



**ST. CLAIR CATHOLIC**  
DISTRICT SCHOOL BOARD

*Lighting the Way ~ Rejoicing in Our Journey*

**REQUEST FOR TENDER: 616-CP2016**

**Partial Roof Replacement**

**Holy Family Catholic School**

**649 Murray Street, Wallaceburg, ON N8A 1W1**

**Submission Deadline and Location:**

**Tuesday, February 11, 2020**

**3:00:00 PM Local Time**

**Catholic Education Centre Reception Desk**

**420 Creek Street, Wallaceburg, ON N8A 4C4**

**ISSUED: January 14, 2020**

## Part 1: INTRODUCTION

### 1.1. **INTRODUCTION**

The St. Clair Catholic District School Board (hereafter referred to as the “SCCDSB” or the “Board”) invites interested parties to submit sealed submissions in response to this Request for Tender (“RFT”) document. The SCCDSB currently operates 25 elementary schools, 2 secondary schools, and an administrative office within the regions of Sarnia-Lambton and Chatham-Kent.

### 1.2. **PURPOSE**

The purpose of this RFT document is to provide interested parties with sufficient information to enable them to prepare and submit bids for consideration by the SCCDSB for the Scope of Work provided, subject to the terms and conditions described herein.

### 1.3. **INTERPRETATION AND DEFINITIONS**

The following words are used throughout the bid document and proponents should note these conditions when completing their RFT submission.

“ADDENDUM” means a written instruction and/or clarification issued to the RFT Document. The term addenda is to mean the same as Addendum.

“AGREEMENT” or “CONTRACT” means the final document including, but not limited to, the terms and conditions of this document.

“APPLICABLE LAW” and “APPLICABLE LAWS” means any common law requirement and all applicable and enforceable statutes, regulations, directives, policies, administrative interpretations, orders, by laws, rules, guidelines, approvals and other legal requirements of any government and/or regulatory authority in effect from time to time.

“BID IRREGULARITY” means a deviation between the requirements (terms, conditions, specifications, special instructions) of a bid response for the purposes of this bid; bid irregularities are further classified as major irregularities or minor irregularities. The classification of what is a major irregularity or a minor irregularity shall be the sole discretion of the SCCDSB.

“BID SUBMISSION” or “SUBMISSION” means all of the documentation and information submitted by a Proponent in response to this request.

“CONFLICT OF INTEREST” means any situation or circumstance where, in relation to performance of obligations under the RFT, the Proponent’s other commitments, relationships, or financial interests could result in a real, perceived, or potential unfair advantage to the Proponent.

“CONTRACTOR” means an entity that submits a bid in response to this tender document, as the context may suggest, refers to a potential Contractor.

“INFORMAL” shall mean bid submissions will be eliminated from further evaluation if the submission does not include the required information.

“MUST” shall mean proponents “must” include the required information in the bid submission. Failure to include the required information will deem the submission informal.

“PROPONENT” means an entity that submits a bid in response to this tender document, as the context may suggest, refers to a potential Proponent.

“SHOULD” shall mean proponents “should” include the required information in the bid submission.

“SUBCONTRACTOR” means the subcontractor and/or business who contracts to provide some service or material necessary for the performance of another’s contract.

[End of Part 1]

## PART 2: RFT PROCESS, INSTRUCTIONS, TERMS & CONDITIONS

### 2.1. **RFT SCHEDULE**

For the purposes of this RFT, the Board has established the following timing deadlines for the completion of the RFT process.

Event	Date & Time
<b>Issue Date:</b>	January 14, 2020
<b>Mandatory Site Visit:</b>	January 21, 2020 @ 10:00 AM
<b>Last day to submit questions:</b>	January 30, 2020 @ 12:00 PM
<b>Responses to Questions Received :</b>	February 4, 2020
<b>Closing Date and Time:</b>	February 11, 2020 @ 3:00:00 PM

### 2.2. **RFT CONTACT**

Tony Prizio, Supervisor – Procurement  
St. Clair Catholic District School Board  
420 Creek Street, Wallaceburg, ON  
P: (519) 627-6762 x10256  
E: [tony.prizio@st-clair.net](mailto:tony.prizio@st-clair.net)

### 2.3. **ACCEPTANCE OF TERMS**

The submission of a bid by a Proponent represents that the Proponent has read and completely understands, and accepts all provisions contained within this RFT. Any bid that has alternative terms and conditions to those contained herewith may be considered a counteroffer to the Board’s request and may be rejected.

### 2.4. **AGREEMENT TO ABIDE BY ESTABLISHED PROCESS**

The following rules must be observed to protect the integrity of the competitive procurement process:

- All communications, including requests for information, must be between only the Representative of the Board and each Bidder who have been authorized and designated for that particular purpose.
- Apart from the communications between and among the designated representatives, there must be no communication between any other Board staff and any other representatives of the Bidder, and no giving of information with respect to the competitive procurement process and the final contract.
- Any attempt on the part of the Bidder, or any of its Employees, Agents, Vendors, or Representatives to contact any person(s) other than the designated SCCDSB representative(s) with respect to the competitive procurement process or any violation of the above requirements will be grounds for disqualification. The Board may, at its discretion, in addition to any other rights or remedies available at law, reject any potential or actual submission submitted by that Bidder.

Bidders accepts and agrees to observe the conditions listed herein, inform their staff thereof, and ensure their compliance by submitting an executed Bid Submission in response to this RFT.

## **2.5. SCOPE OF WORK**

The St. Clair Catholic District School Board (Board) is seeking a Contractor to provide all of the necessary materials, equipment and labour to complete Partial Roof Replacement project at Holy Family Catholic School in Wallaceburg, ON. Refer to Appendix C: Scope of Work & Specifications for detailed description of work to be carried out by the successful Proponent.

## **2.6. EXAMINATION OF SITE & SITE VISIT**

Location: Holy Family Catholic School, 649 Murray Street, Wallaceburg, ON

Contact: Paul Lernout (519) 360-6262

Instructions: The site examination will be held at the date and time specified in Section 2.1 RFT Schedule. Attendees are required to report to the main office. A sign-in sheet will be available at the site examination. It is the attendee's responsibility to ensure they are signed-in at the meeting.

This is a MANDATORY SITE VISIT. Only contractors who attend the site visit will be permitted to submit a bid response. Attendance will be taken and will form part of the Bid Documents. Representatives of the Owner and Consultant will be in attendance.

In submitting a bid, it will be assumed that the bidders have carefully examined the drawings and have included in the bid price the complete cost of the work contemplated by the drawings and specifications and other bid documents.

## **2.7. TIMING OF PROJECT**

The schedule for the completion of the project is:

- Commencement no earlier than June 29, 2020.
- Completion / Substantial Performance no later than August 21, 2020.

Work is to be completed during regular business hours. Working outside of school hours, including daytime access during weekends, holidays, March break, etc. shall be at the sole discretion of the SCCDSB's Project Manager.

## **2.8. COORDINATION WITH OCCUPANTS**

Full Owner Occupancy: Owner will occupy site during entire construction period except for weekends and Holidays. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

- Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
- Notify Owner not less than 48 hours in advance of activities that will affect Owner's operations.
- Restrict high noise operations (i.e. breaking and cutting concrete) to unoccupied periods. Include any overtime wages due to the condition stipulated.

- Power shutdowns will be scheduled during unoccupied periods. Include any overtime wages due to the condition stipulated.

## 2.9. **BID SUBMISSION**

Bids shall be submitted with the project clearly identified on the sealed envelope:

**RFT Bid Package #: 616-CP2016 – Holy Family Catholic School – Partial Roof Replacement**

The sealed Bid Submission must be returned to:

**Catholic Education Centre Reception Desk**

**420 Creek Street, Wallaceburg, ON N8A 4C4**

**Attention: Tony Prizio, Supervisor - Procurement**

**Bids MUST be received no later than the date and time specified in this tender document. Any bid submissions received after the deadline will be returned unopened to the bidder. It is the Bidder's responsibility to ensure their Bid Submission is received by a Board representative on or before the tender close. The Board will not take any responsibility for late submissions due to postal delay through Canada Post, third-party courier services, or for any other reason.**

If a Bidder chooses to deliver their Bid Submission via post or courier, the envelope or package must reference the project number and project description on the outside.

Bids shall be filled out in ink or typed, signed in longhand by a duly authorized company official (having authority to bind) [and sealed with a company corporate seal]. One original of the fully completed Bid Form must be submitted. Failure to provide all of the requested information on the Bid Form may result in disqualification of the bid. Please refer to Appendix A: Bidder's Response Guide.

Bids by telephone, email, or fax will not be accepted.

After bid closing all submissions will be reviewed by the Board's evaluation team. Contractors submitting a bid are invited to stay for a public opening of Bids at 3:05 PM at the Catholic Education Centre.

Supplier's Bid Submission, all Bid Documents and Purchase Order will form the agreement.

## 2.10. **CONTRACT PRICING**

Proponents must complete the Bid Form. Prices must include all travel, reimbursements, delivery (FOB Destination).

All charges must include the cost of the product or service. Prices quoted must be for products or services exactly as specified, unless otherwise noted or requested on the Bid Form.

## 2.11. **QUESTIONS AND REQUESTS FOR CLARIFICATION**

Proponents finding discrepancies, ambiguities or omissions in the RFT documents or having doubt as to the meaning or intent thereof, shall immediately notify the Procurement Department. The board is not responsible for any misunderstanding of the RFT on the part of a Proponent. Questions must be received by the date and time specified in the RFT Document. Responses will be provided in writing to Proponents through the same platform that the original RFT documents were issued.

All questions to be addressed in writing to: Tony Prizio, Supervisor - Procurement  
St. Clair Catholic District School Board  
E-mail: [tony.prizio@st-clair.net](mailto:tony.prizio@st-clair.net)  
CC: [victoria.iaccino@st-clair.net](mailto:victoria.iaccino@st-clair.net)

For the purpose of this RFT, Proponents shall not contact anyone in the Board other than the designated contact listed in these bid documents. Any unauthorized communications may result in disqualification.

**2.12. ADDENDA**

Proponents may also, during the RFT Process, be advised by Addendum of any additions, deletions or alterations to RFT documents. All such Addenda shall become part of the RFT Documents.

If an addendum is issued, the document(s) will be made available to Proponents through the same platform that the original RFT documents were issued. Proponents are responsible for verifying before submitting its response that it has received all addenda that may have been issued.

Where a Bid Submission has been received by the Board prior to the publication of an Addendum or notice, the Board shall allow that Proponent to submit a revised Bid Submission prior to the closing date for the RFT or send written acknowledgement (which may be by email) to the RFT contact that the original Bid Submission still stands.

**2.13. WITHDRAWAL OF SUBMISSION**

A Proponent may alter, amend, or withdraw a submitted proposal if such request is received in writing by the contact person for this RFT prior to the closing date and time specified in this document. The last submission shall supersede and invalidate all previous submission by that Proponent as it applies to this bid. Such requests received after the closing date and time will not be permitted.

**2.14. BID ACCEPTANCE**

It shall be understood by all proponents, that the RFT submission shall be valid and subject to acceptance by the Board, and that no adjustments shall be made to the proposal for a period of up to and including sixty (60) days from the RFT Closing Date.

The Board reserves the right to determine the successful proponent at its sole discretion. The lowest cost may not be accepted. The Board reserves the right to decline any or all submissions, in whole or in part, at any time prior to making an award.

The successful proponent shall be required to enter into a formal contract with the Board, which will include the terms and conditions of the RFT documents, the Proponent's bid, and all other applicable documents.

**2.15. CANCELLATION**

The Board may cancel this RFT at its discretion at any time prior to an award. The Board may do so for budgetary reasons, for any other reason, or without providing reasons and issue a new request for tender, request for qualifications, or do nothing.

**2.16. CLARIFICATION**

The Board reserves the right to seek clarification from any Proponents without being obligated to all Proponents if it finds certain aspects of a bid unclear.

**2.17. BOARD'S RIGHT TO WAIVE MINOR IRREGULARITY**

The Board reserves the right to accept or waive a minor irregularity, or where practical to do so, the Board may as a condition of bid acceptance request a Proponent to correct a minor irregularity with no change in bid price. Items of non-compliance on any bid submissions which do not strictly comply with the provisions, procedures and requirements of this bid, or are incomplete, ambiguous, or which contain errors, alterations, misleading information, omissions, or irregularities of any kind, may be rejected and disqualified at the discretion of the Board. All proponents agree to provide all such additional information as, and when requested, at their own expense, provided no proponent in supplying any such information shall be allowed, in any way to change the pricing or other cost quotations originally given in its bid submission or in any way materially alter or add to the solution originally proposed.

**2.18. ERRORS AND OMISSIONS**

The Board will not be held liable for any errors or omissions in any part of the RFT. While the Board has used considerable effort to ensure an accurate representation in the RFT, the information contained in the RFT is supplied solely as a guideline for the Proponents. The information is not guaranteed or warranted to be accurate by the Board, nor is it necessarily comprehensive or exhaustive.

**2.19. DOCUMENT AVAILABILITY**

RFT documents are available on the Board's Website [www.st-clair.net](http://www.st-clair.net) under Bid Opportunities or on Biddingo [www.biddingo.com](http://www.biddingo.com). Documents will also be provided to local construction associations: Sarnia Construction Association, Windsor Construction Association, Lambton Area Builders Exchange and the London & District Construction Association.

The Board assumes no responsibility for the proponent's failure to examine all of the RFT Documents.

**2.20. PROPONENT EXPENSES**

Any and all costs and expenses incurred by Proponents in the development, preparation, submission or presentation of their bids, or otherwise related to its participation in this RFT process will be borne by the Proponents. The selection of any bid, or the rejection of any or all bids, or the termination/cancellation of this RFT process, or initiation of a new RFT process shall not render the Board liable to pay or reimburse any such costs or damages incurred by any Proponent, or any partner or contractor of such Proponents.

**2.21. VOLUNTARY ALTERNATE & SEPARATE PRICES**

The bid amounts are to be based on the bid documents. Where there is any conflict within the bid documents, the bid amount shall include the higher cost alternative. Alternative proposals are encouraged and should be identified in the bid. Submit complete information including any impact on schedule to allow a full evaluation of the proposal including, as applicable, any particulars in which the alternate proposal is at variance with or unable to meet the specifications. Note also any impact on other trades if the alternative is accepted. Alternative proposals may be made without limitation, including for items specified as single sourced.

**2.22. BID INELIGIBILITY**

Bids may, at the discretion of the Owner, be declared informal for any of the following reasons:

- the bid is incomplete, unsigned, improperly signed or sealed, conditional, illegible, obscure, contains arithmetical errors, erasures, alterations, or irregularities of any kind, or
- the bid does not include the required bonding/ consent of surety
- the Bid Forms and enclosures are improperly prepared, or



- the prices seem to be so unbalanced as to adversely affect the interests of the Owner, or
- the bid is based upon an unreasonable period of time for completion or delivery, or
- the bidder does not provide the required Proof of Insurance within the time specified in these Bid Documents

#### **2.23. AWARD**

The Board has the right to reject any or all bids. The lowest Bid will not necessarily be accepted. The invitation to bid does not constitute an offer by the Contractor to enter into a contract. In the event of a tie, a coin flip conducted by the Supervisor – Procurement (or designate) with a minimum of one other Board staff will determine the successful proponent.

Acceptance of the Bid and/or award is subject to the approval of the St. Clair Catholic District School Board.

The SCCDSB reserves the right to withdraw the award of the contract to a successful bidder(s) within 30 days of the award if, in the opinion of the SCCDSB, the successful bidder(s) is unable or unwilling to enter into a form of contract satisfactory to the SCCDSB. The SCCDSB shall be entitled to do so without any liability being incurred by the SCCDSB to the bidder.

#### **2.24. ENTITLEMENT TO A DEBRIEFING**

In accordance with the Broader Public Sector Procurement Directive unsuccessful Bidders are entitled to a debriefing, during which they will be provided with feedback regarding their Tender. In order to be debriefed, unsuccessful Bidders must contact the Owner representative identified in the Bid Documents in writing to request a debriefing within sixty (60) days from the date of the notification of award.

#### **2.25. BID DISPUTE PROCEDURE**

In the event that a Bidder wishes to review the decision of the Board in respect of any material aspect of the Request For Tender process, the Bidder shall submit a protest in writing to the Board to the attention of the Supervisor – Procurement within ten (10) days of the closing date of the Tender.

Any protest in writing shall include the following:

- a) a specific identification of the provision and/or procurement procedure that is alleged to have been breached;
- b) a specific description of each act alleged to have breached the procurement process;
- c) a precise statement of the relevant facts;
- d) an identification of the issues to be resolved;
- e) the Bidder's arguments and supporting documentation;
- f) the Bidder's requested remedy.

#### **2.26. INVOICING & PAYMENT**

The Board shall pay by electronic funds transfer (EFT), P-Card, or cheque within twenty eight (28) days after the receipt of a proper invoice. Invoices will be reviewed and certified by the Board's Consultant, if applicable, before the invoice is processed for payment. Invoices must include all back-up material for time and material charges, disbursements, and other fees. Please make reference to the Purchase Order number on the invoice.

Invoices should be sent digitally to the architect and be based upon the consultant's approved format for invoicing with copies sent to [victoria.iaccino@st-clair.net](mailto:victoria.iaccino@st-clair.net). Digital invoices will be processed as an original. Please do not send duplicate copies by mail.

**Note:** Invoices should reflect a 10% holdback (final construction cost) which will be retained by Board through substantial completion of the project in accordance with relevant legislation.

**2.27. TAXES**

Include in Bid all Taxes and all other Customs Duties and Excise Taxes which are in force at Bid date as detailed in General Conditions. Harmonized Sales Tax (H.S.T.) is **not** to be included in the bid. The H.S.T. amount and the Bidder's **H.S.T. Registration Number** are to be indicated on the Bid Form in the spaces provided.

**2.28. CHANGE NOTICES, CHANGE ORDERS**

The following fee percentage and overhead charges shall be applied to additional work ordered by the Board:

- For work carried out by the Contractor's own forces – 10% Overhead & Profit
- For work involving a subcontractor, the subcontractor may charge a maximum 10% fee. The General Contractor may charge a maximum of 5% in addition to subcontractor's fee.

**2.29. PROJECT SPECIFIC REQUIREMENTS**

Any and all damages to facilities while under the control of the contractor shall be repaired at the contractor's cost. Please be advised that the Owner has a No Smoking Requirement on the Owners' property. Contractors shall provide their own washroom facilities for their employees; board washrooms will be off limits to the contractor's employees. Contractors are requested to ensure that employees and suppliers are advised of these Requirements. Contractor shall remove rubbish and debris from the site on a daily basis or as directed by the Board. On completion of the work, all debris shall be removed; the floor shall be thoroughly cleaned and swept; the site shall be left in a tidy condition (construction clean). Do not use the Board's equipment or facilities for cleaning or for any reason.

**2.30. SUBCONTRACTORS**

The successful Proponent(s) may not, at any time, subcontract any portions of its contract with the Board nor shall it assign the contract without the written permission of the Board. The successful Proponent(s) must not, at any time, change subcontractors approved by the Board without the written permission of the Board.

**2.31. GENERAL TERMS AND CONDITIONS**

The issuance of this bid document shall not constitute an obligation on the part of the Board to any proponent who submits a bid.

The laws of the Province of Ontario shall govern any dispute occasioned as a result of the performance or non-performance and/or workmanship of a contract issued pursuant to the bid and any dispute arising out of the issuance of and response to this bid document.

All SCCDSB policies, procedures and regulations must be adhered to by the successful bidder(s).

Some of the Board sites are equipped with video surveillance cameras.

The successful proponent(s) is obliged to cooperate with all recycling and environmental procedures and initiatives established by government, the Board and each school.

The successful bidder(s)' employees and contracted staff shall not be considered SCCDSB employees and shall not represent themselves as an agent of the SCCDSB nor be eligible for any of the benefits provided to SCCDSB employees.

The SCCDSB reserves the right to demand the removal of any successful bidder's employees or contracted staff engaged in this contract if, in the SCCDSB's opinion, their conduct has been of an unacceptable nature.

The successful bidder(s) will be responsible for ensuring that regular supervision is maintained over all working personnel. It is the bidder's responsibility to ensure that all their activities are properly coordinated with the SCCDSB's operations and modify assignments as required.

This bid document is being issued pursuant to the SCCDSB's Purchasing Policies and Procedures.

The acceptance of the bid by the successful proponent(s) and the award of the contract contemplated by this bid document may be subject to approval of the Board of Trustees.

### **2.32. BONDING**

On bids exceeding \$100,000.00 (inclusive of all taxes) the following tender security / bonding is required and must accompany the bid:

- Agreement to Bond: 50% Performance and 50% Labour and Material
- Bid Bond: 10% of the bid price, payable to the St. Clair Catholic District School Board

If the bid amount is greater than \$100,000 and less than \$500,000 (inclusive of all taxes) the Surety or Bid Bond may be provided in the form of an irrevocable letter of credit, a certified cheque, or money order payable to the Board in the value of 10% of the bid amount.

Only bond and agreements to bond issued by a licenced Canadian surety company authorized to do business in the Province of Ontario will be accepted. Upon request, the successful Bidder will be required to present the bonds to the Purchasing Department. Failure to provide the proper surety to the Board upon award will result in rejection of that Bid. The cost of bonding shall be included in the Bid price and identified on the Tender Form, if applicable.

### **2.33. INSURANCE**

The successful Proponent(s) must maintain, at the Proponent's expense for the entire term of the Contract or as otherwise required, all insurance as set out below. Proof of coverage must be received within 5 business days of the bid closing; however, it is recommended that proponents include proof of insurance as part of their bid submission:

- Comprehensive General Liability and Property Damage with a limit of not less than **\$2,000,000.00 (two million dollars)**.
- Motor Vehicle Public Liability and Property Insurance on all owned and rented equipment with a limit of not less than **\$2,000,000.00 (two million dollars)**.

The Proponent agrees to indemnify, hold harmless, and defend the Board, its Consultants, agents or employees from and against any and all liability for loss, damage and expense, which the Board may suffer or for which the Board may be held liable by reason of injury (including death) or damage to any property arising out of negligence on the party of the proponent or any of its representatives, employees, or

subcontractors in the execution of the work performed or by way of ownership or operation of an automobile.

The successful Proponent shall provide the Board with a complete certified copy of all policies. Copies of renewed policies must be provided to the Board on or before the policy renewal date for projects that extend past the original policy term or for multi-year contracts. The successful Proponent must name the St. Clair Catholic District School Board as additional insured on their insurance policies.

**2.34. WORKPLACE SAFETY INSURANCE BOARD (WSIB)**

Successful Proponent(s) must ensure that all workers are covered by the Workplace Safety and Insurance Board coverage for the duration of this contract. Proof of coverage must be received within 5 business days of the bid closing; however, it is recommended that proponents include their coverage as part of their bid submission.

Proponents must furnish a Certificate of Clearance from the Workplace Safety and Insurance Board as evidence that all returns have been made and all necessary assessments have been paid as required, or levied, by the Workplace Safety and Insurance Board.

Alternatively, if the Proponent is an Independent Operator and is not classified under Class G: Construction, the proponent must provide a letter from the Work Place Safety & Insurance Board confirming independent operator status and identification number under the WSIB Act.

**2.35. PERMITS**

The Board will apply and pay for a building permit if applicable. The contractor is to obtain all other permits as required to complete the project, including but not limited to ESA, hot work permit etc.

**2.36. MEETINGS**

A Post Bid Meeting may be convened and chaired by the Board who will invite the Successful Proponent and his major Subcontractors to review the Contract Documents and Bid submitted. This meeting will be prior to the Board issuing a Letter of Intent or Contract. This meeting does not constitute or infer any contract award to the proposed contractor or any other contractor, nor that will the project proceed.

During the course of Work, scheduled progress meetings may be required at the call of the Project Leader.

**2.37. WARRANTY**

The vendor/contractor warrants that all goods/services, materials and equipment supplied under contract are free of all defects in manufacture and workmanship for a period of not less than 1 year from date of delivery, installation or performance (whichever is the later) whether or not any portion or trade has been sublet.

The vendor/contractor shall promptly remedy any defect or deficiency in any goods/services, materials and equipment supplied under contract to the satisfaction of the Board within seven (7) calendar days following notice to do so from the Board at no additional cost to the Board, unless otherwise specified.

In the event that the vendor/contractor doesn't not promptly honour the above warranties to the satisfaction of the Board, the Board may, at the sole cost of the vendor/contractor do whatever it deems necessary and advisable to remedy, rectify or replace the defective, deficient or non-compliant goods, services, materials or equipment. The Board shall inform the vendor/contractor in advance of the approximate cost of such work to be done by the Board.

All goods/services and/or equipment furnished or supplied pursuant to the contract shall be installed or attached in such a manner as to preserve all manufacturer's and vendor/contractor's warranties, which shall, together with all parts and components, become the property of the Board after the successful and satisfactory installation or attachment.

**2.38. GUARANTEE**

The vendor/contractor guarantees that all goods/services, materials and equipment supplied under contract are new manufacture. The products must not contain re-manufactured parts and/or accessories and must not have been used under contract with any other customer(s) unless specified by the Board. The submissions will be of the latest design and technology at the time of submission by the vendor.

The vendor/contractor represents and warrants that the goods and/or services supplied pursuant to this bid will be manufactured and/or supplied under such conditions that do not contravene the Ontario Human Right Code or the minimum standards of Ontario workplace legislation and regulations or are otherwise unethical. In the event in the opinion of the Board, the bidder is in breach of the foregoing representation and warranty, the Board may cancel the award or any such subsequent contract entered into between the Board and bidder pursuant thereto.

**2.39. SCHEDULE**

The Contractor will be required to perform the work in accordance with the Schedule dates provided in 2.7. Timing of Project. Ordering of major and long delivery items shall begin immediately upon successful bidder's receipt of contract award. The Contractor will provide a construction schedule within five (5) days of being awarded the project.

*Time is of the essence.* Bidders are to include adequate manpower, overtime and shift work necessary to meet or improve the schedule, and to make up any time lost to weather or normal delays. Include travel, room and board costs for out of town workers, shop overtime and other premiums to expedite material and equipment, shipping premiums and any incentive costs required to meet the schedule.

**2.40. CONTRACTED SERVICES PROGRAM**

Contractors performing work on Board property must complete the Contracted Services Program. The Contracted Services Program is a joint program with Lambton Kent District School Board. This program has three basic components that **must** be met before the bid is awarded. Contractors who cannot meet the minimum requirements of this program will not be awarded this tender. Program information can be found on the Board's web site at [www.st-clair.net](http://www.st-clair.net) or through the Board contact identified previously in this document. If the contractor has already been pre-qualified by LKDSB they must provide proof of completion. Identification badges can be used on SCCDSB or LKDSB property. All Insurance and WSIB certificates must be up to date under the Contracted Services Program.

**2.41. HEALTH and SAFETY**

The Occupational Health and Safety Act describes the responsibilities of an employer. The Board requires Contractors to maintain procedures, training, and enforcement so that the responsibilities are carried out in the workplace. The Contractor shall abide by and strictly adhere to the regulations and conditions set out and laid down by the most current versions of the Occupational Health and Safety Act. All staff employed or hired by the Contractor and working on the Board's premise **MUST** be trained in WHMIS in accordance with Occupational Health and Safety Act and Regulations. They **MUST** adhere to all of the Board's Health and Safety Procedures and Guidelines and to Municipal By-Laws.

Contractor will submit proof of its health and safety program, procedures and training as detailed above upon request by the Board.

The Contractor shall appoint a Competent Person as the Supervisor of this project. The Competent Person shall be as defined in Section 1 of the Occupational Health and Safety Act.

The successful Contractor shall conform to the Ontario "Occupational Health and Safety Act" and all regulations made under said act and assume full responsibility for contraventions of same.

All workplace injuries or accidents on Board property MUST be reported by the Contractor to the Board's representative within 24 hours.

Any workplace injury that is defined under the Occupational Health and Safety Act as a "Critical Injury" must be reported to the Board's representative IMMEDIATELY.

**2.42. ELECTRICAL AND SAFETY APPROVALS**

All electrical/electronic components supplied by the vendor/contractor must be CSA, ULC and/or Ontario Hydro/Ontario Electrical Safety Authority approved. Appropriate labels must be affixed to the equipment prior to delivery. The vendor/ contractor is responsible for ensuring goods or services supplied to the Board must comply with the Occupational Health and Safety Act and Regulations of Industrial Establishments.

**2.43. DESIGNATED SUBSTANCES**

The contractor shall conduct work in recognition of the most current regulations related to Designated Substances. The contractor is required to review the site specific designated substances report to ascertain potential for exposure to designated materials and notify the board of instances where the scope of work under this contract will require remediation. If the report does not schedule designated materials in the attached report and should the contractor uncover material which is believed to be asbestos, work is to cease immediately and the Board staff are to be contacted immediately.

**2.44. SAFE SCHOOL PROCEDURES**

Contractor's staff is required to report to the main office of the site where work will be carried out during regular school hours and notify the school office staff of the purpose of the visit. The Contractor is required to adhere to all school specific procedures if applicable.

It is the responsibility of the Contractor's staff to sign in and sign out of the Log Book, which is located in the main office area, while performing their duties.

The following information must be recorded in a legible manner:

- Date
- Company Name
- Employee Name
- Employee Signature
- Reason for Visit
- Time Entering Building
- Time Leaving Building

**2.45. HOISTING, SCAFFOLDS, ELEVATED WORK PLATFORMS**

The Contractor is responsible for all hoisting and other equipment necessary to facilitate their work if required.

**2.46. TEMPORARY POWER**

A source of electric power will be designated by the Board. The Board will allow a tie-in connection with fuse or breaker protection for the Contractor's estimated load requirements. The Contractor must provide the power connections and all extensions from the point to the job site. All electrical connections and extensions must meet ESA requirements and must be approved by the Board. The Contractor's estimated load requirements must not be exceeded without the Owner's permission.

**2.47. NOISE AND TRAFFIC CONTROL**

Bidders shall comply with all applicable **noise by-laws** (or local requirements governing same) and traffic routing that may be in effect during the life of the Project.

This **may** limit some activities to restricted time periods. Where the schedule requires for after hour work, the Contractor shall include all costs associated with obtaining the necessary permits to work such time periods.

The Contractor shall be responsible for all costs associated with providing a traffic officer as necessary to facilitate construction.

**2.48. SITE ACCESS AND EGRESS**

Contractors will be required to sign out a master key and will be assigned an access code for the alarm system. Successful Contractor will be responsible for building security during working hours and locking up the facility at night, which includes setting the alarm.

Any false alarms generated by the Contractor's workforce will result in a back charge for the costs incurred to the Board.

The Contractor shall make good any damage to roads, curbs, sidewalks, fencing, or grass damaged by vehicles or equipment during the course of construction.

**2.49. PARKING**

Contractors must park within the designated areas and allow for provisions to and from the designated parking area onto the job site.

**2.50. CONTRACTOR'S PERSONNEL**

The Contractor shall, at its own expense, provide all the personnel required to take a proactive role in managing the project as it relates to their work and its coordination with other trades. This will include but is not limited to the following:

- Competent supervision of the work of the Contract and coordination with the work of other Subcontractors. This includes being responsible for and properly supervising any subcontractors of this subcontractor.
- All layout work required to complete the work of the trade contract.
- Competent supervision of the work of the trade contract to ensure work is done in accordance with the OHSA and any other applicable regulations.

- Expediting the procurement of material and equipment to ensure delivery by their required dates.
- Submission of Requests for Information where required in a timely manner and wherever possible providing the Board with information to assist in the answering of these requests.
- Submission in a timely manner of all required shop drawings and samples and assistance to the Board required to obtain approvals to suit the schedule. All shop drawings are to be reviewed by the Contractor prior to submitting for approval.
- Attendance at all construction coordination meetings when requested by the Board.
- Provision of all necessary information requested by the Board for cost control and billing purposes.
- Inspection of the work of the Trade Contract for defects and deficiencies and cooperation with the Board and other inspection authorities to allow their inspections to take place.
- Submission of pricing for all changes to the work within five (5) working days after receipt of change documentation including the breakdown and backup necessary to allow checking and approval.

#### **2.51. ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT**

The Purchaser is committed to the highest possible standards for accessibility. Proponent(s) must be capable to recommend and deliver, as appropriate for each Deliverable, accessible and inclusive Services consistent with the Ontario Human Rights Code (OHRC), the Ontarians with Disabilities Act, 2001 (ODA) and Accessibility for Ontarians with Disabilities Act, 2005 (AODA) and its regulations in order to achieve accessibility for Ontarians with disabilities.

In accordance with Ontario Regulation 429-07 made under the Accessibility for Ontarians with Disabilities Act, 2005 (Accessibility Standards for Customer Service), the Purchaser has established policies, practices and procedures governing the provision of its services to persons with disabilities.

Proponents are required to comply with the Purchaser's accessibility standards, policies, practices, and procedures, which may be in effect during the Term of the Agreement and which apply to the Deliverables to be provided by the Proponent.

#### **2.52. CANADA'S ANTI-SPAM LEGISLATION**

Please note that vendors are required to comply with all applicable laws, including CASL, in providing goods or services to the Board. This also extends to communications sent on the Boards behalf. The successful proponent(s) will be required to indemnify the Board for any failure by the successful proponent(s) to comply with CASL, to the extent that the successful proponent(s) action, or inaction, could expose the Board to liability.

#### **2.53. CONFIDENTIAL INFORMATION**

All correspondence, documentation, and information of any kind provided to any Proponent in connection with or arising out of this Request for Tender or the acceptance of any Bid:

- Remains the property of the Purchaser and shall be removed from the Purchaser's premises only with the prior written consent of the Purchaser.
- Must be treated as confidential and shall not be disclosed except with the prior written consent of the Purchaser.
- Must not be used for any purpose other than for replying to this RFT and for the fulfilment of any related subsequent agreement.
- Must be returned to the Purchaser upon request.



Except as provided otherwise in this request, or as may be required by Applicable Laws, the Purchaser shall treat the Proponents' Proposals and any information gathered in any related process as confidential, provided that such obligation shall not include any information that is or becomes generally available to the public other than as a result of disclosure by the Purchaser.

During any part of this Request for Tender process, the Purchaser or any of its representatives or agents shall be under no obligation to execute a confidentiality agreement.

All correspondence, documentation, and information provided in response to or because of this RFT may be reproduced for the purposes of evaluating the Proponent's Bid Submission.

If a portion of a Proponent's Bid Submission is to be held confidential, such provisions must be clearly identified in the Bid.

The Purchaser reserves the right to require any Proponent to enter into a non-disclosure and/or confidentiality agreement satisfactory to the Purchaser.

**2.54. CONFLICT OF INTEREST**

Proponents must declare all conflicts of interest or any situation that may reasonably be perceived as a conflict of interest in relation to the Project that exists now or may exist in the future. The Board, at its sole discretion, waives any and all actual, potential, or perceived conflicts of interest, on such terms and conditions and the Board, at its sole discretion, considers to be appropriately managed, mitigated, and minimized. In this regard the Board may require the Proponent to implement measures or take steps to manage or mitigate the impact of any actual, potential, or perceived conflict of interest.

**2.55. MUNICIPAL FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT**

The *Municipal Freedom of Information and Protection of Privacy Act* (Ontario) applies to information provided by Proponents. A Proponent should identify any information in its Quotation or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by the Purchaser. The confidentiality of such information will be maintained by the Purchaser, except as otherwise required by law or by order of a court, tribunal, or the Ontario Privacy Commissioner.

By submitting a Bid, including any Personal Information requested in this RFT, Proponents agree to the use of such information for the evaluation process, for any audit of this procurement process, and for contract management purposes.

**2.56. PERSONAL INFORMATION PROTECTION AND ELECTRONIC DOCUMENTS ACT**

The Proponent represents and warrants that if the Proponent becomes subject to any private sector privacy legislation in responding hereto, or in carrying out its obligations under any subsequent agreement, the bidder will be solely responsible with such legislation. Without limitation, the Proponent represents and warrants that if the Proponent is subject to the *Personal Information Protection and Electronic Documents Act* (PIPEDA) the Proponent shall ensure compliance of all PIPEDA Protected Information that the Bidder:

- Collects directly from the individuals or indirectly from the Board or others;
- Uses or discloses in the course of responding hereto or in performing its obligations under and subsequent agreement; or
- Transfers or discloses to the Board

**2.57. TRADE AGREEMENTS**

Proponents should note that procurements within the scope of either Chapter 5 of the Canadian Free Trade Agreement, Chapter 19 of the Comprehensive Economic and Trade Agreement, within the scope of the Trade and Cooperation Agreement between Quebec and Ontario or any other applicable agreement not listed herein are subject to such agreements, although the rights and obligations of the parties shall be governed by the specific terms of this RFT.

**2.58. WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM**

The Proponent should provide Workplace Hazardous Materials Information System (WHMIS) material safety data sheets (MSDS) for all Services. Additionally, the Proponent should provide the Purchaser's personnel WHMIS training, as it relates to the Services, in accordance with the Ontario Occupational Health and Safety Act.

**2.59. VENDOR PERFORMANCE**

Where the Contractor fails to comply with any of its obligations under the Contract, the Board may issue a notice setting out the manner and time-frame for rectification. Within seven (7) Business Days of receipt of that notice or in a timeframe as otherwise agreed to, the Contractor shall either: (a) comply with that rectification notice; or (b) provide a rectification plan satisfactory to the Board. If the Contractor fails to either comply with that rectification notice or provide a satisfactory rectification plan, the Board may immediately terminate the Contract. Where the Contractor has been given a prior rectification notice, the same subsequent type of non-compliance by the Contractor may allow the Board to immediately terminate the Contract and result in the suspension of bidding privileges to the Board for up to two years at the sole unfettered discretion of the Board.

**2.60. TERMINATION OF CONTRACT**

Either party may terminate the Agreement on written notice to the other where such other party neglects or fails to perform or observe any material term or obligation of the Agreement and such failure has not been cured within 30 Days of written notice being provided.

If the Proponent fails to execute the work properly or otherwise fails to comply with the requirements of the contract to a substantial degree, the Board may correct such default and deduct the cost thereof from any payment then or thereafter due to the contractor.

The Board shall be entitled to terminate the Agreement immediately, without liability, cost, or penalty on written notice to the Proponent:

- if any proceeding in bankruptcy, receivership, liquidation, or insolvency is commenced against the Proponent or its property;
- if the Proponent makes an assignment for the benefit of its creditors, becomes insolvent, commits an act of bankruptcy, ceases to carry on its business or affairs as a going concern, files a notice of intention or a proposal, or seeks any arrangement or compromise with its creditors under any statute or otherwise;
- following the occurrence of any material change in the Board's requirements which results from a regulatory or funding changes, or recommendations issued by a Governmental Authority;
- in the event of a breach of the representation regarding conflict of interest;
- in the event of a misrepresentation or material breach;
- if the proponent uses, destroys, exploits, or discloses any Board Confidential Information to any Personal Information contrary to this Agreement; and
- in accordance with any provision of the Agreement that provides for early termination;

The Board reserves the right to terminate the Agreement, without cause, upon sixty (60) days' prior written notice to the Proponent.

The Board shall be liable to the Vendor only for the payment of Deliverable(s) supplied and accepted up to the date of termination.

The Board, at its sole and unfettered discretion, may extend the timelines for termination if it is deemed to be in the Board's best interest to do so.

Any termination of the Agreement shall not in any respect limit any of either party's rights or remedies either in law or in equity or relieve either party of any obligation incurred prior to the effective date of such termination.

[End of Part 2]

## **APPENDIX A: Bidder's Response Guide**

Each bid submission should be structured using only the criteria identified in this bid document.

1. A completed copy of APPENDIX B: Bid Form **must** be included in your bid submission.
2. Proof of WSIB Coverage and proof of insurance **must** be supplied within 5 days of the submission deadline.
3. If applicable, bonding/tender security must be provided in your bid submission.
4. Supplemental material will not qualify as substitutes for direct responses to the bid's requirements, except for specifically requested material.
5. The successful contractor must be prequalified under the contracted services program before an award is made.

**APPENDIX B: Bid Form**

Submitted By: \_\_\_\_\_

To:

St. Clair Catholic District School Board  
616-2016 Partial Roof Replacement  
Holy Family Catholic School, Wallaceburg

**B1. Base Bid Price**

The Drawings, Specifications and other Contract Documents for this Project have been examined, as well as the premises and job site conditions affecting the work. The undersigned hereby offers to complete the work in accordance with the Contract Documents for the following bid price:

*OPTION 1: TPO ROOF SYSTEM*

\_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

*OPTION 2: EPDM ROOF SYSTEM*

\_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

in Canadian Funds, EXCLUDING HST. HST will be added to the bid price.

In submitting this Bid, the undersigned recognizes and accepts the right of the Owner to accept any Bid, which is deemed the most advantageous to the Owner, (or any part thereof), at the price submitted, or to reject any or all Bids. Acceptance of the Bid and/or award of the contract is subject to the approval of the Board.

In the event that a discrepancy arises between the written bid price and the associated numerical price, the written bid price will be deemed to be correct.

**B2. Harmonized Sales Tax (HST)**

The bidder shall not include the applicable HST in the bid price. The successful contractor will indicate on each application for payment as a separate amount the appropriate HST the Owner is obliged to pay.

HST Registration # \_\_\_\_\_

**B3. Cash Allowances**

1. Include a total Stipulated Sum of fifteen thousand dollars (\$15,000.00) to cover over the following items from which the Consultant shall direct payment for services, labour, and material.
  - a. Itemized Price Part A: Roof Areas “A”, “C”, “D” and “E” Cash Allowance of \$15,000.00

Time and Materials rates to be applied against Cash Allowance work. Final reconciliation will adjust the cash allowance as credit to the SCCDSB for unexpended amounts and extra to the contractor for over expenditure. The contractor shall mark-up sub-trade time and materials billing for this portion of work at 10% only.

**B4. Itemized Prices**

The following prices make up the Base Bid amount. The following prices, if accepted by the owner, shall include all labour, material, tools, equipment, overhead and profit for the execution and completion of the scope of work herein and in accordance with these Bid Documents, EXCLUDING HST. No other cost consideration shall be added to the contract for the scope of this work if accepted by the owner. The owner retains the right to cancel any or all of the sites for any reason.

**PROPOSERS MAY BID ON ONE OR BOTH OPTIONS. PLEASE NOTE “N/A” IN THE TABLE BELOW IF YOU ARE NOT PROVIDING A PRICE FOR ONE OF THE OPTIONS.**

*Part A: Roof Areas “A”, “C”, “D” and “E”*

As Indicated on Key Plan RHF-1

The Roofing Contractor is to remove the existing Roof System completely to the wood roof deck, then the Contractor is to supply and install Vapour Retarder as specified along with all rigid insulation, etc. prior to installing the Mechanically Attached TPO Reinforced Membrane Single Ply Roof System (Option 1) OR Mechanically Attached EPDM Reinforced Membrane Single Ply Roof System (Option 2) as shown on the Enclosed Drawings and in accordance with the Project Specifications for this facility. (The Contractor will include a Cash Allowance of \$15,000.00 with this price (if the allowance is not used, it will be taken off of the Total Tender Price).

Option A1 (TPO ROOF SYSTEM)	Option A2 (EPDM ROOF SYSTEM)

*Part B: Provisional Cost*

All Field Splice Seams are to be flashed-in with 6-inch wide Overlay Pressure Sensitive Flashing Membrane.

Option B1 (TPO ROOF SYSTEM)	Option B2 (EPDM ROOF SYSTEM)

*Total Itemized Prices*

Part A: Roof Areas "A", "C", "D" and "E" plus Part B: Provisional Cost. Total to be used to provide bids in Section B1. Base Bid Price.

Option A1 + B1 (TPO ROOF SYSTEM)	Option A2 + B2 (EPDM ROOF SYSTEM)

**MEMBRANE MANUFACTURER – SINGLE PLY MECHANICALLY FASTENED ROOF SYSTEM**

The contractor is required to submit the name of the Membrane Manufacturer who they are planning to use for this Roof Replacement Project:

\_\_\_\_\_

**B5. Bonding**

Upon Award contractor will furnish a Performance Bond and Labour and Materials Bonds as outlined in these Bid Documents. The cost identified below is included in the Base Bid Price and EXCLUDES HST.

Bonding Company \_\_\_\_\_ Cost \_\_\_\_\_

**B6. Unit Prices**

Price (Hourly Rate) for roofing contractor to carry out and additional work which may be required by the Board beyond the Scope of Work, EXCLUDING HST.

\$ \_\_\_\_\_

**B7. List of Subcontractors**

Trade	<u>Mechanical</u>	Contractor	<u>QPS Mechanical</u>
Trade	_____	Contractor	_____
Trade	_____	Contractor	_____

**B8. Project Superintendent / Supervisor**

The Owner requires the General Contractor provide a full time site supervisor for the duration of the project. A minimum of 5 years supervisory experience is required. List proposed personnel

and their experience in the table below. Supervisory experience with firms other than the Bidder is acceptable to include on the list. The General Contractor shall indicate the person chosen in writing to the Owner within 5 days of contract award.

Name	Firm/Position	Qualifications/ Experience

**B9. References**

References are required by proponents regardless if they are currently doing business with the St. Clair Catholic District School Board. References should be from other boards, municipalities, academic institutions or companies of a similar size to the SCCDSB, if possible, for contracts for similar projects completed within the past 5 years. By completing this Bid Form the proponent authorizes the SCCDSB to obtain business reference information from the following sources:

Organization Name	
Organization Address	
Contact Name/ Title	
Email	
Phone	
Type of Product/ Service	
Value of Contract	

Organization Name	
Organization Address	
Contact Name/ Title	
Email	
Phone	
Type of Product/ Service	
Value of Contract	

**B10. Conflict of Interest**

I /We confirm that: (please check one)

\_\_\_\_\_ There is not nor was there any actual or perceived Conflict of Interest or any other type of unfair advantage in our submitting this Proposal or performing or observing the contractual obligations of the Contractor in the Agreement.



OR

\_\_\_\_\_ Complete with this bid submission is a declaration on company letterhead of situations which may be a Conflict of Interest or an instance of unfair advantage or appears as potentially a Conflict of Interest or unfair advantage in our company submitting this Proposal or the contractual obligations of the Contractor under the Agreement.

*Please note that the Board has the right to waive an actual or perceived conflict of interest as described in section 2.54 CONFLICT OF INTEREST.*

**B11. Agreement of Terms**

I/We hereby acknowledge and agree that I/we have read, accepted, and completed all Contract Terms and Conditions and Appendices.

I/We understand it is the SCCDSB's intention that this RFT and the successful proponent(s)'s returned RFT submission will form the basis of the proposed contract. All of the terms and conditions of this RFT must be accepted by the proponent(s) and incorporated into the proponent(s) RFT submission. It is the SCCDSB's intention to use a Purchase Order when establishing a contract with the successful proponent(s).

The undersigned acknowledges receipt of Addenda Numbers \_\_\_\_\_ through \_\_\_\_\_ inclusive, and that the price, or adjustment thereof, for all work required therein is included in this submission.

**This page must be signed below and returned with your submission for your bid to be accepted.**

I/We the undersigned are duly authorized to execute this Bid Submission on behalf of:

Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

*Please refer to Appendix A: Bidder's Response Guide to ensure you include all necessary documentation with your bid submission*

## **APPENDIX C: Scope of Work and Specifications**

Specifications and Drawings prepared by:

Remlap Building Services Inc.

1407 Gore Road, RR1 Harrow, ON NOR 1G0

**SPECIFICATION  
ON  
PARTIAL ROOF REPLACEMENT**

**FOR**

**ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD**

**AT**

**HOLY FAMILY CATHOLIC SCHOOL  
649 MURRAY STREET  
WALLACEBURG, ONTARIO  
N8A 1W1**

**PROJECT No. 616-CP2016**

**JANUARY 2020**

## 3.0 GENERAL

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### 3.1 Warranties

#### **3.1.1 Roofing Application Guarantee**

Warrant the work of this section including insulation, membrane and sheet metal work against defects and any actual leakage in accordance with the General Conditions but for a period of two (2) years and agree to make good promptly any defects which occur or become apparent within the warranty period, such defects to include but not be restricted to leaking, blistering, lifting, curling, wrinkling, alligatoring, fish mouths, loosening and splitting of seams, buckling of counter flashing, improper securement of flashings, improper use or application of materials.

#### **3.1.2 Membrane System Warranty: OPTION No.1 (Mechanically Attached TPO Reinforced Membrane Single Ply Roof System)**

Provide a Written Membrane System Warranty to **St. Clair Catholic District School Board** – Partial Roof Replacement stating that the Roofing Membrane Manufacturer will pay the entire cost to have the Authorized Roofing Applicator search any leaks which occur due to Membrane or Application (workmanship) failure within the warranty period of fifteen years.

#### **3.1.3 Membrane System Warranty: OPTION No.2 (Mechanically Attached EPDM Reinforced Membrane Single Ply Roof System)**

Provide a Written Membrane System Warranty to **St. Clair Catholic District School Board** – Partial Roof Replacement stating that the Roofing Membrane Manufacturer will pay the entire cost to have the Authorized Roofing Applicator searches any leaks which occur due to Membrane or Application (workmanship) failure within the warranty period of fifteen years.

## 4.0 PRODUCTS

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### OPTION No. 1

#### **60 MIL REINFORCED TPO MECHANICALLY FASTENED ROOF SYSTEM**

#### 4.1 General

- 4.1.1 The components of this roofing system are to be products of Carlisle or accepted by Carlisle as compatible or approved equal.

#### 4.2 Membrane

- 4.2.1 Sure-Weld White, 60 mil thick reinforced Thermoplastic Polyolefin (TPO) membrane is used for this system. Field membrane sheets are 10' wide by 100' long based on project conditions. Perimeter sheets are 6' wide (used with 6' field sheets).

#### 4.3 Related Materials

- 4.3.1 Sure-Weld Non-Reinforced or Reinforced Flashing, Bonding Adhesive, Cut Edge Sealant, Water Cut-Off Mastic, PT 304 Sealant, EP-95 Spicing Cement, Weathered Membrane Cleaner, Molded Pocket Sealant, Heat Weldable Walkway Pads, Pre-Molded Inside/Outside Corners, Pipe Flashings, Curb Wraps and Sealant Pockets.

#### 4.4 Vapour Retarder

- 4.4.1 The Vapour Retarder shall consist of 6 mil polyethelene applied over top of the wood deck shall comply with CGSB CAN2-S1.34-M86. Adhesive shall be of a type as recommended by the Polyethelene Manufacturer for adhesion at the side and end laps. (Either sealant or tape application)

#### 4.5 Roof Drain

- 4.5.1 The roof drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4A-RR. Vandal-Proof aluminium roof drain with aluminum ferrule to complete with a FURC connection. Outlet size shall be verified on site by the Roofing Contractor.

#### 4.6 Rigid Insulation

- 4.6.1 Insulation shall be roof insulation which is rigid closed cell, Polyiso foam insulation, integrally laminated to fiber-reinforced paper facers. Thermal resistance of insulation shall be R20.5 (L.T.T.R.) (3.5 inch for main roof area and R-8.6 (L.T.T.R.) (1.5 inch) around the recessed roof Resistance R-value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 8 feet in size.

#### 4.7 Tapered Insulation

- 4.7.1 The tapered insulation shall be faced Isocyanurate Boards conforming to CAN/CGSB 51.26-M86, meeting the requirements of ULC S126. Polyisocyanurate foam panels chemically bonded during the foaming process to facers on the top and bottom fiber-reinforced surfaces. Tapered panels shall not be less than 25 mm at any point of the roof to the slope indicated at the roof drains (2% slope) for a distance of four (4) feet around each roof drain.

## 4.0 PRODUCTS

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### 4.8 Fasteners

- 4.8.1 The fasteners shall be Carlisle HP-XTRA Fasteners (5 inches in length) with 2 3/8" PIRANHA XTRA PLATES.

### 4.9 Vent Pipe Stacks

- 4.9.1 The vent cap shall be Thaler Roofing Specialties Products Inc. Model No. SJ-38. The Roofing Contractor shall verify the outside diameter of vent stack for each location. Vent flanges for the single ply roof system shall be sealed with pre-molded pipe flashings with stainless steel clamping ring along with sealant.

### 4.10 Hot Exhaust Stack Flashings

- 4.10.1 The hot pipe flashing shall be Thaler Roofing Specialties Products Inc. Model No. MEF-3A aluminum flashings with split collar to suit the new single ply roof system. The Roofing Contractor shall verify the outside diameter of the hot pipe stack for each location and fill between the flange and pipe with Rockwool Batt Insulation.

### 4.11 Precast Pads

- 4.11.1 Precast concrete pads shall be 24 inches by 24 inches by 2-inch-thick for the roof area as shown on the Enclosed Drawings. Pads shall be placed on a 20 inch by 20 inches by 1-inch-thick section of rigid Type 4 extruded polystyrene insulation. Also supports under gas line shall be 12 inches by 12 inches by 1 inches and placed on a 10 inch by 10 inches by 1-inch thick section of Rigid Type 4 Extruded Polystyrene Insulation. **ALL EXISTING CONCRETE PAVERS ARE TO BE SAVED AND REUSED**

### 4.12 Framing Lumber

- 4.12.1 Pressure treated for rot resistance to CSA 0322-1976 and CSA 080-M1983. Size shall be 3/4" as shown on the project drawings. Grade SPF No. 2 or better.

### 4.13 Plywood

- 4.13.1 Exterior grade fir to CSA 0121 or CSA 0151 to the thickness indicated on the project drawings.

### 4.14 Metal Flashings

- 4.14.1 Metal Flashings shall be 24ga Colorite 8000 Series pre-finished steel (both sides) as manufactured by Westeel Roscoe, Steelcolour 8000 Series or Owner approved equal, formed to comply with field conditions. The colour is to be brown as selected by the Owner from the manufacturer's standard colours. A one meter 'test bend' for each general metal flashing condition shall be completed and presented to the Owner's Representative for approval prior to general fabrication.

### 4.15 Painting

- 4.15.1 All existing gas lines shall be cleaned and scraped prior to being repainted.
- 4.15.2 Clean and prime with alkyd metal primer before applying two coats of enamel paint. The colour shall match existing colour.

## 4.0 PRODUCTS

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### **4.16 Electrical/Cooling Line Penetration**

4.16.1 Pipe Flash as manufactured by OMG Roofing Products are to be used at all penetrations as detailed.

### **4.17 Insulated Skylight Curb with Lens**

4.17.1 The Roofing Contractor is to supply and install new two-foot by two-foot aluminum insulated curb with double acrylic skylight dome (clear over white) (Model #DDA) as distributed by Hotham Building Materials Inc and as detailed on the Enclosed Drawings.

### **4.18 Roof Pipe Supports**

4.18.1 Roof Pipe Supports as manufactured by C-Port (Model No. CXP) are to be supplied and installed by the Roofing Contractor. **TOTAL OF 58 ARE REQUIRED.**

**Note:**

During this Partial Roof Replacement, an disconnect of the Condensing Units, Gas Lines, etc. are to be completed using this Mechanical Contractor:

QPS Mechanical  
Contact Person: Jay Glasier  
Phone: 519-351-3177

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

### OPTION No. 1

#### **60 MIL REINFORCED TPO MECHANICALLY FASTENED ROOF SYSTEM**

### 5.1 Submittals/Warranty Prerequisites

- 5.1.1 To ensure compliance with Carlisle's minimum warranty requirements, the following projects should be forwarded to Carlisle for review prior to installation, preferably prior to bid:
- a. Total System Warranty projects where a wind speed warranty coverage greater than 55 mph to a maximum of 72 mph.
  - b. The system described is ULC/UL CLASS "C" rated with unlimited slope.

- 5.1.2 Along with the project submittals (Shop Drawings and Request for Warranty), the roofing contractor must include pullout tests when results are below the requirements identified in Part I, Design Criteria, Attachment II.

- 5.1.3 Shop Drawings must be submitted to Carlisle by the Carlisle Authorized Roofing Applicator along with a completely executed Notice of Award (Page 1 of Carlisle's Request for Warranty form) for approval. Approved shop drawings are required for inspection of the roof and on projects where on-site technical assistance is requested.

Shop drawings must include:

- a. Outline of roof and size
- b. Deck type (for multiple deck types)
- c. Location and type of **all** penetrations
- d. Perimeter and penetration details
- e. Key plan (for multiple roof areas) with roof heights indicated
- f. Sheet widths and number of perimeter sheets
- g. Carlisle's Fastener type, length and maximum spacing (for membrane securement).

When field conditions necessitate modifications to the originally approved shop drawings, a copy of the shop drawing out-lining all modifications must be submitted to Carlisle for revision and approval prior to inspection and warranty issuance.

- 5.1.4 **Notice of Completion** (Page 2 of the Carlisle Request for Warranty form)  
After project completion, a Notice of Completion must be submitted to Carlisle to schedule the necessary inspection of the project prior to issuance of the Carlisle Warranty.

### 5.2 General Job Site Considerations

- 5.2.1 **Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage and application of materials.** The applicator shall follow all safety regulations as recommended by OSHA and other agencies having jurisdiction.
- 5.2.2 Subject to project conditions, it is recommended to begin the application of this roofing system at the lowest point of the project area and work to the highest point to prevent water infiltration. This will include completion of all flashings, terminations and daily seals.
- 5.2.3 On phased roofing, temporary closures should be provided to prevent moisture infiltration.
- 5.2.4 When possible on multiple level roofs, begin the installation on the highest level to avoid or minimize construction traffic on completed roof sections.



## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

### 5.3 Job Site Material Storage and Handling

- 5.3.1 Deliver materials to the job site in the original, unopened containers.
- 5.3.2 When loading materials onto the roof, the Carlisle Authorized Roofing Applicator must comply with the requirements of the specifier/owner to prevent overloading and possible disturbance to the building structure.
- 5.3.3 Job site storage temperatures in excess of 90° F may affect shelf life of curable materials (i.e., adhesives and sealants).
- 5.3.4 **When the temperature is expected to fall below 40° F**, outside storage boxes should be provided on the roof for temporary storage of liquid adhesives and sealants. Adhesive and sealant containers should be rotated to maintain their temperature above 40° F.
- 5.3.5 Do not store adhesive containers with opened lids due to the loss of solvent that will occur from flash-off.
- 5.3.6 Store Sure-Weld membrane in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colour, breathable tarpaulins. Sure-Weld membrane that has been exposed to the elements for approximately 7 days must be prepared with Weathered Membrane Cleaner prior to heat welding. Refer to Paragraph I.2.b, Exposed Membrane Seam Preparation, for requirements.
- 5.3.7 Insulation and underlayment must be stored so that it is kept dry and is protected from the elements. Store insulation on a skid and completely cover with a breathable material such as tarp or canvas. If the insulation is lightweight, it should be weighted to prevent possible wind damage.

### 5.4 Substrate Preparation

- 5.4.1 **Defects in the substrate surface must be reported and documented to the specifier, general contractor and the building owner for assessment. The Carlisle Authorized Roofing Applicator shall not proceed with the installation unless the defects are corrected.**
- 5.4.2 The substrate must be relatively even without noticeable high spots or depressions and accumulated water, ice or snow must be removed to prevent the absorption of moisture in the new roofing components and roofing system.
- 5.4.3 Prior to the placement of membrane underlayment, clear the substrate of debris and foreign material that may be harmful to the roofing system.

### 5.5 Installation of Vapour Retarder

- 5.5.1 Install vapour retarder only to clean, dry surfaces.
- 5.5.2 Vapour retarder is required to be enveloped over rigid insulation.
- 5.5.3 Vapour retarder is required to be laid without any wrinkles or buckles on top the wood decking.
- 5.5.4 Overlap on the side laps shall be no less than three (3) inches wide and end laps shall be at least six (6) inches wide with staggered joints.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

### 5.6 Installation of Insulation Placement and Attachment

- 5.6.1 Do not install more insulation than can be covered by membrane in the same day.
- 5.6.2 All insulation boards must be butted tightly together in staggered fashion.
- 5.6.3 **Carlisle Insulation** must be mechanically fastened to the roof deck with Carlisle Fasteners and Seam Fastening Plates or Insulation Plates. Refer to SWMF-27 Details for fastening density requirements.
- 5.6.4 Mechanically attach the rigid insulation through the vapour retarder to the existing metal deck with 8 fasteners per board.

### 5.7 Installation of Membrane Placement and Securement

- 5.7.1 **Ensure** that water does not flow beneath any completed sections of the membrane system by completing all flashings, terminations and daily seals by the end of each work day.
  - 5.7.2 **Sweep** all loose debris from on top the rigid insulation.
  - 5.7.3 The membrane sheets are required to be placed parallel with the slope of the roof area.
  - 5.7.4 Carlisle XTRA Fasteners (5 inches in length) with 2 3/8" PIRANHA XTRA PLATES are to be used for membrane securement at 12 inches on center and the sheets are to be installed running in the east-west direction.
  - 5.7.5 **Perimeter Membrane Securement:** The roof perimeter is defined as all edges of each roof section.
    - a. **Use of 6' wide perimeter sheets:**  
A 6' wide perimeter sheets shall be used for the entire roof area.
    - b. **Use of 10" wide TPO Pressure-Sensitive RUSS:**  
As an option to using perimeter sheets, 10" wide TPO Pressure-Sensitive RUSS can be used beneath the field sheets for perimeter securement.
      - 1) The underside of the deck membrane must be primed with HP-250 Primer where contact with RUSS will occur.
      - 2) When field sheets are positioned parallel to the roof perimeter, 10" wide Pressure-Sensitive RUSS is placed approximately down the center of the field sheet. When a RUSS divides a field sheet in half, 2 perimeter sheets are created.
      - 3) When field sheets extend perpendicular to the edge of the roof, install 10-inch-wide Pressure-Sensitive RUSS beneath the field membrane sheets approximately 4' – 5' from the edge of the roof. When multiple perimeter sheets are required, additional RUSS shall be positioned 4' – 5' from the previous RUSS.
- Note:**  
*When fastening 10" Pressure-Sensitive RUSS, position approved fasteners/ plates along the center line of the RUSS. 6" wide TPO Pressure-Sensitive RUSS cannot be used to create perimeter sheets.*
- 4) Refer to Detail SWMF-2 for applicable requirements.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

- 5.7.6 **Field Membrane Securement Position** adjoining field membrane sheets (10' wide) to allow an approximate overlap of 5-1/2" to 6" at those locations where Fastening Plates are located (along the length of the membrane); at the same time overlap end roll sections (the width of the membrane) a minimum of 2".
- 5.7.7 **Secure the membrane** at the approved fastening density with the required Carlisle Fastener and Fastening Plates.
- 5.7.8 For installation of membrane with fullness, tighten the sheet between fasteners as follows:
- a. Unroll sheets and position.
  - b. Place a fastener and plate in one end of the sheet on the appropriate fastener mark. Go to the opposite end of the sheet, pull it tight and place a fastener and plate at the appropriate mark. Place the remaining fasteners into the sheet.
  - c. Proceed to weld the sheet in place and continue across the roof.
- 5.7.9 Prevention of membrane distortion during windy conditions:
- a. Unroll sheet approximately 5' and position edge of membrane with overlap line on adjacent sheet.
  - b. Install fasteners along the 5' exposed edge.
  - c. While the 5' of exposed membrane is being fastened, begin welding the overlapped edge using the Automatic Heat Welder.
  - d. As sheet is being welded and fastened concurrently, unroll membrane. Unroll only enough membrane to stay a few feet ahead of welding and fastening process. This reduces amount of unsecured membrane to be distorted by wind.
  - e. Continue this process for each adjoining sheet.

## 5.8 Heat Welding Procedures Application

### 5.8.1 General

- 5.8.1.1 Heat weld the Sure-Weld membrane sheets using the Automatic Heat Welder or Hot Air Hand Welder and silicone roller. For description of **heat welding equipment** and generator/electrical requirements, **refer to "Attachment II"** at the end of this section.
- 5.8.1.2 It is recommended that membrane sheets be installed in groups of 3 in order to routinely examine the heat welded seams as work progresses across the roof deck during each day.
- 5.8.1.3 When roof slope exceeds 5" per horizontal foot, use of the Automatic Heat Welding Machine may become more difficult; use of the Hand Held Hot Air Welder is recommended.
- 5.8.2 **Check the surfaces** of the Sure-Weld membrane to be heat welded to ensure they are properly prepared as outlined below:
- 5.8.2.1 **Membrane Cleaning** -The surfaces to be heat welded must be clean. Membrane overlaps that become contaminated with field dirt must be cleaned with Weathered Membrane Cleaner.

Weathered Membrane Cleaner should be wiped dry with a clean HP Splice Wipe prior to welding. No residual dirt or contaminants should be evident.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

5.8.2.2 **Exposed Membrane Seam Preparation** - Surface oxidation of Sure-Weld membrane will occur upon exposure to heat and sunlight. **After exposure to the elements**, membrane must be cleaned with **Weathered Membrane Cleaner prior to heat welding** as follows:

- 1) Apply Weathered Membrane Cleaner to the surface of the membrane which has been exposed using a clean HP Splice Wipe or other white rag and wipe along the direction of the seam.

If natural fibre rags are used, they must be white to prevent fabric dye from discolouring the membrane.

**Prior to heat welding, wipe the surface where Weathered Membrane Cleaner has been applied with a clean, dry HP Splice Wipe or other white rag to remove cleaner residue.**

- 2) Weathered Membrane Cleaner will achieve approximately 600 linear feet (one surface) of coverage per gallon for a standard heat welded splice area.

5.8.2.3 The membrane can typically be repaired with the standard cleaning method referenced above. In cases where the standard cleaning method is not sufficient, additional scrubbing and cleaning will be required. Refer to Paragraph J.2, Welding Problems/ Repairs.

### 5.8.3 Operating Automatic Heat Welder

#### 5.8.3.1 Temperature Settings

When making a Sure-Weld splice, no one temperature setting or speed can be used to describe the temperature setting or speed to set the robot. The splice must be tested to determine the quality of the splice.

Consult the respective heat welding machine manufacturer for recommendations concerning proper temperature setting and speed control of their equipment.

Typically, the colder the ambient temperature (and likewise the membrane temperature) the slower the Automatic Heat Welder speed control must be adjusted to produce proper seams.

**As a general guide, Sure-Weld membrane will weld at a lower temperature (1000° F) and faster speed (10' to 15' per minute) than most other heat welded membrane materials.**

**With the Leister Varimat Automatic Heat Welder**, the suggested **heat setting is 1004° F at 12.5' per minute**. With any other brand of robot welder, the temperature should be set at the manufacturer's recommended temperature to obtain the correct splice results.

The following is a list of items to be checked to determine the temperature setting and the speed at which a splice should be completed:

- 1) When the membrane is in direct sunlight, the temperature or robot speed may have to be adjusted when moving into a shaded area, check the splice results.  
Remember the membrane surface in a shaded area will be cooler than a membrane surface that is in sunlight.  
Darker colour membrane (such as grey) will be warmer than white and may affect the welder speed.
- 2) Dampness on the membrane from dew, a passing rain shower or misting condition will reduce heat from the splice due to evaporating moisture from the membrane surface. The heat welding temperature (increased) or the robot speed (slower) will have to be adjusted to produce a good splice. Water must be wiped from the welding surface prior to welding the splice.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

- 3) Wind has a cooling affect as it blows over the surface. It will also affect the air flow in the splice reducing the effectiveness of the hot air gun. This will require the operator to increase heat from the hot air gun or reduce the welder speed.
- 4) Substrates make a substantial difference in the amount of heat required to produce a proper heat welded splice. The robot will have to be adjusted accordingly:  
  
Plywood and Concrete act as heat sinks and will take a higher temperature or slower speed setting than insulation.  
Cool damp substrates will take a higher temperature or slower speed setting than dry substrates.
- 5) Membrane "bleed-out" from between sheets will not occur with Sure-Weld membrane if properly welded. If bleed-out is occurring (the dark underside of the membrane begins to melt and flow), the welder speed should be increased to reduce welding temperature.

### 5.8.3.2 Equipment Set-Up

Equipment set up is the responsibility of the Authorized Applicator. When poor welding is occurring check the following:

- 1) If the membrane is overheated on one side or the other, check the nozzle to be sure it is distributing the heat evenly between the two sheets.
- 2) If the heat is bypassing the edge of the sheet producing a cold weld along the edge of the splice, be sure the nozzle is completely under the sheet and the air dam is in place and functional.
- 3) If the probed splice is tight at the edge but a cold weld is present in the center of the splice (the heat is melting the edges but does not melt the center of the splice), check to be sure the robot is not running too fast.
- 4) Ensure the silicone pressure wheel is intact with no voids in the silicone. If voids are present, incomplete welding will result.
- 5) If a machine with a brass plate air dam is utilized, be sure all wheels on the air dam are not binding. Binding wheels will cause sheet movement and distortion during the welding process.
- 6) The Automatic Heat Welder nozzle should be adjusted as close to the pressure wheel as possible. If the nozzle is too far away from the pressure wheel, distortion of the membrane may occur due to heat expansion.  
  
***Note: Adjust weld nozzle so the curved portion (heel) extending outside the seam area does not contact or drag on the exposed surface of the membrane. This portion of the nozzle should be 1/16" to 18" above the membrane surface.***
- 7) Overheating the membrane will cause poor welds. It is recommended that the automatic welder be run not less than 10' a minute on average temperature days. Only on very cold days would the welder be run below this speed. The temperature and welder speeds must be determined based on test welds prior to actual sheet welding.
- 8) Clean screen of dirt and debris on air inlet of heat gun every day. Accumulation of contaminants on screen will reduce air flow and heat output of welder.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

### 5.8.3.3 Membrane Welding

- 1) Prepare the Automatic Heat Welder and allow it to warm for approximately 5 to 10 minutes to reach operating temperature.
- 2) Position the Automatic Heat Welder properly prior to seaming with the guide handle pointing in the same direction the machine will move along the seam.
- 3) Lift the overlapping membrane sheet and insert the blower nozzle of the Automatic Heat Welder between the overlap. Immediately begin moving the machine along the seam to prevent burning the membrane.
- 4) Proceed along the seam ensuring that the small guide wheel in front of the machine aligns with the edge of the top membrane sheet. Guide the machine from the front only.

**CAUTION:** Ensure the power cord has plenty of slack to prevent dragging the machine off course (which could result from a tightly stretched cord).

- 5) At all splice intersections, roll the seam with a silicone roller to ensure a continuous heat welded seam (the membrane should be creased into any membrane step-off with the edge of the silicone roller). A false weld may result due to surface irregularities created by multiple thicknesses of Sure-Weld membrane sheets.

**Note:** *When using 60-mil or thicker Sure-Weld Membrane, a TPO "T" Joint Cover or surface splice of Sure-Weld Non-Reinforced Flashing must be applied over all "T" joint splice intersections. Refer to Detail SWMF-2D.*

- 6) To remove the Automatic Heat Welder from the finished splice, stop the movement of the machine and immediately remove the nozzle from the seam area.
- 7) Mark the end of the heat welded seam with water-soluble marker for easy identification. A Hand Held Welder will be necessary to complete the weld in the area between where the Automatic Heat Welder is stopped and restarted.
- 8) **Perform a test weld** at least at the start of work each morning and afternoon. Test welds should be made if any changes in substrate or weather conditions occur.
- 9) **Recommendation to Prevent Membrane Creeping and Movement**
  - a) The operator of the robot must apply foot pressure to the membrane, kicking and sliding the membrane under the robot to keep the membrane tight. Always have the operator stand on the unfastened sheet of membrane to prevent sheet movement.
  - b) Do not release foot pressure from the membrane until the pressure wheel rolls over the membrane in front of the foot that is holding the membrane in place.
  - c) **Use of Welding Tracks**  
Set welding tracks lengthwise along the splice, close to the Automatic Heat Welder air dam to reduce membrane movement caused by the welding process. The operator must continue to apply foot pressure to the welding tracks to help hold the membrane splice in place. Welding tracks are moved as welder progresses along seam.

**Welding tracks can be:**

- Sheet metal, 22 gauge – 12" wide by 10' long (with rounded corners).
- Aluminum or steel plates – 1/4" x 3", 4' to 6' long (with rounded corners).
- Lay flat tubing filled with sand – 4' to 6' long.
- Wood planks – 2" x 12" X 4' to 6' long.
- Heavy plywood – 3/4" x 24" x 8' long.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

### 5.8.3.4 Cut Tests

- 1) Perform a test weld at least at the start of work each morning and afternoon.
- 2) The test sample should be approximately 1" wide and longer than the width of the seam (Cut across the heat welded seam).
- 3) Peel the test sample apart after it has thoroughly cooled (approximately 10 minutes) and examine for a consistent 1-1/2" wide minimum weld. Delamination of the membrane from the scrim-reinforcement is an indication of a properly welded seam.
- 4) Identify the following seam problems to assure seam quality:

**Discoloured or melted membrane** – Increase speed or decrease temperature setting if membrane discolours or exhibits melting (membrane begins to flow).

**Voids and wrinkles** - A proper heat welded seam has no voids or wrinkles and must be at least 1-1/2" wide. Refer to Seam Probing procedures outlined below for proper inspection of seam deficiencies.

### 5.8.4 Hand Held Welder Settings

- a. Temperature setting for hand held welders when used for flashing should be approximately "6" (on a scale from 1 to 10).
- b. Temperature settings for hand held welders when used for membrane should be approximately "8" (on a scale from 1 to 10).
- c. Exact settings will vary based on ambient temperatures, substrate and type of welder.
- d. Silicone roller should always be placed flat against membrane to be welded. **Do not turn roller on edge to weld membrane or flashings.**

### 5.8.5 Seam Probing

5.8.5.1 Carlisle's Seam Probe is recommended to be used to probe all heat welded seams. As an option, a cotter pin puller can be used to probe heat welded seams. Heat welded seams must be probed throughout the day to check seam quality and to make proper adjustments to heat welding equipment. **The repair of deficiencies must be done routinely throughout the day but no later than the end of each workday.**

- a. Allow heat welded seams to cool thoroughly for approximately 30 minutes. Premature probing can damage warm seams.
- b. Draw probing tool tip along the edge of the heat welded seam. Apply firm pressure to probe the seam junction, but not into the bottom membrane sheet. The tool will not penetrate into the lap area of a properly welded seam.
- c. If the seam probing tool penetrates into the lap area, mark the seam using a water-soluble marker at the beginning and the end of voids or wrinkles in the seam edge.
- d. Repair seam deficiencies as soon as possible using the hand held welder. Carlisle recommends that repairs be made the same day they are discovered.



## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

- e. Probe **repaired seams** after they have cooled completely. If the repair is acceptable, wipe off the water-soluble marker lines; if not acceptable, repair the seam using the procedures for repair of heat welded seams as outlined in Repair Procedures for Aged Sure-Weld Membrane.

***Note:** All laps must be probed each day soon after it has cooled to verify the welder set-up is effective. Particular attention must be given to all membrane intersections and heat welded seams at insulation joints. In addition, there should be periodic checks (including at the start of each day) to verify good peel strength.*

- f. **Apply Cut-Edge Sealant** on all cut edges of the reinforced membrane (where the scrim reinforcement is exposed) **after seam probing** is completed. Cut-Edge Sealant is not required on vertical splices. When a 1/8" diameter bead of Cut-Edge Sealant is applied, approximately 225 – 275 linear feet of coverage per squeeze bottle can be achieved.

## 5.9 Welding Problems/Repairs

- 5.9.1 A Hand Held Hot Air Welder and a 2" wide silicone roller must be used when repairing the Sure-Weld membrane. When the **entire** heat welded **seam** is to be **overlaid**, an **Automatic Heat Welder** may be used.
- 5.9.2 Prior to proceeding with any repair procedure, the area to be repaired must be cleaned and any material that has been exposed to the elements must be prepared with Weathered Membrane Cleaner as outlined in Paragraph I.2.b, Exposed Membrane Seam Preparation. The membrane can typically be repaired with a standard cleaning method. In cases where the standard cleaning method is not sufficient, the following procedures must be used.
- a. Scrub the area to be welded with a primer pad and Weathered Membrane Cleaner. The cleaner will become discoloured with abraded membrane during this procedure.
  - b. Clean all residues from the area to be welded with a Splice Wipe or clean natural fibre (cotton) rag.
  - c. Weld the new membrane to the cleaned area using standard welding procedures.
- 5.9.3 Voids in welded seams can be repaired using a Hand Held Hot Air Welder and a silicone roller.
- 5.9.4 Position the hand held welder facing into void so hot air is forced between overlapping membranes. Roll the top membrane surface using positive pressure toward the outer edge until the heated membrane surfaces are fused.
- 5.9.5 Exposed scrim-reinforcement (resulting from scorching surface of membrane) and test weld areas must be repaired by overlaying the damaged area with a separate piece of Sure-Weld reinforced membrane with rounded corners. The overlay must extend a minimum of 2" past the area to be repaired.
- 5.9.6 **Probe** all edges of the overlay once cooled to ensure a proper weld has been achieved.
- 5.9.7 **Seal** all cut edges of Sure-Weld reinforced membrane with Cut-Edge Sealant.

***Note:** The same overlay repair procedures may be used for punctures in the Sure-Weld membrane.*



## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

### 5.10 Additional Membrane Securement (if required)

- 5.10.1 Securement must be provided at the perimeter of each roof level, roof section, expansion joint, curb, skylight, interior wall, penthouse, etc., at any inside angle change where slope exceeds 2" to one horizontal foot, and at all penetrations as identified on the Carlisle details.
- 5.10.2 Securement may be achieved as follows:
1. Carlisle's Piranha™ or Piranha Xtra Fastening Plates are used to secure the membrane at the base of walls and penetrations and flashed as shown on the applicable Carlisle detail (excluding OSB, cementitious wood fibre and gypsum decks where the required Carlisle Fastener is installed with the associated 2" diameter plate). On **Adhered Roofing Systems**, Carlisle standard 2" diameter Seam Fastening Plates may be used in lieu of Piranha Plates.
  2. As an option, 6" wide **TPO Pressure-Sensitive RUSS** may be installed in conjunction with Carlisle Fasteners and Piranha Plates spaced a maximum of 12" on center below the membrane (HP-X or HP-Xtra Fasteners and Piranha or Piranha Xtra Plates are required over steel and wood decks). The securement strip shall be installed horizontally at the base of walls or penetrations. The underside of the deck membrane must be primed with HP-250 Primer. Membrane is spliced to the RUSS and continued as wall flashing resulting in continuous membrane flashing without penetration of the deck membrane.
  3. Securement of the membrane shall be a maximum of 12" on center. Fasteners shall be positioned 6" minimum to 9" maximum from the inside or outside corner.
  4. When mechanical securement is not provided in some of the Sure-Weld Details (i.e., pipes and sealant pockets), additional Fastening Plates must be used for membrane securement. The plates must be positioned a maximum of 12" away from the penetration, spaced a maximum of 12" on center and flashed in accordance with the applicable Carlisle Detail.
  5. Refer to the "Membrane Fastener Criteria" chart in "Attachment I" at the end of this section for the required Carlisle Fastener/Plate with the corresponding deck type.
  6. After securing the membrane, flash in accordance with the appropriate detail.

### 5.11 Flashing Membrane Application

#### 5.11.1 General Flashing Conditions

Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using Sure-Weld **reinforced** membrane. Sure-Weld non-reinforced membrane can be used for flashing pipe penetrations, Sealant Pockets and scuppers as well as inside and outside corners when the use of pre-molded or pre-fabricated accessories are not feasible.

- 5.11.2 When possible, all reinforced membrane splices are heat welded with the Automatic Heat Welder. The Hand Held Hot Air Welder should be utilized in hard to reach areas, smaller curbs, vertical splices and when using non-reinforced membrane.
- a. All existing **loose** flashing must be removed prior to application of Sure-Weld membrane especially when the new Sure-Weld Flashing is to be adhered. The new Sure-Weld membrane must totally conceal all existing intact flashing, but must not conceal weep holes or cover existing through wall counter flashing.
  - b. Install surface mounted reglets and compression bar terminations directly to the wall surface.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

**c. Application of Sure-Weld Bonding Adhesive**

On vertical surfaces such as walls, curbs and pipes, **Bonding Adhesive is not required** when the **flashing height is 12"** or less and the membrane is **terminated under metal counter flashing** (nailed). When a **coping or termination bar** is used for the vertical termination, the **Bonding Adhesive may be eliminated when the flashing height is 18" or less.**

- When required as noted on Carlisle's installation details, membrane shall be adhered to vertical surfaces with Sure-Weld Bonding Adhesive. The Bonding Adhesive shall be applied continuously, without globs or puddles, with a plastic core medium nap paint roller. A 9" roller will easily fit into the 5-gallon containers.
  - The Bonding Adhesive must be applied to both the membrane and the surface to which it is being bonded to achieve a coverage rate of approximately 120 square feet per gallon per one surface (membrane or substrate) or approximately 60 square feet per gallon per finished surface (includes coverage on both membrane and substrate).
  - After the Bonding Adhesive has dried to the point that it is tacky but does not string or stick to a dry finger touch, roll the membrane into the adhesive.
- d.** Care must be taken when setting the flashing to avoid bridging greater than 3/4" at angle changes (i.e., where a parapet or roof penetration meets the roof deck). This can be accomplished by creasing the membrane into the angle change.
- e.** Terminate the edges of the installed membrane in accordance with Carlisle's applicable SW-9 Termination Details.
- f.** In areas where metal counter flashing or surface mounted reglets are used as vertical terminations, the counter flashing must be sealed with a rubber grade caulking to prevent moisture migration behind the new wall flashing.
- g.** On Total System Warranty projects, Carlisle's Termination Bar in conjunction with Water Cut-Off Mastic must be installed under counter flashings and surface mounted reglets used for vertical wall terminations.

**5.11.3 Walls, Parapets, Curbs, Skylights, etc. (SW-5 and SW-12 Details)**

The flashing height must be calculated so that the Sure-Weld membrane flashing includes a minimum 1-1/2" heat weld beyond the Fastening Plates.

- a.** Fasten at angle change as identified in Paragraph K, Additional Membrane Securement, with the required Carlisle Fastener and Plate.
- b.** Flash the fasteners/plates with a separate piece of Sure-Weld reinforced membrane; apply heat and crease the flashing into the angle change before attaching it to the vertical surface.
- c.** As an option, TPO Pressure-Sensitive RUSS may be used, the field membrane can be adhered to the RUSS and continued as wall flashing as shown on the applicable Carlisle Detail.

**5.11.4 Metal Edge Terminations (SW-1 Details)**

The metal edge must be secured to the wood nailer as specified by the manufacturer. Refer to the appropriate SW-1 Detail for flashing options and requirements.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

---

### 5.11.5 Roof Drains (SW-6 Details)

- a. Sure-Weld membrane may extend into the drain sump when the slope of the sump is less than 3" to one horizontal foot. Refer to the Detail SW-6A.  
When the drain sump is greater than 3" to one horizontal foot, additional membrane securement must be installed. Refer to Detail SW-6B.
- b. Only drain strainers that have been approved by the specifier in accordance with all applicable codes may be used.

### 5.11.6 Other Penetrations

**Regardless of size, all vent pipes and Molded TPO Sealant Pockets require mechanical securement.** Membrane securement must be provided utilizing approved Carlisle Fasteners/Plates spaced a maximum of 12" away from the penetration, fastened a maximum of 12" on center and flashed with sections of Sure-Weld membrane as shown on the applicable detail.

#### 5.11.6.1 **Pipes, Round Supports, etc.**

- 1) Flash pipes with Molded Pipe Flashings or Split Pipe Seals where their installation is possible. Molded pipe flashings cannot be cut and patched; deck flanges cannot be overlapped or installed over angle changes.
- 2) Where Molded Pipe Flashings or Split Pipe Seals cannot be installed, APPLY FIELD FABRICATED PIPE FLASHING using Sure-Weld non-reinforced membrane. Refer to Detail SW-8B.

5.11.6.2 **Flexible Penetrations** (braided cables, conduits, wires, etc.) must be enclosed in a stable "goose-neck." Apply a Split Pipe Seal or field fabricated pipe flashing to flash the gooseneck.

5.11.6.3 **Hot pipes** that exceed 120° F, must utilize an insulated metal collar and rain hood, flashed with a field fabricated pipe flashing. Refer to Detail SW-8C.

5.11.6.4 For **pipe clusters** or unusually shaped penetrations, a Molded TPO Sealant Pocket or Pre-Fabricated Sealant Pocket (with Extension Legs as necessary) must be utilized. Refer to Detail SW-16.

## 5.12 Installation of Metal Flashings

5.12.1 Cap flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to the wood capping blocking at 12 inches on center.

5.12.2 Flashings shall be fabricated to shapes on site with all necessary breaks for adequate expansion.

5.12.3 The inside face of the metal cap flashings between the S-locked joint is to be sealed with 3 fasteners matching the colour of the metal cap with neoprene washer between the head and inside face of the metal cap flashings.

5.12.4 All joints shall be sealed with approved sealant.

5.12.5 Counter flashings shall be installed at all reglets and curbs with at least three (3) inches below top of roof curb or reglet.

## 5.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### 5.13 Roof Walkways

- 5.13.1 Install walkways in those locations as designated on the project drawings
- 5.13.2 Install one-inch extruded polystyrene rigid insulation over top the single ply membrane as indicated on the project drawings.
- 5.13.3 Then install the concrete pavers as specified on top the rigid insulation as indicated on the roof plan.

**(ALL EXISTING CONCRETE PAVERS ARE TO BE SAVED AND REUSED AS DIRECTED BY ROOF CONSULTANT)**

### 5.14 Daily Seal

- 5.14.1 On phased roofing, when the completion of flashings and terminations is not possible by the end of each work day, provisions must be taken to temporarily close the membrane to prevent water infiltration.
- 5.14.2 Temporarily seal any loose membrane edge down slope using asphaltic based roof cement, hot asphalt, spray urethane foam or a similar product so that the membrane edge will not buck water. Caution must be exercised to ensure that the membrane is not temporarily sealed near drains in such a way as to promote water migration below the membrane.
- 5.14.3 After embedding membrane in daily seal material, CHECK FOR CONTINUOUS CONTACT. Provide continuous pressure over length of the temporary seal with 15' lengths of 2-1/2" diameter Lay Flat Tubing filled with dry sand.  
  
***Note:** The use of rigid wood nailers is not recommended due to warping and because constant compression cannot be achieved on an uneven substrate.*
- 5.14.4 When work is resumed, pull the Sure-Weld membrane free; trim and remove membrane where the daily seal material was previously applied before continuing installation of adjoining sections.

### 5.15 Clean-Up

- 5.15.1 If required by the specifier to ensure the aesthetics of the surface of the Sure-Weld membrane, handprints, footprints, general traffic grime, industrial pollutants and environmental dirt may be cleaned from the surface of the Sure-Weld membrane by scrubbing with soapy (non-abrasive soap) water and rinsing the area completely with clean water. Weathered Membrane Cleaner can also be used to clean the surface of the Sure-Weld membrane.

## 6.0 PRODUCTS

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### OPTION No. 2

#### **60 MIL REINFORCED EPDM MECHANICALLY FASTENED ROOF SYSTEM**

#### 6.1 General

- 6.1.1 The components of this roofing system are to be products of Carlisle or accepted by Carlisle as compatible or approved equal.

#### 6.2 Membrane

- 6.2.1 Furnish Sure-Tough, 60 mil thick reinforced EPDM (Ethylene, Propylene Diene Terpolymer) conforming to the minimum physical properties of ASTM D4637, Type 11. The membrane shall be manufactured in a single panel with no factory splices to reduce splice intersections. EPDM membrane shall be ordered with Factory-Applied Tape.

#### 6.3 Related Materials

- 6.3.1 Sure-Seal Reinforced Flashing, Bonding Adhesive, Water Cut-Off Mastic, EP-95 Spicing Cement, Weathered Membrane Cleaner, Molded Pocket Sealant, Pre-Molded Inside/Outside Corners, Pipe Flashings, Curb Wraps and Sealant Pockets.

#### 6.4 Vapour Retarder

- 6.4.1 The Vapour Retarder shall consist of 6 mil polyethelene applied over top of the wood deck shall comply with CGSB CAN2-S1.34-M86. Adhesive shall be of a type as recommended by the Polyethelene Manufacturer for adhesion at the side and end laps. (Either sealant or tape application)

#### 6.5 Rigid Insulation

- 6.5.1 Insulation shall be SecurShield Polyiso Rigid Insulation Boards with coated glass fiber mat facers on both sides, meeting or exceeding the requirements of ASTM C1289 (Minimum Compressive Strength of 20 psi (138 KPa). The thermal resistance of insulation shall be R-20.5 (L.T.T.R.) (3.5 inch for the main roof and R-8.6 (L.T.T.R.) (1.5 inch) around the recessed roof drains, resistance R-value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 8 feet in size.

#### 6.6 Tapered Insulation

- 6.6.1 The tapered insulation shall be coated glass fiber mat facers Isocyanurate Boards conforming to ASTM C1289 meeting the requirements of ULC S126. Polyisocyanurate foam panels chemically bonded during the foaming process to glass fiber mat facers on the top and bottom surfaces. Tapered panels shall not be less than 25 mm at any point of the roof to the slope indicated at the roof drains (2% slope) (2" to 1" for four feet around each drain) and crickets (1% slope starting at 1/2" upward)

## **6.0 PRODUCTS**

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### **6.7 Fasteners, Plates, Bars**

- 6.7.1 The fasteners shall be Carlisle HP Fasteners (2" in length for Russ securement strip) (5" in length for the rigid insulation) (5" in length for securement of reinforced membrane at seams).
- 6.7.2 HP Polymer Seam Plates shall be 2-inch (51mm) diameter plastic barbed fastening plate used for membrane
- 6.7.3 Seam Fastening Plate shall be Carlisle HP-XTRA Fasteners (5-inches in length) with 2 3/8-inch PIRANHA XTRA PLATES
- 6.7.4 Insulation Fastening Plate shall be nominal 3-inch (76mm) diameter FM approved metal plate used for insulation attachment.
- 6.7.5 Sure-Seal Metal Fastening Bar shall be 1 inch by 10 feet long (25 mm x 3048 mm) Galvalume-coated steel fastening bar pre-punched 6 inches (152mm) on center for membrane securement as noted.

### **6.8 Vent Pipe Stack Flange**

- 6.8.1 The vent pipe stack flange shall be Thaler Roofing Specialties Products Inc. Model № SJ-38 insulated flange. The Roofing Contractor shall verify the inside diameter of the vent pipe stack for each location. The flanges are required to be sealed to the roof membrane with Pre-molded Pressure Sensitive Pipe Seal in accordance with Carlisle U-8A Detail.

### **6.9 Roof Drain**

- 6.9.1 The roof drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4A-RR Vandal-Proof aluminum roof drain with under deck clamp and aluminum ferrule to complete a Furco Connection. Outlet size shall be verified on site by the Roofing Contractor.

### **6.10 Framing Lumber**

- 6.10.1 Framing lumber on top of roof area shall be Spruce conforming to CSA 0322-1976 and CSA 080-M1983. Size as shown on the project drawings. Grade SPF No. 2 or better.

### **6.11 Plywood**

- 6.11.1 Exterior grade 3/4" Fir to CSA 0121 or CSA 0151 in accordance on the project drawings.

### **6.12 Metal Flashings**

- 6.12.1 Metal Flashings shall be 24ga Colorite 8000 Series pre-finished steel (both sides) as manufactured by Westeel Roscoe, Steelcolour 8000 Series or Owner approved equal, formed to comply with field conditions. The colour is to be selected by the Owner from the manufacturer's standard colours. A one meter 'test bend' for each general metal flashing condition shall be completed and presented to the Owner's Representative for approval prior to general fabrication.

## 6.0 PRODUCTS

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### **6.13 Painting**

- 6.13.1 All existing gas lines, pipe stacks, exhaust fan hoods shall be cleaned and scraped prior to being repainted.
- 6.13.2 Clean and prime with alkyd metal primer before applying two coats of enamel paint. The colour shall match existing colour.

### **6.14 Concrete Pads**

- 6.14.1 Precast Concrete Pads shall be 24 inches by 24 inches by 1-inch-thick for additional walkway, etc. as show on Roof Plans. Pads shall be placed on a 20 inch by 20 inches by 1-inch thick section of Rigid Type 4 Extruded Polystyrene Insulation.

**ALL EXISTING CONCRETE PAVERS ARE TO BE SAVED AND REUSED**

### **6.15 Roof Pipe Supports**

- 6.15.1 Roof Pipe Supports as manufactured by C-Port (Model № CXP) are to be supplied and installed by the Roofing Contractor.

**TOTAL OF 58 ARE REQUIRED**

### **6.16 Hot Exhaust Stack Flashings**

- 6.16.1 The hot pipe flashing shall be Thaler Roofing Specialties Products Inc Model No. MEF-3A aluminum flashings with split collar to suit the new single ply roof system. The Roofing Contractor shall verify the outside diameter of the hot pipe stack for each location and fill between the flange and pipe with Rockwood Batt Insulation.

### **6.17 Insulated Skylight Curb with Lens**

- 6.17.1 The Roofing Contractor is to supply and install new two-foot by two-foot aluminum insulated curb with double acrylic skylight dome (clear over white) (Model #DDA) as distributed by Hotham Building Materials Inc and as detailed on the Enclosed Drawings.

### **6.18 Electrical/Cooling Line Penetration**

- 6.18.1 Pipe Flash as manufactured by OMG Roofing Products are to be used at all penetrations as detailed.

#### **Note:**

During this Partial Roof Replacement, an disconnect of the Condensing Units, Gas Lines, etc. are to be completed using this Mechanical Contractor:

QPS Mechanical  
Contact Person: Jay Glasier  
Phone: 519-351-3177

## 7.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

### OPTION No. 2

#### **60 MIL REINFORCED EPDM MECHANICALLY FASTENED ROOF SYSTEM**

#### 7.1 General

- 7.1.1 Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.
- 7.1.2 Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

#### 7.2 Installation of Vapour Retarder

- 7.2.1 Install vapour retarder only to clean, dry surfaces.
- 7.2.2 Vapour retarder is required to be enveloped over rigid insulation.
- 7.2.3 Vapour retarder is required to be laid without wrinkles or buckles.
- 7.2.4 Overlap on the side laps shall be no less than three (3) inches wide and end laps shall be at least six (6) inches wide with staggered joints.
- 7.2.5 A bead of sealant is required on all overlaps when 6 mil polyethelene is applied.

#### 7.3 Insulation Placement and Attachment

- 7.3.1 Install insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/8 inch. Stagger joints both horizontally and vertically if multiple layers are provided.
- 7.3.2 Secure insulation to the substrate with the required mechanical fasteners in accordance with the manufacturer's specifications. (no less than 8 per board)
- 7.3.3 Apply only as many boards as can be covered in the same day.

#### 7.4 Membrane Placement and Attachment

- 7.4.1 Unroll and position membrane without stretching. Allow the membrane to relax for approximately 1/2 hour prior to attachment. Provide and secure both perimeter and field membrane sheets in accordance with the manufacturer's most current specifications and details.
- 7.4.2 Secure the membrane (along the pre-printed blue line approximately 3" from the edge of the membrane sheet) with the required Sure-Seal Fastener and 2" Polymer Seam Plate (required for steel decks) or Seam Fastening Plate spaced a maximum of 12" on center. The minimum distance between the edge of the fastening plate and the edge of the membrane must be 2 inches.
- 7.4.3 Install adjoining membrane sheets in the same manner in accordance with the manufacturer's specifications.
- 7.4.4 Mechanically install fastener strip to all perimeter roof membrane and secure into the roof parapet with approved screw fasteners or RUSS (Reinforced Universal Securement Strip).
- 7.4.5 Bond roof membrane to the Reinforced Universal Securement Strip using splicing adhesive.



## 7.0 EXECUTION

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### **7.5 Membrane Splicing with SecurTape**

- 7.5.1 Tape splices where fastening plates are located (along the length of the membrane) must utilize 6" wide SecurTape or FAT. Tape splices at end roll sections (along the width of the membrane without fastening plates) shall utilize 6" wide SecurTape.
- 7.5.2 Overlap adjacent sheets and mark a line approximately 1/4" to 1/2" from the top sheet edge.
- 7.5.3 Apply Sure-Seal HP-250 Primer to the splice area.
- 7.5.4 When Factory-Applied Tape (FAT) is not used, apply SecurTAPE in accordance with the manufacturer's specifications and roll the top sheet onto the mating surface.
- 7.5.5 Immediately roll the splice using positive pressure when using a 2" wide steel roller. Roll across the splice edge, not parallel to it. When using FAT, Carlisle's Stand-Up Seam Roller can be used to roll parallel to the splice edge.
- 7.5.6 **All field splice seams are to be flashed in with 6" wide overlay Pressure Sensitive Flashing Membrane. (SEE PROVISIONAL COST)**
- 7.5.7 **Lap sealant is required for all field splices. Feather the lap sealant with a specially performed tool so that the high point or the crown of the lap sealant is located over the edge of splice.**

### **7.6 Flashing**

- 7.6.1 Wall and curb flashing shall be cured EPDM membrane. Continue the deck membrane as wall flashing where practicable.
- 7.6.2 Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.
- 7.6.3 Once the roof membrane is adhered to the securement strip, then bond the flashing membrane using bonding adhesive. Flashing membrane shall extend continuously up the entire height of the parapet over the parapet and down the exterior face as indicated on the enclosed drawings.

### **7.7 Installation of Metal Flashings**

- 7.7.1 Cap flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to the wood capping blocking at 12 inches on centre.
- 7.7.2 Flashings shall be fabricated to shapes on site with all necessary breaks for adequate expansion.
- 7.7.3 The inside face of the metal cap flashing between the S-locked joint is to be secured with three (3) fasteners matching the colour of the metal cap with neoprene washer between the head and inside face of the metal cap flashing.
- 7.7.4 All joints shall be sealed with approved sealant.
- 7.7.5 Counter flashings shall be installed at all reglets and curbs with at least three (3) inches below top of roof curb or reglet.

## **7.0 EXECUTION**

*Partial Roof Replacement  
for  
Holy Family Catholic School  
Project № 616-CP2016*

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### **7.8 Walkways**

- 7.8.1 Install walkways in those locations as designated on the project drawings or as directed by Roof Consultant.
- 7.8.2 Install one-inch extruded polystyrene rigid insulation over top the single ply membrane as indicated on the project drawings.
- 7.8.3 Then install the concrete pavers as specified on top the rigid insulation as indicated on the roof plan.

### **7.9 Daily Seal**

- 7.9.1 On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed to temporarily close the membrane to prevent water infiltration.
- 7.9.2 Complete an acceptable membrane seal in accordance with the manufacturer's requirements.

### **7.10 Clean Up**

- 7.10.1 Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- 7.10.2 Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

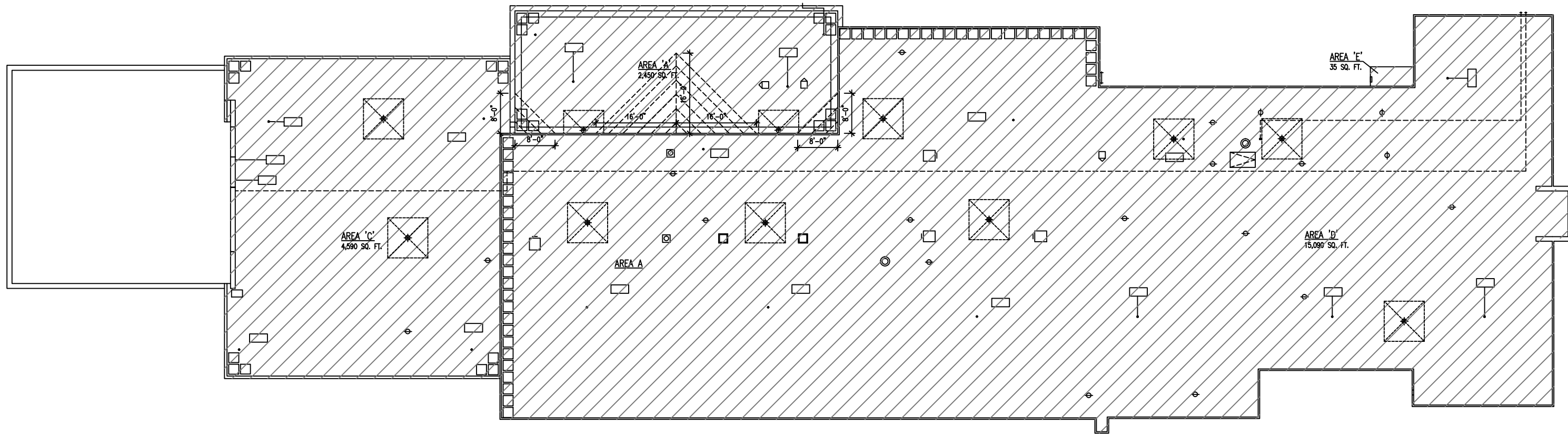
**PARTIAL ROOF REPLACEMENT  
HOLY FAMILY CATHOLIC SCHOOL  
649 MURRAY STREET  
WALLACEBURG ONTARIO N8A 1W1**

**PROJECT Nº 616-CP2016**


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**ENCLOSED DRAWINGS**

<b>RHF-1</b>	<b>Key Roof Plan</b>
<b>RHF-1a</b>	<b>Existing and Design Roof List</b>
<b>RHF-2</b>	<b>Partial Roof Plan</b>
<b>RHF-3</b>	<b>Partial Roof Plan</b>
<b>RHF-4</b>	<b>Partial Roof Plan</b>
<b>DHF-1</b>	<b>Perimeter Detail – Area ‘D’ (Option No. 1)</b>
<b>DHF-2</b>	<b>Perimeter Detail – Area ‘A’ (Option No. 1)</b>
<b>DHF-3</b>	<b>Existing East Elevation Wall – Area ‘C’ (Option No. 1)</b>
<b>DHF-4</b>	<b>High Wall Detail – Area ‘C’ (Option No. 1)</b>
<b>DHF-5</b>	<b>West Perimeter Detail – Area ‘C’ (Option No. 1)</b>
<b>DHF-6</b>	<b>Perimeter Detail – Area ‘C’ (Option No. 1)</b>
<b>DHF-7</b>	<b>Perimeter Detail – Between Area ‘A’ &amp; ‘D’ (Option No. 1)</b>
<b>DHF-8</b>	<b>West Parapet Detail – Above Main Entrance (Option No. 1)</b>
<b>DHF-9</b>	<b>Skylight Detail – (Option No. 1)</b>
<b>DHF-10</b>	<b>Gooseneck Exhaust Fan Detail – (Option No. 1)</b>
<b>DHF-11</b>	<b>Exhaust Fan Detail – Typical (Option No. 1)</b>
<b>DHF-12</b>	<b>Roof Drain Detail – Typical (Option No. 1)</b>
<b>DHF-13</b>	<b>Vent Pipe Stack Detail – Typical (Option No. 1)</b>
<b>DHF-14</b>	<b>Hot Exhaust Stack Detail – Typical (Option No. 1)</b>
<b>DHF-15</b>	<b>Electrical/Cooling Line Penetrations Detail – Typical (Option No. 1)</b>




 AREA TO BE  
 REMOVED AND  
 REPLACED


**KEY ROOF PLAN**  
 SCALE : 1" = 20'-0"

<b>REMLAP BUILDING SERVICES INC.</b> ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road      Office: (519) 739-3458 Harrow, Ontario N0R 1G0      Cell: (519) 818-0653		PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DATE :                    DECEMBER 2019 SCALE :                    AS SHOWN DRAWN BY :                CWP
		CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :                CWP SHEET SIZE :            11"x17"
DATE (MM-DD-YY) 12-20-19 01-09-20	ISSUED FOR OWNER REVIEW TENDER	DRAWING TITLE KEY ROOF PLAN	PROJECT FILE NO.    RBS19-61 DRAWING NO. <b>RHF-1</b>

**ROOF REPLACEMENT  
HOLY FAMILY CATHOLIC SCHOOL  
649 MURRAY STREET, WALLACEBURG ONTARIO N8A 1W1**

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**EXISTING ROOF SYSTEM****AREA 'A'**

Fully Adhered EPDM Membrane  
On 2 ½-inch Tapered Fiberboard Insulation  
On 3-inch Extruded Polystyrene Rigid Insulation  
On One-Ply of Kraft Paper for Vapour Retarder  
On T&G Wood Deck

**DESIGN ROOF SYSTEM****Option No.1 –**

60 mil TPO White Reinforced Membrane **OR**

**Option No.2 –** 60 mil Reinforced EPDM Membrane

**WITH**

On Tapered Insulation as Noted (ISO)  
On 3.5-inch Rigid Insulation (ISO)  
On 6 mil Polyethelene Vapour Retarder  
On Existing Wood Deck

**AREA 'C'**

Fully Adhered EPDM Membrane  
On 2.7-inch Rigid Insulation (ISO)  
On 6 mil Polyethelene for Vapour Retarder  
On T&G Wood Deck

**Option No.1 –**

60 mil TPO White Reinforced Membrane **OR**

**Option No.2 –** 60 mil Reinforced EPDM Membrane

**WITH**

On Tapered Insulation as Noted  
On 3.5-inch Rigid Insulation (ISO)  
On 6 mil Polyethelene Vapour Retarder  
On Existing Wood Deck

**AREA 'D'**

Fully Adhered EPDM Membrane  
On 1 ½-inch Rigid Insulation (ISO)  
On Pea Stone Roofing Gravel  
On Four-Ply of Roofing Felt (Asphalt)  
On 1-inch of Fibreboard Insulation  
One One-Ply Roofing Felt for Vapour Retarder  
On T&G Wood Deck

**Option No.1 –**

60 mil TPO White Reinforced Membrane **OR**

**Option No.2 –** 60 mil Reinforced EPDM Membrane

**WITH**

On Tapered Insulation as Noted (ISO)  
On 3.5-inch Rigid Insulation (ISO)  
On 6 mil Polyethelene Vapour Retarder  
On Existing Wood Deck

**AREA 'E'**

Fully Adhered EPDM Membrane  
On Rigid Insulation (ISO)  
On Wood Deck

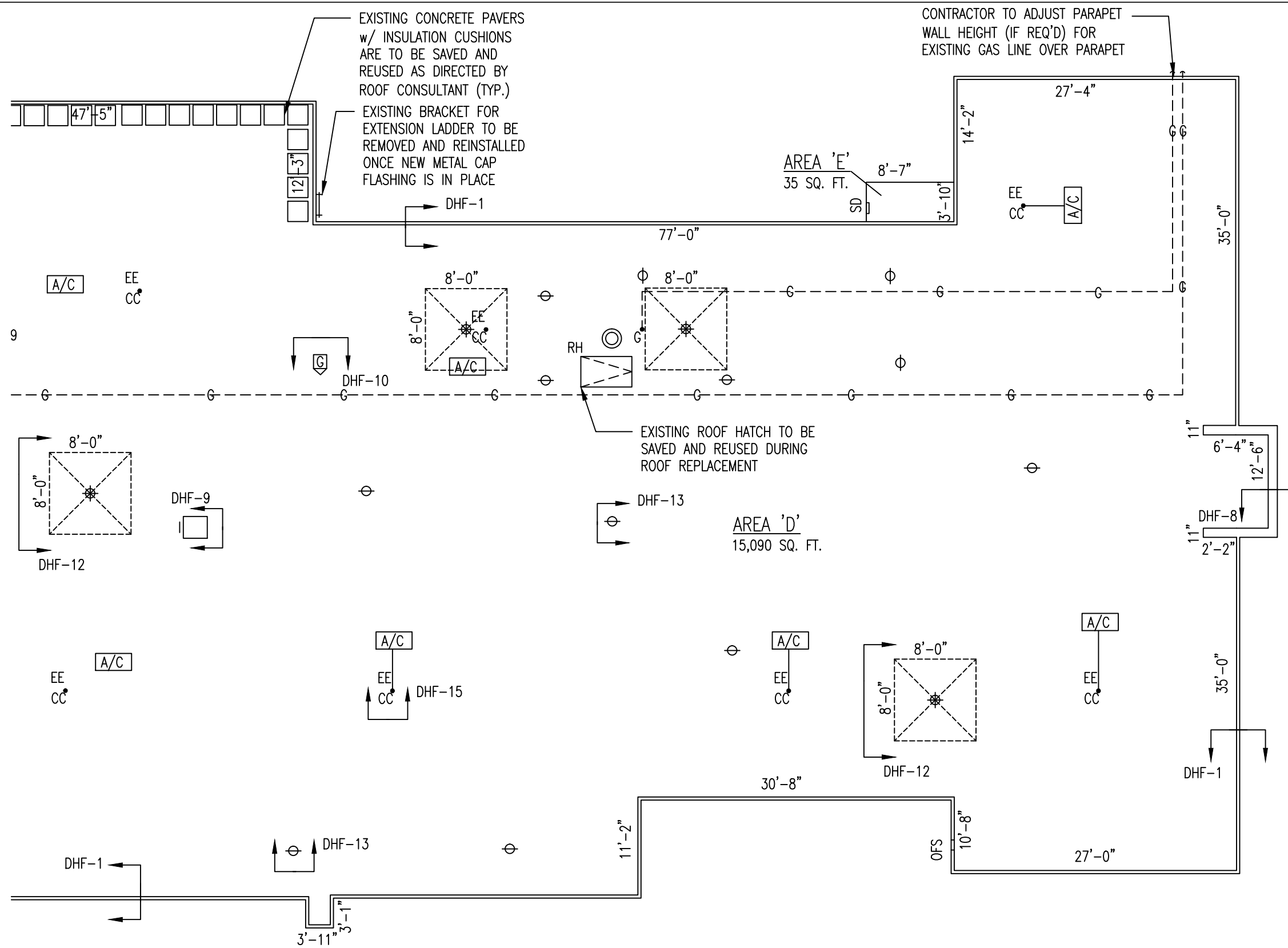
**Option No.1 –**

60 mil TPO White Reinforced Membrane **OR**

**Option No.2 –** 60 mil Reinforced EPDM Membrane

**WITH**

On 1.5-inch Rigid Insulation (ISO)  
On Existing Wood Deck

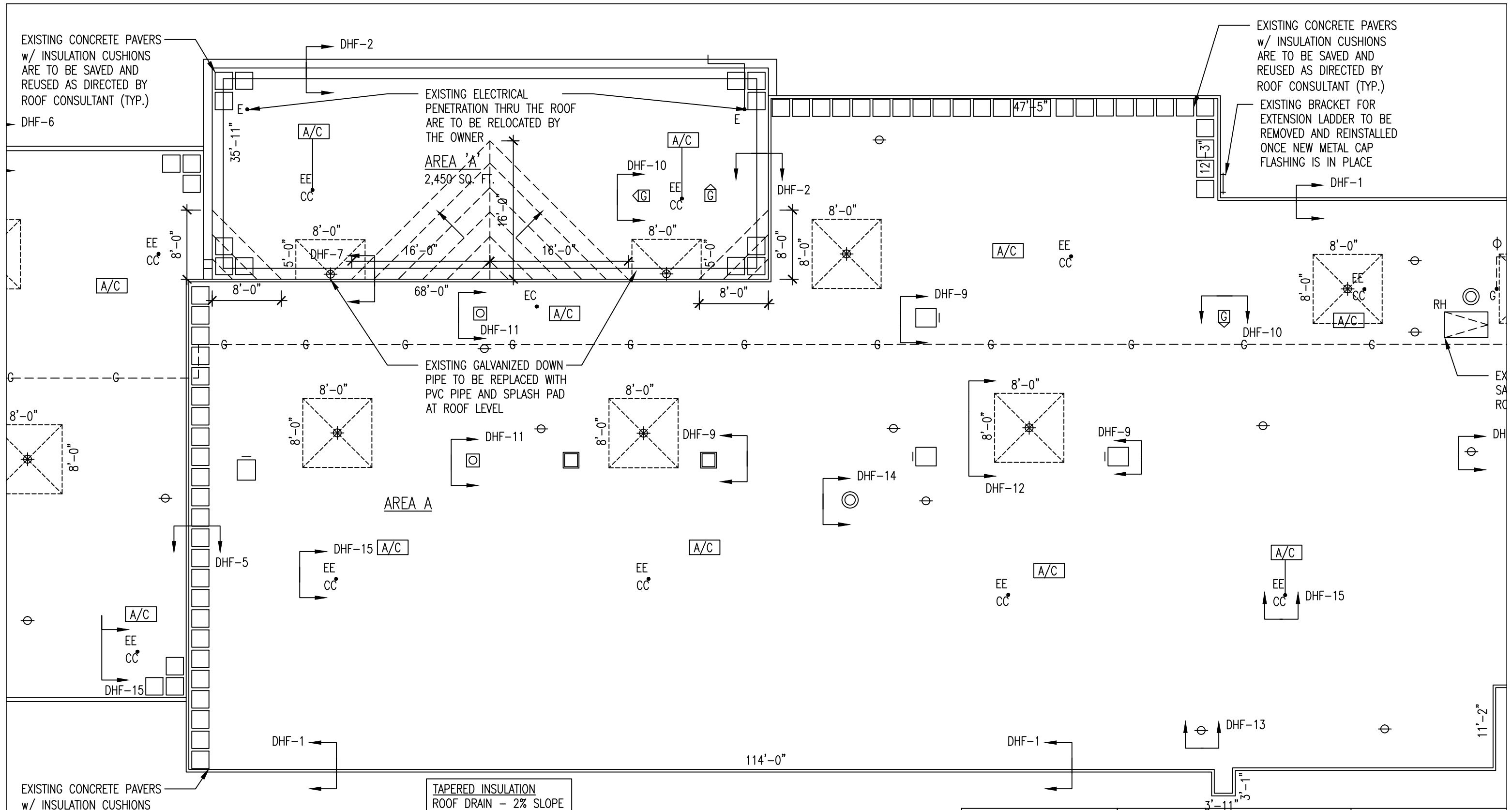


LEGEND	
$\oplus$	ROOF DRAIN (SEE DETAIL DHF-12)
$\phi$	VENT PIPE STACK (SEE DETAIL DHF-13)
$\odot$	HOT EXHAUST STACK (SEE DETAIL DHF-14)
$\boxed{A/C}$	CONDENSING UNIT (EXISTING PAD TO BE REUSED)
OFS	OVER FLOW SCUPPER
SD	SCUPPER DRAIN
$\boxed{G}$	GOOSE NECK EXHAUST FAN (SEE DETAIL DHF-10)
$\phi$	GAS LINE THRU ROOF (CONTRACTOR TO PROVIDE PITCH POCKET @ LOCATION)
$-\phi-$	GAS LINE ON ROOF (NEW SUPPORTS AS SPECIFIED)
$\begin{matrix} E \\ \cdot \\ C \end{matrix}$	ELECTRICAL/COOLING LINE PENETRATION (SEE DETAIL DHF-15)
$\odot$	EXHAUST FAN (SEE DETAIL DHF-11)
$\square$	EXISTING SKYLIGHT (SEE DETAIL DHF-9)
$\square$	EXISTING SKYLIGHT w/ FAN (SEE DETAIL DHF-9)

# PARTIAL ROOF PLAN

SCALE : 3/32" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WATER BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Huron, Ontario N0R 1G0 Office: (519) 738-3458 Cell: (519) 818-0653	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DATE : DECEMBER 2019 SCALE : AS SHOWN DRAWN BY : CWP CHK. BY : CWP SHEET SIZE : 11"x17" PROJECT FILE NO. : RBS19-61 DRAWING NO. : <b>RHF-2</b>
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	DRAWING TITLE PARTIAL ROOF PLAN
	DATE (MM-DD-YY) 12-20-19 01-09-20	ISSUED FOR OWNER REVIEW TENDER



EXISTING CONCRETE PAVERS w/ INSULATION CUSHIONS ARE TO BE SAVED AND REUSED AS DIRECTED BY ROOF CONSULTANT (TYP.)

DHF-6

A/C  
EE  
CC

8'-0"

A/C  
EE  
CC  
DHF-15

EXISTING CONCRETE PAVERS w/ INSULATION CUSHIONS ARE TO BE SAVED AND REUSED AS DIRECTED BY ROOF CONSULTANT (TYP.)



# PARTIAL ROOF PLAN

SCALE : 3/32" = 1'-0"

TAPERED INSULATION ROOF DRAIN - 2% SLOPE  
CRICKET - 1% SLOPE

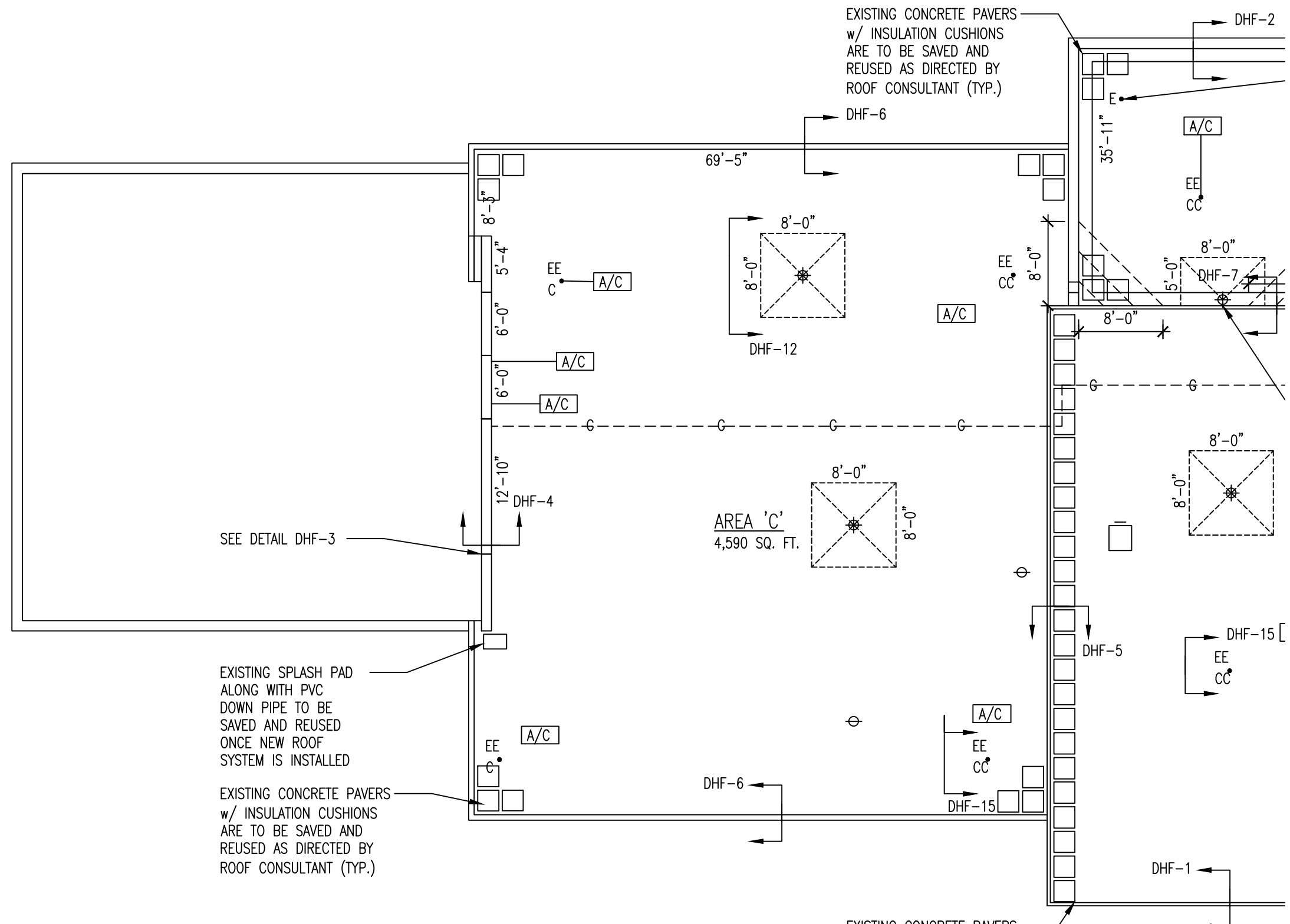
EXISTING ELECTRICAL PENETRATION THRU THE ROOF ARE TO BE RELOCATED BY THE OWNER

EXISTING GALVANIZED DOWN PIPE TO BE REPLACED WITH PVC PIPE AND SPLASH PAD AT ROOF LEVEL

EXISTING CONCRETE PAVERS w/ INSULATION CUSHIONS ARE TO BE SAVED AND REUSED AS DIRECTED BY ROOF CONSULTANT (TYP.)

EXISTING BRACKET FOR EXTENSION LADDER TO BE REMOVED AND REINSTALLED ONCE NEW METAL CAP FLASHING IS IN PLACE

<b>REMLAP BUILDING SERVICES INC.</b> ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Huron, Ontario N0R 1G0      Office: (519) 738-3458      Cell: (519) 818-0653		PROJECT <b>HOLY FAMILY CATHOLIC SCHOOL          PARTIAL ROOF REPLACEMENT</b> 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DATE : DECEMBER 2019 SCALE : AS SHOWN DRAWN BY : CWP CHK. BY : CWP SHEET SIZE : 11"x17" PROJECT FILE NO. : RBS19-61 DRAWING NO. : <b>RHF-3</b>
DATE (MM-DD-YY) 12-20-19 01-09-20	ISSUED FOR OWNER REVIEW TENDER	DRAWING TITLE PARTIAL ROOF PLAN	



SEE DETAIL DHF-3

EXISTING SPLASH PAD  
ALONG WITH PVC  
DOWN PIPE TO BE  
SAVED AND REUSED  
ONCE NEW ROOF  
SYSTEM IS INSTALLED

EXISTING CONCRETE PAVERS  
w/ INSULATION CUSHIONS  
ARE TO BE SAVED AND  
REUSED AS DIRECTED BY  
ROOF CONSULTANT (TYP.)

EXISTING CONCRETE PAVERS  
w/ INSULATION CUSHIONS  
ARE TO BE SAVED AND  
REUSED AS DIRECTED BY  
ROOF CONSULTANT (TYP.)

EXISTING CONCRETE PAVERS  
w/ INSULATION CUSHIONS  
ARE TO BE SAVED AND  
REUSED AS DIRECTED BY  
ROOF CONSULTANT (TYP.)

AREA 'C'  
4,590 SQ. FT.

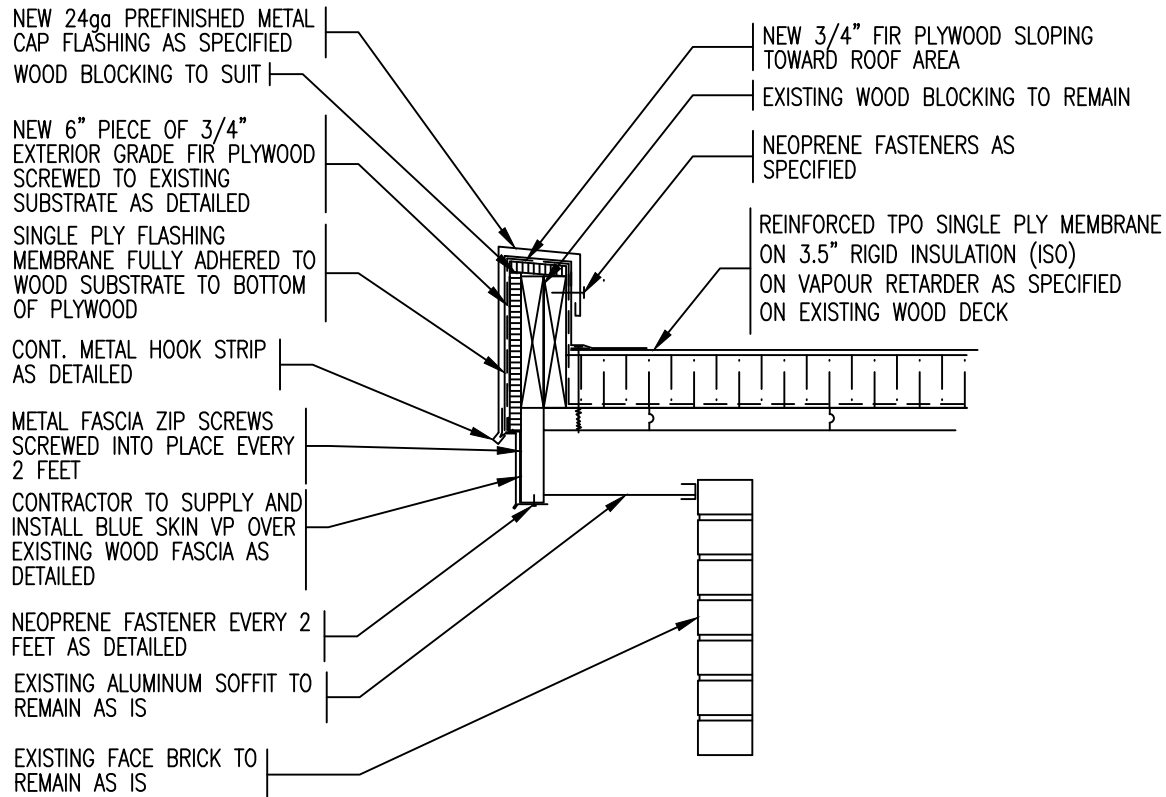


# PARTIAL ROOF PLAN

SCALE : 3/32" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road      Office: (519) 738-3458 Huron, Ontario N0R 1G0      Cell: (519) 818-0653		PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DATE :                    DECEMBER 2019 SCALE :                    AS SHOWN DRAWN BY :                CWP
		CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :                CWP SHEET SIZE :            11"x17"
DATE (MM-DD-YY) 12-20-19 01-09-19	ISSUED FOR OWNER REVIEW OWNER REVIEW	DRAWING TITLE PARTIAL ROOF PLAN	PROJECT FILE NO.    RBS19-61 DRAWING NO. <b>RHF-4</b>

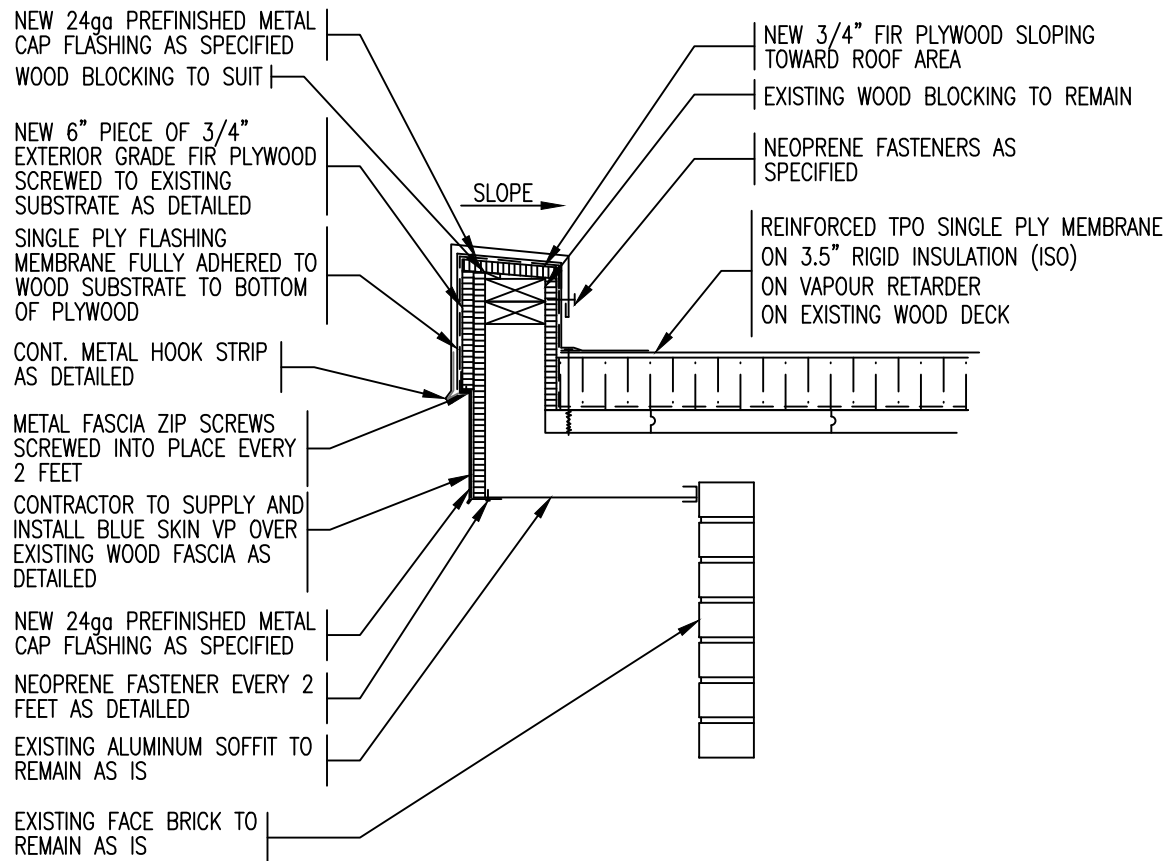




# PERIMETER DETAIL - AREA 'D' OPTION No1

SCALE : 1" = 1'-0"

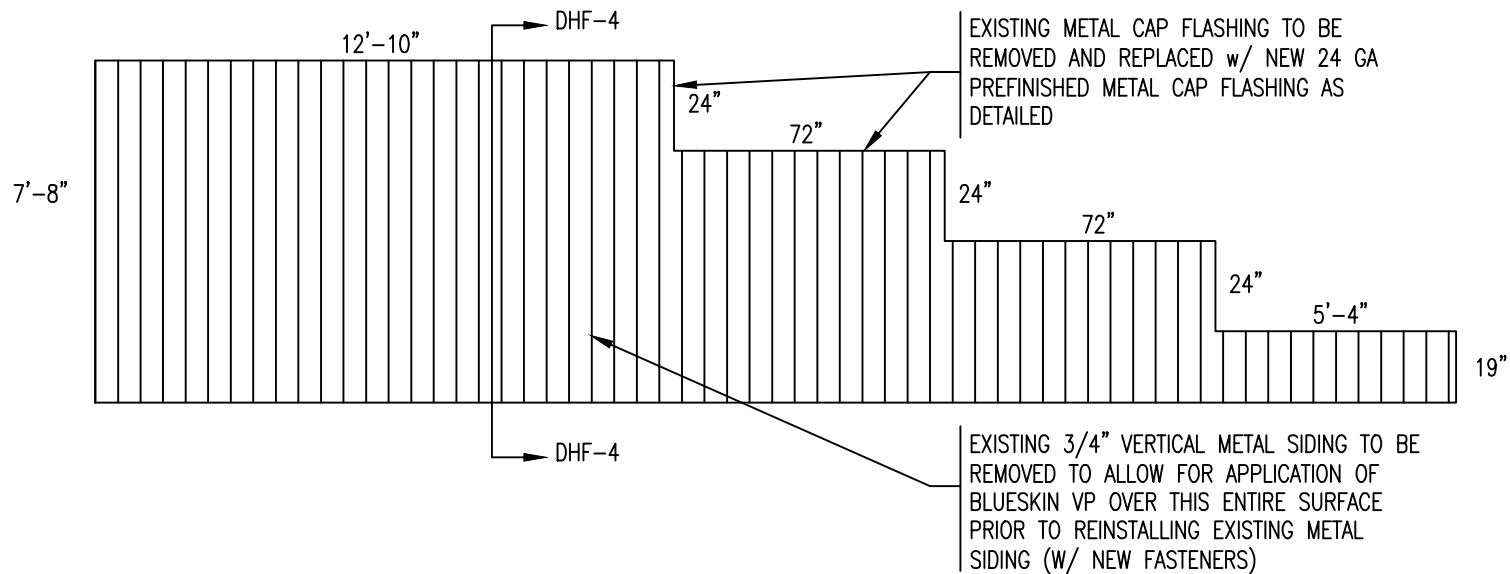
<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>1607 Glen Road Huron, Ontario N2R 1K0</small>	<small>WE'VE ASSURED YOU, OWNER AND ARCHITECT THE FOLLOWING:          QUALITY DELIVERED (POLYURETHANE ROOFING RECEIVED)          SUBJECT AND CONDITIONS OF BIDS AND BIDDING</small> <small>Christopher W. Palmer, C.B.S.          Tel: (519) 738-3885          Fax: (519)738-0757</small>	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DATE : DEC 2019 SCALE : N.T.S. DRAWN BY : CWP
	<small>1607 Glen Road Huron, Ontario N2R 1K0</small>	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"
	DATE <small>08-25-17</small> 12-20-19 OWNER REVIEW 01-09-20 TENDER	ISSUED FOR ROOF DETAIL	PROJECT FILE NO. RBS19-61 DRAWING NO. <b>DHF-1</b>



# PERIMETER DETAIL - AREA 'A' (OPTION No1)

SCALE : 1" = 1'-0"

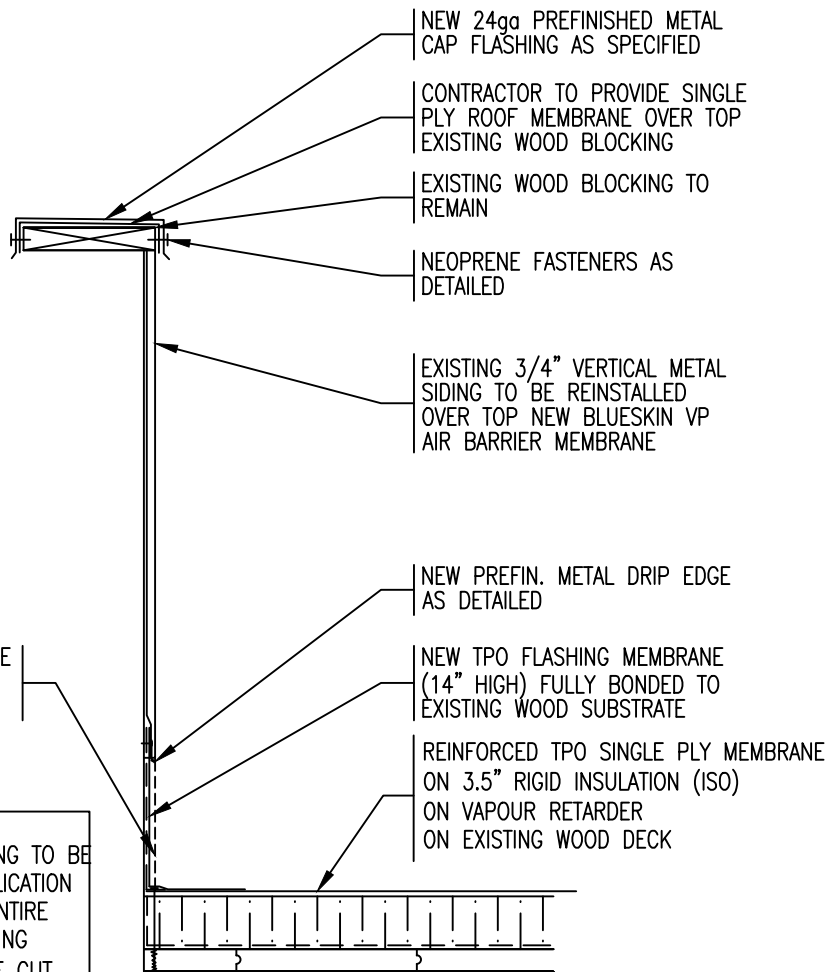
<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>1000 Glen Road          Toronto, Ontario M8Z 1G2</small>	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT	DATE : DEC 2019
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	SCALE : N.T.S.
	649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DRAWN BY : CWP
	1000 Glen Road Toronto, Ontario M8Z 1G2 Tel: (416) 738-3885 Fax: (416) 738-0757	CHK. BY : CWP
DATE (MM-DD-YY) 12-20-19	ISSUED FOR OWNER REVIEW	SHEET SIZE : 8.1/2"x11"
DATE (MM-DD-YY) 01-09-20	ISSUED FOR TENDER	PROJECT FILE NO. RBS19-61
DRAWING TITLE ROOF DETAIL		DRAWING NO. DHF-2



# EXISTING EAST ELEVATION WALL - AREA 'C' (OPTION No1)

SCALE : 1/4" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>WEAKLY ASSOCIATED, DESIGN AND SERVICES PROVIDED          EXISTING DRAWINGS (NOT/NEVER CORRECT/UNDER PROVISION)          SUBJECT AND CONTENTS OF THIS DRAWING</small> <small>Christopher W. Palmer, C.B.S.</small> <small>1607 Glen Road          Toronto, Ontario M8Z 1X2 Tel: (416) 738-3383          Fax: (416) 738-0737</small>	<b>PROJECT</b> HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT	<b>DATE :</b> DEC 2019
	649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	<b>SCALE :</b> N.T.S.
	<b>CLIENT</b> ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	<b>DRAWN BY :</b> CWP
	<b>DRAWING TITLE</b> ELEVATION	<b>CHK. BY :</b> CWP
<b>DATE</b> 08-28-17	<b>ISSUED FOR</b>	<b>SHEET SIZE :</b> 8.1/2"x11"
12-20-19	OWNER REVIEW	<b>PROJECT FILE NO.</b> RBS19-61
01-09-20	TENDER	<b>DRAWING NO.</b> DHF-3



EXISTING METAL SIDING TO BE CUT OFF FROM THE TOP OF EACH SHEET (12" TOTAL)

**NOTE:**  
 EXISTING VERTICAL METAL SIDING TO BE REMOVED TO ALLOW FOR APPLICATION OF BLUESKIN VP OVER THE ENTIRE SURFACE PRIOR TO REINSTALLING EXISTING METAL SIDING (TO BE CUT OFF AS NOTED) WITH NEW NEOPRENE FASTENERS

# HIGH WALL DETAIL - AREA 'C' (OPTION No1)

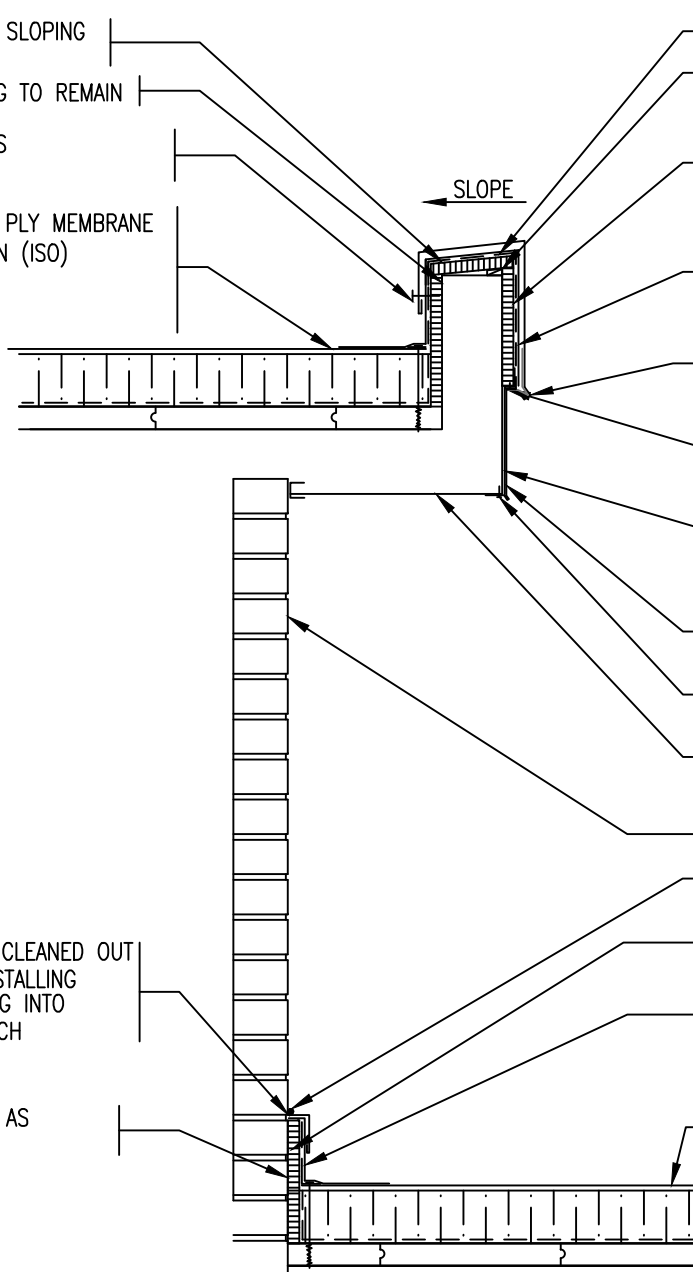
SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>1607 Glen Road        Toronto, Ontario M8Z 1X2</small>	<small>ROOF ASSESSMENT, DESIGN AND SUPERVISION PROVIDED</small> <small>DESIGNER QUALIFIED (P.E./P.R.O. MEMBER/OTHER LICENSED)</small> <small>SUBJECTS AND CONDITIONS OF ROOFS AND BUILDINGS</small> <small>Christopher W. Palmer, C.E.S.</small>	<b>PROJECT</b> HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	<b>DATE :</b> DEC 2019 <b>SCALE :</b> N.T.S. <b>DRAWN BY :</b> CWP	
	<small>1607 Glen Road        Toronto, Ontario M8Z 1X2</small>	<b>CLIENT</b> ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	<b>CHK. BY :</b> CWP <b>SHEET SIZE :</b> 8.1/2"x11"	
	<b>DATE</b> (MM-DD-YY) 12-20-19	<b>ISSUED FOR</b> OWNER REVIEW	<b>DRAWING TITLE</b> ROOF DETAIL	<b>PROJECT FILE NO.</b> RBS19-61 <b>DRAWING NO.</b> DHF-4
	01-09-20	TENDER		

NEW 3/4" FIR PLYWOOD SLOPING  
TOWARD ROOF AREA  
EXISTING WOOD BLOCKING TO REMAIN

NEOPRENE FASTENERS AS  
SPECIFIED

REINFORCED TPO SINGLE PLY MEMBRANE  
ON 3.5" RIGID INSULATION (ISO)  
ON VAPOUR RETARDER  
ON EXISTING WOOD DECK



NEW 24ga PREFINISHED METAL  
CAP FLASHING AS SPECIFIED  
WOOD BLOCKING TO SUIT

NEW 6" PIECE OF 3/4"  
EXTERIOR GRADE FIR PLYWOOD  
SCREWED TO EXISTING  
SUBSTRATE AS DETAILED

SINGLE PLY FLASHING  
MEMBRANE FULLY ADHERED TO  
WOOD SUBSTRATE TO BOTTOM  
OF PLYWOOD

CONT. METAL HOOK STRIP  
AS DETAILED

METAL FASCIA ZIP SCREWS  
SCREWED INTO PLACE EVERY  
2 FEET

CONTRACTOR TO SUPPLY AND  
INSTALL BLUE SKIN VP OVER  
EXISTING WOOD FASCIA AS  
DETAILED

NEW 24ga PREFINISHED METAL  
FASCIA FLASHING AS SPECIFIED  
NEOPRENE FASTENER EVERY 2  
FEET AS DETAILED

EXISTING ALUMINUM SOFFIT TO  
REMAIN AS IS

EXISTING FACE BRICK TO  
REMAIN AS IS

APPROVED SEALANT

NEW PREFINISHED METAL  
COUNTER FLASHING WITH  
SAFETY BEND

TPO FLASHING MEMBRANE  
FULLY ADHERED

REINFORCED TPO SINGLE PLY MEMBRANE  
ON 3.5" RIGID INSULATION (ISO)  
ON VAPOUR RETARDER  
ON EXISTING WOOD DECK

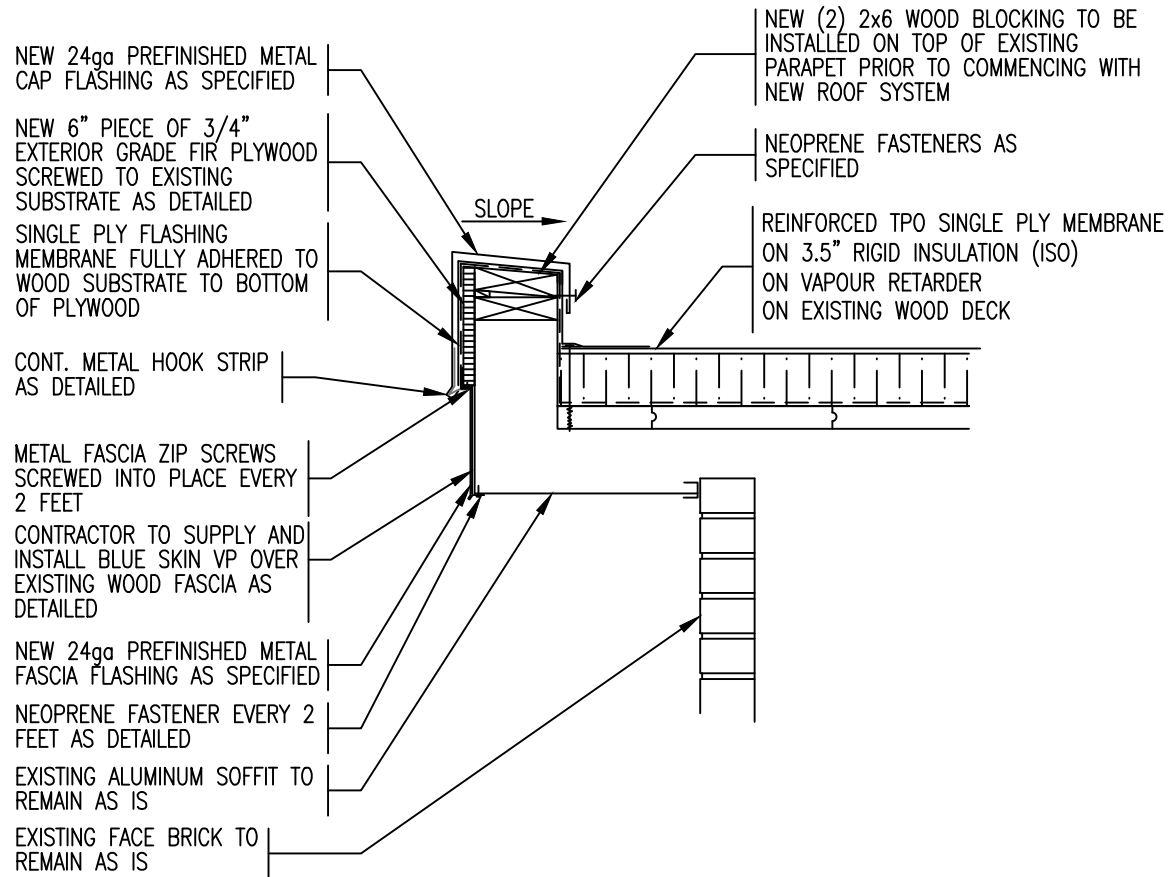
EXISTING REGLET TO BE CLEANED OUT  
(SAW CUT) PRIOR TO INSTALLING  
METAL COUNTER FLASHING INTO  
REGLET MINIMUM 3/4 INCH

NEW 3/4" FIR PLYWOOD AS  
SPECIFIED

# WEST PERIMETER DETAIL - AREA 'C' (OPTION No1)

SCALE : 1" = 1'-0"

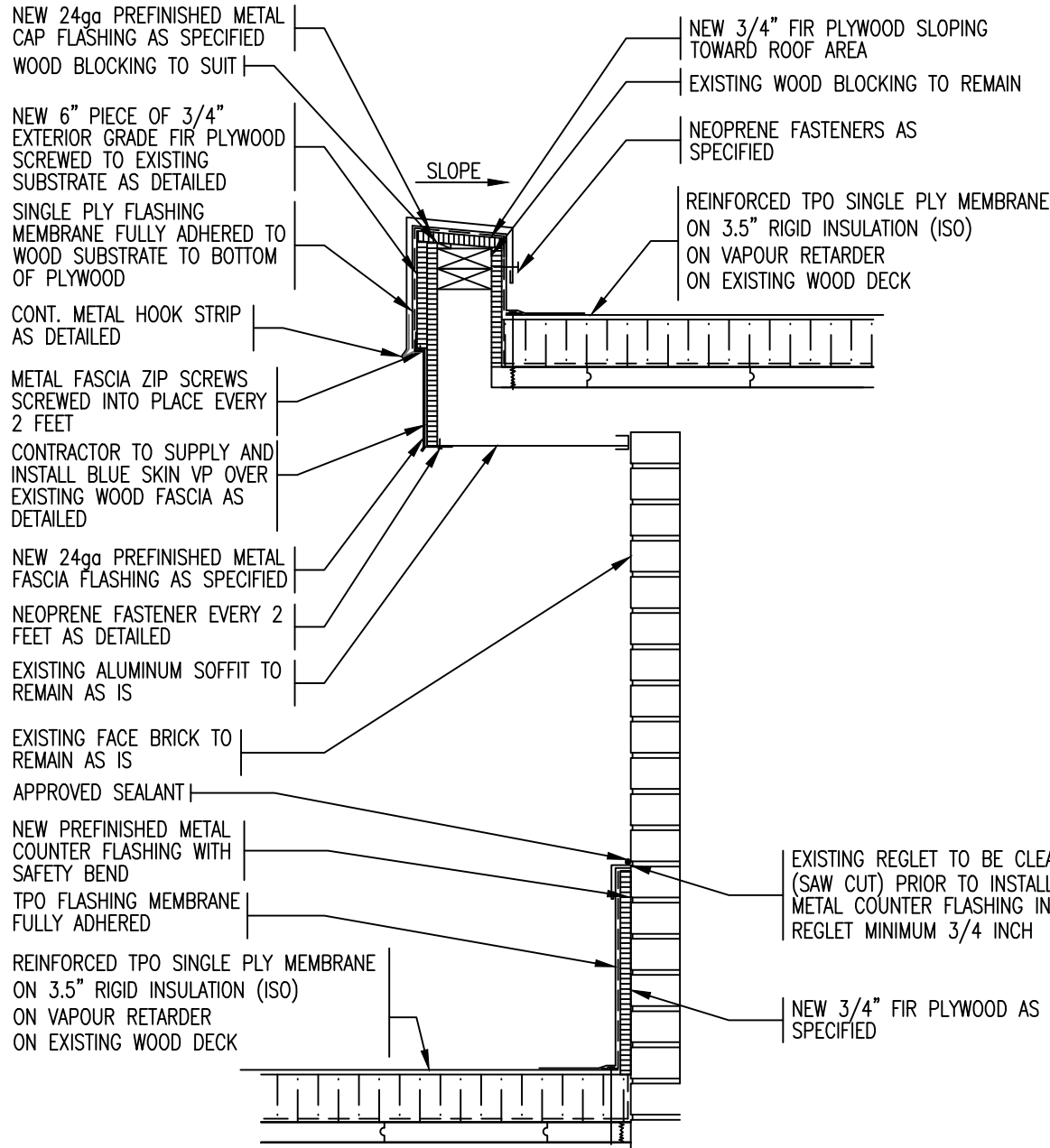
<b>REMLAP BUILDING SERVICES INC.</b> <b>RBS</b> <small>1000 Glen Road North, Oshawa, ON L1H 3K3</small>	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT	DATE : DEC 2019
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	SCALE : N.T.S.
<small>1000 Glen Road North, Oshawa, ON L1H 3K3</small>	649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DRAWN BY : CWP
DATE 08-28-17	ISSUED FOR OWNER REVIEW	CHK. BY : CWP
DATE 12-20-19	OWNER REVIEW	SHEET SIZE : 8.1/2"x11"
DATE 01-09-20	TENDER	PROJECT FILE NO. RBS19-61
	DRAWING TITLE ROOF DETAIL	DRAWING NO. DHF-5



## PERIMETER DETAIL - AREA 'C' (OPTION No1)

SCALE : 1" = 1'-0"

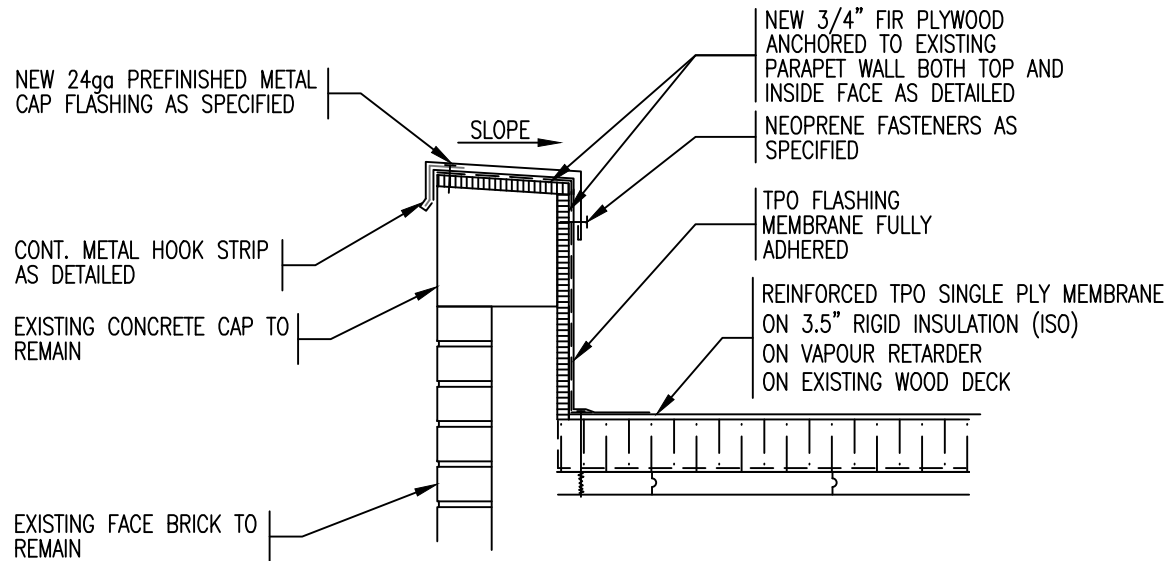
<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>WEATHER RESISTANT BARRIER AND DRAINAGE PROTECTION  MEMBRANE INSTALLERS (POLYURETHANE MEMBRANE RECEIVERS)  SUBJECTS AND CONSULTANTS OF ROOFS AND WALLS</small> <small>Christopher W. Palmer, C.B.S.</small> <small>1607 Glen Road  Toronto, Ontario M8Z 1G2</small>	<b>PROJECT</b> HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	<b>DATE :</b> DEC 2019 <b>SCALE :</b> N.T.S. <b>DRAWN BY :</b> CWP	
	<b>CLIENT</b> ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	<b>CHK. BY :</b> CWP <b>SHEET SIZE :</b> 8.1/2"x11"	
	<b>DATE</b> (01-20-17) 12-20-19 OWNER REVIEW 01-09-20 TENDER	<b>ISSUED FOR</b> DRAWING TITLE ROOF DETAIL	<b>PROJECT FILE NO.</b> RBS19-61 <b>DRAWING NO.</b> DHF-6



# PERIMETER DETAIL - BETWEEN AREA 'A' & 'D' (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>1987 Glen Road          Toronto, Ontario M8Z 1X2          Tel: (416) 738-3885          Fax: (416)738-0757</small>	<b>PROJECT</b> HOLY FAMILY CATHOLIC SCHOOL ROOF REPLACEMENT	<b>DATE :</b> DEC 2019	
	<small>NOT A CONTRACT, ORDER AND SPECIFICATIONS REQUIRED          DRAWING CHANGES (BY/WHICH COMPANY/DATE RECEIVED)          SUBJECT AND CONDITIONS OF BIDS AND TENDERS          Christopher W. Palmer, C.E.S.</small>	<b>CLIENT</b> ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	<b>SCALE :</b> N.T.S.
	<small>1987 Glen Road          Toronto, Ontario M8Z 1X2          Tel: (416) 738-3885          Fax: (416)738-0757</small>	<b>649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1</b>	<b>DRAWN BY :</b> CWP
	<b>DATE</b> (MM-DD-YY) 12-20-19	<b>ISSUED FOR</b> OWNER REVIEW	<b>CHK. BY :</b> CWP
<b>01-09-20</b> TENDER	<b>DRAWING TITLE</b> ROOF DETAIL	<b>SHEET SIZE :</b> 8.1/2"x11" <b>PROJECT FILE NO.</b> RBS19-61 <b>DRAWING NO.</b> DHF-7	

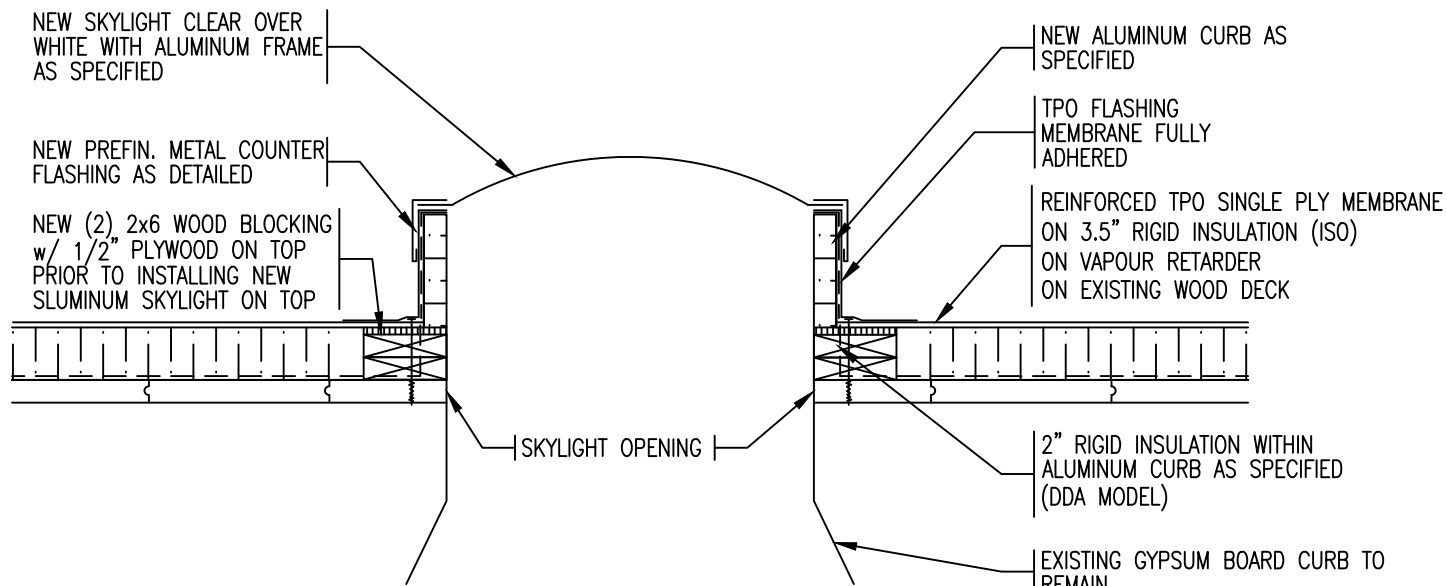


# WEST PARAPET DETAIL - ABOVE MAIN ENTRANCE (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>WE'VE GOT YOU COVERED FROM CONCEPT TO COMPLETION</small> <small>1000 Glen Road          Aurora, Ontario L4G 1G9          Tel: (905) 709-3885          Fax: (905) 709-0797</small>	<b>PROJECT</b> HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	<b>DATE :</b> DEC 2019 <b>SCALE :</b> N.T.S. <b>DRAWN BY :</b> CWP
	<b>CLIENT</b> ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	<b>CHK. BY :</b> CWP <b>SHEET SIZE :</b> 8.1/2"x11"
	<b>DRAWING TITLE</b> ROOF DETAIL	<b>PROJECT FILE NO.</b> RBS19-61 <b>DRAWING NO.</b> DHF-8
	<b>DATE</b> 02-25-17 12-20-19 01-09-20	<b>ISSUED FOR</b> OWNER REVIEW TENDER

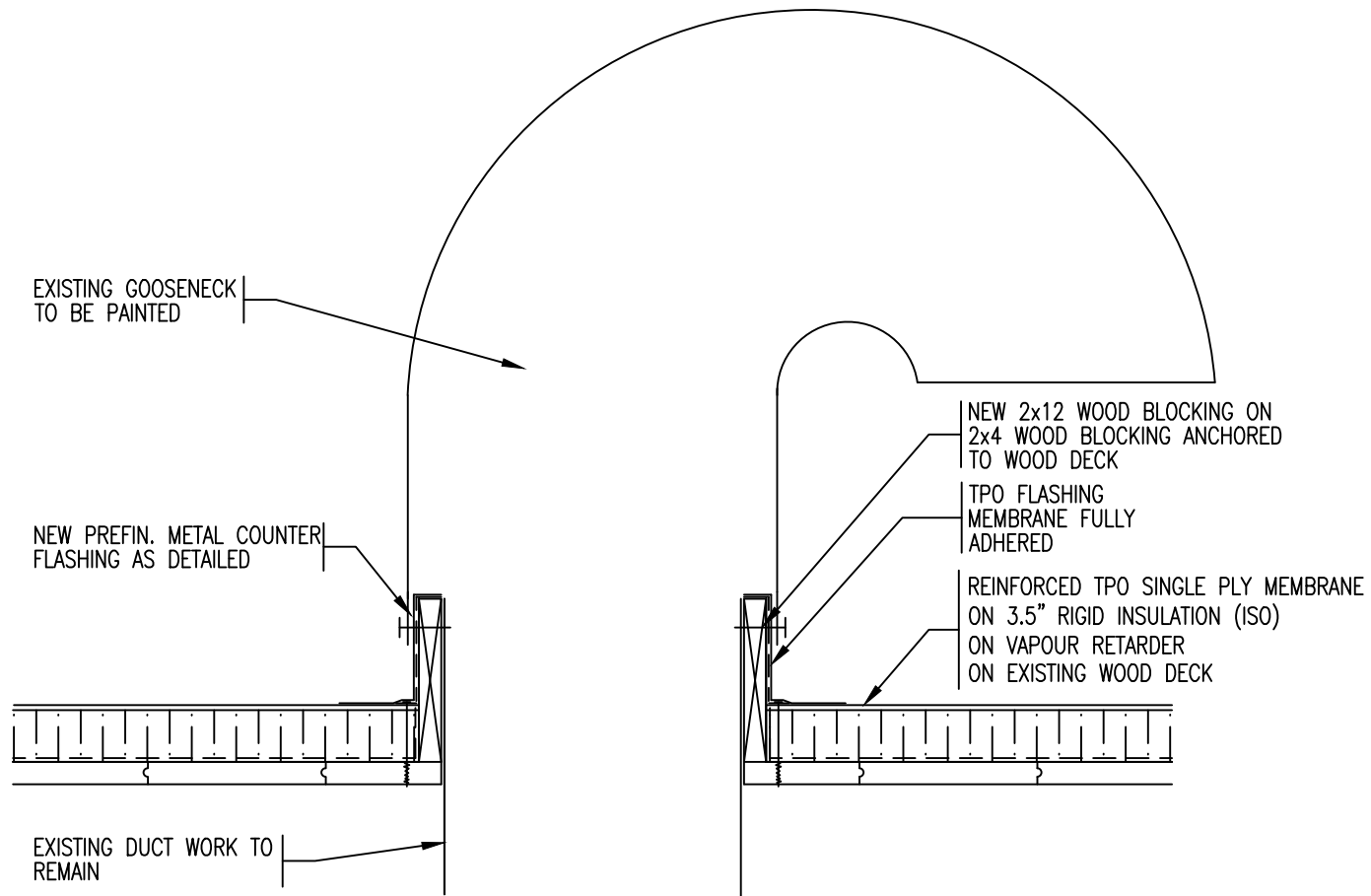




## SKYLIGHT DETAIL (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>ROOF AND CLADDING, DESIGN AND SERVICES PROVIDED          EXISTING SKYLIGHTS (NEW/EXISTING ROOFS/EXISTING ROOFING)          SUBJECT AND CONDITIONS OF BIDS AND AGREEMENT</small> <small>1407 Glen Road          Toronto, Ontario M8Z 1G9</small>	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT	DATE : DEC 2019
	649 MURRAY ST., WALLACEBURG, ONTARIO, N9A 1W1	SCALE : N.T.S.
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	DRAWN BY : CWP
	1407 Glen Road Toronto, Ontario M8Z 1G9 Tel: (416) 738-3885 Fax: (416) 738-0797	CHK. BY : CWP
DATE (DD-MM-YY) 12-20-19	ISSUED FOR OWNER REVIEW	SHEET SIZE : 8.1/2"x11"
01-09-20 TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS19-61 DRAWING NO. <b>DHF-9</b>



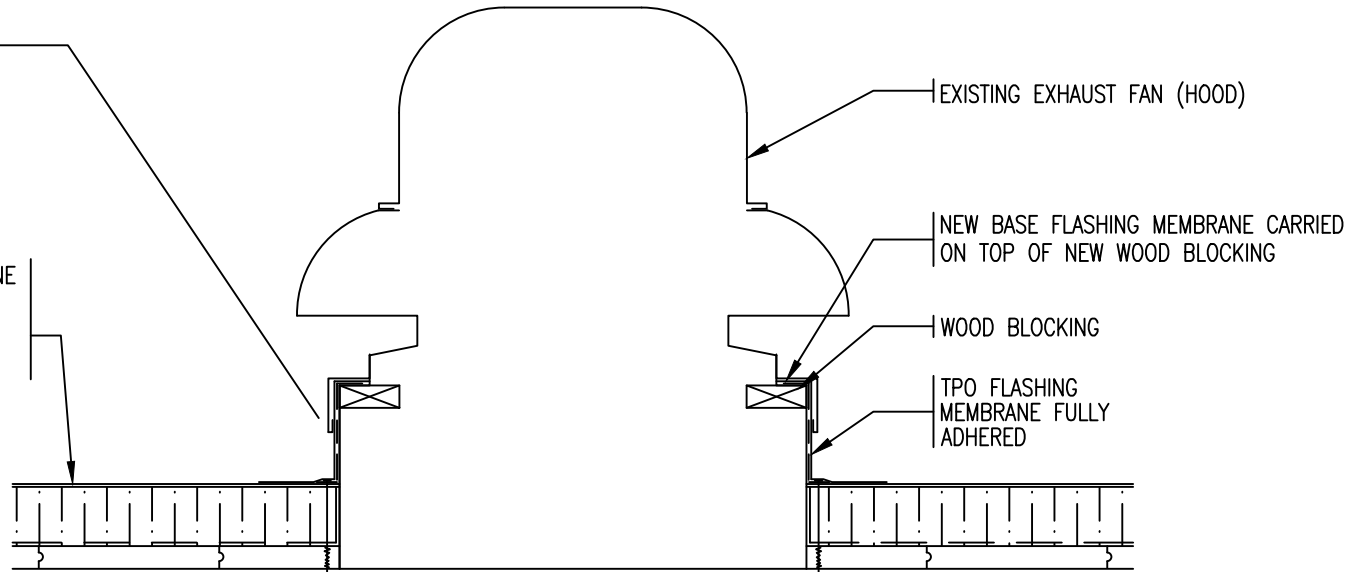
# GOOSENECK EXHAUST FAN DETAIL (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>1607 Glen Road          Aurora, Ontario M1R 1G1</small>	<small>NEW ARCHITECTURAL, DESIGN AND SERVICES PROVIDED</small> <small>ISSUES CHANGES (BY/WORK ORDER/DATE RECEIVED)</small> <small>SUBJECT AND COMMENTS OF ISSUES AND CHANGES</small> Christopher W. Palmer, C.E.S. <small>1607 Glen Road          Aurora, Ontario M1R 1G1</small>	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DATE : DEC 2019 SCALE : N.T.S. DRAWN BY : CWP	
	<small>1607 Glen Road          Aurora, Ontario M1R 1G1</small>	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"	
	DATE 12-20-19	ISSUED FOR OWNER REVIEW	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS19-61 DRAWING NO. <b>DHF-10</b>
	01-09-20	TENDER		

NEW PREFINISHED METAL  
COUNTER FLASHING AS  
DETAILED

REINFORCED TPO SINGLE PLY MEMBRANE  
ON 3.5" RIGID INSULATION (ISO)  
ON VAPOUR RETARDER  
ON EXISTING WOOD DECK



EXISTING EXHAUST FAN (HOOD)

NEW BASE FLASHING MEMBRANE CARRIED  
ON TOP OF NEW WOOD BLOCKING

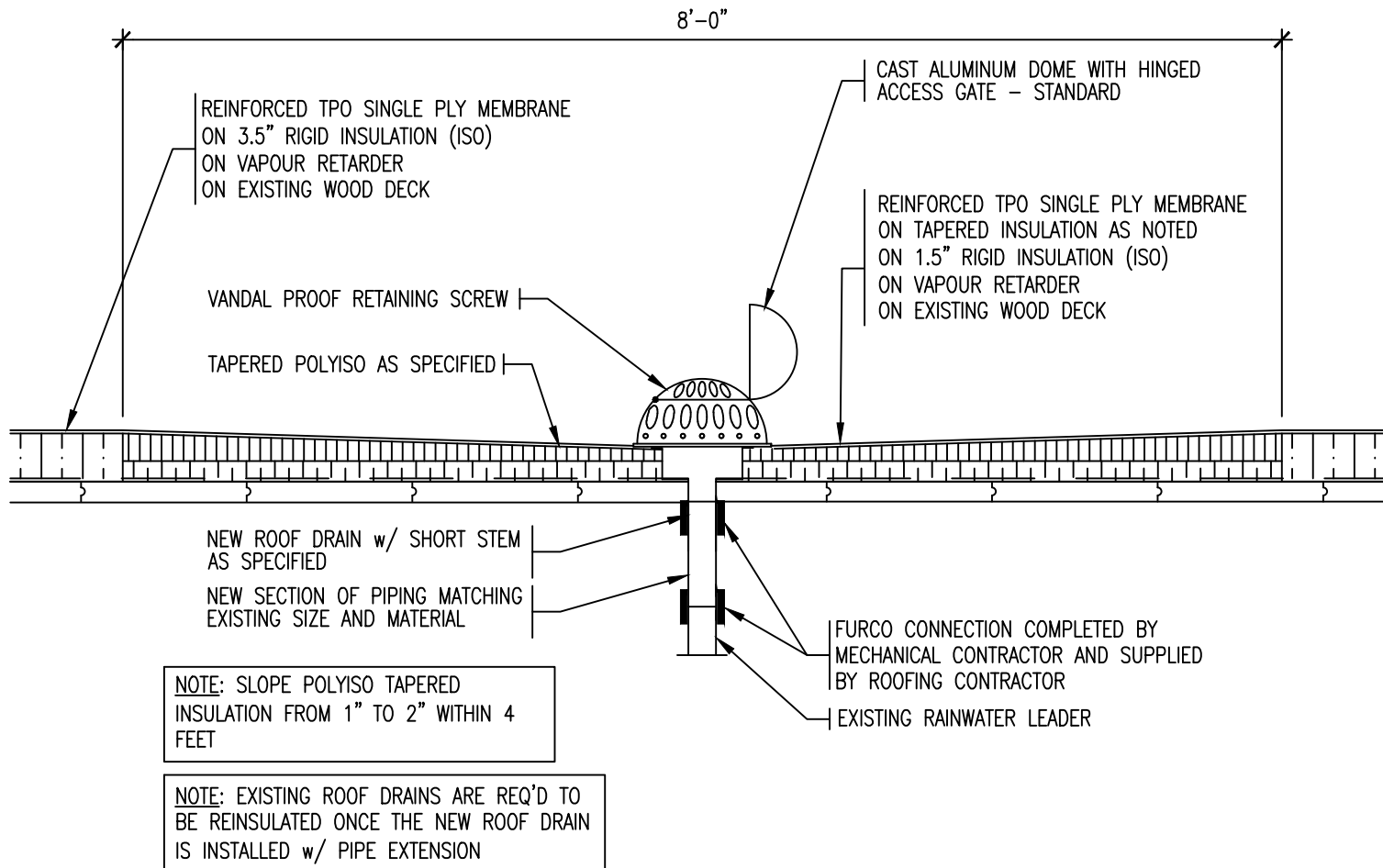
WOOD BLOCKING

TPO FLASHING  
MEMBRANE FULLY  
ADHERED

# EXHAUST FAN DETAIL - TYPICAL (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> ROOF ASSESSMENT, DESIGN AND SUPERVISION SERVICES <b>B</b> BUSINESS DEVELOPMENT (NEW/REPAIR ROOFS/OTHER PROJECTS) <b>S</b> SURVEY AND CONSULTING OF ROOFS AND BUILDINGS <small>1607 Glen Road Huron, Ontario N2R 1G0</small>	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N2A 1W1	DATE : DEC 2019 SCALE : N.T.S. DRAWN BY : CWP	
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"	
	DATE 08-25-17 12-20-19 OWNER REVIEW 01-09-20 TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS19-61 DRAWING NO. <b>DHF-11</b>
	<small>1607 Glen Road Huron, Ontario N2R 1G0</small>	<small>TEL (519) 738-3883 FAX (519)738-4037</small>	

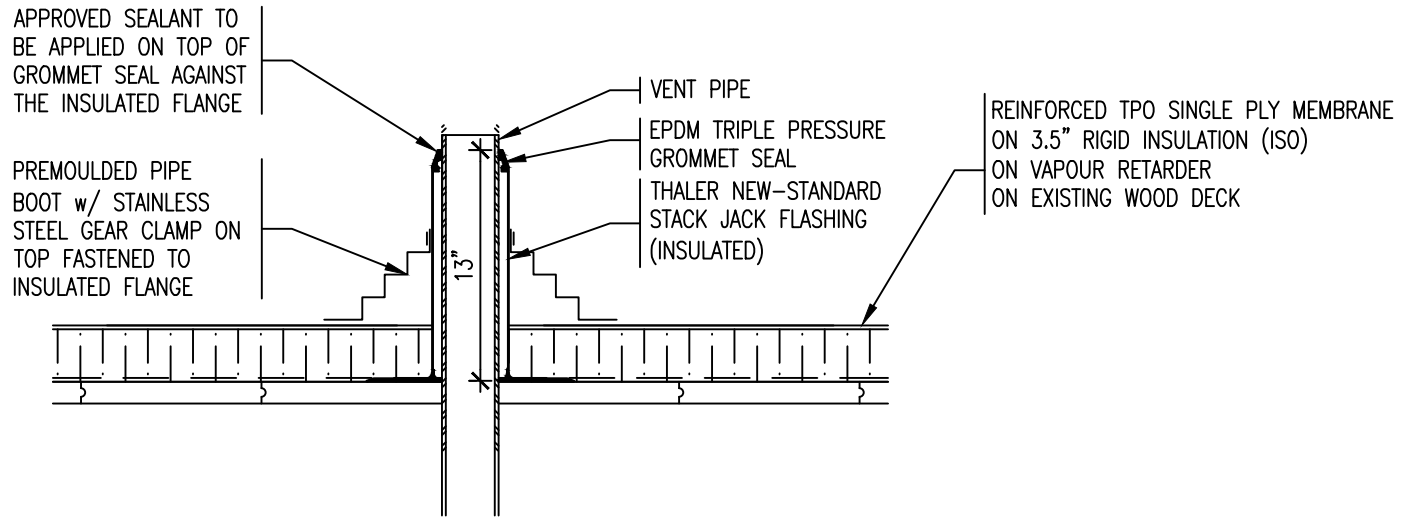


## ROOF DRAIN DETAIL - TYPICAL (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>ROOF MEMBRANES, FLASHING AND DRAINAGE PRODUCTS  INSULATION MATERIALS (POLYURETHAN FOAMS/FOAM PRODUCTS)  SUBSTRATE AND COMPOSITE OF ROOFS AND WALLS</small> <small>1407 Glen Road  Honey, Ontario, M8B 1G2</small>	<b>PROJECT</b> HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	<b>DATE :</b> DEC 2019 <b>SCALE :</b> N.T.S. <b>DRAWN BY :</b> CWP	
	<b>CLIENT</b> ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	<b>CHK. BY :</b> CWP <b>SHEET SIZE :</b> 8.1/2"x11"	
	<b>DATE</b> (08-20-17) 12-20-19 01-09-20	<b>ISSUED FOR</b> OWNER REVIEW TENDER	<b>PROJECT FILE NO.</b> RBS19-61 <b>DRAWING NO.</b> DHF-12
	<b>DRAWING TITLE</b> ROOF DETAIL		

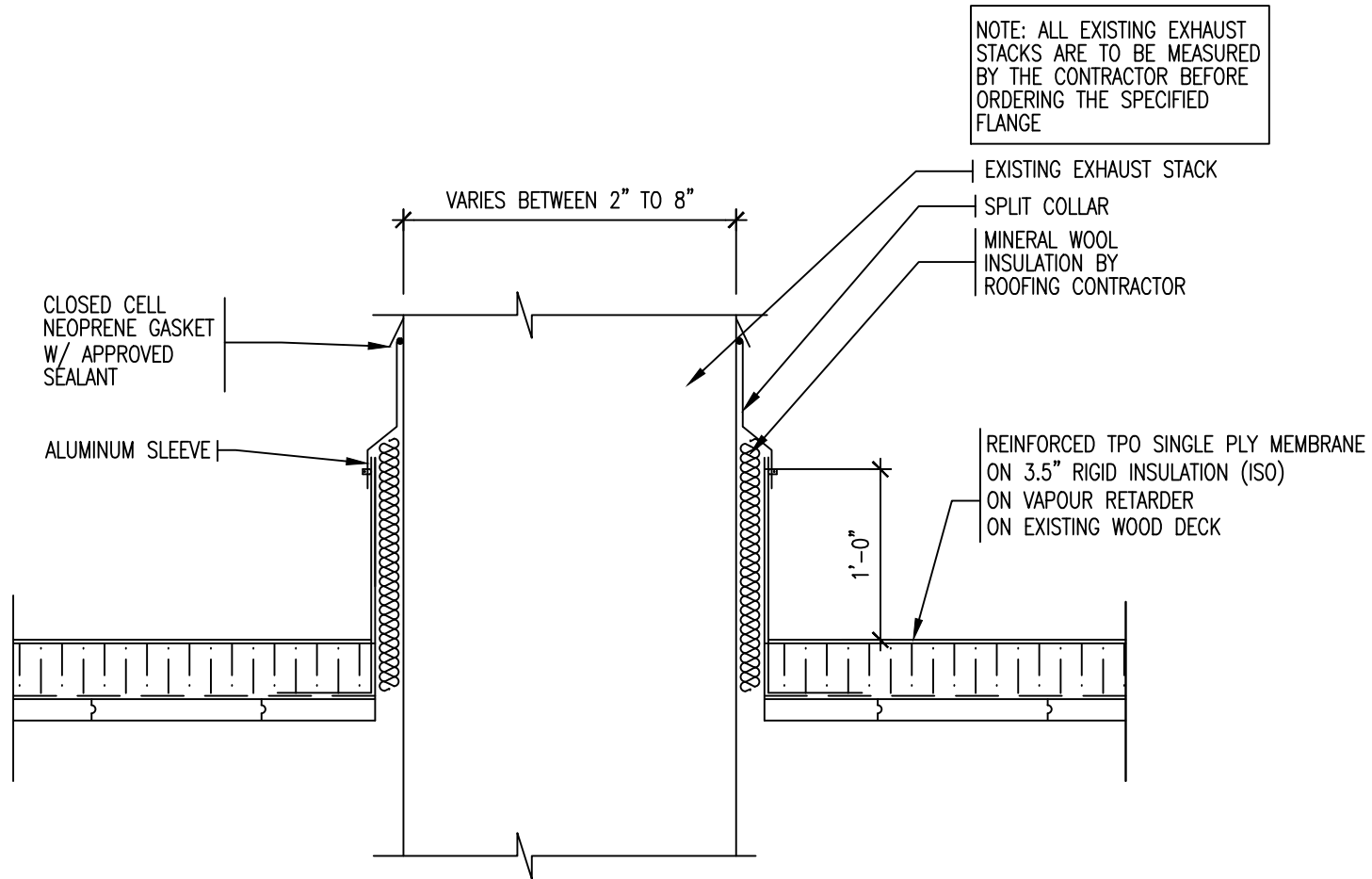
NOTE:  
 IF EXISTING VENT STACK IS NOT HIGHER THAN THE NEW SJ-38, THE CONTRACTOR IS REQUIRED TO EXTEND A MINIMUM OF 3" ABOVE EPDM GROMMET SEAL



# VENT PIPE STACK DETAIL - TYPICAL (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>RBS</b> <small>ROOF REPAIRS, ROOFING AND REPAIRS</small> <small>INSULATION, FLASHING (POLYURETHANE/EPDM/EPICURE)</small> <small>SURFACE AND COATING OF ROOFS AND WALLS</small> <small>Christchurch, N. Palmer, C.B.S.</small> <small>1001 Glen Road Phone, Dunedin 801 100 Tel: (03) 738-3885 Fax: (03)738-4077</small>	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DATE : DEC 2019 SCALE : N.T.S. DRAWN BY : CWP	
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"	
	DATE ISSUED FOR 12-20-19 OWNER REVIEW 01-09-20 TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS19-61 DRAWING NO. <b>DHF-13</b>

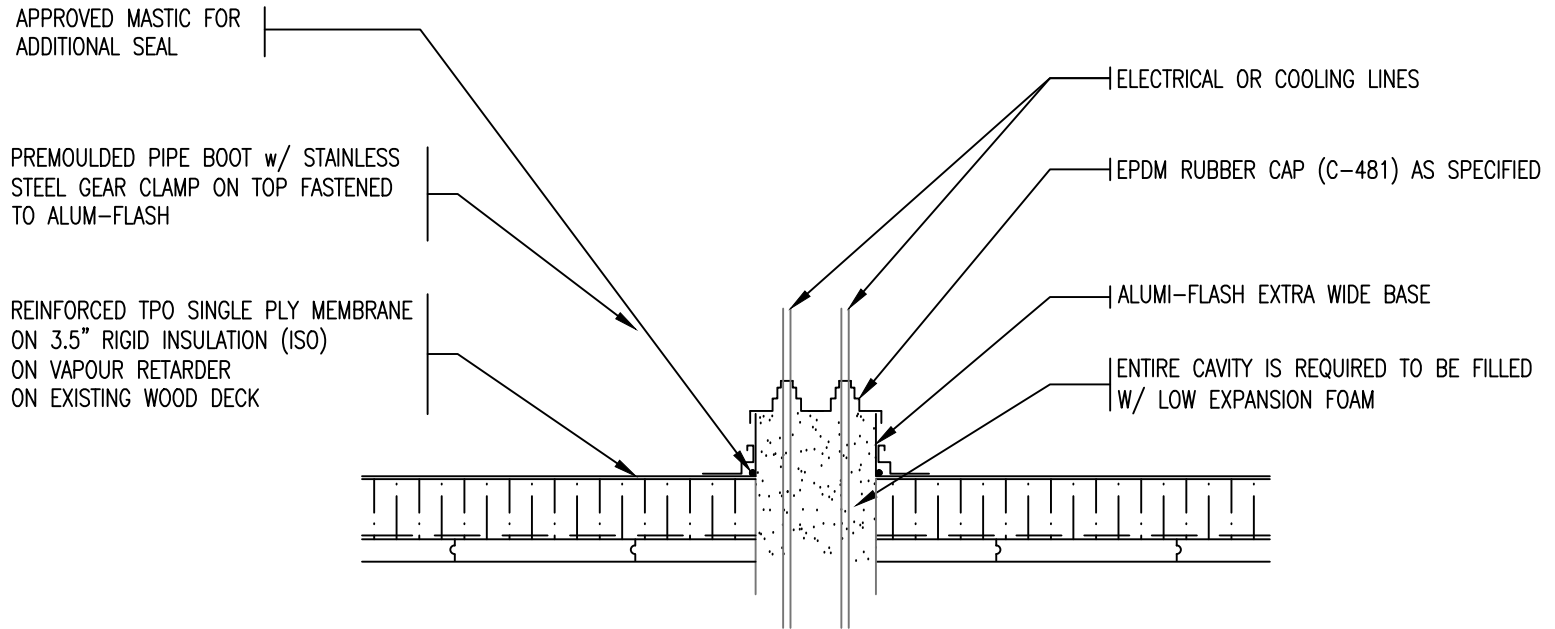


# HOT EXHAUST STACK DETAIL - TYPICAL (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> <b>B</b> <b>S</b> <small>ROOF ASSESSMENT, DESIGN AND SUPERVISION PROVIDED          INSULATION SPECIALISTS (SHEATHWORK, MEMBRANE PROTECTION)          SURVEYS AND CONSULTING OF ROOFS AND BUILDINGS</small> <small>1407 Glen Road          Toronto, Ontario M8Z 1G2</small>	PROJECT HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT	DATE : DEC 2019 SCALE : N.T.S.
	649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	DRAWN BY : CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"
DATE 12-20-19 01-09-20	ISSUED FOR OWNER REVIEW TENDER	PROJECT FILE NO. RBS19-61 DRAWING NO. <b>DHF-14</b>
DRAWING TITLE ROOF DETAIL		

**NOTE:**  
 IT IS THE RESPONSIBILITY OF THE ROOFING CONTRACTOR TO DISCONNECT ALL CONDENSING UNITS BY AN APPROVED CONTRACTOR TO ALLOW A PROPER FLANGE AND SEAL AROUND ALL ELECTRICAL AND COOLING LINES PENETRATIONS FOR THIS PROJECT



# ELECTRICAL / COOLING LINE PENETRATIONS DETAIL - TYPICAL - (OPTION No1)

SCALE : 1" = 1'-0"

<b>REMLAP BUILDING SERVICES INC.</b> <b>R</b> ROOF ASSESSMENT, DESIGN AND SUPERVISION SERVICES <b>B</b> BUSINESS DEVELOPMENT (NEW/REPAIR ROOFS/OTHER PROJECTS) <b>S</b> SURVEY AND CONSULTING OF ROOFS AND BUILDINGS <small>1407 Glen Road        Toronto, Ontario M8Z 1X2        Tel: (416) 738-3383        Fax: (416) 738-0727</small>	<b>PROJECT</b> HOLY FAMILY CATHOLIC SCHOOL PARTIAL ROOF REPLACEMENT 649 MURRAY ST., WALLACEBURG, ONTARIO, N8A 1W1	<b>DATE :</b> DEC 2019 <b>SCALE :</b> N.T.S. <b>DRAWN BY :</b> CWP	
	<b>CLIENT</b> ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	<b>CHK. BY :</b> CWP <b>SHEET SIZE :</b> 8.1/2"x11"	
	<b>DATE</b> (MM-DD-YY) 12-20-19	<b>ISSUED FOR</b> OWNER REVIEW	<b>PROJECT FILE NO.</b> RBS19-61 <b>DRAWING NO.</b> DHF-15
	01-09-20	<b>TENDER</b>	