



Thermoplastic Metal Retrofit Roofing System

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METAL RETROFIT

Thermoplastic Metal Retrofit Roofing System

January 2026

The information contained in this generic specification represents a part of Versico's requirements for obtaining a roofing systems warranty. Construction materials and practices, building siting and operation, climatic conditions, and other site-specific factors will have an impact on the performance of the roofing system. Versico recommends that the building owner retain a design professional to determine appropriate design measures to be taken in order to address these factors.

This section is to serve as criteria for Specifiers and Authorized contractors regarding the design and installation of Versico's Thermoplastic Metal Retrofit Roofing System. Additional information essential for the design and installation of the roof system mentioned herein are also included in the Design Reference Section and also listed in the form of a Specification Supplement at the end of the Technical Manual. Specifiers and Authorized contractors are advised to reference all applicable sections.

PART I – GENERAL

1.01 Description

The installation of this Metal Retrofit Roofing Systems may incorporate a Mechanically Attached option, RhinoBond Attachment Method or a Fully Adhered Assembly.

The Mechanically Attached Option is available only with TPO membrane. Both the RhinoBond and the Fully Adhered Option could incorporate either TPO, PVC OR KEE HP PVC.

Note: The VersiWeld QA membrane is available with TPO as fully adhered alternative.

1. **VersiWeld Mechanically Attached Option** incorporates 45, 60 or 80-mil thick scrim-reinforced VersiWeld TPO (Thermoplastic Polyolephin) membrane with 10" wide Pressure-Sensitive RUSS positioned along the structural purlins in the field of the roof (5' or 10' depending on wind zone). The RUSS is attached to the purlins a maximum of 12" on center utilizing Versico Purlin Fasteners and HPVX Plates. The membrane is adhered to the RUSS and adjoining sheets are heat welded together a minimum of 1-1/2". This option includes an acceptable loose laid insulation used to fill between standing seams (when applicable) and an acceptable insulation or underlayment is mechanically secured over the fill insulation at a rate **1 fastener per 4 square feet**, to the existing metal roof with Versico fasteners and plates.
2. **RhinoBond Attachment Option** incorporates 45, 60 or 80-mil thick polyester reinforced VersiWeld TPO membrane OR 50, 60 or 80-mil thick polyester reinforced VersiFlex PVC or VersiFlex KEE HP membranes. RhinoBond plate appropriate for the membrane type is positioned over the structural purlins and attached with Versico Purlin Fasteners. See RhinoBond Attachment included at the end of this Section.
3. **Conventional Fully Adhered Option – TPO, PVC or KEE HP** incorporates maximum 16' wide white, gray or tan 45, 60 or 80-mil thick scrim-reinforced VersiWeld Thermoplastic Polyolefin (TPO) membrane OR maximum 10' wide, 50-mil, 60-mil or 80-mil thick Polyester or Fiberglass reinforced VersiFlex Polyvinyl Chloride (PVC) or VersiFlex KEE HP membrane. The membrane is fully adhered to the substrate with the appropriate Bonding Adhesive. Adjoining sheets of membrane are overlapped and joined together with a minimum 1-1/2" wide heat weld. This option includes an acceptable loose laid insulation used to fill between standing seams (when applicable) and an acceptable

insulation or underlayment is mechanically secured over the fill insulation at a rate **1 fastener per 2 square feet**, to the existing metal roof with Versico fasteners and plates.

Polyester Reinforced membrane is available in widths of 10' (white only) and 81" wide (white, gray, light gray, slate gray and tan). Fiberglass Reinforced membrane is available in 10' width only (white, gray, light gray or tan).

KEE HP enhanced Sure-Flex PVC membrane with polyester reinforcement is available in widths of 10' or 5' wide (white, gray, light gray and tan).

4. **VersiFleece TPO Fully Adhered Option** - incorporates 45, 60 or 80-mil thick, 12' or 6' wide, scrim-reinforced, white, gray or tan VersiWeld Thermoplastic Polyolefin (TPO) membrane laminated to a 55-mil thick non-woven polyester fleece-backing resulting in a total finished sheet thickness of 100, 115 or 135-mils. Available in White, Gray, Tan, Slate Gray, Medium Bronze, Terra Cotta, Patina Green and Rock Brown.
5. **VersiFleece FRS PVC Adhered Option** - incorporates 60- or 80-mil thick, 10' wide, fiberglass reinforced scrim, (white, gray, light gray and tan) VersiFlex (PVC) membrane laminated to a 55-mil thick non-woven polyester fleece-backing resulting in a total finished sheet thickness of 115 or 135-mils.
6. **VersiFleece PVC Adhered Option** - incorporates 60- or 80-mil thick, 10' wide, polyester reinforced scrim, (white, gray, light gray, slate gray and tan) VersiFlex (PVC) membrane laminated to a 55-mil thick non-woven polyester fleece-backing resulting in a total finished sheet thickness of 115 or 135-mils.
7. **VersiFleece KEE HP Adhered Option** - incorporates 50-, 60- or 80-mil thick, 10' wide, polyester reinforced scrim, (white, gray, light gray, slate gray and tan) VersiFlex KEE HP (PVC) FleeceBACK 01/2025 4 membrane laminated to a 55-mil thick non-woven polyester fleece-backing resulting in a total finished sheet thickness of 105, 115 or 135-mils.

The membrane is fully adhered to an acceptable substrate with a spray or extrusion applied, two-component, low-rise Flexible DASH Adhesive.

Adjoining sheets of VersiWeld or VersiFlex membrane are overlapped and joined together with a minimum 1-1/2" wide hot air weld. This option includes an acceptable loose laid insulation used to fill between standing seams (when applicable) and an acceptable insulation or underlayment is mechanically secured over the fill insulation at a rate **1 fastener per 2 square feet**, to the existing metal roof with Versico fasteners and plates.

8. **VersiWeld QA (Quick Applied TPO) Option** - is a heat-weldable single-ply thermoplastic polyolefin (TPO) sheet available in 10' and 12' wide, white 60- or 80-mil reinforced TPO membrane laminated to an elastomeric pressure-sensitive adhesive. Limited to 20 Year Maximum Warranty. This option includes an acceptable loose laid insulation used to fill between standing seams (when applicable) and an acceptable insulation or underlayment is mechanically secured over the fill insulation at a rate **1 fastener per 2 square feet**, to the existing metal roof with Versico fasteners and plates.
9. **Adhered Insulation Option**
When insulation is to be attached with Flexible DASH Adhesive, or Flexible DASH Dual Cartridges, both the bottom and top layers must be adhered in accordance with installation procedures outlined in the Spec Supplement G-02 VersiFleece and Insulation Attachment and Coverage Rates with Flexible DASH Adhesive in the Versico Technical Manual.

Note: Two-part urethane adhesives may not be compatible with certain types of metal roof coatings. If existing, Versico should be contacted for verification. Mechanical fasteners may be specified in lieu of the adhesive providing the minimum pullouts can be met.

1.02 General Design Considerations

- A. It is the responsibility of the building owner or his/her designated representative to verify structural load limitation.
- B. Existing venting around edges and wall intersections should not be closed off unless determined by designer of record. Refer to applicable details included in this section for recommended venting methods. Specific details may be submitted for Versico review.

1.03 Quality Assurance

Building Codes are above and beyond the intended purpose of this specification. The respective **owner** or **specifier** should consult local codes for applicable requirements and limitations. It is the responsibility of the specifier to review local, state and regional codes to determine their impact on the specified Versico Roofing System.

NOTE: For code approvals achieved with the Versico Roofing Systems, refer to the Versico Code Approval Guide, Factory Mutual (FM) Approval Guide or Underwriters Laboratories (UL) Fire Resistance or Roofing Materials and Systems Directories.

- A. Versico recommends the use of Versico supplied products for use with these Versico Roofing Systems. The performance or integrity of products by others, **when selected by the specifier and accepted as compatible by Versico**, is not the responsibility of Versico and is **disclaimed** by the Versico Warranty.
- B. The specified roofing system must be installed by a Versico Authorized Roofing Contractor in compliance with drawings and specifications as approved by Versico.
- C. There must be no deviations made from Versico's specification or Versico's approved shop drawings without the **PRIOR WRITTEN APPROVAL** of Versico.
- D. After completion of the installation, upon request, an inspection shall be conducted by a Field Service Representative (FSR) of Versico to ascertain that the membrane roofing system has been installed according to Versico's published specifications and details applicable at the time of bid. This inspection is to determine whether a warranty shall be issued. It is not intended as a final inspection for the benefit of the owner.
- E. Refer to the Design Reference DR-07-15 "CRRC/LEED Information" for information. (i.e. solar emittance, solar reflectance and recycled content).

1.04 Submittals

- A. To ensure compliance with Versico's minimum warranty requirements, the following projects should be forwarded to Versico for review prior to installation, preferably prior to bid:
 - 1. Canopies and buildings with large openings where the total wall openings exceed 10% of the total wall area on which the openings are located (such as airport hangars, warehouses and large maintenance facilities).
 - 2. Projects which incorporate purlin spacing other than 5' on center where a Mechanically Attached membrane assembly is specified.
 - 3. Projects where the roofing membrane is expected to come in direct contact with petroleum-based products or other chemicals.
 - 4. Retrofit projects being refurbished for different usage.
- B. Along with the project submittals (shop drawings and Request for Warranty), the roofing contractor must include pullout tests when results are below the requirements identified in this specification.

- C. Shop drawings must be submitted to Versico by the Versico Authorized Roofing Contractor along with a completely executed Copy-A (Page 1 of Versico’s Request For Warranty form) for approval. Approved shop drawings are required for inspection of the roof and on projects where on-site technical assistance is requested.

Along with the project submittals (shop drawing and Request for Warranty), the roofing contractor must include **pullout test** results when the results are below the requirements identified in, Table included in Design Reference DR-06-1 “Withdrawal Resistance Criteria”.

- D. **Copy-B Job Completion** (Page 2 of the Versico Request for Warranty form)

After project completion, a Copy-B Job Completion must be submitted to Versico to schedule the necessary inspection of the project prior to issuance of the Versico Warranty.

1.05 Warranty

- A. Membrane System Warranty is available for roofing systems on commercial buildings within the United States and applies only to **products manufactured or marketed by Versico**. The membrane system is defined as membrane, flashings, adhesives, sealants and other Versico brand products utilized in the installation. For a complete description of these products, refer to the Part II “Products” Section in this Specification and Spec Supplement “Related Products” P-01-11.

- B. **See Table Below for information regarding Warranted Systems and Design Criteria:**

Contact Versico for recommended enhancements including additional perimeter sheets OR increased fastening density for increased warranty duration or wind speed coverage greater than 90 MPH.

Years	Metal Retrofit Thermoplastic Membranes (VersiWeld TPO / VersiFlex PVC / VersiFlex KEE HP) Warranty Options		
	Warranty Wind Speed Coverage		Minimum Membrane Thickness
	55, 72, 80 or 90 MPH	55, 72, 80 or 90 MPH	
	Adhered	Mechanically Attached	
5, 10, or 15 year	√	√	VersiWeld TPO 45-mil
	√	√	VersiFlex PVC or VersiFlex KEE HP 50-mil
	√	N/A	VersiFleece TPO 100-mil
	√	N/A	VersiFleece FRS PVC 115-mil
	√	N/A	VersiFleece PVC or VersiFleece KEE HP 105-mil
20 year	√	√	VersiWeld TPO or VersiWeld QA TPO 60-mil
	√	√	VersiFlex PVC or VersiFlex KEE HP 60-mil
	√	√	VersiFlex KEE HP PVC 50-mil
	√	N/A	VersiFleece TPO 115-mil
	√	N/A	VersiFleece FRS PVC 115-mil
	√	N/A	VersiFleece PVC or VersiFleece KEE HP PVC 115-mil

Notes: N/A = Not Acceptable √= Acceptable

1.06 Job Conditions

- A. When possible on multiple level roofs, begin the installation on the highest level to avoid or minimize construction traffic on completed roof sections.
- B. When roof slopes exceed 5" per horizontal foot, use of an Automatic Heat Welder may be more difficult. A Hand Held Hot Air Welder should be specified.
- C. Wood nailers are required for the securement of metal edgings, scuppers, and insulated pipes. Wood Nailer shall be secured per specifier recommendation or in accordance with Factory Mutual's property Loss Prevention Data Sheet 1-49. Refer to Design Reference DR-08-11 "Wood Nailers Securement Criteria" in Versico Technical Manual shall be referenced.
- D. When fastening to a structural purlin, a trial fastener should be installed when purlins are heavier than 12 gauge to determine the feasibility of the Versico Purlin Fastener. Versico Purlin Fasteners are designed to engage purlins 18 to 12 gauge.
- E. Due to the wide variety of edge conditions found in metal buildings, edge details may be submitted to Versico for review preferably prior to installation.
- F. Fiberglass insulation is not physically compatible with this roofing system and cannot be utilized over the existing metal roof (even when specified in multiple layer applications in conjunction with an acceptable underlayment).

1.07 Product Delivery, Storage and Handling

- A. Deliver materials to the job site in the original, unopened containers.
- B. When loading materials onto the roof, the Versico Authorized Roofing contractor must comply with the requirements of the specifier/owner to prevent overloading and possible disturbance to the building structure.
- C. Job site storage temperatures in excess of 90° F (32° C) may affect shelf life of curable materials (i.e. adhesives and sealants)
- D. **When the temperature is expected to fall below 40° F (5° C)**, outside storage boxes should be provided on the roof for temporary storage of liquid adhesives and sealants. Adhesives and sealant containers should be rotated to maintain their temperature above 40° F (5° C).
- E. Insulation/underlayment must be stored so that it is kept dry and is protected from the elements. Store insulation on a skid and completely cover with a breathable material such as tarp or canvas. If the insulation is lightweight, it should be weighted to prevent possible wind damage.
- F. Do not store adhesive containers with opened lids due to the loss of solvent that will occur from flash-off.
- G. Store Versico membrane on provided pallets in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable tarpaulins.
- H. Insulation/underlayment must be stored so that it is kept dry and is protected from the elements. Store insulation on a skid and completely cover with a breathable material such as tarp or canvas. If the insulation is lightweight, it should be weighted to prevent possible wind damage

PART II – PRODUCTS

2.01 General

The components of this roofing system are to be products of Versico or accepted by Versico as compatible. The installation, performance or integrity of products by others, **when selected by the specifier and accepted by Versico**, is not the responsibility of Versico and is expressly disclaimed by the Versico warranty.

2.02 Membrane/Related Products

A. Membranes

1. Mechanically Attached Option

- a. **VersiWeld** 45-mil, 60-mil or 80-mil thick reinforced TPO (Thermoplastic Polyolefin) membrane available in white, grey or tan. The membrane is available in widths up to 16 feet wide. Also available in TPO special colors (Medium Bronze, Rock Brown, Terra Cotta, Slate Gray and Patina Green)

2. RhinoBond Attachment Option

- a. **VersiWeld** 45, 60 or 80-mil thick polyester reinforced (Thermoplastic Polyolefin) membrane available in white, grey or tan. The Membrane is available in widths up to 16 feet wide. Also available in TPO special colors (Medium Bronze, Rock Brown, Terra Cotta, Slate Gray and Patina Green)
- b. **VersiFlex** 50-mil, 60-mil or 80-mil thick polyester reinforced PVC (Polyvinyl Chloride) membrane (white, gray, light gray, slate gray or tan) or **VersiFlex** KEE HP PVC 50-mil, 60-mil or 80-mil thick polyester reinforced KEE HP membrane (white, gray, light gray or tan). Either membrane is available in 10 feet wide.

3. Conventional Fully Adhered Option

- a. **VersiWeld** 45-mil, 60-mil or 80-mil thick reinforced TPO (Thermoplastic Polyolefin) membrane available in white, grey or tan. The membrane is available in widths up to 16 feet wide. Also available in TPO special colors (Medium Bronze, Rock Brown, Terra Cotta, Slate Gray and Patina Green)
- b. **VersiFlex** 50-mil, 60-mil or 80-mil thick reinforced PVC (Polyvinyl Chloride) membrane (white, gray, light gray, slate gray or tan) or **VersiFlex** KEE HP PVC 50-mil, 60-mil or 80-mil thick polyester reinforced KEE HP membrane (white, gray, light gray or tan). Either membrane is available in 10 feet wide.

4. VersiFleece Fully Adhered Option

- a. **VersiWeld VersiFleece TPO** 100, 115, or 135-mil membrane available in white, grey or tan. The membrane is available in various widths up to 12 feet wide.
- b. **VersiFleece PVC** (polyester reinforced) 115, 135 mil membrane available in white, gray, light gray, slate gray, or tan. 115-mil rolls available in 10' x 100'. 135-mil rolls available in 10' x 75'.
- c. **VersiFleece KEE HP** (polyester reinforced) 105, 115, 135 mil membrane available in white, gray, light gray or tan. 105 and 115-mil rolls available in 10' x 100'. 135-mil rolls available in 10' x 75'.
- d. **VersiFleece FRS PVC** (fiberglass reinforced) The membrane is available in 115-mil thickness in 10' x 80' rolls and 135-mil thickness in 10' x 65' rolls in white, gray or tan.

5. VersiWeld QA TPO (Quick Applied) Option

- a. **VersiWeld QA** 60- or 80-mil reinforced TPO (Thermoplastic Polyolefin) membrane available in white. The membrane is available in 10' or 12' wide sheets.

For membrane physical properties and other related products, refer to the appropriate "Products" Section of the appropriate membrane specification.

B. Related Products

1. **Versico EPS (Flute-Filler):** A custom-made, high performance insulation consisting of a superior closed-cell, lightweight expanded polystyrene (EPS) that meets the requirements of ASTM C578. The product offers a long-term, stable R-Value and has excellent dimensional stability, compressive strength and water resistant properties. It is custom-manufactured for each specific application, and is readily available in a variety of lengths, widths and shapes to meet virtually any job condition.
2. **Versico MP-H Polyisocyanurate (Flute-Filler):** A custom-cut insulation consisting of a closed-cell polyisocyanurate that meets the requirements of ASTM D2126. It is custom-cut for each specific application, and is readily available in a variety of lengths and widths.
3. **SecurShield HD:** A rigid roof insulation panel composed of a high-density, closed-cell polyisocyanurate foam core laminated to a premium-performance, coated-glass fiber-mat facer specifically designed for use as a cover board.
4. **SecurShield CD (Combustible Deck):** A rigid roof insulation panel composed of a closed-cell polyisocyanurate foam core manufactured on-line to an extra durable, dimensionally stable coated-glass facer on each surface side for use as a cover board. Achieves a UL Class A combustible deck assembly rating at a 1" thickness without the use of a fire-rated slip sheet or gypsum coverboard.
5. **Purlin Fastener:** A hex-head, threaded, self-drilling, black epoxy electro-deposition coated (E-Coat) fastener used for membrane/RUSS securement into structural purlins (12-18 gauge) in conjunction with VersiWeld Metal Retrofit Roofing Systems.
6. **HPV Fastener:** A threaded E-coat square head fastener for insulation and additional membrane attachment (Adhered Roofing Systems) in conjunction with 2" diameter polymer plates.
7. **HPVX Fastener:** A heavy duty #15 threaded fastener with a #3 Phillips drive used with Versico's HPVX Fastening Plate to secure Mechanically Attached Roofing Systems.
8. **Insulation Fastening Plates:** A nominal 3" diameter metal plate used for insulation attachment in conjunction with the appropriate Versico Fastener.
9. **Seam Fastening Plates:** A 2" diameter metal plate used for insulation attachment on Mechanically Attached Roofing Systems or membrane securement on Adhered Roofing Systems in conjunction with the appropriate Versico Fastener.
10. **HPVX Plate:** A 2-3/8" diameter metal barbed fastening plate used primarily for membrane securement in conjunction with Versico Purlin Fasteners. The plate is also used in conjunction with appropriate fasteners for securement of insulation/membrane underlayments in mechanically attached assemblies.
11. **10" wide TPO Pressure-Sensitive RUSS:** Used as a primary securement for the TPO membrane in Mechanically Attached TPO assemblies. A 45-mil thick reinforced TPO membrane with 3" wide and 35-mil thick cured synthetic rubber pressure-sensitive adhesive laminated along both sides. Used in conjunction with TPO Membrane Primer.
12. **VersiWeld Coated Metal:** A 24 gauge, galvanized steel sheet coated with a layer of non-reinforced VersiWeld Flashing. The sheet is cut to the appropriate width and used to fabricate metal drip edges or other roof perimeter

edging profiles. VersiWeld Membrane may be heat welded directly to the coated metal. Available in white, gray or tan. Refer to appropriate Versico Detail for additional information.

13. **VersiFlex PVC Coated Metal:** A 24 gauge, galvanized steel sheet coated with a layer of 40-mil non-reinforced VersiFlex Flashing. The sheet is cut to the appropriate width and used to fabricate metal drip edges or other roof perimeter edging profiles. VersiFlex Membrane may be heat welded directly to the coated metal. Coated metal is available in sheets 4' x 10' and comes packaged 10 sheets per pallet. Available in white, gray or tan.
14. **TPO Contour Rib:** an extruded TPO profile used to simulate standing seam metal roofing system that is welded directly to an adhered TPO membrane.
15. **PVC Contour Rib:** an extruded PVC profile used to simulate standing seam metal roofing system. Heat welded directly to an adhered PVC membrane.

For membrane physical properties and other related products, refer to the appropriate "Products" Section of the appropriate membrane specification.

PART III – EXECUTION

3.01 General

In addition to the criteria contained herein, the "Installation" Section for the specified roof assembly should be referenced in its entirety.

When feasible, begin the application at the highest point of the highest roof level and work to the lowest point to prevent moisture infiltration and to minimize construction traffic on completed sections. This will include completion of all flashings and terminations.

3.02 Existing Metal Roof Criteria

- A. Defects in the existing metal roof or purlin system must be reported and documented to the specifier, general contractor and building owner for assessment. The Versico Authorized Roofing contractor shall not proceed unless the defects are corrected.
- B. The following chart identifies the minimum pullout values which must be achieved with both the Versico Purlin Fastener, which is required for RUSS/RhinoBond Plate securement, and the HPV or HPVX Fastener, which is required for additional membrane securement around penetrations (i.e. vent pipes) and is recommended for insulation securement:

Purlins		Metal Roofs	
Gauges	Versico Purlin Fastener Min. Pullouts (lbs./fastener)	Gauges	HPV or HPVX Fastener Min. Pullouts (lbs./fastener)
12	1,000	24	300
14	1,000	26	200
16	800	28*	150
18	600		

* Pullouts must be submitted to Versico when an Adhered Assembly is to be selected.

Withdrawal resistance tests are strongly suggested to determine the suitability of the existing metal roof and structural purlins for the application of this roofing system.

CAUTION: Visually inspect existing metal roof and conduct pullout tests at low areas (i.e. eaves and valleys) or areas of concern during visual inspection.

3.03 Substrate Preparation

- A. Clear the substrate of debris and foreign material.
- B. Wood nailers are required at all roof edges where metal edging and gutter systems are specified and must be flush with the top of the specified membrane underlayment.

When treated lumber is specified, it is recommended that only lumber that has been pressure treated with salt preservatives be specified. Lumber treated with other wood preservatives such as, Creosote, Pentachlorophenol, Copper Naphthenate, Copper 8-quinolinolate, will adversely affect the membrane when in direct contact and are, therefore, unacceptable.

- C. On standing seam metal roofs, two layers of wood nailers are required with the first layer installed between the raised standing seams, flush with the top surface of the seams. These nailers must be mechanically attached directly to the structural purlins with Versico Purlin Fasteners spaced a maximum of 16 inches on center. Sections of wood nailers installed between standing seams must have a minimum of 2 fasteners positioned approximately 3 inches from each end of the nailer (spaced no more than 16 inches apart).

The top layer of wood nailers is then attached to the bottom layer of wood nailers with HPV or HPVX Fasteners spaced a maximum of 16 inches on center with all fasteners penetrating the bottom layer of wood nailers a minimum of 1 inch.

Note: In lieu of fasteners, galvanized or coated nails may be used to secure the top nailer when positioned 4 inches on center and staggered 3/4 inch on center. The nails shall be sufficient in length to penetrate the bottom nailer a minimum of 1-1/4 inch.

- D. On corrugated metal roofs, batt insulation or other compressible filler must be used beneath perimeter wood nailers to minimize infiltration of air beneath this roofing system.
- E. On flat seam metal roofs, the underside of the wood nailer should be notched at the flat seam areas to achieve a smooth, stable base.

Note: The existing metal roof may be trimmed at metal edge and gutter locations to minimize the dimension between the edge purlin support and the edge of the metal roof. This will allow standard size nailers (2" x 6") to be attached to the edge purlin flush with the roof edge.

3.04 Installation

A. Insulation Placement and Attachment

- 1. Membrane underlayment must be butted together with no gaps greater than 1/4 inch. Gaps greater than 1/4 inch are not acceptable.

2. On standing seam metal roofs, insulation must be installed in multiple layers. The first layer of insulation is used as a fill between standing seams, relatively flush with the top surface of the seams. A second layer of insulation is placed over the first layer and the standing seams to serve as the membrane underlayment.
3. When mechanical fasteners are specified for insulation securement, the bottom layer (fill boards) can be loose laid with the top layer (membrane underlayment) mechanically attached to the metal roof at the rate of 1 fastener per 4 square feet for Mechanically Attached Systems.
4. When mechanical fasteners are specified for insulation securement, the bottom layer (fill boards) can be loose laid with the top layer (membrane underlayment) mechanically attached to the metal roof at the rate of 1 fastener per 2 square feet for Adhered Systems.
5. When insulation is to be attached with DASH/FAST Adhesive, or DASH Dual Cartridges, both the bottom and top layers must be adhered in accordance with installation procedures outlined in the Spec Supplement G-02-11 FAST Adhesive Application/Coverage Rate in the Versico Technical Manual.

Note: Two-part urethane adhesives may not be compatible with certain types of metal roof coatings. If existing, Versico should be contacted for verification. Mechanical fasteners may be specified in lieu of the adhesive providing the minimum pullouts can be met.

B. Membrane Installation

1. Mechanically Attached Option

- a. Securement for this roofing system is accomplished by splicing the membrane to the Pressure-Sensitive RUSS (10 inch wide for TPO) that is positioned along the structural purlins and spaced 5 feet or 10 feet on center depending on project wind zone. The RUSS is attached to the purlins a maximum of 12 inches on center utilizing Versico Purlin Fasteners and HPVX Plates (TPO). Refer to appropriate Versico Details.
- b. Securement of the membrane at the perimeter roof areas shall be achieved by attaching the membrane to the RUSS positioned along the first purlin from the roof edge/eave (perpendicular to the roof slope). Along the rake edges, membrane securement is achieved with RUSS positioned along all purlins for a distance of no less than 5 feet. Refer to appropriate Versico Details for required fastening density according to project wind zone.
- c. When using Pressure-Sensitive RUSS, appropriate membrane primer must be applied to the membrane in accordance with standard procedures.
- d. Install consecutive membrane sheets allowing a minimum overlap onto the adjacent membrane sheets following respective membrane application requirements.
- e. For additional information pertaining to membrane splicing, refer to the appropriate Membrane Specification in the Versico Technical Manual.
- f. Additional membrane securement must be provided at the perimeter of each roof level, roof section, expansion joint, curb flashing, skylight, interior wall, penthouse, etc., at any inside angle change where slope exceeds 2" in one horizontal foot, and at other penetrations in accordance with Versico's details and securement options.

2. RhinoBond Attachment Method Option

Refer to Attachment I – Metal Retrofit Roofing System RhinoBond Attachment Method.

3. VersiWeld QA TPO or VersiFleece TPO or VersiFleece PVC Adhered Roofing Systems

For installation procedures on Adhered Roofing Systems, refer to appropriate Membrane Specification in the Versico Technical Manual.

C. Other Related Work

Refer to appropriate Membrane Specification in the Versico Technical Manual for additional membrane securement, membrane flashing and other related clean-up work.

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METAL RETROFIT

Metal Retrofit Roofing System Induction Welding (RhinoBond/Isoweld) Attachment Method

“Attachment I”

January 2026

This is an alternate method for securing Versico’s VersiWeld (TPO) or VersiFlex (PVC/KEE HP) membranes and is intended to be used in conjunction with Versico’s Metal Retrofit Thermoplastic Specification and Details.

A. Description

The Induction Welding (RhinoBond/Isoweld) Attachment Method incorporates 3" diameter corrosion-resistant plates with a hot melt TPO or PVC coating. The RhinoBond or Isoweld Plates are installed with Versico Purlin Fasteners to secure an acceptable insulation to minimum 18 gauge steel purlin.

Versico’s Polyester Reinforced Thermoplastic membrane is positioned over the secured RhinoBond or Isoweld plates and welded to the top surface of the plate with the RhinoBond Induction Welding Tool.

Induction Welding (RhinoBond/Isoweld) Metal Retrofit – Warranty Table					
Warranty Wind Speed*	Securement Rows in Purlins from Eave			Maximum Securement Spacing into Purlins in the Field**	Rate of Plate Securement
	Building Location Distance from Coastline				
	Greater than 7 miles	7 to 3 miles	Less than 3 miles		
55 MPH	1	2	3	10'	12"
72 MPH	2	2	3	10'	12"
80 MPH	3	3	4	10'	12"
90 MPH	3	4	4	10'	12"
Greater Than 90 MPH	Contact Versico				
*Maximum building height of 60'-0".					
**From eave, first two consecutive purlins. Every other purlin thereafter. See Metal Retrofit Membrane Attachment Details.					

B. Products/Heat Welding Equipment

Products listed in "Part II" of the Versico Thermoplastic Mechanically Attached Roofing System Specification can be used as part of this alternate securement method in conjunction with the RhinoBond Welding Plates.

- RhinoBond or Isoweld TPO or PVC Welding Plate:** A 3" diameter, 0.028" thick, corrosion-resistant steel plate with hot melt coating on the top surface. The plate is used in conjunction with Versico's Purlin Fasteners to attach the roofing assembly and is activated using the RhinoBond/Isoweld Induction Welding Tool.
- RhinoBond/Isoweld Induction Welding Tool:** An induction heating tool is used to emit the magnetic field that activates the hot melt coating on the top surface of the RhinoBond/Isoweld Welding Plate to fuse with the roofing membrane. Refer to RhinoBond Owner’s Manual for additional information.

3. **Magnet:** A stand-up device that allows the weld to cool as it clamps the membrane to the heated plate. Refer to RhinoBond or Isoweld Owner's Manual for additional information.

C. RhinoBond Induction Tool Calibration

Prior to proceeding with membrane attachment to the plate, the RhinoBond Induction Welding Tool must be calibrated with samples of the project specified insulation thickness and type and project specified membrane thickness. Refer to RhinoBond Owner's Manual for additional information.

1. Loose lay five RhinoBond Plates in a row about 12-24" apart on the specified membrane substrate.
2. Place membrane over the RhinoBond Plates.
3. Centering over the RhinoBond Plate under the membrane, place the Induction Welding Tool and use the device's default setting. Weld the membrane to the first plate, and when ready, completely remove Welding Tool. Immediately place the Cooling Clamp on the membrane over the plate and leave in place for 60 seconds.
2. Place Induction Welding Tool on the next plate as previously done and increasing induction energy one level by depressing the "up" button once. After welding, immediately place the Cooling Clamp.
3. Repeat above procedure for the remainder of the plates, increasing induction energy one level for each plate.
4. After allowing the membrane and plates to cool to ambient temperature, remove Cooling Clamp and use a pliers by apply force to peel RhinoBond Plate from underside of membrane to determine bonding strength. Desired result is welded ply of membrane stays fused to RhinoBond Plate.
5. Repeat trial process, if needed, adjusting energy level up or down until desired results are achieved.

Note: Recalibrate induction tool settings is necessary when ambient temperature changes more than +/- 15°F or power to device has been interrupted.

D. Isoweld Induction Tool Calibration

Calibrate the Isoweld Induction Welding tool using the process outlined in the Owner's Manual.

E. Installation

1. After placement of insulation on substrate, attach insulation using mechanical fasteners or Flexible DASH Adhesive. See installation section of Metal Retrofit specification for further information.
2. Secure RhinoBond/Isoweld Plates and Versico Purlin Fasteners at a rate designated by the Warranty Table.
Note: Avoiding fastener overdrive to prevent plate from deforming.
3. Place VersiWeld or VersiFlex membrane over the appropriate RhinoBond/Isoweld Plates and allowing membrane to relax.
4. Place RhinoBond/Isoweld Induction Tool centered over the RhinoBond/Isoweld PVC Welding Plate (+/- 1") under the roofing membrane.
5. Elevate the temperature of plate from ambient to 400-500°F using induction tool.
6. Immediately place magnet on the membrane over the plate and leave in place for at least 60 seconds.
7. Resume process ensuring membrane is attached to all plates.

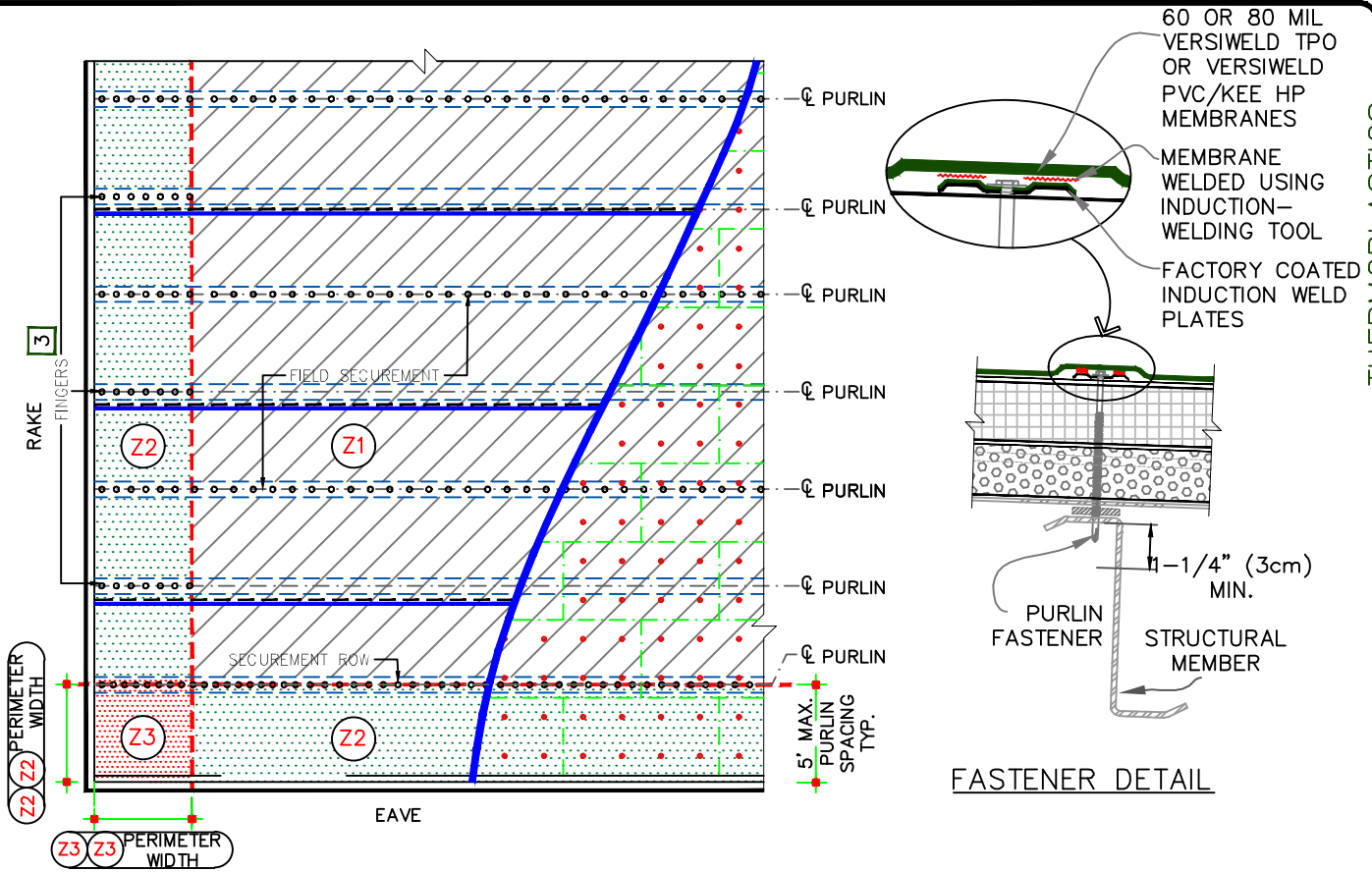
F. Membrane Hot Air Welding Procedures & Additional Securement

1. Adjoin membrane sheets by overlapping and heat welding the seam following standard Hot Air Welding Procedures as outlined in the "Part III" of the Thermoplastic Mechanically Attached Roofing System Specification.
2. Base wall securement and securement around roof penetrations as well as flashings of walls and penetrations must comply with Versico requirements for the Thermoplastic Mechanically Attached Roofing System.

G. Associated Installation Details

Membrane Attachment with Induction Welds: 1 Purlin Securement Row from Eave IW-2.1
Membrane Attachment with Induction Welds: 2 Purlin Securement Row from Eave IW-2.2
Membrane Attachment with Induction Welds: 3 Purlin Securement Row from Eave IW-2.3
Membrane Attachment with Induction Welds: 4 Purlin Securement Row from Eave IW-2.4

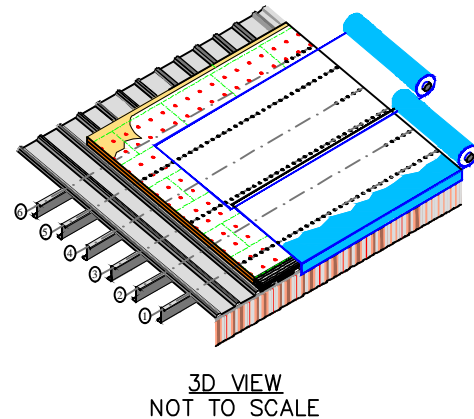
End of Section



INDUCTION WELDED MEMBRANE ON METAL RETROFIT
 SECUREMENT ROW (PERIMETER SHEET): 1 PURLIN FROM EAVE
 INSULATION FASTENED TO EXISTING METAL ROOF

INDUCTION WELDING METAL RETROFIT WARRANTY					
WARRANTY WIND SPEED*	SECUREMENT ROWS (PERIMETER SHEETS Z2/Z3) IN PURLINS PER EAVE			MAX. ROW (PURLIN) SPACING FOR FIELD (Z1)	PLATE SECUREMENT RATE
	BUILDING LOCATION DISTANCE FROM COASTLINE				
	GREATER THAN 7 MI.	7-3 MI.	LESS THAN 3 MI.		
55 MPH	1	--	--	10'	12"
72 MPH	--	--	--	--	--
80 MPH	--	--	--	--	--
90 MPH	--	--	--	--	--
>90 MPH	CONTACT VERSICO				

* MAXIMUM BUILDING HEIGHT OF 60'

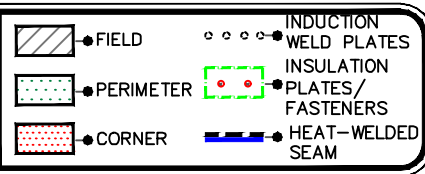


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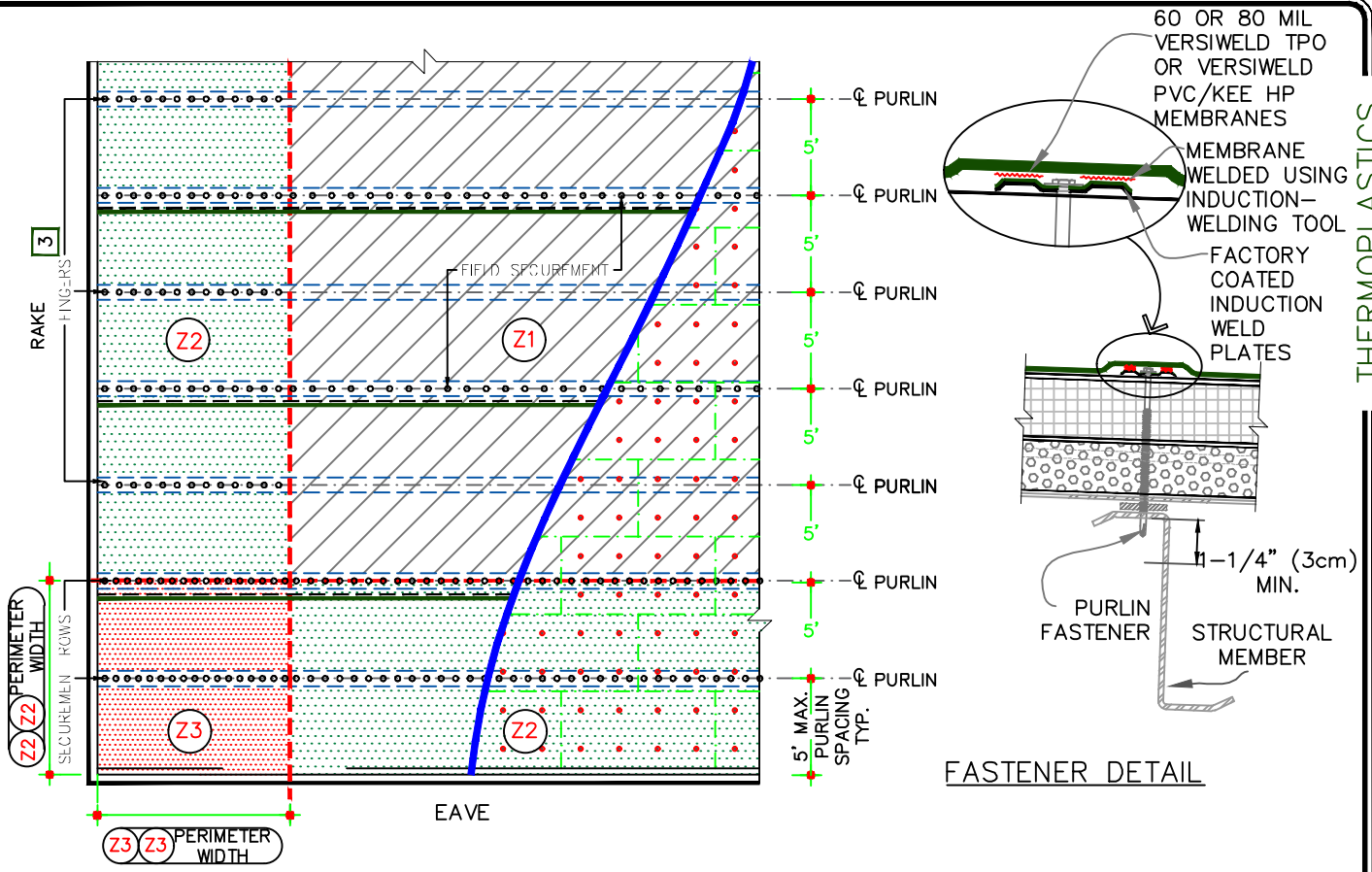
- FASTENING SPACING COULD BE ADJUSTED DEPENDING UPON THE SPECIFIED WIND UPLIFT PRESSURE. CONTACT VERSICO WITH SPECIFIED PRESSURES.
- INSULATION MAY ALTERNATIVELY BE ADHERED USING FLEXIBLE-DASH LOW-RISE POLYURETHANE ADHESIVE. SEE SPEC SUPPLEMENT G-02 - VERSIFLEECE AND INSULATION ATTACHMENT WITH FLEXIBLE DASH ADHESIVE.
- FINGER LENGTH (PERIMETER FASTENING ON RAKE SIDE) SHALL BE EQUAL TO THE PERIMETER WIDTH



MEMBRANE ATTACHMENT WITH INDUCTION WELDS:
 1 PURLIN SECUREMENT ROW FROM EAVE

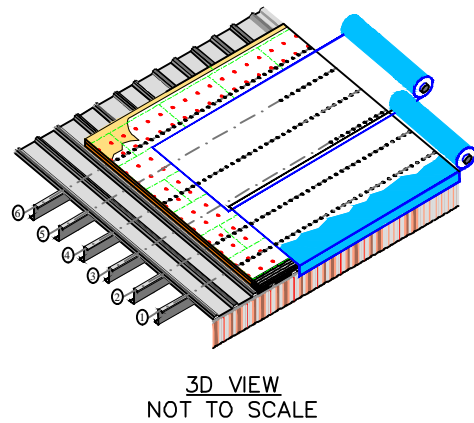


METAL RETROFIT
 MR | W-2.1



INDUCTION WELDED MEMBRANE ON METAL RETROFIT
 SECUREMENT ROWS (PERIMETER SHEETS): 2 PURLINS FROM EAVE
 INSULATION FASTENED TO EXISTING METAL ROOF

INDUCTION WELDING METAL RETROFIT WARRANTY					
WARRANTY WIND SPEED	SECUREMENT ROWS (PERIMETER SHEETS Z2/Z3) IN PURLINS PER EAVE			MAX. ROW (PURLIN) SPACING FOR FIELD (Z1)	PLATE SECUREMENT RATE
	GREATER THAN 7 MI.	7-3 MI.	LESS THAN 3 MI.		
55 MPH	--	2	--	10'	12"
72 MPH	2	2	--	10'	12"
80 MPH	--	--	--	--	--
90 MPH	--	--	--	--	--
>90 MPH	CONTACT VERSICO				
* MAXIMUM BUILDING HEIGHT OF 60'					

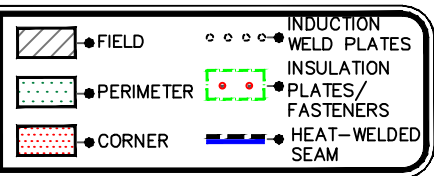


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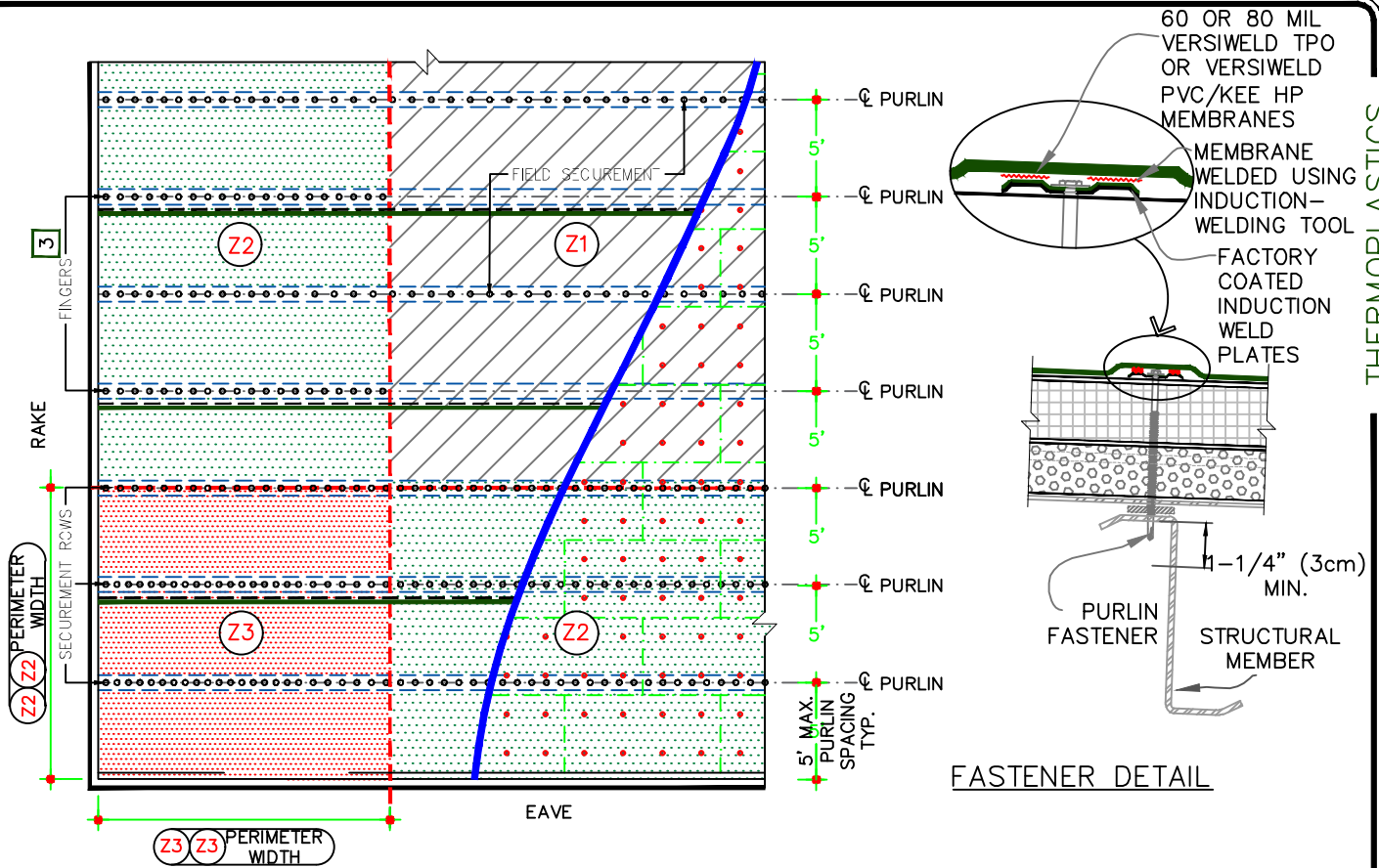
- FASTENING SPACING COULD BE ADJUSTED DEPENDING UPON THE SPECIFIED WIND UPLIFT PRESSURE. CONTACT VERSICO WITH SPECIFIED PRESSURES.
- INSULATION MAY ALTERNATIVELY BE ADHERED USING FLEXIBLE-DASH LOW-RISE POLYURETHANE ADHESIVE. SEE SPEC SUPPLEMENT G-02 - VERSIFLEECE AND INSULATION ATTACHMENT WITH FLEXIBLE DASH ADHESIVE.
- FINGER LENGTH (PERIMETER FASTENING ON RAKE SIDE) SHALL BE EQUAL TO THE PERIMETER WIDTH



MEMBRANE ATTACHMENT WITH INDUCTION WELDS:
 2 PURLIN SECUREMENT ROWS FROM EAVE

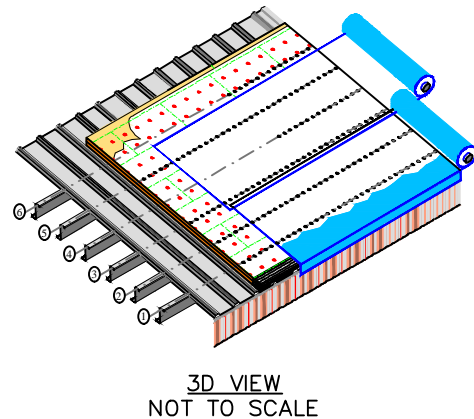


METAL RETROFIT
 MR | W-2.2



INDUCTION WELDED MEMBRANE ON METAL RETROFIT
 SECUREMENT ROWS (PERIMETER SHEETS): 3 PURLINS FROM EAVE
 INSULATION FASTENED TO EXISTING METAL ROOF

INDUCTION WELDING METAL RETROFIT WARRANTY					
WARRANTY WIND SPEED	SECUREMENT ROWS (PERIMETER SHEETS Z2/Z3) IN PURLINS PER EAVE			MAX. ROW (PURLIN) SPACING FOR FIELD (Z1)	PLATE SECUREMENT RATE
	BUILDING LOCATION DISTANCE FROM COASTLINE				
	GREATER THAN 7 MI.	7-3 MI.	LESS THAN 3 MI.		
55 MPH	--	--	3	10'	12"
72 MPH	--	--	3	10'	12"
80 MPH	3	3	--	10'	12"
90 MPH	3	--	--	10'	12"
>90 MPH	CONTACT VERSICO				
* MAXIMUM BUILDING HEIGHT OF 60'					

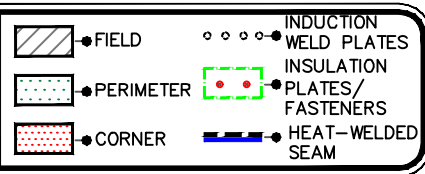


NOTES:

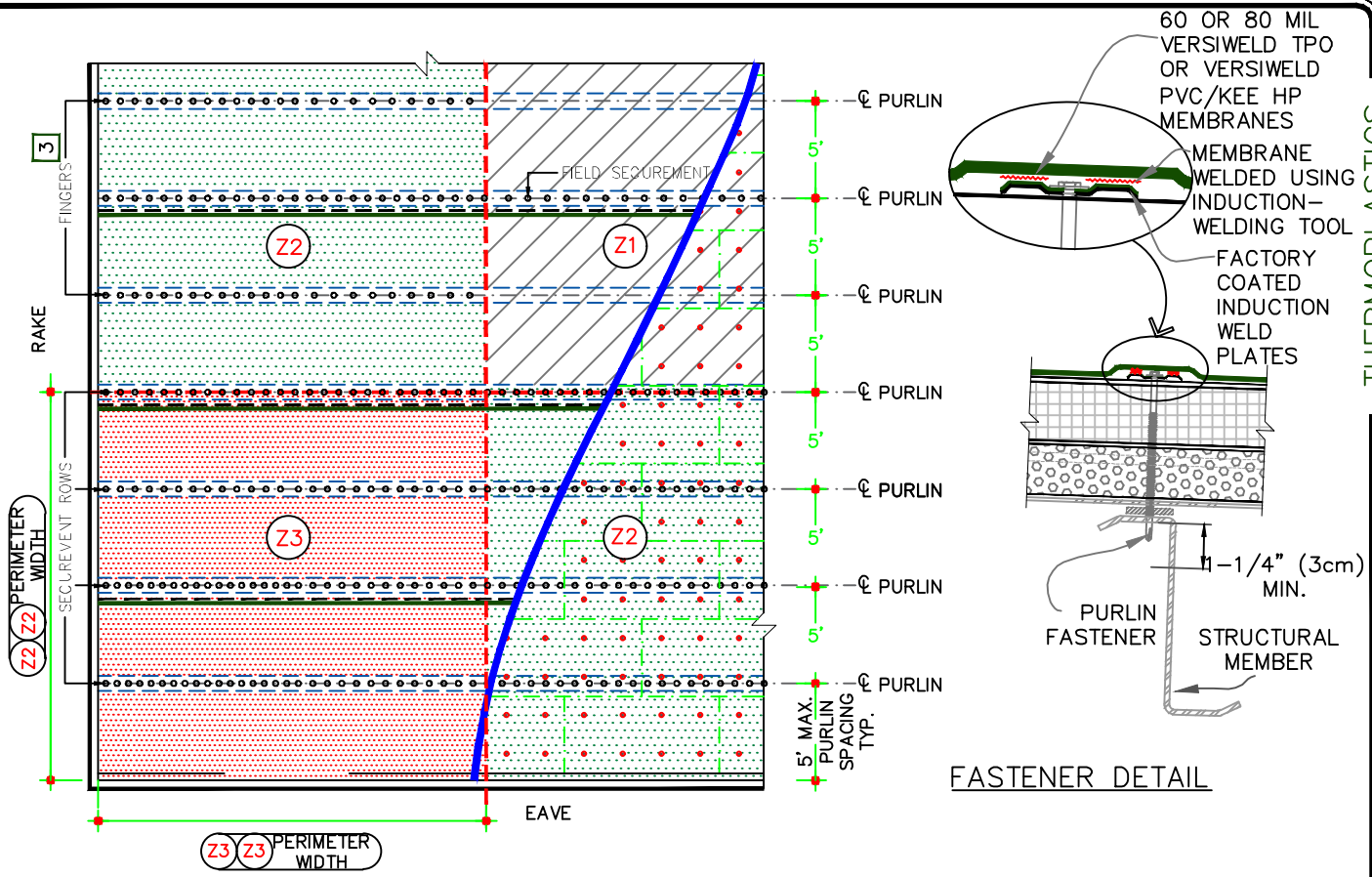
- FASTENING SPACING COULD BE ADJUSTED DEPENDING UPON THE SPECIFIED WIND UPLIFT PRESSURE. CONTACT VERSICO WITH SPECIFIED PRESSURES.
- INSULATION MAY ALTERNATIVELY BE ADHERED USING FLEXIBLE-DASH LOW-RISE POLYURETHANE ADHESIVE. SEE SPEC SUPPLEMENT G-02 - VERSIFLEECE AND INSULATION ATTACHMENT WITH FLEXIBLE DASH ADHESIVE.
- FINGER LENGTH (PERIMETER FASTENING ON RAKE SIDE) SHALL BE EQUAL TO THE PERIMETER WIDTH



MEMBRANE ATTACHMENT WITH INDUCTION WELDS:
 3 PURLIN SECUREMENT ROWS FROM EAVE

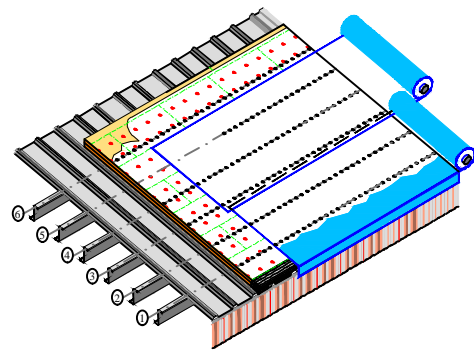


METAL RETROFIT
 MR | W-2.3



INDUCTION WELDED MEMBRANE ON METAL RETROFIT
 SECUREMENT ROWS (PERIMETER SHEETS): 4 PURLINS FROM EAVE
 INSULATION FASTENED TO EXISTING METAL ROOF

INDUCTION WELDING METAL RETROFIT WARRANTY					
WARRANTY WIND SPEED	SECUREMENT ROWS (PERIMETER SHEETS Z2/Z3) IN PURLINS PER EAVE			MAX. ROW (PURLIN) SPACING FOR FIELD (Z1)	PLATE SECUREMENT RATE
	BUILDING LOCATION DISTANCE FROM COASTLINE				
	GREATER THAN 7 MI.	7-3 MI.	LESS THAN 3 MI.		
55 MPH	--	--	--	--	--
72 MPH	--	--	--	--	--
80 MPH	--	--	4	10'	12"
90 MPH	--	4	4	10'	12"
>90 MPH	CONTACT VERSICO				
* MAXIMUM BUILDING HEIGHT OF 60'					



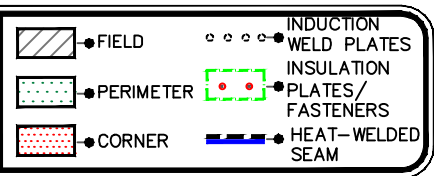
3D VIEW
NOT TO SCALE

NOTES:

- FASTENING SPACING COULD BE ADJUSTED DEPENDING UPON THE SPECIFIED WIND UPLIFT PRESSURE. CONTACT VERSICO WITH SPECIFIED PRESSURES.
- INSULATION MAY ALTERNATIVELY BE ADHERED USING FLEXIBLE-DASH LOW-RISE POLYURETHANE ADHESIVE. SEE SPEC SUPPLEMENT G-02 - VERSIFLEECE AND INSULATION ATTACHMENT WITH FLEXIBLE DASH ADHESIVE.
- FINGER LENGTH (PERIMETER FASTENING ON RAKE SIDE) SHALL BE EQUAL TO THE PERIMETER WIDTH



MEMBRANE ATTACHMENT WITH INDUCTION WELDS:
 4 PURLIN SECUREMENT ROWS FROM EAVE



METAL RETROFIT
 MR | W-2.4

METAL RETROFIT

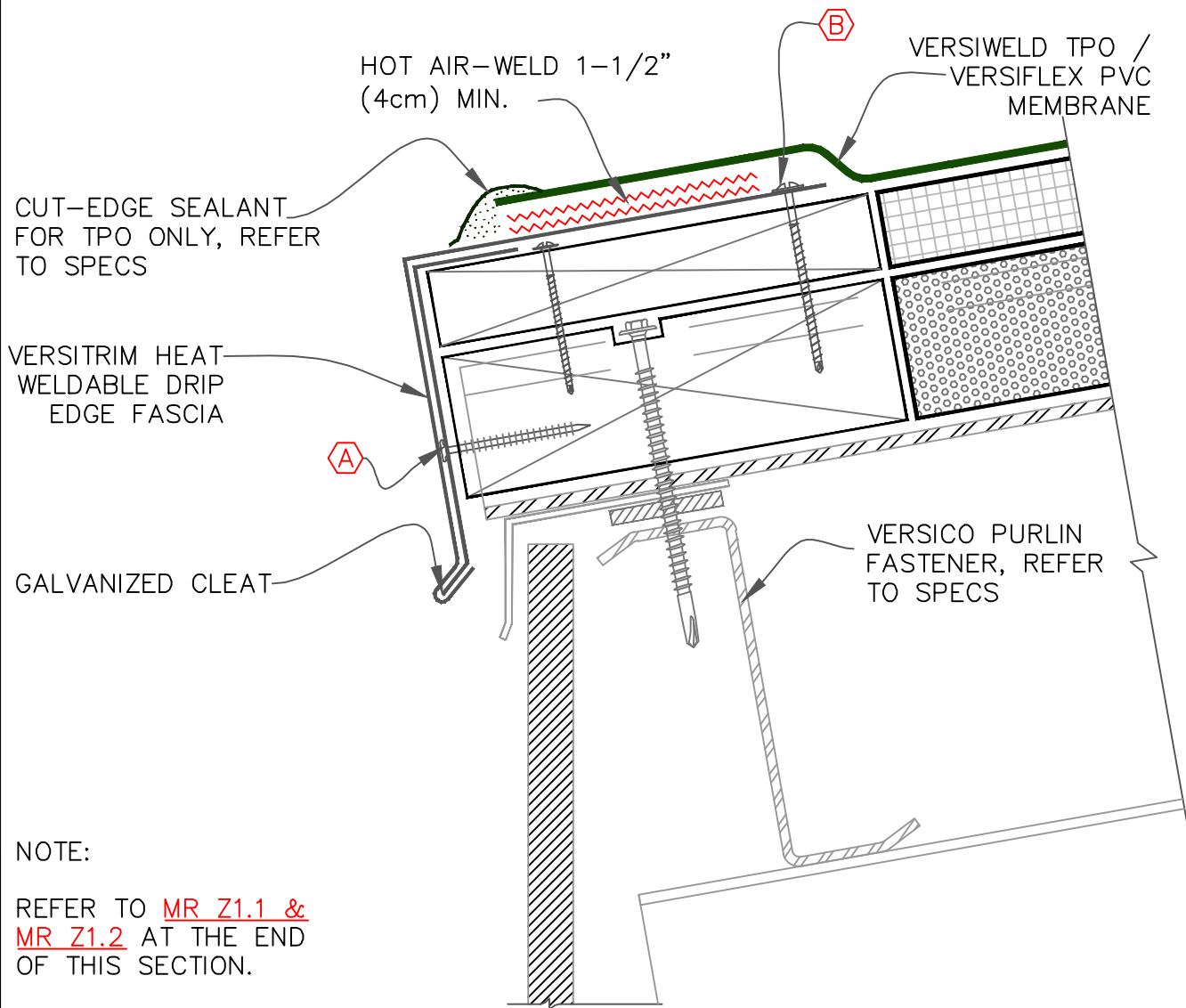
Thermoplastic Metal Retrofit Roofing Systems

Installation Details

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January 2026

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NOTE:

REFER TO [MR Z1.1](#) & [MR Z1.2](#) AT THE END OF THIS SECTION.

A 1-1/2" (38mm) RING SHANK NAILS @ 6" (15cm) O.C. MAXIMUM

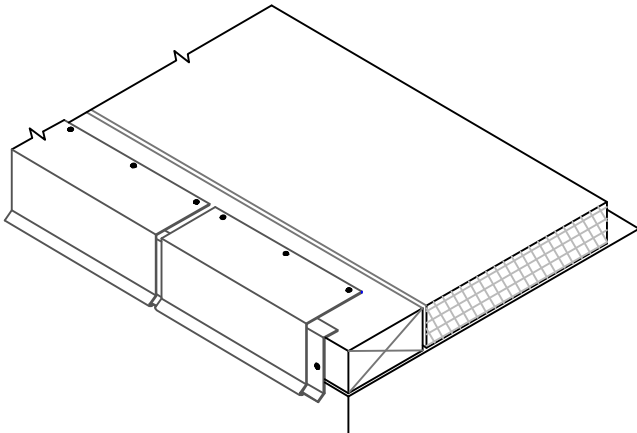
B HPV FASTENERS @ 12" (30cm) O.C. OR RING-SHANK NAILS @ 4" (10cm) O.C. & STAGGERED 3/4" (2cm) O.C.



EAVE/RAKE EDGE
(COATED METAL FASCIA)
(PAGE 1 OF 2)

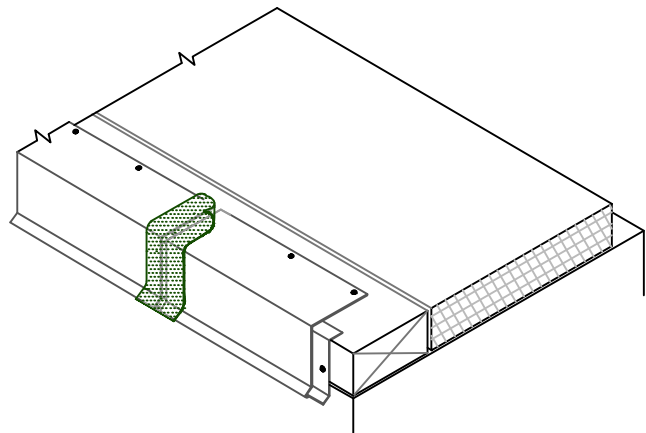
METAL RETROFIT
MR | T1.1A

1



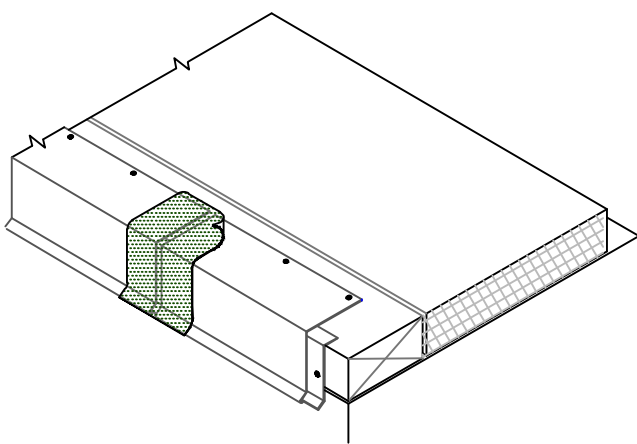
INSTALL CONTINUOUS CLEAT AND COATED METAL WITH 1/8"–1/4" (0.5cm–1cm) JOINTS BETWEEN ADJOINING SECTIONS.

2



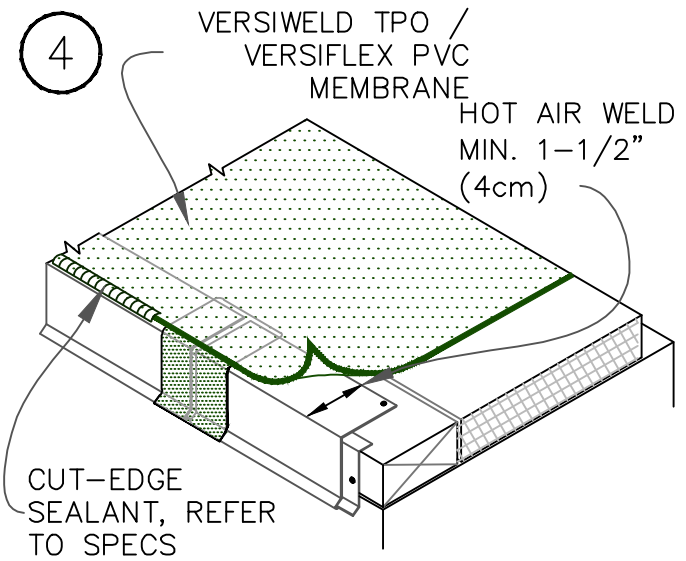
HEAT WELD 3" (7.5cm) WIDE PIECE OF NON-REINFORCED THERMOPLASTIC MEMBRANE OVER JOINT.

3



HEAT WELD 6" (15cm) WIDE PIECE OF NON-REINFORCED MEMBRANE OVER THE JOINT.

4



POSITION FIELD MEMBRANE AND HEAT WELD TO COATED METAL A MINIMUM OF 1-1/2" (4cm) AS SHOWN.

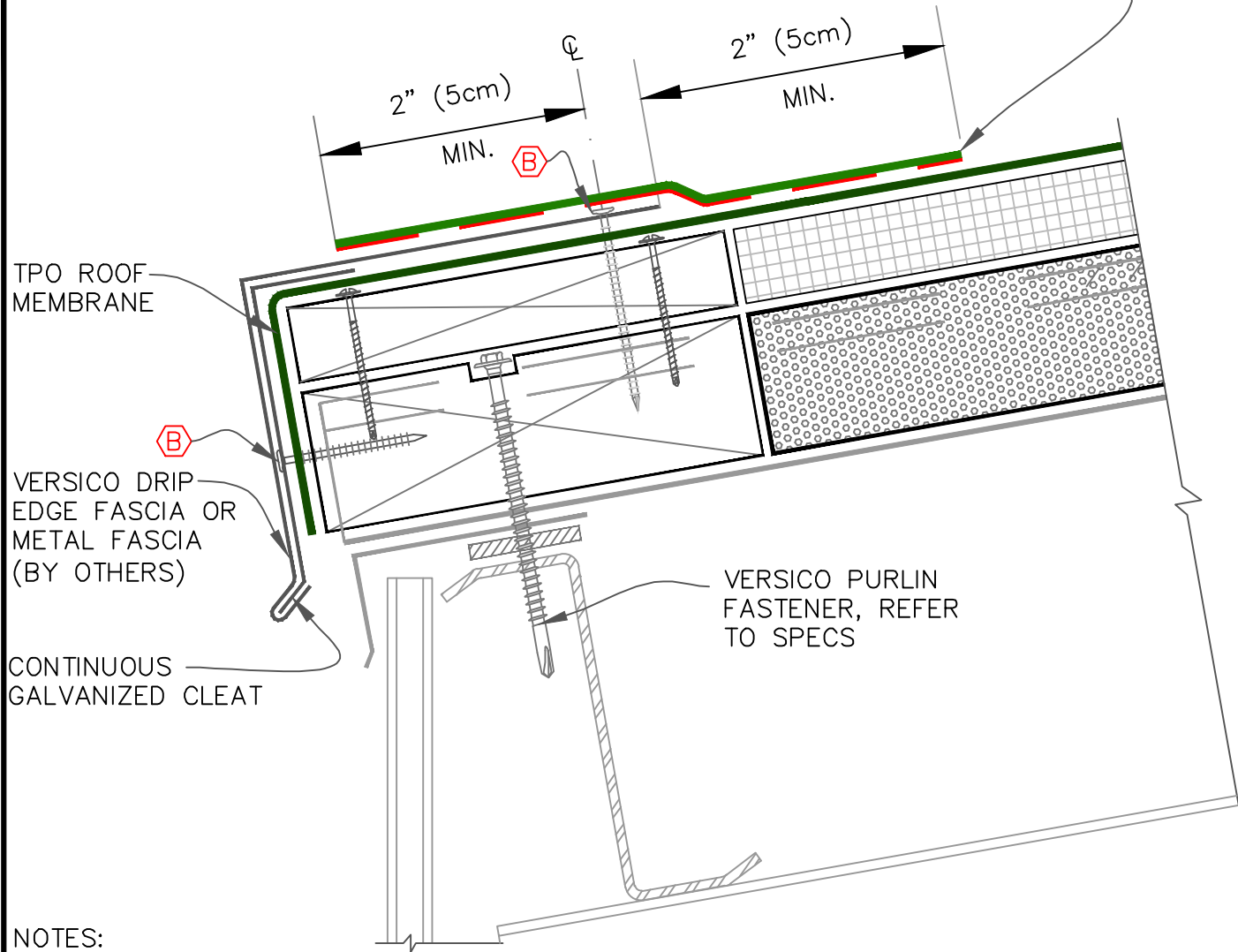


EAVE/RAKE EDGE
(COATED METAL FASCIA)
(PAGE 2 OF 2)

	● HIGH DENSITY RECOVER BOARD
	● IN-FILL INSULATION
	● SEE NOTE(S)

METAL RETROFIT
MR | T1.1B

6" (15cm) WIDE TPO QUICK-APPLIED COVER STRIP IN CONJUNCTION WITH TPO PRIMER



NOTES:

1. FASCIA DECK FLANGE MUST BE TOTALLY COVERED BY TPO QUICK-APPLIED COVER STRIP WITH MINIMUM 2" (5cm) COVERAGE PAST NAIL HEADS.
2. THIS DETAIL IS NOT RECOMMENDED FOR ROOFS THAT ARE LIKELY TO EXPERIENCE SIGNIFICANT SNOW AND ICE UP-SLOPE FROM GUTTER/EDGE WITH A PITCH OF 3:12 OR GREATER. REFER TO DETAILS: [MRT1.1A](#), [MR T1.3](#), [MR T1.4](#), [MR T1.6](#).

TPO ONLY
(NOT FOR PVC)

A 1-1/2" (38mm) RING SHANK NAILS @ 6" (15cm) O.C. MAXIMUM

B HPV FASTENERS @ 12" (30cm) O.C. OR RING-SHANK NAILS @ 4" (10cm) O.C. & STAGGERED 3/4" (2cm) O.C.



EAVE / RAKE EDGE
(PAGE 1 OF 2)

METAL RETROFIT
MR | T1.2A

SHEET METAL FASCIA

℄

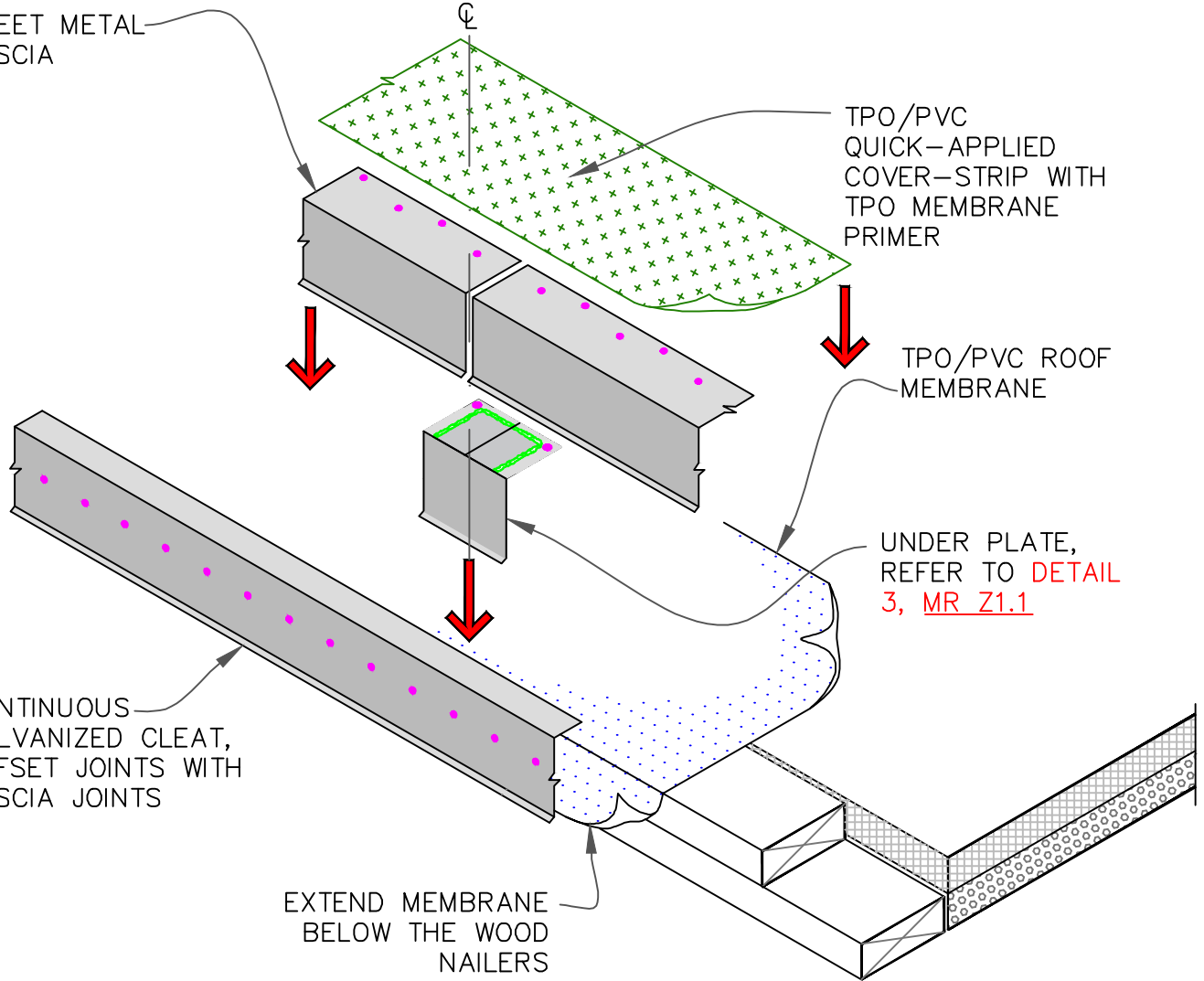
TPO/PVC QUICK-APPLIED COVER-STRIP WITH TPO MEMBRANE PRIMER

TPO/PVC ROOF MEMBRANE

UNDER PLATE, REFER TO [DETAIL 3, MR_Z1.1](#)

CONTINUOUS GALVANIZED CLEAT, OFFSET JOINTS WITH FASCIA JOINTS

EXTEND MEMBRANE BELOW THE WOOD NAILERS



NOTE:

REFER TO [MR_Z1.1](#) & [MR_Z1.2](#) AT THE END OF THIS SECTION.

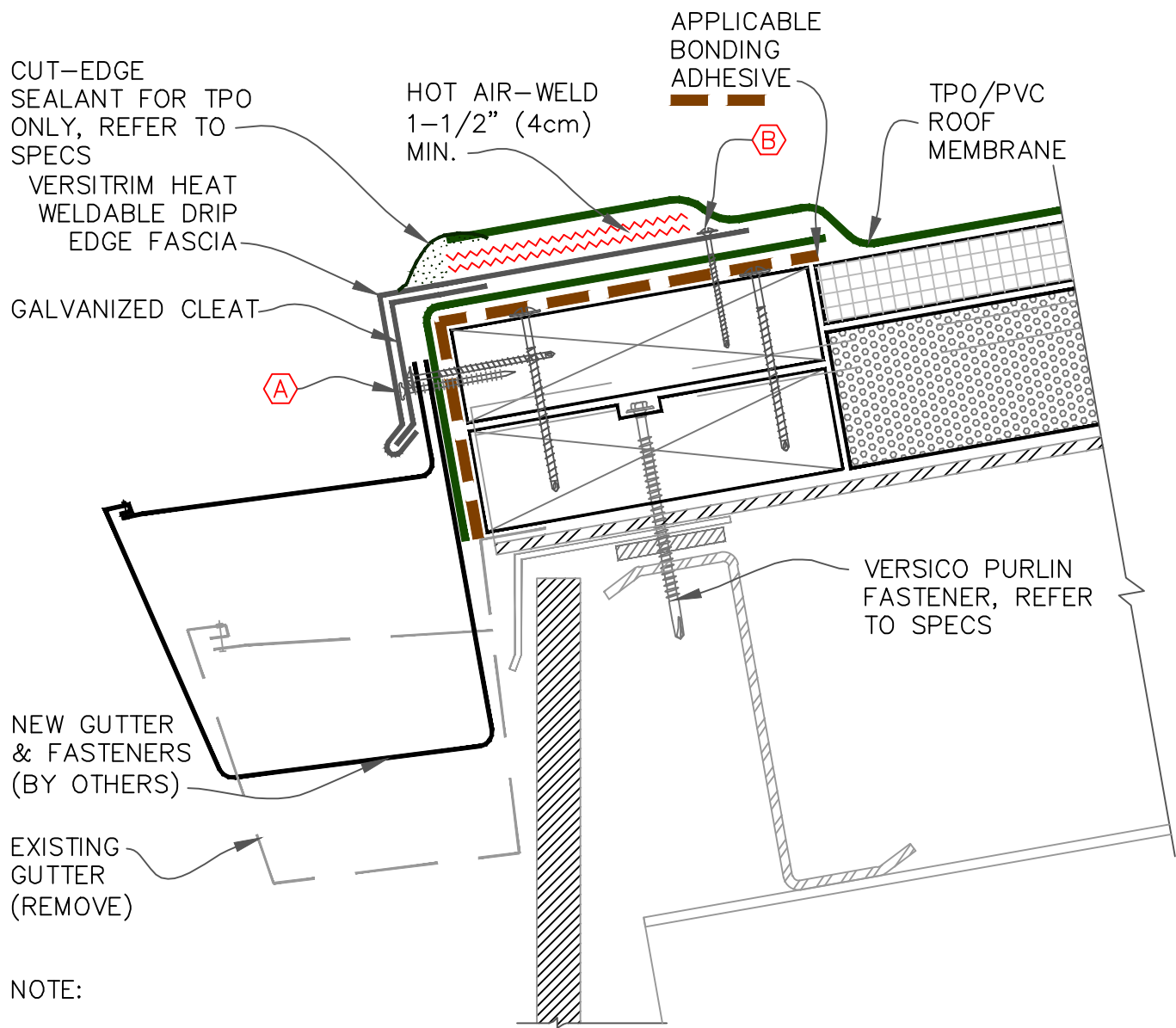


EAVE/RAKE EDGE
(NON-COATED METAL FASCIA) (PAGE 2 OF 2)

	● HIGH DENSITY RECOVER BOARD
	● IN-FILL INSULATION
	● SEE NOTE(S)

METAL RETROFIT

MR | T1.2B



NOTE:

REFER TO [MR Z1.1](#) & [MR Z1.2](#) AT THE END OF THIS SECTION.

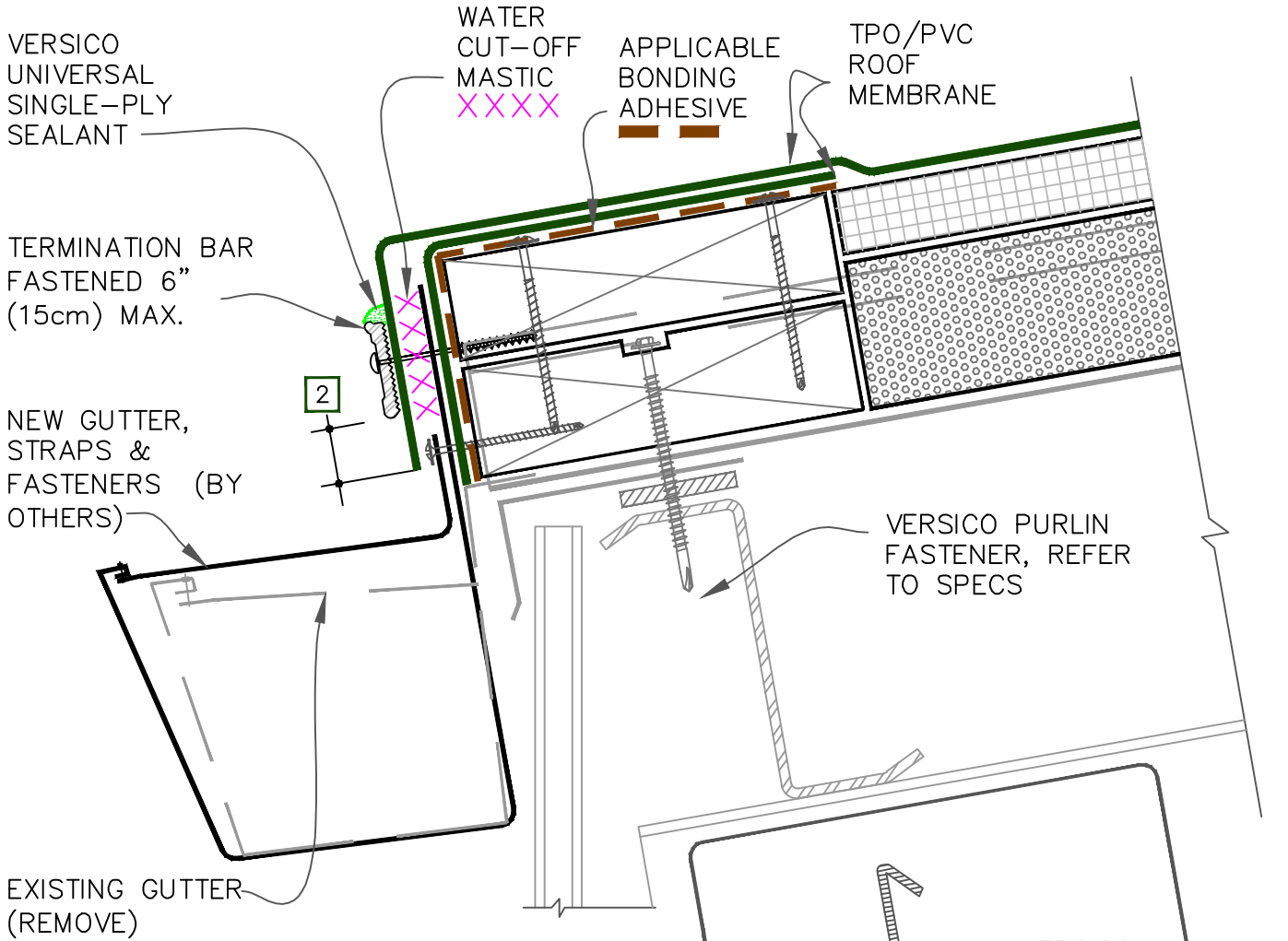
A 1-1/2" (38mm) RING SHANK NAILS @ 6" (15cm) O.C. MAXIMUM

B HPV FASTENERS @ 12" (30cm) O.C. OR RING-SHANK NAILS @ 4" (10cm) O.C. & STAGGERED 3/4" (2cm) O.C.



GUTTER WITH COATED METAL FASCIA

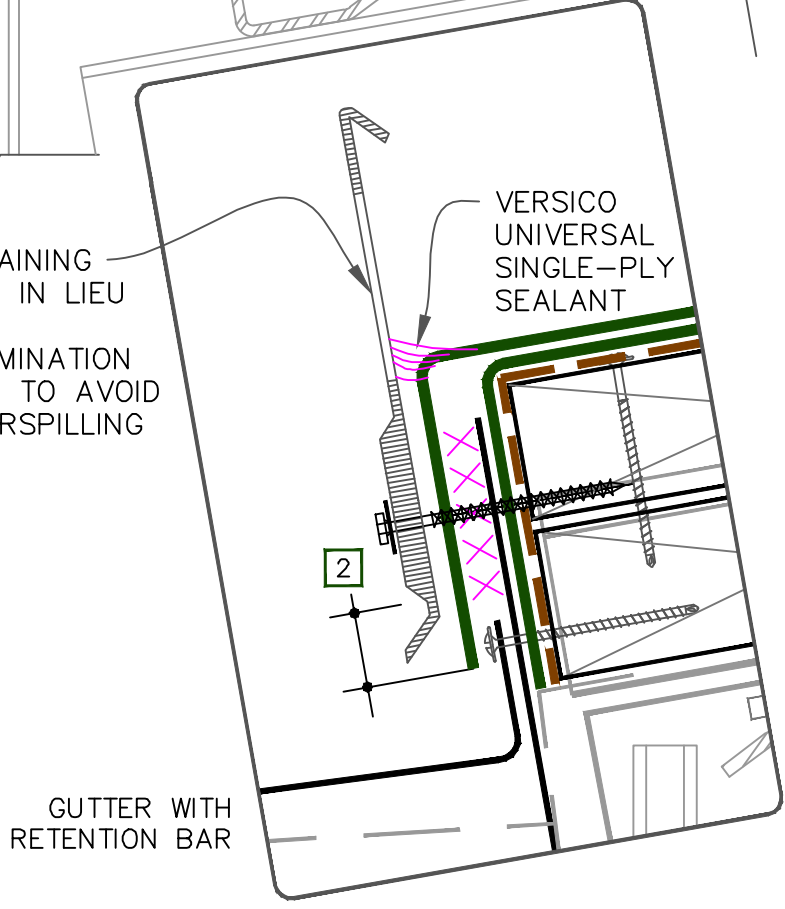
METAL RETROFIT
MR | T1.3



NOTES:

1. FASTENING OF METAL TERMINATION BAR OR RETAINING BAR MUST PROVIDE CONSTANT COMPRESSION ON WATER CUT-OFF MASTIC.
2. ALLOW MEMBRANE SHEET TO EXTEND 1/2" (1.5cm) MINIMUM BELOW THE TERMINATION BAR.
3. REFER TO [MR Z1.1](#) & [MR Z1.2](#) AT THE END OF THIS SECTION.

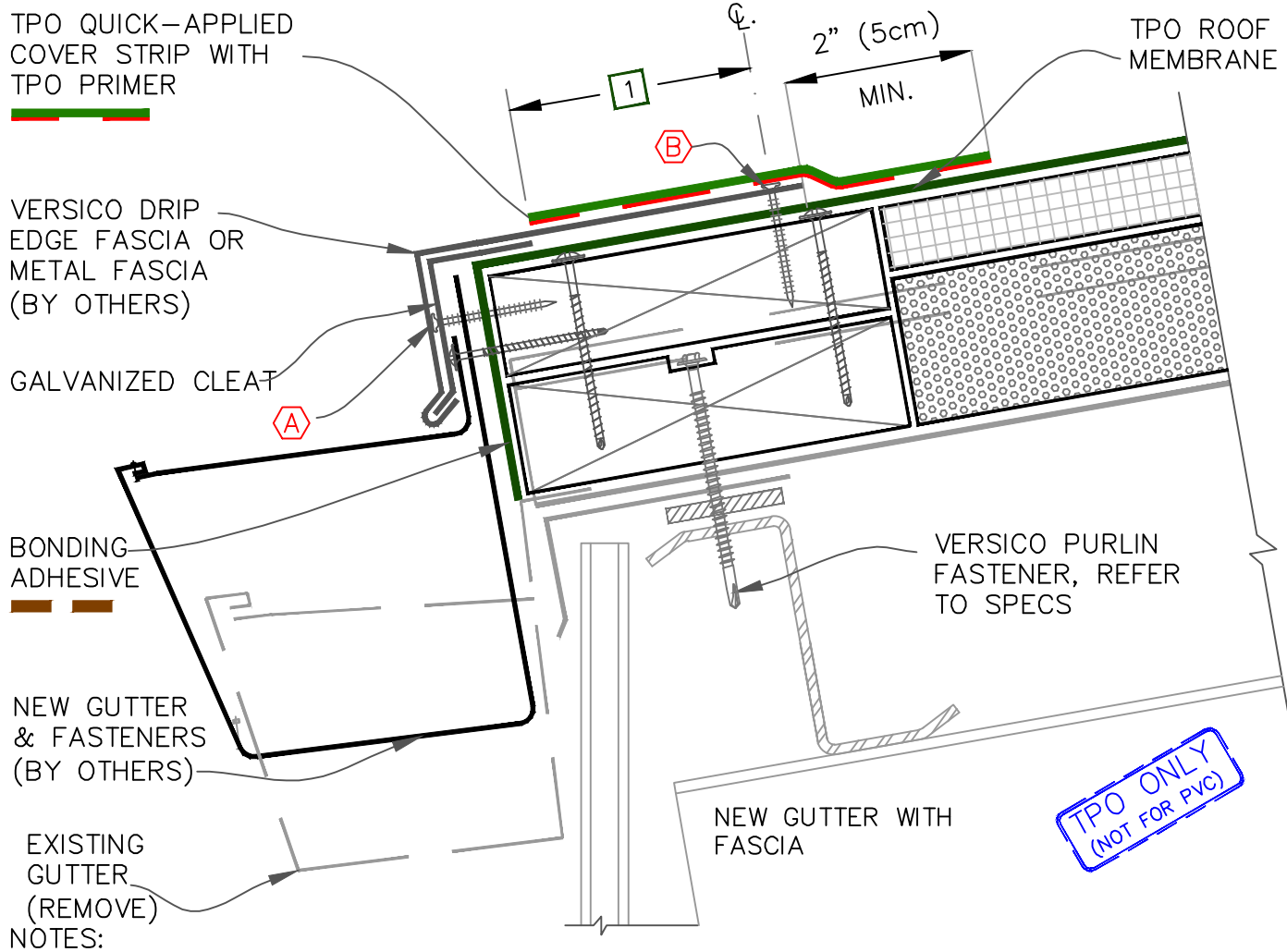
RETAINING BAR IN LIEU OF TERMINATION BAR TO AVOID OVERSPILLING



GUTTER WITH METAL BAR
EDGE TERMINATION

	• HIGH DENSITY RECOVER BOARD
	• IN-FILL INSULATION
	• SEE NOTE(S)

METAL RETROFIT
MR | T1.4



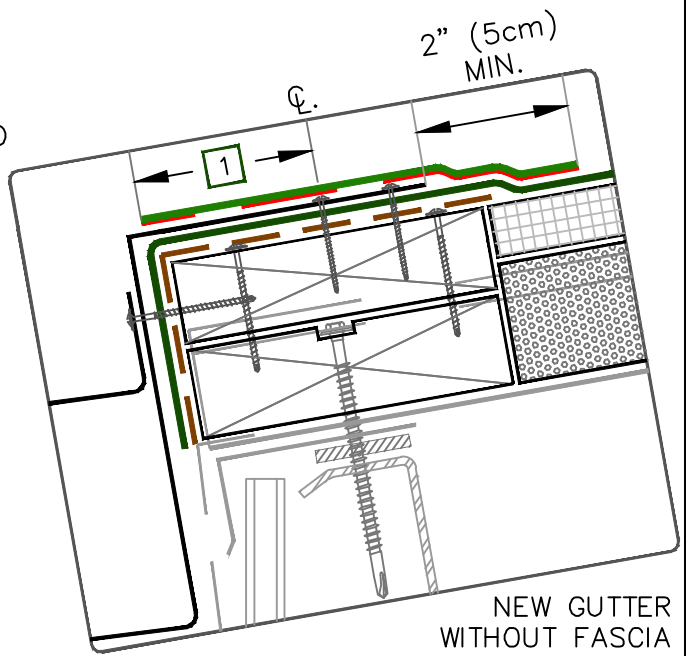
TPO ONLY
(NOT FOR PVC)

NOTES:

1. FASCIA DECK FLANGE MUST BE TOTALLY COVERED BY TPO QUICK-APPLIED COVER STRIP WITH MINIMUM 2" (5cm) COVERAGE PAST NAIL HEADS.
2. REFER TO [MR Z1.1](#) & [MR Z1.2](#) AT THE END OF THIS SECTION.
3. THIS DETAIL IS NOT RECOMMENDED FOR ROOFS THAT ARE LIKELY TO EXPERIENCE SIGNIFICANT SNOW AND ICE UP-SLOPE FROM GUTTER/EDGE. REFER TO DETAILS: [MRT1.1A](#), [MR T1.3](#), [MR T1.4](#), [MR T1.6](#).

A 1-1/2" (38mm) RING SHANK NAILS @ 6" (15cm) O.C. MAXIMUM

B HPV FASTENERS @ 12" (30cm) O.C. OR RING-SHANK NAILS @ 4" (10cm) O.C. & STAGGERED 3/4" (2cm) O.C.



NEW GUTTER WITHOUT FASCIA

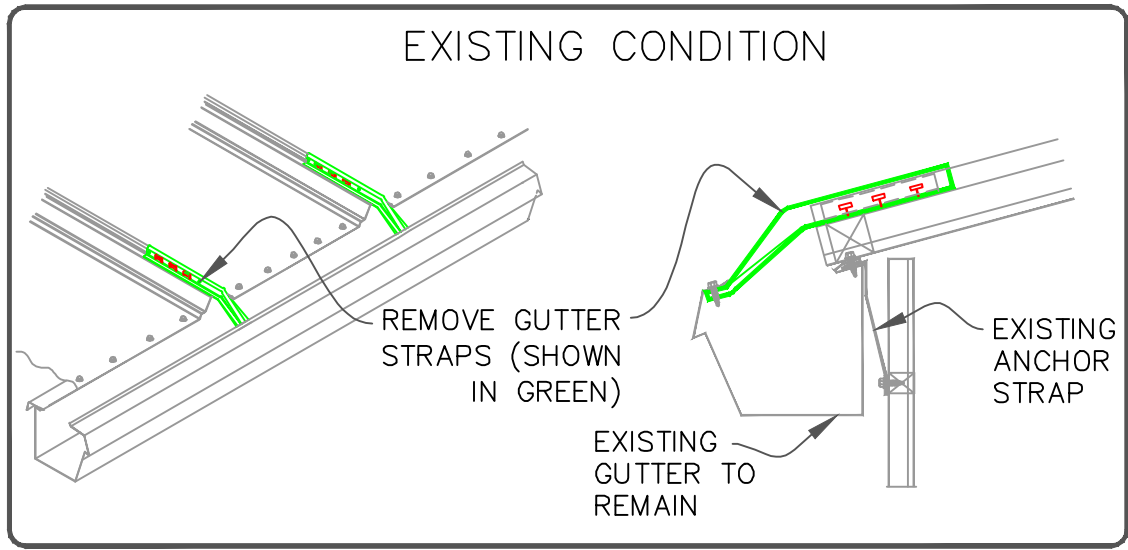


GUTTER WITH AND WITHOUT FASCIA

	• HIGH DENSITY RECOVER BOARD
	• IN-FILL INSULATION
A B	• SEE NOTE(S)

METAL RETROFIT
MR | T1.5

EXISTING CONDITION



NOTE:

REFER TO [MR Z1.1](#) & [MR Z1.2](#) AT THE END OF THIS SECTION.

UNIVERSAL SINGLE PLY SEALANT

TERMINATION BAR OR RETAINING BAR TO AVOID OVER SPILLING OF WATER OUTSIDE THE GUTTER, FASTENED 6" (15cm) O.C. REFER TO VERSICO DETAIL [VGB-1.4](#)

WATER CUT-OFF MASTIC **XX**

NEW FASTENERS & STRAPS (BY OTHERS)

2" (5cm) MIN.

EXISTING GUTTER

TPO / PVC MEMBRANE

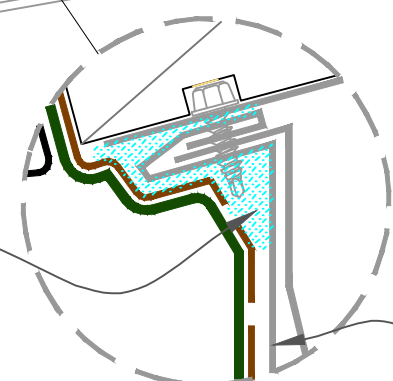
APPLICABLE BONDING ADHESIVE

VERSIWELD TPO / VERSIFLEX PVC MEMBRANE

VERSICO PURLIN FASTENER, REFER TO SPECS

INJECT SEALANT TO SEAL THE OPENINGS & PROVIDE CUSHION AROUND FASTENER & OTHER PROTRUSIONS.

EXISTING GUTTER BACK WALL



GUTTER WITH STRAPS ANCHORED INTO STANDING SEAMS

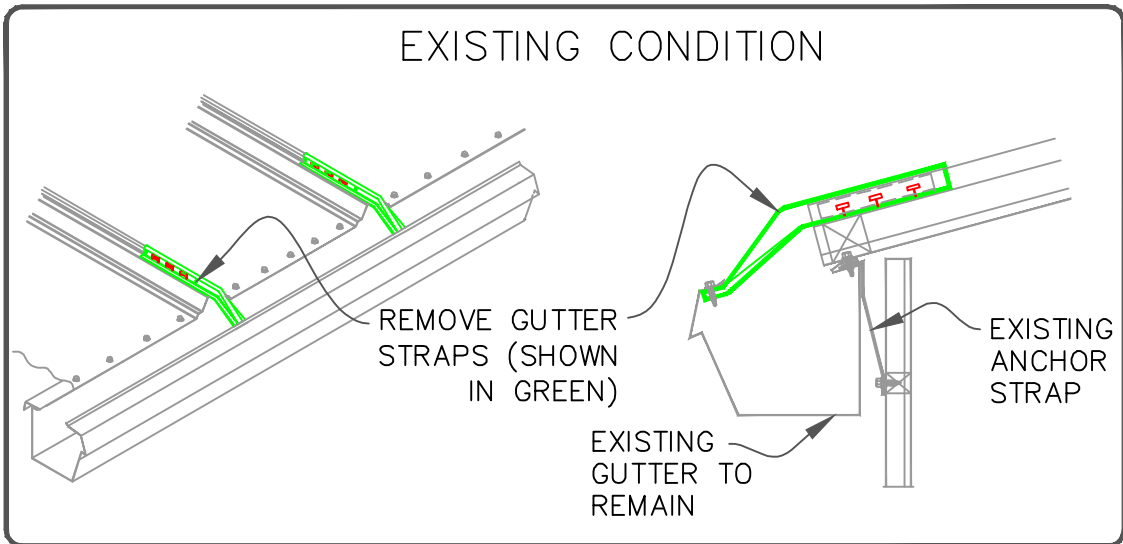
	• HIGH DENSITY RECOVER BOARD
	• IN-FILL INSULATION
	• SEE NOTE(S)

METAL RETROFIT
MR | T1.6

EXISTING CONDITION

NOTE:

REFER TO **MR Z1.1 & MR Z1.2**
AT THE END OF
THIS SECTION.



CUT-EDGE SEALANT FOR TPO ONLY, REFER TO SPECS

VERSITRIM HEAT WELDABLE DRIP EDGE FASCIA

WATER CUT-OFF MASTIC **XX**

GALVANIZED CLEAT

WATER LINE

SHEET METAL TRIM ABOVE THE WATER-LINE.

NEW FASTENERS & STRAPS (BY OTHERS)

EXISTING GUTTER

HOT AIR-WELD 1-1/2" (4cm) MIN.

VERSIWELD TPO / VERSIFLEX PVC MEMBRANE

APPLICABLE BONDING ADHESIVE

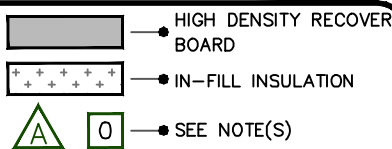
VERSICO PURLIN FASTENER, REFER TO SPECS

A 1-1/2" (38mm) RING SHANK NAILS @ 6" (15cm) O.C. MAXIMUM

B HPV FASTENERS @ 12" (30cm) O.C. OR RING-SHANK NAILS @ 4" (10cm) O.C. & STAGGERED 3/4" (2cm) O.C.

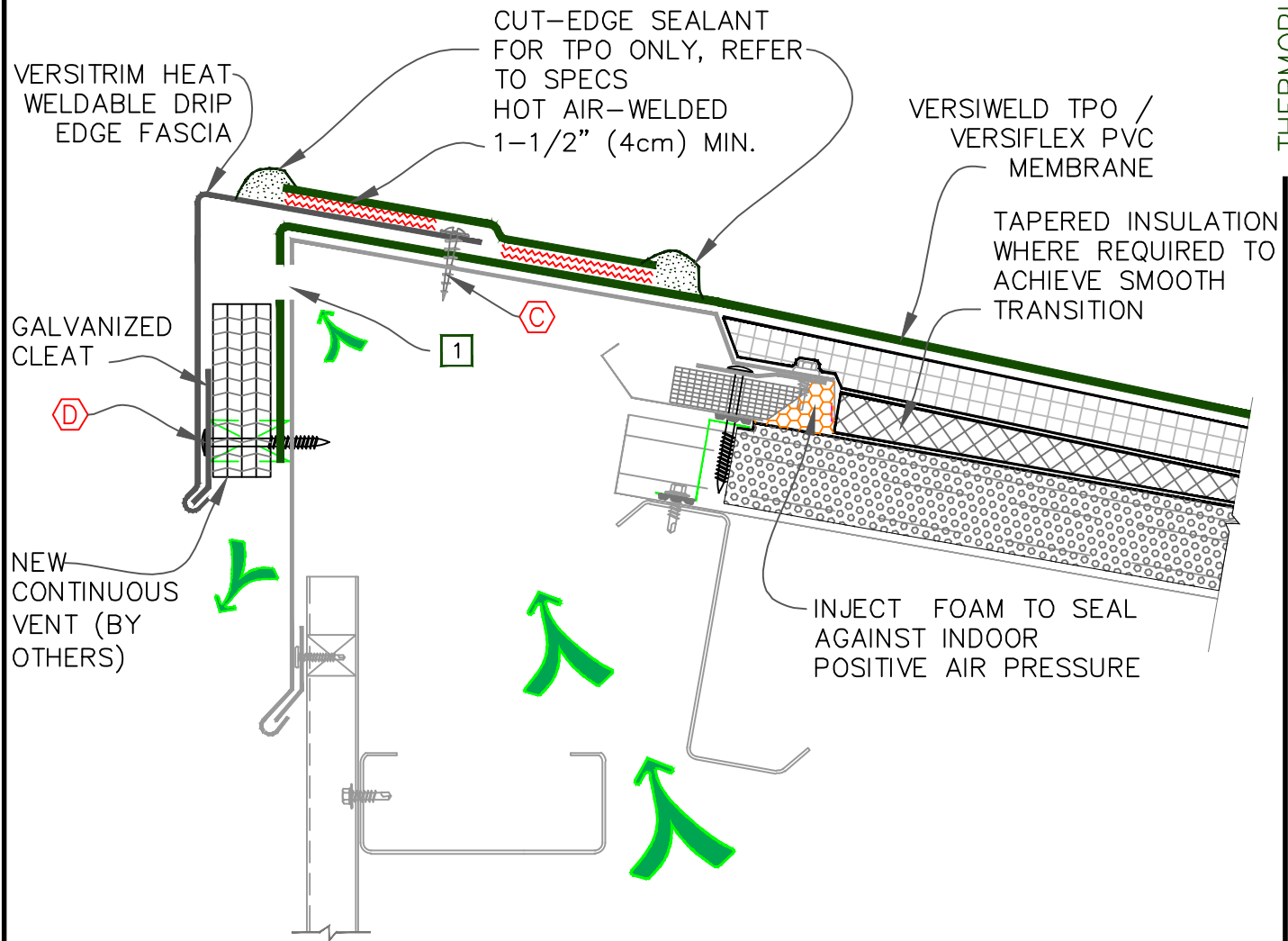


GUTTER WITH STRAPS ANCHORED INTO STANDING SEAMS



METAL RETROFIT

MR | T1.7



NOTES:

1. CUT HOLES IN EXISTING HIGH EAVE TRIM AT TOP TO REDIRECT VENTING. SPECIFIER TO CALCULATE THE VENT SIZES, FREQUENCY OF HOLES WITHOUT WEAKENING THE EXISTING SHEET METAL.
2. FOR ADDITIONAL INFORMATION REFER TO [MR Z1.1 & MR Z1.2](#) AT THE END OF THIS SECTION.

- C** SHEET METAL SCREWS @ 6" (15cm) O.C., MAX., EXPOSED 3/4" (2cm) MIN. BEYOND EXISTING SHEET METAL SUBSTRATE
- D** FASTENERS TO MATCH EXISTING @ 6" (15cm) O.C., MAX., EXPOSED 3/4" (2cm) MIN. BEYOND EXISTING SUBSTRATE



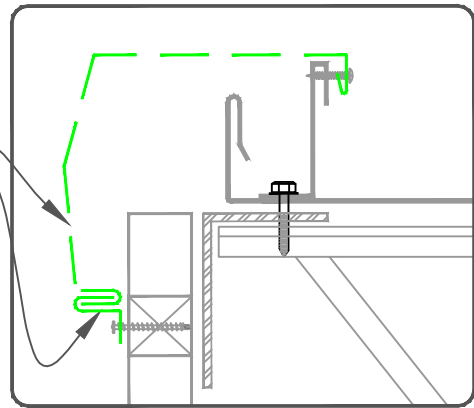
HIGH-END VENTED ROOF EDGE

- HIGH DENSITY RECOVER BOARD
- IN-FILL INSULATION
- SEE NOTE(S)

METAL RETROFIT
MR | T1.8

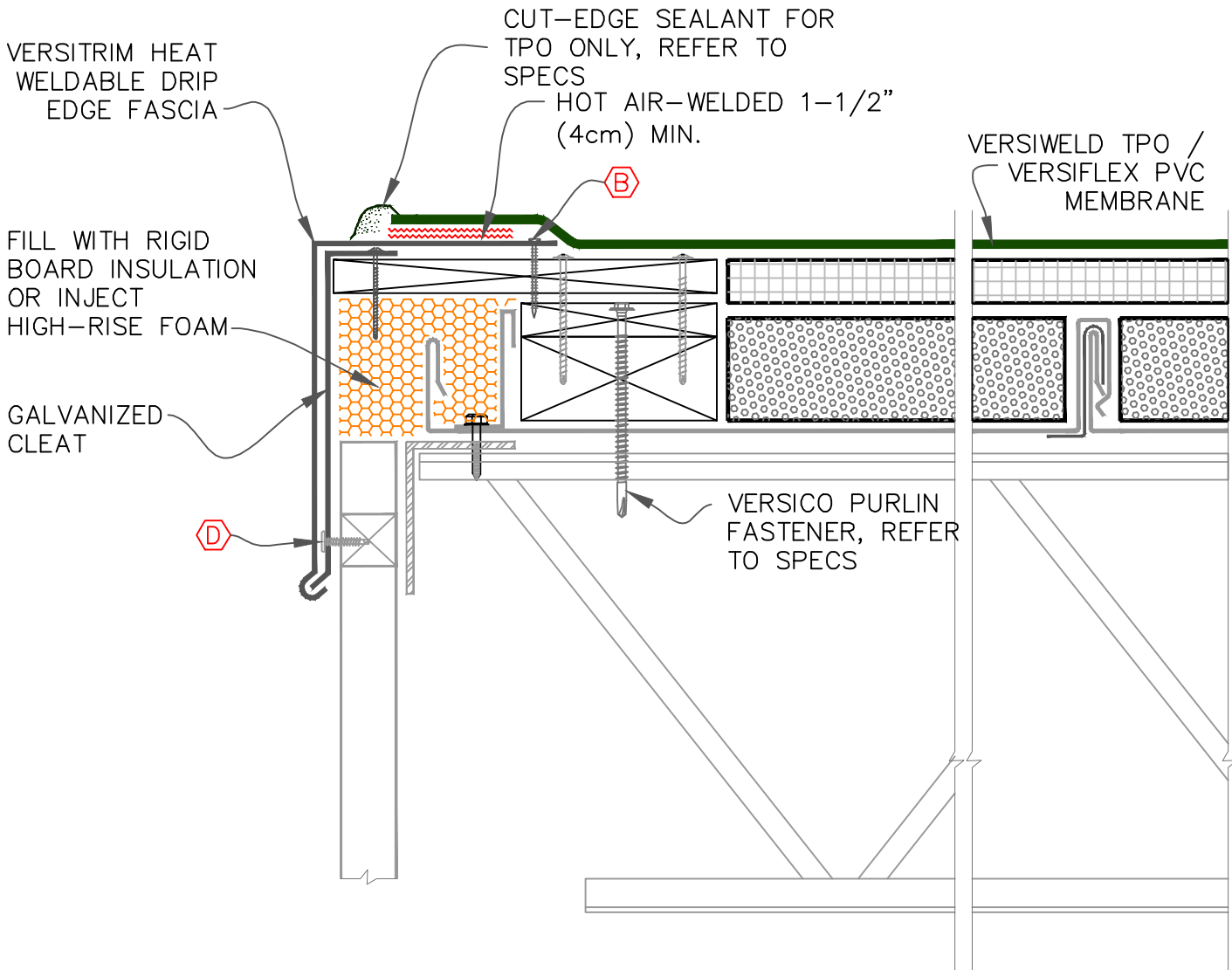
NOTES:

1. FASCIA HORIZONTAL FLANGE MUST BE TOTALLY COVERED MINIMUM 2" (5cm) BEYOND THE NAIL.
2. REFER TO [MR Z1.1](#) & [MR Z1.2](#) AT THE END OF THIS SECTION.



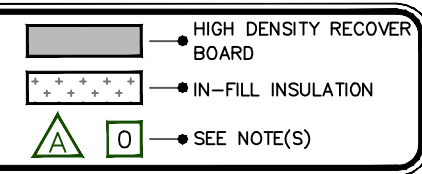
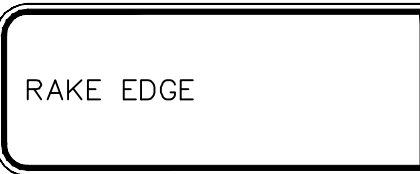
EXISTING FLOATING RAKE AND CLIP REMOVED

EXISTING FLOATING RAKE EDGE

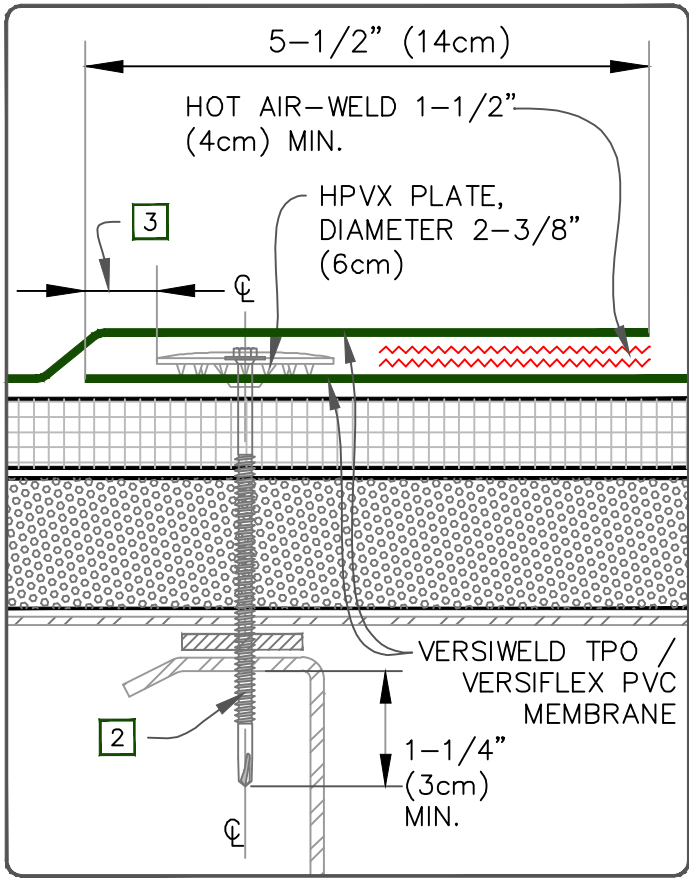
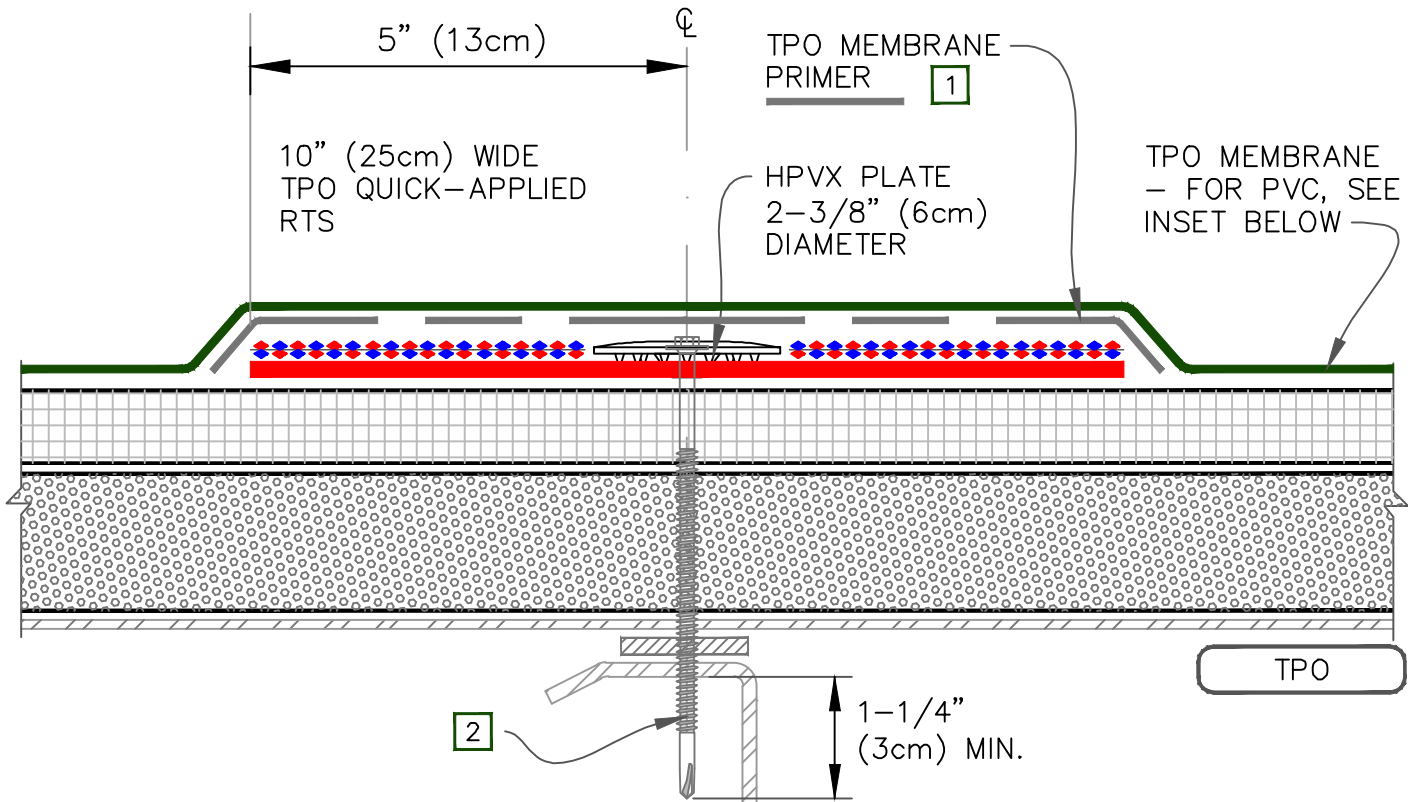


A HPV FASTENERS @ 12" (30cm) O.C. OR RING-SHANK NAILS @ 4" (10cm) O.C. & STAGGERED 3/4" (2cm) O.C.

D FASTENERS TO MATCH EXISTING @ 6" (15cm) O.C., MAX., EXPOSED 3/4" (2cm) MIN. BEYOND EXISTING SUBSTRATE



METAL RETROFIT
MR | T1.10



NOTES:

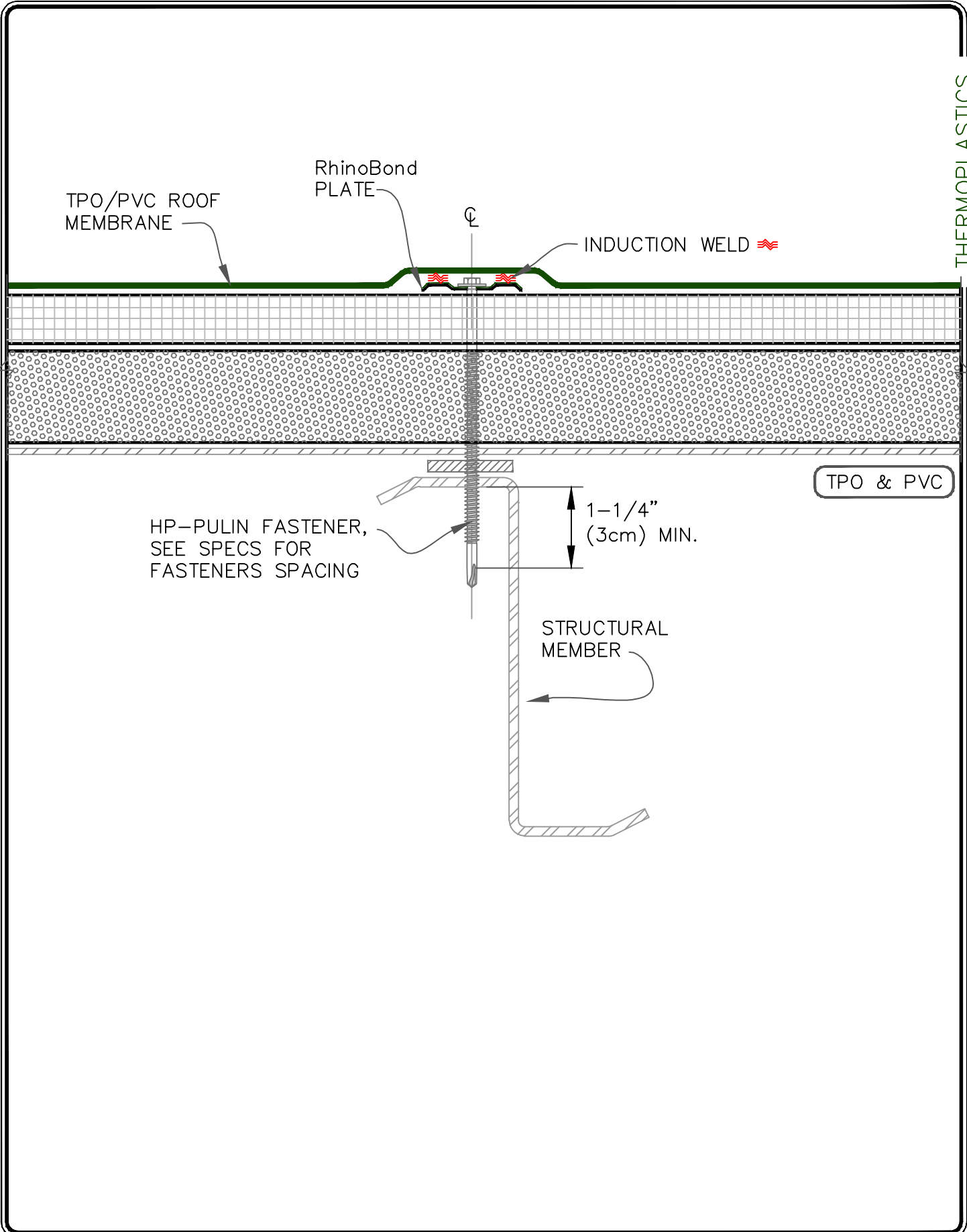
1. TPO MEMBRANE PRIMER MUST BE APPLIED ON THE BACK SIDE OF TPO MEMBRANE, PRIOR TO ADHERING THE MEMBRANE TO QUICK-APPLIED RTS.
2. HP-PURLIN FASTENER MAX. 12" (30cm) O.C.
3. 1/2" (1.5cm) MIN.



MEMBRANE ATTACHMENT

HIGH DENSITY RECOVER BOARD
+++++ IN-FILL INSULATION
A 0 SEE NOTE(S)

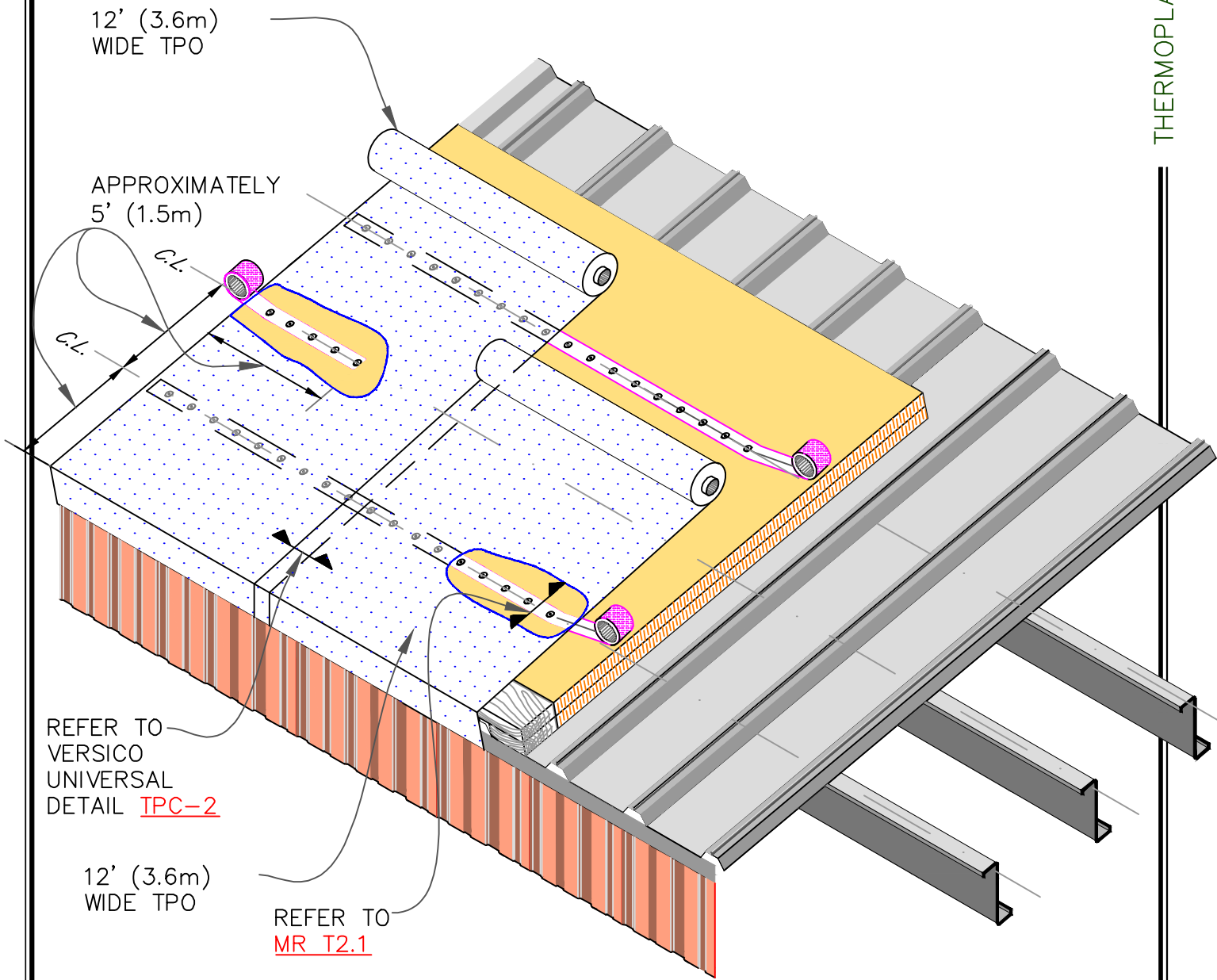
METAL RETROFIT
MR | T2.1



MEMBRANE ATTACHMENT
- RhinoBond ASSEMBLY

- HIGH DENSITY RECOVER BOARD
- IN-FILL INSULATION
- SEE NOTE(S)

METAL
RETROFIT
MR | T2.2



NOTE:

MEMBRANE SHEETS MAY BE INSTALLED
PERPENDICULAR TO SLOPE. SEE DETAILS T2.6
& T2.7

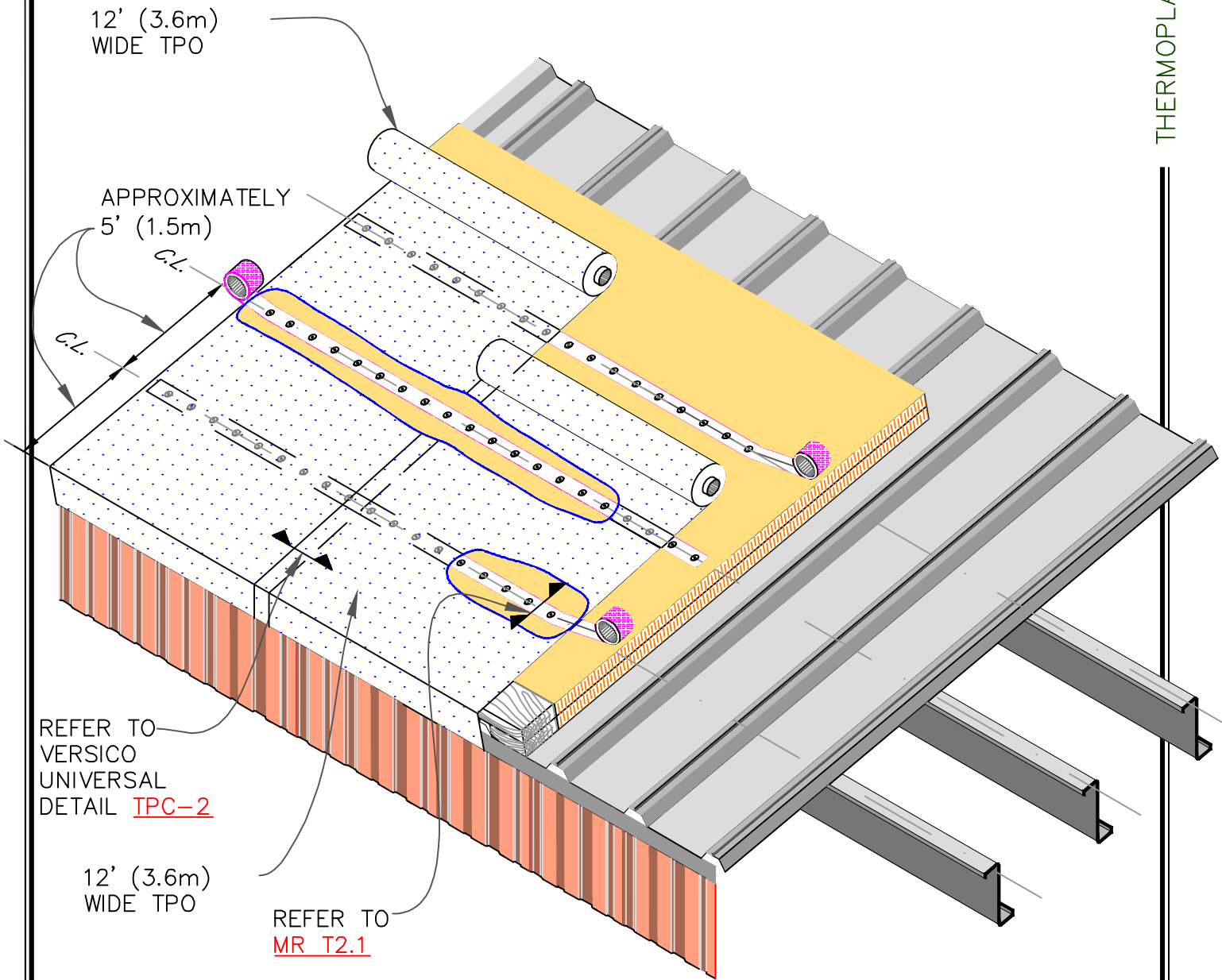


MEMBRANE ATTACHMENT
PARALLEL TO SLOPE –
UP TO 100 MPH WIND
ZONE

	● HIGH DENSITY RECOVER BOARD
	● IN-FILL INSULATION
	● SEE NOTE(S)

METAL
RETROFIT

MR | T2.3







NOTE:

MEMBRANE SHEETS MAY BE INSTALLED
PERPENDICULAR TO SLOPE. SEE DETAILS T2.6
& T2.7

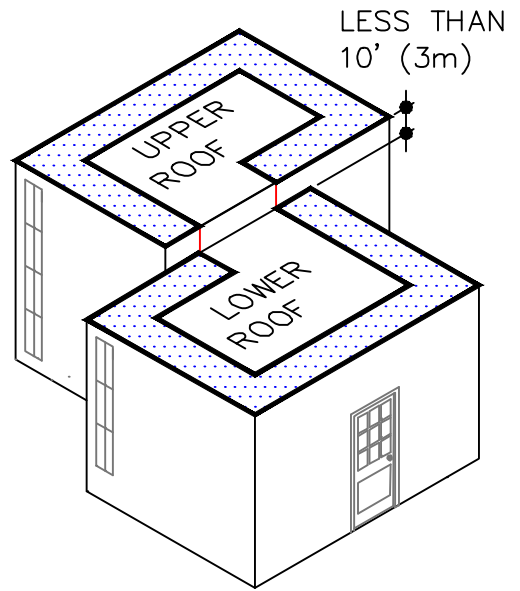
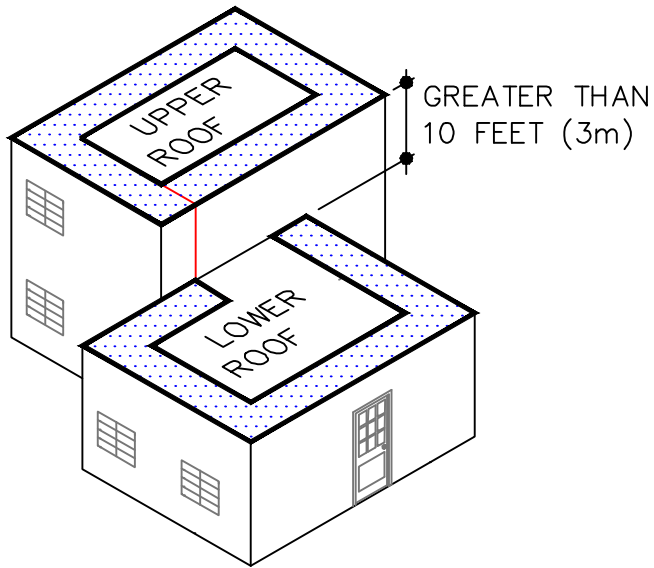


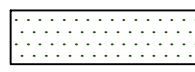
MEMBRANE ATTACHMENT
PARALLEL TO SLOPE –
101 TO 120 MPH WIND
ZONE

-  HIGH DENSITY RECOVER BOARD
-  IN-FILL INSULATION
-   SEE NOTE(S)

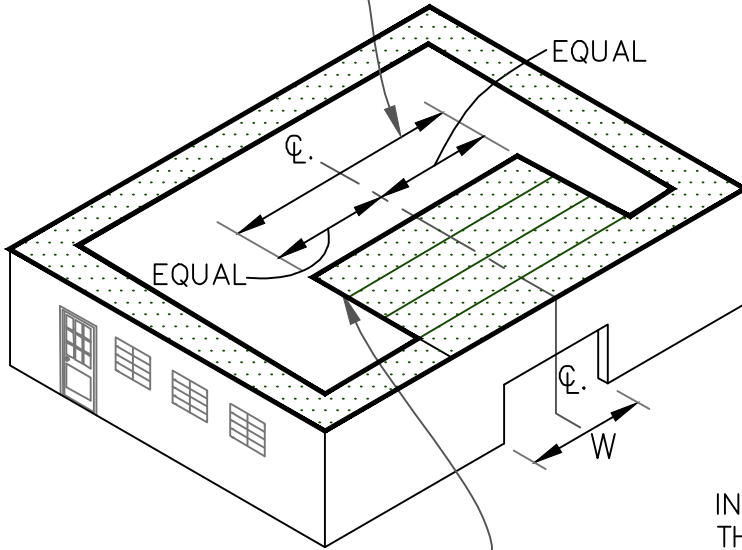
METAL
RETROFIT
MR | T2.4

GUIDELINES FOR ROOF PERIMETER ZONES FOR MECHANICALLY FASTENED ROOF SYSTEM

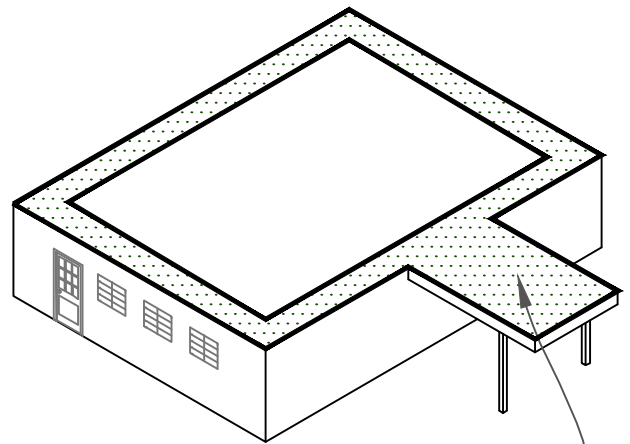


 PERIMETER ZONES

WIDTH (W) X 1.5






FOUR PERIMETER SHEETS CENTERED OVER LARGE OPENINGS.



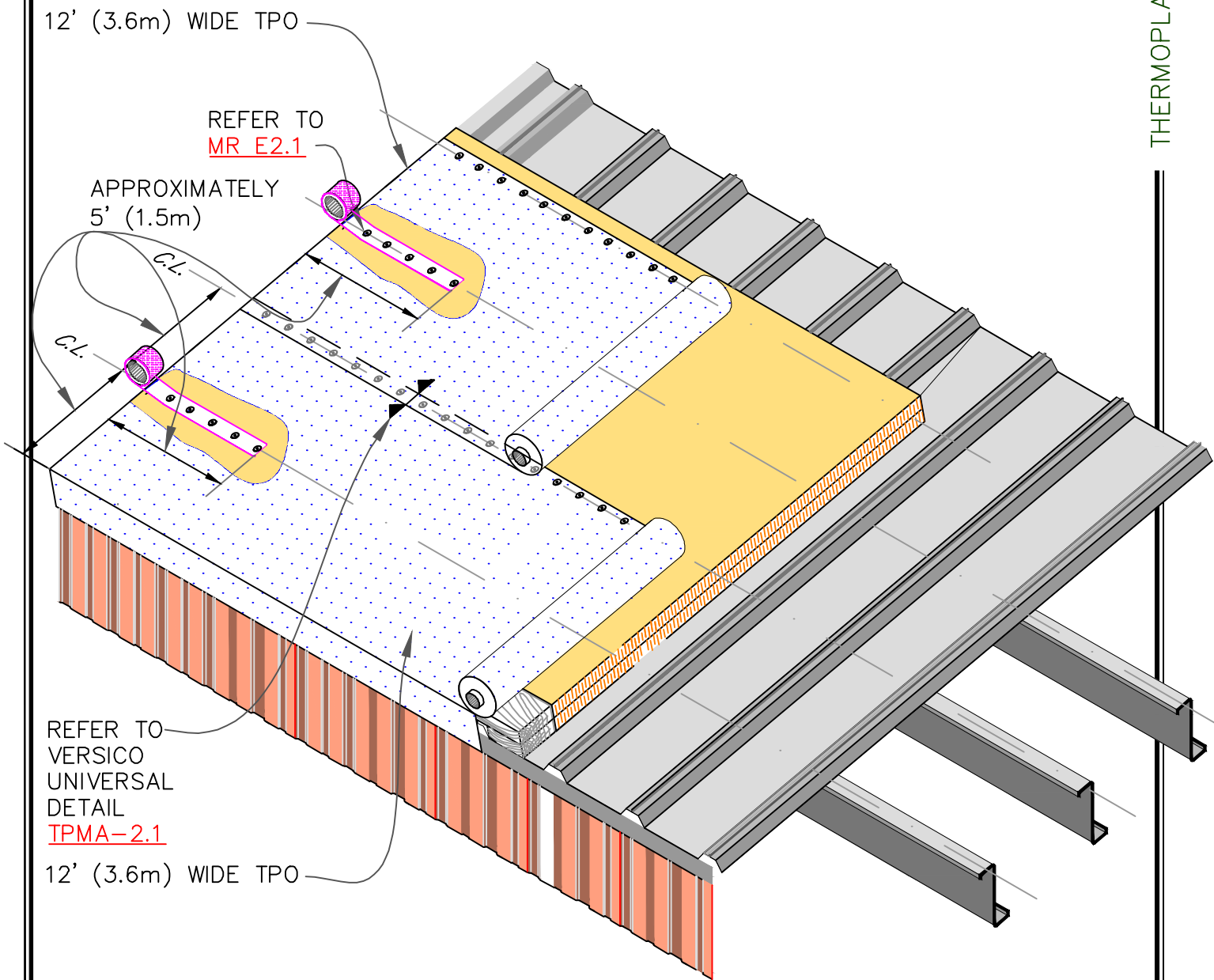
INSTALL PERIMETER SHEETS OVER THE ENTIRE OVERHANG EXTENDING ONTO THE MAIN ROOF







ROOF PERIMETER ZONES

-  HIGH DENSITY RECOVER BOARD
-  IN-FILL INSULATION
-  SEE NOTE(S)

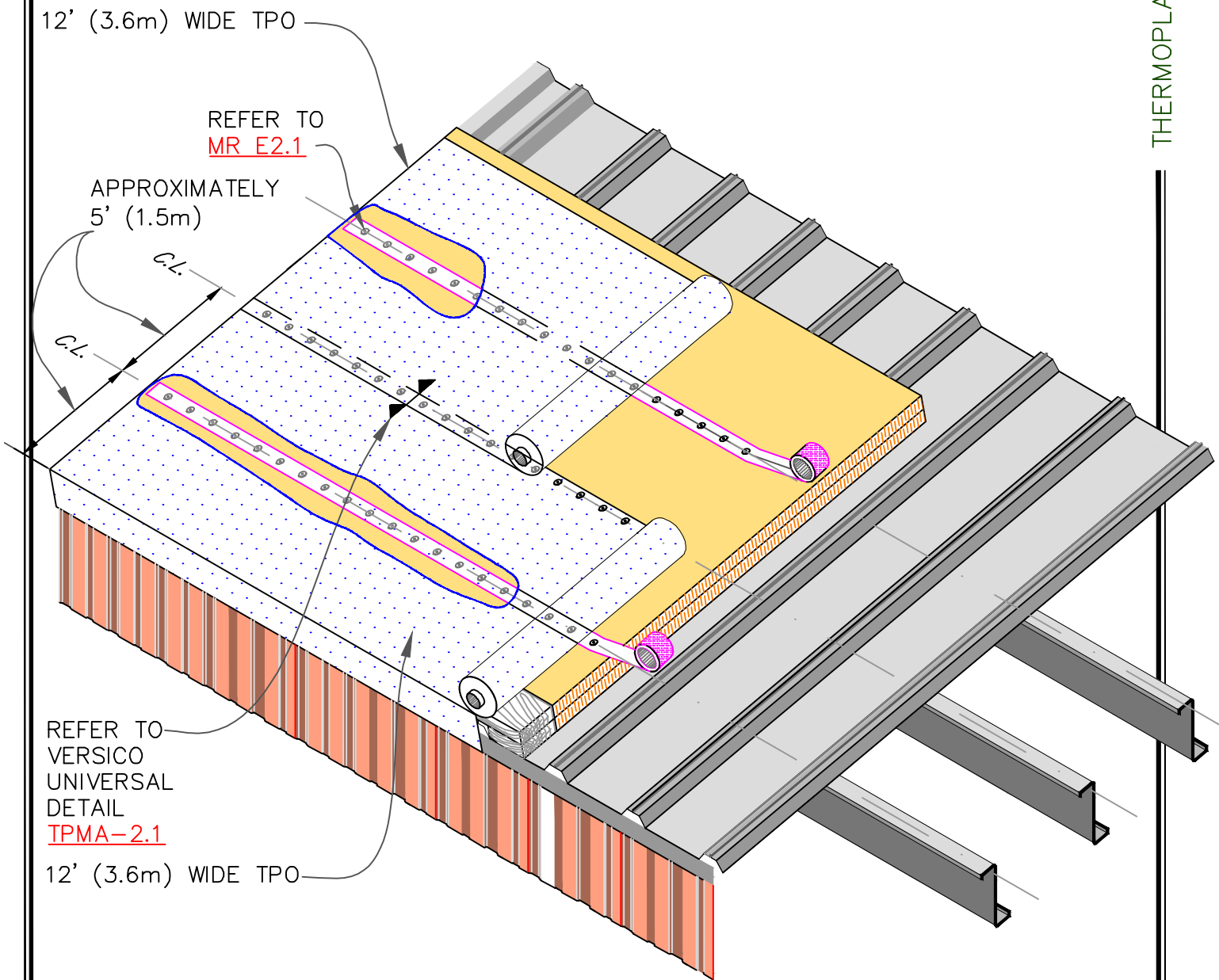
METAL RETROFIT
MR | T2.5







MEMBRANE ATTACHMENT
PERPENDICULAR TO
SLOPE - UP TO 100
MPH WIND ZONE

-  HIGH DENSITY RECOVER BOARD
-  IN-FILL INSULATION
-   SEE NOTE(S)

METAL
RETROFIT
MR | T2.6



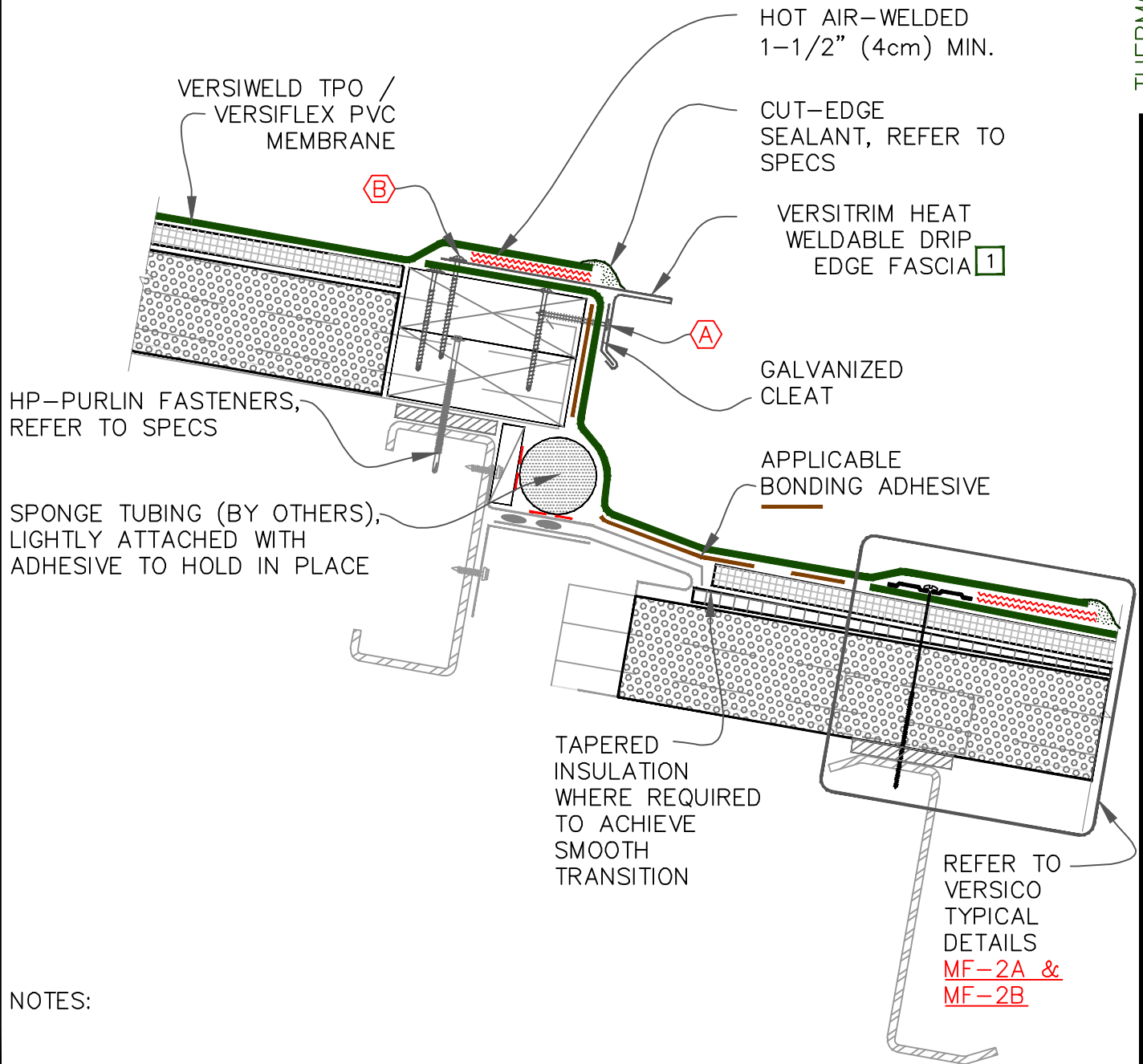
MEMBRANE ATTACHMENT
PERPENDICULAR TO
SLOPE - 101 TO 120
MPH WIND ZONE

-  HIGH DENSITY RECOVER BOARD
-  IN-FILL INSULATION
-   SEE NOTE(S)

METAL
RETROFIT
MR | T2.7

A 1-1/2" (38mm) RING SHANK NAILS @ 6" (15cm) O.C. MAXIMUM

B HPV FASTENERS @ 12" (30cm) O.C. OR RING-SHANK NAILS @ 4" (10cm) O.C. & STAGGERED 3/4" (2cm) O.C.



NOTES:

1. EXTEND OUT SHEET METAL MIN. 2" (5cm)
2. REFER TO [MR Z1.1](#) & [MR Z1.2](#) AT THE END OF THIS SECTION.

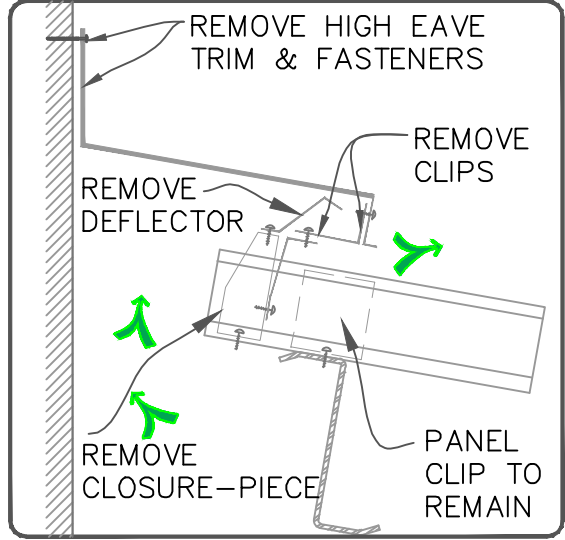
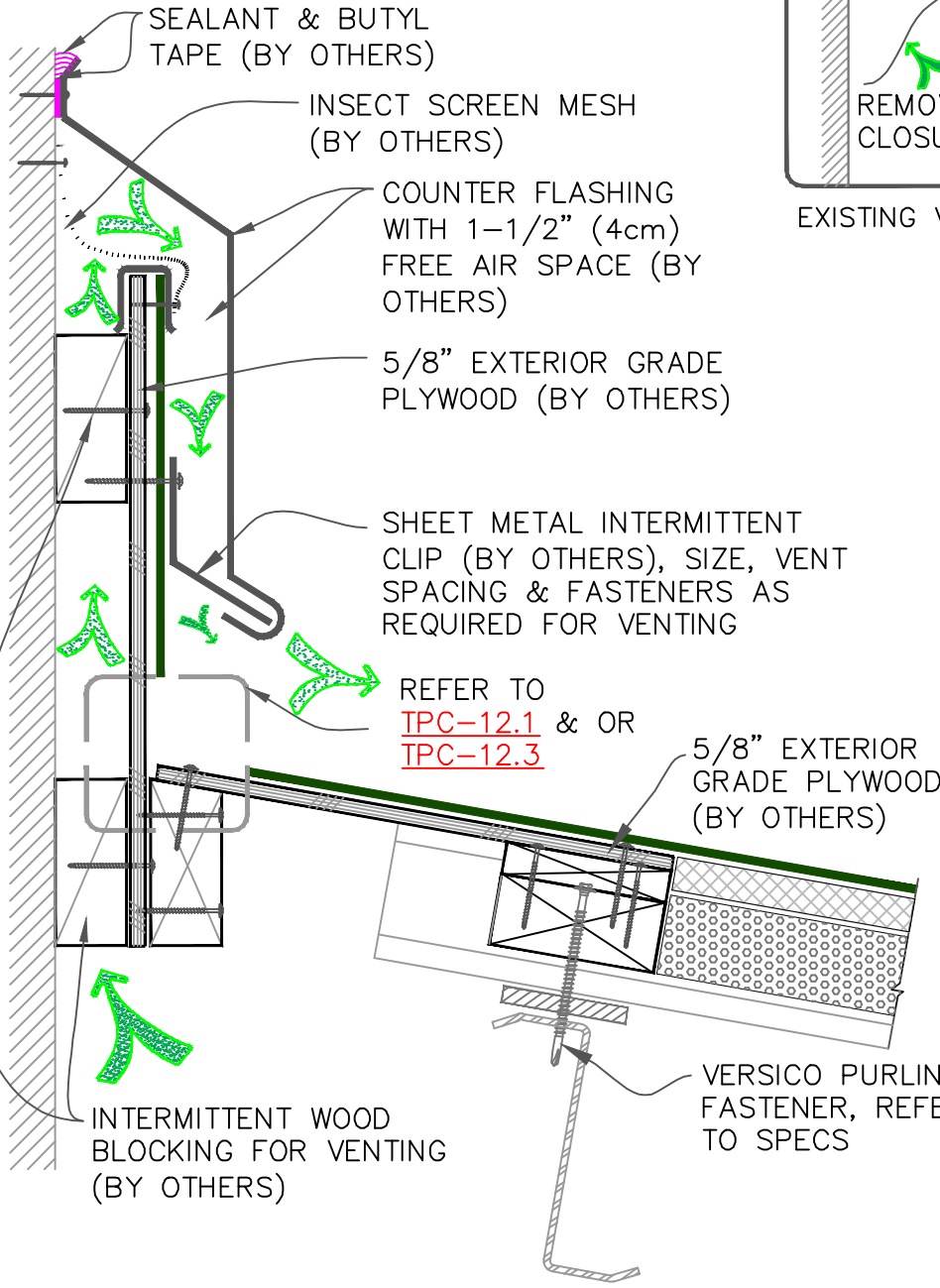


EXPANSION JOINT AT STEP DOWN CONDITION

	● HIGH DENSITY RECOVER BOARD
	● IN-FILL INSULATION
	● SEE NOTE(S)

METAL RETROFIT
MR | T3.1





CAUTION: CONSULT WITH PROJECT DESIGNER OR STRUCTURAL ENGINEER FOR ADEQUATE SECUREMENT OF PLYWOOD AND REQUIRED VENTILATION.



EXISTING VENTING AT RISING WALL



VERTICAL WALL – VENTED BASE DETAIL

-  HIGH DENSITY RECOVER BOARD
-  IN-FILL INSULATION
-   SEE NOTE(S)

METAL RETROFIT
MR | T12.1

REMOVE EXISTING RIDGE/HIP CAP & ITS FASTENERS

℄

EXISTING RIDGE CAP

THERMOPLASTIC REINFORCED MEMBRANE, NOT EXCEEDING 5' (1.5m) IN WIDTH, CENTERED OVER THE RIDGE

APPROX. 5-1/2" (14cm) WIDE MEMBRANE OVERLAP, HOT AIR WELDED MINIMUM 1-1/2" (4cm) BEYOND FASTENING PLATES. REFER TO [DETAIL MF-2A](#) & [MF-2B](#)

℄

℄

FILL WITH RIGID BOARD INSULATION OR INJECT HIGH-RISE FOAM

CUT-EDGE SEALANT FOR TPO ONLY, REFER TO SEPCS

VERSICO FASTENER & SEAM FASTENING PLATE, MAX. 12" (30cm) O.C.

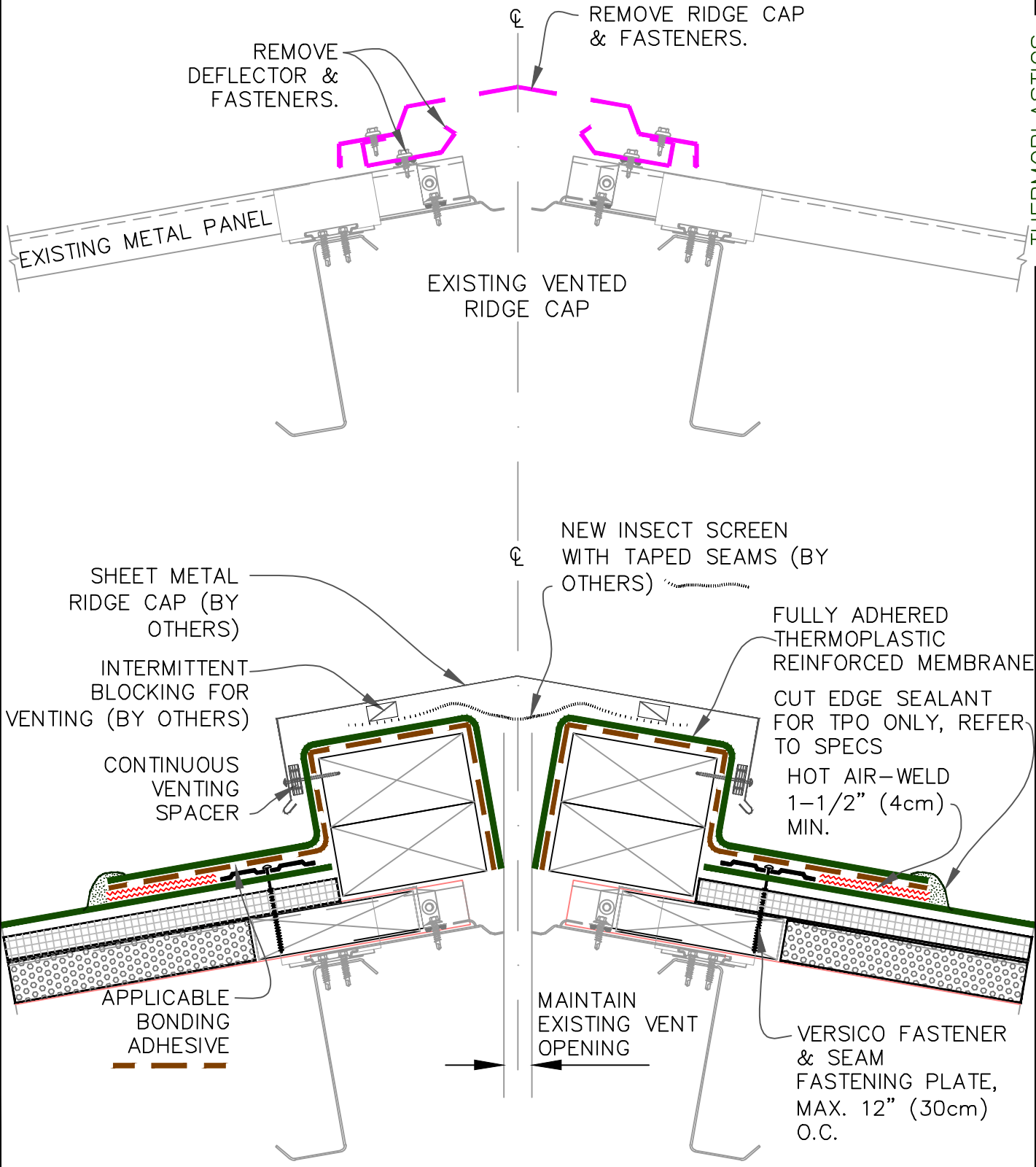


ROOF RIDGE / HIP
NON-VENTED




- HIGH DENSITY RECOVER BOARD
- IN-FILL INSULATION
- SEE NOTE(S)

METAL
RETROFIT

MR | T22.1

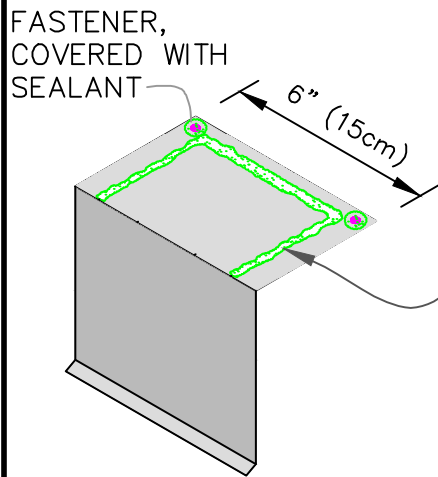
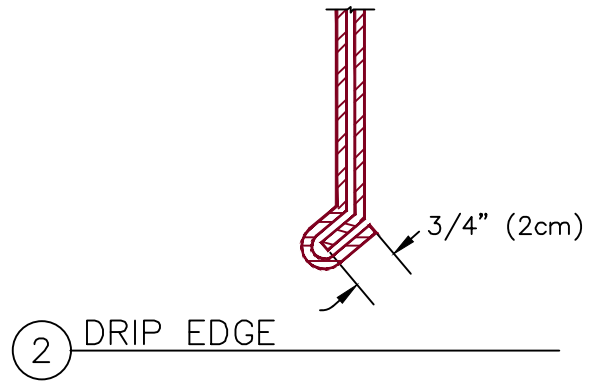
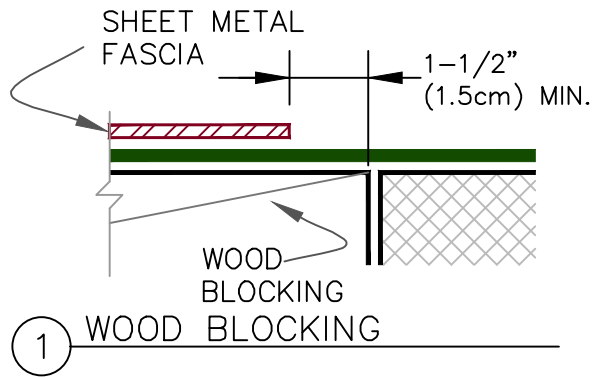


ROOF RIDGE VENTED

-  HIGH DENSITY RECOVER BOARD
-  IN-FILL INSULATION
-  SEE NOTE(S)

METAL RETROFIT

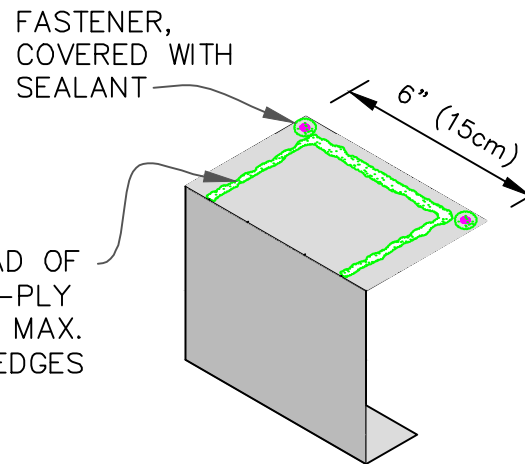
MR | T22.2



3/8" (1cm) DIA. BEAD OF CONTINUOUS SINGLE-PLY UNIVERSAL SEALANT, MAX. 1/2" (1.5cm) FROM EDGES

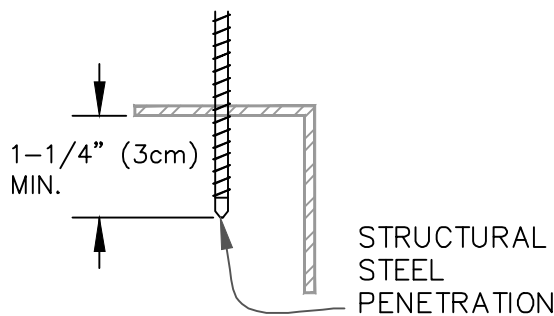
6" (15cm) WIDE CONCEALED JOINT UNDER PLATE, CENTRALLY ALIGNED BETWEEN TWO FASCIA PIECES

③ UNDER PLATE - TYP. FASCIA

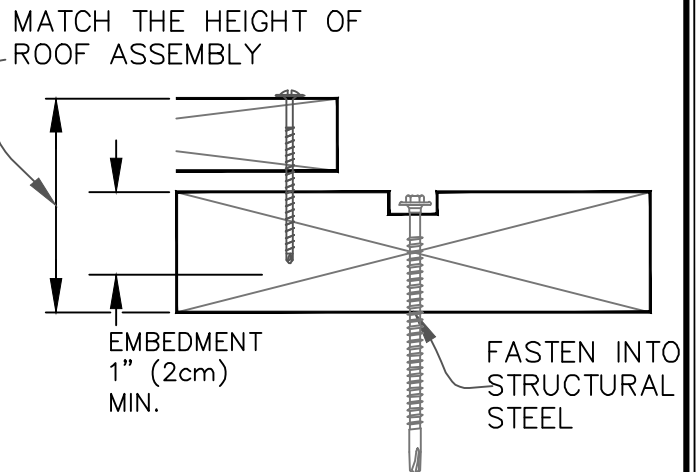


6" (15cm) WIDE, 24 GAUGE, CONCEALED JOINT UNDER PLATE, PROFILE TO MATCH WITH C-CHANNEL, CENTRALLY ALIGNED BETWEEN TWO C-CHANNEL FASCIAS

④ UNDER PLATE: C-CHANNEL



⑤ FASTENER INTO STRUCTURAL STEEL



⑥ FASTENER INTO WOOD

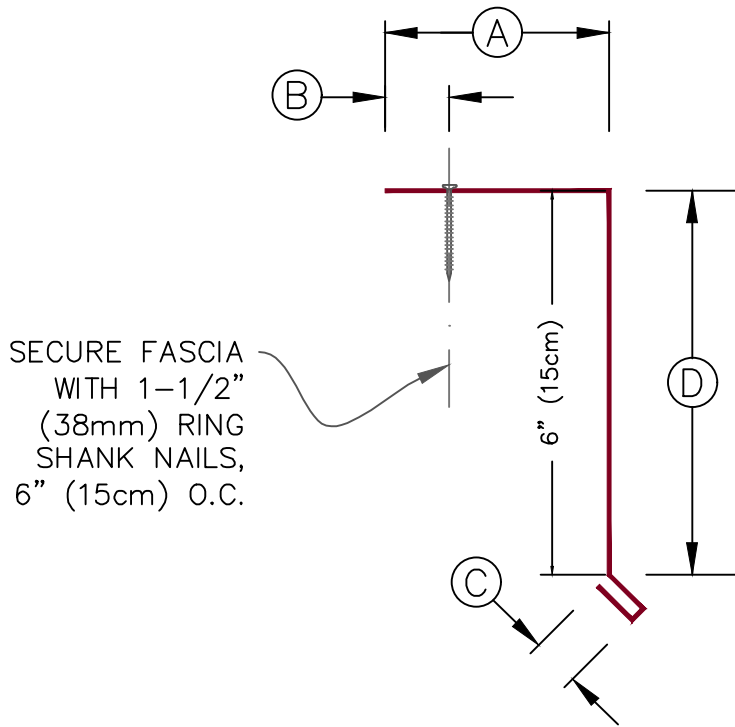
COMMON DETAILS (EPDM, TPO, PVC)



ENLARGED DETAILS

- HIGH DENSITY RECOVER BOARD
- IN-FILL INSULATION
- SEE NOTE(S)

METAL RETROFIT
MR | Z1.1



DIMENSIONS		cm
(A)	3-1/2"	9
(B)	1"	2.5
(C)	3/4	2
(D)	4" OR 6"	10 OR 15

NOTE:
ALL 1-1/2" (4cm) RING SHANK NAILS MUST HAVE 1" (2.5cm) MINIMUM EMBEDMENT INTO WOOD

(A) ES-1 COMPLIANT FASCIA PROFILE
24 GAUGE (0.59 mm) THICK - 10' (3m) LENGTH

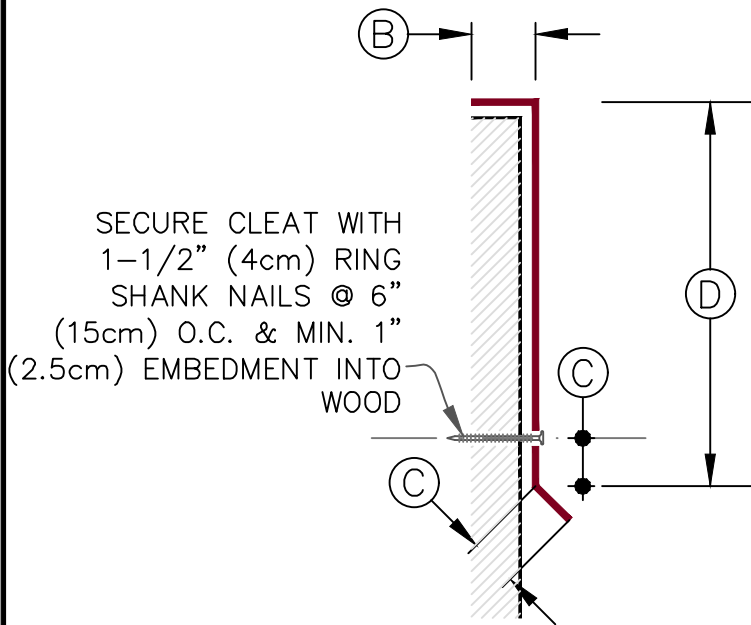


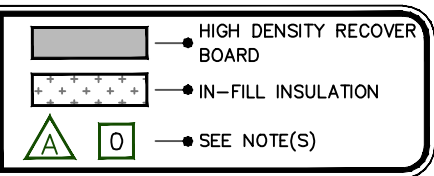
TABLE 1: (TEST DATA)

ES-1 COMPLIANT		
RE-1	424	PSF (POUNDS/SQUARE FOOT)
	62.62	(kilogram/sq.meter)
	614	pascals (Pa)
RE-2	435	PSF (POUNDS/SQUARE FOOT)
	64.24	(kilogram/sq.meter)
	629.95	pascals (Pa)

(B) GALVANIZED METAL CLEAT
22 GAUGE (0.75 mm) THICK



ANSI / SPRI ES-1 COMPLIANT FASCIA - SHOP FABRICATED



METAL RETROFIT
MR | Z1.2