ST. CLAIR CATHOLIC
DISTRICT SCHOOL BOARD
Lighting the Way ~ Rejoicing in Our Journey

PARTIAL ROOF REPLACEMENT TENDER
GREGORY A HOGAN & ST. PHILIP CATHOLIC SCHOOLS

INSTRUCTIONS TO BIDDERS

Date: May 3, 2016 **BID PACKAGES #: 615-CP1621 & 645-CP1623**

---

1. BID SUBMISSION

The St. Clair Catholic District School Board (Board) is seeking roofing contractors to provide partial roof replacement at two facilities in Lambton County.

Bids from invited bidders shall be submitted on the Tender Form provided and submitted in an envelope clearly marked:
Bid Packages #: 615-CP1621 Gregory A. Hogan Catholic School – Partial Roof Replacement
645-CP1623 St. Philip Catholic School – Partial Roof Replacement

The envelope shall be sealed and delivered to: St. Clair Catholic District School Board
420 Creek Street
Wallaceburg, ON
N8A 4C4

Attention: Mr. Tony Prizio, Procurement Specialist

Bids will be accepted at the Catholic Education Centre office not later than **May 17, 2016 @ 11:00:00 a.m. (No extensions to Bid Closing date are anticipated. Bidders are encouraged to act immediately to prepare their submissions!)**

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 Tender Form must be submitted. **Failure to provide all of the requested information on the Tender Form may result in disqualification of the bid**.

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

After bid closing, sealed envelopes will be opened by the Board's Procurement Specialist (Tony Prizio) and a representative from Corporate Services' department.

2. SCOPE OF WORK

The Instructions to Bidders identifies the work to be performed in the Contract and takes priority if there is a conflict within the Bid Documents. **Refer to attached specifications for detailed description of work to be carried out by the successful proponent.**

3. BID DOCUMENTS

The following Bid Documents form the basis of this Bid Package and shall be examined by bidders:

3.1 Instructions to Bidders dated May 3, 2016
3.2 Tender Form and Specifications – Gregory A Hogan Catholic School Project # 615-CP1621
3.3 Tender Form and Specifications – St. Philip Catholic School Project # 645-CP1623
3..4 **Prime Contract –** Board will issue a purchase order to the successful proponent(s). The Board assumes no responsibility for the bidder's failure to examine **all** of the Bid Documents.

INSTRUCTIONS TO BIDDERS

Date: May 3, 2016 **BID PACKAGES #: 615-CP1621 & 645-CP1623**

---

4. BID ACCEPTANCE

It shall be understood by all bidders, that the bid shall be valid and subject to acceptance by the Board, and that no adjustments shall be made to the Bid amounts for a period of up to and including sixty (60) days from the Bid Closing Date**.**

The Board reserves the right to determine the successful bidder by any combination of base bid, separate prices, requested alternate prices and voluntary alternate prices submitted with the bid. The Board is not obligated to select the bid with the lowest price and may cancel a bid prior to award without liability to any bidder.

The successful bidder shall be required to enter into a formal contract with the Board, which will include the terms and conditions of the Instructions to Bidders, Tender Form, and all other applicable documents.

5. 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.

6. PAYMENT

The Board shall pay within forty-five (45) days after receipt of the invoices which are received and approved by the Board.

7. 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 Tender Form in the spaces provided.

8. ADDENDA

Bidders finding discrepancies, ambiguities or omissions in the bid documents or having doubt as to the meaning or intent thereof, shall immediately notify the Procurement Specialist who may issue instructions and/or clarifications by Addendum to all Bidders. Bidders may also, during the Bidding Period, be advised by Addendum of any additions, deletions or alterations to bid documents. All such Addenda shall become part of the Bid Documents.

All questions to be addressed in writing to:

Mr. Tony Prizio, Procurement Specialist
St. Clair Catholic District School Board
Fax 519.627.8230 or
E-mail: tony.prizio@st-clair.net
Copy: marcie.butler@st-clair.net
No later than 48 hours prior to bid closing date.

9. 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.

10. BONDING: REQUIREMENT

On bids exceeding $ 50,000.00, submit with the Bid an Agreement to Bond for a 50% Performance Bond, and a 50% Labour & Material Payment Bond. The successful Bidder will be required to provide the 50% Performance Bond and 50% Labour and Material Payment Bond from a bonding company.

11. VOLUNTARY ALTERNATE AND 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 must 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.

12. EXAMINATION OF SITE & SITE VISIT

In submitting a bid, it will be assumed that the bidders have carefully examined the site and surrounding properties of the work and have informed themselves as to the existing conditions, access, storage areas and limitations, and have included in the bid price the complete cost of the work contemplated by the drawings and specifications and other bid documents.

A mandatory site visit has been scheduled for May 5, 2016 at 10:00 a.m. Interested parties should meet at the office of Gregory A. Catholic School, located at 1825 Hogan Drive, Sarnia. Following the Gregory A. Hogan visit we will proceed to St. Philip Catholic School, 420 Queen St. Petrolia.

13. TIMING OF PROJECT

A purchase order will be issued by May 31, 2016.
Work on **ALL** sites must take place during the month of July and completed no later than August 19, 2016.

14. PROJECT SPECIFIC REQUIREMENTS

Contractor shall provide their own washroom facilities for their employees, board washrooms will be off-limits to the contractor's employees.

Please be advised that the Owner has a No Smoking Requirement on the Owners' property. Contractors are requested to ensure that employees and suppliers are advised of the Requirement. 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.

15. INSURANCE

Contractor must maintain, at the Contractor's expense for the entire term of the Contract or as otherwise required, all insurance as set out below:

- The successful Contractor shall provide the Board with proof of insurance for Comprehensive General Liability and Property Damage with a limit of not less than $2,000,000.00 (two million dollars) inclusive prior to commencing work.
- The successful Contractor shall provide the Board with proof of insurance for 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)** inclusive prior to commencing work.
- The Contractor agrees to indemnify, hold harmless, and defend the Board 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 or employees by way of ownership or operation of an automobile.
- The successful Contractor shall provide the Board with a complete certified copy of all policies.
- The successful Contractor must name the St. Clair Catholic District School Board as additional insured on their insurance policies.

16. WORKPLACE SAFETY INSURANCE BOARD (WSIB)

Contractor must furnish a copy of Workplace Safety and Insurance Board Clearance Certificate of good standing, "Section 748" of the Workplace Safety and Insurance Act with its bid documents.

17. PERMITS

The Board will apply and pay for the building permit. The Contractor shall apply for and include costs for any other permits and approvals required for the completion of their work.

18. MEETINGS

A Post Bid Meeting may be convened and chaired by the Board who will invite Contractor 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.

19. GUARANTEE

The guarantee shall be as outlined in the specifications starting from after completion of the entire job and acceptance thereof by the Board unless a different period of time is specified with the Board's approval. The Contractor's guarantee shall cover all work under the Contract whether or not any portion or trade has been sublet.

The Contractor agrees to correct promptly, at the Contractor's own expense, defects or deficiencies in the Work which appear prior to and during the period of guarantee, or such longer periods as may be specified for certain products or work.

If the Contractor fails to make any replacements or repairs required hereunder, after notice from the Board and reasonable opportunity to do so, the Board may have such work done at Contractor's expense, including all necessary labour costs in connection therewith. Board shall inform Contractor in advance of the approximate cost of such work to be done by the Board.

20. SCHEDULE

The Contractor will be required to perform the work in accordance with the Schedule dates provided in 13. 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.

21. CONTRACTED SERVICES PROGRAM

Contractors performing work on Board property must complete the Contracted Services Program. 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 or through the Board contact identified previously in this document.

22. 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.

23. SAFE SCHOOL PROCEDURES

Contractor's staff is required to report to the main office of each school 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

24. PARKING

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

END OF INSTRUCTIONS TO BIDDERS

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

AT

GREGORY A. HOGAN CATHOLIC SCHOOL
1825 HOGAN DRIVE
SARNIA ONTARIO
N7S 6G9

TENDER FORM

PROJECT No. 615-CP1621

MAY 2016

Remlap Building Services Inc.
1407 Gore Road, RR1 – Harrow Ontario N0R 1H0

TENDER FORM

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

Name of Bidder _____

(Hereinafter Called the Tenderer Contractor)

Address _____

Being A _____ **(A) which** _____ **(B)**

Note: In space (A) above states type of company
Eg. "Incorporated", "limited", etc.
In space (B) above state "is" or "is not".

Registered under the laws of the Province of _____

DOES HEREBY AGREE TO:

1. Furnish all labour, materials, equipment, and service necessary for the completion of the Partial Roof Replacement at **St. Clair Catholic District School Board** in accordance with Information of Tenderers, Form of Tender, General Conditions of Contract and Drawings by Remlap Building Services, 1407 Gore Road, RR1 Harrow, Ontario – N0R 1G0 for **TOTAL TENDER PRICE "A" (H.S.T. INCLUDED**),

_____ ***$***_____

(HST Included)

or such other sums as may be finally ascertained in accordance with the allowance for Partial Roof Replacement and deductions as set out in the Tender Documents.

2. And also agrees that upon Tender acceptance to furnish a Performance and Maintenance Bond, Labour and Material Payment Bond and Liability Insurance as required by the Contract Documents, the cost of which is included in the Total Tender Price. The Tenderer hereby proposes:

_____

Name of Bonding Company

Stipulated prices shall include all labour, equipment and materials required to complete the work in every respect, including provincial sales tax.

TENDER FORM

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

Section "A"
Partial Roof Replacement for Gregory A. Hogan Catholic School

The Bidder offers to provide all labour, materials and equipment services for the execution and completion of the work of the trade or trades herein and in accordance with the instructions for Bidders including Provincial Sales Tax for the stipulated sum of:

Item No.	*Description*	*Total*	
		Option No.1	**Option No.2**
A.	**ROOF AREA 'A'** The Roofing Contractor is to remove the existing Roof System completely to the metal deck. Then the Contractor is to supply and install Exterior Grade Gypsum, Vapour Retarder, all Rigid Insulation, Protection Board, etc. prior to installing a Two Ply Modified Bitumen Roof System as shown on the Enclosed Drawings and in accordance with the Project Specifications for this facility. (The Contractor will include a Cash Allowance of $15,000.00 with this price (if the allowance is not used, it will be taken off of the Total Tender Price).	**$**_____	**$**_____
B.	**ROOF AREA 'B'** The Roofing Contractor is to remove the existing Roof Hatch and replace with a New Hatch (match existing size)on top of wood blocking so that the bottom of hatch is even with the top of rigid insulation. It is the responsibility of the Roofing Contractor to reconnect the Safety Rail back on the new roof hatch once the roofing system is installed.	**$**_____	

Total Tender Price "A" (excluding HST) **$**_____

Add 13% HST **$**_____

Total Tender Price "A" (including HST) **$**_____

SEPARATE PRICE 'A'

The Contractor is to provide a cost to remove the existing ribbed vertical metal siding on the north and east elevation along with the metal drip edge, then provide and install new double bend metal drip edge complete with thru-wall flashing, sealant on drip edge overlap, etc. prior to installing new vertical metal siding matching the siding on the west elevation for this Roof Area 'A' for a Cost of: **$**_____

TENDER FORM

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

---

3. And also agrees to submit the total tender price in compliance with the provisions of Section 1.21 of the Information to Tenderers regarding Ontario Sales Tax.

4. And agrees to leave this tender open for acceptance a minimum period of sixty (60) days from the tender closing date and not to modify, withdraw, or cancel their bid during this period.

The Tenderer also agrees that until the form of Agreement is completed and executed, this Tender, together with the acceptance thereof by the Owner and the Tenderer, shall remain open regardless of whether or not any other Tender has been previously accepted.

5. And also agrees to start the entire work within four (4) working days after the award of contract.

6. **Documents and Acknowledgements**

The Tenderer acknowledges that they have carefully examined the site of the proposed work, the existing premises and conditions; and thoroughly reviewed the Information to Tenderers, Tender Form, General Conditions, Supplementary General Conditions, Specifications, Drawings and the Addenda of the proposed Contract.

Addendum No. _____ **Date:** _____

Addendum No. _____ **Date:** _____

7. **Completion of Work**

We undertake to complete the work in _____weeks after Receipt of Purchase Order or Written Authorization issued by **St. Clair Catholic District School Board**

OR

To start work on _____ and to complete the work by _____

Completion date is not to exceed **AUGUST 19TH, 2016**

8. **Subcontractors**

The Tenderer proposes to use the following Subcontractors, the portion of the work to be performed by each being as indicated with no more than one Subcontractor being proposed for any such portions. (If Subcontractors are not proposed, write N/A in the blank space.)

TENDER FORM

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

SUBCONTRACTOR	WORK OR TRADE

Signature of Authorized Officer _____

Phone No. _____ ***Email*** _____

Name of Signature _____

Witness _____

Dated at _____

This _____ ***day of*** _____ ***2016***

NOTES:

1. ***If this Tender is submitted by or on behalf of any Corporation by some duly authorized officer, or agent thereof, who shall subscribe their name and office, the Seal of the Corporation shall be affixed.***

2. ***The Owner reserves the right to accept or reject any part OR all of bid and may not necessarily award the tender to the lowest bidder.***

SPECIFICATION
ON
PARTIAL ROOF REPLACEMENT

FOR

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

AT

GREGORY A. HOGAN CATHOLIC SCHOOL
1825 HOGAN DRIVE
SARNIA ONTARIO
N7S 6G9

PROJECT No. 615-CP1621

MAY 2016

Remlap Building Services Inc.
1407 Gore Road, RR1 – Harrow Ontario N0R 1H0

3.0 GENERAL

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

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:

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.

4.0 PRODUCTS

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 1 – HENRY COMPANY

4.1 Modified Bitumen Membrane

4.1.1 Modified Bitumen Sheets shall conform to CGSB 37-GP-56M "Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing";Type 2, Class C, Grade 2 for Base Sheets and Type 1, Class A, Grade 2 for Cap Sheets.

4.1.2 The Contractor may bid on any Manufacturer's Systems specified for torching application of the base sheet and torching of the cap sheet for this roof area. The colour of the granular surface is to be selected by the Owner. Supply additional granules to be applied to bitumen outflows between membrane sheets.

4.1.3 Modified Bitumen Membrane Two-Ply System shall be as specified or approved equal and accepted by the Consultant and Owner.

a) Henry Company
- i) Base Sheet (NP180P/S) and (NP180 S/P 3.5 Cap Sheet)
- ii) Self-Adhesive Membrane (NP 180 Tack Sheet)
- iii) Cap Sheet (NP250gT4)

4.2 Thermal Barrier

4.2.1 Exterior grade gypsum sheathing board with water resistant paper surfaces 12.7mm thick. Reference Standard CSA-A82.27 – M1979

4.3 Vapour Retarder

4.3.1 Vapour retarder shall be Self-Adhered Sand Surfaced Air/Vapour Barrier shall be Perma-Seal FG as manufactured by Henry, an SBS modified bitumen self-adhering reinforced membrane have a thickness of 56 mils.

4.4 Primer

4.4.1 As required by each roof membrane manufacturer.

4.5 Rigid Insulation

4.5.1 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 R-20.5 (L.T.T.R.) (3.5 inch) for the main roof area and R-8.5 (L.T.T.R.) (1.5 inch) around recessed roof drains, Resistance R-Value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 4 feet in size.

4.6 Insulation Overlay Boards

4.6.1 Bituminous Boards consisting of multi-ply, semi-rigid Asphaltic Roofing Substrate Board composed of a mineral fortified Asphaltic core formed between two Asphaltic saturated fiberglass liners. Length 1200mm x Width 1500mm x thickness 4.5 mm such as Recover Board by Bakor or approved equal by the Consultant.

4.0 PRODUCTS

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 1 – HENRY COMPANY

4.7 Bitumen Adhesive

4.7.1 Thermostik 840-10 is a 100% solid, asphalt extended, ambient temperature, vulcanizing adhesive supplied as a two component unit consisting of two liquids which are mixed to produce a pourable adhesive.

4.8 Vent Pipe Stack Flange

4.8.1 The vent pipe stack flange shall be Thaler Roofing Specialties Products Inc. Model No. SJ-37 insulated flange. The Roofing Contractor shall verify the inside diameter of the vent pipe stack for each location.

4.9 Hot Exhaust Stack Flashings

4.9.1 The hot pipe flashings shall be Thaler Roofing Specialties Products Inc. Model № MEF-3A aluminum flashings with split collar to suit new roof system. The Contractor shall fill Roxul Insulation between pipe and flange.

4.10 Roof Drain

4.10.1 Roof Drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4-RR with FURCO FOR DIRECT CONNECT. Outlet size shall be verified on site by the Roofing Contractor.

4.11 Tapered Insulation (Recessed Roof Drains and Cricket Areas)

4.11.1 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 organic surfaces. Tapered panels shall not be less than 13m at any point of the roof to the slope indicated on the Roof Plan and Details.

4.12 Elastomeric Modified Bitumen Adhesive

4.12.1 Bakor MBA Gold is a fib rated rubberized adhesive with a bonding strength designed for adhering SBS modified bitumen and asphalt coated membranes directly to properly prepared substrates.

4.13 Metal Flashings

4.13.1 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.

4.0 PRODUCTS

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 1 – HENRY COMPANY

4.14 Sealants

4.14.1 Caulking Sealants for metal flashing shall be one part silicone to conform to CGSB 19 GP 96. Sealants shall be manufactured by Canadian General Electric, Dow Corning or approved equal. The colour of the sealant shall be identical to the colour of the metal flashing; the Owner is to approve the colour before ordering the sealant. This sealant shall be applied to all metal flashing joints including the reglet.

4.15 Roofing Gravel

4.15.1 The gravel shall be ¼" to 5/8" size; water washed pea gravel, well graded, opaque, non-porous material free of fines, moisture, ice, and snow or long splinters and conforms to ASTM D1863086.

4.16 Framing Lumber

4.16.1 Framing Lumber on top of roof area shall be pressure treated for rot resistance conforming to CSA 0322-1976 and CSA 080-M1983; sizes shown on the Drawings. Grade SPF No. 2 or better.

4.17 Plywood

4.17.1 Exterior Grade "fir" to CSA 0121 or CSA 0151, ½" and ¾" thick, as detailed on Enclosed Drawings.

4.18 Rough Hardware and Nails

4.18.1 The Roofing Contractor shall supply all rough hardware where required. Nails, spikes, screws, bolts, etc. shall be of sufficient size and type to rigidly secure all members into place. All nails shall be hot dip galvanized.

4.19 Painting

4.19.1 All existing gas lines, exhaust fan hoods and roof top units shall be cleaned and scraped prior to being repainted.

4.19.2 Clean and prime with Alkyd Metal Primer before applying two coats of enamel paint. The colour shall be selected by the Owner.

4.20 Plastic Roof Cement

4.20.1 Pro-Grade Plastomers 810-21 Plastic Cement is composed of asphalt synthetic rubber, fiber and fillers exceeding the requirements of CAN/CGSB-37.5. This product is manufactured by Bakor or approved equal.

4.0 PRODUCTS

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 1 – HENRY COMPANY

4.21 Precast Pads

4.21.1 Precast concrete pads shall be 24 inch by 24 inch by 2 inch thick for additional walkway, etc. as shown on Roof Plan. Pads shall be placed on a 20 inch by 20 inch by 2 inch thick sections of rigid Type 4 extruded polystrenne insulation. Also the supports under the electrical raceway shall be 12 inches by 12 inches by 2 inches and placed on a 10 inch square by 1 inch thick of rigid Type 4 extruded polystrenne insulation as detailed. (20 new pavers in total)

4.22 Roof Pipe Supports

4.22.1 Roof pipe supports as manufactured by C-Port (Model No. CXP) are to be supplied and installed by the Roofing Contractor to replace the existing supports for gas line. (Total of 30 Required)

5.0 EXECUTION

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 1 – HENRY COMPANY

5.1 TEAR-OFF

5.1.1 Prior to the start of installation, the roofing Contractor shall examine all roof areas included in this Specification. The Roofing Contractor shall notify the Consultant of any unacceptable conditions.

5.1.2 These conditions include, but are not limited to, uneven deck surfaces, improperly installed curbs and nailers, surfaces with fins or sharp projections, and surfaces contaminated with incompatible materials. Work shall not begin until these conditions have been corrected. Protect membrane in high traffic areas, work by other trades, application of gravel, etc.

5.1.3 Completely remove the existing Loose Laid Ballasted Roof System completely to the existing metal deck. Only tear-off those roofing components that can be re-roofed in the same day. Tear-off work shall not be left exposed at the end of the work day.

5.2 INSTALLATION – Two Ply Modified Bitumen Membrane Roof System

5.2.1 The areas to be re-roofed must have all the roofing components removed completely to the metal roof dish before applying the new roof system. Install all carpentry items such as curb extensions, wood blocking at roof perimeters, etc. as detailed on the Drawings. All wood members which are to be anchored to masonry construction shall be permanently fastened into place. Do not use fasteners which will cause spalling, cracking or deformation of fastened materials.

5.2.2 Apply roofing materials over clean and dry surfaces in accordance with the Manufacturer's Recommendations. The re-roofing operations shall be performed on a continuous basis as weather conditions allow.

5.2.3 Install all new wood blocking and plywood as detailed on the applicable details

5.2.4 **Installation of Thermal Barrier**

.1 Apply adhesive as recommended by the Membrane Manufacturer on top the metal roof deck to ensure good adhesion of the exterior grade gypsum board to the top flute of metal deck..

5.2.5 **Installation of Vapour Retarder**

.1 Apply Blueskin Primer by roller or spray to all surfaces as required and allow drying.

.2 Unroll and align air/vapour barrier centered at low point of roof or drain. Apply air/vapour removing release paper providing 2 inch side and end laps. Seal around projections as per manufacturer's recommendations.

.3 Apply self-adhesive membrane without any wrinkles or fish mouths.

.4 The vapour retarder is to be carried up the vertical surfaces a minimum of 8 inches above roof deck.

5.2.6 **Installation of Rigid Insulation Boards**

.1 Install boards with cold adhesive to the vapour retarder. On all insulation surfaces intended for board coverage apply beads of 20mm (3/4") wide on 200mm (8") centers.

5.0 EXECUTION

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 1 – HENRY COMPANY

.2 Firmly set the rigid insulation boards in staggered fashion. All boards must be butted tightly together.

.3 Apply only as many boards as can be covered in the same day.

5.2.7 **Installation of Tapered Insulation Boards**

.1 Install boards with cold adhesive to the rigid insulation boards below. On all insulation surfaces intended for tapered insulation board coverage apply beads of 20mm (3/4") wide on 200mm (8") centered.

.2 Firmly set the tapered insulation boards as indicated on the tapered approved drawings. All boards must be butted tightly together.

5.2.8 **Installation of Insulation Overlay Boards**

.1 Install boards with cold adhesive to the rigid insulation as indicated. On all insulation surfaces intended for board coverage, apply beads of 20mm (3/4") wide on 200mm (8") centers.

.2 Firmly set the insulation overlay boards, long joints continuously and short joints staggered. All boards must be evenly and tightly butted together.

.3 All vertical joints between boards and insulation will be staggered.

.4 Apply only as many boards as can be covered in the same day.

5.2.9 **Base Sheet Installation**

.1 Install the base sheet roof membrane starting from the low point (roof drain) to the high point. The base sheet is to be adhered with adhesive to the overlay boards to the parapet wall.

.2 Unroll base sheet flashing at drain level with first side lap lined-up with drain center.

.3 Overlap side laps by 75mm along lines provided to this end and overlap end laps by 150mm. Stagger end joints by at least 300mm.

.4 Re-Roll base sheet and unroll again onto bed of cold adhesive with a notched squeegee having notches 6mm (1/4") wide 3mm (1/8") deep and spaced 25mm (1") on centers. The side and end lap must be HEAT WELDED (FUSED) TOGETHER WITH A LEISTER HAND HELD GUN OR APPROVED TO EQUAL TO ENSURE GOOD FUSION. Also avoid the cold adhesive from within two inches of the side and end laps.

.5 Avoid forming wrinkles, air pockets or fish-mouthing. The modified bitumen membrane should be cut in maximum lengths of 55mm (18 ft) and allowed to relax on the jobsite.

.6 This membrane is to be carried up to the inside face of parapet wall prior to installing new plywood on inside face of parapet wall.

5.0 EXECUTION

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 1 – HENRY COMPANY

5.2.10 Installation of Additional Plywood and/or Wood Blocking

.1 Install all new wood blocking and plywood as detailed on the applicable Details.

Note: The new plywood detail on the inside face of parapet wall is not to be installed until the first ply of base sheet roof membrane is applied 3 inches up the vertical surface of parapet wall.

5.2.11 Base Sheet Flashing Installation

.1 Apply base sheet flashing only once primer coat is dry.

.2 Install base sheet flashing in one (1) metre widths to cover roofing substrate over 100mm. Overlap side laps by 75mm. Stagger side laps by a least 100mm from base sheet overlaps on the roof to avoid excessive layering.

.3 Apply base sheet flashing directly onto substrate by removing silicone paper cover sheet. Proceed from top to bottom. Once in place, apply pressure manually in a uniformed fashion to obtain homogenous adherence over the entire surface. Preferably seal seams with aluminum applicator and rubber roller. The flashing membrane is to be adhered to the bottom of the wood blocking on the outside face of parapet wall. Nail outside edge at 300mm O.C. Burn off plastic film of base sheet membrane before adhering base sheet flashing over it.

.4 Avoid forming wrinkles, air pockets or fish-mouths.

5.2.12 Cap Sheet Installation

.1 Prior to installing the cap sheet membrane, all insulated flanges are to be installed around each roof penetration and secured to the metal roof deck with four (4) fasteners per flange before applying base sheet target section on top.

.2 Once the base sheet has been applied, the stripping has been completed and no indications of defects are present, then the cap sheet shall be laid.

.3 Begin application of the cap sheet at the lowest edge. Cap sheet shall be unrolled and care be taken to ensure proper alignment of the first roll.

.4 Cap sheet shall be torched into place in accordance with the Recommendations of the Membrane Manufacturer, to the base sheet membrane.

.5 The seams between the base sheet and cap sheet shall be staggered a minimum of 300 mm (12 inches).

.6 Care should be taken to ensure heating is consistent across the width in order to avoid skips or voids. Bitumen should flow out from the lap 6mm (1/4") to ensure a tight seal.

.7 All lap seams on the cap sheet are to be checked after membrane installation.

5.0 EXECUTION

OPTION NO. 1 – HENRY COMPANY

5.2.13 **Cap Sheet Flashing Installation**

.1 Cap sheet membrane installation shall be laid in strips 1m wide along the parapet. End laps shall be a minimum of 100mm (4 inches) overlap.

.2 Extend cap sheet a minimum of 150mm (6 inches) onto roof surface from the intersection of roof and vertical surfaces and extend to the top of the parapet wall to the outside of wall.

.3 The flashing membrane shall be anchored to the wood nailers by nailing through discs or using nails with 25mm (1 inch) minimum diameter head semi-solidly attached. Nail a minimum of 200mm (8 inches) on center.

.4 Matching granules shall be used to cover excess between flow at seams.

5.2.14 **Flood Coat and Gravel Cover**

.1 Apply a flood coat of cold roofing adhesive (MBA Gold) at the rate of 6.5 gallons/100ft² as recommended by Manufacturer (Bakor).

.2 Then embed new approved pea stone gravel at 20 kg/m² (450 lbs/100ft²) while adhesive is still wet.

5.2.15 **Concrete Pavers**

.1 Install concrete pavers as indicated on the Roof Plan on top of one inch extruded polystrenne rigid insulation (Type 4).

5.3 INSTALLATION – Metal Flashings

5.3.1 Cap and counter flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to wood capping blocking at 12 inches O.C.

5.3.2 Flashing shall be fabricated to shapes on site with all necessary breaks for adequate expansion.

5.3.3 The inside face of the metal cap flashing between the S-locked joints is to be secured with three (3) fasteners matching the colour of the metal cap with a neoprene washer between the fastener head and inside face of the metal cap flashing.

5.3.4 All joints shall be sealed with approved sealant.

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

5.4 CLEAN-UP

5.4.1 Upon completion of the installation, the work shall be left clean and free of defects which might affect the durability or appearance of the building. Clean all roof surfaces, including adjacent roofs and grounds of all foreign matter resulting from this Roofing Project.

6.0 PRODUCTS

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 2 – SOPREMA

6.1 Modified Bitumen Membrane

6.1.1 Modified Bitumen Sheets shall conform to CGSB 37-GP-56M "Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing";Type 2, Class C, Grade 2 for Base Sheets and Type 1, Class A, Grade 2 for Cap Sheets.

6.1.2 The Contractor may bid on any Manufacturer's Systems specified for torching application of the base sheet and torching of the cap sheet for this roof area. The colour of the granular surface is to be selected by the Owner. Supply additional granules to be applied to bitumen outflows between membrane sheets.

6.1.3 Modified Bitumen Membrane Two-Ply System shall be as specified or approved equal and accepted by the Consultant and Owner.

a) Soprema
- i) Base Sheet (SOPRALENE 180 S/P 3.5 for Cap Sheet)
- ii) Self-Adhesive Membrane (NP 180 Tack Sheet)
- iii) Cap Sheet (NP250gT4) for flashing membrane.

6.2 Thermal Barrier

6.2.1 Exterior grade gypsum sheathing board with water resistant paper surfaces 12.7mm thick. Reference Standard CSA-A82-27-M1979.

6.3 Vapour Retarder

6.3.1 Sopravap'R is a self-adhesive membrane composed of SBS modified bitumen and a tri-laminated woven polyethylene facer. The under face is covered with a silicone release film.

6.4 Insulation Soprasmart Board 180

6.4.1 Soprasmart board 180 is a high performance high density support panel composed of SBS modified bitumen membrane with a non-woven polyester reinforcement, factory-laminated on asphaltic board (SOPRABOARD). The surface is covered with a thermo-fusible plastic film.

6.5 Primer

6.5.1 The primer shall consist of Elastocol Stick designed for use with self-adhered SBS modified bitumen base sheet flashing membrane. The risk of primer flare-up is eliminated when modified bitumen cap sheets are thermo-fused to the self-adhered base sheet flashing membranes.

6.6 Duotack

6.6.1 Duotack is a LOW-RISE two-part urethane adhesive to be used for the application of rigid insulation.

6.0 PRODUCTS

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 2 – SOPREMA

6.7 Vent Pipe Stack Flange

6.7.1 The vent pipe stack flange shall be Thaler Roofing Specialties Products Inc. Model No. SJ-37 insulated flange. The Roofing Contractor shall verify the inside diameter of the vent pipe stack for each location

6.8 Hot Exhaust Stack Flashings

6.8.1 The hot pipe flashings shall be Thaler Roofing Specialties Products Inc. Model № MEF-3A aluminum flashings with split collar to suit the new Two-Ply Modified Bitumen Roof System. The Roofing Contractor shall verify the inside diameter of the hot pipe stack for each location and fill between the flange and pipe with Roxul Insulation.

6.9 Inter Clip System

6.9.1 This system is to be used wherever Thaler SJ-37 are not able to be used.
The system allows the easy assembly of pre-fabricated pitch pockets on the roof which are then filled with IC Duomastic, a solvent-free fast drying multi-use mastic.

6.10 Roof Drain

6.10.1 Roof Drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4-RR with FURCO FOR DIRECT CONNECT. Outlet size shall be verified on site by the Roofing Contractor.

6.11 Rigid Insulation

6.11.1 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 R-20.5 (L.T.T.R.) (3.5 inch) for the main roof area and R-8.5 (L.T.T.R.) (1.5 inch) around recessed roof drains, Resistance R-Value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 4 feet in size.

6.12 Tapered Insulation (Recessed Roof Drains and Cricket Areas)

6.12.1 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 organic surfaces. Tapered panels shall not be less than 13m at any point of the roof to the slope indicated on the Roof Plan and Details.

6.13 Elastomeric Modified Bitumen Adhesive

6.13.1 COLPLY EF is a low volatile organic compound (VOC), low odour, 100% solids and solvent-free polyether based adhesive.

6.0 PRODUCTS

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 2 – SOPREMA

6.14 Metal Flashings

6.14.1 Metal flashings shall be 24ga. Colorite 5000 Series pre-finished steel (both sides) as manufactured by Westeel Roscoe, Steelcolour 5000 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.

6.15 Sealants

6.15.1 Caulking Sealants for metal flashing shall be one part silicone to conform to CGSB 19 GP 96. Sealants shall be manufactured by Canadian General Electric, Dow Corning or approved equal. The colour of the sealant shall be identical to the colour of the metal flashing; the Owner is to approve the colour before ordering the sealant. This sealant shall be applied to all metal flashing joints including the reglet.

6.16 Roofing Gravel

6.16.1 The gravel shall be ¼" to 5/8" size; water washed pea gravel, well graded, opaque, non-porous material free of fines, moisture, ice, and snow or long splinters and conforms to ASTM D1863086.

6.17 Framing Lumber

6.17.1 Framing Lumber on top of roof area shall be pressure treated for rot resistance conforming to CSA 0322-1976 and CSA 080-M1983; sizes shown on the Drawings. Grade SPF No. 2 or better.

6.18 Plywood

6.18.1 Exterior Grade "fir" to CSA 0121 or CSA 0151, ½" and ¾" thick, as detailed on Enclosed Drawings.

6.19 Rough Hardware and Nails

6.19.1 The Roofing Contractor shall supply all rough hardware where required. Nails, spikes, screws, bolts, etc. shall be of sufficient size and type to rigidly secure all members into place. All nails shall be hot dip galvanized.

6.20 Painting

6.20.1 All existing gas lines, exhaust fan hoods and roof top units shall be cleaned and scraped prior to being repainted.

6.20.2 Clean and prime with Alkyd Metal Primer before applying two coats of enamel paint. The colour shall be selected by the Owner.

7.0 EXECUTION

OPTION NO. 2 – SOPREMA

6.21 Plastic Roof Cement

6.21.1 Pro-Grade Plastomers 810-21 Plastic Cement is composed of asphalt synthetic rubber, fiber and fillers exceeding the requirements of CAN/CGSB-37.5. This product is manufactured by Bakor or approved equal.

6.22 Precast Pads

6.22.1 Precast concrete pads shall be 24 inch by 24 inch by 2 inch thick for additional walkway, etc. as shown on Roof Plan. Pads shall be placed on a 20 inch by 20 inch by 2 inch thick sections of rigid Type 4 extruded polystrenne insulation. Also the supports under the electrical raceway shall be 12 inches by 12 inches by 2 inches and placed on a 10 inch square by 1 inch thick of rigid Type 4 extruded polystrenne insulation as detailed. (20 new pavers in total) along with existing pavers on roof area

6.22 Roof Pipe Supports

6.22.1 Roof pipe supports as manufactured by C-Port (Model No. CXP) are to be supplied and installed by the Roofing Contractor to replace the existing wood supports for gas line. (Total of 30 Required)

7.0 EXECUTION

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 2 – SOPREMA

7.1 Tear-Off

7.1.1 Prior to the start of installation, the roofing Contractor shall examine all roof areas included in this Specification. The Roofing Contractor shall notify the Consultant of any unacceptable conditions.

7.1.2 These conditions include, but are not limited to, uneven deck surfaces, improperly installed curbs and nailers, surfaces with fins or sharp projections, and surfaces contaminated with incompatible materials. Work shall not begin until these conditions have been corrected. Protect membrane in high traffic areas, work by other trades, application of gravel, etc.

7.1.3 Completely remove the existing Loose Laid Ballasted Roof System completely to the existing metal deck. Only tear-off those roofing components that can be re-roofed in the same day. Tear-off work shall not be left exposed at the end of the work day.

7.2 INSTALLATION – Two Ply Modified Bitumen Membrane Roof System

7.2.1 The areas to be re-roofed must have all the roofing components removed completely to the metal roof deck before applying the new roof system. Install all carpentry items such as curb extensions, wood blocking at roof perimeters, etc. as detailed on the Drawings. All wood members which are to be anchored to masonry construction shall be permanently fastened into place. Do not use fasteners which will cause spalling, cracking or deformation of fastened materials.

7.2.2 Apply roofing materials over clean and dry surfaces in accordance with the Manufacturer's Recommendations. The re-roofing operations shall be performed on a continuous basis as weather conditions allow.

7.2.3 Install all new wood blocking and plywood as detailed on the applicable details.

7.2.4 **Installation of Thermal Barrier**

.1 Install boards with Duotack Adhesive to the metal deck.

.2 On all gypsum surfaces intended for board coverage, apply beads of 20mm (3/4") wide on 200mm (8") centers.

7.2.5 **Installation of Vapour Retarder**

.1 When applying Sopravap'R over top metal deck, the existing surface is not required to be primed.

.2 The deck surface must be clean and sound, free of loose materials or contaminants such as water and grease which may compromise the performance of this product.

.3 Unroll and align air/vapour barrier centered at low point of roof or drain. Apply air/vapour removing release film providing 3 inch side laps and 6 inch end last (minimum). Seal around projections as per manufacturer's recommendations.

.4 Apply self-adhesive membrane without any wrinkles or fish mouths.

.5 The vapour retarder is to be carried up the vertical surfaces a minimum of 8 inches above roof deck.

7.0 EXECUTION

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 2 – SOPREMA

7.2.6 **Installation of Rigid Insulation Boards**

.1 Install boards with Duotack Adhesive to the vapour retarder. On all insulation surfaces intended for board coverage apply beads of 20mm (3/4") wide on 200mm (8") centers.

7.2.7 **Installation of Tapered Insulation Boards**

.1 Install boards with Duotack Adhesive to the rigid insulation below.

.2 On all insulation surfaces intended for tapered insulation board coverage apply beads of 20mm (3/4") wide on 200mm (8") centers.

.3 Firmly set the tapered insulation boards as indicated on the tapered approved drawings. All boards must be butted tightly together.

7.2.8 **Installation of Soprasmart Board**

.1 Install Smart Boards with Duotack Adhesive to the rigid insulation as indicated. On all insulation surfaces intended for board coverage, apply continuous strips of 13 to 19 mm (½ to ¾ inch) on 150 mm (6") centers for eight (8) feet around roof perimeter and 200 mm (8") centers for the field of the roof.

.2 Firmly set the Smart Boards, into the strips of Duotack Adhesive. All boards must be evenly and tightly butted together in soldier fashion.

.3 Apply only as many boards as can be covered in the same day.

.4 Install Sopralap cover strips across the end laps on the panels by heat-welded with a propane torch.

7.2.9 **Installation of Additional Plywood and/or Wood Blocking**

Install all new wood blocking and plywood as detailed on the applicable Details.

Note: The new plywood detailed on the inside face of parapet wall is not to be installed until the first ply of base sheet roof membrane is applied 3 inches up the vertical surface of parapet wall.

7.2.10 **Application of Primer**

.1 Apply primer to the wood blocking and plywood surfaces which will be in contact with the self-adhesive membranes at a rate of 0.2 to 0.3 l/m^2. All surfaces to be primed must be free of rust, dust or any residue that may hinder adherence. Cover primed surfaces with roofing membrane as directed by the Manufacturer.

7.2.11 **Base Sheet Flashing Installation**

.1 Apply base sheet flashing only once primer coat is dry.

.2 Install base sheet flashing in one (1) metre widths to cover roofing substrate over 100mm. Overlap side laps by 75mm. Stagger side laps by a least 100mm from base sheet overlaps on the roof to avoid excessive layering.

7.0 EXECUTION

OPTION NO. 2 – SOPREMA

.3 Apply base sheet flashing directly onto substrate by removing silicone paper cover sheet. Proceed from top to bottom. Once in place, apply pressure manually in a uniformed fashion to obtain homogenous adherence over the entire surface. Preferably seal seams with aluminum applicator and rubber roller. The flashing membrane is to be adhered 4 inches over top of the Blueskin membrane on the outside face of parapet wall. Nail outside edge at 300mm O.C. Burn off plastic film of base sheet membrane before adhering base sheet flashing over it.

.4 Avoid forming wrinkles, air pockets or fish-mouths.

7.2.12 **Cap Sheet Installation**

.1 Prior to installing the cap sheet membrane, all insulated flanges are to be installed around each roof penetration and secured to the metal roof deck with four (4) fasteners per flange before applying base sheet target section on top.

.2 Once the base sheet has been applied, the stripping has been completed and no indications of defects are present, then the cap sheet shall be laid.

.3 Begin application of the cap sheet at the lowest edge. Cap sheet shall be unrolled and care be taken to ensure proper alignment of the first roll.

.4 Cap sheet shall be torched into place in accordance with the Recommendations of the Membrane Manufacturer, to the base sheet membrane.

.5 The seams between the base sheet and cap sheet shall be staggered a minimum of 300 mm (12 inches).

.6 Care should be taken to ensure heating is consistent across the width in order to avoid skips or voids. Bitumen should flow out from the lap 6mm (1/4") to ensure a tight seal.

.7 All lap seams on the cap sheet are to be checked after membrane installation.

7.2.13 **Cap Sheet Flashing Installation**

.1 Cap sheet membrane installation shall be laid in strips 1m wide along the parapet. End laps shall be a minimum of 100mm (4 inches) overlap.

.2 Extend cap sheet a minimum of 150mm (6 inches) onto roof surface from the intersection of roof and vertical surfaces and extend to the top of the parapet wall to the outside of wall.

.3 The flashing membrane shall be anchored to the wood nailers by nailing through discs or using nails with 25mm (1 inch) minimum diameter head semi-solidly attached. Nail a minimum of 200mm (8 inches) on center.

.4 Matching granules shall be used to cover excess between flow at seams.

7.0 EXECUTION

Partial Roof Replacement
for
Gregory A. Hogan Catholic School – Sarnia
PROJECT No. 615-CP1621

OPTION NO. 2 – SOPREMA

7.2.14 **Flood Coat and Gravel Cover**

.1 Apply a flood coat of cold roofing adhesive (COLPLY EF) at the rate of 5 gallons/100ft² as recommended by Manufacturer (Soprema).

.2 Then embed new approved pea stone gravel at 20 kg/m² (450 lbs/100ft²) while adhesive is still wet.

7.2.15 **Concrete Pavers**

.1 Install concrete pavers as indicated on the Roof Plan on top of one inch extruded polystrenne rigid insulation (Type 4).

7.3 INSTALLATION – Metal Flashings

7.3.1 Cap and counter flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to wood capping blocking at 12 inches O.C.

7.3.2 Flashing shall be fabricated to shapes on site with all necessary breaks for adequate expansion.

7.3.3 The inside face of the metal cap flashing between the S-locked joints is to be secured with three (3) fasteners matching the colour of the metal cap with a neoprene washer between the fastener head and inside face of the metal cap flashing.

7.3.4 All joints shall be sealed with approved sealant.

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

7.4 CLEAN-UP

7.4.1 Upon completion of the installation, the work shall be left clean and free of defects which might affect the durability or appearance of the building. Clean all roof surfaces, including adjacent roofs and grounds of all foreign matter resulting from this Roofing Project.

AREA TO BE
REMOVED AND
REPLACED

KEY ROOF PLAN

SCALE : 1" = 30'-0"

REMLAP BUILDING SERVICES INC.

R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS
B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING)
S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS

Christopher W. Palmer, C.E.T.

1407 Core Road
Harrow, Ontario N0R 1G0
Tel: (519) 738-3458
Fax: (519)738-4787

DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

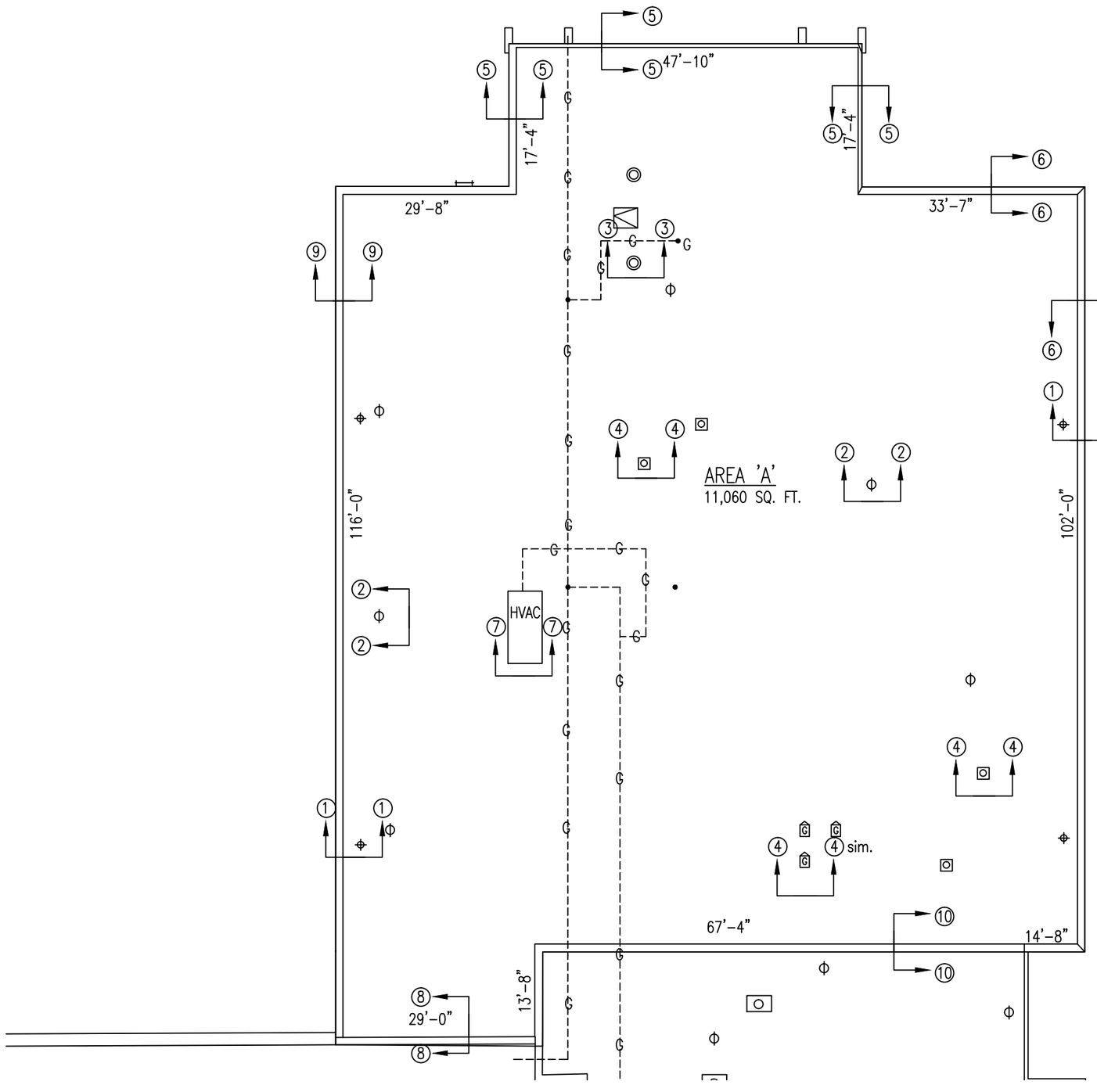
PROJECT
GREGORY A. HOGAN
CATHOLIC SCHOOL

1825 HOGAN DRIVE, SARNIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT
SCHOOL BOARD

DRAWING TITLE
KEY ROOF PLAN

DATE :	MAY 2016
SCALE :	AS SHOWN
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	11"x17"
PROJECT FILE NO.	RBS16-13
DRAWING NO.	R-1



LEGEND

- ROOF DRAIN
- VENT PIPE STACK
- HOT EXHAUST STACK
- ROOF HATCH
- EXHAUST FAN
- G — GOOSE NECK EXHAUST FAN
- •G — GAS LINE THRU ROOF
- --G-- GAS LINE

EXISTING ROOF SYSTEM

TWO PLY MODIFIED BITUMEN MEMBRANE
ON 1/2 INCH FIBREBOARD INSULATION
ON 2 INCH RIGID INSULATION (ISO)
ON 4 PLIES OF ROOFING FELT
ON 1/2 INCH DRYWALL
ON METAL DECK

DESIGN ROOF SYSTEM

PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF COLD ADHESIVE
ON 2 PLY MODIFIED BITUMEN MEMBRANE
ON 3/16" PROTECTION BOARD
ON TAPERED INSULATION AS NOTED
ON 3.5" RIGID INSULATION
ON VAPOUR RETARDER
ON 1/2" FIRECODE DRYWALL
ON EXISTING METAL DECK

ENLARGED ROOF PLAN - ROOF PENETRATION & DIMENSIONS

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

REMLAP BUILDING SERVICES INC.
R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS
B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING)
S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS
Christopher W. Palmer, C.E.T.
1407 Gore Road, Harrow, Ontario N0R 1G0
Tel: (519) 738-3458 Fax: (519)738-4797

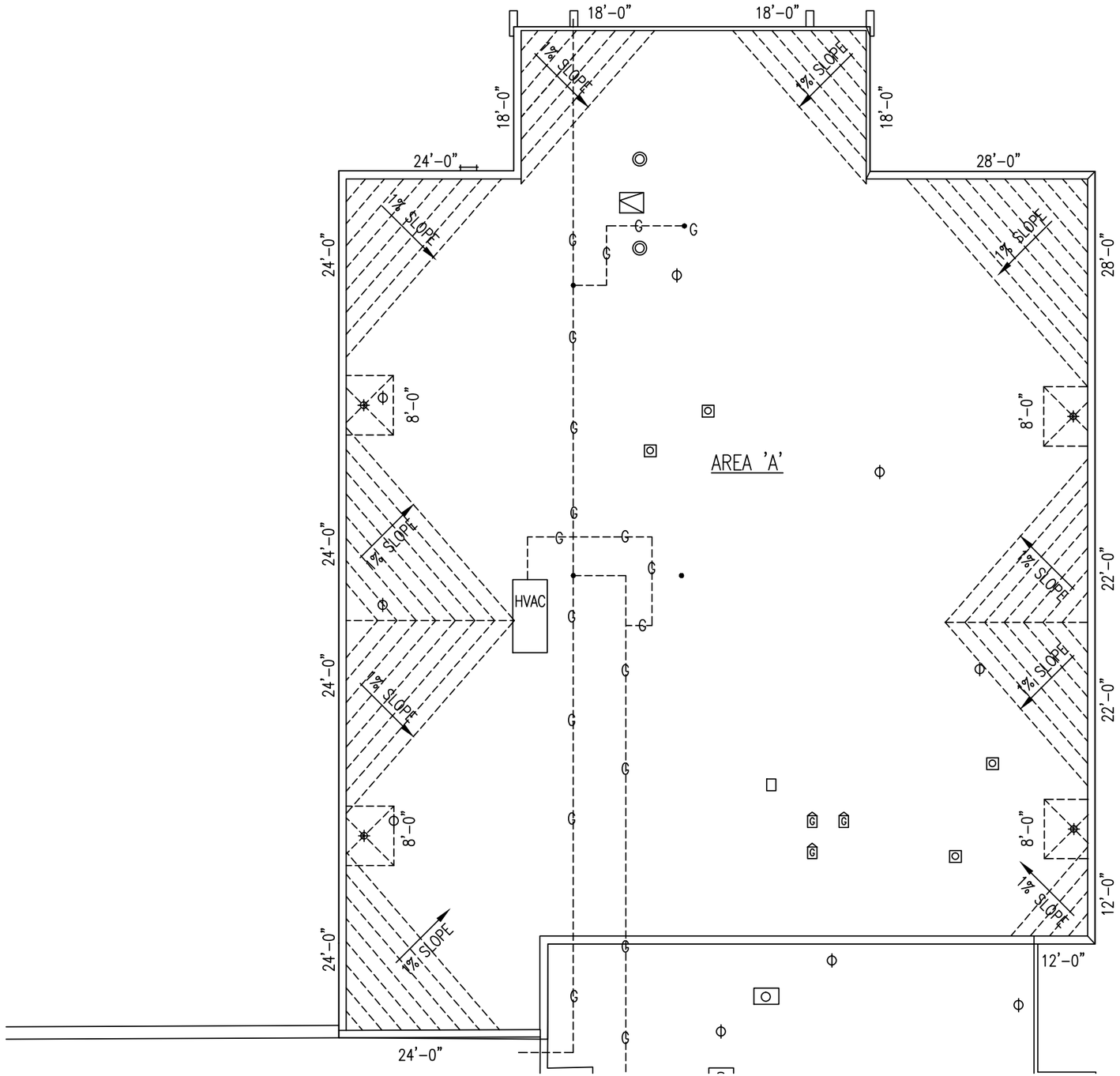
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
GREGORY A. HOGAN
CATHOLIC SCHOOL
1825 HOGAN DRIVE, SARNIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT
SCHOOL BOARD

DRAWING TITLE
ENLARGED ROOF PLAN - ROOF
PENETRATION & DIMENSIONS

DATE :	MAY 2016
SCALE :	AS SHOWN
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	11"x17"
PROJECT FILE NO.	RBS16-13
DRAWING NO.	R-2



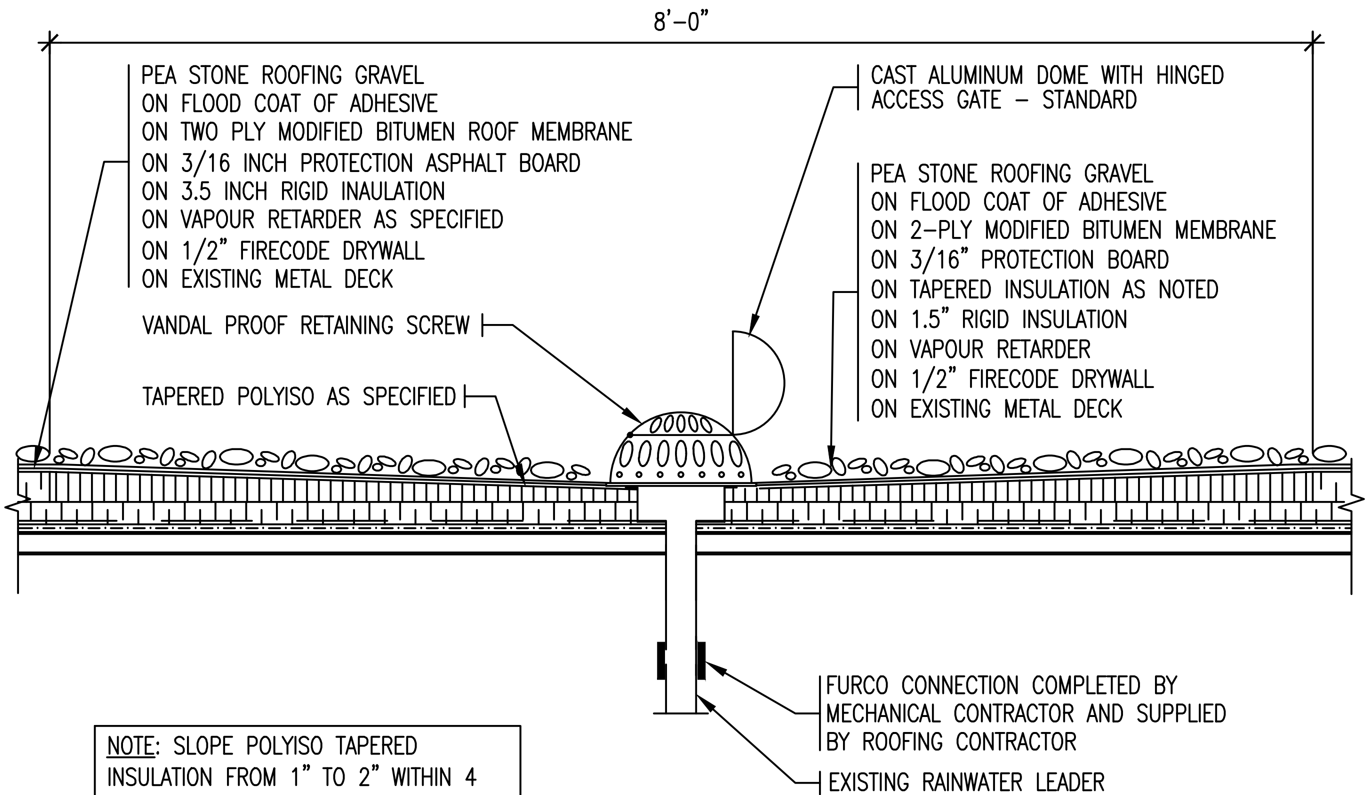
ENLARGED ROOF PLAN - TAPERED INSULATION

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

REMLAP BUILDING SERVICES INC.	PROJECT: GREGORY A. HOGAN CATHOLIC SCHOOL, 1825 HOGAN DRIVE, SARNIA ONTARIO
R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS	CLIENT: ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD
Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3458, Fax: (519)738-4787	DRAWING TITLE: ENLARGED ROOF PLAN - TAPERED INSULATION

DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

DATE :	MAY 2016
SCALE :	AS SHOWN
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	11"x17"
PROJECT FILE NO.	RBS16-13
DRAWING NO.	R-3



NOTE: SLOPE POLYISO TAPERED INSULATION FROM 1" TO 2" WITHIN 4 FEET

ROOF DRAIN DETAIL

SCALE : 1" = 1'–0"

REMLAP BUILDING SERVICES INC.
R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS
B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING)
S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS
Christopher W. Palmer, C.E.T.
1407 Gore Road, Harrow, Ontario N0R 1G0
Tel: (519) 738-3468
Fax: (519)738-4787

DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

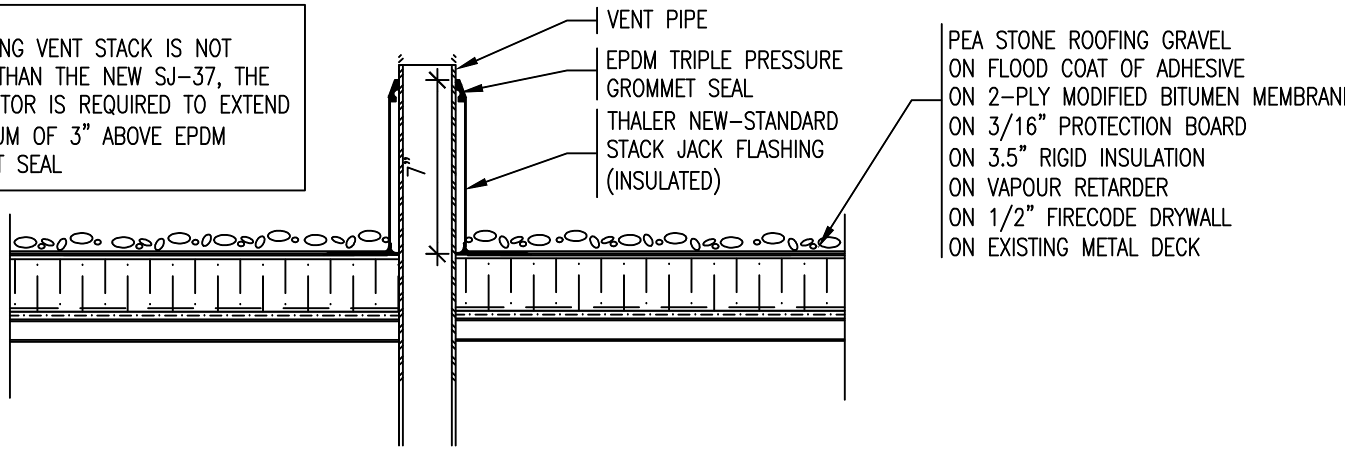
PROJECT
GREGORY A. HOGAN CATHOLIC SCHOOL
1825 HOGAN DRIVE, SARNIA, ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE
ROOF DETAIL

DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16–13
DRAWING NO.	D-1

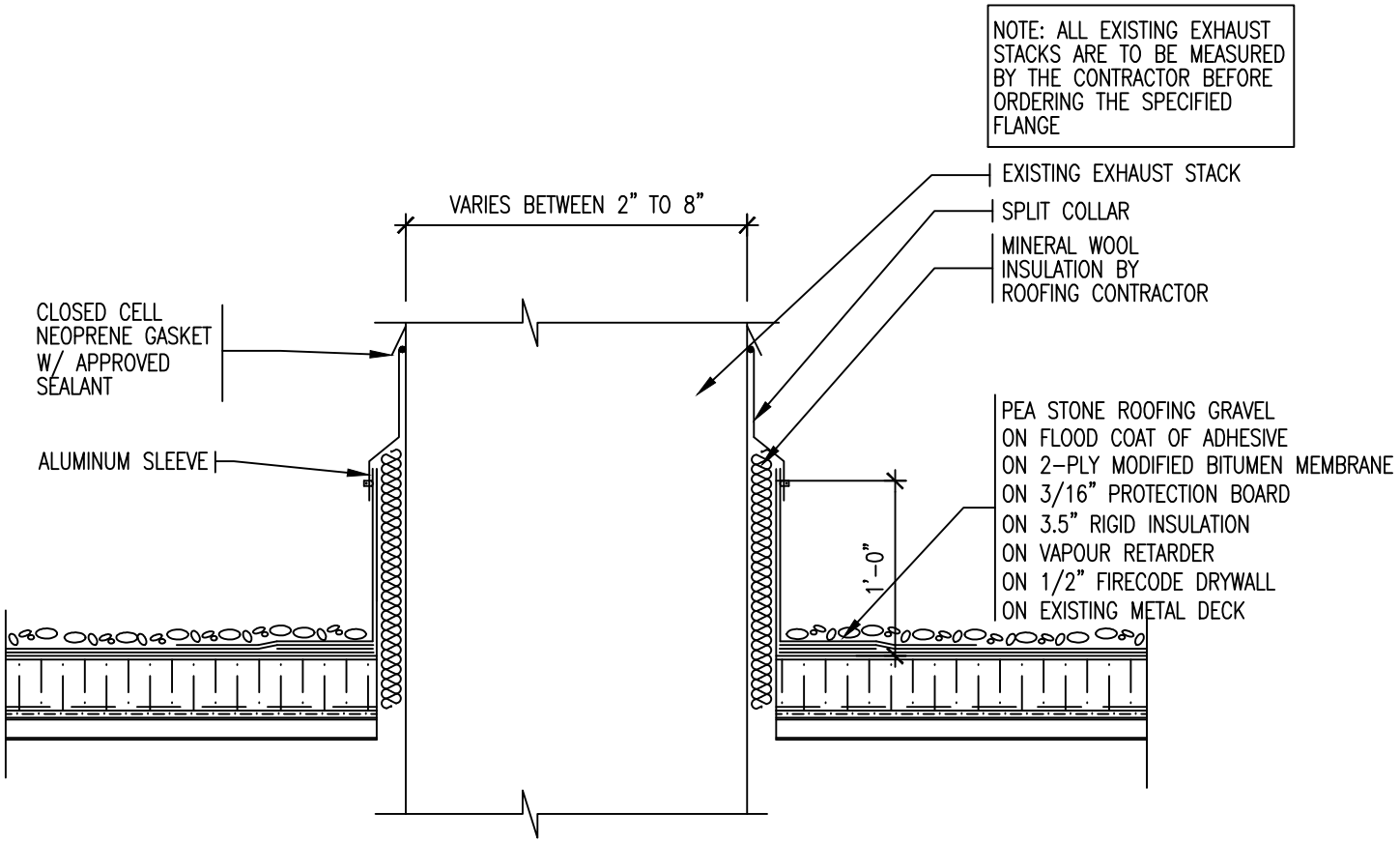
NOTE:
IF EXISTING VENT STACK IS NOT HIGHER THAN THE NEW SJ-37, THE CONTRACTOR IS REQUIRED TO EXTEND A MINIMUM OF 3" ABOVE EPDM GROMMET SEAL



VENT PIPE STACK DETAIL

SCALE : 1" = 1'-0"

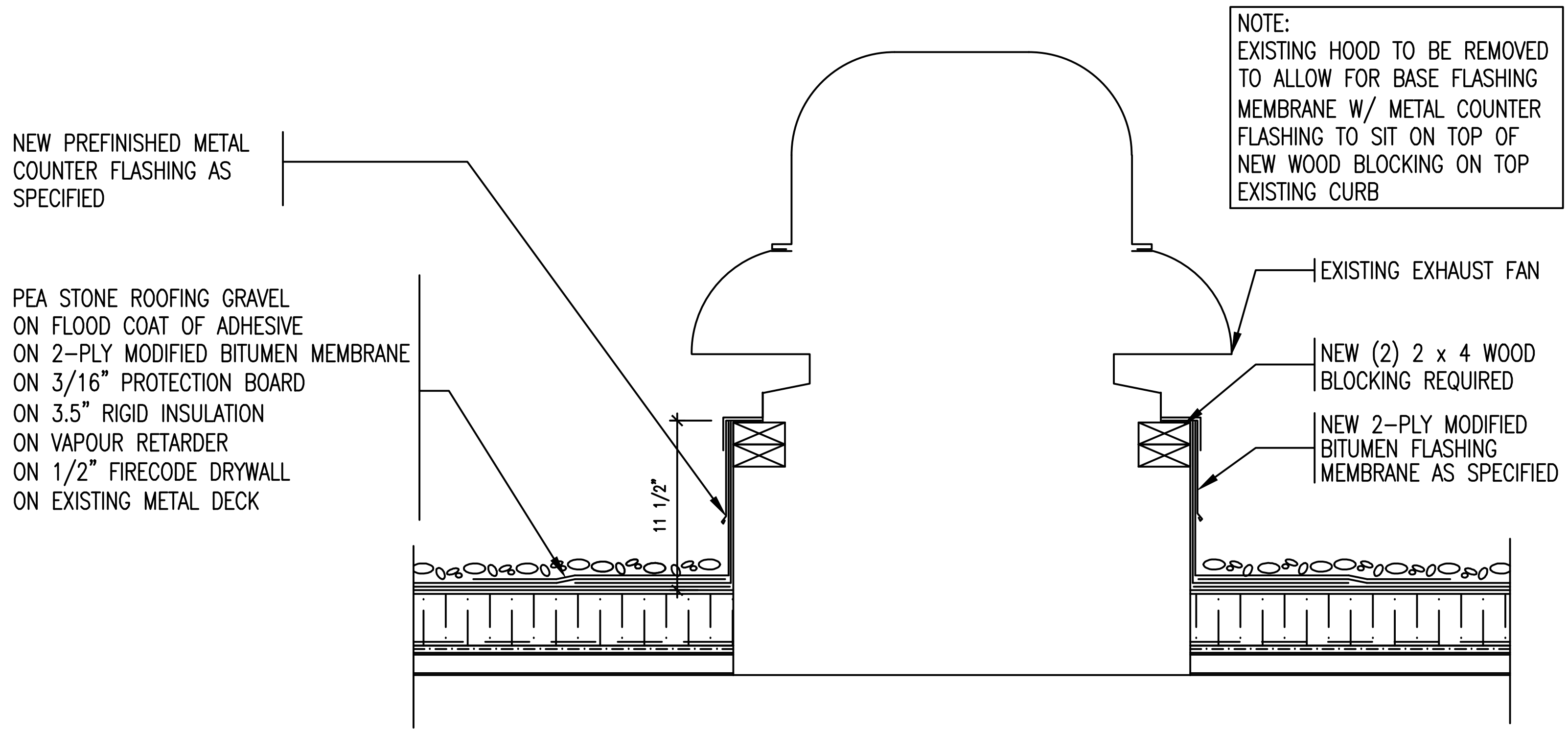
REMLAP BUILDING SERVICES INC. R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519)738-4787	PROJECT GREGORY A. HOGAN CATHOLIC SCHOOL 1825 HOGAN DRIVE, SARNIA, ONTARIO	DATE : MAY 2016 SCALE : N.T.S. DRAWN BY : CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"
DATE (MM-DD-YY): 5-5-16 / ISSUED FOR: TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS16-13 DRAWING NO. D-2



TYPICAL HOT EXHAUST STACK DETAIL

SCALE : 1" = 1'-0"

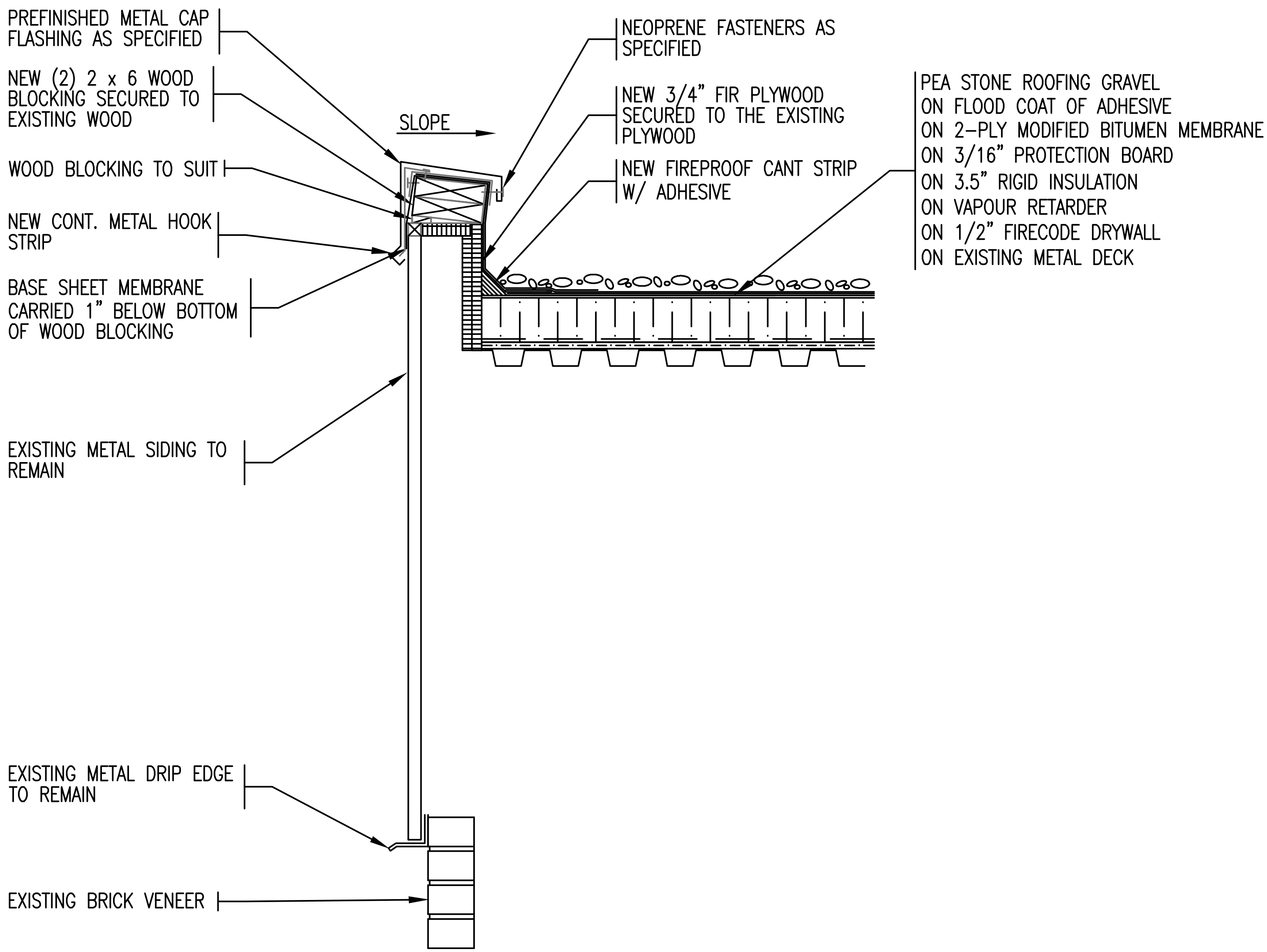
REMLAP BUILDING SERVICES INC. RBS ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/SHEET PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Cleo Road, Kanata, Ontario K2K 1X3 Tel: (613) 723-3455 Fax: (613)723-4707	PROJECT GREGORY A. HOGAN CATHOLIC SCHOOL 1825 HOGAN DRIVE, SARNIA, ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 5-5-16 TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-13
		DRAWING NO.	D-3



TYPICAL EXHAUST FAN DETAIL

SCALE : 1" = 1'-0"

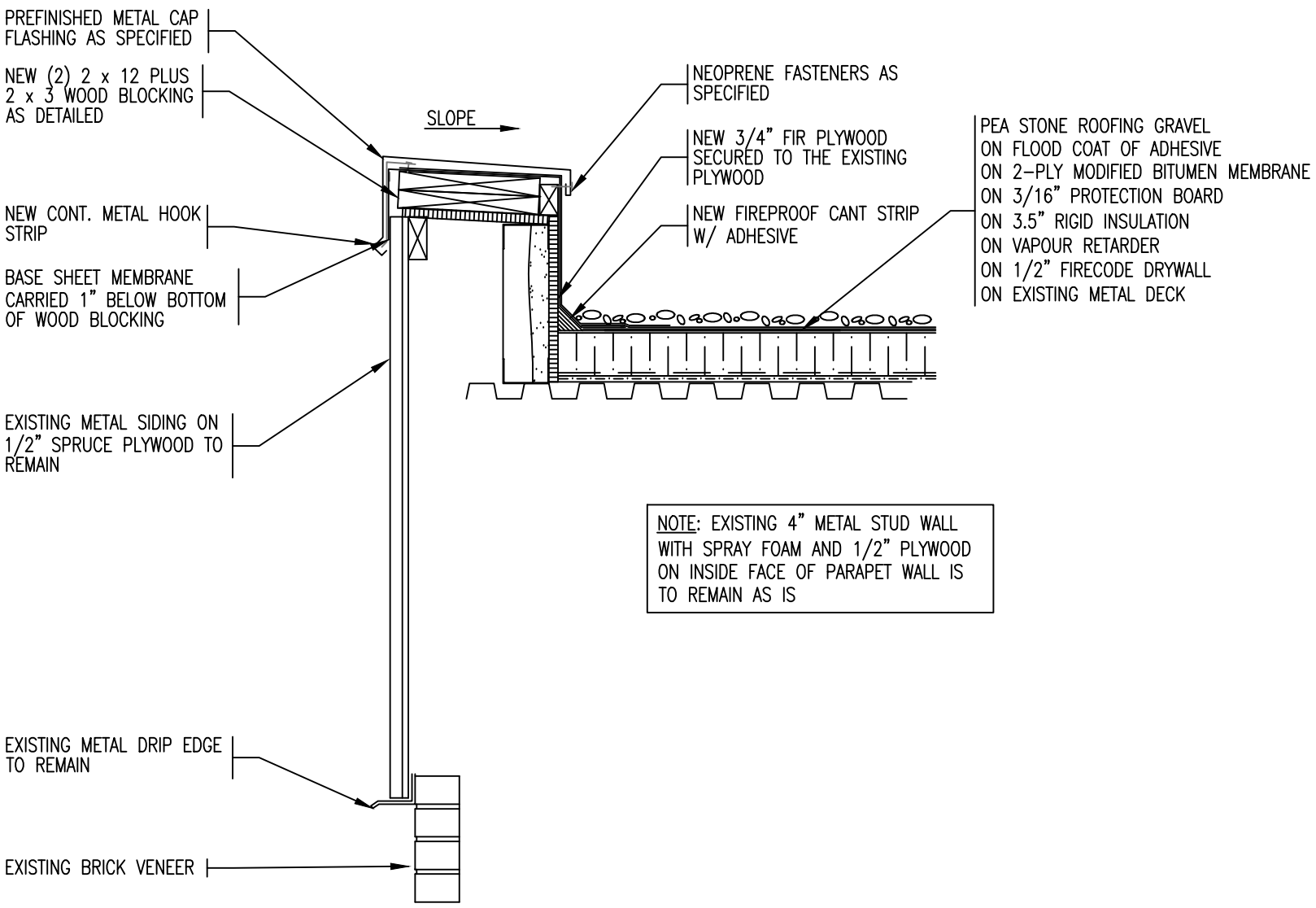
REMLAP BUILDING SERVICES INC. R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519)738-4767	PROJECT GREGORY A. HOGAN CATHOLIC SCHOOL 1825 HOGAN DRIVE, SARNIA, ONTARIO	DATE : MAY 2016 SCALE : N.T.S. DRAWN BY : CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 5-5-16 / TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS16-13 DRAWING NO. D-4



DETAIL 5 - PARAPET WALL

SCALE : 1" = 1'-0"

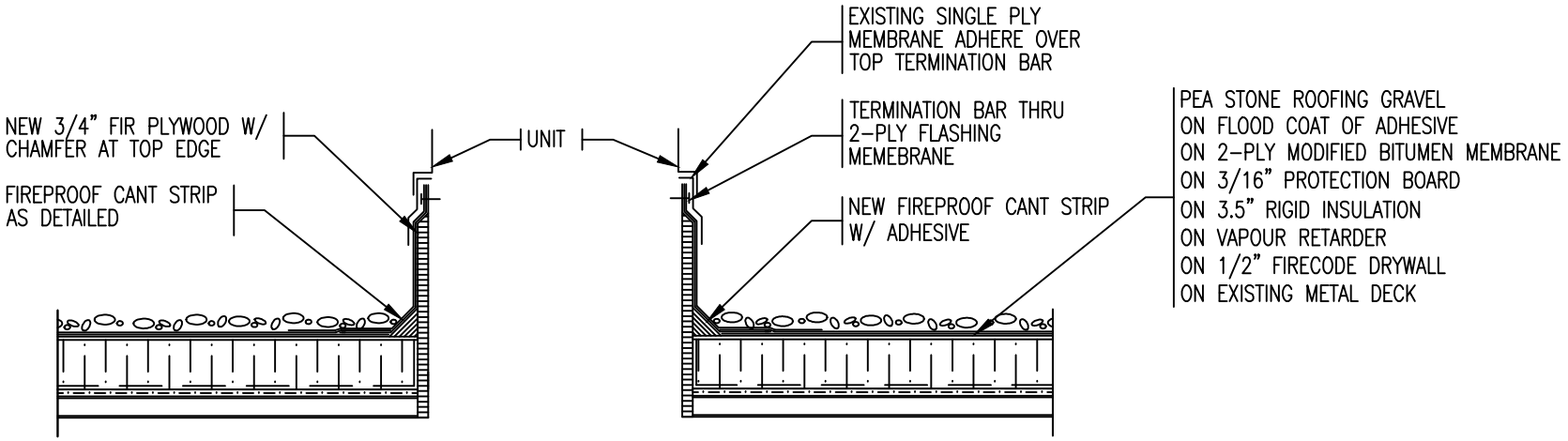
REMLAP BUILDING SERVICES INC. RBS ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3468 Fax: (519)738-4787	PROJECT GREGORY A. HOGAN CATHOLIC SCHOOL 1825 HOGAN DRIVE, SARNIA, ONTARIO	DATE : MAY 2016 SCALE : N.T.S. DRAWN BY : CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 3-29-16 OWNER REVIEW 4-2-16 TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS16-13 DRAWING NO. D-5



DETAIL 6 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC. RBS ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/SHEET PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Cora Road, Sarnia, Ontario N7S 1G3 Tel: (519) 733-3455 Fax: (519)733-4797	PROJECT GREGORY A. HOGAN CATHOLIC SCHOOL 1825 HOGAN DRIVE, SARNIA, ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 3-29-16 OWNER REVIEW 4-2-16 TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-13
		DRAWING NO.	D-6



DETAIL AT HRU UNIT

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.
RBS
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 Cora Road
Sarnia, Ontario N7W 1G3
Tel: (519) 733-3455
Fax: (519)733-4797

DATE (MM-DD-YY)	ISSUED FOR
3-29-16	OWNER REVIEW
4-2-16	TENDER

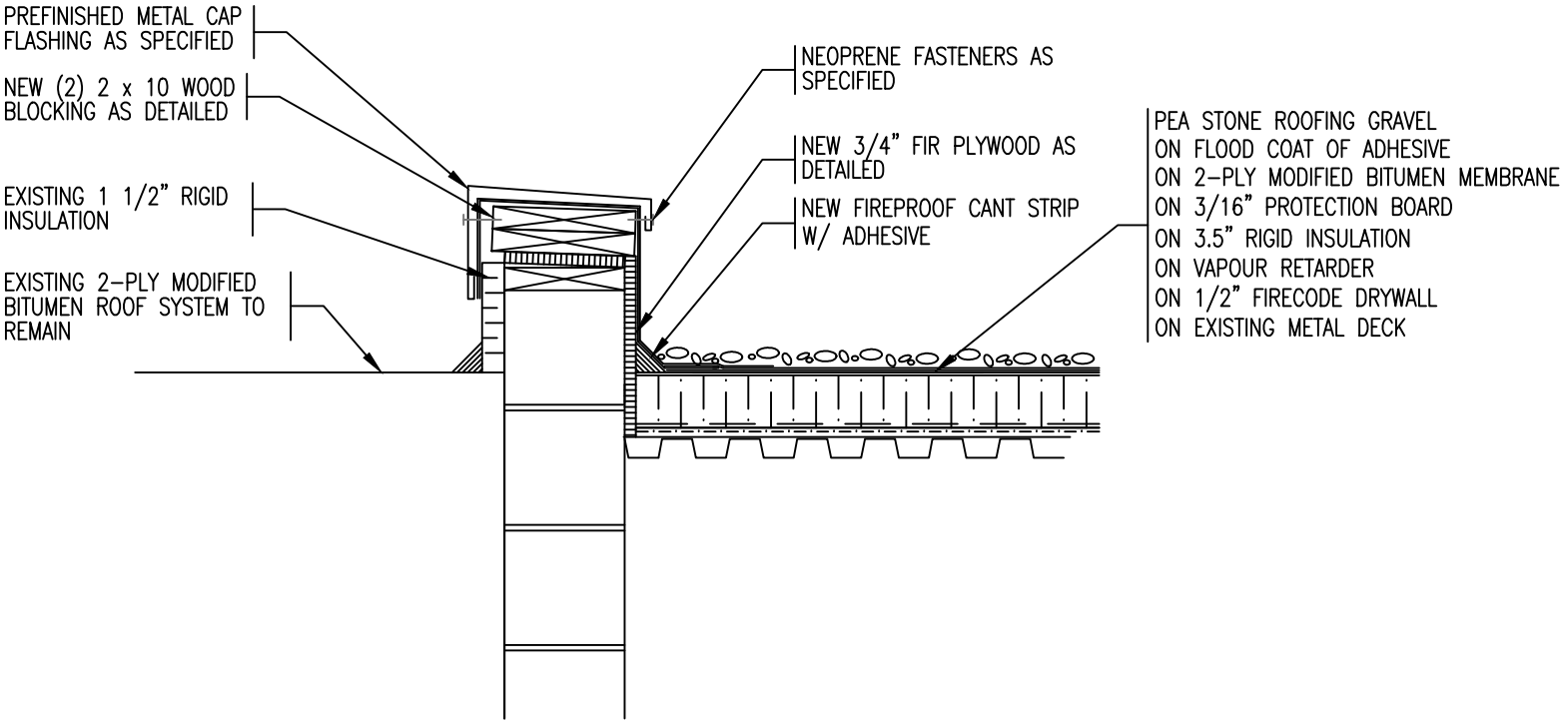
PROJECT
GREGORY A. HOGAN CATHOLIC SCHOOL

1825 HOGAN DRIVE, SARNIA, ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE
ROOF DETAIL

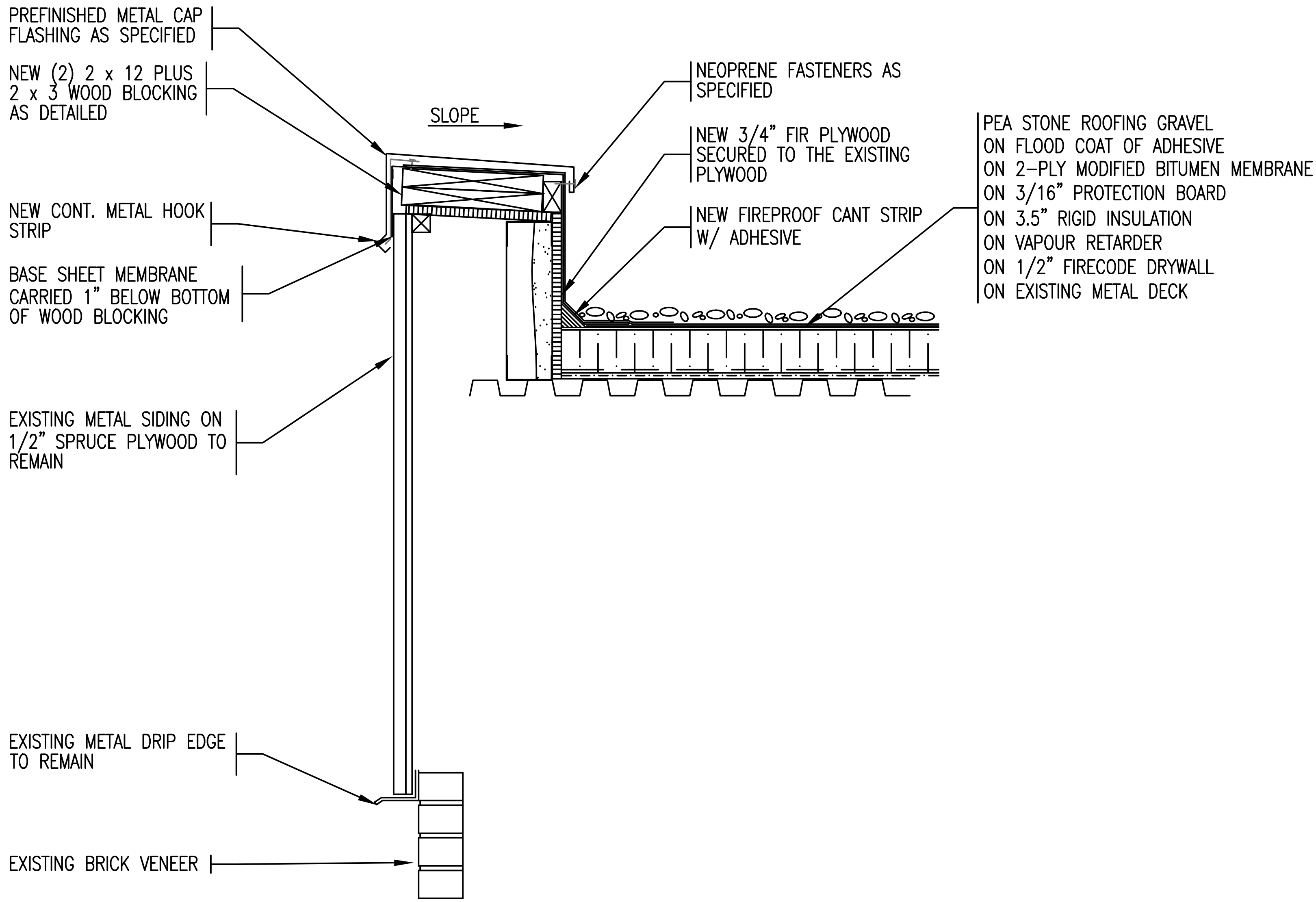
DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-13
DRAWING NO.	D-7



DETAIL 8 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC. RBS 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 Cleo Road, Kanata, Ontario K2K 1X3 Tel: (613) 723-3455 Fax: (613)723-4707	PROJECT GREGORY A. HOGAN CATHOLIC SCHOOL 1825 HOGAN DRIVE, SARNIA, ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 3-29-16 OWNER REVIEW 4-2-16 TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-13
		DRAWING NO.	D-8



DETAIL 9 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.

RBS
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
Harrow, Ontario N0R 1G0
Tel: (519) 738-3468
Fax: (519)738-4767

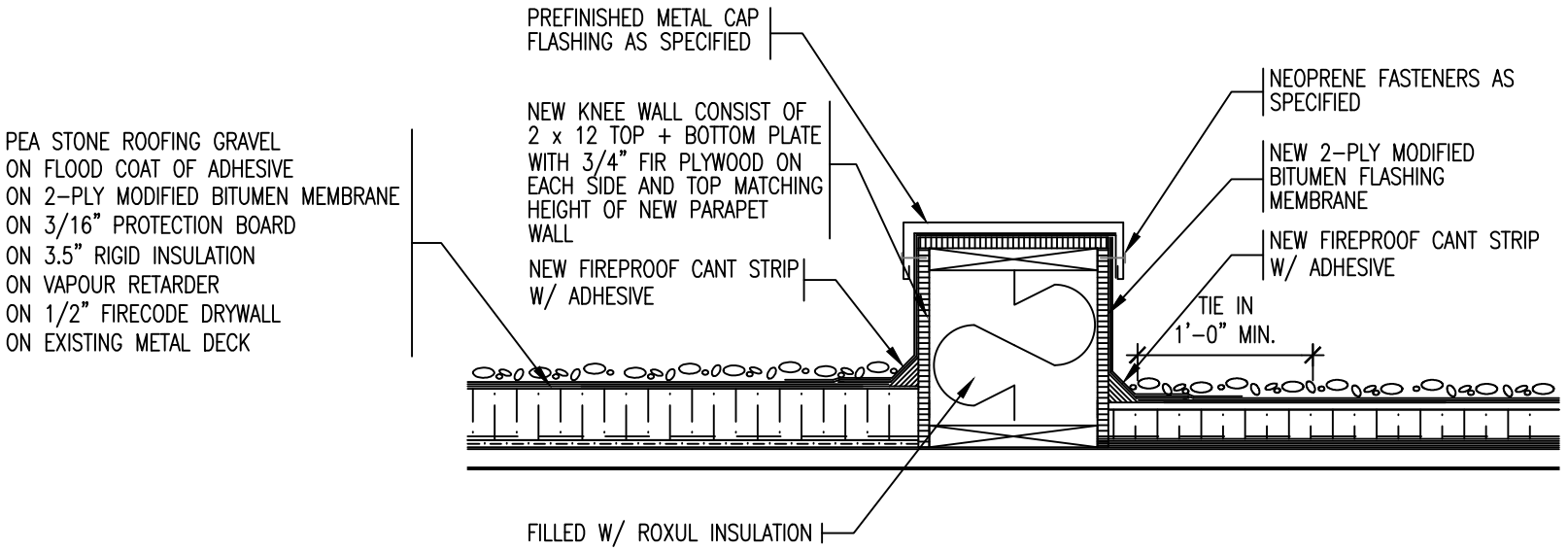
DATE (MM-DD-YY)	ISSUED FOR
3-29-16	OWNER REVIEW
4-2-16	TENDER

PROJECT
GREGORY A. HOGAN CATHOLIC SCHOOL
1825 HOGAN DRIVE, SARNIA, ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE
ROOF DETAIL

DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-13
DRAWING NO.	D-9



NOTE: EXISTING ROOF MEMBRANE ON OTHER SIDE OF NEW KNEE WALL IS REQUIRED TO BE PRIMED ONE FOOT BEYOND WALL TO ALLOW FOR APPLICATION OF 2-PLY FLASHING MEMBRANE

DETAIL 10 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.	PROJECT: GREGORY A. HOGAN CATHOLIC SCHOOL	DATE :	MAY 2016
		SCALE :	N.T.S.
	1825 HOGAN DRIVE, SARNIA, ONTARIO	DRAWN BY :	CWP
Christopher W. Palmer, C.E.T.	CLIENT: ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR: 3-29-16 OWNER REVIEW; 4-2-16 TENDER	DRAWING TITLE: ROOF DETAIL	PROJECT FILE NO.	RBS16-13
		DRAWING NO.	D-10

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

AT

ST. PHILIP CATHOLIC SCHOOL
420 QUEEN STREET
PETROLIA ONTARIO
N0N 1R0

TENDER FORM

PROJECT No. 645-CP1623

MAY 2016

Remlap Building Services Inc.
1407 Gore Road, RR1 – Harrow Ontario N0R 1H0

TENDER FORM

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

Name of Bidder _____

(Hereinafter Called the Tenderer Contractor)

Address _____

Being A _____ **(A) which** _____ **(B)**

Note: In space (A) above states type of company
Eg. "Incorporated", "limited", etc.
In space (B) above state "is" or "is not".

Registered under the laws of the Province of _____

DOES HEREBY AGREE TO:

1. Furnish all labour, materials, equipment, and service necessary for the completion of the Partial Roof Replacement at **St. Clair Catholic District School Board** in accordance with Information of Tenderers, Form of Tender, General Conditions of Contract and Drawings by Remlap Building Services, 1407 Gore Road, RR1 Harrow, Ontario – N0R 1G0 for **TOTAL TENDER PRICE "A" (H.S.T. INCLUDED**),

_____ ***$***_____

(HST Included)

or such other sums as may be finally ascertained in accordance with the allowance for Partial Roof Replacement and deductions as set out in the Tender Documents.

2. And also agrees that upon Tender acceptance to furnish a Performance and Maintenance Bond, Labour and Material Payment Bond and Liability Insurance as required by the Contract Documents, the cost of which is included in the Total Tender Price. The Tenderer hereby proposes:

_____

Name of Bonding Company

Stipulated prices shall include all labour, equipment and materials required to complete the work in every respect, including provincial sales tax.

TENDER FORM

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

Section "A"
Partial Roof Replacement for St. Philip Catholic School

The Bidder offers to provide all labour, materials and equipment services for the execution and completion of the work of the trade or trades herein and in accordance with the instructions for Bidders including Provincial Sales Tax for the stipulated sum of:

Item No.	*Description*	*Total*	
		Option No.1	**Option No.2**
A.	**ROOF AREAS 'A' THRU 'J'** The Roofing Contractor is to remove the existing Roof System completely to the metal deck. Then the Contractor is to supply and install Exterior Grade Gypsum Board, Vapour Retarder, all Rigid Insulation, Protection board, etc. prior to installing a Two Ply Modified Bitumen Roof System as shown on the Enclosed Drawings and in accordance with the Project Specifications for this facility. (The Contractor will include a Cash Allowance of $15,000.00 with this price (if the allowance is not used, it will be taken off of the Total Tender Price).	**$**_____	**$**_____

Total Tender Price "A" (excluding HST) **$**_____

Add 13% HST **$**_____

Total Tender Price "A" (including HST) **$**_____

3. And also agrees to submit the total tender price in compliance with the provisions of Section 1.21 of the Information to Tenderers regarding Ontario Sales Tax.

4. And agrees to leave this tender open for acceptance a minimum period of sixty (60) days from the tender closing date and not to modify, withdraw, or cancel their bid during this period.

The Tenderer also agrees that until the form of Agreement is completed and executed, this Tender, together with the acceptance thereof by the Owner and the Tenderer, shall remain open regardless of whether or not any other Tender has been previously accepted.

5. And also agrees to start the entire work within four (4) working days after the award of contract.

TENDER FORM

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

6. Documents and Acknowledgements

The Tenderer acknowledges that they have carefully examined the site of the proposed work, the existing premises and conditions; and thoroughly reviewed the Information to Tenderers, Tender Form, General Conditions, Supplementary General Conditions, Specifications, Drawings and the Addenda of the proposed Contract.

Addendum No. _____ **Date:** _____

Addendum No. _____ **Date:** _____

7. Completion of Work

We undertake to complete the work in _____weeks after Receipt of Purchase Order or Written Authorization issued by **St. Clair Catholic District School Board**

OR

To start work on _____ and to complete the work by _____

Completion date is not to exceed **AUGUST 19TH, 2016**

8. Subcontractors

The Tenderer proposes to use the following Subcontractors, the portion of the work to be performed by each being as indicated with no more than one Subcontractor being proposed for any such portions. (If Subcontractors are not proposed, write N/A in the blank space.)

SUBCONTRACTOR	WORK OR TRADE

TENDER FORM

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

Signature of Authorized Officer _____

Phone No. _____ ***Email*** _____

Name of Signature _____

Witness _____

Dated at _____

This _____ ***day of*** _____ ***2016***

NOTES:

1. ***If this Tender is submitted by or on behalf of any Corporation by some duly authorized officer, or agent thereof, who shall subscribe their name and office, the Seal of the Corporation shall be affixed.***

2. ***The Owner reserves the right to accept or reject any part OR all of bid and may not necessarily award the tender to the lowest bidder.***

SPECIFICATION
ON
PARTIAL ROOF REPLACEMENT

FOR

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

AT

ST. PHILIP CATHOLIC SCHOOL
420 QUEEN STREET
PETROLIA ONTARIO
N0N 1R0

PROJECT No. 645-CP1623

MAY 2016

Remlap Building Services Inc.
1407 Gore Road, RR1 – Harrow Ontario N0R 1H0

3.0 GENERAL

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

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:

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.

4.0 PRODUCTS

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 1 – HENRY COMPANY

4.1 Modified Bitumen Membrane

4.1.1 Modified Bitumen Sheets shall conform to CGSB 37-GP-56M "Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing";Type 2, Class C, Grade 2 for Base Sheets and Type 1, Class A, Grade 2 for Cap Sheets.

4.1.2 The Contractor may bid on any Manufacturer's Systems specified for torching application of the base sheet and torching of the cap sheet for this roof area. The colour of the granular surface is to be selected by the Owner. Supply additional granules to be applied to bitumen outflows between membrane sheets.

4.1.3 Modified Bitumen Membrane Two-Ply System shall be as specified or approved equal and accepted by the Consultant and Owner.

a) Henry Company
- i) Base Sheet (NP180P/S) and (NP180 S/P 3.5 Cap Sheet)
- ii) Self-Adhesive Membrane (NP 180 Tack Sheet)
- iii) Cap Sheet (NP250gT4)

4.2 Thermal Barrier

4.2.1 Exterior grade gypsum sheathing board with water resistant paper surfaces 12.7mm thick. Reference Standard CSA-A82.27 – M1979

4.3 Vapour Retarder

4.3.1 Vapour retarder shall be Self-Adhered Sand Surfaced Air/Vapour Barrier shall be Perma-Seal FG as manufactured by Henry, an SBS modified bitumen self-adhering reinforced membrane have a thickness of 56 mils.

4.4 Primer

4.4.1 As required by each roof membrane manufacturer.

4.5 Rigid Insulation

4.5.1 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 R-20.5 (L.T.T.R.) (3.5 inch) for the main roof area and R-8.5 (L.T.T.R.) (1.5 inch) around recessed roof drains, Resistance R-Value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 4 feet in size.

4.6 Insulation Overlay Boards

4.6.1 Bituminous Boards consisting of multi-ply, semi-rigid Asphaltic Roofing Substrate Board composed of a mineral fortified Asphaltic core formed between two Asphaltic saturated fiberglass liners. Length 1200mm x Width 1500mm x thickness 4.5 mm such as Recover Board by Bakor or approved equal by the Consultant.

4.0 PRODUCTS

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 1 – HENRY COMPANY

4.7 Bitumen Adhesive

4.7.1 Thermostik 840-10 is a 100% solid, asphalt extended, ambient temperature, vulcanizing adhesive supplied as a two component unit consisting of two liquids which are mixed to produce a pourable adhesive.

4.8 Vent Pipe Stack Flange

4.8.1 The vent pipe stack flange shall be Thaler Roofing Specialties Products Inc. Model No. SJ-37 insulated flange. The Roofing Contractor shall verify the inside diameter of the vent pipe stack for each location.

4.9 Hot Exhaust Stack Flashings

4.9.1 The hot pipe flashings shall be Thaler Roofing Specialties Products Inc. Model № MEF-3A aluminum flashings with split collar to suit new roof system. The Contractor shall fill Roxul Insulation between pipe and flange.

4.10 Roof Drain

4.10.1 Roof Drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4-RR with FURCO FOR DIRECT CONNECT. Outlet size shall be verified on site by the Roofing Contractor.

4.11 Tapered Insulation (Recessed Roof Drains)

4.11.1 The tapered insulation shall be faced Isocyanurate Boards conforming to CAN/CGSB-51.26-M86, 4.11.1 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 organic surfaces. Tapered panels shall not be less than 13m at any point of the roof to the slope indicated on the Roof Plan and Details.

4.12 Elastomeric Modified Bitumen Adhesive

4.12.1 Bakor MBA Gold is a fib rated rubberized adhesive with a bonding strength designed for adhering SBS modified bitumen and asphalt coated membranes directly to properly prepared substrates.

4.13 Metal Flashings

4.13.1 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.

4.0 PRODUCTS

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 1 – HENRY COMPANY

4.14 Sealants

4.14.1 Caulking Sealants for metal flashing shall be one part silicone to conform to CGSB 19 GP 96. Sealants shall be manufactured by Canadian General Electric, Dow Corning or approved equal. The colour of the sealant shall be identical to the colour of the metal flashing; the Owner is to approve the colour before ordering the sealant. This sealant shall be applied to all metal flashing joints including the reglet.

4.15 Roofing Gravel

4.15.1 The gravel shall be ¼" to 5/8" size; water washed pea gravel, well graded, opaque, non-porous material free of fines, moisture, ice, and snow or long splinters and conforms to ASTM D1863086.

4.16 Framing Lumber

4.16.1 Framing Lumber on top of roof area shall be pressure treated for rot resistance conforming to CSA 0322-1976 and CSA 080-M1983; sizes shown on the Drawings. Grade SPF No. 2 or better.

4.17 Plywood

4.17.1 Exterior Grade "fir" to CSA 0121 or CSA 0151, ½" and ¾" thick, as detailed on Enclosed Drawings.

4.18 Rough Hardware and Nails

4.18.1 The Roofing Contractor shall supply all rough hardware where required. Nails, spikes, screws, bolts, etc. shall be of sufficient size and type to rigidly secure all members into place. All nails shall be hot dip galvanized.

4.19 Painting

4.19.1 All existing gas lines, exhaust fan hoods and roof top units shall be cleaned and scraped prior to being repainted.

4.19.2 Clean and prime with Alkyd Metal Primer before applying two coats of enamel paint. The colour shall be selected by the Owner.

4.20 Plastic Roof Cement

4.20.1 Pro-Grade Plastomers 810-21 Plastic Cement is composed of asphalt synthetic rubber, fiber and fillers exceeding the requirements of CAN/CGSB-37.5. This product is manufactured by Bakor or approved equal.

4.0 PRODUCTS

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 1 – HENRY COMPANY

4.21 Precast Pads

4.21.1 Precast concrete pads shall be 24 inch by 24 inch by 2 inch thick for additional walkway, etc. as shown on Roof Plan. Pads shall be placed on a 20 inch by 20 inch by 2 inch thick sections of rigid Type 4 extruded polystrenne insulation. Also the supports under the electrical raceway shall be 12 inches by 12 inches by 2 inches and placed on a 10 inch square by 1 inch thick of rigid Type 4 extruded polystrenne insulation as detailed. (23 new pavers in total)

4.22 Exterior Cladding

4.22.1 The exterior cladding shall be fabricated from galvanize coated structural quality steel sheet, CSSB1 201-M84 Grade 33, base thickness.030 in (22 ga) Coating Designation AZ150 for painted finish.

4.22.2 The prefinished wall cladding shall be Vic West Steel Inc. – AD300R or approved equal.

4.22.3 The paint finish for wall cladding shall be Steelcolour Series 8000 having a dry film thickness of 1.0mil. The unexposed side shall have a prime coat. Colour will be selected from Manufacturer's Standard Colours by the owner.

4.22.4 The sub girts shall be a 19mm (3/4") hat section installed no more than every two (2) feet on center.

4.22.5 All flashings and trims are required to be fabricated as detailed with 24ga material which is the same as metal cap and counter flashings.

5.0 EXECUTION

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 1 – HENRY COMPANY

5.1 TEAR-OFF

5.1.1 Prior to the start of installation, the roofing Contractor shall examine all roof areas included in this Specification. The Roofing Contractor shall notify the Consultant of any unacceptable conditions.

5.1.2 These conditions include, but are not limited to, uneven deck surfaces, improperly installed curbs and nailers, surfaces with fins or sharp projections, and surfaces contaminated with incompatible materials. Work shall not begin until these conditions have been corrected. Protect membrane in high traffic areas, work by other trades, application of gravel, etc.

5.1.3 Completely remove the existing Loose Laid Ballasted Roof System completely to the existing metal deck. Only tear-off those roofing components that can be re-roofed in the same day. Tear-off work shall not be left exposed at the end of the work day.

5.2 INSTALLATION – Two Ply Modified Bitumen Membrane Roof System

5.2.1 The areas to be re-roofed must have all the roofing components removed completely to the metal roof dish before applying the new roof system. Install all carpentry items such as curb extensions, wood blocking at roof perimeters, etc. as detailed on the Drawings. All wood members which are to be anchored to masonry construction shall be permanently fastened into place. Do not use fasteners which will cause spalling, cracking or deformation of fastened materials.

5.2.2 Apply roofing materials over clean and dry surfaces in accordance with the Manufacturer's Recommendations. The re-roofing operations shall be performed on a continuous basis as weather conditions allow.

5.2.3 Install all new wood blocking and plywood as detailed on the applicable details

5.2.4 **Installation of Thermal Barrier**

.1 Apply adhesive as recommended by the Membrane Manufacturer on top the metal roof deck to ensure good adhesion of the exterior grade gypsum board to the top flute of metal deck.

5.2.5 **Installation of Vapour Retarder**

.1 Apply Blueskin Primer by roller or spray to all surfaces as required and allow drying.

.2 Unroll and align air/vapour barrier centered at low point of roof or drain. Apply air/vapour removing release paper providing 2 inch side and end laps. Seal around projections as per manufacturer's recommendations.

.3 Apply self-adhesive membrane without any wrinkles or fish mouths.

.4 The vapour retarder is to be carried up the vertical surfaces a minimum of 8 inches above roof deck.

5.0 EXECUTION

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 1 – HENRY COMPANY

5.2.6 **Installation of Rigid Insulation Boards**

.1 Install boards with cold adhesive to the vapour retarder. On all insulation surfaces intended for board coverage apply beads of 20mm (3/4") wide on 200mm (8") centers.

.2 Firmly set the rigid insulation boards in staggered fashion. All boards must be butted tightly together.

.3 Apply only as many boards as can be covered in the same day.

5.2.7 **Installation of Insulation Overlay Boards**

.1 Install boards with cold adhesive to the rigid insulation as indicated. On all insulation surfaces intended for board coverage, apply beads of 20mm (3/4") wide on 200mm (8") centers.

.2 Firmly set the insulation overlay boards, long joints continuously and short joints staggered. All boards must be evenly and tightly butted together.

.3 All vertical joints between boards and insulation will be staggered.

.4 Apply only as many boards as can be covered in the same day.

5.2.8 **Base Sheet Installation**

.1 Install the base sheet roof membrane starting from the low point (roof drain) to the high point. The base sheet is to be adhered with adhesive to the overlay boards to the parapet wall.

.2 Unroll base sheet flashing at drain level with first side lap lined-up with drain center.

.3 Overlap side laps by 75mm along lines provided to this end and overlap end laps by 150mm. Stagger end joints by at least 300mm.

.4 Re-Roll base sheet and unroll again onto bed of cold adhesive with a notched squeegee having notches 6mm (1/4") wide 3mm (1/8") deep and spaced 25mm (1") on centers. The side and end lap must be HEAT WELDED (FUSED) TOGETHER WITH A LEISTER HAND HELD GUN OR APPROVED TO EQUAL TO ENSURE GOOD FUSION. Also avoid the cold adhesive from within two inches of the side and end laps.

.5 Avoid forming wrinkles, air pockets or fish-mouthing. The modified bitumen membrane should be cut in maximum lengths of 55mm (18 ft) and allowed to relax on the jobsite.

.6 This membrane is to be carried up to the inside face of parapet wall prior to installing new plywood on inside face of parapet wall.

5.2.9 **Installation of Additional Plywood and/or Wood Blocking**

.1 Install all new wood blocking and plywood as detailed on the applicable Details.

Note: The new plywood detail on the inside face of parapet wall is not to be installed until the first ply of base sheet roof membrane is applied 3 inches up the vertical surface of parapet wall.

5.0 EXECUTION

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 1 – HENRY COMPANY

5.2.10 **Base Sheet Flashing Installation**

.1 Apply base sheet flashing only once primer coat is dry.

.2 Install base sheet flashing in one (1) metre widths to cover roofing substrate over 100mm. Overlap side laps by 75mm. Stagger side laps by a least 100mm from base sheet overlaps on the roof to avoid excessive layering.

.3 Apply base sheet flashing directly onto substrate by removing silicone paper cover sheet. Proceed from top to bottom. Once in place, apply pressure manually in a uniformed fashion to obtain homogenous adherence over the entire surface. Preferably seal seams with aluminum applicator and rubber roller. The flashing membrane is to be adhered to the bottom of the wood blocking on the outside face of parapet wall. Nail outside edge at 300mm O.C. Burn off plastic film of base sheet membrane before adhering base sheet flashing over it.

.4 Avoid forming wrinkles, air pockets or fish-mouths.

5.2.11 **Cap Sheet Installation**

.1 Prior to installing the cap sheet membrane, all insulated flanges are to be installed around each roof penetration and secured to the metal roof deck with four (4) fasteners per flange before applying base sheet target section on top.

.2 Once the base sheet has been applied, the stripping has been completed and no indications of defects are present, then the cap sheet shall be laid.

.3 Begin application of the cap sheet at the lowest edge. Cap sheet shall be unrolled and care be taken to ensure proper alignment of the first roll.

.4 Cap sheet shall be torched into place in accordance with the Recommendations of the Membrane Manufacturer, to the base sheet membrane.

.5 The seams between the base sheet and cap sheet shall be staggered a minimum of 300 mm (12 inches).

.6 Care should be taken to ensure heating is consistent across the width in order to avoid skips or voids. Bitumen should flow out from the lap 6mm (1/4”) to ensure a tight seal.

.7 All lap seams on the cap sheet are to be checked after membrane installation.

5.2.12 **Cap Sheet Flashing Installation**

.1 Cap sheet membrane installation shall be laid in strips 1m wide along the parapet. End laps shall be a minimum of 100mm (4 inches) overlap.

.2 Extend cap sheet a minimum of 150mm (6 inches) onto roof surface from the intersection of roof and vertical surfaces and extend to the top of the parapet wall to the outside of wall.

5.0 EXECUTION

OPTION NO. 1 – HENRY COMPANY

.3 The flashing membrane shall be anchored to the wood nailers by nailing through discs or using nails with 25mm (1 inch) minimum diameter head semi-solidly attached. Nail a minimum of 200mm (8 inches) on center.

.4 Matching granules shall be used to cover excess between flow at seams.

5.2.13 **Flood Coat and Gravel Cover**

.1 Apply a flood coat of cold roofing adhesive (MBA Gold) at the rate of 6.5 gallons/100ft² as recommended by Manufacturer (Bakor).

.2 Then embed new approved pea stone gravel at 20 kg/m² (450 lbs/100ft²) while adhesive is still wet.

5.2.14 **Concrete Pavers**

.1 Install concrete pavers as indicated on the Roof Plan on top of one inch extruded polystrenne rigid insulation (Type 4).

5.2.15 **Exterior Cladding Installation**

.1 Install sub girts and metal flashing enclosures to the areas indicated on the drawings.

.2 Complete all installation of the exterior cladding with approved fasteners.

5.3 INSTALLATION – Metal Flashings

5.3.1 Cap and counter flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to wood capping blocking at 12 inches O.C.

5.3.2 Flashing shall be fabricated to shapes on site with all necessary breaks for adequate expansion.

5.3.3 The inside face of the metal cap flashing between the S-locked joints is to be secured with three (3) fasteners matching the colour of the metal cap with a neoprene washer between the fastener head and inside face of the metal cap flashing.

5.3.4 All joints shall be sealed with approved sealant.

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

5.4 CLEAN-UP

5.4.1 Upon completion of the installation, the work shall be left clean and free of defects which might affect the durability or appearance of the building. Clean all roof surfaces, including adjacent roofs and grounds of all foreign matter resulting from this Roofing Project.

6.0 PRODUCTS

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 2 – SOPREMA

6.1 Modified Bitumen Membrane

6.1.1 Modified Bitumen Sheets shall conform to CGSB 37-GP-56M "Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing";Type 2, Class C, Grade 2 for Base Sheets and Type 1, Class A, Grade 2 for Cap Sheets.

6.1.2 The Contractor may bid on any Manufacturer's Systems specified for torching application of the base sheet and torching of the cap sheet for this roof area. The colour of the granular surface is to be selected by the Owner. Supply additional granules to be applied to bitumen outflows between membrane sheets.

6.1.3 Modified Bitumen Membrane Two-Ply System shall be as specified or approved equal and accepted by the Consultant and Owner.

a) Soprema
- i) Base Sheet (SOPRALENE 180 S/P 3.5 for Cap Sheet)
- ii) Self-Adhesive Membrane (NP 180 Tack Sheet)
- iii) Cap Sheet (NP250gT4) for flashing membrane.

6.2 Thermal Barrier

6.2.1 Exterior grade gypsum sheathing board with water resistant paper surfaces 12.7mm thick. Reference Standard CSA-A82-27-M1979.

6.3 Vapour Retarder

6.3.1 Sopravap'R is a self-adhesive membrane composed of SBS modified bitumen and a tri-laminated woven polyethylene facer. The under face is covered with a silicone release film.

6.4 Insulation Soprasmart Board 180

6.4.1 Soprasmart board 180 is a high performance high density support panel composed of SBS modified bitumen membrane with a non-woven polyester reinforcement, factory-laminated on asphaltic board (SOPRABOARD). The surface is covered with a thermo-fusible plastic film.

6.5 Primer

6.5.1 The primer shall consist of Elastocol Stick designed for use with self-adhered SBS modified bitumen base sheet flashing membrane. The risk of primer flare-up is eliminated when modified bitumen cap sheets are thermo-fused to the self-adhered base sheet flashing membranes.

6.6 Duotack

6.6.1 Duotack is a LOW-RISE two-part urethane adhesive to be used for the application of rigid insulation.

6.0 PRODUCTS

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 2 – SOPREMA

6.7 Vent Pipe Stack Flange

6.7.1 The vent pipe stack flange shall be Thaler Roofing Specialties Products Inc. Model No. SJ-37 insulated flange. The Roofing Contractor shall verify the inside diameter of the vent pipe stack for each location

6.8 Hot Exhaust Stack Flashings

6.8.1 The hot pipe flashings shall be Thaler Roofing Specialties Products Inc. Model № MEF-3A aluminum flashings with split collar to suit the new Two-Ply Modified Bitumen Roof System. The Roofing Contractor shall verify the inside diameter of the hot pipe stack for each location and fill between the flange and pipe with Roxul Insulation.

6.9 Roof Drain

6.10.1 Roof Drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4-RR with FURCO FOR DIRECT CONNECT. Outlet size shall be verified on site by the Roofing Contractor.

6.10 Rigid Insulation

6.10.1 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 R-20.5 (L.T.T.R.) (3.5 inch) for the main roof area and R-8.5 (L.T.T.R.) (1.5 inch) around recessed roof drains, Resistance R-Value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 4 feet in size.

6.11 Tapered Insulation (Recessed Roof Drains)

6.11.1 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 organic surfaces. Tapered panels shall not be less than 13m at any point of the roof to the slope indicated on the Roof Plan and Details.

6.12 Elastomeric Modified Bitumen Adhesive

6.12.1 COLPLY EF is a low volatile organic compound (VOC), low odour, 100% solids and solvent-free polyether based adhesive.

6.13 Metal Flashings

6.13.1 Metal flashings shall be 24ga. Colorite 5000 Series pre-finished steel (both sides) as manufactured by Westeel Roscoe, Steelcolour 5000 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
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 2 – SOPREMA

6.14 Sealants

6.14.1 Caulking Sealants for metal flashing shall be one part silicone to conform to CGSB 19 GP 96. Sealants shall be manufactured by Canadian General Electric, Dow Corning or approved equal. The colour of the sealant shall be identical to the colour of the metal flashing; the Owner is to approve the colour before ordering the sealant. This sealant shall be applied to all metal flashing joints including the reglet.

6.15 Roofing Gravel

6.15.1 The gravel shall be ¼" to 5/8" size; water washed pea gravel, well graded, opaque, non-porous material free of fines, moisture, ice, and snow or long splinters and conforms to ASTM D1863086.

6.16 Framing Lumber

6.16.1 Framing Lumber on top of roof area shall be pressure treated for rot resistance conforming to CSA 0322-1976 and CSA 080-M1983; sizes shown on the Drawings. Grade SPF No. 2 or better.

6.17 Plywood

6.17.1 Exterior Grade "fir" to CSA 0121 or CSA 0151, ½" and ¾" thick, as detailed on Enclosed Drawings.

6.18 Rough Hardware and Nails

6.18.1 The Roofing Contractor shall supply all rough hardware where required. Nails, spikes, screws, bolts, etc. shall be of sufficient size and type to rigidly secure all members into place. All nails shall be hot dip galvanized.

6.19 Painting

6.19.1 All existing gas lines, exhaust fan hoods and roof top units shall be cleaned and scraped prior to being repainted.

6.19.2 Clean and prime with Alkyd Metal Primer before applying two coats of enamel paint. The colour shall be selected by the Owner.

6.20 Plastic Roof Cement

6.20.1 Pro-Grade Plastomers 810-21 Plastic Cement is composed of asphalt synthetic rubber, fiber and fillers exceeding the requirements of CAN/CGSB-37.5. This product is manufactured by Bakor or approved equal.

6.0 PRODUCTS

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 2 – SOPREMA

6.21 Precast Pads

6.19.1 Precast concrete pads shall be 24 inch by 24 inch by 2 inch thick for additional walkway, etc. as shown on Roof Plan. Pads shall be placed on a 20 inch by 20 inch by 2 inch thick sections of rigid Type 4 extruded polystrenne insulation. Also the supports under the electrical raceway shall be 12 inches by 12 inches by 2 inches and placed on a 10 inch square by 1 inch thick of rigid Type 4 extruded polystrenne insulation as detailed. (18 new pavers in total) along with existing pavers on roof area.

7.0 EXECUTION

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 2 – SOPREMA

7.1 Tear-Off

7.1.1 Prior to the start of installation, the roofing Contractor shall examine all roof areas included in this Specification. The Roofing Contractor shall notify the Consultant of any unacceptable conditions.

7.1.2 These conditions include, but are not limited to, uneven deck surfaces, improperly installed curbs and nailers, surfaces with fins or sharp projections, and surfaces contaminated with incompatible materials. Work shall not begin until these conditions have been corrected. Protect membrane in high traffic areas, work by other trades, application of gravel, etc.

7.1.3 Completely remove the existing Loose Laid Ballasted Roof System completely to the existing metal deck. Only tear-off those roofing components that can be re-roofed in the same day. Tear-off work shall not be left exposed at the end of the work day.

7.2 INSTALLATION – Two Ply Modified Bitumen Membrane Roof System

7.2.1 The areas to be re-roofed must have all the roofing components removed completely to the metal roof deck before applying the new roof system. Install all carpentry items such as curb extensions, wood blocking at roof perimeters, etc. as detailed on the Drawings. All wood members which are to be anchored to masonry construction shall be permanently fastened into place. Do not use fasteners which will cause spalling, cracking or deformation of fastened materials.

7.2.2 Apply roofing materials over clean and dry surfaces in accordance with the Manufacturer's Recommendations. The re-roofing operations shall be performed on a continuous basis as weather conditions allow.

7.2.3 Install all new wood blocking and plywood as detailed on the applicable details.

7.2.4 **Installation of Thermal Barrier**

.1 Install boards with Duotack Adhesive to the metal deck or wood deck.

.2 On all gypsum surfaces intended for board coverage, apply beads of 20mm (3/4") wide on 200mm (8") centers.

7.2.5 **Installation of Vapour Retarder**

.1 When applying Sopravap'R over top metal deck, the existing surface is not required to be primed.

.2 The deck surface must be clean and sound, free of loose materials or contaminants such as water and grease which may compromise the performance of this product.

.3 Unroll and align air/vapour barrier centered at low point of roof or drain. Apply air/vapour removing release film providing 3 inch side laps and 6 inch end last (minimum). Seal around projections as per manufacturer's recommendations.

.4 Apply self-adhesive membrane without any wrinkles or fish mouths.

.5 The vapour retarder is to be carried up the vertical surfaces a minimum of 8 inches above roof deck.

7.0 EXECUTION

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 2 – SOPREMA

7.2.6 **Installation of Rigid Insulation Boards**

.1 Install boards with Duotack Adhesive to the vapour retarder. On all insulation surfaces intended for board coverage apply beads of 20mm (3/4") wide on 200mm (8") centers.

7.2.7 **Installation of Soprasmart Board**

.1 Install Smart Boards with Duotack Adhesive to the rigid insulation as indicated. On all insulation surfaces intended for board coverage, apply continuous strips of 13 to 19 mm (½ to ¾ inch) on 150 mm (6") centers for eight (8) feet around roof perimeter and 200 mm (8") centers for the field of the roof.

.2 Firmly set the Smart Boards, into the strips of Duotack Adhesive. All boards must be evenly and tightly butted together in soldier fashion.

.3 Apply only as many boards as can be covered in the same day.

.4 Install Sopralap cover strips across the end laps on the panels by heat-welded with a propane torch.

7.2.8 **Installation of Additional Plywood and/or Wood Blocking**

Install all new wood blocking and plywood as detailed on the applicable Details.

Note: The new plywood detailed on the inside face of parapet wall is not to be installed until the first ply of base sheet roof membrane is applied 3 inches up the vertical surface of parapet wall.

7.2.9 **Application of Primer**

.1 Apply primer to the wood blocking and plywood surfaces which will be in contact with the self-adhesive membranes at a rate of 0.2 to 0.3 l/m^2. All surfaces to be primed must be free of rust, dust or any residue that may hinder adherence. Cover primed surfaces with roofing membrane as directed by the Manufacturer.

7.2.10 **Base Sheet Flashing Installation**

.1 Apply base sheet flashing only once primer coat is dry.

.2 Install base sheet flashing in one (1) metre widths to cover roofing substrate over 100mm. Overlap side laps by 75mm. Stagger side laps by a least 100mm from base sheet overlaps on the roof to avoid excessive layering.

.3 Apply base sheet flashing directly onto substrate by removing silicone paper cover sheet. Proceed from top to bottom. Once in place, apply pressure manually in a uniformed fashion to obtain homogenous adherence over the entire surface. Preferably seal seams with aluminum applicator and rubber roller. The flashing membrane is to be adhered 4 inches over top of the Blueskin membrane on the outside face of parapet wall. Nail outside edge at 300mm O.C. Burn off plastic film of base sheet membrane before adhering base sheet flashing over it.

.4 Avoid forming wrinkles, air pockets or fish-mouths.

7.0 EXECUTION

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 2 – SOPREMA

7.2.11 **Cap Sheet Installation**

.1 Prior to installing the cap sheet membrane, all insulated flanges are to be installed around each roof penetration and secured to the metal roof deck with four (4) fasteners per flange before applying base sheet target section on top.

.2 Once the base sheet has been applied, the stripping has been completed and no indications of defects are present, then the cap sheet shall be laid.

.3 Begin application of the cap sheet at the lowest edge. Cap sheet shall be unrolled and care be taken to ensure proper alignment of the first roll.

.4 Cap sheet shall be torched into place in accordance with the Recommendations of the Membrane Manufacturer, to the base sheet membrane.

.5 The seams between the base sheet and cap sheet shall be staggered a minimum of 300 mm (12 inches).

.6 Care should be taken to ensure heating is consistent across the width in order to avoid skips or voids. Bitumen should flow out from the lap 6mm (1/4") to ensure a tight seal.

.7 All lap seams on the cap sheet are to be checked after membrane installation.

7.2.12 **Cap Sheet Flashing Installation**

.1 Cap sheet membrane installation shall be laid in strips 1m wide along the parapet. End laps shall be a minimum of 100mm (4 inches) overlap.

.2 Extend cap sheet a minimum of 150mm (6 inches) onto roof surface from the intersection of roof and vertical surfaces and extend to the top of the parapet wall to the outside of wall.

.3 The flashing membrane shall be anchored to the wood nailers by nailing through discs or using nails with 25mm (1 inch) minimum diameter head semi-solidly attached. Nail a minimum of 200mm (8 inches) on center.

.4 Matching granules shall be used to cover excess between flow at seams.

7.2.13 **Flood Coat and Gravel Cover**

.1 Apply a flood coat of cold roofing adhesive (COLPLY EF) at the rate of 5 gallons/100ft² as recommended by Manufacturer (Soprema).

.2 Then embed new approved pea stone gravel at 20 kg/m² (450 lbs/100ft²) while adhesive is still wet.

7.2.14 **Concrete Pavers**

.1 Install concrete pavers as indicated on the Roof Plan on top of one inch extruded polystrenne rigid insulation (Type 4).

7.0 EXECUTION

Partial Roof Replacement
for
St. Philip Catholic School – Petrolia
PROJECT No. 645-CP1623

OPTION NO. 2 – SOPREMA

7.2.15 **Exterior Cladding Installation**

.1 Install sub-girts and metal flashings enclosures to the areas indicated on the Drawings.

.2 Complete all installation of the exterior cladding with approved fasteners.

7.3 INSTALLATION – Metal Flashings

7.3.1 Cap and counter flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to wood capping blocking at 12 inches O.C.

7.3.2 Flashing shall be fabricated to shapes on site with all necessary breaks for adequate expansion.

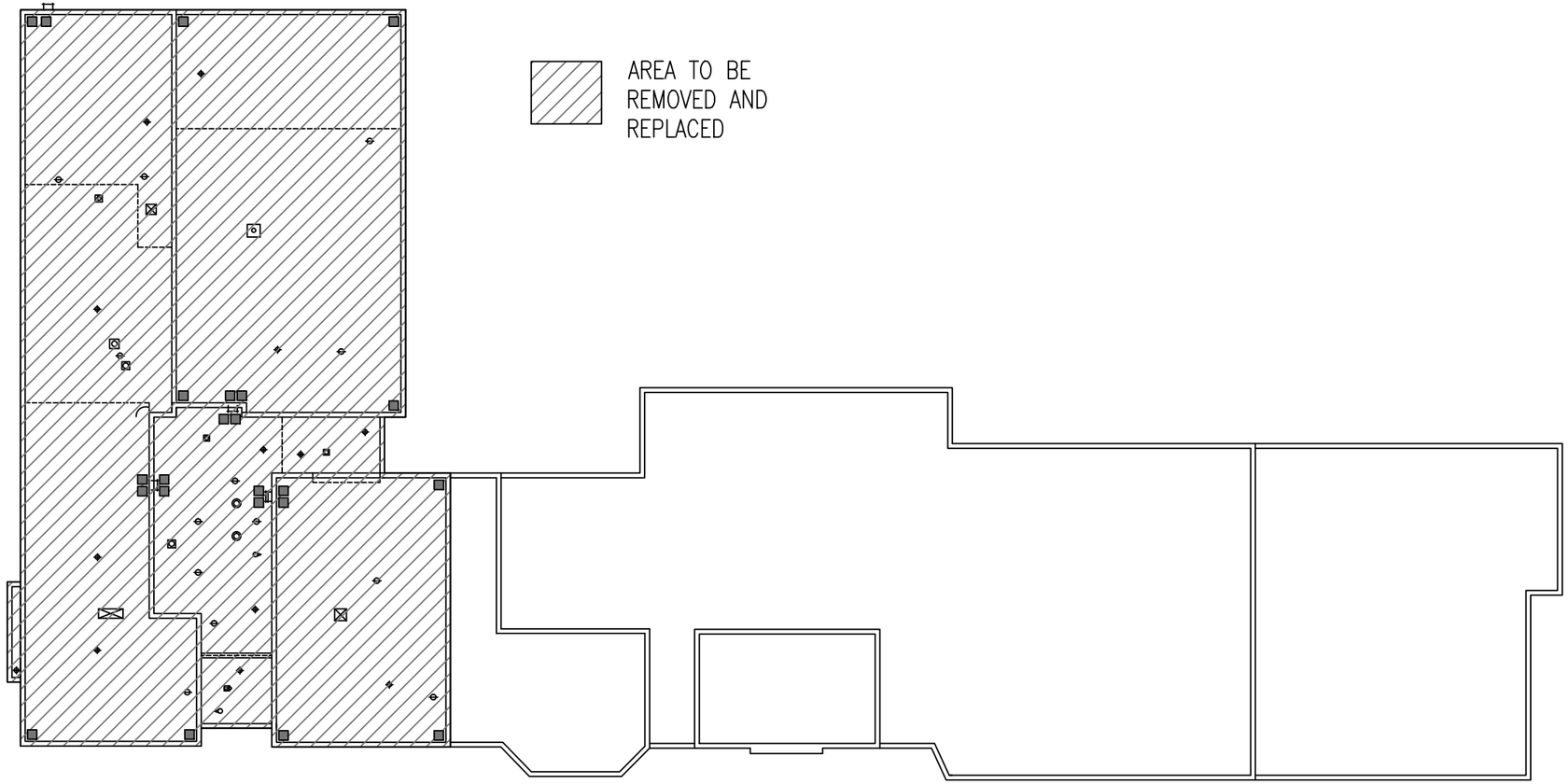
7.3.3 The inside face of the metal cap flashing between the S-locked joints is to be secured with three (3) fasteners matching the colour of the metal cap with a neoprene washer between the fastener head and inside face of the metal cap flashing.

7.3.4 All joints shall be sealed with approved sealant.

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

7.4 CLEAN-UP

7.4.1 Upon completion of the installation, the work shall be left clean and free of defects which might affect the durability or appearance of the building. Clean all roof surfaces, including adjacent roofs and grounds of all foreign matter resulting from this Roofing Project.



AREA TO BE
REMOVED AND
REPLACED

KEY ROOF PLAN

SCALE : 1" = 30'-0"

REMLAP BUILDING SERVICES INC.

R B S — 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
Harrow, Ontario N0R 1G0
Tel: (519) 738-3458
Fax: (519)738-4787

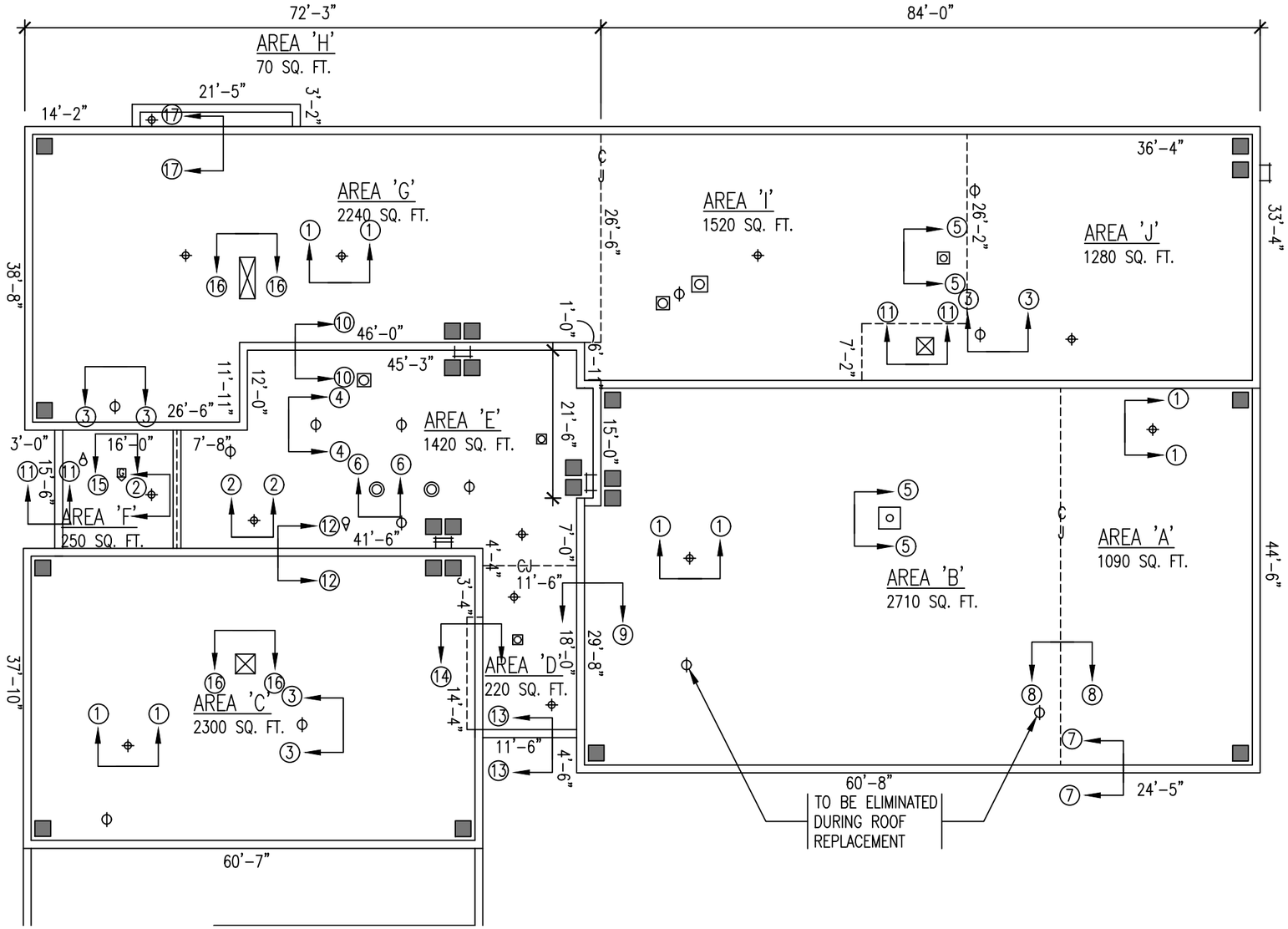
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP
CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT
SCHOOL BOARD

DRAWING TITLE
KEY ROOF PLAN

DATE :	MAY 2016
SCALE :	AS SHOWN
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	11"x17"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	R-1



LEGEND

- ROOF DRAIN
- VENT PIPE STACK
- EXHAUST FAN
- WALL LADDER
- BRACKET FOR EXTENSION LADDER
- ABANDONED CURB TO BE ELIMINATED
- HOT EXHAUST STACK
- EXHAUST STACK W/ DIRECTION
- GOOSE NECK EXHAUST FAN
- CONTROL JOINT
- CONCRETE PAVER W/ INSULATION CUSHION

ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS

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

REMLAP BUILDING SERVICES INC.
R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS
B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING)
S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS
Christopher W. Palmer, C.E.T.
1407 Cora Road
Harrow, Ontario N0R 1G0
Tel: (519) 738-3458
Fax: (519)738-4787

DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP
CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT
SCHOOL BOARD

DRAWING TITLE
ENLARGED ROOF PLAN - ROOF
PENETRATION AND DIMENSIONS

DATE :	MAY 2016
SCALE :	AS SHOWN
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	11"x17"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	R-2

ROOF REPLACEMENT
ST. PHILIP CATHOLIC SCHOOL
420 QUEEN STREET, PETROLIA ONTARIO N0N 1R0

EXISTING ROOF SYSTEM		DESIGN ROOF SYSTEM
	AREA 'A'	
Two Ply Modified Bitumen Granulated Surface Membrane On 2.2 Rigid Insulation (ISO) On ½ inch Drywall On Metal Deck		Pea Stone Roofing Gravel On Flood Coat of Adhesive On Two Ply Modified Bitumen Membrane On 3/16" Protection Board On Tapered Insulation as noted On 3.5" Rigid Insulation On Vapour Retarder On New ½" Fire Code Drywall On Existing Metal Deck
	AREA 'B'	
Four Plies of Roofing Felt w/Granules On ½" Fibreboard Insulation On 1.7 Rigid Insulation (ISO) On Acoustic Metal Deck (Flutes filled w/Batt)		Pea Stone Roofing Gravel On Flood Coat of Adhesive On Two Ply Modified Bitumen Membrane On 3/16" Protection Board On Tapered Insulation as noted On 3.5" Rigid Insulation On Vapour Retarder On New ½" Fire Code Drywall On 3" Acoustic Metal Deck with Flutes filled w/ Batt Insulation
	AREA 'C'	
Four Plies of Roofing Felt w/Granules On ½" Fibreboard Insulation On 1.7 Rigid Insulation (ISO) On Two Ply Roofing Felt for Vapour Retarder On Metal Deck		Pea Stone Roofing Gravel On Flood Coat of Adhesive On Two Ply Modified Bitumen Membrane On 3/16" Protection Board On Tapered Insulation as noted On 3.5" Rigid Insulation On Vapour Retarder On New ½" Fire Code Drywall On Existing Metal Deck
	AREA 'D'	
Two Ply Modified Bitumen Granulated Surface Membrane On 2 inch Rigid Insulation (ISO) On ½ inch Drywall On Metal Deck		Pea Stone Roofing Gravel On Flood Coat of Adhesive On Two Ply Modified Bitumen Membrane On 3/16" Protection Board On Tapered Insulation as noted On 3.5" Rigid Insulation On Vapour Retarder On New ½" Fire Code Drywall On Existing Metal Deck
	AREA 'E'	
Four Plies of Roofing Felt w/Granules On ½" Fibreboard Insulation On 1.7 Rigid Insulation (ISO) On ½" Drywall On Wood Deck		Pea Stone Roofing Gravel On Flood Coat of Adhesive On Two Ply Modified Bitumen Membrane On 3/16" Protection Board On Tapered Insulation as noted On 3.5" Rigid Insulation On Vapour Retarder On New ½" Fire Code Drywall On Existing Wood Deck

AREA 'F'

Four Plies of Roofing Felt w/Granules
On ½" Fibreboard Insulation
On 1.7 Rigid Insulation (ISO)
On ½" Drywall
On Wood Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Protection Board
On Tapered Insulation as noted
On 3.5" Rigid Insulation
On Vapour Retarder
On New ½" Fire Code Drywall
On Existing Wood Deck

AREA 'G'

Four Plies of Roofing Felt w/Granules
On ½" Fibreboard Insulation
On 1.7 Rigid Insulation (ISO)
On Two Ply Roofing Felt for Vapour Retarder
On Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Protection Board
On Tapered Insulation as Noted
On 3.5" Rigid Insulation
On Vapour Retarder
On New ½" Fire Code Drywall
On Existing Metal Deck

AREA 'H'

Four Plies of Roofing Felt w/Granules
On Wood Deck

Pea Stone Roofing Gravel
On Two Ply Modified Bitumen Membrane
On 3/16" Protection Board
On New ½" Fire Code Drywall
On Existing Wood Deck

AREA 'I'

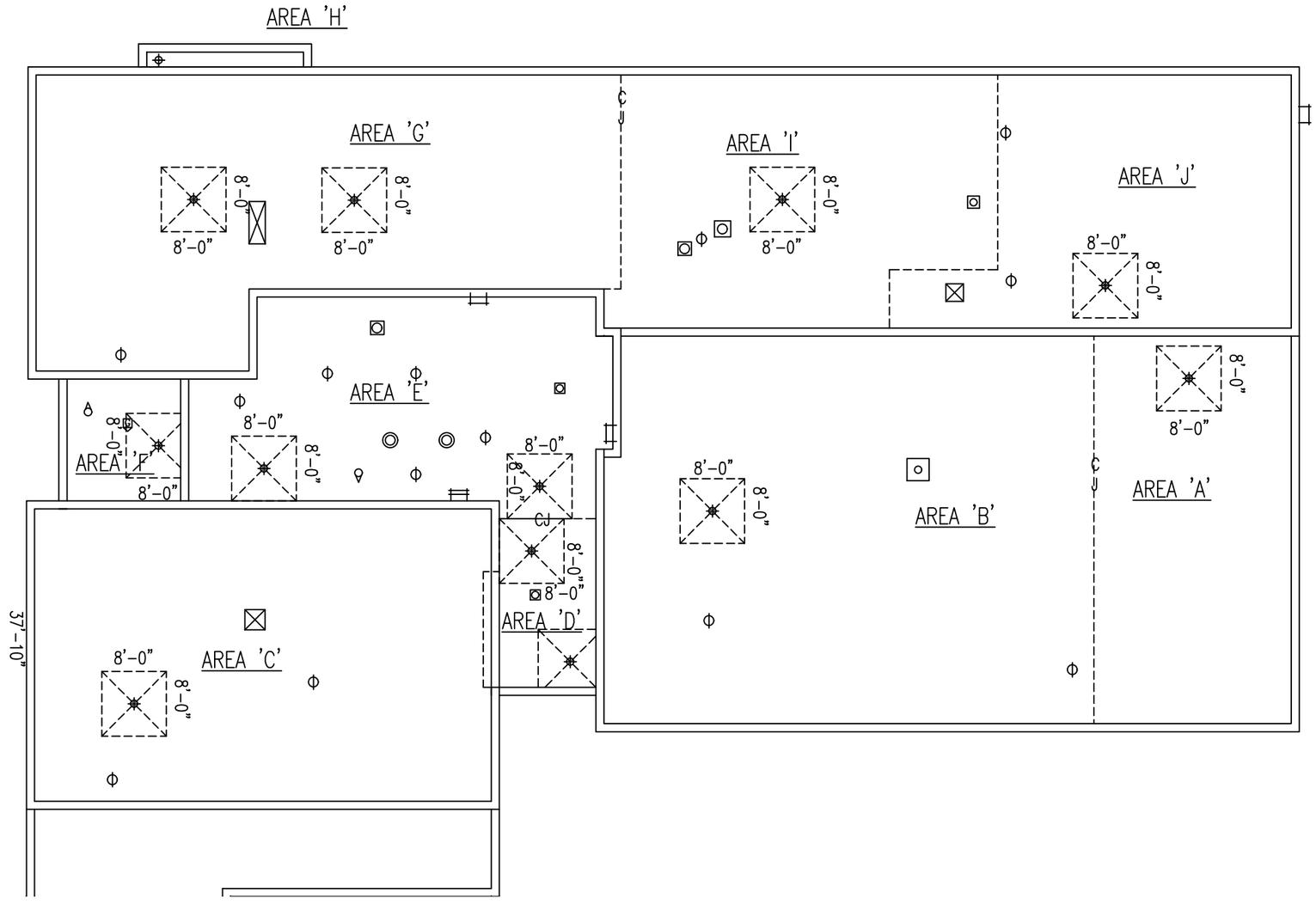
Four Plies of Roofing Felt w/Granules
On ½" Fibreboard Insulation
On 1.7 Rigid Insulation (ISO)
On Two Ply Roofing Felt for Vapour Retarder
On Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Protection Board
On Tapered Insulation as Noted
On 3.5" Rigid Insulation
On Vapour Retarder
On New ½" Fire Code Drywall
On Existing Metal Deck

AREA 'J'

Four Plies of Roofing Felt w/Granules
On ½" Fibreboard Insulation
On 1.7 Rigid Insulation (ISO)
On Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Protection Board
On Tapered Insulation as Noted
On 3.5" Rigid Insulation
On Vapour Retarder
On New ½" Fire Code Drywall
On Existing Metal Deck

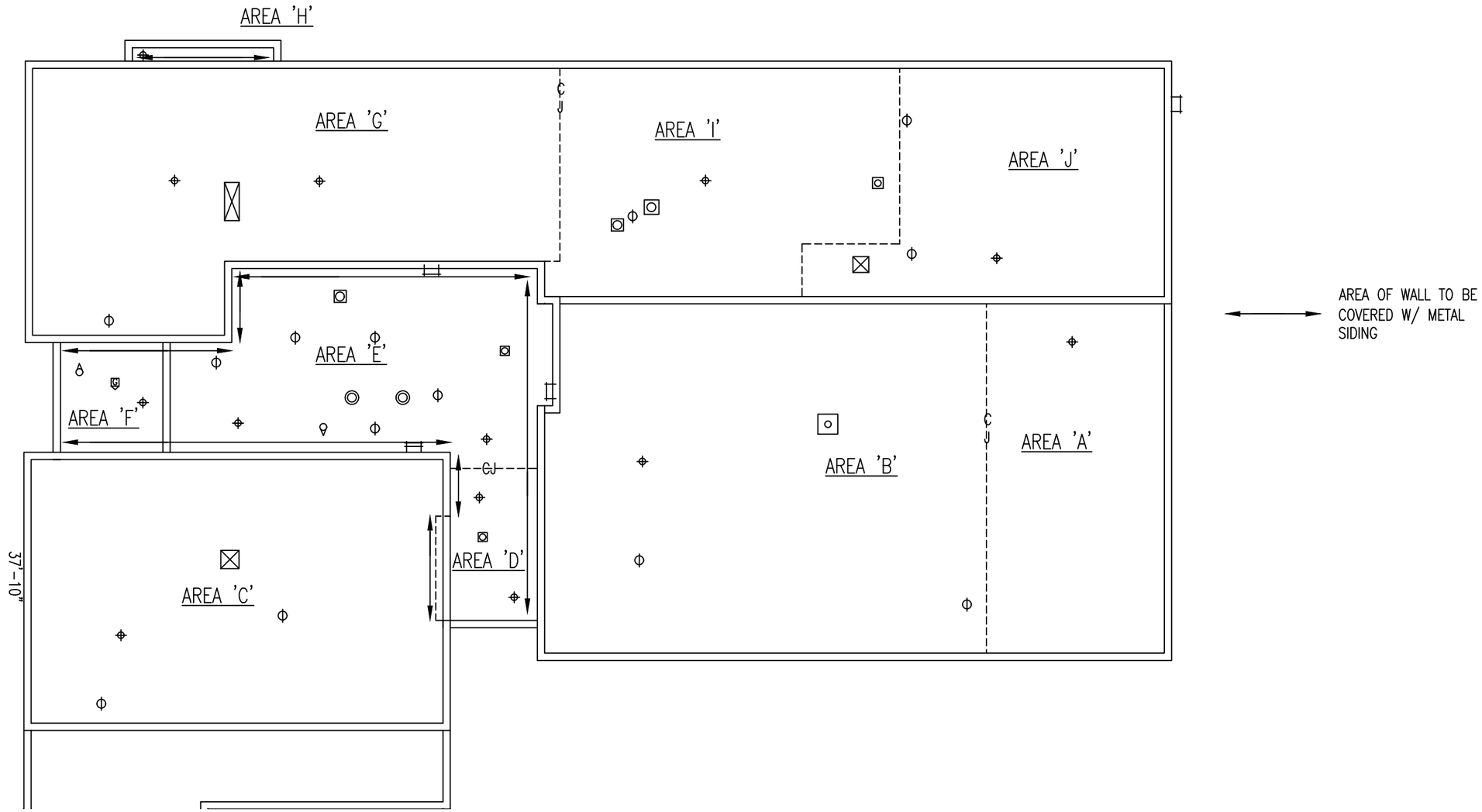


SLOPED POLYISO
TAPERED INSULATION
FROM 1" TO 2"
WITHIN 4 FEET

ENLARGED ROOF PLAN - TAPERED INSULATION

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

REMLAP BUILDING SERVICES INC. R B S — 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 Cove Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3458, Fax: (519)738-4797	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE : MAY 2016 SCALE : AS SHOWN DRAWN BY : CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 11"x17"
DATE (MM-DD-YY) / ISSUED FOR 5-5-16 / TENDER	DRAWING TITLE ENLARGED ROOF PLAN - TAPERED INSULATION	PROJECT FILE NO. RBS16-12 DRAWING NO. R-3



ENLARGED ROOF PLAN - WALL COVERED W/ METAL SIDING

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

REMLAP BUILDING SERVICES INC.

R B S — 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, Harrow, Ontario N0R 1G0

Tel: (519) 738-3458

Fax: (519)738-4797

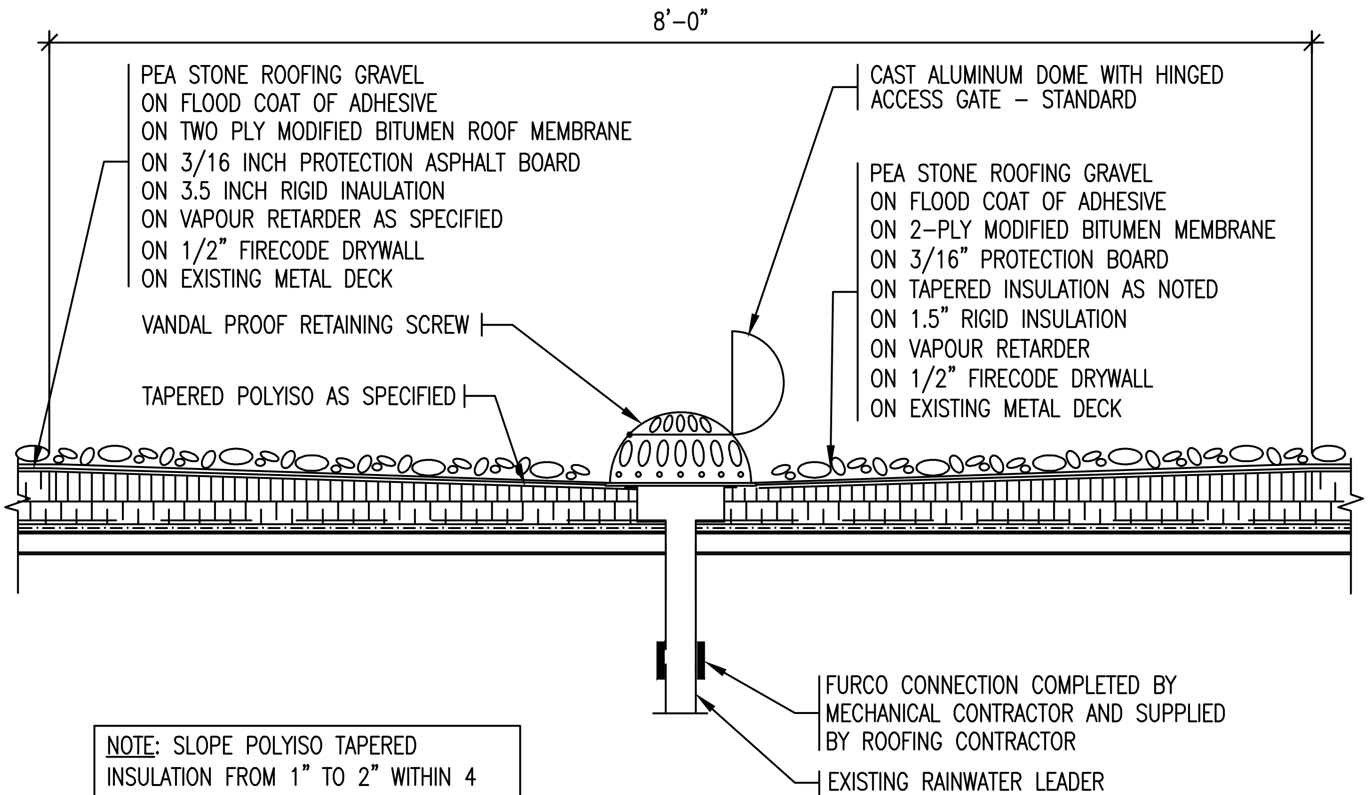
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP
CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT
SCHOOL BOARD

DRAWING TITLE
ENLARGED ROOF PLAN - WALL COVERED W/ METAL INSULATION

DATE :	MAY 2016
SCALE :	AS SHOWN
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	11"x17"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	R-4

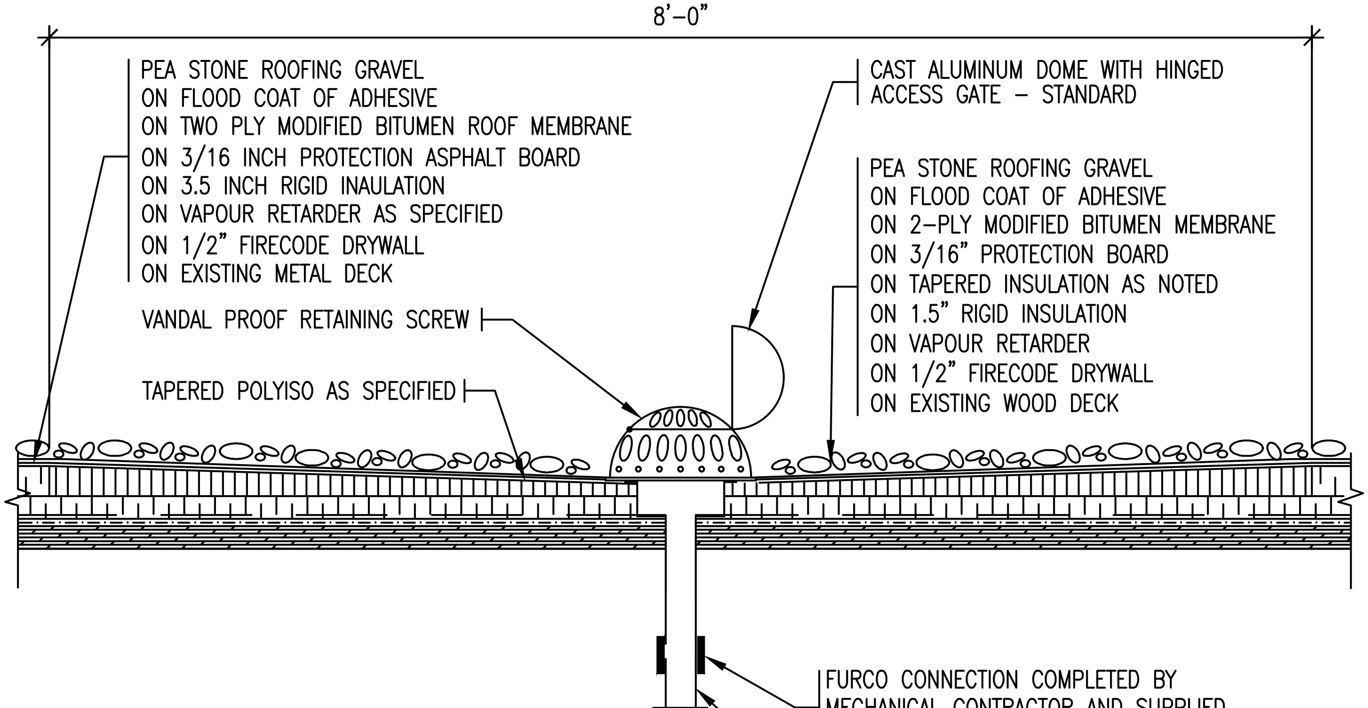


NOTE: SLOPE POLYISO TAPERED INSULATION FROM 1" TO 2" WITHIN 4 FEET

DETAIL 1 - ROOF DRAIN

SCALE : 1" = 1'–0"

REMLAP BUILDING SERVICES INC. R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519)738-4767	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM–DD–YY): 5–5–16 / ISSUED FOR: TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16–12
		DRAWING NO.	D-1



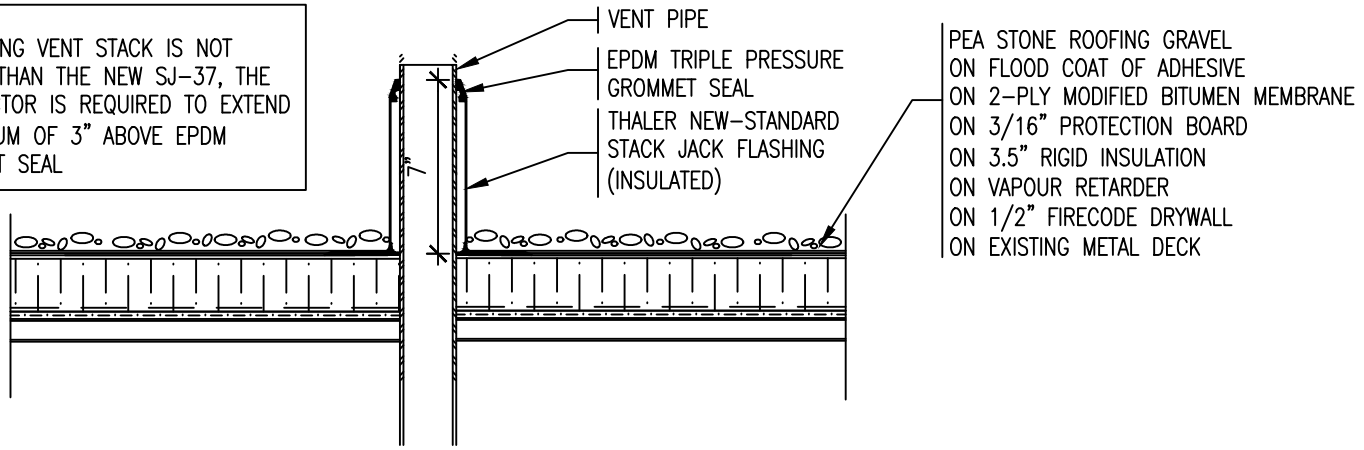
NOTE: SLOPE POLYISO TAPERED INSULATION FROM 1" TO 2" WITHIN 4 FEET

DETAIL 2 - ROOF DRAIN

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC. RBS 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 Harrow, Ontario N0R 1G0 Tel: (519) 738-3468 Fax: (519)738-4767	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-12
5-5-16 / TENDER		DRAWING NO.	D-2

NOTE:
IF EXISTING VENT STACK IS NOT HIGHER THAN THE NEW SJ-37, THE CONTRACTOR IS REQUIRED TO EXTEND A MINIMUM OF 3" ABOVE EPDM GROMMET SEAL

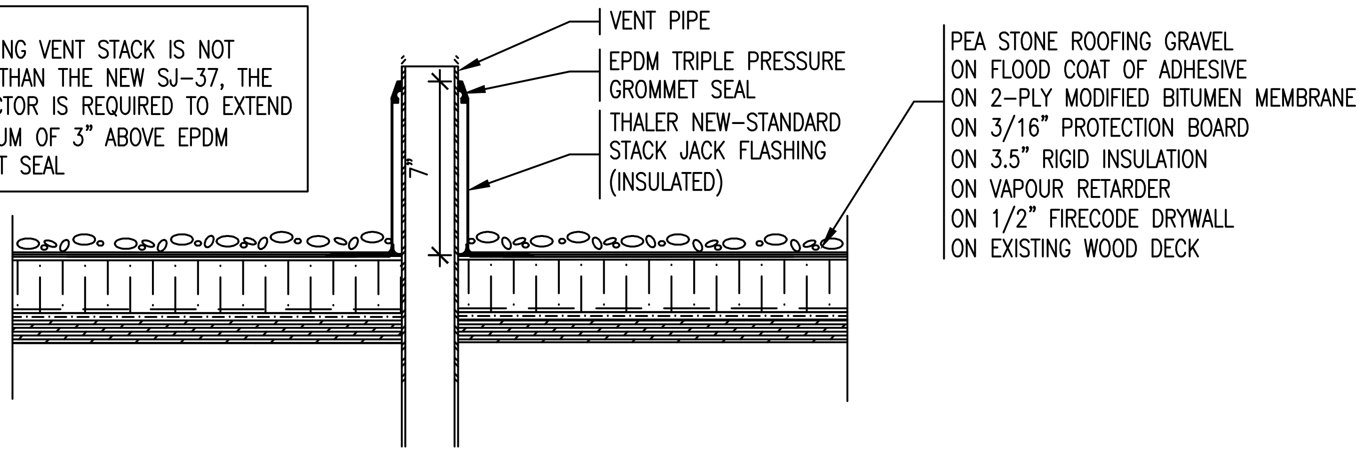


DETAIL 3 - VENT PIPE STACK

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC. RBS 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 Cleo Road, Kanata, Ontario K2K 1X3 Tel: (613) 723-3455 Fax: (613)723-4707	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 5-5-16 / TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-12
		DRAWING NO.	D-3

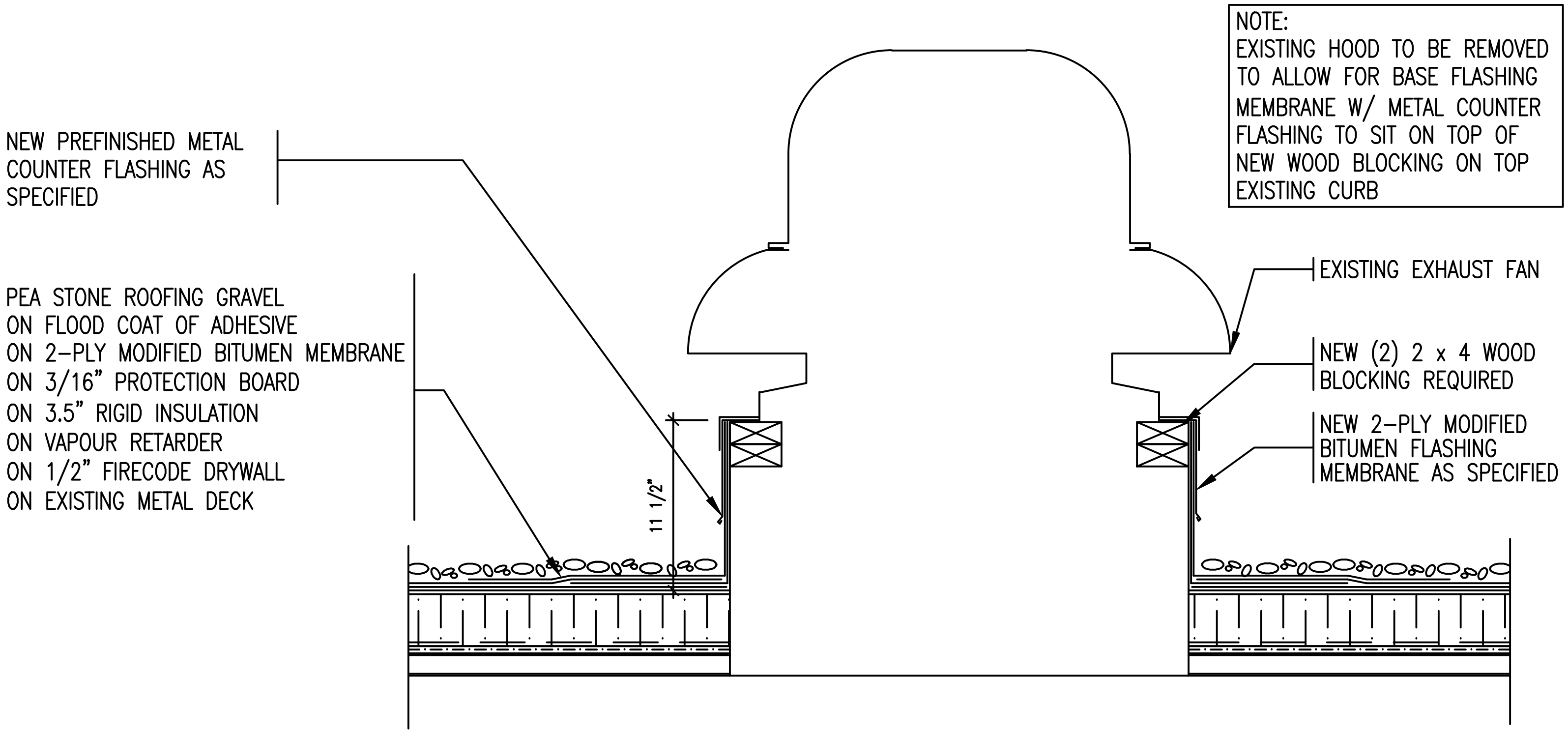
NOTE:
IF EXISTING VENT STACK IS NOT HIGHER THAN THE NEW SJ-37, THE CONTRACTOR IS REQUIRED TO EXTEND A MINIMUM OF 3" ABOVE EPDM GROMMET SEAL



DETAIL 4 - VENT PIPE STACK

SCALE : 1" = 1'-0"

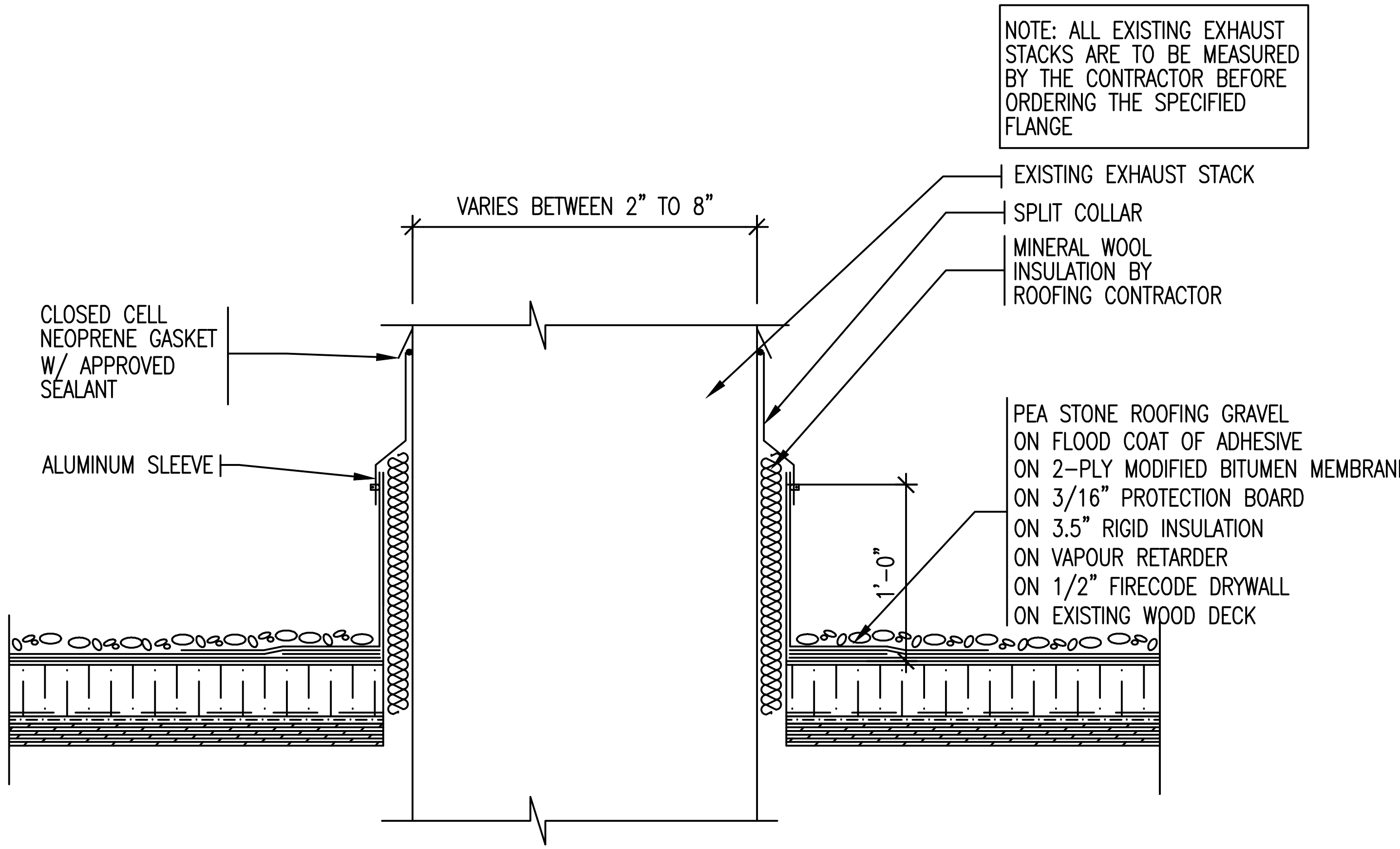
REMLAP BUILDING SERVICES INC. RBS ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3468 Fax: (519)738-4767	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	DATE : MAY 2016 SCALE : N.T.S. DRAWN BY : CWP CHK. BY : CWP SHEET SIZE : 8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 5-5-16 / TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS16-12 DRAWING NO. D-4



DETAIL 5 - TYPICAL EXHAUST FAN

SCALE : 1" = 1'–0"

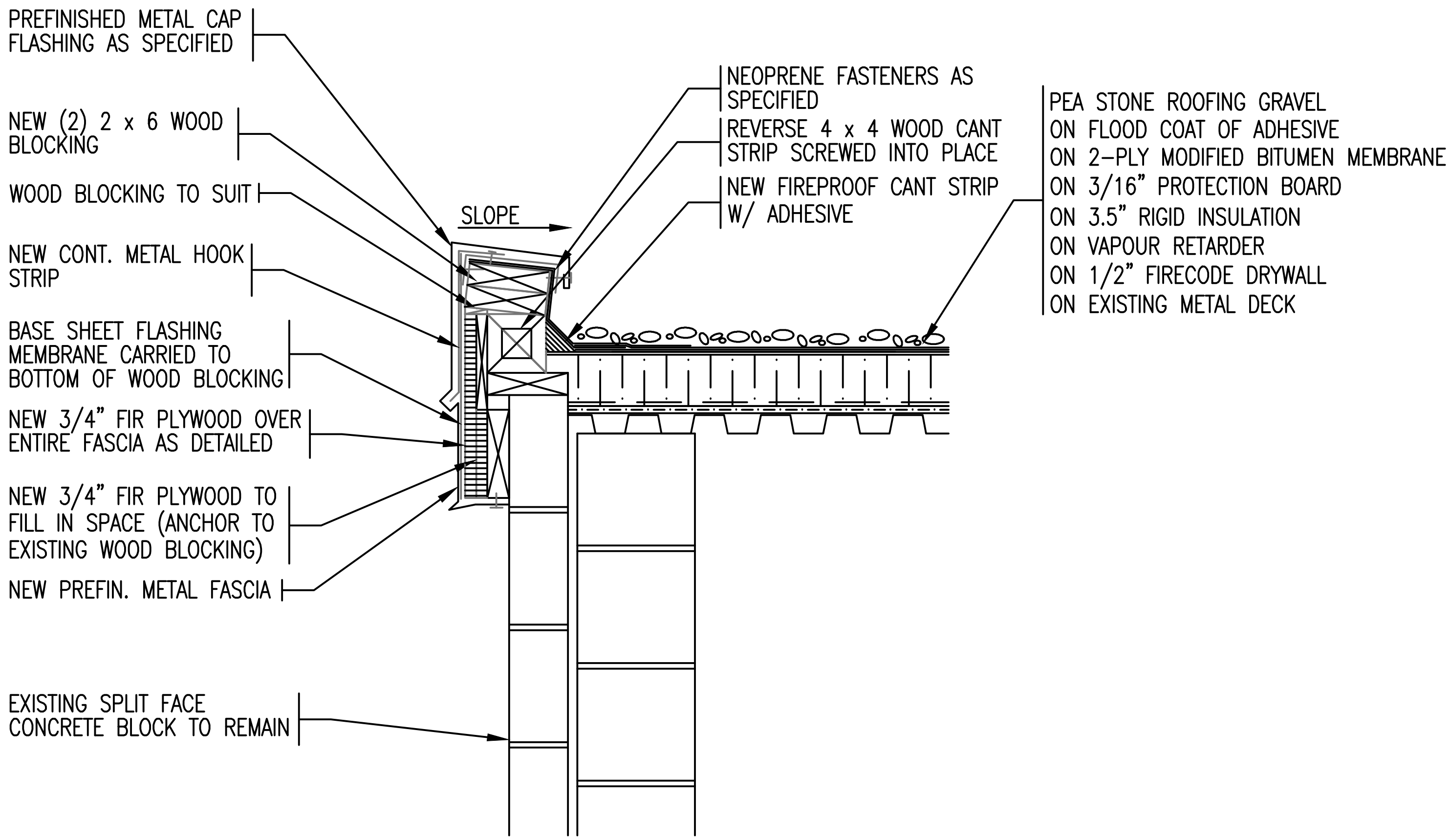
REMLAP BUILDING SERVICES INC. R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3456 Fax: (519)738-4787	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE : MAY 2016 SCALE : N.T.S. DRAWN BY : CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"
DATE (MM–DD–YY) / ISSUED FOR 5–5–16 / TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS16–12 DRAWING NO. D-5



DETAIL 6 - TYPICAL HOT EXHAUST STACK

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC. R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3468 Fax: (519)738-4787	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY): 5-5-16 — ISSUED FOR: TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-12
		DRAWING NO.	D-6



DETAIL 7 - PARAPET WALL DETAIL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.

RBS
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
Harrow, Ontario N0R 1G0
Tel: (519) 738-3458
Fax: (519)738-4767

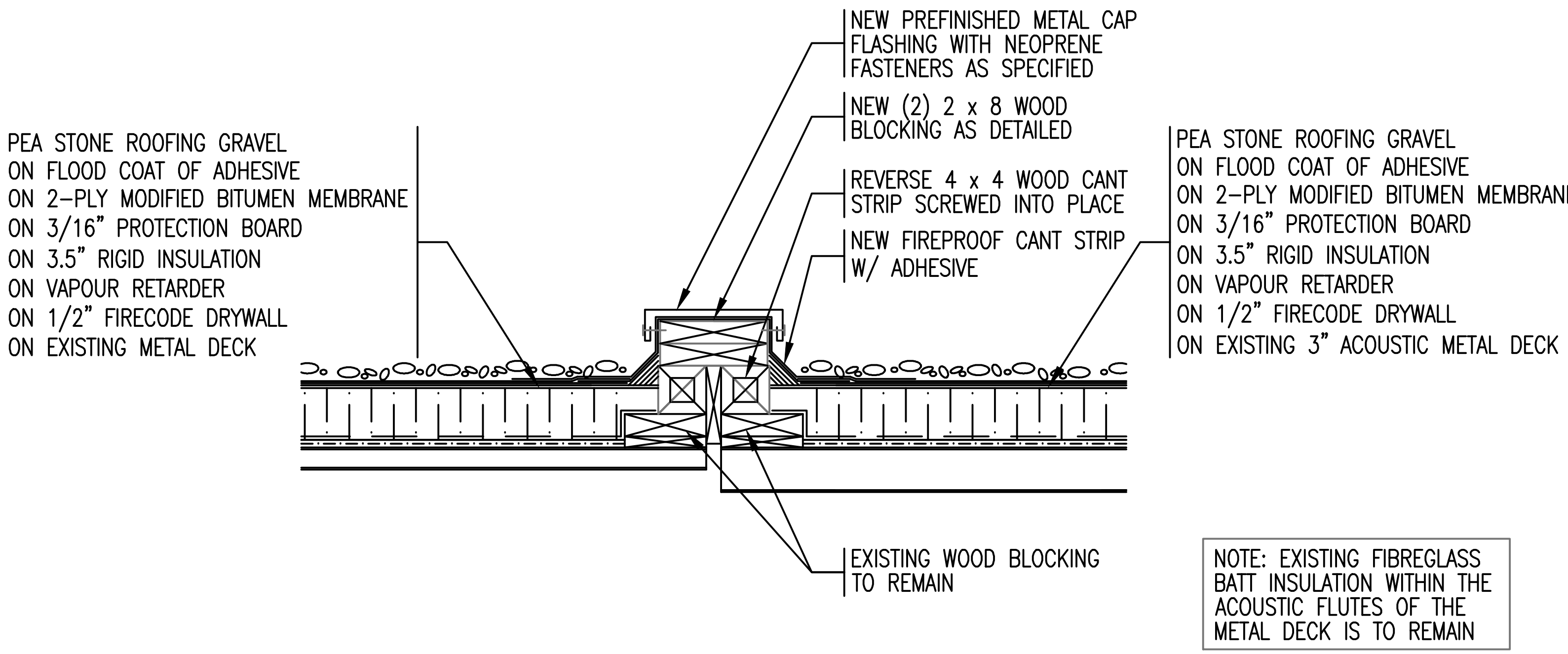
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE
ROOF DETAIL

DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	D-7



DETAIL 8 - CONTROL JOINT

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.

R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS
B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING)
S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS

Christopher W. Palmer, C.E.T.

1407 Gore Road
Harrow, Ontario N0R 1G0
Tel: (519) 738-3458
Fax: (519)738-4767

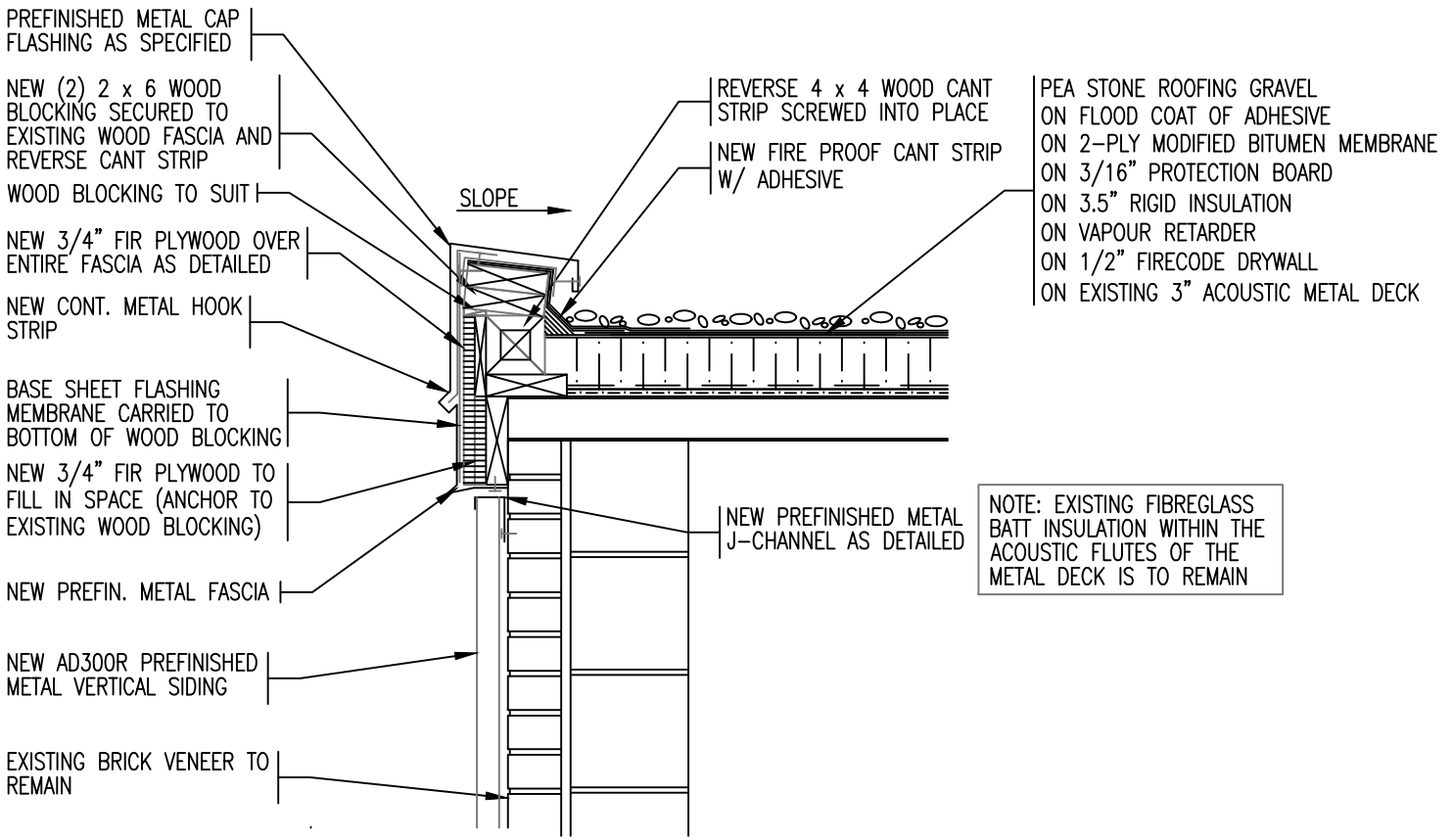
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE
ROOF DETAIL

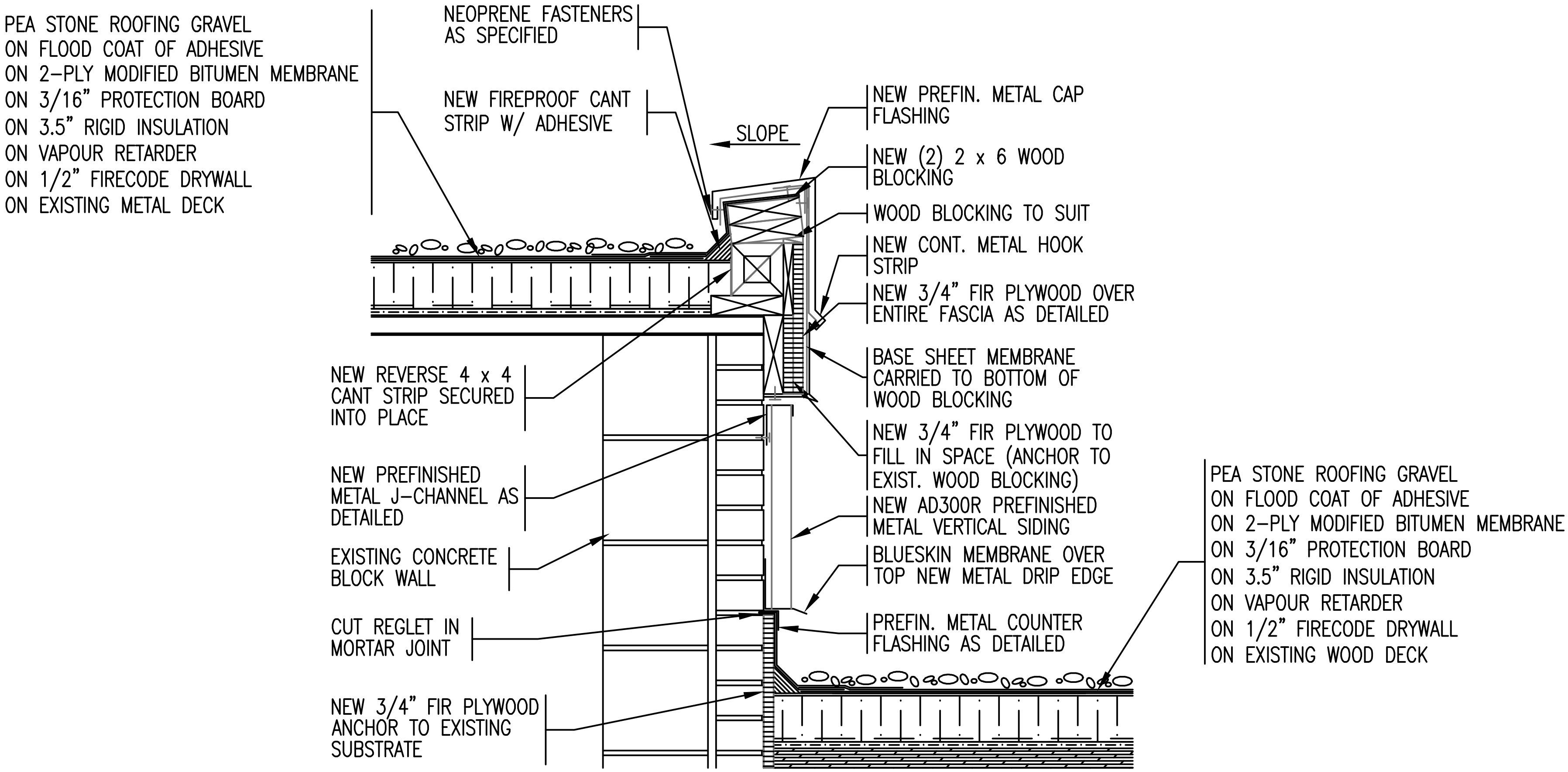
DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	D-8



DETAIL 9 - PARAPET WALL DETAIL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC. RBS ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/UNDER ROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Cleo Road, Kanata, Ontario K2K 1X3 Tel: (613) 723-3455 Fax: (613)723-4707	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 5-5-16 TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-12
		DRAWING NO.	D-9



DETAIL 10 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.

RBS
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, Harrow, Ontario N0R 1G0
Tel: (519) 738-3488
Fax: (519)738-4767

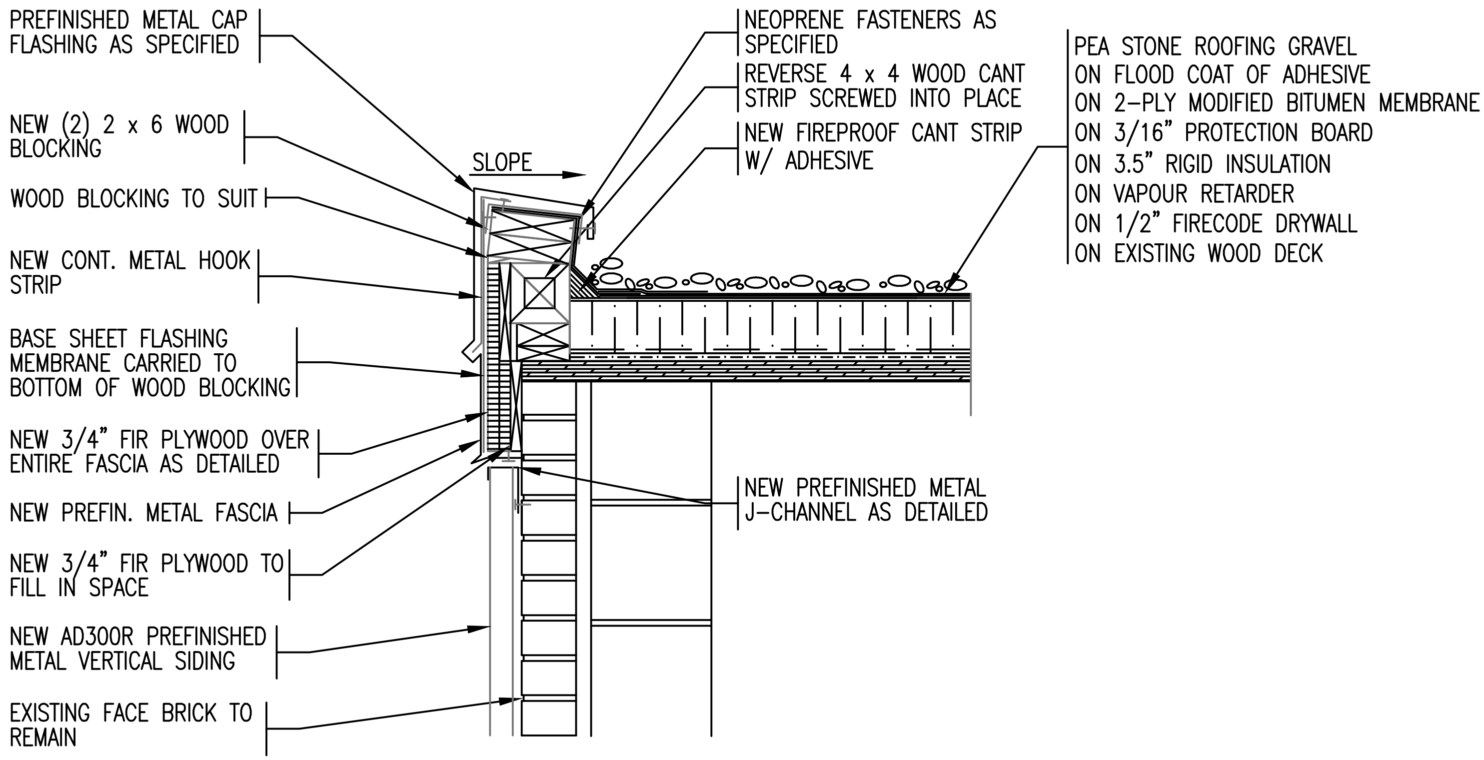
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT: ST. PHILIP CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT: ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE: ROOF DETAIL

DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	D-10



DETAIL 11 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.
RBS
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
Harrow, Ontario N0R 1G0
Tel: (519) 738-3468
Fax: (519)738-4787

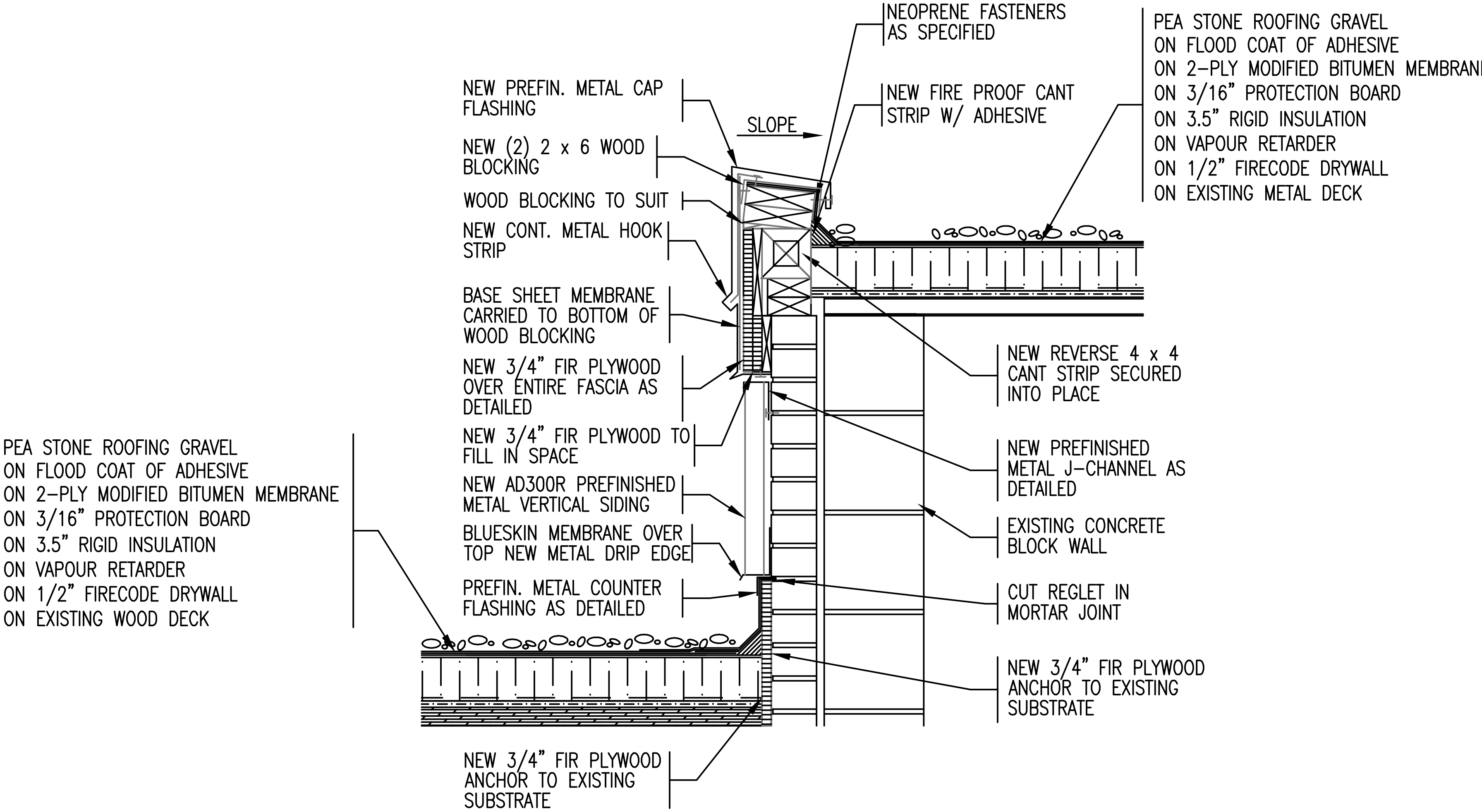
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE
ROOF DETAIL

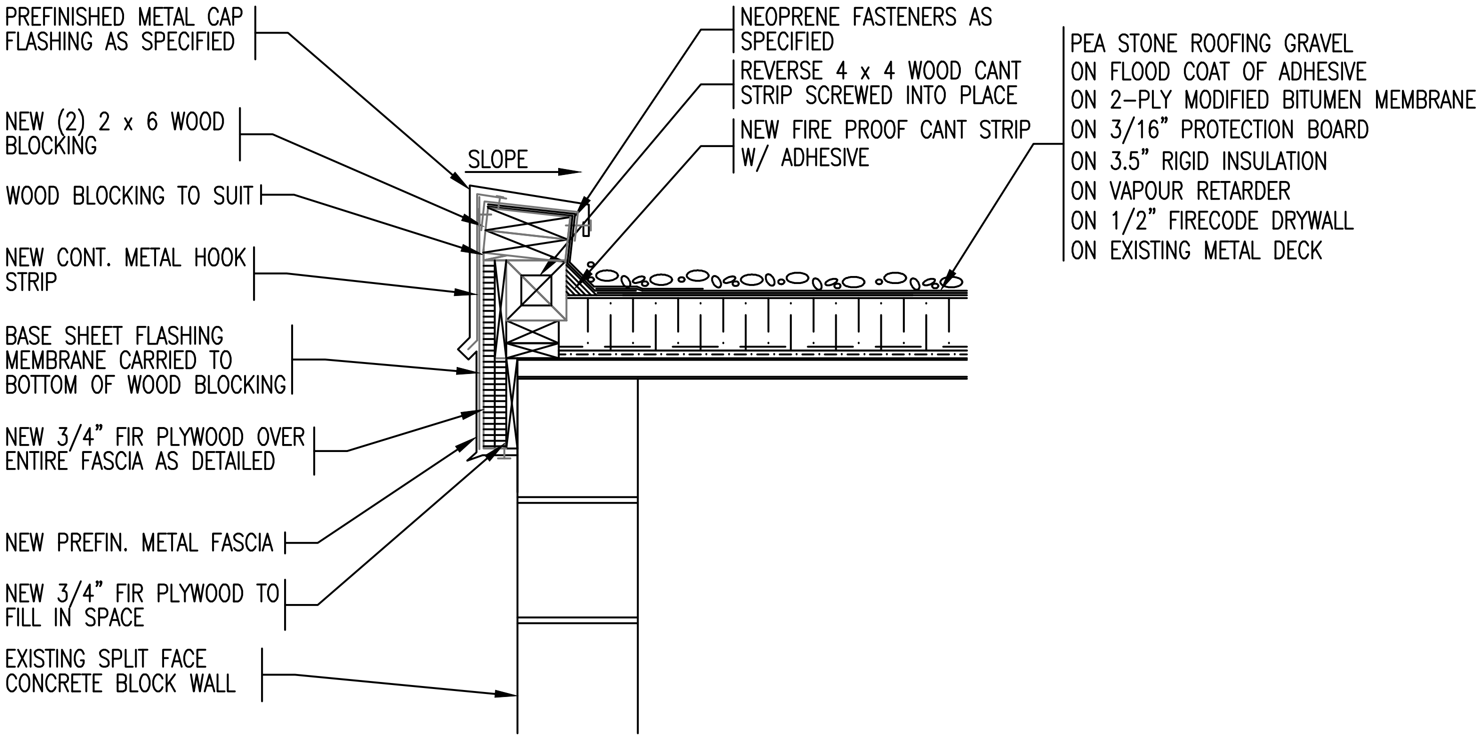
DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	D-11



DETAIL 12 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC. RBS 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, Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519)738-4787	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY): 5-5-16 — ISSUED FOR: TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-12
		DRAWING NO.	D-12



DETAIL 13 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.
RBS
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
Harrow, Ontario N0R 1G0
Tel: (519) 738-3468
Fax: (519)738-4787

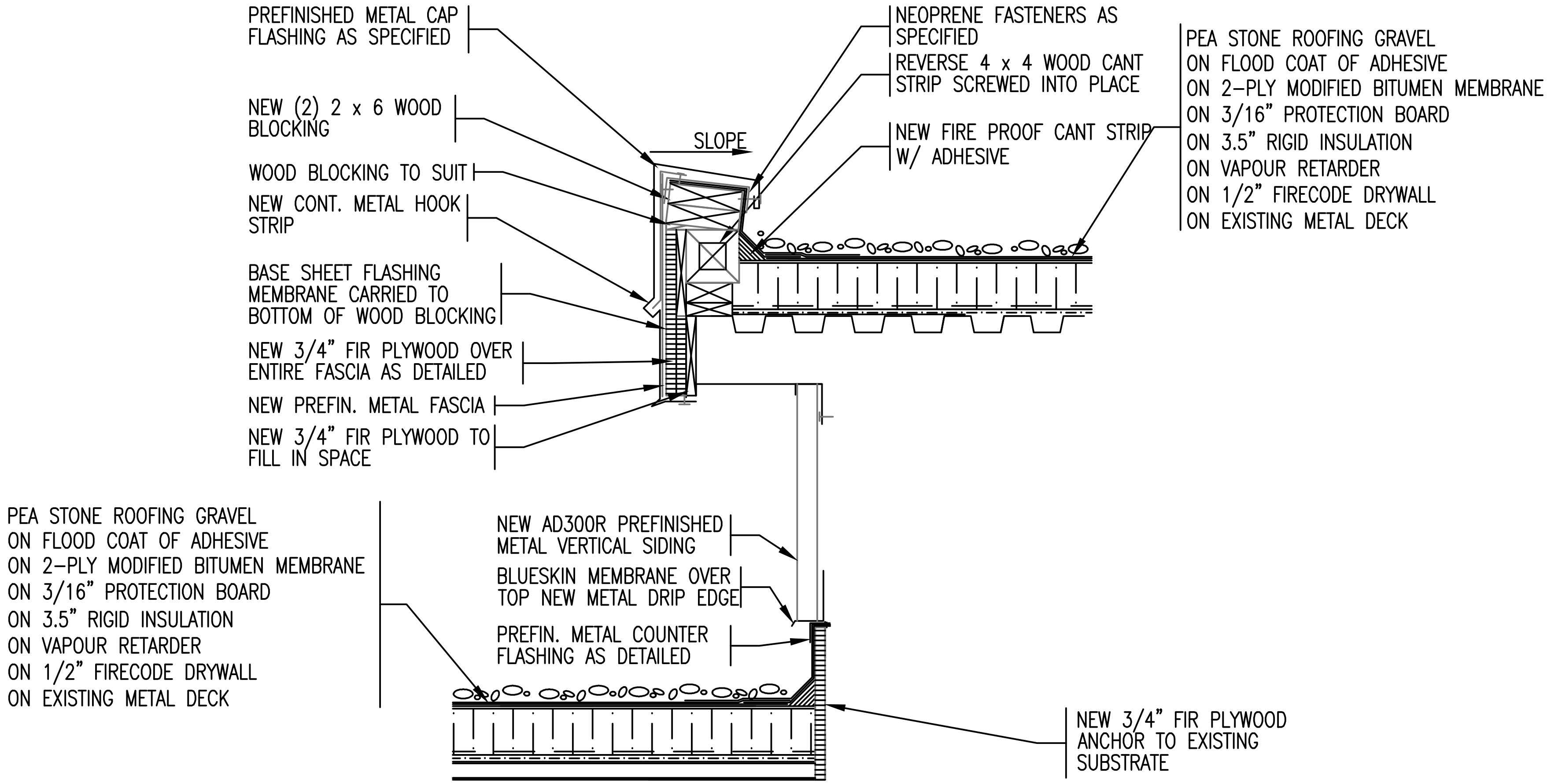
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE
ROOF DETAIL

DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	D-13



DETAIL 14 - PARAPET WALL

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.

RBS — 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, Harrow, Ontario N0R 1G0
Tel: (519) 738-3458
Fax: (519)738-4787

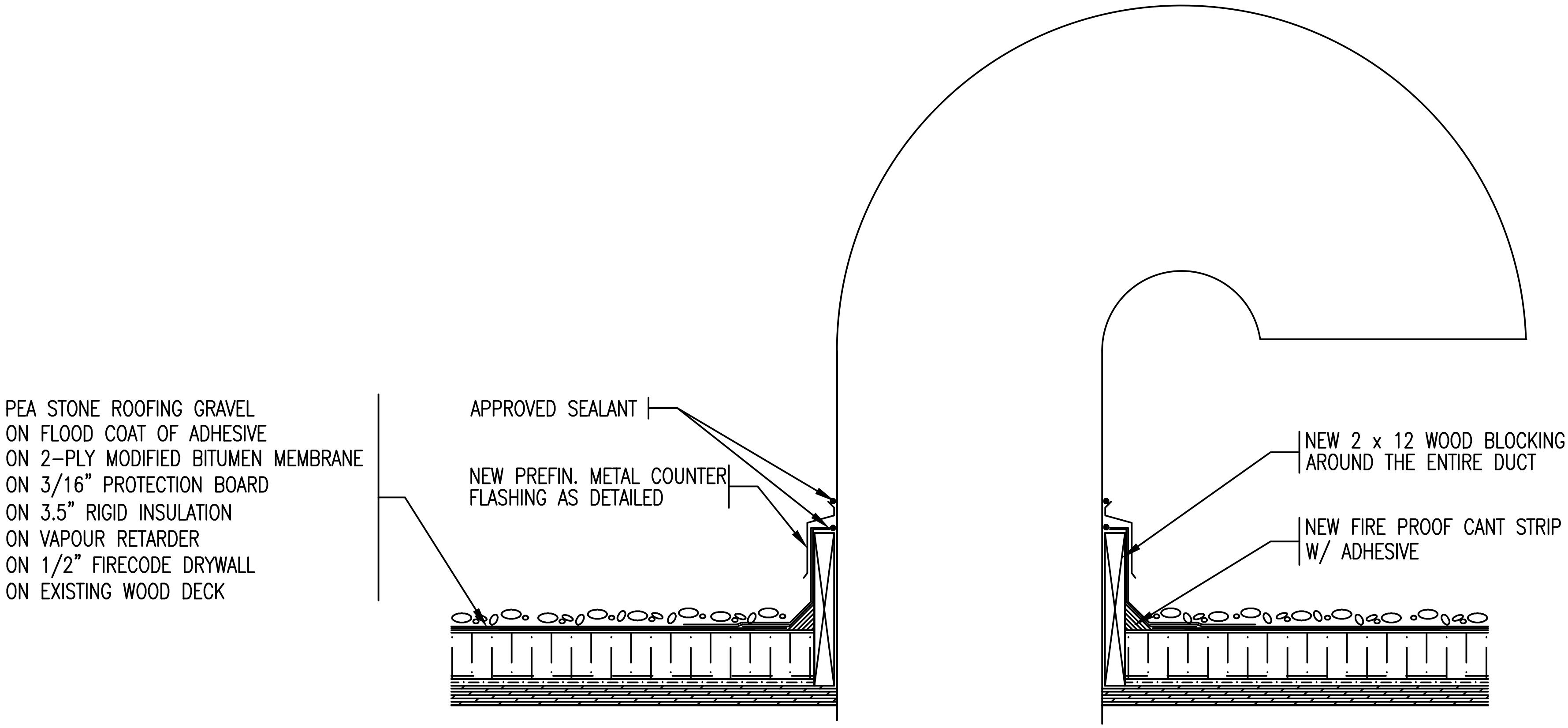
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

DRAWING TITLE
ROOF DETAIL

DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	D-14



DETAIL 15 - GOOSENECK EXHAUST FAN

SCALE : 1" = 1'-0"

REMLAP BUILDING SERVICES INC.

R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS
B BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING)
S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS

Christopher W. Palmer, C.E.T.

1407 Gore Road, Harrow, Ontario N0R 1G0
Tel: (519) 738-3468
Fax: (519)738-4787

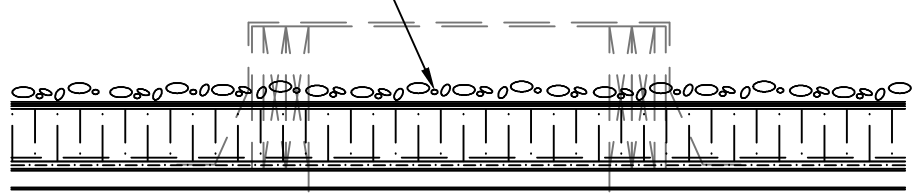
DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT	ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO
CLIENT	ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD
DRAWING TITLE	ROOF DETAIL

DATE :	MAY 2016
SCALE :	N.T.S.
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	8.1/2"x11"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	D-15

PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF ADHESIVE
ON 2-PLY MODIFIED BITUMEN MEMBRANE
ON 3/16" PROTECTION BOARD
ON 3.5" RIGID INSULATION
ON VAPOUR RETARDER
ON 1/2" FIRECODE DRYWALL
ON EXISTING METAL DECK

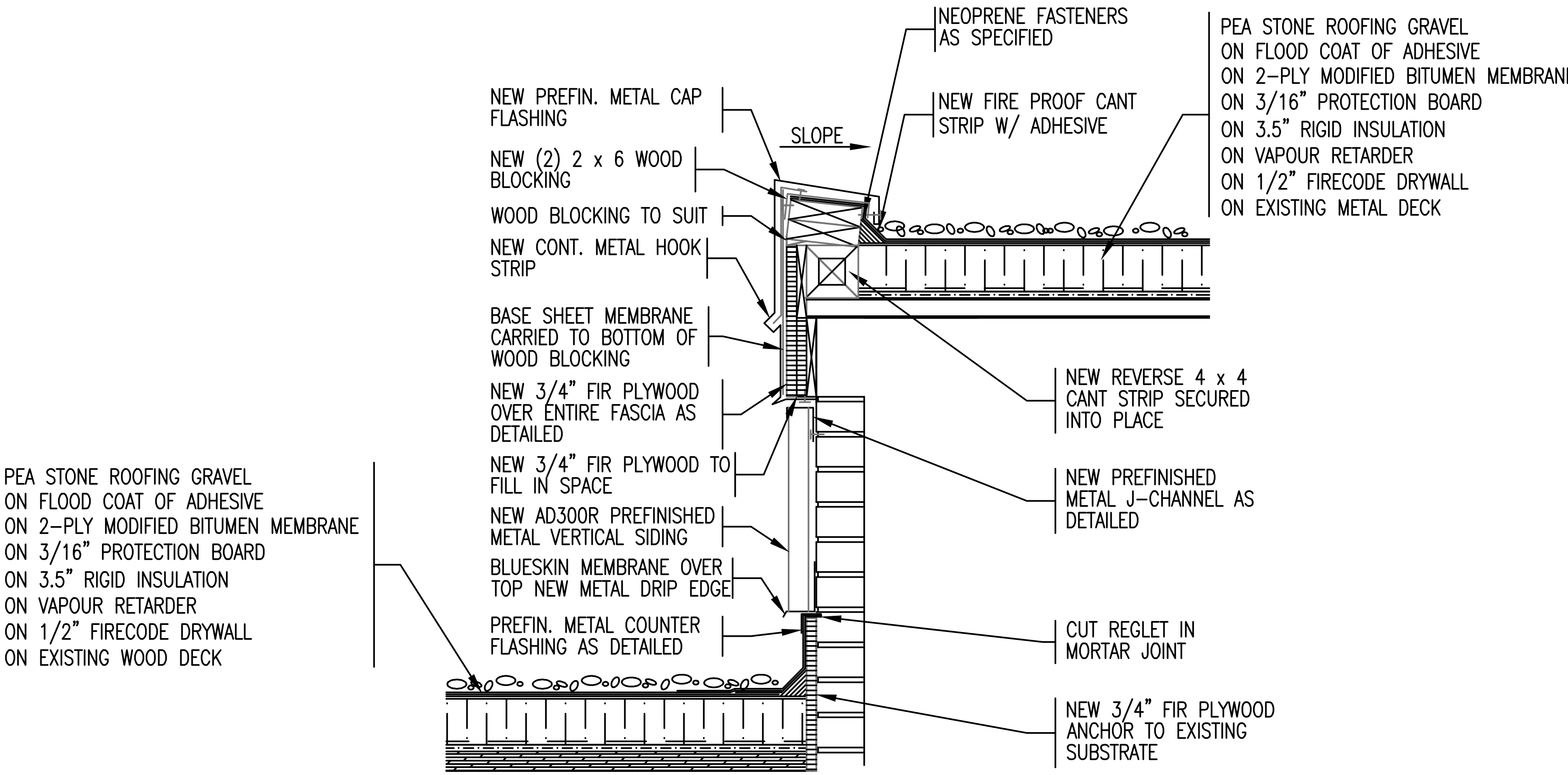
NOTE: EXISTING ABANDONED ROOF CURB TO BE REMOVED COMPLETELY FROM METAL DECK AND OPENING TO BE CLOSED IN WITH METAL DECK OVERLAPPING CURRENT DECK 6 INCHES AND SCREWED TOGETHER



DETAIL 16 - ABANDONED CURB

SCALE : 1" = 1'-0"

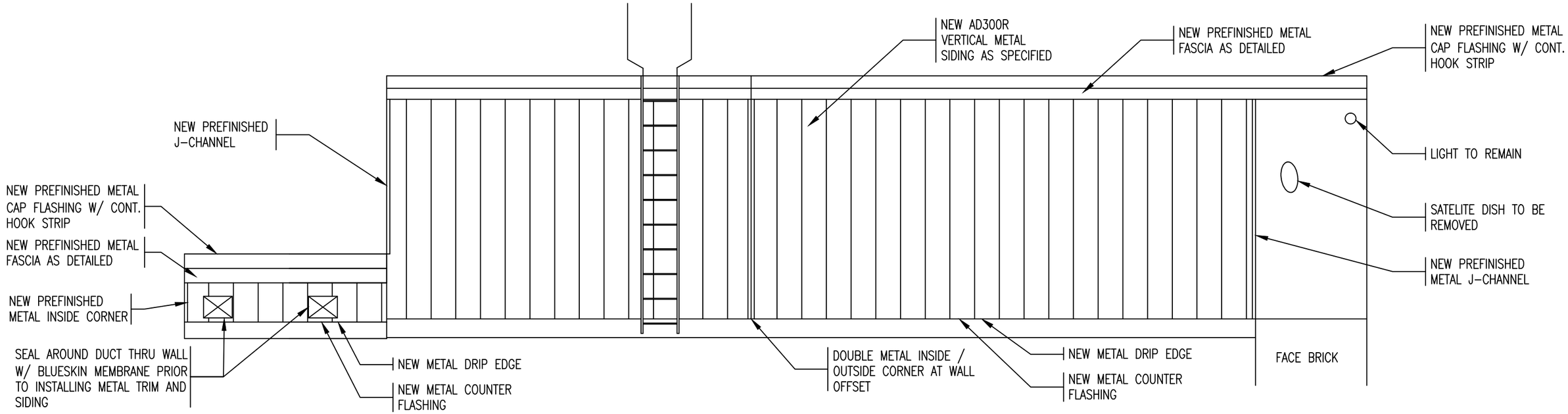
REMLAP BUILDING SERVICES INC. RBS ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3468 Fax: (519)738-4787	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE :	MAY 2016
		SCALE :	N.T.S.
		DRAWN BY :	CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY :	CWP
		SHEET SIZE :	8.1/2"x11"
DATE (MM-DD-YY) / ISSUED FOR 5-5-16 / TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO.	RBS16-12
		DRAWING NO.	D-16



DETAIL 17 - PARAPET WALL

SCALE : 1" = 1'–0"

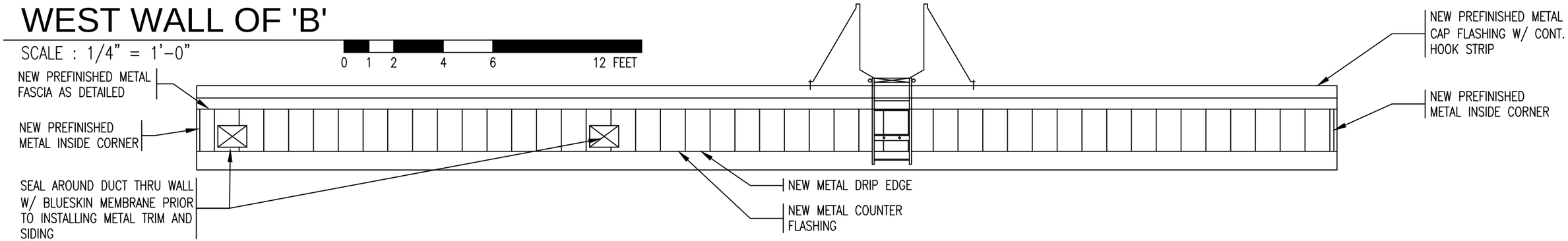
REMLAP BUILDING SERVICES INC. RBS ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3450 Fax: (519)738-4767	PROJECT ST. PHILIP CATHOLIC SCHOOL 420 QUEEN ST., PETROLIA ONTARIO	DATE : MAY 2016 SCALE : N.T.S. DRAWN BY : CWP
	CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD	CHK. BY : CWP SHEET SIZE : 8.1/2"x11"
DATE (MM–DD–YY) / ISSUED FOR 5–5–16 / TENDER	DRAWING TITLE ROOF DETAIL	PROJECT FILE NO. RBS16–12 DRAWING NO. D-17



WEST WALL OF 'B'

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

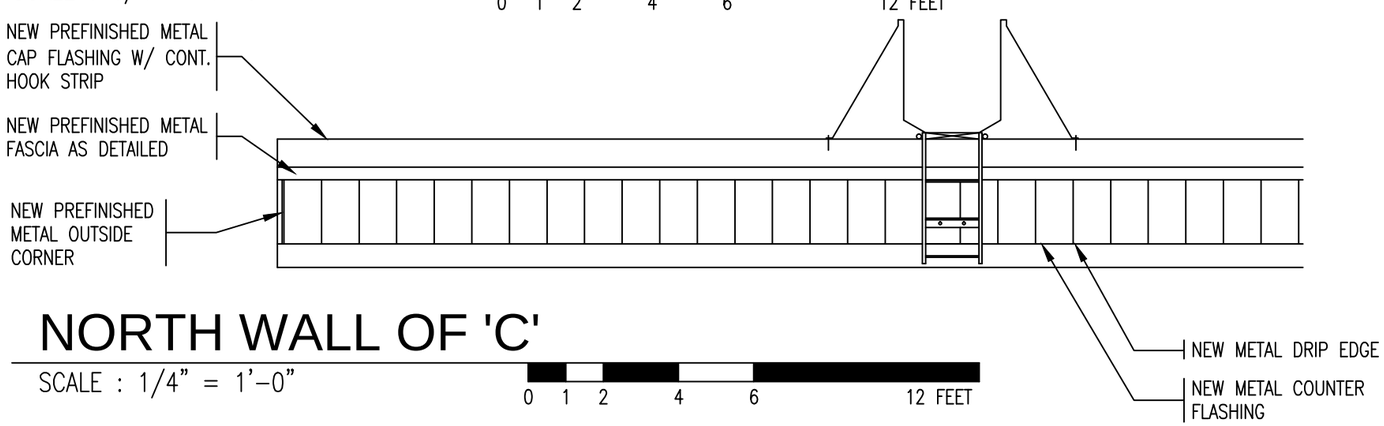
0 1 2 4 6 12 FEET



SOUTH WALL OF 'G'

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

0 1 2 4 6 12 FEET



NORTH WALL OF 'C'

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

0 1 2 4 6 12 FEET

NOTE: EXISTING WALL LADDER TO BE REMOVED UNTIL NEW PARAPET WALLS ARE COMPLETED AND NEW METAL FLASHING IS INSTALLED

REMLAP BUILDING SERVICES INC.

R B S — 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 Cora Road, Harrow, Ontario N0R 1G0

Tel: (519) 738-3458 Fax: (519)738-4787

DATE (MM-DD-YY)	ISSUED FOR
5-5-16	TENDER

PROJECT
ST. PHILIP
CATHOLIC SCHOOL
420 QUEEN ST., PETROLIA ONTARIO

CLIENT
ST. CLAIR CATHOLIC DISTRICT
SCHOOL BOARD

DRAWING TITLE
ELEVATIONS

DATE :	MAY 2016
SCALE :	AS SHOWN
DRAWN BY :	CWP
CHK. BY :	CWP
SHEET SIZE :	11"x17"
PROJECT FILE NO.	RBS16-12
DRAWING NO.	W-1