencing work, Contractor to confirm that the forecasted meteorological conditions will permit work to be carried out without interruption during the course of the day.

1.5.4 Do not install membrane when temperatures are below 5°C for torch application, or equivalent temperature allowing for a wind chill factor.

1.5.5 The minimum temperature for solvent-based adhesive is 5°C.

1.5.6 Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

1.5.7 If water penetrates through the assembly due to inadequate protection, Contractor to cut and inspect damages, remove, replace and re-install all materials so that any water in the assembly is eliminated. This work will be at the cost of the Contractor.

- 1.5.8 Provide protection to the work area at the end of each day or during any interruption of work. The entire area must be watertight at the end of each workday.
- 1.5.9 Maintain daily fire watch for two (2) hours after torch-applied membrane operation ceases. Use IR temperature gauges to detect any persistent hot areas.

## 1.6 **MOCK-UP**

- 1.6.1 Provide mock-ups of base sheet and cap sheet, including upturn detailing.

## 1.7 **WARRANTY**

- 1.7.1 Provide a minimum 5-year installer warranty on labour and workmanship.
- 1.7.2 Provide a minimum 10-year manufacturer warranty on material defects.

## 2 **PART 2 – PRODUCTS**

### 2.1 **MODIFIED BITUMEN ROOFING MEMBRANE**

- 2.1.1 Modified bitumen roofing membrane shall be a 2-ply system.
- 2.1.2 Acceptable systems include (standard system):

<b>Manufacturer</b>	Soprema	Siplast
<b>Cap sheet</b>	Sopralene Flam 180 GR	Paratech 180 Cap TG
<b>Base sheet (field)</b>	Sopralene Flam 180	Paratech 180 Base TG
<b>Base sheet (flashing)</b>	Sopraply Flam Stick	Paratech Glass Base SA 2.5
<b>Cover board</b>	3/16" or 1/4" Sopraboard	Protecto Board (IKO)
<b>Polyisocyanurate insulation</b>	Sopra Iso Plus	Paratherm CG
<b>EPS insulation</b>	Insulfoam EPS	Insulfoam EPS
<b>Vapour barrier</b>	Sopraply Stick Duo	Paradiene 20 SA
<b>Sheathing</b>	Georgia Pacific DensDeck Prime Roof Board (12.7mm)	Georgia Pacific DensDeck Prime Roof Board (12.7mm)
Or a pre-approved alternative		

### 2.2 **ACCESSORIES**

- 2.2.1 Use accessories (primer, sealant/mastic, etc.) as recommended by the membrane manufacturer.
- 3 **PART 3 – EXECUTION**
  - 3.1 **PREPARATION**
    - 3.1.1 Remove existing membrane and finishes to provide bare substrate.
    - 3.1.2 Check that deck surfaces are properly sloped and notify Consultant if the existing slope is not appropriate.
    - 3.1.3 Ensure that items which penetrate surfaces to receive membrane are securely installed.
    - 3.1.4 Membrane to be fully backed and not bridge any gaps wider than 6mm. notify Consultant if the condition of the substrate or detailing will require membrane to bridge gaps larger than 6mm.
    - 3.1.5 Ensure all membrane products and accessories are compatible with each other and with substrates. If required by the Consultant, provide written confirmation from the membrane manufacturer stating that materials are compatible.
    - 3.1.6 Clean and prepare surfaces to receive membrane in accordance with manufacturer's written instructions.
    - 3.1.7 Protect adjacent surfaces not designated to receive membrane.
    - 3.1.8 Verify substrate surfaces are sound and free of frozen matter, dampness, loose particles, foreign matter, large voids, sharp/rough edges, or other damage detrimental to adhesion or application of membrane system.
    - 3.1.9 Examine the condition of all existing surfaces and substrates to which the work of this section is to be applied and ensure that they are adequate for complete and satisfactory installation. Start of work will imply Contractor's acceptance that all installation conditions and satisfactory.
  - 3.2 **APPLICATION**
    - 3.2.1 Apply primer to all substrates where membrane is to be applied.
    - 3.2.2 Lay membrane sheets at right angles to slope and in straight, parallel lines.
    - 3.2.3 Ensure membrane sheets are positively lapped in the direction of drainage.

- 3.2.4 Stagger end laps a minimum 600mm. Seal membrane edges and ends.
- 3.2.5 Apply membrane smooth, free from air pockets, wrinkles, or tears. Ensure full bond of membrane to substrate.
- 3.2.6 Maintain consistent asphalt bleed out at seams. If bleed out exceeds 19mm, re-heat and embed colour-matched granules.
- 3.2.7 Where seams are required at granulated surfaces, heat and embed the granules to provide a proper substrate for adhesion.
- 3.2.8 After installation, check adhesion at all lap seams. Remove and replace membrane where seams are inadequately adhered, as directed by the Consultant.
- 3.3 **FLASHINGS AND ACCESSORIES**
  - 3.3.1 Apply base and cap sheet flashings at upturns.
  - 3.3.2 Base sheet flashings to extend onto field of roof minimum 100mm.
  - 3.3.3 Cap sheet flashings to extend onto field of roof minimum 50mm past the base sheet flashing.
  - 3.3.4 Seal membrane to accessory items, including drains, scuppers, and roof penetrations.
- 3.4 **CLEANING AND PROTECTION**
  - 3.4.1 Remove excess primer or other material from surfaces not designated to receive membrane.
  - 3.4.2 In areas where finished surfaces are soiled by work of this section, consult manufacturer of soiled surfaces for cleaning advice and comply with their written instructions.
  - 3.4.3 Repair or replace defaced or disfigured finishes caused by work of this section.
  - 3.4.4 Where foot traffic must continue over finished roof membrane, protect membrane surfaces.
- 3.5 **FIELD QUALITY CONTROL**
  - 3.5.1 The Consultant will perform field adhesion testing. Testing will occur a minimum of 24 hours after installation to allow membrane bond to develop. Repair adhesion tests at no additional cost.

**END OF SECTION**

**1            PART 1 – GENERAL**

**1.1          SECTION INCLUDES**

- 1.1.1        Supply and installation of PMMA (polymethyl methacrylate) membrane for exterior above-grade applications.

**1.2          QUALITY ASSURANCE**

- 1.2.1        Perform Work in accordance with manufacturer's written instructions.
- 1.2.2        PMMA membrane installer to be certified by the manufacturer as an approved applicator.

**1.3          SUBMITTALS**

- 1.3.1        Submit product data sheets for PMMA materials and accessories to be used, prior to purchasing.
- 1.3.2        Submit colour samples for Owner approval, for materials that will be exposed.

**1.4          DELIVERY, STORAGE, AND PROTECTION**

- 1.4.1        Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- 1.4.2        Store products in weather protected environment, clear of ground and moisture.

**1.5          SITE CONDITIONS**

- 1.5.1        Do not apply membrane on damp, wet, or frozen surfaces, or when rain or snow are forecasted.
- 1.5.2        Follow manufacturer requirements for acceptable application temperatures of primer and membrane.

**1.6          MOCK-UP**

- 1.6.1        Provide a mock-up of the PMMA membrane applied to roofing upturns for Consultant review prior to general application. As a minimum, mock-up shall be completed once per type of substrate (e.g., wood, concrete, existing membrane). Embed a 25 m wide, 300 mm long sheet of reinforcing fabric within the PMMA, leaving a 100 mm uncoated exposed end for Consultant to test bond to substrate. Create test strips in discrete locations to avoid impacting the final appearance of exposed membrane.

1.7 **WARRANTY**

1.7.1 Provide a minimum 5-year warranty for membrane failing to resist penetration of water, except where such failures are the result of structural failures of building. Hairline cracking of concrete due to temperature change or shrinkage is not considered a structural failure.

1.7.2 Provide a minimum 10-year manufacturer warranty on material or fabrication defects.

2 **PART 2 – PRODUCTS**

2.1 **PMMA MEMBRANE**

2.1.1 Supply one of the following liquid applied PMMA membranes:

MANUFACTURER	PRODUCT
Soprema	Alsan RS 230 system
Siplast	Parapro 123 system
Pre-approved alternative	

2.2 **ACCESSORIES**

2.2.1 Accessories including primer, catalyst, and reinforcing fabric to be recommended by the membrane manufacturer for the application. Use products from the same manufacturer as the membrane, unless otherwise approved by the Consultant.

2.3 **DRAINAGE BOARD**

2.3.1 Plastic core drainage boards with laminated filter fabric, as recommended by the membrane manufacturer.

3 **PART 3 – EXECUTION**

3.1 **PREPARATION**

3.1.1 Remove existing membrane and finishes to provide bare substrate.

3.1.2 Verify substrate surfaces are sound and free of frozen matter, dampness, loose particles, foreign matter, large voids, sharp/rough edges, or other damage detrimental to adhesion or application of membrane system.

3.1.3 Ensure that items which penetrate surfaces to receive membrane are securely installed.



- 3.1.4 Protect adjacent surfaces not designated to receive membrane.
- 3.1.5 Clean and prepare surfaces to receive membrane in accordance with manufacturer's written instructions.
- 3.1.6 Membrane to be fully backed and not bridge any gaps wider than 6 mm. Notify Consultant if the condition of the substrate or detailing will require membrane to bridge gaps larger than 6 mm.
- 3.2 **APPLICATION**
  - 3.2.1 Apply primer and allow to cure per manufacturer's written instructions.
  - 3.2.2 Fully reinforce membrane with fabric reinforcing sheets. Pre-cut fabric reinforcing and have sheet ready for installation before preparing membrane mixture.
  - 3.2.3 Mix membrane resin and catalyst per manufacturer's written instructions
  - 3.2.4 Apply catalyzed membrane resin and embed pre-cut fabric reinforcing. Use a roller to remove trapped air and avoid wrinkles.
  - 3.2.5 Apply additional coats of membrane per manufacturer's written instructions.
  - 3.2.6 Apply drainage board over cured membrane material surface. Scribe and cut drainage board around projections, penetrations, and interruptions.
- 3.3 **PROTECTION OF FINISHED WORK**
  - 3.3.1 Do not permit traffic over unprotected or uncovered membrane.
- 3.4 **FIELD QUALITY CONTROL**
  - 3.4.1 Notify the Consultant 48 hours prior to the following:
    - 3.4.1.1 Completion of surface preparation
    - 3.4.1.2 Installation of new membrane
    - 3.4.1.3 Testing of membrane adhesion
  - 3.4.2 The Consultant may cut test sample areas of membrane to check bond and thickness. Repair all tested areas at no additional cost.

**END OF SECTION**

**1 PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

1.1.1 Sheet metal flashings.

**1.2 SUBMITTALS**

1.2.1 Submit two (2) samples of each sheet metal colour for Owner approval.

**1.3 QUALITY ASSURANCE**

1.3.1 Perform Work to SMACNA 1120, the RCABC Roofing Practices Manual, and these specifications. Where requirements differ, the more stringent shall govern.

**1.4 DELIVERY, STORAGE, AND HANDLING**

1.4.1 Deliver, store, and handle materials in accordance with the manufacturer's printed instructions.

1.4.2 Pre-finished metal flashings shall be adequately protected to prevent scratches, gouges, and other damage during handling and after installation.

**1.5 MOCK-UP**

1.5.1 Provide mock-ups of all flashing types to be used for the Work, including but not limited to: base-of-wall, skylight, and roof parapet cap flashings.

**2 PART 2 - PRODUCTS**

**2.1 SHEET MATERIALS**

2.1.1 Prefinished galvanized sheet steel: 24ga. with silicone modified polyester (SMP) coating. Concealed finishes may have acrylic or polyester coating.

2.1.2 Fastening clips/cleats: 22ga. galvanized sheet steel.

2.1.3 Colours shall match existing.

**2.2 FASTENERS**

2.2.1 All fasteners to be compatible with the materials they will be in contact with and coated to prevent corrosion.

2.2.2 The following fasteners are acceptable:

- 2.2.2.1 In contact with pressure treated wood: Hot-dipped galvanized or stainless steel screws.
- 2.2.2.2 In contact with non-pressure treated wood: Hot-dipped galvanized, electro galvanized, or stainless steel screws.
- 2.2.2.3 Exposed fasteners are not permitted unless pre-approved by the Consultant. Where approved, exposed fasteners shall be screws with neoprene gaskets and colour-matched to the sheet metal.
- 2.2.2.4 Rivets to be stainless steel, sized to suit application, and colour matched to sheet metal. Use only where permitted by the Consultant.

## 2.3 **FABRICATION**

- 2.3.1 Form sections true to shape, accurate in size, square, and free from distortion or defects. Form pieces in longest possible lengths. All sheet metal shall be fabricated to suit site conditions.
- 2.3.2 Where required, provide bends to prevent oil canning. Obtain Consultant approval on layout of bends prior to fabrication.
- 2.3.3 Dimensional requirements:
  - 2.3.3.1 Provide 13mm drip edges at bottoms of vertical flashings.
  - 2.3.3.2 Provide minimum 13mm end dams at ends of horizontal flashings.
- 2.3.4 Hem exposed edges minimum 13mm on underside, such that there are no cut or sharp edges exposed.
- 2.3.5 All vertical joints to be s-lock, unless otherwise approved by the Consultant.
- 2.3.6 All horizontal joints to be standing seam, unless otherwise approved by the Consultant.
- 2.3.7 All horizontal surfaces shall be sloped to drain a minimum of 6%.

## 3 **PART 3 - EXECUTION**

### 3.1 PREPARATION

- 3.1.1 Examine the condition of all existing surfaces and substrates to which the work of this section is to be applied and ensure that they are adequate for complete and satisfactory installation with true planes and vertical lines. Start of work will imply Contractor's acceptance that all installation conditions are satisfactory.
- 3.1.2 Do not place sheet metal in direct contact with pressure treated wood, concrete, or other materials that may cause galvanic corrosion. Where metal will be installed against these substrates, provide separation material as approved by the Consultant.

### 3.2 INSTALLATION

- 3.2.1 Where applicable, install fastening clips/cleats prior to installing sheet metal flashing.
- 3.2.2 Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- 3.2.3 All flashings shall be positively lapped with adjacent components.
- 3.2.4 Keep sheet metal above surfaces where standing water may occur.
- 3.2.5 Secure flashings in place using concealed fasteners. Use exposed fasteners only where pre-approved by the Consultant.
- 3.2.6 Unless otherwise noted, install fasteners at maximum 300mm o.c., into solid structure.
- 3.2.7 Do not secure flashings through horizontal waterproof surfaces, unless pre-approved by the Consultant.
- 3.2.8 Do not apply sealant to any sheet metal joints, unless pre-approved by the Consultant.

### 3.3 PROTECTION

- 3.3.1 Protect sheet metal from damage and be responsible for any damage on metal after installation, resulting from inadequate protection during construction.

**END OF SECTION**

1            **PART 1 – GENERAL**

1.1          **SECTION INCLUDES**

1.1.1        Joint preparation and sealant installation.

1.2          **QUALITY ASSURANCE**

1.2.1        All work to be in accordance with the manufacturer's published installation instructions.

1.3          **SUBMITTALS**

1.3.1        Submit product data sheets for all materials to be used, prior to purchasing.

1.3.2        Submit sealant standard colour samples for Owner approval.

1.4          **DELIVERY, STORAGE, AND PROTECTION**

1.4.1        Deliver all materials and store them in original wrappings and containers with the manufacturer's seals and labels, intact.

1.4.2        Protect from freezing and moisture.

1.5          **SITE CONDITIONS**

1.5.1        Do not apply sealant on damp, wet, or frozen surfaces, or when rain or snow are forecasted.

1.5.2        Follow manufacturer requirements for acceptable application temperatures, relative humidity levels, and substrate moisture content for application and curing of sealants.

1.6          **MOCK-UPS**

1.6.1        Include sealant in related roof penetration and metal flashing mock-ups.

1.7          **WARRANTY**

1.7.1        Provide a 5-year manufacturer warranty on material defects.

## 2 **PART 2 – PRODUCTS**

### 2.1 **EXTERIOR SEALANTS (NOT IN CONTACT WITH BITUMINOUS MATERIAL)**

2.1.1 Polyurethane or hybrid sealant; colour to match adjacent surfaces and as selected by the Owner.

2.1.2 Acceptable products (not in contact with bituminous materials):

MANUFACTURER	PRODUCT
Sika	MasterSeal NP 1
Sika	MasterSeal NP 100
Tremco	Dymonic 100
Tremco	Dymonic FC
Or a pre-approved alternative	

### 2.2 **INTERIOR SEALANTS**

2.2.1 Single component, acrylic latex, paintable sealant for interior finishing joints.

2.2.2 Acceptable products (not in contact with bituminous materials):

MANUFACTURER	PRODUCT
DAP	Dynaflex 230
GE (Momentive Performance Materials)	RCS20
Tremco	Tremflex 834
Or a pre-approved alternative	

### 2.3 **ACCESSORIES**

2.3.1 Primer: Non-staining type, as recommended by sealant manufacturer to suit application.

2.3.2 Joint cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

2.3.3 Joint backing: Round, non-gassing foam rod, oversized (30% larger than joint width).

2.3.4 Bond breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

- 2.3.5 Masking tape: Non-staining, non-absorbent type compatible with sealant and adjacent surfaces.

### 3 **PART 3 – EXECUTION**

#### 3.1 **PREPARATION**

- 3.1.1 Remove all existing sealant and any loose materials and foreign matter which might impair sealant adhesion. Do not damage adjacent surfaces.
- 3.1.2 Verify that substrate surfaces are sound and free of frozen matter, dampness, loose particles, foreign matter, or other damage detrimental to adhesion or application of sealant.
- 3.1.3 Clean and prepare surfaces to receive sealant in accordance with manufacturer's written instructions.
- 3.1.4 Protect adjacent components by using masking tape or other reasonable means. Take sufficient precautions to prevent staining of adjacent surfaces.
- 3.1.5 Ensure sealant does not contact incompatible surfaces, such as bituminous materials, unless the sealant manufacturer confirms there are no adverse effects.
- 3.1.6 Measure joint dimensions and size materials to achieve manufacturer required width/depth ratios.
- 3.1.7 Install joint backing to achieve a neck dimension no greater than 1/3 of the joint width. Ensure backer rod is installed without stretching, twisting, braiding or puncturing its outer skin.
- 3.1.8 Install bond breaker where joint backing is not used, to prevent 3-sided adhesion.

#### 3.2 **APPLICATION – PRIMER**

- 3.2.1 If recommended by the sealant manufacturer, prime surfaces to receive sealant. Follow the sealant manufacturer's recommendations for application and cure time.
- 3.2.2 Protect the surfaces that do not require primer. If primer is installed accidentally on surfaces other than the one (1) specified, it should be removed immediately with a clean cloth dampened with the manufacturer's recommended cleaner. Do not apply primer to the backer rod/bond breaker.
- 3.2.3 If primed areas are exposed to rain or contaminants (dirt, dust, etc.), the surface must be cleaned and re-primed.

### 3.3            **APPLICATION – SEALANT**

- 3.3.1            Apply sealant using equipment approved by, and in accordance with the manufacturer's written instructions. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- 3.3.2            Maintain the minimum and maximum sealant depths as recommended by the manufacturer. Increase average sealant size as required to accommodate application tolerances.
- 3.3.3            Immediately after application, tool the sealant to ensure firm, full contact with the faces of the joint. Neatly tool the surfaces to a slight concave profile, unless noted otherwise. Avoid pulling the sealant out of the joint by frequent cleaning of the tooling instrument.
- 3.3.4            Sealant must have clean, neat, straight lines, with full contact to the substrate.
- 3.3.5            Ensure existing drainage paths are not blocked by the sealant material.

### 3.4            **CLEANING AND PROTECTION**

- 3.4.1            Remove masking tape immediately after tooling sealant.
- 3.4.2            Clean and remove excess sealant from adjacent surfaces as required.
- 3.4.3            Protect sealants until cured.

### 3.5            **FIELD QUALITY CONTROL**

- 3.5.1            The Consultant will perform field adhesion testing. Repair adhesion tests at no additional cost.

**END OF SECTION**



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1            **PART 1 – GENERAL**

1.1          **SECTION INCLUDES**

1.1.1       Application of paint to exterior fibre cement materials.

1.2          **SUBMITTALS**

1.2.1       Submit product data sheets for all materials to be used, prior to purchasing.

1.2.2       Submit physical colour cards best matching existing fibre cement trim colours for Owner approval.

1.3          **QUALITY ASSURANCE**

1.3.1       All materials, preparation, and workmanship shall conform to requirements of the latest edition of the Architectural Painting Specification Manual by the Master Painters Institute (MPI) as issued by the local MPI Accredited Quality Assurance Association having jurisdiction.

1.4          **DELIVERY, STORAGE, AND PROTECTION**

1.4.1       Deliver paint materials to job site in sealed original labeled containers bearing the manufacturer's name, type of paint, brand name, colour designation and instructions for mixing or reducing.

1.4.2       Store products in weather protected environment, clear of ground and moisture.

1.5          **SITE CONDITIONS**

1.5.1       Follow manufacturer requirements for environmental conditions, including application temperature, relative humidity, and substrate moisture content.

1.5.2       Do not apply paints in snow, rain, fog, mist, or other inclement weather.

1.5.3       Do not paint surfaces that are wet or damp.

1.5.4       Do not apply paint in direct sunlight or when rain is expected.

1.6          **MOCK-UP**

1.6.1       Provide a mock-up of painted fibre cement board.

## 2 **PART 2 – PRODUCTS**

### 2.1 **EXTERIOR PAINT**

#### 2.1.1 Exterior-grade acrylic latex paint:

MANUFACTURER	PRODUCT
Dulux	Weatherguard
PPG	Sun Proof
Sherwin Williams	A-100
Or pre-approved alternative	

2.1.2 Use primer for the substrate as recommended by the paint manufacturer.

2.1.3 Paint materials to be products of a single manufacturer and designated by the manufacturer to be compatible with the existing conditions and with each other.

## 3 **PART 3 – EXECUTION**

### 3.1 **SURFACE PREPARATION**

3.1.1 Verify substrate surfaces are sound and free of frozen matter, dampness, loose particles, foreign matter, large voids, sharp/rough edges, or other damage detrimental to adhesion or application of paint products.

3.1.2 Fill holes and indentations with filler appropriate to surface. Allow to dry and sand flush with adjacent surfaces.

3.1.3 Ensure surfaces are clean prior to applying filler, primer, or paint.

3.1.4 Protect and/or mask off adjacent and underlying surfaces.

### 3.2 **APPLICATION**

3.2.1 Prime edges, ends, faces, undersides, and backsides of any unprimed or unpainted surfaces, prior to installation.

3.2.2 Uniformly mix paints to thoroughly disperse pigments prior to applying.

3.2.3 For thinning, use only those materials permitted by the Consultant and approved by the manufacturer. Do not thin paint in excess of manufacturer's recommendations.

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- 3.2.4 Withdraw from original container only as much material as can be used in one day. Do not return unused material to original container. Maintain containers closed if not extracting paint.
- 3.2.5 Apply primer or first coat immediately after surface preparation is complete to prevent recontamination.
- 3.2.6 Apply a minimum of two (2) coats of paint. Allow applied coats to dry before the next coat is applied.
- 3.2.7 Apply paint to minimum wet and dry film thickness recommended by manufacturer.
- 3.2.8 To avoid air entrapment in applied coats, apply materials in strict accordance with manufacturer's spread rates and application requirements. Failure to follow these requirements will require replacement at the Contractor's expense.
- 3.2.9 Apply paint to uniform appearance without cloudiness, spotting, runs, ropiness, laps, sags, curtains, holidays, brush marks, foreign matter, or other surface imperfections visible from 1m away. The dried finish coat shall be uniform in colour, coverage, and gloss. The "lap-in" areas shall exhibit uniformity with the adjacent painted areas.
- 3.2.10 Cut in sharp lines and colour breaks as required.
- 3.3 **CLEANING AND PROTECTION**
- 3.3.1 Remove masking tape immediately after painting.
- 3.4 Wipe wet paint from adjacent surfaces that are not to be painted immediately and thoroughly so not to leave a mark.
- 3.4.1 After application, clean spattered surfaces. Remove spattered material by washing, scraping, or other methods that do not scratch or damage underlying or adjacent finished surfaces.
- 3.4.2 Protect work of other trades from damaging new paint application. Correct damage by cleaning, repairing, and refinishing, as approved by Consultant, and leave in an undamaged condition.
- 3.5 **FIELD QUALITY CONTROL**
- 3.5.1 The Consultant may perform wet film thickness testing. Repair tests at no additional cost.

- 3.5.2 The Consultant may perform paint adhesion testing. Repair tests at no additional cost.
- 3.5.3 If test results show that the thickness of applied paint does not comply with manufacturer's written instructions, Contractor shall pay for additional testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written instructions, at no additional costs to the Owner.

**END OF SECTION**

1 **PART 1 – GENERAL**

1.1 **SECTION INCLUDES**

1.1.1 Supply and installation of drainage products and related accessories.

1.2 **SUBMITTALS**

1.2.1 Submit product data sheets for all materials to be used, prior to purchasing.

1.3 **DELIVERY, STORAGE, AND PROTECTION**

1.3.1 Store and protect materials according to manufacturer's written instructions.

1.4 **MOCK-UP**

1.4.1 Provide mock-up of roof drain and scupper installation, as applicable.

2 **PART 2 – PRODUCTS**

2.1 **AREA DRAINS**

2.1.1 Area drains to be flanged and designed for use with the specified membrane.

2.1.2 Area drains to have removable clamping rings and strainers.

2.1.3 New drains to be sized to match existing and compatible with existing plumbing.

2.1.4 Acceptable drains:

MANUFACTURER	PRODUCT
Menzies Metal Products	Clamp-Tite Spun Copper Drain
Or pre-approved alternative	

2.1.5 Connect new drains to existing plumbing with retrofit mechanical seal, such as Blue Drain Seal by Menzies Metal Products or pre-approved alternative.

2.2 **SCUPPERS**

2.2.1 Box scuppers to be aluminum with flange for membrane tie-in by Menzies Metal Products or pre-approved alternative.

2.3 **DOWNSPOUTS**

2.3.1 Downspouts shall be PVC to match existing.

2.3.2 Match size, profile, and colour of downspouts to existing conditions.

2.3.3 Accessories:

2.3.3.1 Aluminum drain tile cover, matching downspout colour.

2.3.3.2 Precast concrete splash pad.

### 3 **PART 3 – EXECUTION**

#### 3.1 **AREA DRAIN INSTALLATION**

3.1.1 Install drains in accordance with manufacturer's written instructions.

3.1.2 Ensure drain components are sufficiently supported and secured to substrate.

3.1.3 Ensure drainage is free from obstruction. Adjust drains as required to provide positive flow of water.

3.1.4 Connect drains to existing plumbing with retrofit mechanical seals.

3.1.5 Water test drains to ensure no leakage through the system.

#### 3.2 **SCUPPER INSTALLATION**

3.2.1 Place scuppers to ensure positive flow of water. Fasten securely to substrate.

#### 3.3 **DOWNSPOUT INSTALLATION**

3.3.1 Where applicable, install new downspouts at new scuppers that discharge onto other roofs.

3.3.2 Attach downspouts securely at a maximum 1800mm o.c., minimum two (2) fastening clips per section.

3.3.3 Where existing downspouts connect to the building's perimeter drainage system, insert new downspouts to the same drains, complete with drain tile covers.

3.3.4 Where existing downspouts are not connected to existing drainage systems, provide 45° elbow and install splash pads at downspout discharge points. Direct downspout discharge away from building walls or materials that are prone to deterioration from increased water exposure.

**END OF SECTION**