

# **Sika Canada Roofing Estimators Handbook Sarnafil® & Sikaplan® membranes**

## **Introduction**

Welcome to the Sika Canada Roofing Estimators Handbook. This guide is designed to serve as a quick reference for Estimators when considering a Sarnafil® or Sikaplan® project\*.

Our Sales and Technical Services teams are here to support you in your efforts. Their phone number can be located on our website.

Sika Canada website <https://can.sika.com/en/construction/67113.html> which contains product data sheets (PDS), Safety data sheets (SDS), typical drawings and specifications that may be of assistance to you.

\* Although accurate at the time of printing, we continuously endeavour to improve. Please check Sika Canada's website <https://can.sika.com/en/home.html> regularly to ensure you have the latest information.

## INDEX

|                                            |    |
|--------------------------------------------|----|
| 1. Design Review                           | 3  |
| 2. Material Estimation                     | 4  |
| 3. Notice of Award                         | 5  |
| 4. Overview Typical Sarnafil® Roof Systems | 6  |
| 5. Mechanically-Attached Roof Systems:     |    |
| a. Rhinobond                               | 8  |
| b. Rhinobond Metal Retrofit System         | 10 |
| c. Sarnafast / Inseam                      | 12 |
| d. Engineered                              | 18 |
| 6. Adhered Roof Systems:                   |    |
| a. Adhered                                 | 24 |
| b. Sarnafil® Décor                         | 26 |
| c. Sarnafil® SA                            | 28 |
| 7. Ballasted                               |    |
| a. Stone/Paver Ballasted                   | 30 |
| b. LightGUARD / HeavyGUARD PMR Ballasted   | 32 |
| c. Stone / Paver PMR Ballasted             | 34 |
| 8. Typical Products                        | 36 |
| 9. Guides                                  |    |
| a. Roof Zone Guide                         | 42 |
| b. Roof System Attachment Guide            | 49 |
| c. Mechanical Attachment Rhinobond Guide   | 53 |
| d. Board Attachment Guide                  | 55 |
| e. Vapour Retarder Selection Guide         | 57 |
| f. Adhesive Selection Guide                | 58 |
| g. Fastener Plate and Bar Guide            | 59 |
| h. Warranty Selection Guide                | 60 |
| i. Guidelines for Roof Recovers            | 61 |
| 10. Typical Details                        | 62 |

## 1. DESIGN REVIEW

Prior to bidding you can obtain a design review from Sika Canada for your project.

### MANY MANUFACTURERS RESISTANCE DESIGN CRITERIA ARE BASED ON THE WIND SPEED OF THEIR WARRANTIES AND NOT THE CALCULATED WIND LOAD PRESSURES

Sika Canada technical department can provide upon request, Design Reviews for wind uplift, fire ratings and any other specific requested requirements which can assist you in your estimation of your Sika® Sarnafil® project.

| Information Required for Design Review |        |                                                                               |
|----------------------------------------|--------|-------------------------------------------------------------------------------|
| Building Address                       |        |                                                                               |
| Building Length (ft.)                  |        | Not required if dimensioned drawings are submitted                            |
| Building Width (ft.)                   |        | Not required if dimensioned drawings are submitted                            |
| Roof Height (h) (ft.)                  |        | Not required if dimensioned drawings are submitted                            |
| Roof Slope (Degree)                    | Select | Not required if dimensioned drawings are submitted                            |
| Importance Category                    | Select | See below for definition                                                      |
| Building Openings                      | Select | See below for definition                                                      |
| Roof Type / Shape                      | Select | See below for definition. Not required if dimensioned drawings are submitted. |
| Structural Deck:                       | Select | If other, please describe in additional information                           |
| Wind Load Compliance                   | Select | Not required if dimensioned drawings are submitted                            |
| Fire Compliance                        | Select | Not required if dimensioned drawings are submitted                            |
| Sika Warranty Required                 | Select | Warranty Length (Years)                                                       |

Date: January 20<sup>th</sup>, 2021

Re: Design review for Project ABC, Elora, ON

Based on the information provided we would offer the following guidance. All wind load pressures and roof zones are to be confirmed by the design professional.

Wind load calculation: Based on NRC Wind-RCI wind load roof calculator (see tables below). Wind-RCI calculates the NBCC specified wind loads for various zones (i.e., field, edge and corner) of the roof assembly in accordance to the NBCC's Limit States design requirement, (NBCC - Subsections: 4.1.3 and 4.1.7).



#### Building parameters

Building location: Fargo, Ontario

#### Building geometry:

- Low-rise building, Low-rise roof without parapet
- Height (reference height): 40 ft (12.2 m)
- Width (smaller plan dimension): 400 ft (122 m)
- Length: 800 ft (243.8 m)

Building exposure: Open

Building exposure: Category 2

Building importance: Normal

#### Wind loads for roof cladding

| Roof area                         | Wind load          |
|-----------------------------------|--------------------|
| End zone width, Z = 10 ft (3.0 m) |                    |
| Corner, $\text{C}_w$              | -60 psf (-2.9 kPa) |
| Edge, $\text{E}_w$                | -34 psf (-1.6 kPa) |
| Field, $\text{F}_w$               | -26 psf (-1.2 kPa) |

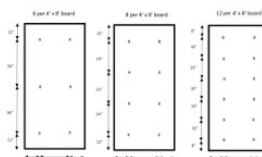
#### Sikapan Rhinobond Roof System:

- Min 22Ga 33ksi steel deck
- Samavap PE 6 Vapour Retarder adhered loose laid with all laps sealed with Sika Multi-purpose Tape
- 2 layers 2.6" Samatherm insulation, mechanically attached as described below
- 60 mil Sikapan Fastened induction weld Rhinobond Roof System
- 60 mil Sikapan Adhered flashing membrane adhered with Samacol 2170 adhesive

#### Attachment:

- Field zone: Samatherm insulation mechanically attached with #15 Sarnafasteners & Sarnadisc Rhinobond at a rate of 6 per 4' x 8' board

- Perimeter/Edge: Samatherm insulation mechanically attached with #15 Sarnafasteners & Sarnadisc Rhinobond at a rate of 8 per 4' x 8' board
- Corner zone: Samatherm insulation mechanically attached with #15 Sarnafasteners & Sarnadisc Rhinobond at a rate of 12 per 4' x 8' board



Roof Zone definition. Building less than 65ft. in height and the width greater than the height: Based on the information provided, Z value = 18ft.



Calculation: Z = Lesser of: 40 % of the Roof Height (h) or 10 % of the lesser Building Plan (NOT ROOF) dimension (W<sub>L</sub>), but not less than 4 ft of W<sub>L</sub>.

- Criteria:
- h ≤ 65 ft
- slope S ≤ 12°
- S ≤ 5.0/12
- h < W<sub>L</sub> (lesser Building Plan dimension)
- If h > W<sub>L</sub>, refer to High Rise



#### Approvals:

The system noted above will meet the wind load requirements based on CSA A123.21 testing and ULc Class A fire rating.

#### Warranty:

The roof assemblies described above will meet the requirements for a 20 year Sika Canada System Warranty when installed according to current Sika Canada published specification, application and details.

I trust this information meets with your approval. Please contact the undersigned for any additional information or clarification.

Regards,

*Paul Yurcich*

Paul Yurcich, National Technical Manager, Roofing

## 2. SIKA SARNAFIL MATERIALS TAKE OFF

Designed for your ease of use, the Material take off tool provides easy to use excel sheets to assist you in your material take off for your Sika® Sarnafil® project.

For assistance with this tool, or to obtain a copy please contact your local Sales Representative.

| QUANTITY TAKE-OFF - RHINO BOND SYSTEM    |                 |                     |                                                                                          |                                                                          |
|------------------------------------------|-----------------|---------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Roof Area                                |                 | sqft                | Refer to information sheet, enter numbers only                                           |                                                                          |
| Perimeter/Corner Zone Z Value            |                 | lineal feet         | Refer to information sheet, enter numbers only                                           |                                                                          |
| Perimeter Zone Length                    |                 | lineal feet         | Refer to information sheet, enter numbers only                                           |                                                                          |
| Corner Zone Length                       |                 | lineal feet         | Refer to information sheet, enter numbers only                                           |                                                                          |
|                                          | Field Zone Rate | Perimeter Zone Rate | Corner Zone Rate                                                                         |                                                                          |
| Rhinobond Fastening Rate (4' x 8' board) | Select Rate     | Select Rate         | Select Rate                                                                              | Select the attachment rate for the number of fasteners per 4' x 8' board |
| Flashing Area                            |                 | sqft                | Refer to information sheet, enter numbers only                                           |                                                                          |
| Transition Securement                    |                 | lineal feet         | Refer to information sheet, enter numbers only                                           |                                                                          |
| Transition Securement Attachment Rate    | Select Rate     | per lineal foot     | Refer to information sheet, select the rate per lineal foot                              |                                                                          |
| Parapet/Edge                             |                 | lineal feet         | Enter the lineal footage of parapet / edge where Multi-purpose tape air seal is required |                                                                          |
| Walkway                                  |                 | lineal feet         | Enter the lineal footage of Sika Sarnafil walkway                                        |                                                                          |

| MATERIAL SELECTION - RHINO BOND SYSTEM |                                     |                        |                          |                 |     |         |           |        |                |               |  |
|----------------------------------------|-------------------------------------|------------------------|--------------------------|-----------------|-----|---------|-----------|--------|----------------|---------------|--|
| Categories                             | Material                            |                        | Packaging                | Coverage        | Qty | Waste % | Order QTY | Units  | Price Per Unit | Total Cost \$ |  |
| Thermal Barrier                        | Select Thermal Barrier              |                        |                          |                 |     | 0%      |           | Bundle |                |               |  |
| Vapour Retarder                        | Select Vapour Retarder              |                        |                          |                 |     | 0%      |           | Roll   |                |               |  |
| Vapour Retarder Primer                 | Select Vapour Retarder Primer       |                        |                          | Select Coverage |     | 0%      |           | Pail   |                |               |  |
| Insulation Layers                      | Select Insulation                   | Select Thickness       |                          |                 |     | 3%      |           | Bundle |                |               |  |
|                                        | Select Insulation                   | Select Thickness       |                          |                 |     | 3%      |           | Bundle |                |               |  |
|                                        | Select Insulation                   | Select Thickness       |                          |                 |     | 0%      |           | Bundle |                |               |  |
|                                        | Select Tapered                      |                        |                          |                 |     |         |           | Total  |                |               |  |
| Coverboard                             | Select Coverboard                   |                        |                          |                 |     | 0%      |           | Bundle |                |               |  |
| Board/Membrane Attachment              | Select Rhinobond                    |                        |                          |                 |     | 0%      |           | Carton |                |               |  |
|                                        | Select Treadsafe Tube Length        |                        |                          |                 |     | 0%      |           | Carton |                |               |  |
|                                        | Select Fastener                     |                        |                          |                 |     | 0%      |           | Carton |                |               |  |
|                                        | Select Bar/Disc                     |                        |                          |                 |     | 0%      |           |        |                |               |  |
| Transition Attachment                  | Select Fastener                     |                        |                          |                 |     | 0%      |           | Carton |                |               |  |
| Field Membrane                         | Select Membrane                     |                        |                          |                 |     | 0%      |           | Roll   |                |               |  |
| Flashing Membrane                      | Select Flashing Membrane            |                        |                          |                 |     | 0%      |           | Roll   |                |               |  |
| Flashing Adhesive                      | Select Adhesive                     |                        |                          |                 |     | 0%      |           | Pail   |                |               |  |
| Perimeter Air Seal and PE VB Seam Tape | Multi-Purpose Tape                  |                        | 700 Lineal ft. / Carton  | 700             |     | 0%      |           | Carton |                |               |  |
| Walkway                                | Select Walkway                      |                        |                          |                 |     | 0%      |           | Roll   |                |               |  |
| Accessories                            | 2" Aluminum Tape                    |                        | 2100 Lineal ft. / Carton |                 |     |         |           | Carton |                |               |  |
|                                        | Sarnacorner - Inside 6"x6"          |                        | 10 pcs / Carton          |                 |     |         |           | Carton |                |               |  |
|                                        | Sarnacorner - Outside 9"x9"         |                        | 20 pcs / Carton          |                 |     |         |           | Carton |                |               |  |
|                                        | Sikaflex 1A                         |                        | 24 Tubes / Case          |                 |     |         |           | Case   |                |               |  |
|                                        | Sarnastack Universal                |                        | Each                     |                 |     |         |           | Each   |                |               |  |
|                                        | Sarnacircles 4-1/2" Round           |                        | 100 pcs / Carton         |                 |     |         |           | Each   |                |               |  |
|                                        | Sarnastack A Split Prefab 3/4" - 3" |                        | Each                     |                 |     |         |           | Each   |                |               |  |
|                                        | Sarnastack B Split Prefab 2" - 5"   |                        | Each                     |                 |     |         |           | Each   |                |               |  |
|                                        | Sarnastack C Split Prefab 4" - 7"   |                        | Each                     |                 |     |         |           | Each   |                |               |  |
|                                        | Custom Prefab Flashings             |                        | Each                     |                 |     |         |           | Each   |                |               |  |
|                                        | Sarnaclad                           |                        | 4'x8' Sheet              |                 |     |         |           | Sheet  |                |               |  |
|                                        | 60 mil Sarnafil S327 Coverstrip     |                        | 8" x 100' Roll           |                 |     |         |           | Roll   |                |               |  |
|                                        | Sarnadrain                          |                        | Each                     |                 |     |         |           | Each   |                |               |  |
|                                        | Perimeter Warning Membrane          |                        | 4" x 100' Roll           |                 |     |         |           | Roll   |                |               |  |
|                                        |                                     | Other                  |                          |                 |     |         |           |        | Total          |               |  |
|                                        |                                     | Other                  |                          |                 |     |         |           |        | Total          |               |  |
|                                        | Other                               |                        |                          |                 |     |         |           | Total  |                |               |  |
|                                        | Select Warranty Type                | Select Warranty Length |                          |                 |     |         | 10,000    | Sqft   |                |               |  |
|                                        |                                     |                        |                          |                 |     |         |           |        | Total Cost     | \$ -          |  |

### 3. NOTICE OF AWARD

All Sika® Sarnafil® projects, regardless of warranty type must have a Notice of Award (NOA) submitted to the Sika Canada Technical department prior to the project commencement. This electronic form is the method used to track the project and ensure that the correct materials are used in your project.

Please note that Sika Canada will not release materials until a NOA has been received and processed.

#### ROOFING NOTICE OF AWARD (NOA)

Sarnafil® Adhered, Rhinobond, Rhinobond Metal Retrofit or Inseam/Sarnafast



**\*\*ROOF PLANS TO BE SUBMITTED WITH ALL NOAs\*\***



| I. PROJECT                                          |                                                   |                                                   |                                                                   |
|-----------------------------------------------------|---------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------|
| Project Name: Click here to enter text.             |                                                   |                                                   |                                                                   |
| Roof Area 1 Name: Click here to enter text.         |                                                   |                                                   |                                                                   |
| Roof Area 2 Name: Click here to enter text.         |                                                   |                                                   |                                                                   |
| Roof Area 3 Name: Click here to enter text.         |                                                   |                                                   |                                                                   |
| Address: Click here to enter text.                  |                                                   |                                                   |                                                                   |
| City: Click here to enter text.                     |                                                   | Province: Select                                  | P.C. Click here to enter text.                                    |
| II. BUILDING OWNER                                  |                                                   |                                                   |                                                                   |
| Name: Click here to enter text.                     |                                                   |                                                   |                                                                   |
| Address: Click here to enter text.                  |                                                   |                                                   |                                                                   |
| City: Click here to enter text.                     |                                                   | Province: Select                                  | P.C. Click here to enter text.                                    |
| Contact Person: Click here to enter text.           | Tel: Click here to enter text.                    | Email: Click here to enter text.                  |                                                                   |
| III. DESIGNER / SPECIFIER                           |                                                   |                                                   |                                                                   |
| Name: Click here to enter text.                     |                                                   |                                                   |                                                                   |
| Address: Click here to enter text.                  |                                                   |                                                   |                                                                   |
| City: Click here to enter text.                     |                                                   | Province: Select                                  | P.C. Click here to enter text.                                    |
| Contact Person: Click here to enter text.           | Tel: Click here to enter text.                    | Email: Click here to enter text.                  |                                                                   |
| IV. GENERAL CONTRACTOR                              |                                                   |                                                   |                                                                   |
| Name: Click here to enter text.                     |                                                   |                                                   |                                                                   |
| Address: Click here to enter text.                  |                                                   |                                                   |                                                                   |
| City: Click here to enter text.                     |                                                   | Province: Select                                  | P.C. Click here to enter text.                                    |
| V. AUTHORIZED ROOFING APPLICATOR                    |                                                   |                                                   |                                                                   |
| Name: Click here to enter text.                     |                                                   |                                                   |                                                                   |
| Address: Click here to enter text.                  |                                                   |                                                   |                                                                   |
| City: Click here to enter text.                     |                                                   | Province: Select                                  | P.C. Click here to enter text.                                    |
| Contact Person: Click here to enter text.           | Tel: Click here to enter text.                    | Email: Click here to enter text.                  |                                                                   |
| Project Manager: Click here to enter text.          | Tel: Click here to enter text.                    | Email: Click here to enter text.                  |                                                                   |
| VI. OTHER                                           |                                                   |                                                   |                                                                   |
| 1. Building Usage: Select                           |                                                   | 2. Recycle Project: Select                        |                                                                   |
| 3a. Roof Access: Select                             |                                                   | 3b. If "Other" specify: Click here to enter text. |                                                                   |
| 4a. Roof Membrane Overburden: Select                | 4b. If "Other" specify: Click here to enter text. |                                                   | 4c. Identify Roof Area with Overburden: Click here to enter text. |
| VII. PROJECT INFORMATION                            |                                                   |                                                   |                                                                   |
|                                                     | Roof Area 1                                       | Roof Area 2                                       | Roof Area 3                                                       |
| 1. Anticipated Start Date:                          | Click here to enter a date.                       | Click here to enter a date.                       | Click here to enter a date.                                       |
| 2. Construction Type:                               | Select                                            | Select                                            | Select                                                            |
| If Tear-Off specify                                 | Select                                            | Select                                            | Select                                                            |
| 3. System:                                          | Select                                            | Select                                            | Select                                                            |
| 4. Total Sqft. (include flashings):                 | Click here to enter text.                         | Click here to enter text.                         | Click here to enter text.                                         |
| 5. Warranty Type:                                   | Select                                            | Select                                            | Select                                                            |
| 6. Warranty Length:                                 | Select                                            | Select                                            | Select                                                            |
| 7. Special Warranty Request (Pre-approval required) | Click here to enter text.                         |                                                   |                                                                   |
| 8. Sarnafil Membrane:                               | Select                                            | Select                                            | Select                                                            |
| I. Gauge:                                           | Select                                            | Select                                            | Select                                                            |
| II. Colour:                                         | Select                                            | Select                                            | Select                                                            |
| III. Flashing:                                      | Select                                            | Select                                            | Select                                                            |
| 9. Sikaplan Membrane:                               | Select                                            | Select                                            | Select                                                            |
| I. Gauge:                                           | Select                                            | Select                                            | Select                                                            |
| II. Colour:                                         | Select                                            | Select                                            | Select                                                            |
| III. Flashing:                                      | Select                                            | Select                                            | Select                                                            |
| VIII. ADHERED ROOF SYSTEM                           |                                                   |                                                   |                                                                   |
| 1. Adhesive Type:                                   | Select                                            | Select                                            | Select                                                            |
| 2. Coverage Rate:                                   | Click here to enter text.                         | Click here to enter text.                         | Click here to enter text.                                         |

- Contractor completes the NOA and submits the form electronically.
- Project is reviewed by Sika Canada Technical services and the contractor is notified of any required changes
- Once accepted, the contractor is sent an Acceptance Notice of Award (ANOA) acceptance letter
- Upon completion of the project the contractor submits the request for Final Warranty

#### **4. SIKA® SARNAFIL® ROOFING SYSTEMS**

##### **MECHANICALLY-ATTACHED SYSTEMS**

###### **I. Sarnafast® / Inseam System**

The Sarnafil® or Sikaplan® membrane is fastened in the seam overlap along one long side of the membrane directly into the roof deck. The adjacent membrane panels are then heat-welded together with an approved automatic hot air welder.

###### **II. Engineered System**

The Engineered System uses Sarnabar®, a u-shaped steel bar that is fastened over Sarnafil® S327 membrane and into the roof deck, effectively clamping the membrane in place. The Sarnabar® is then covered with a strip of pre-cut Sarnafil® S327 coverstrip membrane.

###### **III. Rhinobond®**

Rhinobond® system uses the Sarnadisc Rhinobond which is a polymer coated plate used with Sarnafasteners to attach the insulation or cover boards directly to the roof deck in a grid pattern. The roof membrane is then welded to the Sarnadisc Rhinobond by induction welding.

###### **IV. Rhinobond® Metal Retrofit**

Fasten the insulation to the purlins using the Sarnadisc Rhinobond and Sarnafasteners Fastener Retrodriller at the rates for the corresponding uplift approval. The insulation boards will need additional fastening to ensure a minimum of six (6) fasteners per 1,2 x 2,4 m (4' by 8') board. Sarnaplates & Sarnafastener #15 XP fastening components may be used for this fastening the board.

##### **ADHERED SYSTEMS**

###### **I. Sarnafil® Adhered System**

Sarnafil® Roofing membranes are adhered with Sarnacol® adhesives direct to approved substrates. Boards shall be secured to the roof deck by either fasteners and plates or insulation adhesive.

###### **II. Sarnafil® Decor Adhered System**

Sarnafil® Roofing membranes are adhered with Sarnacol® adhesives direct to approved substrates. Boards shall be secured to the roof deck by either fasteners and plates or insulation adhesive.

###### **III. Adhered Sarnafil® SA System**

Sarnafil® Roofing with a factory applied pressure-sensitive adhesive and siliconized polyethylene release liner membranes are adhered directly to approved substrates. Boards shall be secured to the roof deck by either fasteners and plates or insulation adhesive.

## **BALLASTED SYSTEMS**

### **I. Stone/Paver Ballasted System**

Sarnafil® membranes are loose laid and ballasted with either round washed river stones or pavers.

### **II. LightGUARD / HeavyGUARD PMR System**

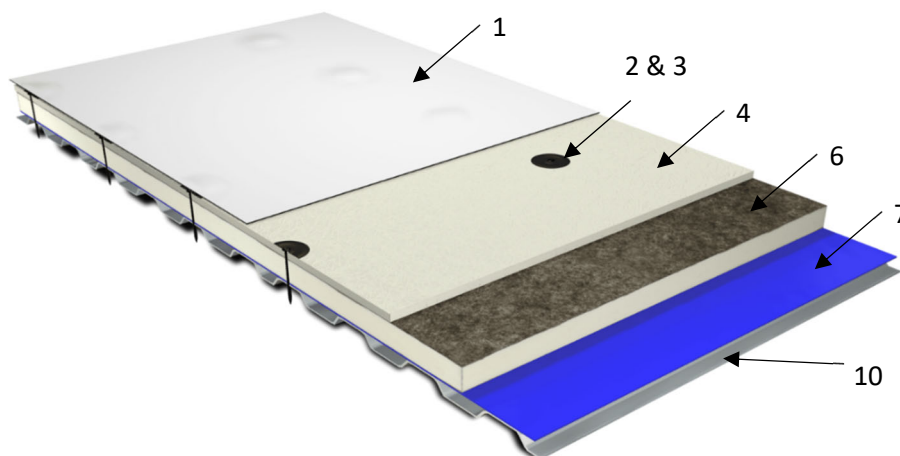
Sarnafil® membranes are loose laid beneath the insulation and ballasted LightGUARD / HeavyGUARD panels

### **III. Stone/Paver Ballasted PMR System**

Sarnafil® membranes are loose laid beneath the insulation and ballasted with either round washed river stones, pavers or vegetative roof cover.

## 5. MECHANICALLY-ATTACHED SYSTEMS

### a. Rhinobond

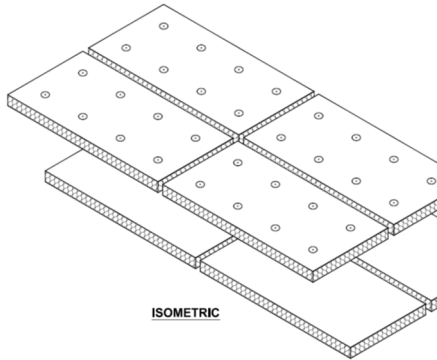


| Cross Section Layer Rhinobond            | Approved Materials                                                                                                                                                                                                               |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Membrane                              | 1.5, 1.8, or 2.0 mm (60, 72 or 80 mil) Sarnafil® S327 or 1.5 mm (60 mil) Sikaplan® Fastened                                                                                                                                      |
| 2. Membrane & Board Securement           | Sarnadisc Rhinobond or Sarnadisc Rhinobond Treadsafe                                                                                                                                                                             |
| 3. Membrane & Board Securement Fasteners | Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)                                                                                                                                             |
| 4. Cover board (optional)                | 12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck® & DensDeck® Prime                                                                                                                        |
| 5. Grounding Layer (optional not shown)  | EFVM (Electronic Field Vector Mapping) Grid                                                                                                                                                                                      |
| 6. Insulation                            | Sarnatherm (137 or 172 kPa (20 psi or 25 psi)) flat & tapered, Sarnatherm CG (137 or 172 kPa (20 psi or 25 psi)) flat & tapered or Rockwool DD (note: cover board is required with Rockwool DD or Sarnadisc Rhinobond Treadsafe) |
| 7. Vapour Retarder                       | Sarnavap®-6, Sarnavap®-10, Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138                                                                                                                                    |
| 8. Vapour Retarder Primers (not shown)   | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap®6 or 10)                                                                                               |
| 9. Thermal Barrier (optional not shown): | 12 & 15 mm (½ in & 5/8 in) DensDeck® & DensDeck® Prime                                                                                                                                                                           |
| 10. Structural Deck                      | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                                                                                       |

#### Notes:

- Securement at Membrane Transition: Sikaplan® Disc, Sarnadisc XPN, Sarnadisc Rhinobond, Sarnastop or Sarnabar
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap

- Board & Membrane securement rates are based on wind load pressures in the field, perimeter, and corner roof zones. Refer to Section 9b Roof System Attachment Guide or consult Sika Canada Technical Services for a Design Review
- Refer to Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 9c Mechanical Attachment Rhinobond Guide
- Refer to Section 10 for typical standard details



The top layer of the insulation is to be soldered rather than staggered as with other systems. The top layer is offset from the bottom layer.

#### Warranty Types:

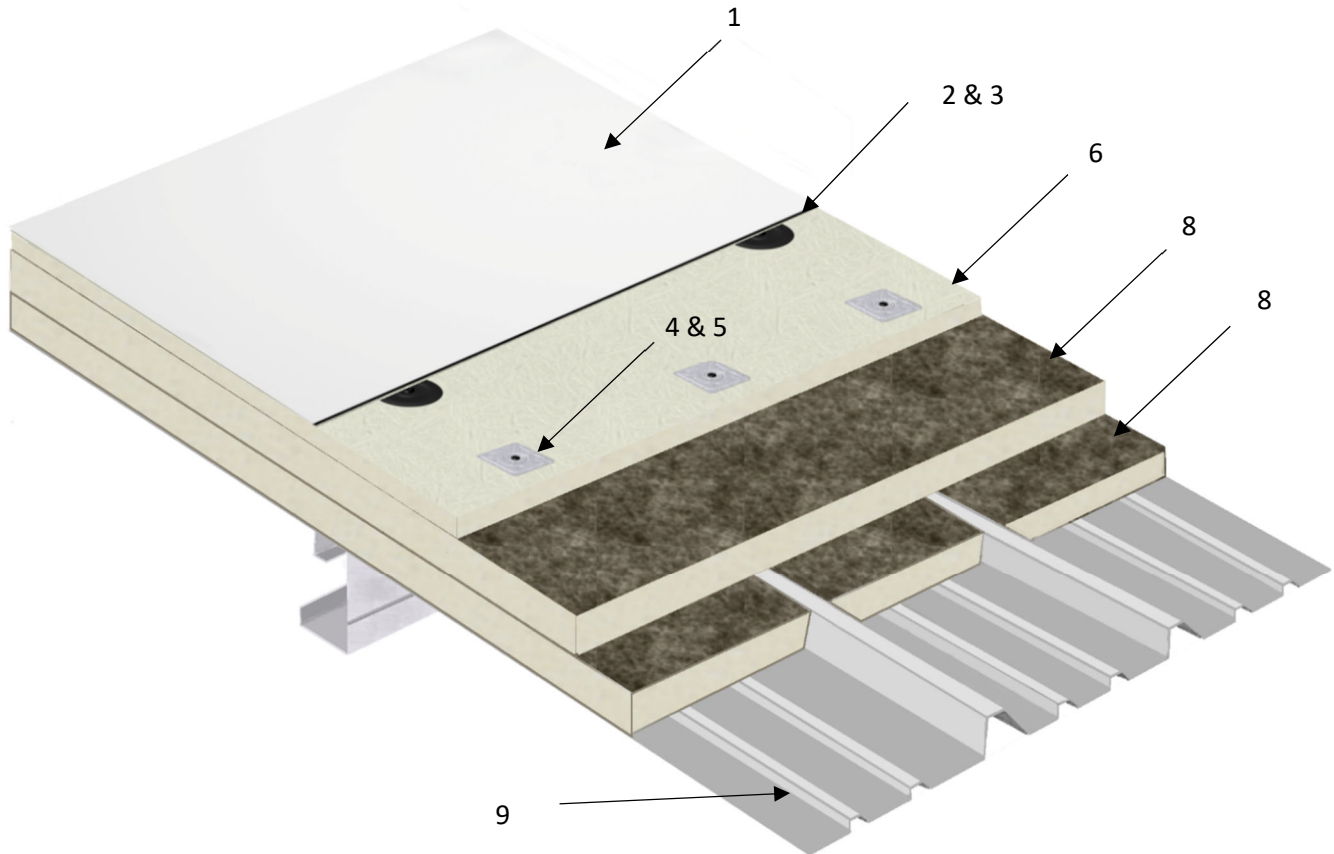
1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for membrane and accessories
3. System: workmanship & material warranty for all components

#### Warranty Duration:

1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\* years
3. System: 5, 10, 15, 20, 25\* or 30\* years

#### Warranty Notes:

- System warranties require all materials be supplied by Sika from the structural deck up
- Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika
- **\*Sarnavap 6 is not permitted in 25 & 30-year warranties**
- \*Coverboard is required for all 25 & 30-year warranties and PV roof systems
- \*Sarnatherm CG or Rockwool insulation required for all 25 & 30-year warranties
- \*Minimum 1.8 mm (72 mil) Sarnafil® S327 roof membrane and 1.5 mm (60 mil) G410 flashings required for 25-year warranties
- \*Minimum 2.0 mm (80 mil) Sarnafil® S327 roof membrane and 1.5 mm (60 mil) G410 flashings for 30-year warranties
- \*\* Contact your Sales Representative for specific requirements
- All high-speed wind and hail warranties must be pre-approved by the Sika Canada Vice President Technical
- Refer to Section 9h warranty selection guide

**b. Rhinobond Metal Retrofit**

| Cross Section Layer Rhinobond Metal Retrofit | Approved Materials                                                                                                              |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1. Membrane                                  | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil® S327 or 1.5 mm (60 mil) Sikaplan® Fastened                                      |
| 2. Membrane Securement                       | Sarnadisc Rhinobond                                                                                                             |
| 3. Membrane Securement Fasteners             | Fastener Retrodriller                                                                                                           |
| 4. Board Securement                          | Sarnaplate                                                                                                                      |
| 5. Board Securement Fasteners                | Sarnafastener #15 XP                                                                                                            |
| 6. Cover board (optional)                    | 12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck & DensDeck Prime                         |
| 7. Grounding Layer (optional not shown)      | EFVM (Electronic Field Vector Mapping) Grid                                                                                     |
| 8. Insulation                                | Sarnatherm (137 or 172 kPa (20 psi or 25 psi)) flat & tapered, Sarnatherm CG (137 or 172 kPa (20 psi or 25 psi)) flat & tapered |
| 9. Structural Deck                           | Min. 26 Ga Steel                                                                                                                |

**Notes:**

- Securement at Membrane Transition: Sikaplan® Disc, Sarnadisc XPN, Sarnadisc Rhinobond, Sarnastop or Sarnabar
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap
- Board & Membrane securement rates are based on wind load pressures and purlin spacing in the field, perimeter and corner roof zones. Consult Sika Canada Technical Services for a Design Review
- Refer to Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 10 for typical standard details

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for membrane and accessories
3. System: workmanship & material warranty for all components

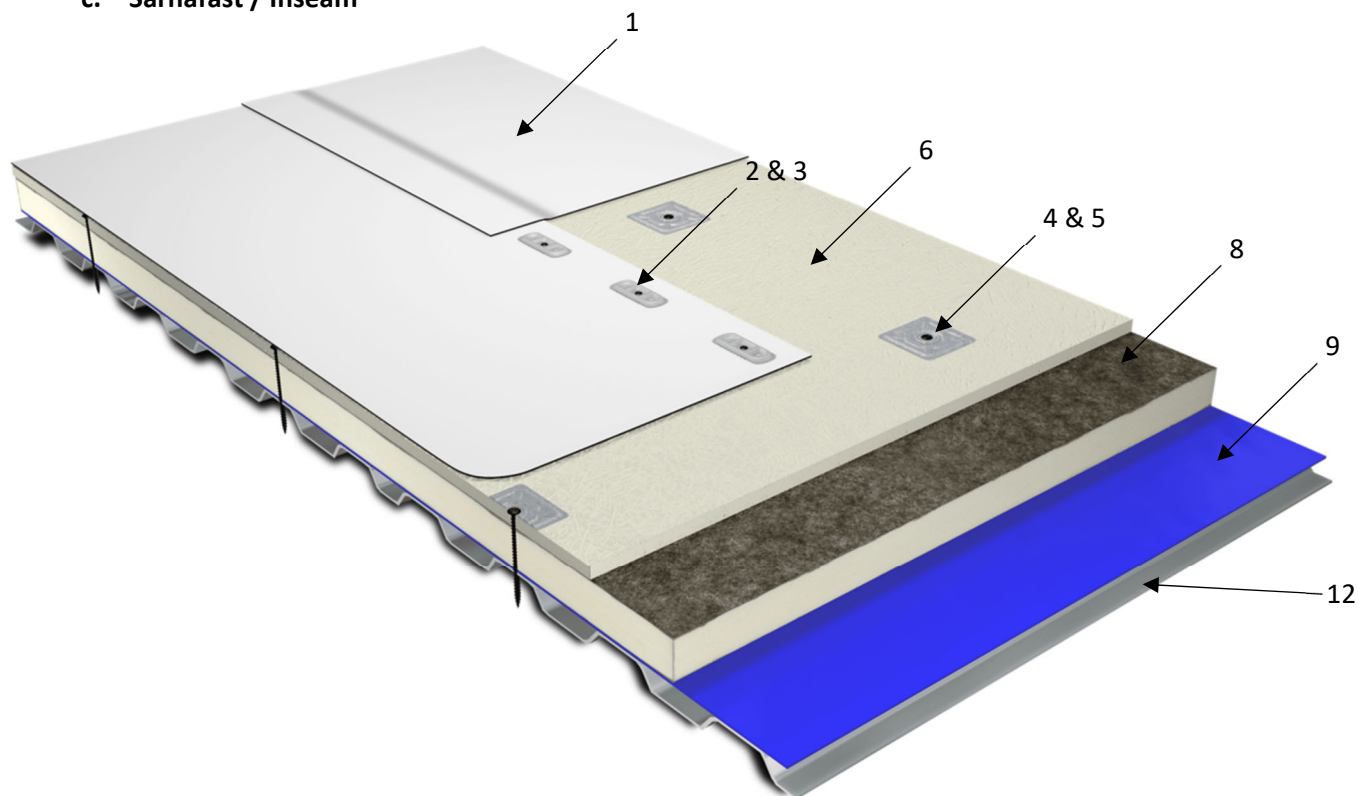
**Warranty Duration:**

1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\*
3. System: 5, 10, 15, 20, 25\* or 30\* years

**Warranty Notes:**

- System warranties require all materials be supplied by Sika from the structural deck up
- Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika
- **\*Sarnavap 6 is not permitted** in 25 & 30-year warranties
- \*Coverboard is required for all 25 & 30-year warranties and PV roof systems
- \*Sarnatherm CG or Rockwool insulation required for all 25 & 30-year warranties
- \*Minimum 1.8 mm (72 mil) Sarnafil® S327 roof membrane and 1.5 mm (60 mil) G410 flashings required for 25-year warranties
- \*Minimum 2.0 mm (80 mil) Sarnafil® S327 roof membrane and 1.5 mm (60 mil) G410 flashings required for 30-year warranties
- \*\* Contact your Sales Representative for specific requirements
- All high-speed wind and hail warranties must be pre-approved by the Sika Canada Vice President Technical
- Refer to section 9h warranty selection guide

## c. Sarnafast / Inseam



| Cross Section Layer Sarnafast / Inseam   | Approved Materials                                                                                                                                                                                 |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) Membrane                              | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil® S327 (Feltback), 1.5 mm (60 mil) Sikaplan® Fastened (Feltback)                                                                                     |
| 2) Membrane Securement                   | Sikaplan® Disc or Sarnadisc XPN                                                                                                                                                                    |
| 3) Membrane Securement Fasteners         | Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)                                                                                                               |
| 4) Board Securement                      | Sarnaplate                                                                                                                                                                                         |
| 5) Board Securement Fasteners            | Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)                                                                                                               |
| 6) Cover board (optional)                | 12 mm (½ in) Sarnatherm® Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck® & DensDeck Prime                                                                                          |
| 7) Grounding Layer (optional not shown)  | EFVM (Electronic Field Vector Mapping) Grid                                                                                                                                                        |
| 8) Insulation                            | Sarnatherm® (137 or 172 kPa (20 psi or 25 psi)) flat & tapered, Sarnatherm® CG (137 or 172 kPa (20 psi or 25 psi)) flat & tapered or Rockwool DD (note: cover board is required with Rockwool DD). |
| 9) Vapour Retarder                       | Sarnavap 6, Sarnavap 10, Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138                                                                                                        |
| 10) Vapour Retarder Primers (not shown)  | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap 6 or 10)                                                                 |
| 11) Thermal Barrier (optional not shown) | 6 & 15 mm (½ in & 5/8 in) DensDeck® & DensDeck Prime                                                                                                                                               |
| 12) Structural Deck                      | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                                                         |

**Notes:**

- Securement at Membrane Transition: Sikaplan® Disc, Sarnadisc XPN or Sarnabar
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap
- Board & Membrane securement rates are based on wind load pressures in the field, perimeter, and corner roof zones. Refer to Section 9b Roof System Attachment Guide or consult Sika Canada Technical Services for a Design Review
- Refer to Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 9d Board Attachment Guide
- Refer to Section 10 for typical standard details

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for membrane and accessories
3. System: workmanship & material warranty for all components

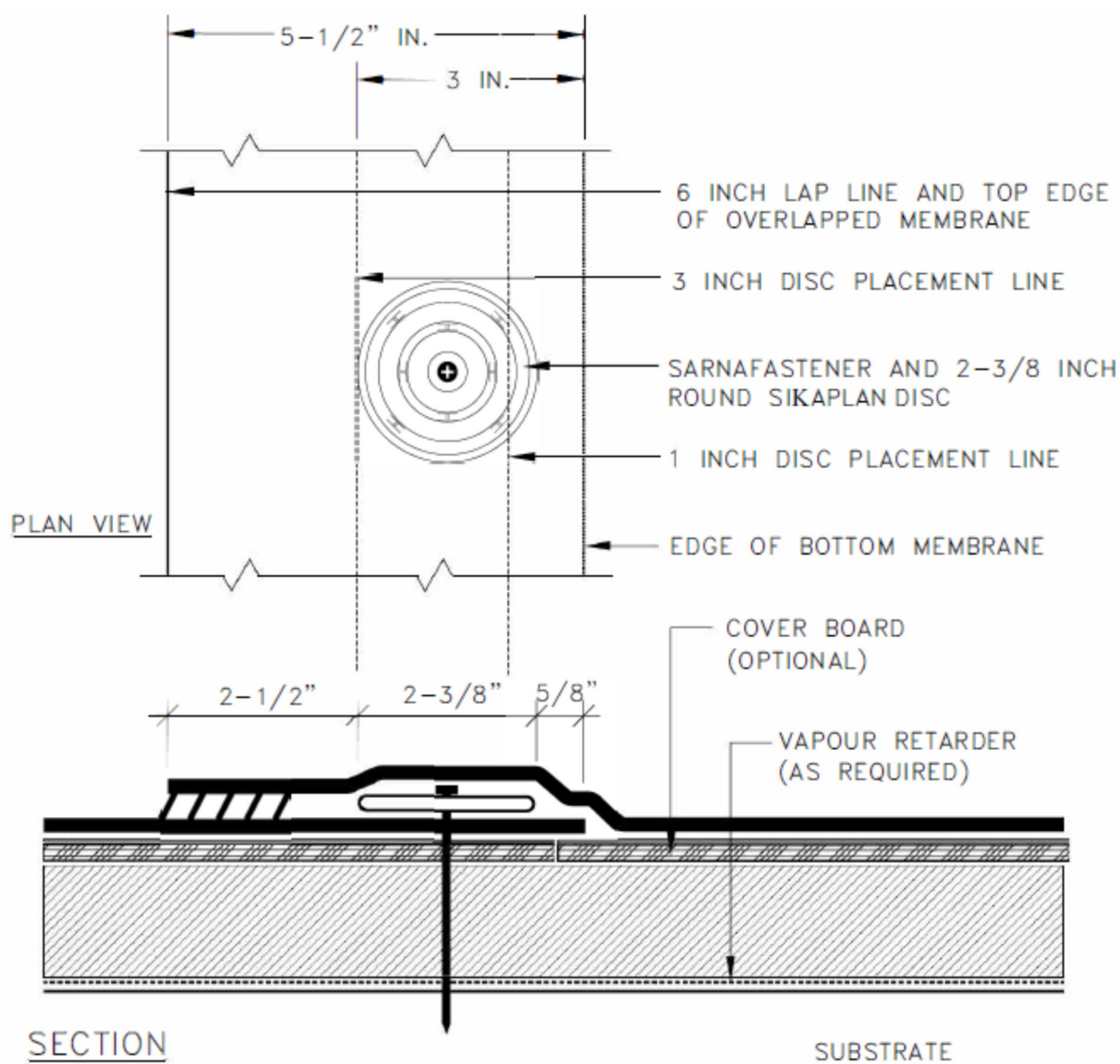
**Warranty Duration:**

1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\* years
3. System: 5, 10, 15, 20, 25\* or 30\* years

**Warranty Notes:**

- System warranties require all materials to be supplied by Sika Canada from the structural deck up
- Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika
- **\*Sarnavap®-6 is not permitted in 25- & 30-year warranties**
- \*Coverboard is required for all 25 & 30-year warranties and PV roof systems
- \*Sarnatherm CG or Rockwool insulation required for all 25 & 30-year warranties
- \*Minimum 1.8 mm (72 mil) Sarnafil® S327 roof membrane and 1,4 mm (60 mil) G410 flashings required for 25-year warranties
- \*Minimum 2.0 mm (80 mil) Sarnafil® S327 roof membrane and 1.5 mm (60 mil) G410 flashings required for 30-year warranties
- \*\* Contact your Sales Representative for specific requirements
- All high-speed wind and hail warranties must be pre-approved by the Sika Canada Vice President Technical
- Refer to Section 9h warranty selection guide

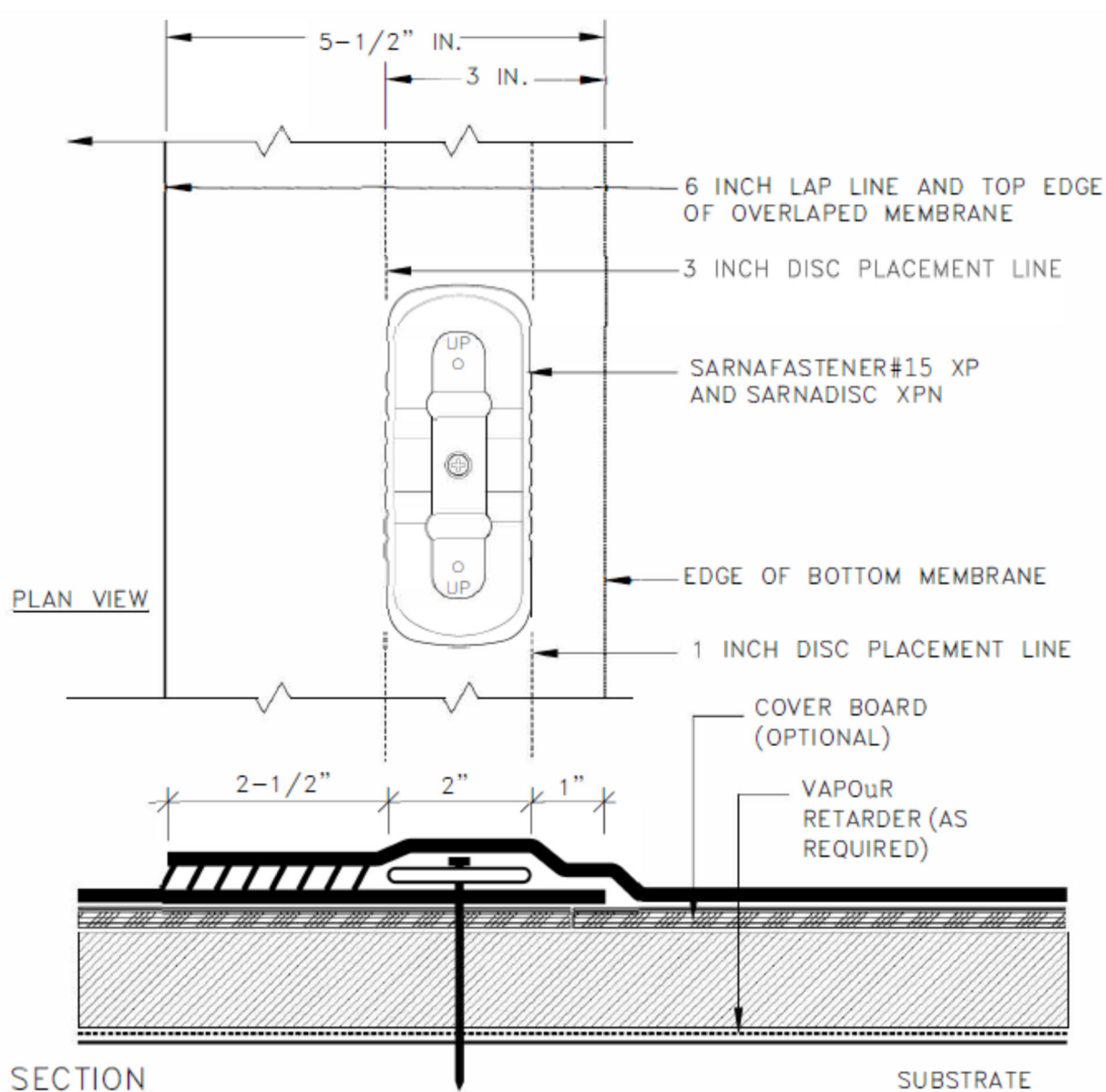
**Typical Sarnafast / Inseam System Details**



**NOTES:**

1) VAPOUR RETARDER SHALL BE SEALED AT OVERLAPS AND PENETRATIONS.

**SARNAFASTENER & SIKAPLAN DISC  
2-3/8" PLACEMENT PLAN**



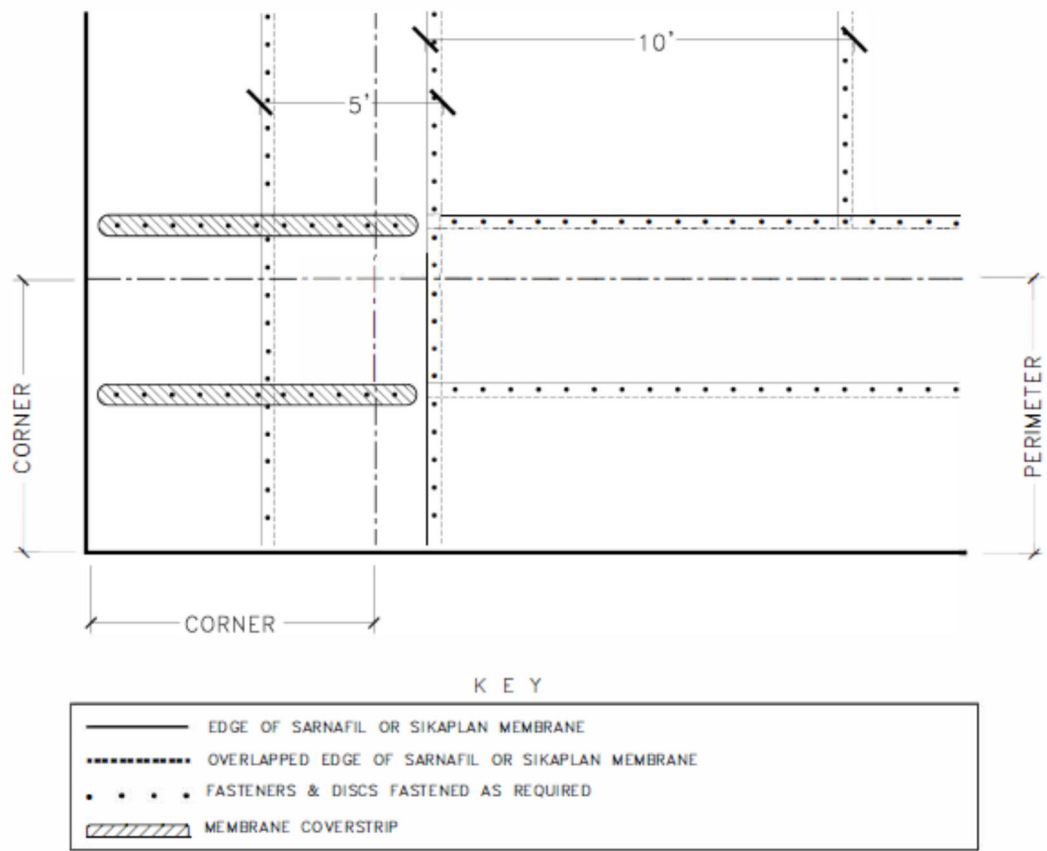
**NOTES:**

1) VAPOUR RETARDER SHALL BE SEALED AT OVERLAPS AND PENETRATIONS.

**SARNAFASTENER-XP PLACEMENT PLAN**



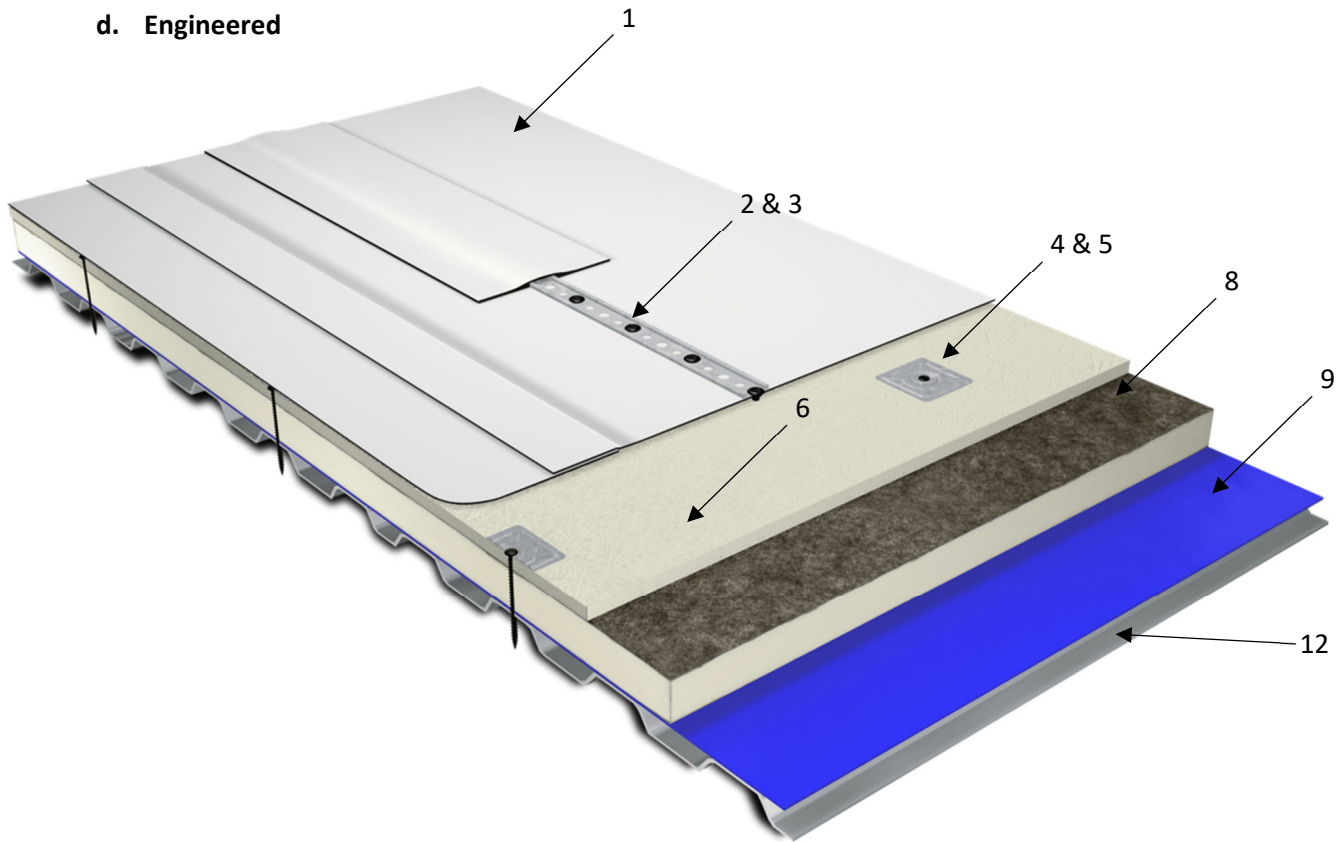
## 16



**NOTE:**  
1) CORNER AREAS WHERE THE PERIMETER SHEETS INTERSECT, ADD ROWS OF FASTENERS AND DISCS OVER TOP OF THE MEMBRANE AND WELD A COVER TRIP.

CORNER & PERIMETER 10 FT SHEET LAYOUT  
APPROVED DECKS (NON STEEL)

## d. Engineered



| Cross Section Layer Engineered           | Approved Materials                                                                                                                                             |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Membrane                              | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil®- S327 (Feltback)                                                                                               |
| 2. Membrane Securement                   | Sarnabar                                                                                                                                                       |
| 3. Membrane Securement Fasteners         | Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)                                                                           |
| 4. Board Securement                      | Sarnaplate                                                                                                                                                     |
| 5. Board Securement Fasteners            | Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)                                                                           |
| 6. Cover board (optional)                | 12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck & DensDeck Prime                                                        |
| 7. Grounding Layer (optional not shown)  | EFVM (Electronic Field Vector Mapping) Grid                                                                                                                    |
| 8. Insulation                            | Sarnatherm (20 psi or 25 psi) flat & tapered, Sarnatherm CG (20 psi or 25 psi) flat & tapered or Rockwool DD (note: cover board is required with Rockwool DD). |
| 9. Vapour Retarder                       | Sarnavap®-6, Sarnavap®-10, Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138                                                                  |
| 10. Vapour Retarder Primers (not shown)  | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap 6 or 10)                             |
| 11. Thermal Barrier (optional not shown) | 12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                                           |
| 12. Structural Deck                      | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                     |

**Notes:**

- Securement at Membrane Transition: Sarnabar®
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 detail Parapet Wall with Metal Cap
- Board & Membrane securement rates are based on wind load pressures in the field, perimeter, and corner roof zones. Refer to Section 9b Roof System Attachment Guide or consult Sika Canada Technical Services for a Design Review
- Refer to Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 9d Board Attachment Guide
- Refer to Section 10 for typical standard details

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for membrane and accessories
3. System: workmanship & material warranty for all components

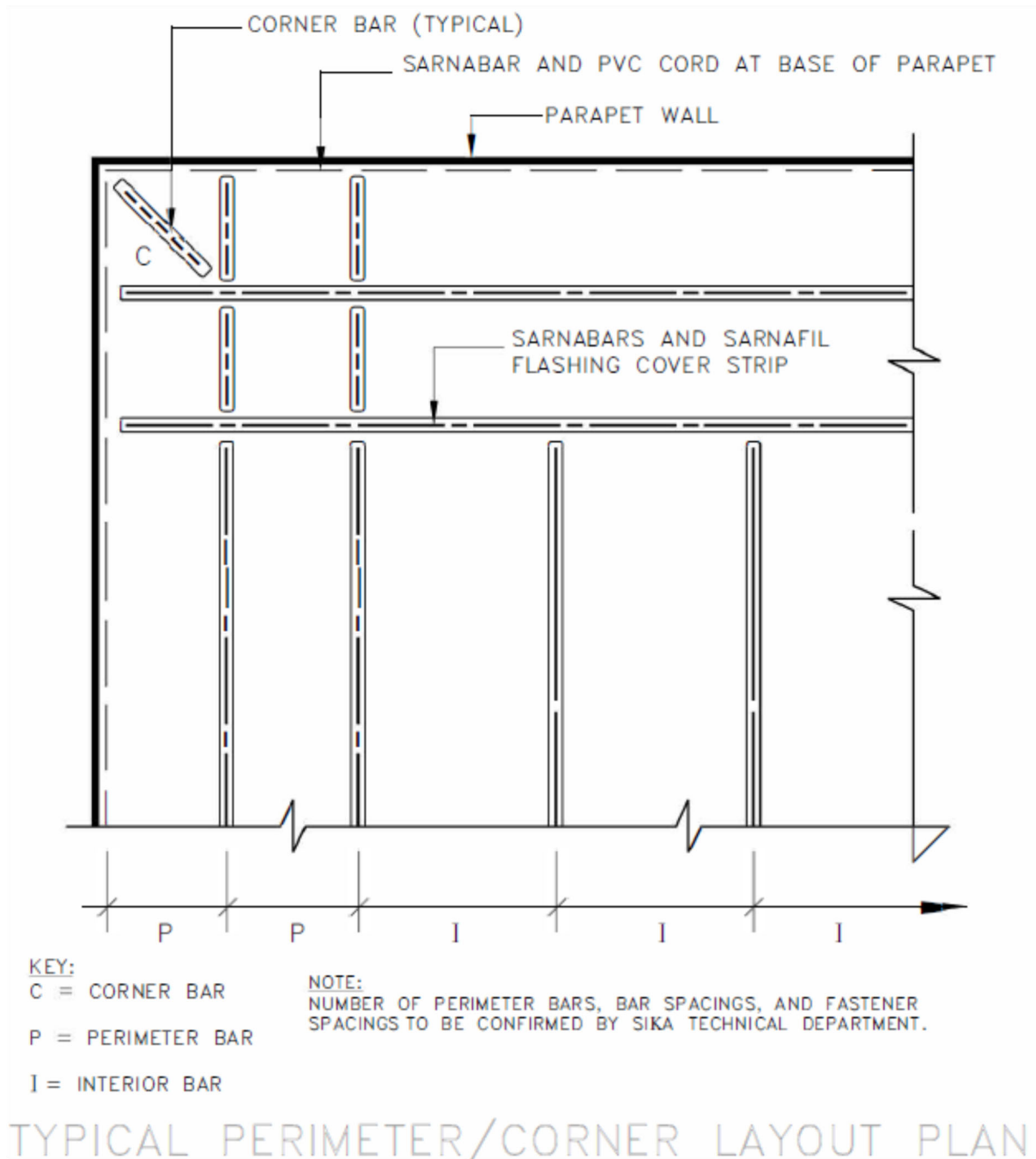
**Warranty Duration:**

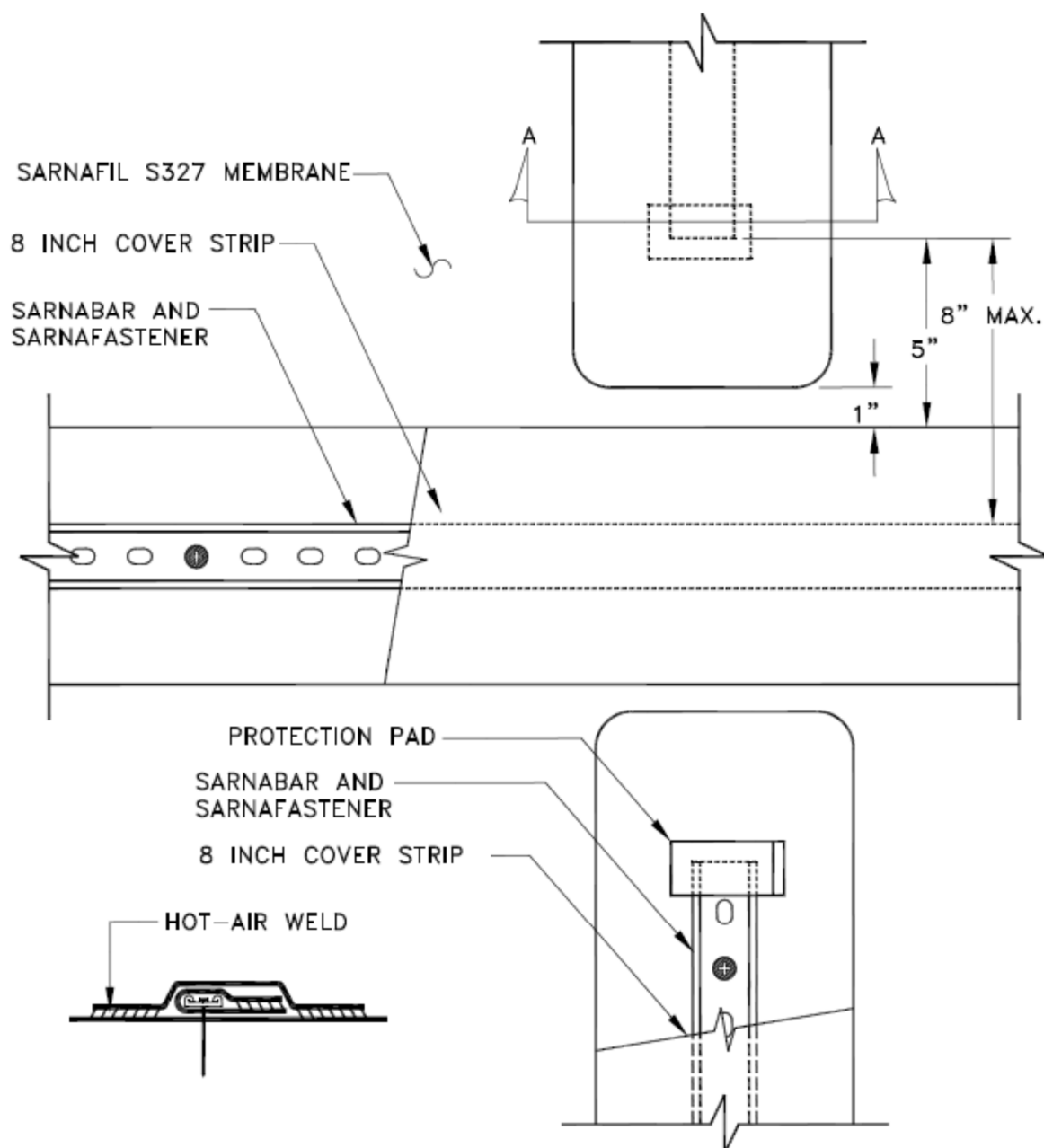
1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\* years
3. System: 5, 10, 15, 20, 25\* or 30\* years

**Warranty Notes:**

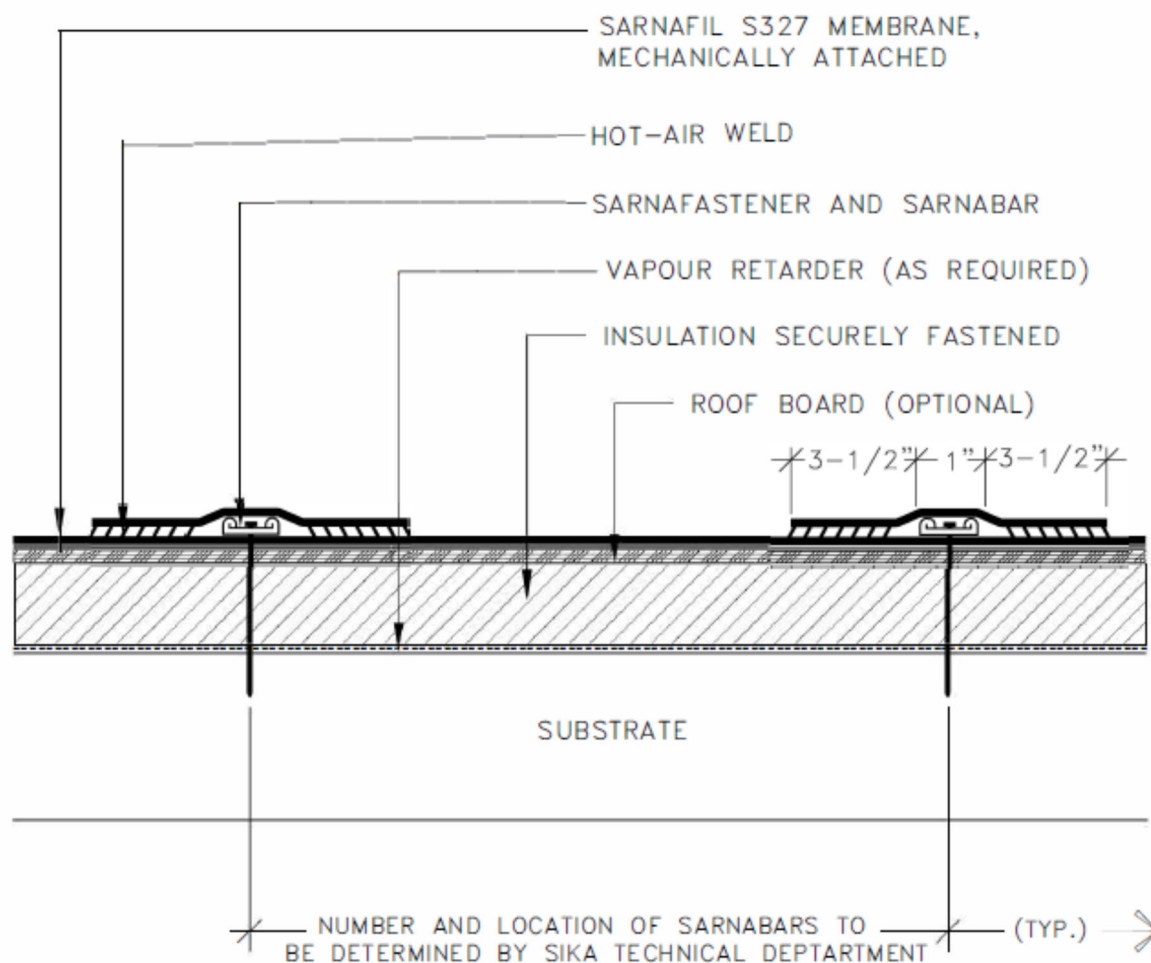
- System warranties require all materials be supplied by Sika from the structural deck up
- Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika
- **\*Sarnavap 6 is not permitted in 25 & 30-year warranties**
- \*Coverboard is required for all 25 & 30-year warranties and PV roof systems
- \*Sarnatherm CG or Rockwool insulation required for all 25 & 30-year warranties
- \*Minimum 1.8 mm (72 mil) Sarnafil® S327 roof membrane and 1.5 mm (60 mil) G410 flashings required for 25-year warranties
- \*Minimum 2.0 mm (80 mil) Sarnafil® S327 roof membrane and 1.5 mm (60 mil) G410 flashings required for 30-year warranties
- \*\* Contact your Sales Representative for specific requirements
- All high-speed wind and hail warranties must be pre-approved by the Sika Canada Vice President Technical
- Refer to Section 9h warranty selection guide

**Typical Engineered System Details**





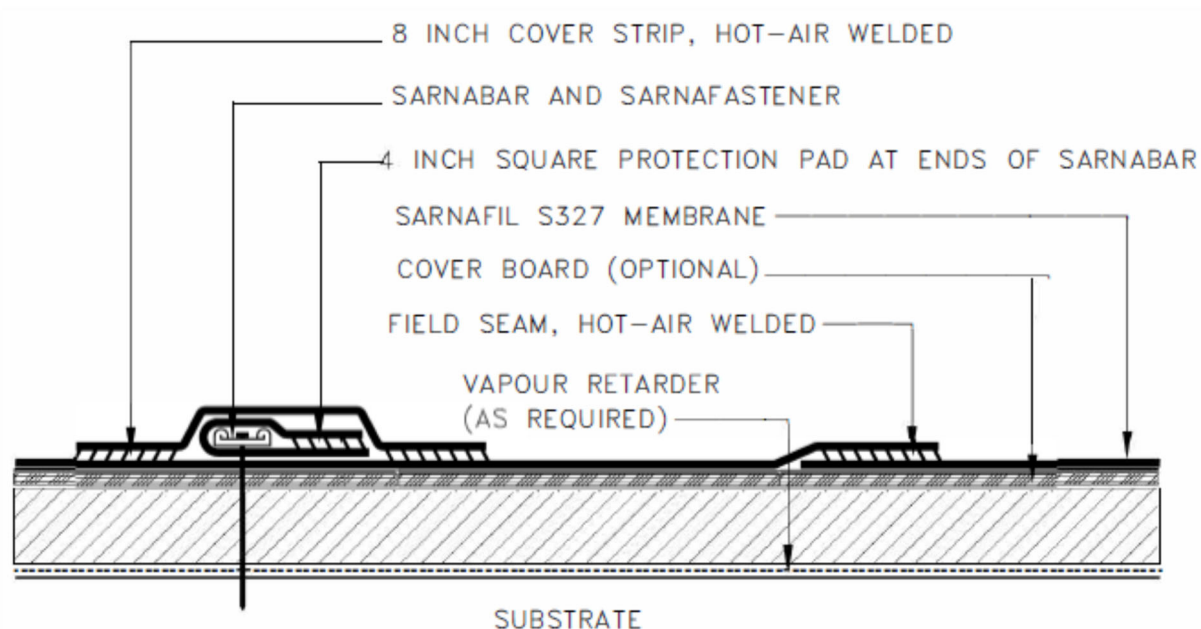
INTERSECTION OF BAR AND COVER STRIP AT CORNER



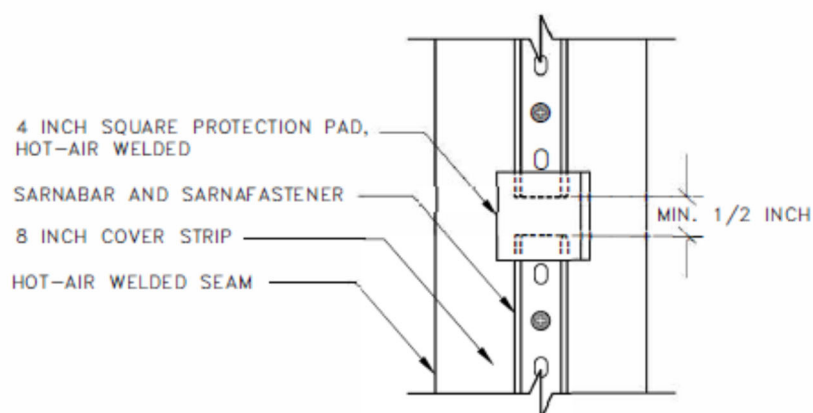
**NOTES:**

- 1) BARS AND COVERSTRIPS ARE TO RUN PERPENDICULAR TO THE DIRECTION OF STEEL AND PLANK DECKS WHERE POSSIBLE.
- 2) VAPOUR RETARDER SHALL BE SEALED AT EDGES.

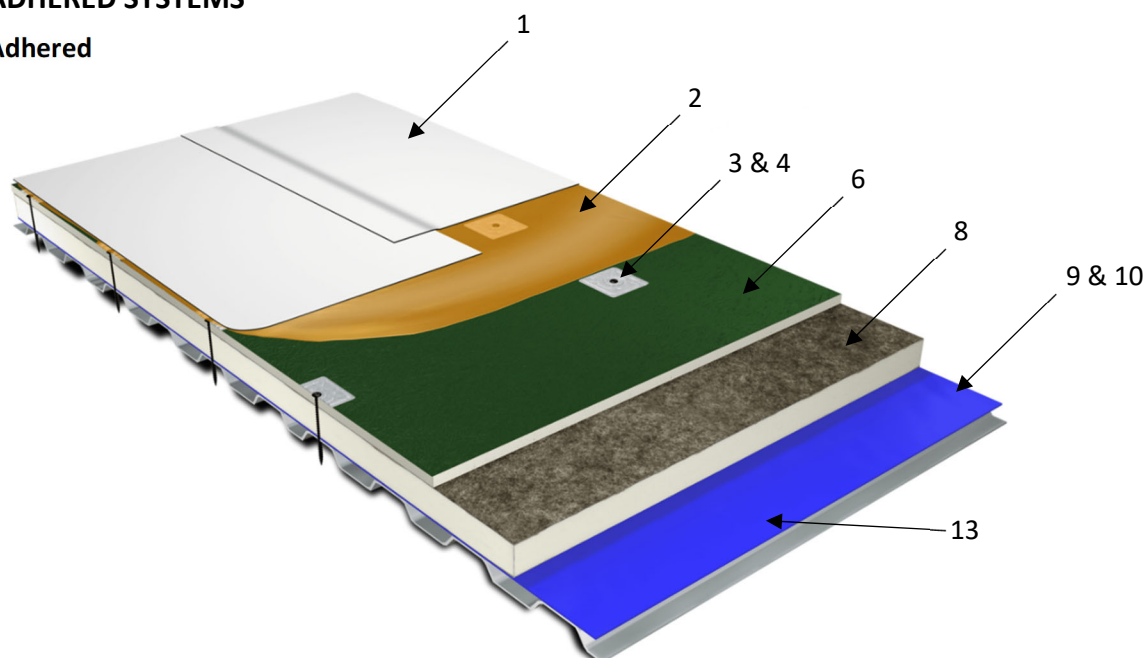
**SECTION OF INTERIOR BAR SPACING**



NOTE: VAPOUR RETARDER SHALL BE SEALED AT EDGES



DETAIL AT SARNABAR JOINTS

**6. ADHERED SYSTEMS****a. Adhered**

| Cross Section Layer Adhered               | Approved Materials                                                                                                                                                                               |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Membrane                               | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil G410 (Feltback), 1.5 mm (60 mil) Sikaplan® Adhered (Feltback)                                                                                     |
| 2. Membrane Securement                    | Sarnacol®-2170 R, Sarnacol® VC, Sarnacol®-2121 or Sarnacol® Feltback Membrane Adhesive                                                                                                           |
| 3. Board Securement, Mechanical           | Sarnaplate                                                                                                                                                                                       |
| 4. Board Securement, Mechanical Fasteners | Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)                                                                                                             |
| 5. Board Securement, adhesive (not shown) | Sarnacol® LRA, Sarnacol®-2163 or Sarnacol® OM Board Adhesive                                                                                                                                     |
| 6. Cover board (optional)                 | 12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                          |
| 7. Grounding Layer (optional not shown)   | EFVM (Electronic Field Vector Mapping) Grid                                                                                                                                                      |
| 8. Insulation                             | Sarnatherm (132 or 172 kPa (20 psi or 25 psi)) flat & tapered, Sarnatherm CG (137 or 172 kPa (20 psi or 25 psi)) flat & tapered or Rockwool DD (note: cover board is required with Rockwool DD). |
| 9. Vapour Retarder (polyethylene)         | Sarnavap®-6, Sarnavap®-10                                                                                                                                                                        |
| 10. Vapour Retarder (modified bitumen)    | Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138                                                                                                                               |
| 11. Vapour Retarder Primers (not shown)   | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap 6 or 10                                                                |
| 12. Thermal Barrier (optional not shown)  | 12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                                                                             |
| 13. Structural Deck                       | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                                                       |

**Notes:**

- Securement at Membrane Transition: Sarnastop or Sarnabar®
- Board Securement, mechanical, anywhere from the thermal barrier to the cover board. All components after the mechanical securement (up to the membrane) are then secured with board adhesive
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap
- Membrane securement rates are based on membrane and adhesive. Refer to Section 9e Adhesive Selection Guide.
- Board & Membrane securement rates are based on wind load pressures in the field, perimeter, and corner roof zones. Refer to Section 9b Roof System Attachment Guide or consult Sika Canada Technical Services for a Design Review
- Refer to Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 9d Board Attachment Guide
- Refer to Section 10 for typical standard details
- **Board Adhesive cannot be used to adhere to Sarnavap®6 or Sarnavap®10**
- Trayed vegetative roof cover may be installed over the membrane. Sarnafelt NWP separation layer is required between the membrane and the trays vegetative roof system and a cover board is required. Consult Sika Canada Technical Services for warranty duration and conditions.

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for materials supplied by Sika
3. System: workmanship & material warranty

**Warranty Duration:**

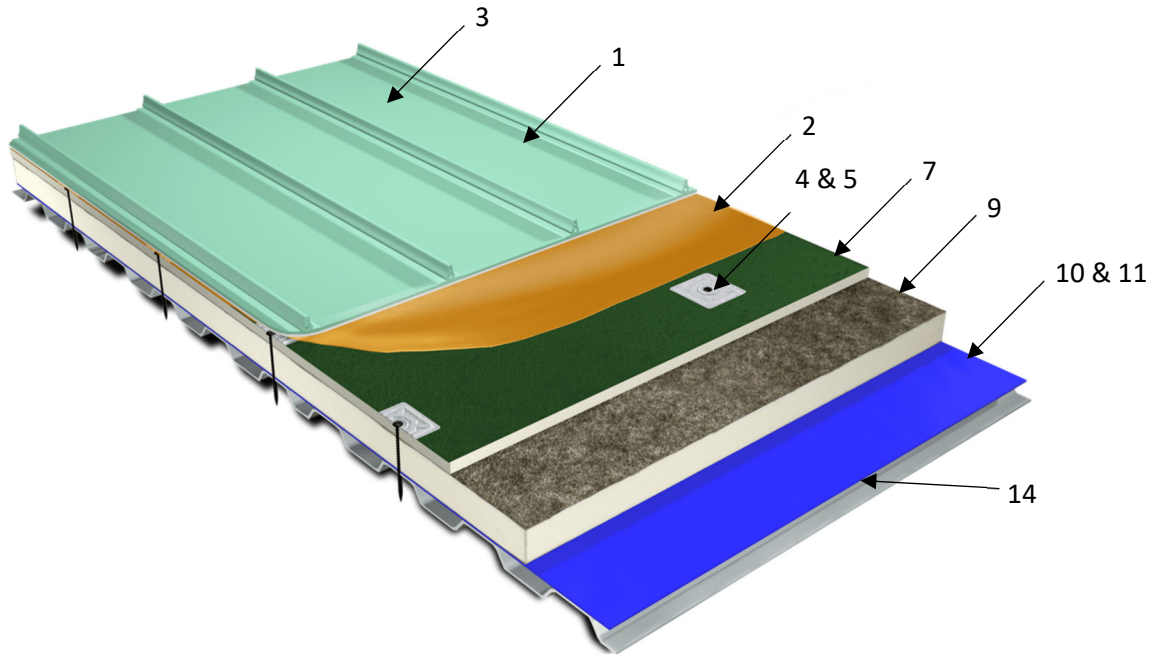
1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\* years
3. System: 5, 10, 15, 20, 25\* or 30\* years

**Warranty Notes:**

- System warranties require all new materials supplied by Sika from the structural deck up
- Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika Canada
- **Sarnavap®-6 is not permitted** in 25- & 30-year warranties
- Cover board is required for all 25- & 30-year warranties and PV roof systems
- Sarnatherm CG or Rockwool insulation required for all 25- & 30-year warranties
- Minimum 1.8 mm (72 mil) Sarnafil® G410 roof membrane and 1.5 mm (60 mil) G410 flashings required for 25-year warranties
- Minimum 2.0 mm (80 mil) Sarnafil® G410 roof membrane and 1.5 mm (60 mil) G410 flashings required for 30-year warranties
- \*\* Contact your Sales Representative for specific requirements
- Mechanical fixation is required, for one of the layers (overboard, insulation or thermal barrier) below the membrane, for all 25 and 30-year warranties which incorporate Steel, Wood Plank or Plywood structural deck
- All high-speed wind and hail warranties must be pre-approved by the Vice President Technical

- Refer to Section 9h warranty selection guide

**b. Sarnafil® Décor**



| Cross Section Layer Sarnafil Décor       | Approved Materials                                                                                                                                                                               |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Membrane                              | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil G410 (Feltback)                                                                                                                                   |
| 2. Membrane Securement                   | Sarnacol®-2170 R, Sarnacol® VC, Sarnacol®-2121 or Sarnacol® Feltback Membrane Adhesive                                                                                                           |
| 3. Rib Profile                           | Décor Rib                                                                                                                                                                                        |
| 4. Board Securement Mechanical           | Sarnaplate or Sarnaplate Low Profile                                                                                                                                                             |
| 5. Board Securement Mechanical Fasteners | Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)                                                                                                             |
| 6. Board Securement Adhesive             | Sarnacol® LRA, Sarnacol®-2163 or Sarnacol® OM Board Adhesive                                                                                                                                     |
| 7. Cover board (optional)                | 12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                          |
| 8. Grounding Layer (optional not shown)  | EFVM (Electronic Field Vector Mapping) Grid                                                                                                                                                      |
| 9. Insulation                            | Sarnatherm (137 or 172 kPa (20 psi or 25 psi)) flat & tapered, Sarnatherm CG (137 or 172 kPa (20 psi or 25 psi)) flat & tapered or Rockwool DD (note: cover board is required with Rockwool DD). |
| 10. Vapour Retarder (polyethylene)       | Sarnavap 6, Sarnavap 10                                                                                                                                                                          |
| 11. Vapour Retarder (modified bitumen)   | Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138                                                                                                                               |
| 12. Vapour Retarder Primers (not shown)  | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap®-6 or 10                                                               |
| 13. Thermal Barrier (optional not shown) | 12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                                                                             |
| 14. Structural Deck                      | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                                                       |

**Notes:**

- Securement at Membrane Transition: Sarnastop or Sarnabar
- Board Securement, mechanical, anywhere from the thermal barrier to the cover board. All components after the mechanical securement (up to the membrane) are then secured with board adhesive
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap
- Membrane securement rates are based on membrane and adhesive. Refer to Section 9e Adhesive Selection Guide.
- Board & Membrane securement rates are based on wind load pressures in the field, perimeter, and corner roof zones. Refer to Section 9b Roof System Attachment Guide or consult Sika Canada Technical Services for a Design Review
- Refer to Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 9d Board Attachment Guide
- Refer to Section 10 for typical standard details
- **Board Adhesive cannot be used to adhere to Sarnavap®-6 or Sarnavap®-10**

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for materials supplied by Sika Canada
3. System: workmanship & material warranty

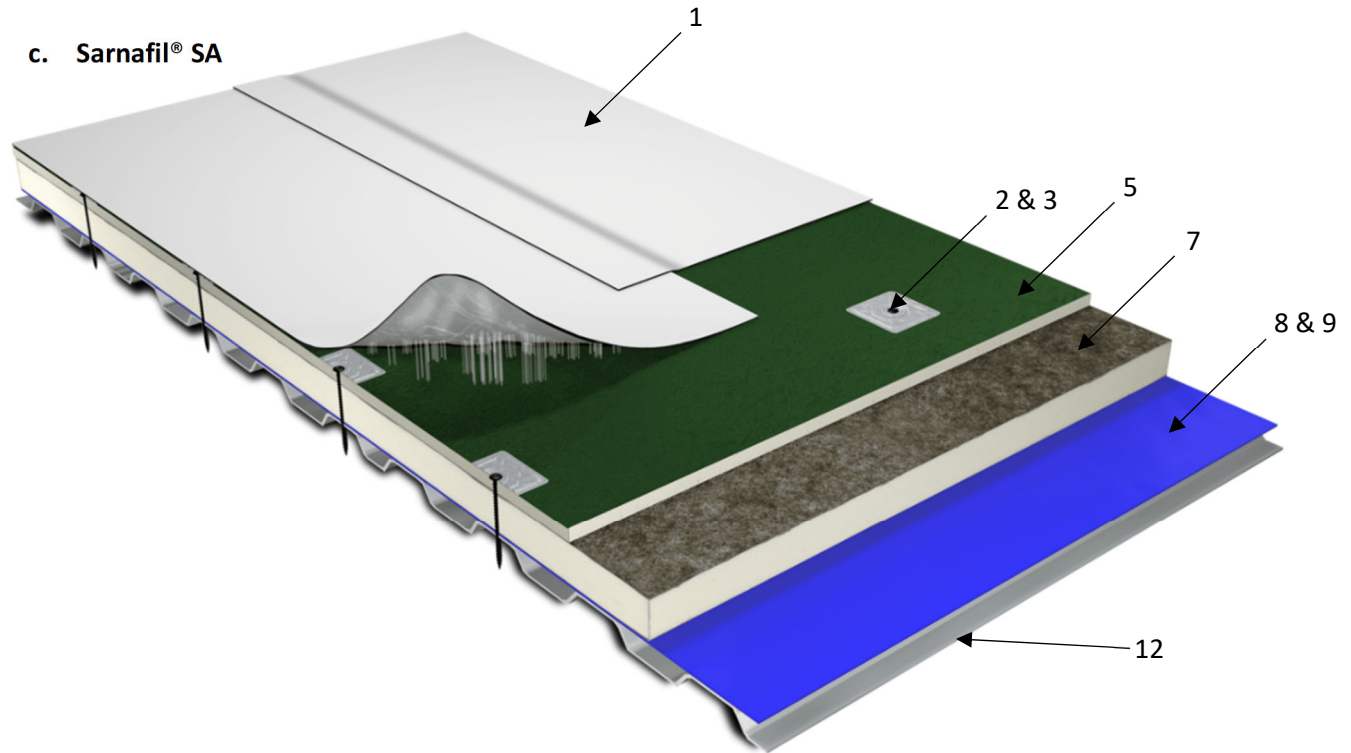
**Warranty Duration:**

1. Membrane: 5, 10, 15 or 20 years
2. Standard: 5, 10, 15 or 20 years
3. System: 5, 10, 15 or 20 years

**Warranty Notes:**

- System warranties require all new materials supplied by Sika from the structural deck up
- Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika Canada
- All high-speed wind and hail warranties must be pre-approved by the Vice President Technical
- Refer to section 9h warranty selection guide

c. Sarnafil® SA



| Cross Section Layer Sarnafil SA (Self Adhered) | Approved Materials                                                                                                                                                                               |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Membrane                                    | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil® G410 SA (Feltback)                                                                                                                               |
| 2. Board Securement Mechanical                 | Sarnaplate or Sarnaplate Low Profile                                                                                                                                                             |
| 3. Board Securement Mechanical Fasteners       | Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)                                                                                                             |
| 4. Board Securement Adhesive (not shown)       | Sarnacol® LRA, Sarnacol®-2163 or Sarnacol® OM Board Adhesive                                                                                                                                     |
| 5. Cover board (optional)                      | 12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                          |
| 6. Grounding Layer (optional not shown)        | EFVM (Electronic Field Vector Mapping) Grid                                                                                                                                                      |
| 7. Insulation                                  | Sarnatherm (137 or 172 kPa (20 psi or 25 psi)) flat & tapered, Sarnatherm CG (137 or 172 kPa (20 psi or 25 psi)) flat & tapered or Rockwool DD (note, cover board is required with Rockwool DD). |
| 8. Vapour Retarder (polyethylene)              | Sarnavap®-6, Sarnavap®-10                                                                                                                                                                        |
| 9. Vapour Retarder (modified bitumen)          | Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138                                                                                                                               |
| 10. Vapour Retarder Primers (not shown)        | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap®6 or 10                                                                |
| 11. Thermal Barrier (optional not shown)       | 12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                                                                             |
| 12. Structural Deck                            | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                                                       |

**Notes:**

- Securement at Membrane Transition: Sarnastop or Sarnabar
- Board Securement, mechanical, anywhere from the thermal barrier to the cover board. All components after the mechanical securement (up to the membrane) are then secured with board adhesive
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap
- Board & Membrane securement rates are based on wind load pressures in the field, perimeter, and corner roof zones. Refer to Section 9b Roof System Attachment Guide or consult Sika Canada Technical Services for a Design Review
- Refer to appendix Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 9d Board Attachment Guide
- Refer to Section 10 for typical standard details
- **Board Adhesive cannot be used to adhere to Sarnavap®-6 or Sarnavap®-10**
- Trayed vegetative roof cover may be installed over the membrane. Sarnafelt NWP separation layer is required between the membrane and the trays vegetative roof system and a cover board is required. Consult Sika Canada Technical Services for warranty duration and conditions.

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for materials supplied by Sika
3. System: workmanship & material warranty

**Warranty Duration:**

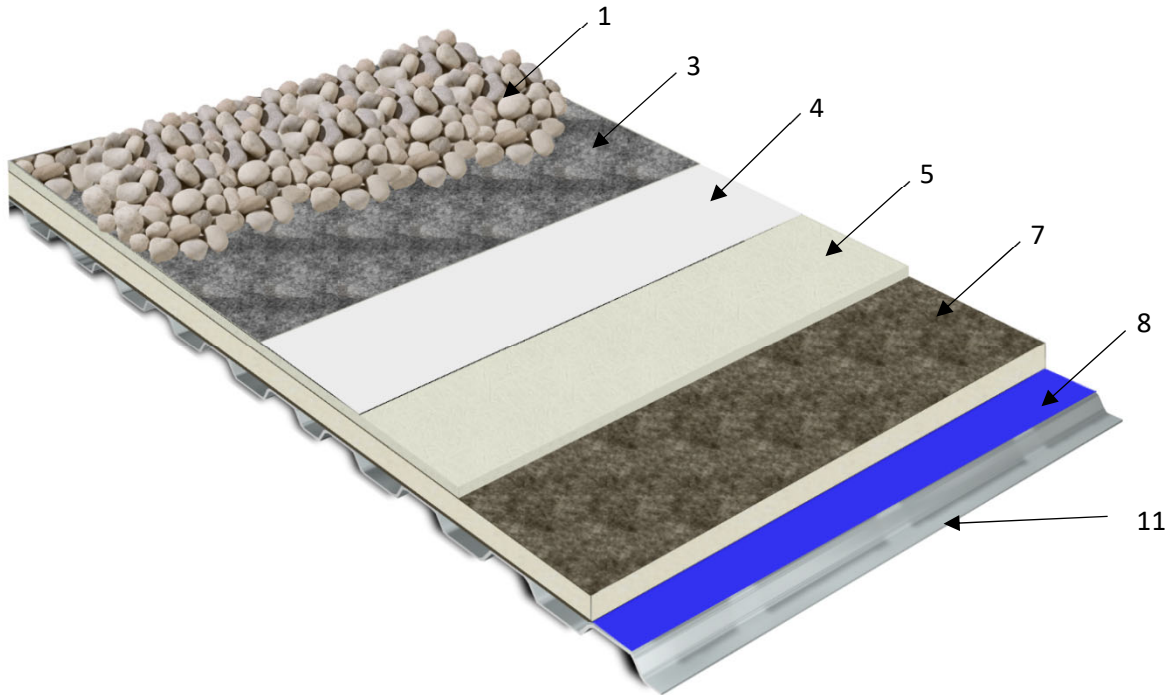
1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\* years
3. System: 5, 10, 15, 20, 25\* or 30\* years

**Warranty Notes:**

- System warranties require all new materials supplied by Sika from the structural deck up
- Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika Canada
- **Sarnavap®-6 is not permitted** in 25- & 30-year warranties
- Cover board is required for all 25- & 30-year warranties and PV roof systems
- Sarnatherm® CG or Rockwool insulation required for all 25- & 30-year warranties
- Minimum 1.8 mm (72 mil) Sarnafil® G410 roof membrane and 1.5 mm (60 mil) G410 flashings required for 25-year warranties
- Minimum 2.0 mm (80 mil) Sarnafil® G410 roof membrane and 1.5 mm (60 mil) G410 flashings required for 30-year warranties
- \*\* Contact your Sales Representative for specific requirements
- All high-speed wind and hail warranties must be pre-approved by the Vice President Technical
- Refer to Section 9h warranty selection guide

## 7. BALLASTED SYSTEMS

### a. Stone/Paver Ballasted



| Cross Section Layer Stone/Paver Ballasted | Approved Materials                                                                                                                                                                               |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Ballast                                | Ballast shall be nominal 38 mm (1-1/2 in), smooth, clean, and well-rounded, river-bottom stone meeting ASTM D448 No. 4, minimum rate of 49 kg/m <sup>2</sup> (10 lb/ft <sup>2</sup> ).           |
| 2. Pavers & Pedestals (not shown)         | Pavers shall be highly resistant to freeze/thaw cracking. Weight shall be at least 88 kg/m <sup>2</sup> (18 lb/ft <sup>2</sup> ), Pedestals, minimum PAVE-EL 5x or Sika approved                 |
| 3. Protection Layer                       | Sarnafelt NWP                                                                                                                                                                                    |
| 4. Membrane                               | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil® G410 (Feltback), 1.5 mm (60 mil) Sikaplan® Adhered (Feltback)                                                                                    |
| 5. Cover board (optional)                 | 12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                          |
| 6. Grounding Layer (optional not shown)   | EFVM (Electronic Field Vector Mapping) Grid                                                                                                                                                      |
| 7. Insulation                             | Sarnatherm (137 or 172 kPa (20 psi or 25 psi)) flat & tapered, Sarnatherm CG (137 or 172 kPa (20 psi or 25 psi)) flat & tapered or Rockwool DD (note: cover board is required with Rockwool DD). |
| 8. Vapour Retarder                        | Sarnavap®-6, Sarnavap®-10, Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138                                                                                                    |
| 9. Vapour Retarder Primers (not shown)    | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap 6 or 10                                                                |
| 10. Thermal Barrier (optional not shown)  | 12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                                                                             |
| 11. Structural Deck                       | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                                                       |

**Notes:**

- Securement at Membrane Transition: Sarnabar
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap
- Ballast/Paver rates are based on ANSI/SPR RP-4 requirements or consult Sika Canada Technical Services for a Design Review
- Refer to section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to section 10 for typical standard details

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for materials supplied by Sika
3. System: workmanship & material warranty

**Warranty Duration - Sikaplan®:**

1. Membrane: 5 or 10 years
2. Standard: 5 or 10 years
3. System: 5 or 10 years

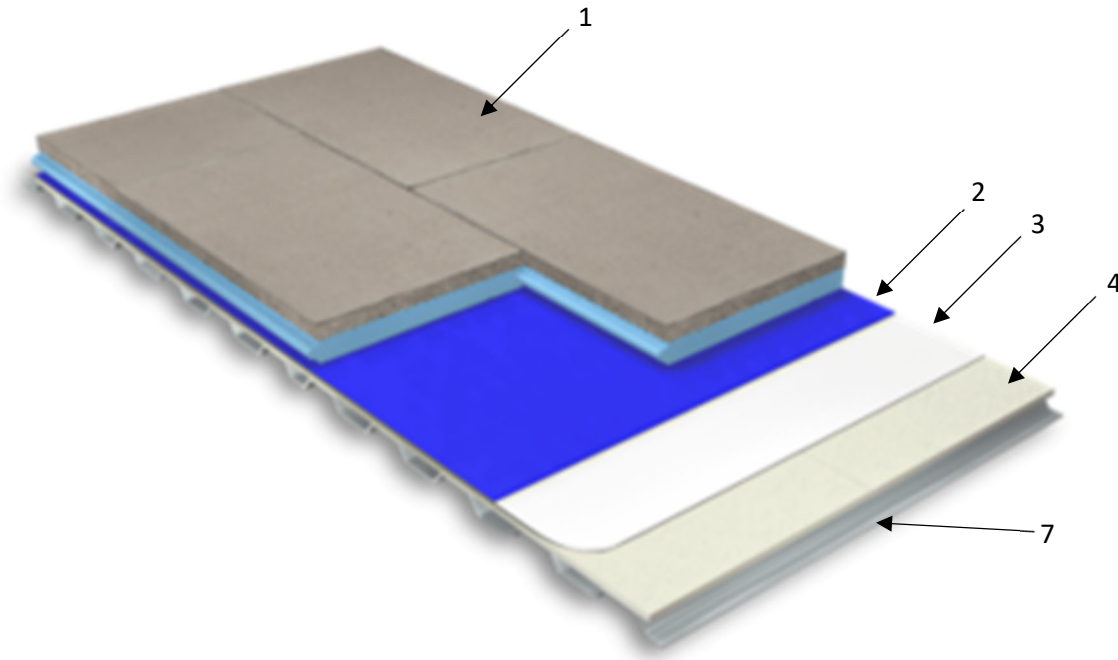
**Warranty Duration - Sarnafil®:**

1. Membrane: 5, 10, 15 or 20 years
2. Standard: 5, 10, 15 or 20 years
3. System: 5, 10, 15 or 20 years

**Warranty Notes:**

- System warranties require all new materials supplied by Sika from the structural deck up
- Min 1.8 mm (72 mil) Sarnafil® G410 required for 15-year warranties
- Minimum 2.0 mm (80 mil) Sarnafil® G410 required for 20-year warranties
- Refer to section 9h warranty selection guide

## b. LightGUARD/HeavyGUARD Ballasted PMR



| Cross Section Layer<br>LightGUARD/HeavyGUARD<br>Ballasted PMR                             | Approved Materials                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. <b>Ballast</b>                                                                         | LightGUARD / HeavyGUARD insulation                                                                                                                                                                 |
| 2. <b>Separation Layer</b>                                                                | Sarnafelt NWP, Drainage Panel 990                                                                                                                                                                  |
| 3. <b>Membrane</b>                                                                        | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil® G410 (Feltback), 1.5 or 2 mm (60 or 80 mil) Sarnafil® G476, 1.5 mm (60 mil) Sarnafil® G476 SA or 1.5 mm (60 mil) Sikaplan® Adhered (Feltback)      |
| 4. <b>Grounding Layer (optional not shown)</b>                                            | EFVM (Electronic Field Vector Mapping) Grid. Sarnafelt NWP (HD) is required between the membrane and the grounding layer. The Sarnafelt NWP layer may be eliminated if Feltback membranes are used |
| 5. <b>Thermal Barrier (required on steel decks)</b>                                       | 12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                                                                               |
| 6. <b>Protection Layer (not shown) required on Wood Plank, Plywood and Concrete decks</b> | Sarnafelt NWP HD. The Sarnafelt NWP protection layer may be eliminated if Feltback membranes are used                                                                                              |
| 7. <b>Structural Deck</b>                                                                 | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                                                         |

**Notes:**

- Securement at Membrane Transition: Sarnastop or Sarnabar
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap
- Additional securement of the LightGUARD / Heavy GUARD insulation is required in perimeter and corner zones. Contact Sika Canada Technical Services for a Design Review
- Refer to Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 10 for typical standard details

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for materials supplied by Sika
3. System: workmanship & material warranty

**Warranty Duration - Sikaplan®:**

1. Membrane: 5 or 10 years
2. Standard: 5 or 10 years
3. System: 5 or 10 years

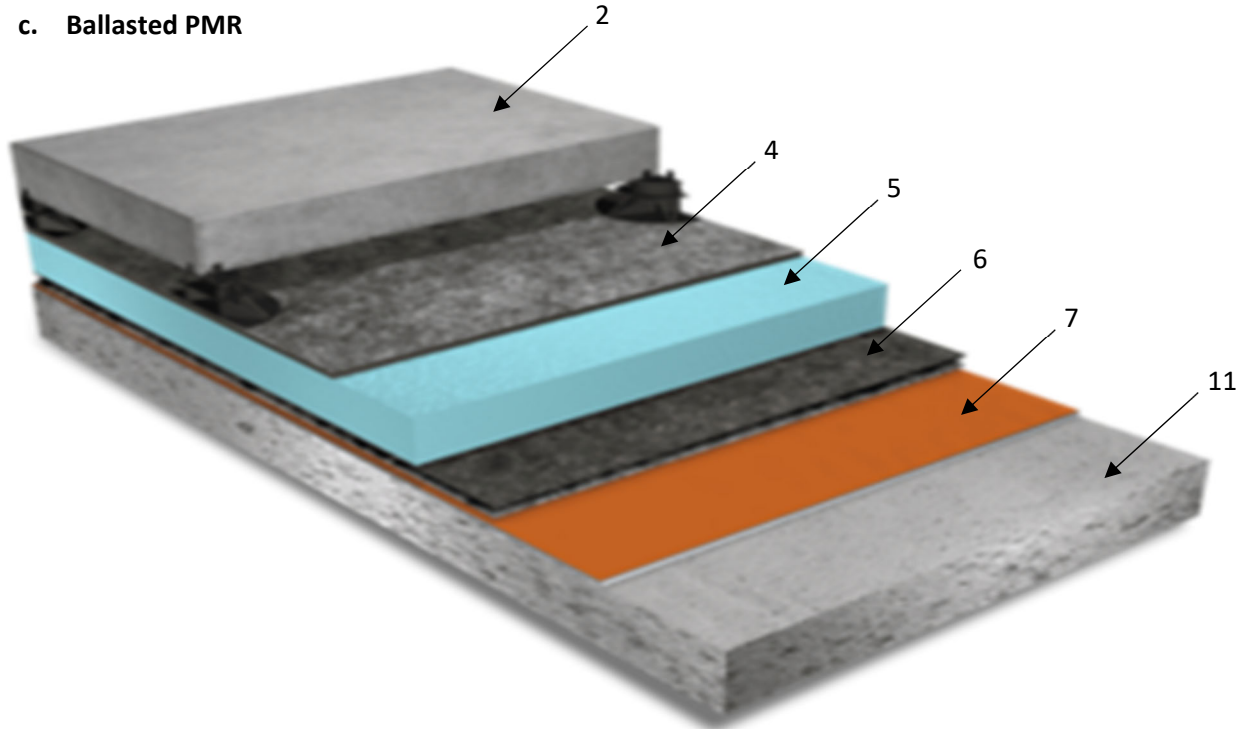
**Warranty Duration - Sarnafil®:**

1. Membrane: 5, 10, 15 or 20 years
2. Standard: 5, 10, 15 or 20 years
3. System: 5, 10, 15 or 20 years

**Warranty Notes:**

- System warranties require all new materials supplied by Sika from the structural deck up
- Minimum 1.8 mm (72 mil) Sarnafil® G410 required for 15-year warranties
- Minimum 2.0 mm (80 mil) Sarnafil® G410 required for 20-year warranties
- Refer to section 9h warranty selection guide

## c. Ballasted PMR



| Cross Section Layer Ballasted PMR                                                   | Approved Materials                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Ballast (not shown) in lieu of the Pavers & Pedestals                            | Ballast shall be nominal 38 mm (1-1/2 in), smooth, clean, and well-rounded, river-bottom stone meeting ASTM D448 No. 4, minimum rate of 49 kg/m <sup>2</sup> (10 lb/ft <sup>2</sup> ).             |
| 2. Pavers & Pedestals                                                               | Pavers shall be highly resistant to freeze/thaw cracking. Weight shall be at least 88 kg/m <sup>2</sup> (18 lb/ft <sup>2</sup> ). Pedestals, minimum PAVE-EL 5x or Sika approved                   |
| 3. Vegetative cover (not shown) in lieu of the Pavers & Pedestals                   | Intensive/Extensive vegetative roof system by others                                                                                                                                               |
| 4. Protection Layer                                                                 | Sarnafelt NWP                                                                                                                                                                                      |
| 5. Insulation                                                                       | Closed cell extruded polystyrene foam insulation board, meeting ASTM C578 Type VI or VII, at least 137 kPa (20 psi) compressive strength                                                           |
| 6. Separation Layer                                                                 | Sarnafelt NWP, Drainage Panel 990                                                                                                                                                                  |
| 7. Membrane                                                                         | 1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil® G410 (Feltback), 1.5 or 2.0 mm (60 or 80 mil) Sarnafil® G476, 1.5 mm (60 mil) Sarnafil® G476 SA or 1.5 mm (60 mil) Sikaplan® Adhered (Feltback)    |
| 8. Grounding Layer (optional not shown)                                             | EFVM (Electronic Field Vector Mapping) Grid. Sarnafelt NWP (HD) is required between the membrane and the grounding layer. The Sarnafelt NWP layer may be eliminated if Feltback membranes are used |
| 9. Thermal Barrier (not shown) required on steel decks                              | 12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime                                                                                                                                               |
| 10. Protection Layer (not shown) required on Wood Plank, Plywood and Concrete decks | Sarnafelt NWP HD. Protection layer may be eliminated if Feltback membranes are used.                                                                                                               |
| 11. Structural Deck                                                                 | 22 Ga Steel, 50 mm (2 in) Wood Plank, 19 mm (¾ in) Plywood, 20,684 kPa (3000 psi) Concrete                                                                                                         |

**Notes:**

- Securement at Membrane Transition: Sarnabar or Sarnastop
- Install Sika pressure sensitive Aluminum Tape as a barrier between the Sika® Sarnafil® membrane and Air /Vapour Barriers or other non-compatible surfaces
- A continuous air seal is required at perimeter edge for example refer to Section 10 Parapet Wall with Metal Cap
- Ballast/Paver rates are based on ANSI/SPR RP-4 requirements or consult Sika Canada Technical Services for a Design Review
- Refer to Section 9a Roof Zone Guide to define the Field, Perimeter and Corner roof zones
- Refer to Section 10 for typical standard details

**Warranty Types:**

1. Membrane: membrane material only warranty
2. Standard: workmanship & material warranty for materials supplied by Sika
3. System: workmanship & material warranty

**Warranty Duration - Sikaplan®:**

1. Membrane: 5 or 10 years
2. Standard: 5 or 10 years
3. System: 5 or 10 years

**Warranty Duration - Sarnafil®:**

1. Membrane: 5, 10, 15 or 20 years
2. Standard: 5, 10, 15 or 20 years
3. System: 5, 10, 15 or 20 years

**Warranty Notes:**

- System warranties require all new materials supplied by Sika from the structural deck up
- Minimum 1.8 mm (72 mil) Sarnafil® G410 required for 15-year warranties
- Minimum 2.0 mm (80 mil) Sarnafil® G410 required for 20-year warranties
- Refer to Section 9h warranty selection guide

## 8. TYPICAL PRODUCTS

For a complete listing of all our available products, contact your local Sales Representative or refer to the price list. Refer to the PDS, specifications, application manuals, guides for additional product information and application information.

### VAPOUR RETARDERS

#### **Sarnavap®-6**

Polyethylene vapour retarder for use within Sarnafil® and Sikaplan® insulated roof systems.

#### **Sarnavap®-10**

Polyethylene vapour retarder/air barrier for use within Sarnafil® and Sikaplan® insulated roof systems.

#### **Vapor Retarder SA 31**

0.8 mm (31 mil) thick self-adhesive vapour retarder/air barrier for use within Sarnafil® and Sikaplan® insulated roof systems. Vapor Retarder SA 31 can also serve as temporary roof protection in areas limited to light construction traffic. It can be left exposed for up to two (2) months.

#### **Vapor Retarder SA 106**

2.7 mm (106 mil) thick self-adhesive vapour retarder/air barrier for use within Sarnafil® and Sikaplan® insulated roof systems. Vapor Retarder SA 106 can also serve as temporary roof protection. It can be left exposed for up to six (6) months.

#### **Vapor Retarder TA 138 (Concrete Only) (Torch Applied)**

3.5 mm (138 mil) thick torch applied SBS modified bitumen polyester reinforced vapour retarder for use within Sarnafil® and Sikaplan® insulated roof systems. Vapor Retarder TA 138 can also serve as temporary roof protection. It can be left exposed for up to six (6) months.

### INSULATION

#### **Sarnatherm® ISO**

Rigid closed cell polyisocyanurate insulation board with fibre reinforced felt facers and is suitable for use in new construction and re-roofing with Sarnafil® or Sikaplan® membranes. Sarnatherm® ISO is available as flat or tapered board. Sarnatherm® ISO is available with a compressive strength of 138 kPa (20 psi) or 172 kPa (25 psi).

#### **Sarnatherm CG**

Rigid closed cell polyisocyanurate insulation board with coated glass facers. Sarnatherm CG® is suitable for use in new construction and re-roofing with Sarnafil® or Sikaplan® membranes. Sarnatherm® CG is available with a compressive strength of 138 kPa (20 psi) or 172 kPa (25 psi).

**Notes:**

1. When insulation is to be secured to the deck with fasteners and plates, the fastener must have 1 in (25.4 mm) penetration into the steel or plywood decks, and embedment into concrete or wood plank decks.
2. Use two (2) layers of insulation when total thickness of Sarnatherm® exceeds 69 mm (2.7 in). Stagger joints in both directions at least 300 mm (12 in) between layers.
3. When adhering Sarnatherm insulation use 1.20 m x 1.20 m (4 ft x 4 ft) boards only.

**BOARD ADHESIVES****Sarnacol®-2163 Board Adhesive**

Two-component foamable polyurethane board adhesive that is applied in one step and sets up in minutes. Sarnacol®-2163 Board Adhesive is used to bond insulation and cover boards to approved substrates, vapour retarders and/or to intermediate insulation boards.

**Sarnacol® LRA**

Two-component foamable polyurethane board adhesive that is applied in one step and sets up in minutes. Sarnacol® LRA is used to bond insulation and cover boards to approved substrates, vapour retarders and/or to intermediate insulation boards.

**Sarnacol® OM (WG) Board Adhesive**

Two-component foamable polyurethane board adhesive that is applied in one step and sets up in minutes. Sarnacol® OM (WG) Board Adhesive is used to bond insulation and cover boards to approved substrates, vapour retarders and/or to intermediate insulation boards.

**FASTENERS AND PLATES****Sarnaplate**

Specially designed stress plate used with approved Sarnafasteners to attach Sarnatherm® insulation, Sarnatherm® roof boards, gypsum roof boards, or other Sika approved boards directly to the roof deck prior to the installation of the Sarnafil® or Sikaplan® mechanically-attached or adhered roof membrane.

**Sarnaplate Low Profile**

Specially designed stress plate used with approved Sarnafasteners to attach Sarnatherm® insulation, Sarnatherm® roof boards, gypsum roof boards, or other Sika approved boards directly to the roof deck prior to the installation of the Sarnafil® Décor Adhered roof membrane.

**Sikaplan Disc**

Round steel plate with eyehooks, used with Sarnafasteners fasteners to in seam attach Sarnafil® S327 or Sikaplan® Fastened membrane to approved roof decks. The eye hooks grip the membrane without initiating tears.

**Sarnadisc XPN**

Specially designed, high-strength linear plate used with Sarnafasteners #14 and #15 to in-seam attach Sarnafil® S327 or Sikaplan® roof membrane to the roof deck

**Sarnadisc Rhinobond**

Specially designed polymer coated plates used with Sarnafasteners to attach Sarnatherm® insulation, Sarnatherm® roof boards, gypsum roof boards, or other Sika approved boards directly to the roof deck or structural purlins prior to the installation of Sarnafil® S327 or Sikaplan® Fastened membrane. The membrane is field welded to Sarnadisc Rhinobond by induction welding.

**Sarnadisc Rhinobond Treadsafe**

Fastening system consisting of a polymer tube used in conjunction with a specially designed polymer coated Sarnadisc Rhinobond Treadsafe to attach Sarnatherm® insulation, Sarnatherm® roof boards, or other Sika approved boards directly to the roof deck or structural purlins prior to the installation of the Sarnafil® S327 or Sikaplan® Fastened roof membrane. The membrane is field welded to the Sarnadisc Rhinobond Treadsafe by induction welding. It can also be used over non-compressible insulation to limit thermal bridging.

**Sarnabar**

Heavy-duty "U" shaped, roll formed steel bar specifically designed to resist the static and dynamic loads produced during strong winds. Sarnabar distributes the loads uniformly across a series of fastening points and maximizes pull-out and back-out resistance.

**Sarnastop**

Aluminum alloy bar used with approved fasteners to clamp Sarnafil® or Sikaplan® membrane to the roof deck, walls, curbs, and other details.

**Sarnafastener #14**

Threaded drill point fastener used within Sarnafil® roof systems to attach Sarnafil S327 Membrane or Sarnatherm® insulation, Sarnatherm roof boards, gypsum roof boards, or other Sika approved boards into structural concrete (63-68 kg/m<sup>2</sup> (140-150 lb/ft)), wood plank (minimum 38 mm (1-½ in)), or plywood sheathing (minimum 50 mm (2 in)).

**Sarnafastener #15 XP**

Threaded drill point fastener used within Sarnafil® roof systems to attach Sarnafil® S327 Membrane, Sikaplan Fastened Membrane or Sarnatherm® insulation, Sarnatherm® roof boards, gypsum roof boards, or other Sika approved boards into steel decking (18-24 gauge), wood planks (minimum 1-½ in), or plywood sheathing (minimum ½ in).

**Fastener Retrodriller**

Threaded drill point fastener used to attach Sarnafil® S327 Membrane or Sikaplan® Fastened Membrane into structural steel purlins (12-16 gauge).

**Fastener CD-10**

Non-threaded fastener, driven with a hammer used to fasten Sarnafil® S327 or Sikaplan® membranes, Sarnatherm® insulation, Sarnatherm® roof panels, gypsum boards and any other Sika-approved panel or accessory into the structural concrete deck.

**COVER BOARD / THERMAL BARRIER****Sarnatherm® Roof Board A-III**

Rigid closed cell polyisocyanurate insulation board with coated glass facer which is suitable for use in new construction and re-roofing with Sarnafil® or Sikaplan® membranes. Sarnatherm® Roof Board A-III has a compressive strength of 551 kPa (80 psi).

**DensDeck® Prime Roof Board**

Thermal barrier and cover board used in Sarnafil® and Sikaplan® roof systems that has been enhanced to provide a broader compatibility and higher performance with Sarnafil® adhesives and self adhered vapour retarders.

**DensDeck® Roof Board**

Thermal barrier and cover board used in Sarnafil® and Sikaplan® roof systems.

**MEMBRANE ADHESIVES****Sarnacol®-2170 R**

Solvent-based, reactivating adhesive used for Sarnafil® or Sikaplan® Adhered roofing systems. Sarnacol®-2170 R can also be used within any Sika approved roofing system for adhering flashings. The adhesive is formulated for adhering membranes in a two-step process to clean, dry, surfaces with no slope restrictions.

**Sarnacol®-2170 VC**

Low VOC, solvent-based, reactivating adhesive used for Sarnafil® or Sikaplan® Adhered roofing systems. Sarnacol®-2170 VC Adhesive can also be used within any Sika approved roofing system for adhering flashings. The adhesive is formulated for adhering membranes in a two-step process to clean, dry, surfaces with no slope restrictions.

**Sarnacol®-2121**

Water-based, dispersion adhesive used for Sarnafil® or Sikaplan® Adhered roofing systems. Sarnacol®-2121 is formulated for adhering membranes as a wet lay in to clean, dry, water absorbent, horizontal roof surfaces with slopes up to 2/12 (10°).

**Sarnacol® Feltback OM and AD Membrane Adhesive**

Two components foamable polyurethane adhesives that is applied in one step and sets up in minutes. Sarnacol® AD and OM Feltback Membrane Adhesive is used to bond Sarnafil® and Sikaplan® Adhered Feltback membranes to approved substrates.

## **MEMBRANES**

*Actual performance proven in the field over time is the only true test of a roofing system's quality. Billions of square feet of Sika Sarnafil® membrane have performed with distinction **over the past 55+** years in climates of every description. Many installations are still performing after 30 years or more of service. Sarnafil® G and S membranes are available in a variety of guaranteed thicknesses (1.5, 1.8 and 2.0 mm (60, 72 and 80 mil)), and both standard and custom colours.*

### **Sarnafil® Membranes**

*All Sarnafil® branded membranes are guaranteed to meet or exceed the labelled value thickness when tested according to ASTM D751, e.g. the thickness of 1.5 mm (60 mil) S or G membrane is 1.5 mm (60 mil) minimum.*

#### **Sarnafil® S327 EnergySmart Roof Membrane (available in Feltback, textured)**

##### **Min Thickness**

PVC thermoplastic membrane produced with an integral polyester reinforcement for high strength, is highly reflective, with heat-weldable seams, and a unique lacquer coating applied to the top of the membrane to reduce dirt pick up. Sarnafil® S327 is a polyester reinforcement specifically designed for mechanically-attached systems, S327 is exceptional at resisting membrane tearing at the high point loads imposed on mechanically-attached roof systems.

#### **Sarnafil® G410 EnergySmart Roof Membrane (available in Feltback, textured)**

PVC thermoplastic membrane produced with an integral fibreglass mat reinforcement for excellent dimensional stability, with heat-weldable seams, and a unique lacquer coating applied to the top of the membrane to reduce dirt pick up. Sarnafil® G410 is specifically designed for adhered systems, they deliver exceptional dimensional stability for adhered roof systems

#### **Sarnafil® G410 SA Roof and Flashing Membrane**

PVC thermoplastic membrane with a factory applied pressure sensitive adhesive backing and siliconized polyethylene release liner. It is produced with an integral fibreglass mat reinforcement for excellent dimensional stability, is highly reflective, with heat-weldable seams, and a unique lacquer coating applied to the top of the membrane to reduce dirt pick up.

#### **Sarnafil® G459**

Membrane specially formulated for application by adherence directly to asphalt or other contaminated surfaces and for direct exposure to the weather. Sarnafil® G459 is heat-weldable and manufactured with an integral fibre glass mat reinforcement for dimensional stability. It can also be used as a flashing membrane within Sarnafil® and Sikaplan® roofing and systems. Sarnafil® G459 is also used in conjunction with Sikaflex®-11 FC or Sarnafiller adhesives to construct sub-membrane waterstops within the Sarnafil® grid PMR system.

#### **Sarnafil® G476**

Heat-weldable, thermoplastic membrane formulated with an integral fibreglass mat carrier sheet for dimensional stability. Sarnafil® G476 is used in PMR applications receiving overburden.

**Sarnafil® G476 SA**

60 mil, heat-weldable PVC thermoplastic membrane formulated with a foam backing coated with a pressure-sensitive adhesive and an integral fibreglass mat carrier sheet for dimensional stability. Sarnafil® G476 SA is used in PMR applications receiving overburden and can be applied directly to concrete or other approved substrates.

**Sikaplan® Membranes**

*All Sikaplan® branded membranes are a nominal thickness ( $\pm 10\%$ ) of the labelled value thickness as defined in the ASTM Standard D4434.*

**Sikaplan® Fastened EnergySmart Roof Membrane (available in 85 g, 255 g (3 oz, 9 oz) and Fire Resistant Feltback)**

PVC thermoplastic membrane produced with a polyester scrim reinforcement.

**Sikaplan® Adhered EnergySmart Roof Membrane (available in Feltback)**

PVC thermoplastic membrane produced with an integral fibreglass mat reinforcement.

**ACCESSORIES****Aluminum Tape**

Aluminum foil faced pressure sensitive taping, which allows for a separation barrier between contaminated/non-compatible materials and Sarnafil® or Sikaplan® membranes.

**Sikalastomer-65**

High-performance sealant tape with superior surface tack that remains elastic and is designed to bond to Sarnafil® or Sikaplan® membranes and a variety of metals

**Sarnaclad**

PVC-coated, heat-weldable sheet metal capable of being formed into a variety of shapes and profiles.

**Sarnacircle**

Sarnacircles are required on T joints welding membranes greater than 1.5mm (60 mil) thick or when using the Speed nozzle with a Speedweld setting on a Sarnamatic welder.

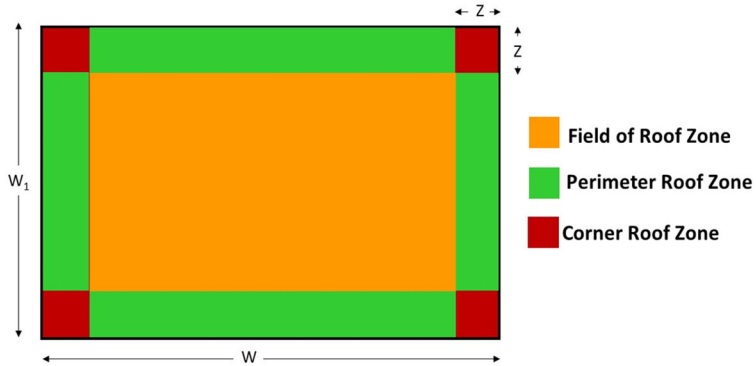
**Prefabricated Detail Flashings**

Sika® Sarnafil® has a large selection of prefabricated, standard flashings, inside corners, outside corners and custom flashings for your convenience. Please contact your local Sale Representative or see our website for a full range of products.

## 9. GUIDES

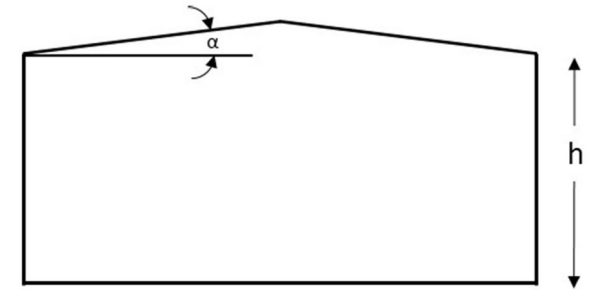
## a. Roof Zone Guide

## LOW SLOPE



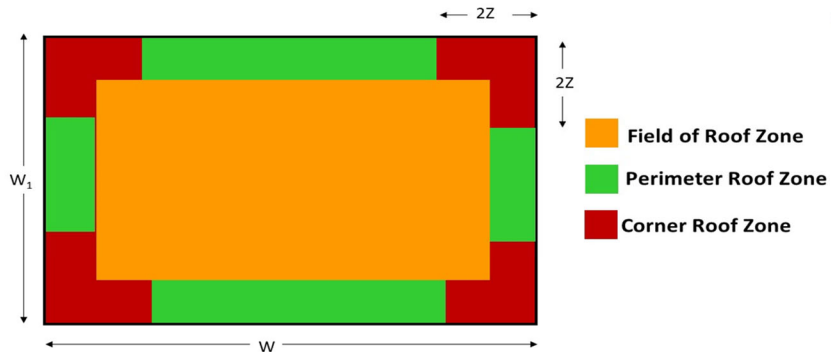
## Criteria:

- $h \leq 65$  ft.
- slope:  $0^\circ \alpha \leq 7^\circ$   
( $0 \alpha 1.5/12$ )
- $h < W_1$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise



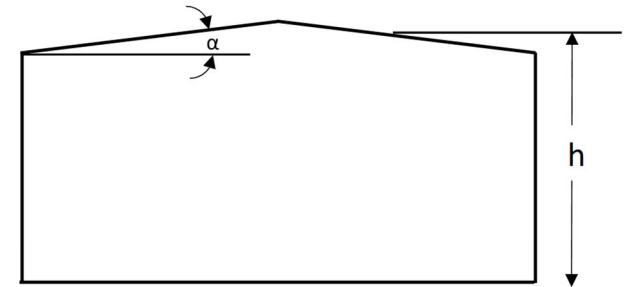
Calculation:  $Z = \text{Lessor of: } 40\% \text{ of the Roof Height } (h) \text{ or } 10\% \text{ of the lessor Building Plan (NOT ROOF) dimension } (W_1), \text{ but not less than } 4\% \text{ of } W_1$

## HIGH RISE



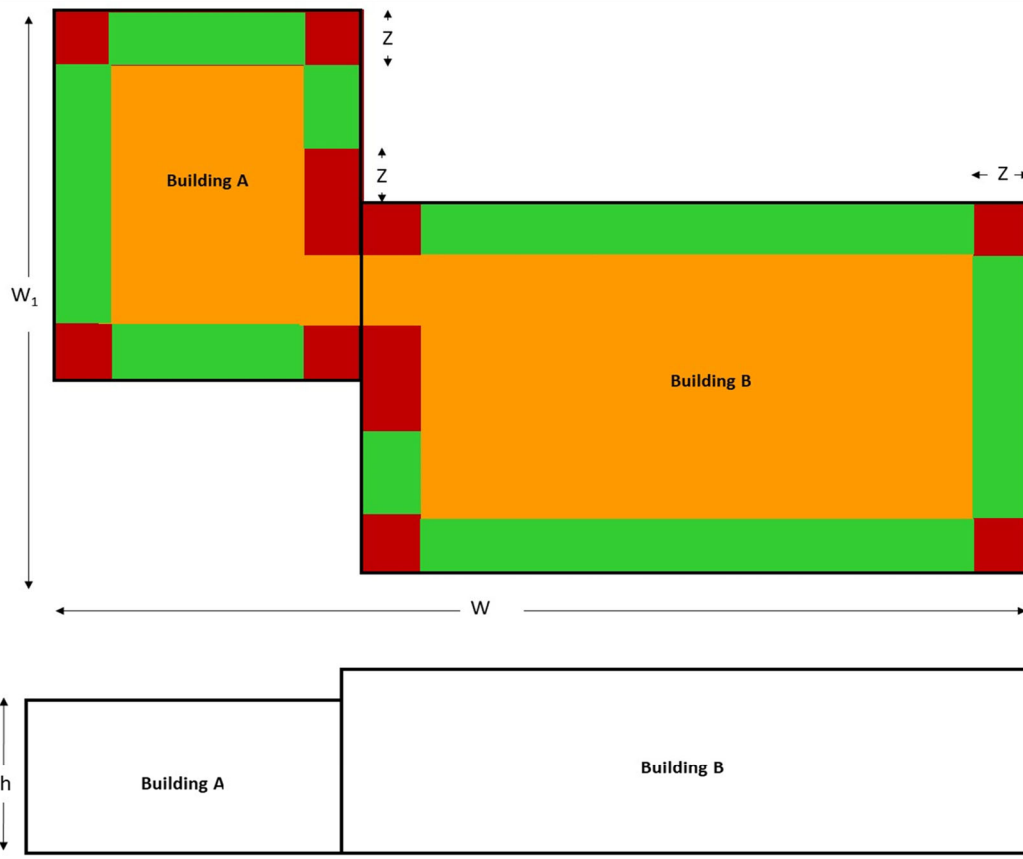
## Criteria:

- $h > 65$  ft.
- or if  $h > W_1$



Calculation:  $Z = 10\% \text{ of the greater Building Plan (NOT ROOF) dimension } (W)$

## STEPPED 1



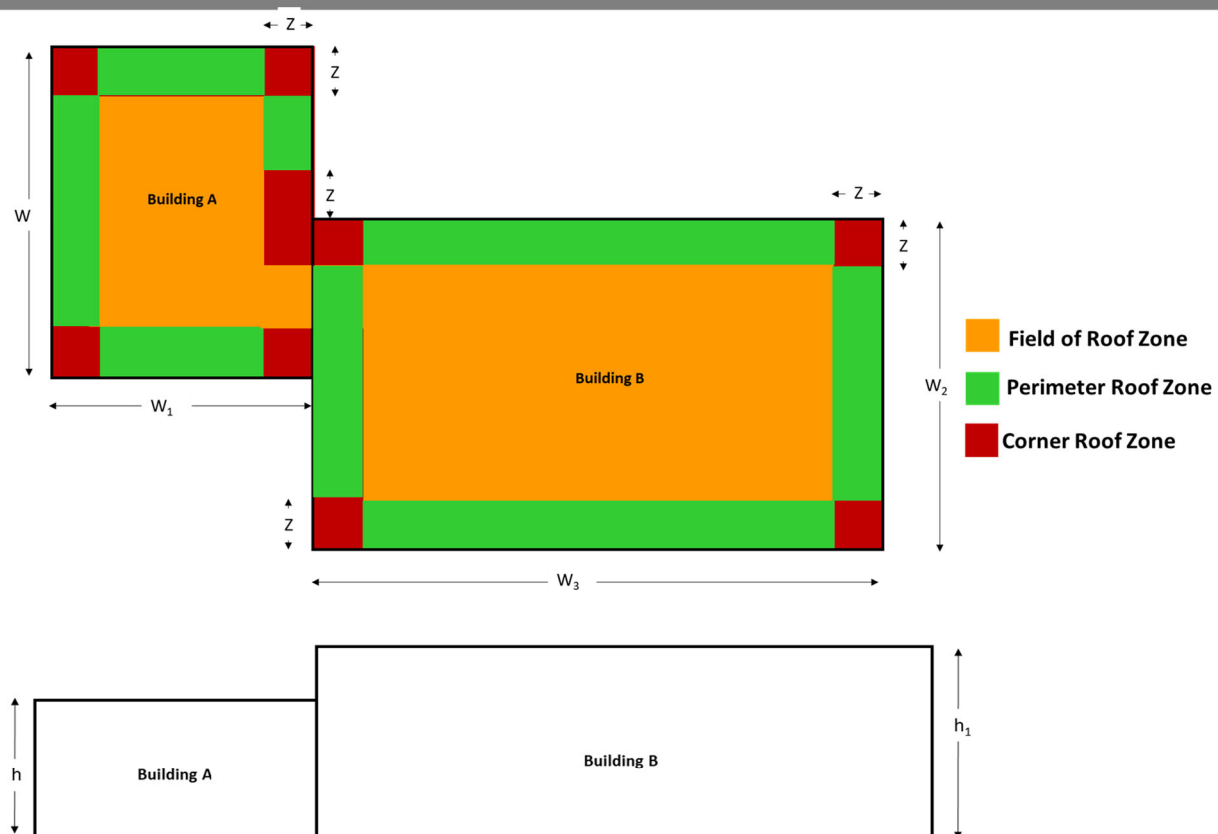
## Criteria:

- $h < 65$  ft.
- slope:  $0^\circ \alpha < 7^\circ$  ( $0 \alpha 1.5/12$ )
- Elevation of Building B is less than 10 ft. above the Elevation of Building A ( $h_1 - h < 10$ ft.)
- $h < W_1$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise

- Field of Roof Zone
- Perimeter Roof Zone
- Corner Roof Zone

Calculation:  $Z = \text{Lessor of: } 40\% \text{ of the Roof Height } (h_1) \text{ or } 10\% \text{ of the lessor Building Plan (NOT ROOF) dimension } (W_1), \text{ but not less than } 4\% \text{ of } W_1$

## STEPPED 2



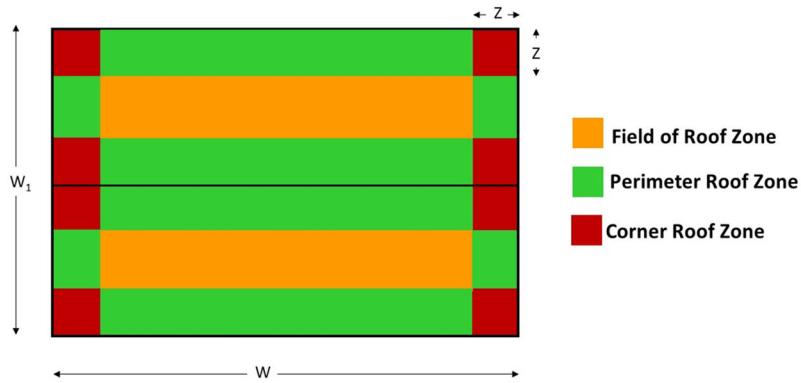
## Criteria:

- $h < 65$  ft.
- slope:  $0^\circ \alpha < 7^\circ$  ( $0 \alpha 1.5/12$ )
- Elevation of Building B is greater than 10 ft. above the Elevation of Building A ( $h_1 - h > 10$ ft.)
- $h < W_1$  (lessor Building Plan dimension)
- $h_1 < W_2$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise
- if  $h_1 > W_2$  refer to High Rise

Note: Z is to be calculated separately for Building A and Building B.

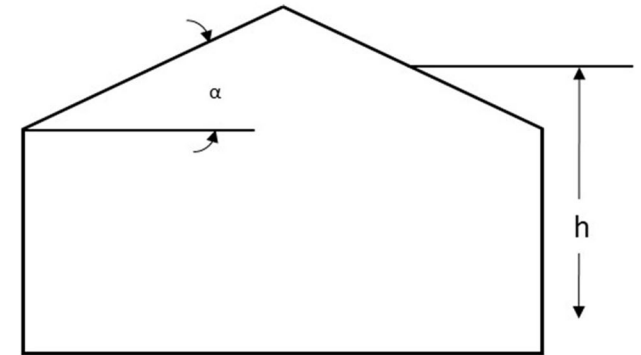
Building A, Calculation:  $Z = \text{Lessor of: } 40\% \text{ of the Roof Height } (h) \text{ or } 10\% \text{ of the lessor Building Plan (NOT ROOF) dimension } (W_1), \text{ but not less than } 4\% \text{ of } W_1.$

## GABLE



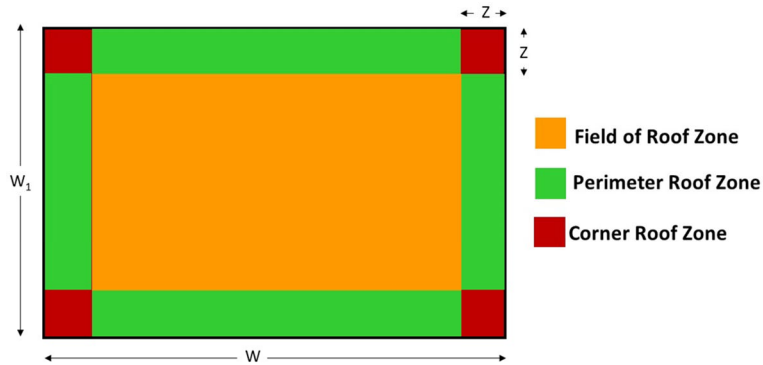
### Criteria:

- $h < 65$  ft.
- slope:  $7^\circ \alpha < 45^\circ$   
(1.5/12  $\alpha$  12/12)
- $h < W_1$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise



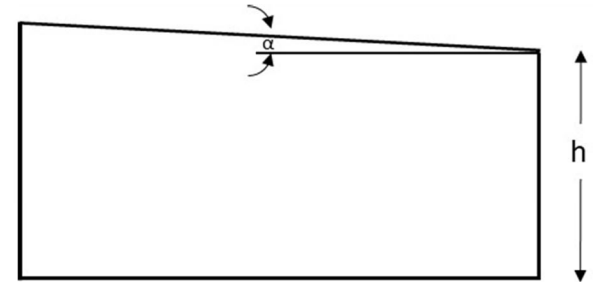
Calculation:  $Z = \text{Lessor of: } 40\% \text{ of the Roof Height } (h) \text{ or } 10\% \text{ of the lessor Building Plan (NOT ROOF) dimension } (W_1), \text{ but not less than } 4\% \text{ of } W_1$

## MONOSLOPE 1



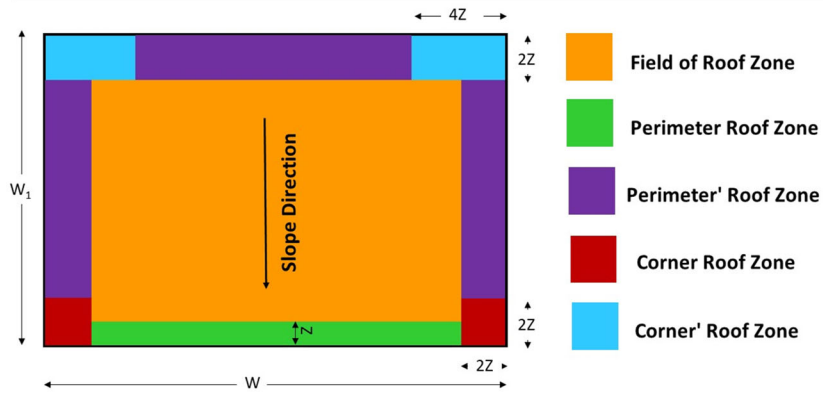
### Criteria:

- $h < 65$  ft.
- slope:  $0^\circ \alpha < 3^\circ$   
(0  $\alpha$  .62/12)
- $h < W_1$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise



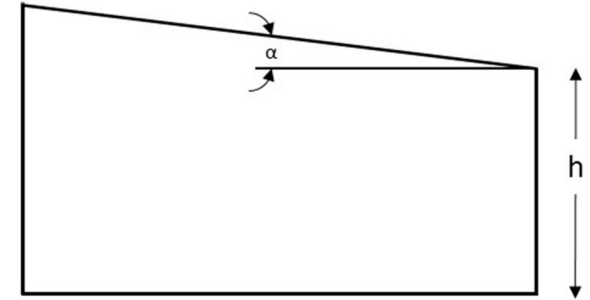
Calculation:  $Z = \text{Lessor of: } 40\% \text{ of the Roof Height } (h) \text{ or } 10\% \text{ of the lessor Building Plan (NOT ROOF) dimension } (W_1), \text{ but not less than } 4\% \text{ of } W_1$

## MONOSLOPE 2



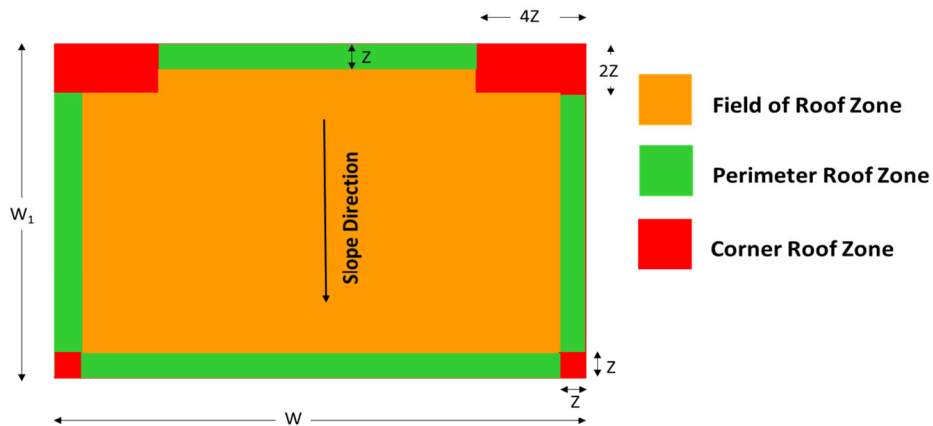
### Criteria:

- $h < 65$  ft.
- slope:  $3^\circ \alpha < 10^\circ$   
(.6/12  $\alpha$  2.1/12)
- $h < W_1$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise



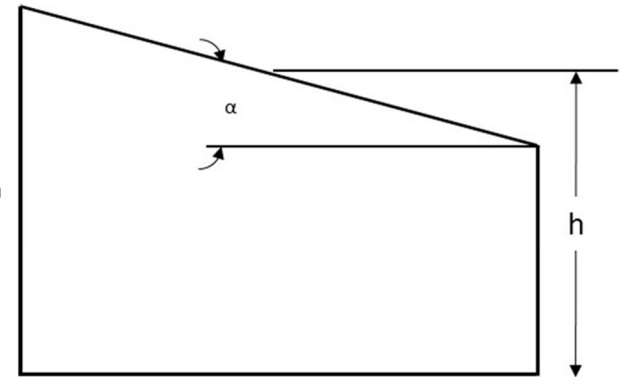
Calculation:  $Z$  = Lessor of: 40 % of the Roof Height ( $h$ ) or 10 % of the lessor Building Plan (NOT ROOF) dimension ( $W_1$ ), but not less than 4 % of  $W_1$

## MONOSLOPE 3



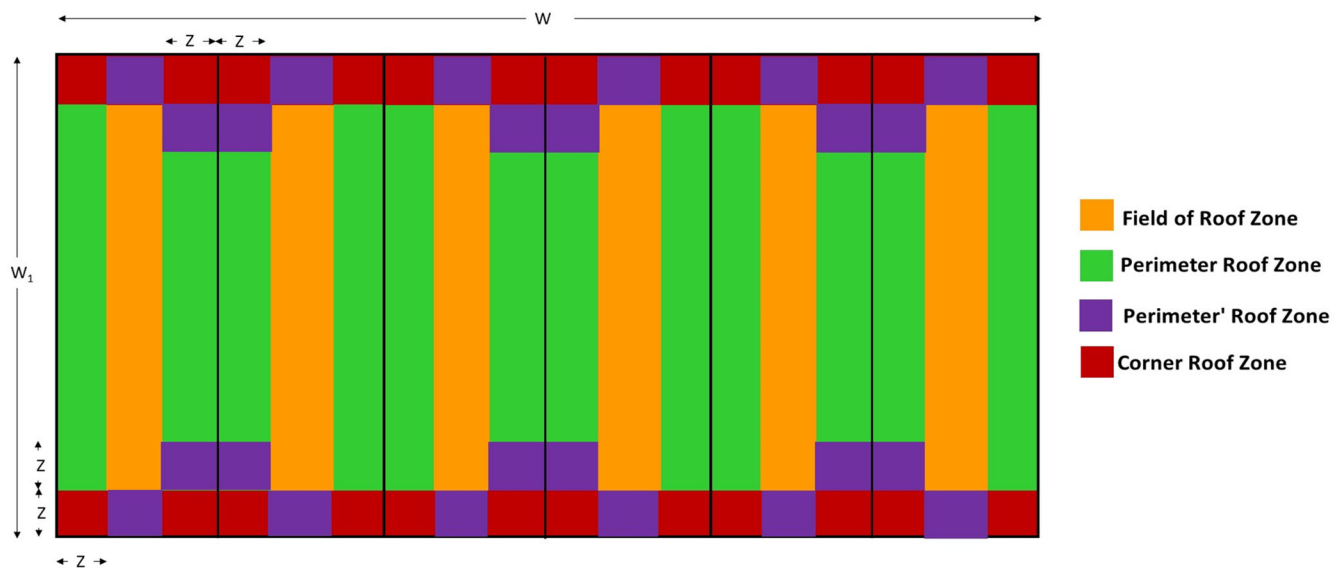
### Criteria:

- $h < 65$  ft.
- slope:  $10^\circ \alpha < 30^\circ$   
(2.1/12  $\alpha$  6.9/12)
- $h < W_1$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise



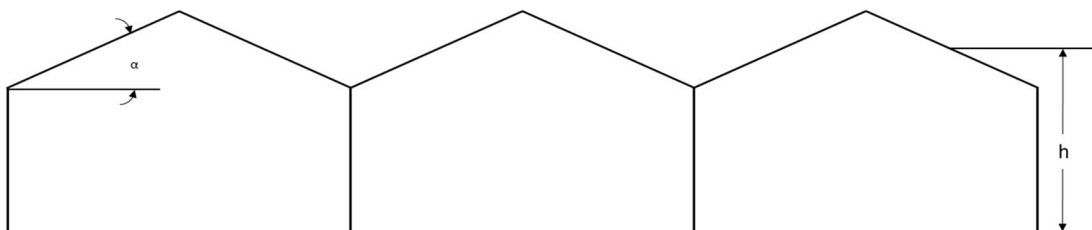
Calculation:  $Z$  = Lessor of: 40 % of the Roof Height ( $h$ ) or 10 % of the lessor Building Plan (NOT ROOF) dimension ( $W_1$ ), but not less than 4 % of  $W_1$

## MULTISPAN



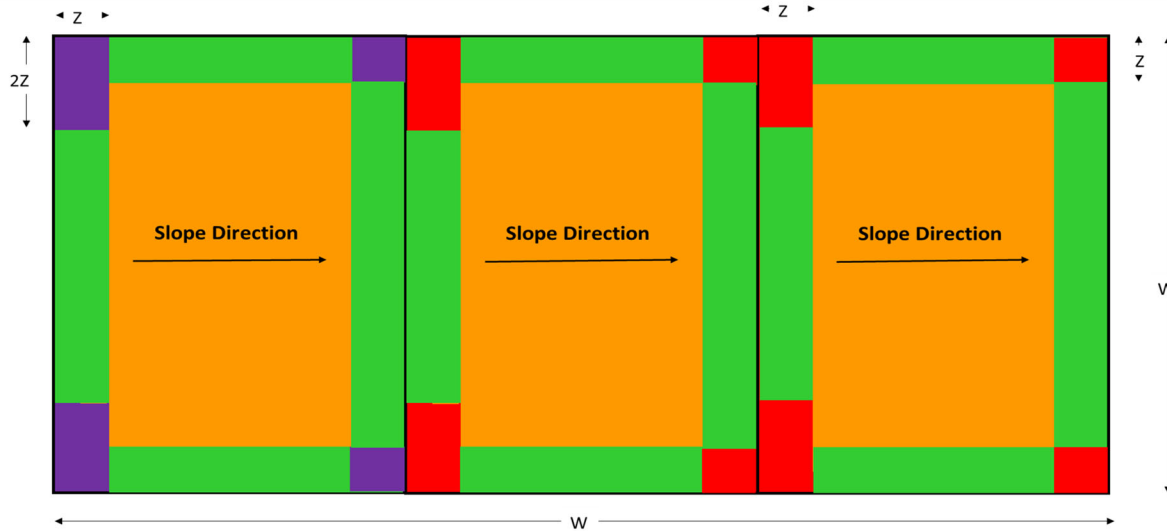
## Criteria:

- $h < 65$  ft.
- slope:  $10^\circ \alpha < 45^\circ$   
(2.1/12  $\alpha$  12/12)
- $h < W_1$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise



Calculation:  $Z =$  Lessor of: 40 % of the Roof Height ( $h$ ) or 10 % of the lessor Building Plan (NOT ROOF) dimension ( $W_1$ ), but not less than 4 % of  $W_1$

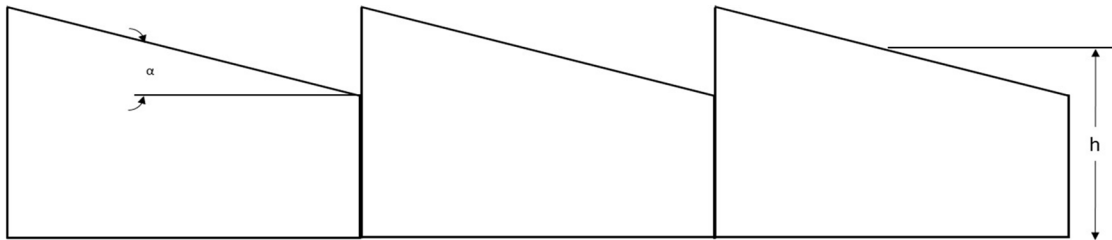
## SAWTOOTH



- Field of Roof Zone**
- Perimeter Roof Zone**
- Corner² Roof Zone**
- Corner¹ Roof Zone**

### Criteria:

- $h \leq 65$  ft.
- slope:  $10^\circ \alpha \leq 30^\circ$   
(2.1/12  $\alpha$  6.9/12)
- $h < W_1$  (lessor Building Plan dimension)
- if  $h > W_1$  refer to High Rise



Calculation:  $Z = \text{Lessor of: } 40\% \text{ of the Roof Height (h) or } 10\% \text{ of the lessor Building Plan (NOT ROOF) dimension (W}_1\text{), but not less than } 4\% \text{ of W}_1$

## b. Roof System Attachment Guide

| MECHANICALLY ATTACHED SYSTEMS |                                                 |                              |                            |                        |                         |                                                     |                        |            |                                                                                                                              |                                                               |
|-------------------------------|-------------------------------------------------|------------------------------|----------------------------|------------------------|-------------------------|-----------------------------------------------------|------------------------|------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| System                        | Deck <sup>3</sup>                               | Thermal Barrier <sup>4</sup> | Vapour Retarder            | Insulation             | Cover Board             | Membrane                                            | Field of Roof Pressure | Zones      | Attachment                                                                                                                   | Wind Uplift Approvals                                         |
| Rhinobond                     | Structural Concrete, Steel, Wood Plank,         | Optional                     | Any Sika® <sup>(1,2)</sup> | Min 2" Sarnatherm (CG) | Optional <sup>(5)</sup> | Sikaplan® Fastened or Sarnafil®                     | 45 psf                 | Field:     | 6 per 4' x 8' board                                                                                                          | CSA A123.21 (specific test reports available upon request)    |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Perimeter: | 8 per 4' x 8' board                                                                                                          |                                                               |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Corner:    | 14 per 4' x 8' board                                                                                                         |                                                               |
| Rhinobond                     | Structural Concrete, Steel, Wood Plank,         | Optional                     | Any Sika® <sup>(1,2)</sup> | Min 2" Sarnatherm (CG) | Optional <sup>(5)</sup> | Sikaplan® Fastened or Sarnafil®                     | 60 psf                 | Field:     | 8 per 4' x 8' board                                                                                                          | CSA A123.21 (specific test reports available upon request)    |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Perimeter: | 12 per 4' x 8' board                                                                                                         |                                                               |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Corner:    | 16 per 4' x 8' board                                                                                                         |                                                               |
| Engineered                    | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® <sup>(1,2)</sup> | Min 2" Sarnatherm (CG) | Optional <sup>(5)</sup> | Sikaplan® Fastened or Sarnafil® S327 <sup>(6)</sup> | 45 psf                 | Field:     | Sarnabar spaced 72" o.c. & fastened 12" o.c.<br>Insulation/Cover Board fastened 1 per 4 sqft.                                | FM 4470 (specific roof Nav assemblies available upon request) |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Perimeter: | Sarnabar spaced 48" o.c. & fastened 12" o.c.<br>Insulation/Cover Board fastened 1 per 4 sqft.                                |                                                               |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Corner:    | Sarnabar spaced 36" o.c. & fastened 12" o.c.<br>Insulation/Cover Board fastened 1 per 4 sqft.                                |                                                               |
| Engineered                    | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® <sup>(1,2)</sup> | Min 2" Sarnatherm (CG) | Optional <sup>(5)</sup> | Sikaplan® Fastened or Sarnafil® S327 <sup>(6)</sup> | 60 psf                 | Field:     | Sarnabar spaced 72" o.c. & fastened 6" o.c.<br>Insulation/Cover Board fastened 1 per 4 sqft.                                 | FM 4470 (specific roof Nav assemblies available upon request) |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Perimeter: | Sarnabar spaced 48" o.c. & fastened 6" o.c.<br>Insulation/Cover Board fastened 1 per 4 sqft.                                 |                                                               |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Corner:    | Sarnabar spaced 36" o.c. & fastened 6" o.c.<br>Insulation/Cover Board fastened 1 per 4 sqft.                                 |                                                               |
| Sarnafast/Inseam              | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® <sup>(1,2)</sup> | Min 2" Sarnatherm (CG) | Optional <sup>(5)</sup> | Sikaplan® Fastened or Sarnafil® S327 <sup>(6)</sup> | 37.5psf                | Field:     | 10' sheet: fastened 12" o.c. inseam<br>Insulation/Cover Board fastened 1 per 4 sqft.                                         | CSA A123.21 (specific test reports available upon request)    |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Perimeter: | 5' sheet: fastened 12" o.c. inseam<br>Insulation/Cover Board fastened 1 per 4 sqft.                                          |                                                               |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Corner:    | Coverstrip (over fastener & plate attached 12" o.c.) between perimeter rows<br>Insulation/Cover Board fastened 1 per 4 sqft. |                                                               |
| Sarnafast/Inseam              | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® <sup>(1,2)</sup> | Min 2" Sarnatherm (CG) | Optional <sup>(5)</sup> | Sikaplan® Fastened or Sarnafil® S327 <sup>(6)</sup> | 60 psf                 | Field:     | 10' sheet: fastened 6" o.c. inseam<br>Insulation/Cover Board fastened 1 per 4 sqft.                                          | CSA A123.21 (specific test reports available upon request)    |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Perimeter: | 5' sheet: fastened 6" o.c. inseam<br>Insulation/Cover Board fastened 1 per 4 sqft.                                           |                                                               |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Corner:    | Coverstrip (over fastener & plate attached 6" o.c.) between perimeter rows<br>Insulation/Cover Board fastened 1 per 4 sqft.  |                                                               |
| Sarnafast                     | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® <sup>(1,2)</sup> | Min 2" Sarnatherm (CG) | Optional <sup>(5)</sup> | Sarnafil® S327 <sup>(6)</sup>                       | 30 psf                 | Field:     | 6.56' sheet: fastened 18" o.c. inseam<br>Insulation/Cover Board fastened 1 per 4 sqft.                                       | FM 4470 (specific roof Nav assemblies available upon request) |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Perimeter: | 6.56' sheet: fastened 12" o.c. inseam<br>Insulation/Cover Board fastened 1 per 4 sqft.                                       |                                                               |
|                               |                                                 |                              |                            |                        |                         |                                                     |                        | Corner:    | 6.56' sheet: fastened 6" o.c. inseam<br>Insulation/Cover Board fastened 1 per 4 sqft.                                        |                                                               |

## ADHERED SYSTEMS

| System                                              | Deck <sup>3</sup>                               | Thermal Barrier <sup>4</sup> | Vapour Retarder                 | Insulation                                                 | Cover Board                               | Membrane                                             | Field of Roof Pressure | Zones      | Attachment                                                                      | Wind Uplift Approvals                                      |
|-----------------------------------------------------|-------------------------------------------------|------------------------------|---------------------------------|------------------------------------------------------------|-------------------------------------------|------------------------------------------------------|------------------------|------------|---------------------------------------------------------------------------------|------------------------------------------------------------|
| Adhered - PARS - Mandatory Thermal Barrier Attached | Steel, Wood Plank, Plywood                      | Minimum 1/2" DensDeck Prime  | Vapour Retarder SA 31 or SA 106 | Min 2" Sarnatherm (CG) - maximum board size is 4ft. X 4ft. | Optional <sup>(5)</sup>                   | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 35 psf                 | Field:     | Thermal Barrier fastened at 1 per 4 sqft                                        | CSA A123.21 (specific test reports available upon request) |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 12" o.c. |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Perimeter: | Thermal Barrier fastened at 1 per 2.67 sqft                                     |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 6" o.c.  |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Corner:    | Thermal Barrier fastened at 1 per 1.33 sqft                                     |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 4" o.c.  |                                                            |
| Adhered - PARS - Mandatory Thermal Barrier Attached | Steel, Wood Plank, Plywood                      | Minimum 1/2" DensDeck Prime  | Vapour Retarder SA 31 or SA 106 | Min 2" Sarnatherm (CG) - maximum board size is 4ft. X 4ft. | Optional <sup>(5)</sup>                   | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 50 psf                 | Field:     | Thermal Barrier fastened at 1 per 2.67 sqft                                     | CSA A123.21 (specific test reports available upon request) |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 12" o.c. |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Perimeter: | Thermal Barrier fastened at 1 per 1.78 sqft                                     |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 6" o.c.  |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Corner:    | Thermal Barrier fastened at 1 per 1 sqft                                        |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 4" o.c.  |                                                            |
| Adhered - PARS - Mandatory Cover Board              | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® <sup>(1,2)</sup>      | Min 2" Sarnatherm (CG)                                     | 1/2" Sarnatherm HD or 1/4" DensDeck Prime | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 37.5 psf               | Field:     | Insulation Board fastened 1 per 4 sqft.                                         | CSA A123.21 (specific test reports available upon request) |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Cover Board adhered with Sarancol Low Rise Board Adhesive @ 12" o.c.            |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Perimeter: | Insulation Board fastened 1 per 2.67 sqft.                                      |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Cover Board adhered with Sarancol Low Rise Foam @ 12" o.c.                      |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Corner:    | Insulation/Cover Board fastened 1 per 1.78 sqft.                                |                                                            |
|                                                     |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Cover Board adhered with Sarancol Low Rise Foam @ 6" o.c.                       |                                                            |

## ADHERED SYSTEMS

| System                                         | Deck <sup>3</sup>                               | Thermal Barrier <sup>4</sup> | Vapour Retarder                 | Insulation                                                 | Cover Board                               | Membrane                                             | Field of Roof Pressure | Zones      | Attachment                                                                      | Wind Uplift Approvals                                      |
|------------------------------------------------|-------------------------------------------------|------------------------------|---------------------------------|------------------------------------------------------------|-------------------------------------------|------------------------------------------------------|------------------------|------------|---------------------------------------------------------------------------------|------------------------------------------------------------|
| Adhered - PARS - Mandatory Cover Board         | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® (1,2)                 | Min 2" Sarnatherm (CG)                                     | 1/2" Sarnatherm HD or 1/4" DensDeck Prime | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 35 psf                 | Field:     | Insulation/Cover Board fastened 1 per 4 sqft.                                   | CSA A123.21 (specific test reports available upon request) |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Perimeter: | Insulation/Cover Board fastened 1 per 2.67 sqft.                                |                                                            |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Corner:    | Insulation/Cover Board fastened 1 per 1.33 sqft.                                |                                                            |
| Adhered - PARS - Mandatory Cover Board         | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® (1,2)                 | Min 2" Sarnatherm (CG)                                     | 1/2" DensDeck Prime                       | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 50 psf                 | Field:     | Insulation/Cover Board fastened 1 per 4 sqft.                                   | CSA A123.21 (specific test reports available upon request) |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Perimeter: | Insulation/Cover Board fastened 1 per 2.67 sqft.                                |                                                            |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Corner:    | Insulation/Cover Board fastened 1 per 1.33 sqft.                                |                                                            |
| Adhered - PARS - No Cover Board                | Structural Concrete, Steel, Wood Plank, Plywood | Optional                     | Any Sika® (1,2)                 | Min 2" Sarnatherm (CG)                                     | No cover Board                            | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 40 psf                 | Field:     | Insulation/Cover Board fastened 1 per 4 sqft.                                   | CSA A123.21 (specific test reports available upon request) |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Perimeter: | Insulation/Cover Board fastened 1 per 2.67 sqft.                                |                                                            |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Corner:    | Insulation/Cover Board fastened 1 per 1.33 sqft.                                |                                                            |
| Adhered - AARS - No Thermal Barrier Steel Deck | Steel                                           | N.A.                         | Vapour Retarder SA 31 or SA 106 | Min 2" Sarnatherm (CG) - maximum board size is 4ft. X 4ft. | Optional <sup>(5)</sup>                   | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 35 psf                 | Field:     | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 12" o.c. | CSA A123.21 (specific test reports available upon request) |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Perimeter: | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 6" o.c.  |                                                            |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Corner:    | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 4" o.c.  |                                                            |
| Adhered - AARS - Thermal Barrier Steel Deck    | Steel                                           | Minimum 1/2" DensDeck Prime  | Vapour Retarder SA 31 or SA 106 | Min 2" Sarnatherm (CG) - maximum board size is 4ft. X 4ft. | 1/2" Sarnatherm HD or 1/4" DensDeck Prime | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 60 psf                 | Field:     | Thermal Barrier with Sarnacol Low Rise Board Adhesive @ 6" o.c.                 | CSA A123.21 (specific test reports available upon request) |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 12" o.c. |                                                            |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Perimeter: | Thermal Barrier with Sarnacol Low Rise Board Adhesive @ 6" o.c.                 |                                                            |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 6" o.c.  |                                                            |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        | Corner:    | Thermal Barrier with Sarnacol Low Rise Board Adhesive @ 6" o.c.                 |                                                            |
|                                                |                                                 |                              |                                 |                                                            |                                           |                                                      |                        |            | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 4" o.c.  |                                                            |

## ADHERED SYSTEMS

| System                         | Deck <sup>3</sup>   | Thermal Barrier <sup>4</sup> | Vapour Retarder                         | Insulation                                                 | Cover Board             | Membrane                                             | Field of Roof Pressure | Zones      | Attachment                                                                      | Wind Uplift Approvals                                         |
|--------------------------------|---------------------|------------------------------|-----------------------------------------|------------------------------------------------------------|-------------------------|------------------------------------------------------|------------------------|------------|---------------------------------------------------------------------------------|---------------------------------------------------------------|
| Adhered - AARS - Concrete Deck | Structural Concrete | N.A.                         | Vapour Retarder SA 31, SA 106 or TA 138 | Min 2" Sarnatherm (CG) - maximum board size is 4ft. X 4ft. | Optional <sup>(5)</sup> | Sikaplan® Adhered or Sarnafil® G410 <sup>(6,7)</sup> | 90 psf                 | Field:     | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 12" o.c. | FM 4470 (specific roof Nav assemblies available upon request) |
|                                |                     |                              |                                         |                                                            |                         |                                                      |                        | Perimeter: | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 6" o.c.  |                                                               |
|                                |                     |                              |                                         |                                                            |                         |                                                      |                        | Corner:    | Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 4" o.c.  |                                                               |

**General Notes:**

Contact Sika Technical for specific testing requirements. FM 4470 specific Roof Nav assemblies are also available for certain systems tested to CSA A123.21

PARS = Partially Adhered Roof System (some components below the membrane are mechanically attached), AARS = All Adhered Roof System (All components are adhered)

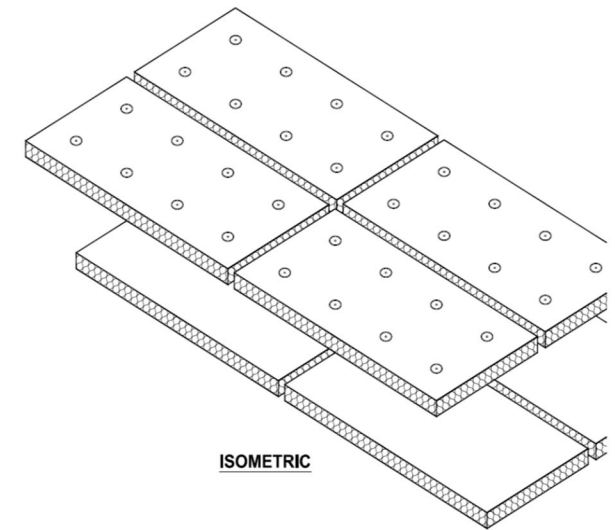
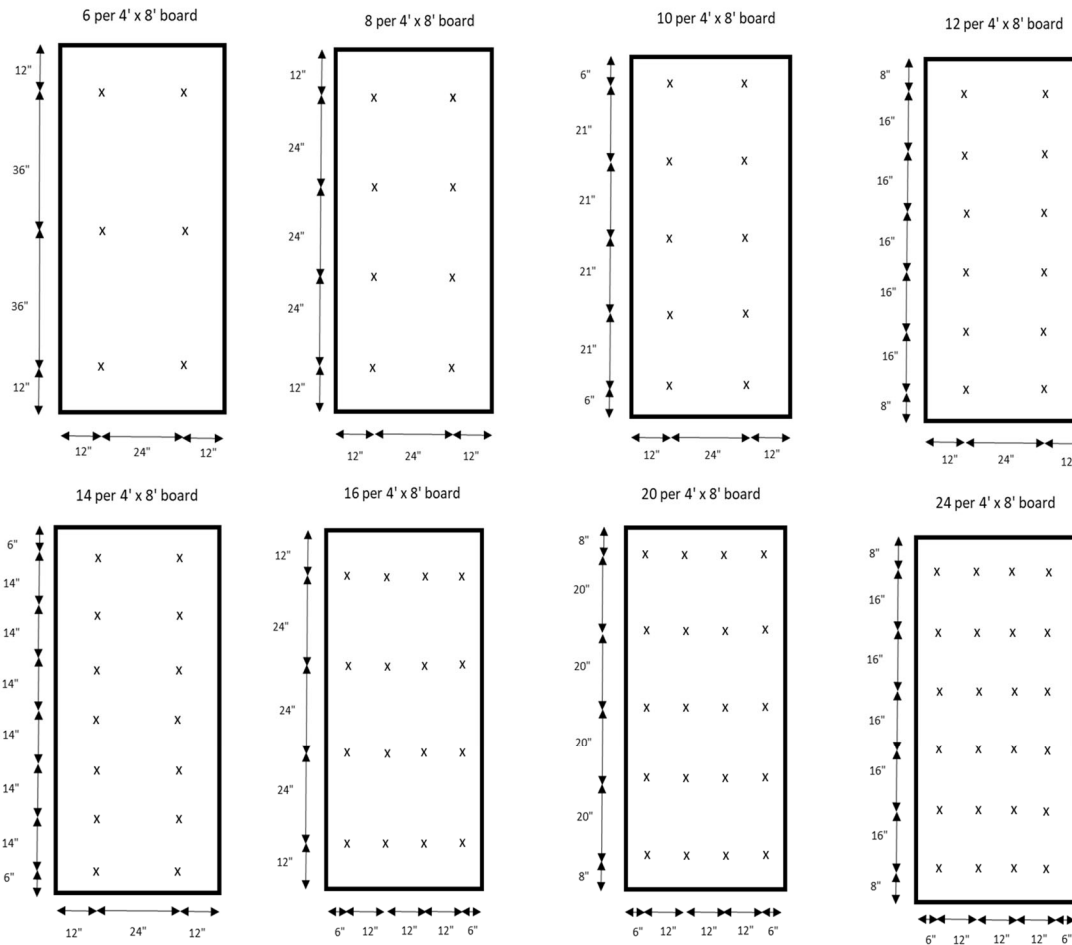
Specific Notes:

1. Vapour Retarder TA 138 only used on concrete decks
2. Vapour Retarder SA 31 and SA 106 may require a min 1/2" Thermal Barrier except on concrete decks
3. Structural Concrete (min. 3000 psi), Steel (min. 22Ga 33.4 KSI), Wood Plank (min. 2"), Plywood (min. 3/4")
4. Minimum Thermal Barrier is 1/2" DensDeck (Prime)
5. Minimum Cover Board is 1/2" Sarnatherm HD Roof Board or 1/4" DensDeck (Prime)
6. Minimum membrane thickness is 60 mil
7. Sikaplan® Adhered (Feltback), Sarnafil® G410 (Feltback) with Sarnacol 2170R, 2170VC & 2121 adhesive or Sarnafil® G410 SA

For up to date and accurate information, please consult the current Product Data Sheet for all Sika products at [www.sika.ca](http://www.sika.ca)

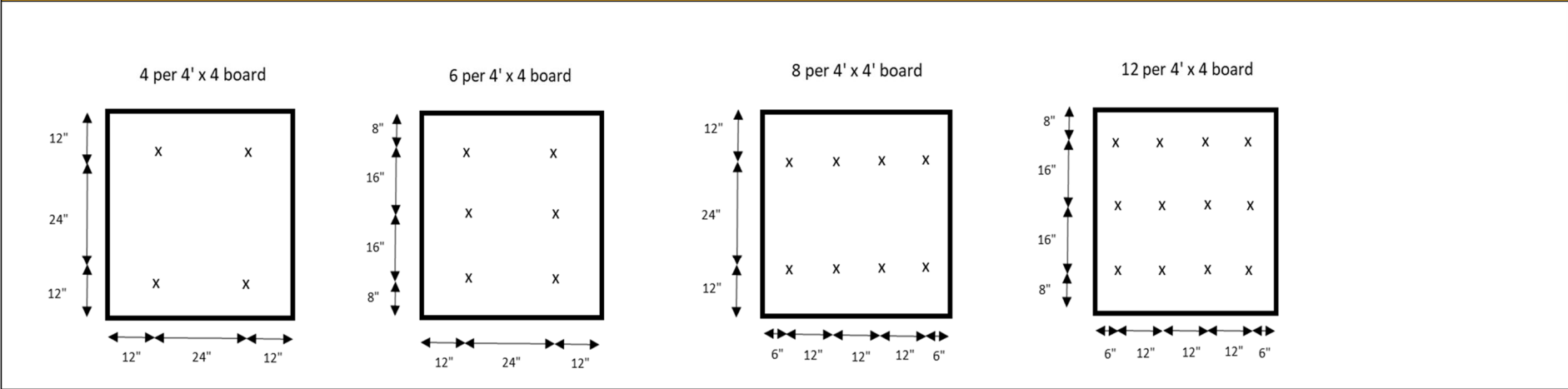
c. Mechanical Attachment Guide- Rhinobond

## RHINO BOND 4 FT. X 8 FT. BOARDS



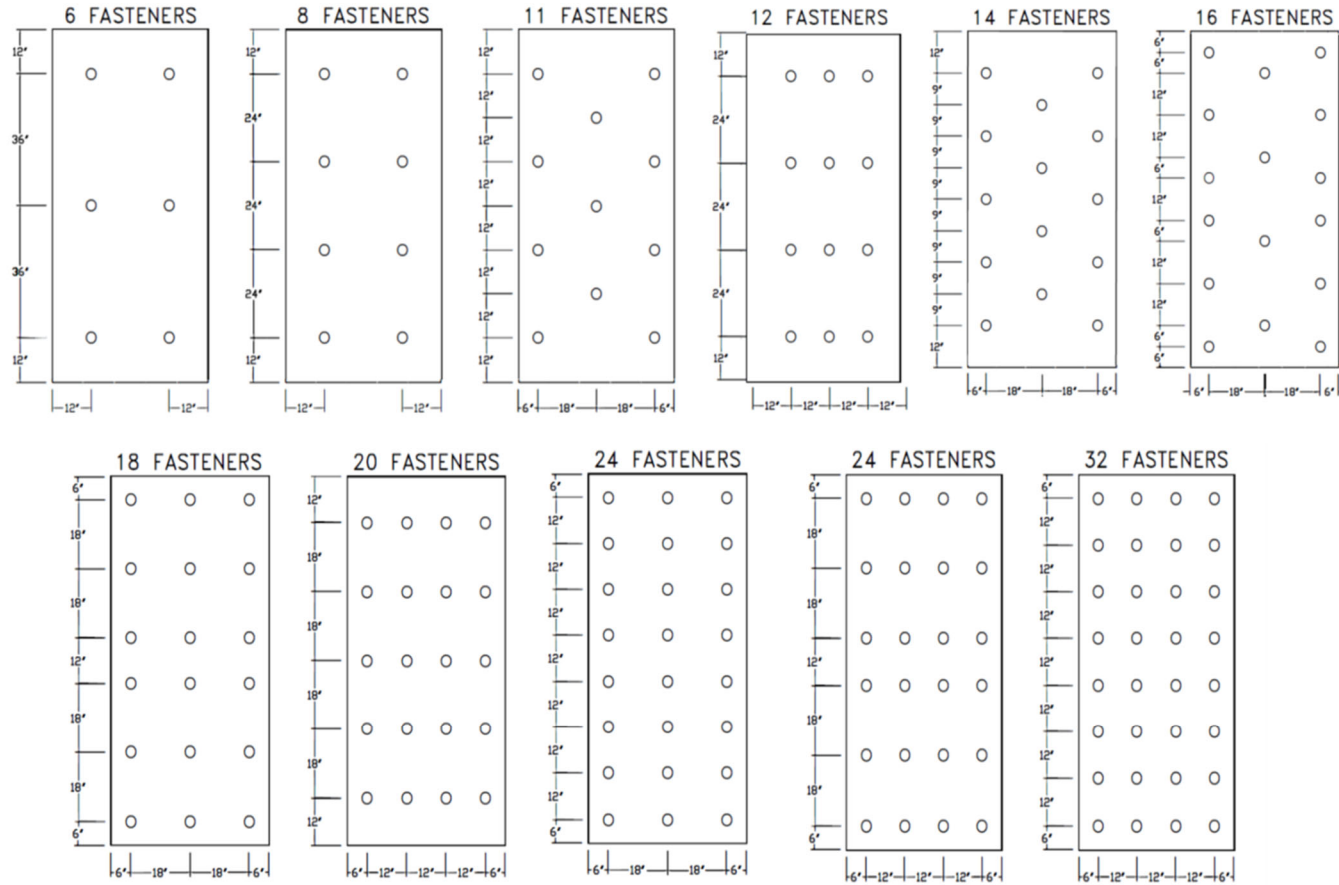
The top layer of the insulation is to be soldered rather than staggered as with other systems. The top layer is offset from the bottom layer.

RHINO BOND 4 FT. X 4 FT. BOARDS

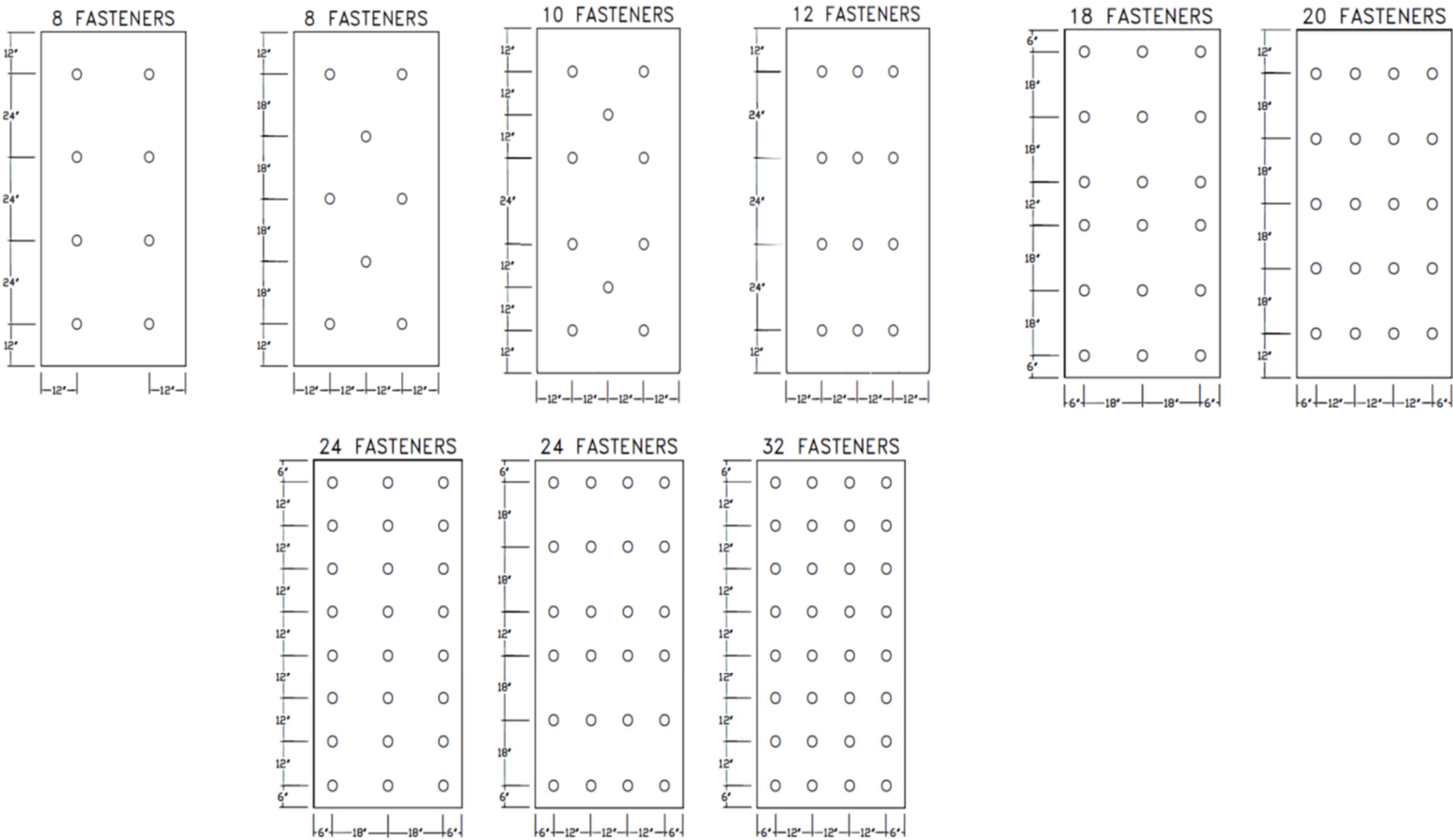


d. Attachment Guide – Boards

## SARNATHERM 4 FT. X 8 FT. BOARDS



DENSDECK (PRIME) 4 FT. X 8FT. BOARDS



## e. Vapour Retarder Selection Guide

| Sheet Products                                                                 | Sarnavap 6                          | Sarnavap 10                               | Vapor Retarder SA 31                                                         | Vapor Retarder SA 106                                                        | Vapor Retarder TA 138                                            |
|--------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------|
| Roll Size                                                                      | 20' x 100' (6.9m x 30.5m)           | 20' x 100' (6.9m x 30.5m)                 | 44.8" x 133.8' (1.14m x 40.8m)                                               | 39.4" x 49.2' (1m x 15m)                                                     | 39.4" x 32.8' (1m x 10m)                                         |
| Application Type                                                               | Loose laid                          | Loose laid                                | Self-Adhered                                                                 | Self-Adhered                                                                 | Torch Applied                                                    |
| Temperature at Application                                                     | Any                                 | Any                                       | 14°F (-10°C) & above                                                         | 40°F (-5°C) & above                                                          | Any                                                              |
| Substrates <sup>1</sup>                                                        | Any                                 | Any                                       | Concrete, Steel <sup>2</sup> , Approved Gypsum Boards, Plywood               | Concrete, Steel <sup>2</sup> , Approved Gypsum Boards, Plywood               | Concrete                                                         |
| Primer                                                                         | None                                | None                                      | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB | Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB | Vapor Retarder Primer TA                                         |
| Seams                                                                          | Sikalastomer 65                     | Sikalastomer 66                           | Self-Adhered                                                                 | Self-Adhered Side Laps, Heat Welded End Laps                                 | Torch Applied                                                    |
| Temporay Roof                                                                  | No                                  | No                                        | 2-months <sup>3</sup>                                                        | 6-months                                                                     | 6-months                                                         |
| WV Permeance E96: perms (ng/[Pa·s·m <sup>2</sup> ])                            | .263 (15)                           | 0.019 (1.07)                              | 0.018 (1.04)                                                                 | 0.010 (0.543)                                                                | 0.006 (0.320)                                                    |
| WV Transmission E96: g/[hr·m <sup>2</sup> ] (g/[24hr·m <sup>2</sup> ])         | NA                                  | 0.0054 (0.1304)                           | 0.0070 (0.168)                                                               | 0.0099 (0.2384)                                                              | 0.0055 (0.1312)                                                  |
| Air Flow Rate At 75 Pa E2178: L/[s·m <sup>2</sup> ] (L/[Pa·s·m <sup>2</sup> ]) | NA                                  | <0.0002 (<0.000008)                       | <0.0003 (<0.000012)                                                          | 0.0004 (0.000005)                                                            | 0.0004 (0.000005)                                                |
| Roof Board Application                                                         | Mechanically Attached or Loose Laid | Mechanically Attached or Loose Laid       | Adhered, Mechanically Attached or Loose Laid                                 | Adhered, Mechanically Attached or Loose Laid                                 | Adhered, Mechanically Attached or Loose Laid                     |
| Primer Products                                                                | Colour                              | Substrates                                | Application Temperature                                                      | Coverage Rates                                                               | VOC (g/L)                                                        |
| Vapor Retarder Primer SB (solvent-based)                                       | Red                                 | Concrete, Approved Gypsum Boards, Plywood | 14°F (-10°C) & above                                                         | 83-138 sf/gal porous<br>166-416 sf/gal non-porous                            | 500                                                              |
| Vapor Retarder Primer VC (low VOC)                                             | Green                               | Concrete, Approved Gypsum Boards, Plywood | 14°F (-10°C) & above                                                         | 104-208 sf/gal porous<br>166-416 sf/gal non-porous                           | 0 with exemption (EPA)*<br>240 (SCAQMD)*<br>476.3 w/o exemption* |
| Vapor Retarder Primer WB (water-based)                                         | Blue                                | Concrete, Approved Gypsum Boards, Plywood | 25°F (-4°C) & above                                                          | 208 sf/gal<br>depending on porosity                                          | 0                                                                |
| Vapor Retarder Primer TA (torch-applied)                                       | Black                               | Concrete                                  | 14°F (-10°C) & above                                                         | 166-277 sf/gal<br>depending on porosity                                      | 340                                                              |

## Notes:

<sup>1</sup> Substrates require priming (primer not required when using Vapor Retarder PE 6 or 10) and must be clean, cured, dry, and free of dirt, dust, oil and debris. Steel substrates do not need priming but must be clean, dry and free of dirt, dust, oil and debris.

<sup>2</sup> Except on FM insured projects. Meets requirements for UL

<sup>3</sup> Light construction traffic

\* The U.S. EPA considers the solvents in Vapor Retarder Primer VC as "exempt", and therefore the product's VOC content can be considered "0 g/l" and used in all jurisdictions operating under the EPA guidelines. At this time, the SCAQMD does not recognize the TBAC solvent as "exempt", and therefore the primer's VOC content is "240 g/l" when used in jurisdictions operating under their guidelines.

Physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation.

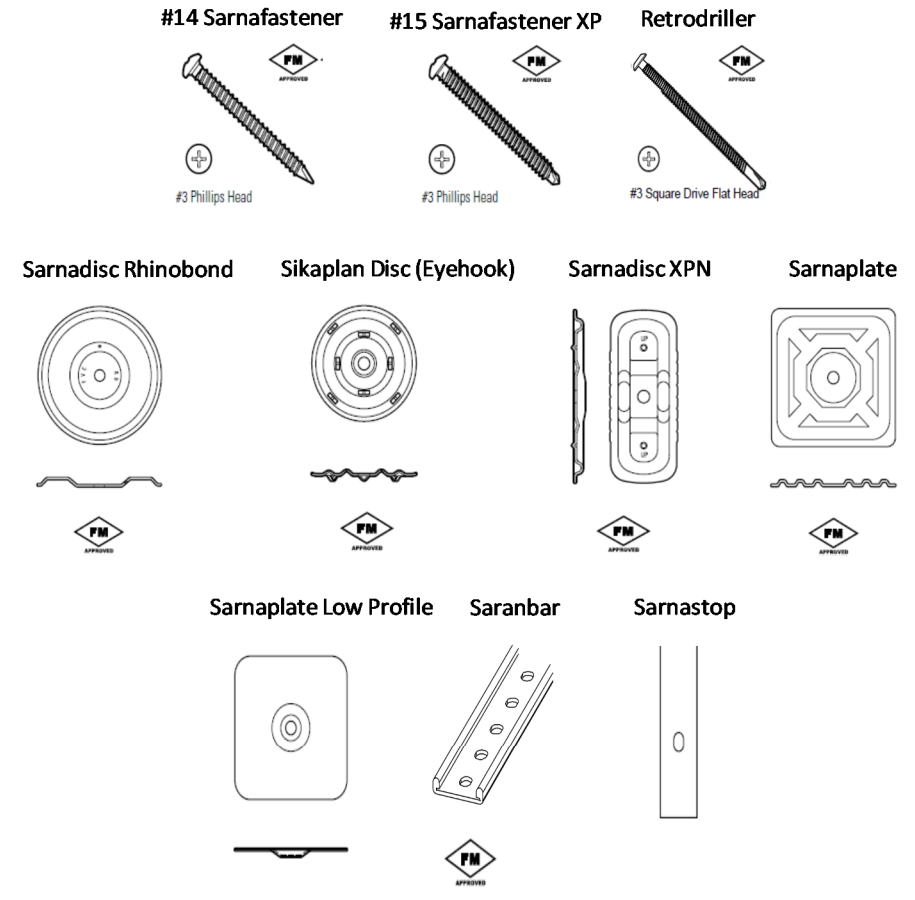
Use Mastic at and around all penetrations except on Vapor Retarder PE 6 or PE 10 applications, use Multi-Purpose Tape.

## f. Adhesive Selection Guide

| Membrane Adhesive Product                                                                                                                                                                                                                            | Use                                                       | Application Temp. Restriction <sup>1</sup> | Dew Point Restriction - Not within 3°C (5°F) of the Dew point                                                                                                                  | LEED Compliant | VOC Content     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|
| Sarnacol 2170 VC                                                                                                                                                                                                                                     | All membranes - horizontal and vertical applications      | minus 15°C (0°F)                           | Yes                                                                                                                                                                            | No             | 0 g/L (per EPA) |
| Sarnacol 2170 R                                                                                                                                                                                                                                      |                                                           |                                            |                                                                                                                                                                                |                | 694.2 g/L       |
| Sarnacol 2121                                                                                                                                                                                                                                        | All membranes - horizontal applications up to 2:12 slope  | 4°C (40°F)                                 | No                                                                                                                                                                             | Yes            | 240 g/L         |
| Sarnacol AD Feltback Membrane Adhesive                                                                                                                                                                                                               | All membranes - horizontal application                    |                                            |                                                                                                                                                                                |                | 32 g/L          |
| Sarnacol OM Feltback Membrane Adhesive                                                                                                                                                                                                               |                                                           |                                            |                                                                                                                                                                                |                | 32 g/L          |
| Membrane Adhesive Product                                                                                                                                                                                                                            | Packaging                                                 | Coverage Rate                              | Approved Substrates:                                                                                                                                                           |                |                 |
| Sarnacol 2170 VC                                                                                                                                                                                                                                     | 18.9 L (5 US Gal)                                         | 44 - 67 sqft / gal <sup>3</sup>            | Sarnatherm, Sarnatherm CG, Sarnatherm HD Roof Board, DensDeck Prime, Metal, Concrete Wall, Concrete Deck <sup>2</sup> , Cellular Concrete <sup>2</sup> & Smooth Plywood        |                |                 |
| Sarnacol 2170 R                                                                                                                                                                                                                                      |                                                           | 100 - 133 sqft / gal <sup>3</sup>          |                                                                                                                                                                                |                |                 |
| Sarnacol 2121                                                                                                                                                                                                                                        |                                                           |                                            |                                                                                                                                                                                |                |                 |
| Sarnacol AD Feltback Membrane Adhesive                                                                                                                                                                                                               | Case: 4 - 1.5L Cartridge                                  | 600 sqft /case <sup>4</sup>                | Sarnatherm, Sarnatherm CG, Sarnatherm HD Roof Board, DensDeck Prime, Concrete Deck <sup>2</sup> & Cellular Concrete                                                            |                |                 |
|                                                                                                                                                                                                                                                      | Bag in Box Kit: Part A & Part B - 18.9 L (5 US Gal) each. | 2,500 - 3,000 sqft / kit <sup>4</sup>      |                                                                                                                                                                                |                |                 |
| Sarnacol OM Feltback Membrane Adhesive                                                                                                                                                                                                               | Case: 4 - 1.5L Cartridge                                  | 600 sqft /case <sup>4</sup>                |                                                                                                                                                                                |                |                 |
|                                                                                                                                                                                                                                                      | Bag in Box Kit: Part A & Part B - 18.9 L (5 US Gal) each. | 2,500 - 3,000 sqft / kit <sup>4</sup>      |                                                                                                                                                                                |                |                 |
| Board Adhesive Product                                                                                                                                                                                                                               | Use                                                       | Application Temp. Restriction <sup>1</sup> | Dew Point Restriction - Not within 3°C (5°F) of the Dew point                                                                                                                  | LEED Compliant | VOC Content     |
| Sarnacol LRA                                                                                                                                                                                                                                         | Insulation / Coverboard                                   | 4°C (40°F)                                 | No                                                                                                                                                                             | Yes            | 11 g/L          |
| Sarnacol 2163                                                                                                                                                                                                                                        |                                                           | minus 15°C (0°F)                           |                                                                                                                                                                                |                | 18 g/L          |
| Sarnacol AD Board Adhesive                                                                                                                                                                                                                           |                                                           | 4°C (40°F)                                 |                                                                                                                                                                                |                | 32 g/L          |
| Sarnacol OM Board Adhesive                                                                                                                                                                                                                           |                                                           |                                            |                                                                                                                                                                                |                | 11 g/L          |
| Sarnacol OM Board Adhesive WG                                                                                                                                                                                                                        |                                                           |                                            |                                                                                                                                                                                |                | 50 g/L          |
| Board Adhesive Product                                                                                                                                                                                                                               | Packaging                                                 | Coverage Rate                              | Approved Substrates:                                                                                                                                                           |                |                 |
| Sarnacol LRA                                                                                                                                                                                                                                         | Case: 4 - 1.5L Cartridge                                  | 600 sqft /case <sup>4</sup>                | Approved Sika Vapour Retarders, Sarnatherm, Sarnatherm CG, Sarnatherm HD Roof Board, DensDeck Prime, Concrete, Cellular Concrete, Mineral Surface Asphalt, Aged Smooth Asphalt |                |                 |
| Sarnacol 2163                                                                                                                                                                                                                                        | Case: 4 - 1.5L Cartridge                                  | 600 sqft /case <sup>4</sup>                |                                                                                                                                                                                |                |                 |
| Sarnacol AD Board Adhesive                                                                                                                                                                                                                           | Bag in Box Kit: Part A & Part B - 18.9 L (5 US Gal) each. | 2,500 - 3,000 sqft / kit <sup>4</sup>      |                                                                                                                                                                                |                |                 |
|                                                                                                                                                                                                                                                      | Case: 4 - 1.5L Cartridge                                  | 600 sqft /case <sup>4</sup>                |                                                                                                                                                                                |                |                 |
| Sarnacol OM Board Adhesive                                                                                                                                                                                                                           | Bag in Box Kit: Part A & Part B - 18.9 L (5 US Gal) each. | 2,500 - 3,000 sqft / kit <sup>4</sup>      |                                                                                                                                                                                |                |                 |
| Sarnacol OM Board Adhesive WG                                                                                                                                                                                                                        | Case: 4 - 1.5L Cartridge                                  | 600 sqft /case <sup>4</sup>                |                                                                                                                                                                                |                |                 |
| Notes:                                                                                                                                                                                                                                               |                                                           |                                            |                                                                                                                                                                                |                |                 |
| <sup>1</sup> Adhesive shall not be used if temperatures are expected below listed temperature during application or subsequent drying time. Check individual product data sheets for proper storage and conditioning temperatures.                   |                                                           |                                            |                                                                                                                                                                                |                |                 |
| <sup>2</sup> Feltback Membrane only except Bareback Membrane is acceptable over smooth concrete.                                                                                                                                                     |                                                           |                                            |                                                                                                                                                                                |                |                 |
| <sup>3</sup> Coverage rate displayed as an average range, bareback vs feltback membrane as well as porous vs non-porous substrates, application method, temperature, and experience with product are some variables which will effect listed values. |                                                           |                                            |                                                                                                                                                                                |                |                 |
| <sup>4</sup> Coverage based on 12" o.c. bead spacing.                                                                                                                                                                                                |                                                           |                                            |                                                                                                                                                                                |                |                 |

g. Fastener, Plate & Bar Selection Guide

| Fastener                                                                     | Deck Type <sup>1,2,3</sup>                                         | Lengths                                      |
|------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------|
| Sarnafastener #14                                                            | Structural Concrete, Wood Plank (min 1-1/2"), Plywood (min 5/8")   | 1 - 1/4" to 14"                              |
| Sarnafastener #15 XP                                                         | Steel (18 ga - 24 Ga), Wood Plank (min 1-1/2"), Plywood (min 5/8") | 1 - 1/4" to 20"                              |
| Retrodriller                                                                 | Purlin Steel 12 Ga - 16 Ga                                         | 4" to 10"                                    |
| Bar, Plates & Discs                                                          | Use                                                                | Systems                                      |
| Sarnaplate                                                                   | Board Attachment                                                   | All (except Rhinobond)                       |
| Sarnaplate Low Profile <sup>5</sup>                                          | Board Attachment                                                   | Adhered Décor                                |
| Sarnadisc Rhinobond                                                          | Board/Membrane Attachment                                          | Rhinobond (Metal Retrofit)                   |
| Sarnadisc Rhinobond Treadsafe                                                | Board/Membrane Attachment                                          | Rhinobond (Metal Retrofit)                   |
| Sikaplan Disc (Eyehook)                                                      | Membrane Attachment                                                | Sarnafast/Inseam                             |
|                                                                              | Transition Securement                                              | Sarnafast/Inseam, Rhinobond (Metal Retrofit) |
| Sarnabar                                                                     | Membrane Attachment                                                | Engineered                                   |
|                                                                              | Transition Securement                                              | All                                          |
| Sarnastop <sup>4</sup>                                                       | Transition Securement                                              | All (except Sarnafast/Inseam)                |
| Notes:                                                                       |                                                                    |                                              |
| 1 Fastener is to penetrate the steel, concrete, wood plank deck a minimum 1" |                                                                    |                                              |
| 2 Fastener is to penetrate the underside of the plywood deck by 1/2"         |                                                                    |                                              |
| 3 Pilot holes are required on structural concrete decks                      |                                                                    |                                              |
| 4 Not to be used on FM projects                                              |                                                                    |                                              |



## h. Warranty Selection Guide

| Sikaplan® Warranties                                                                                                                                                                                                                               |                                        |                      |                                                           |                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------|-----------------------------------------------------------|--------------------------|
| System                                                                                                                                                                                                                                             | Membrane                               | Warranty Type        | Warranty Length (Years)                                   | High Wind Speed Warranty |
| RhinoBond, Inseam                                                                                                                                                                                                                                  | Sikaplan® Fastened                     | Membrane or Standard | 5, 10, 15 or 20                                           | N.A                      |
|                                                                                                                                                                                                                                                    |                                        | System               |                                                           | 119 and 159 km/h         |
| Adhered                                                                                                                                                                                                                                            | Sikaplan® Adhered                      | Membrane or Standard | 5, 10, 15 or 20                                           | N.A                      |
|                                                                                                                                                                                                                                                    |                                        | System               |                                                           | 119 and 159 km/h         |
| Ballasted                                                                                                                                                                                                                                          | Sikaplan® Adhered                      | Membrane or Standard | 5 or 10                                                   | N.A                      |
|                                                                                                                                                                                                                                                    |                                        | System               |                                                           |                          |
| Sarnafil® Warranties                                                                                                                                                                                                                               |                                        |                      |                                                           |                          |
| System                                                                                                                                                                                                                                             | Membrane                               | Warranty Type        | Warranty Length (Years)                                   | High Wind Speed Warranty |
| RhinoBond, Sarnafast, Engineered                                                                                                                                                                                                                   | Sarnafil® S327                         | Membrane             | 5, 10, 15, 20, 25 <sup>2</sup> or 30 <sup>3</sup>         | N.A                      |
|                                                                                                                                                                                                                                                    |                                        | Standard             | 5, 10, 15, 20, 25 <sup>2,4</sup> or 30 <sup>3,4</sup>     | N.A.                     |
|                                                                                                                                                                                                                                                    |                                        | System               | 5, 10, 15, 20, 25 <sup>2</sup> or 30 <sup>3</sup>         | 119, 159 & 193 km/h      |
| Adhered                                                                                                                                                                                                                                            | Sarnafil® G410, Sarnafil G410 SA       | Membrane             | 5, 10, 15, 20, 25 <sup>1,2</sup> or 30 <sup>1,3</sup>     | N.A                      |
|                                                                                                                                                                                                                                                    |                                        | Standard             | 5, 10, 15, 20, 25 <sup>1,2,4</sup> or 30 <sup>1,3,4</sup> | N.A.                     |
|                                                                                                                                                                                                                                                    |                                        | System               | 5, 10, 15, 20, 25 <sup>1,2</sup> or 30 <sup>1,3</sup>     | 119, 159 & 193 km/h      |
| Adhered Décor                                                                                                                                                                                                                                      | Sarnafil® G410, Sarnafil G410 SA       | Membrane or Standard | 5, 10, 15 or 20                                           | N.A                      |
|                                                                                                                                                                                                                                                    |                                        | System               | 5, 10, 15 or 20                                           | 119, 159 & 193 km/h      |
| PMR                                                                                                                                                                                                                                                | Sarnafil® G410, Sarnafil G476, G476 SA | Membrane or Standard | 5, 10, 15 or 20 <sup>6</sup>                              | N.A                      |
|                                                                                                                                                                                                                                                    |                                        | System               |                                                           |                          |
| Ballasted                                                                                                                                                                                                                                          | Sarnafil® G410                         | Membrane or Standard | 5, 10, 15 <sup>5</sup> or 20 <sup>6</sup>                 | N.A                      |
|                                                                                                                                                                                                                                                    |                                        | System               |                                                           |                          |
| Notes:                                                                                                                                                                                                                                             |                                        |                      |                                                           |                          |
| * System warranties require all materials from the structural deck up and supplied by Sika                                                                                                                                                         |                                        |                      |                                                           |                          |
| * Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika                                                                                                                                       |                                        |                      |                                                           |                          |
| * All High Wind Speed and Hail warranties must be approved by the Sika Vice President Technical                                                                                                                                                    |                                        |                      |                                                           |                          |
| * PV Systems only permitted on Sarnafil adhered or mechanically attached roof systems. Sika approved cover board is required for any systems with a PV installation.                                                                               |                                        |                      |                                                           |                          |
| * Sika approved vapour retarders are required for all wind warranties                                                                                                                                                                              |                                        |                      |                                                           |                          |
| * Vegetative roofs are considered PMR systems. A Sika approved cover board is required in there is insulation below the membrane                                                                                                                   |                                        |                      |                                                           |                          |
| * XPS/EPS insulation, bitumen cannot come into contact with the membrane                                                                                                                                                                           |                                        |                      |                                                           |                          |
| * Contact the Technical Representative if Coal Tar Pitch is present in the existing roof system                                                                                                                                                    |                                        |                      |                                                           |                          |
| 1. Criteria for all 25 & 30 year warranties - Adhered Roofs. Mechanical fixation is required, for one of the layers (coverboard, insulation or thermal barrier) below the membrane, which incorporate Steel, Wood Plank or Plywood structural deck |                                        |                      |                                                           |                          |
| 2. Criteria for all 25 year warranties: Sarnavap 6 NOT permitted, minimum 72 mil membrane, Sarnatherm CG or Rockwool DD and Sika approved cover board are required.                                                                                |                                        |                      |                                                           |                          |
| 3. Criteria for all 30 year warranties: Sarnavap 6 NOT permitted, minimum 80 mil membrane, Sarnatherm CG or Rockwool DD and Sika approved cover board are required                                                                                 |                                        |                      |                                                           |                          |
| 4. Criteria for 25 & 30 year Standard warranty: Contact your Sales Representative                                                                                                                                                                  |                                        |                      |                                                           |                          |
| 5. 72 mil membrane required                                                                                                                                                                                                                        |                                        |                      |                                                           |                          |
| 6. 80 mil membrane required                                                                                                                                                                                                                        |                                        |                      |                                                           |                          |

## i. Guideline for Roof Recover

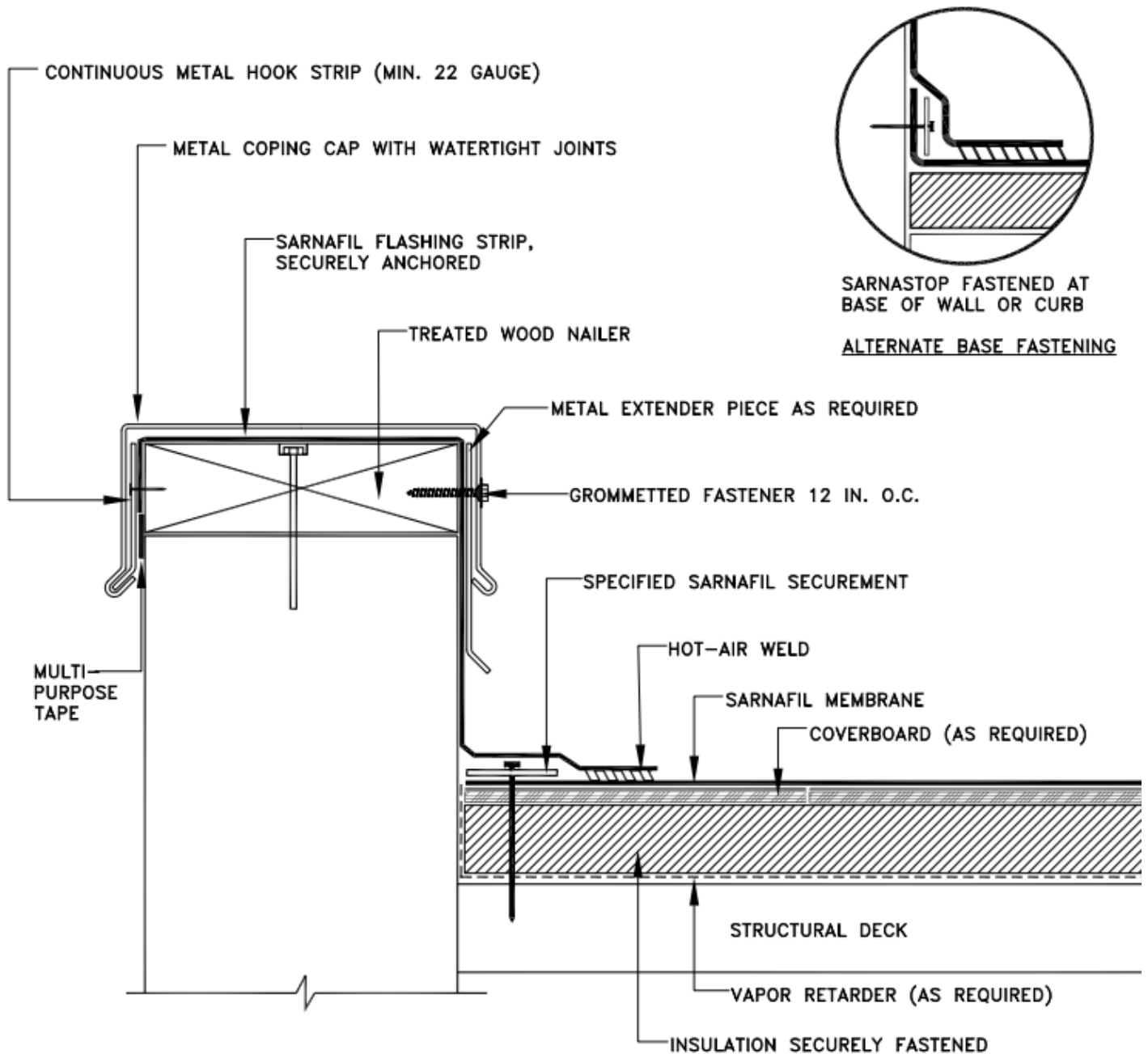
### General Criteria:

1. The Owner's Representative and Applicator shall determine the condition of the existing roof deck and old roof system.
  - a. Areas with deteriorated decking or wet materials are to be removed and replaced.
  - b. Acceptable existing roofing must be sound, well adhered and free of any trapped moisture. Verification that the roof system is free of trapped moisture must be established with a moisture scan and a copy of the moisture scan must be provided to the manufacturer.
2. Existing Single Ply roofs.
  - a. All gravel and debris shall be removed
  - b. Cut the existing membrane into 10 ft x 10 ft panels (3.0 m x 3.0 m) or cut 6" (15.2 cm) circles down the centre of each sheet, every 5 to 8 ft (1.5 to 2.4 m).
  - c. The surface must be clean and dry
  - d. Install a layer of a Sika Corporation approved cover roof board or new insulation board over the cut single ply and then fasten the board according to Sika Corporation's requirements.
3. Existing gravelled surfaces bitumen roofs.
  - a. All gravel and debris shall be removed.
  - b. All blisters shall be removed and sealed or cut, fastened down and sealed.
  - c. Any accumulation of bitumen or other irregularities shall be scratched and removed so as to produce a smooth surface.
  - d. The surface must be clean and dry
  - e. Install a layer of a Sika Corporation approved cover roof board or new insulation board over the existing roof membrane and fasten the board according to Sika Corporation's requirements.
4. Existing smooth surfaced roofs.
  - a. All debris shall be removed
  - b. All blisters shall be removed and sealed or cut, fastened down and sealed.
  - c. Seal all voids or openings into the existing membrane system. Repair all areas that are wet with like in kind roofing per allowable building code standards.
  - d. The surface must be clean and dry
  - e. Install a layer of a Sika Corporation approved cover roof board or new insulation board over the existing roof membrane and fasten the board according to Sika Corporation's requirements.

Note: Coal-tar pitch or heavily restored roofs require removal. Contact Technical Services Roofing, Sika Canada

Warranties: Sika Canada offers Membrane Only and Standard Warranties (Labour & Material) for duration up to 20 years.

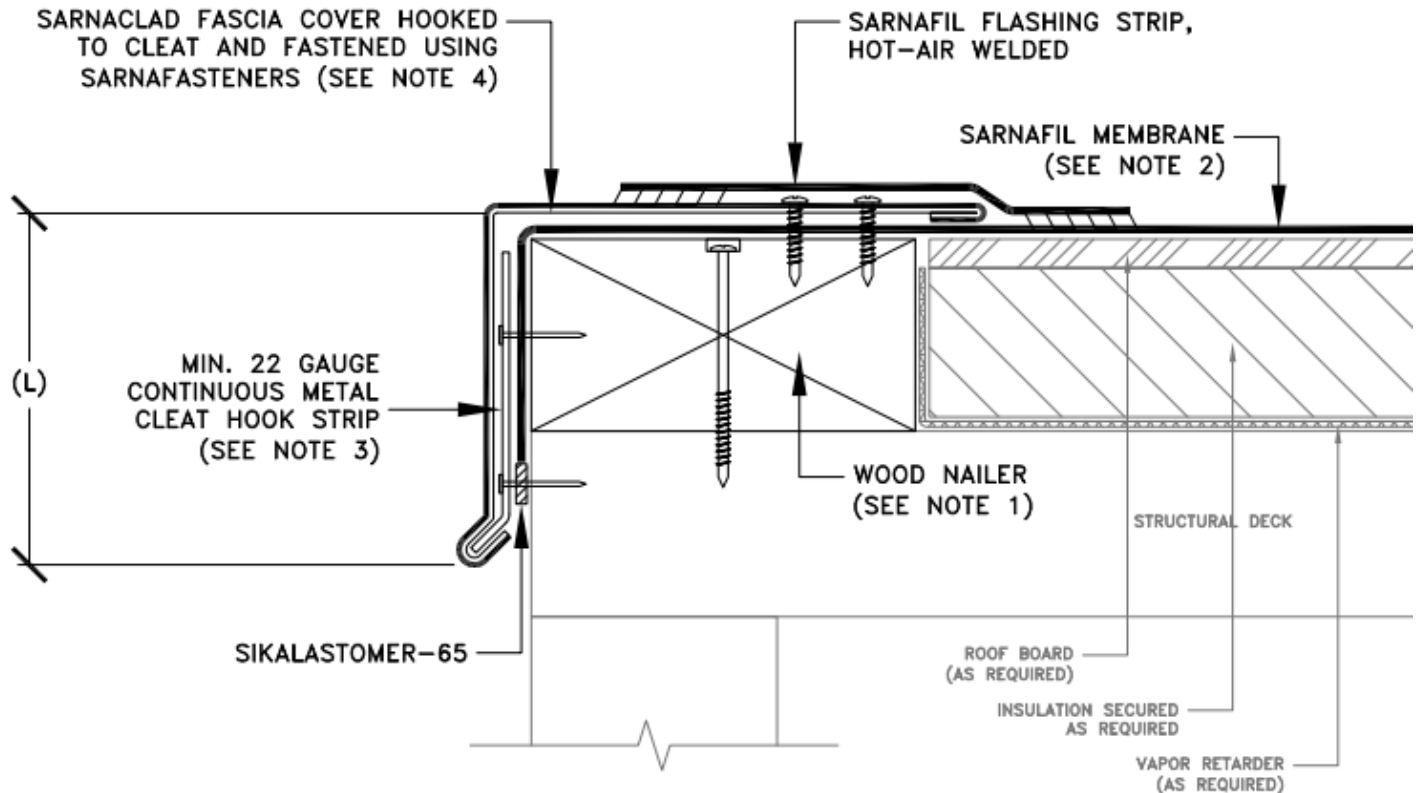
## 10. TYPICAL DETAIL DRAWINGS



## NOTES:

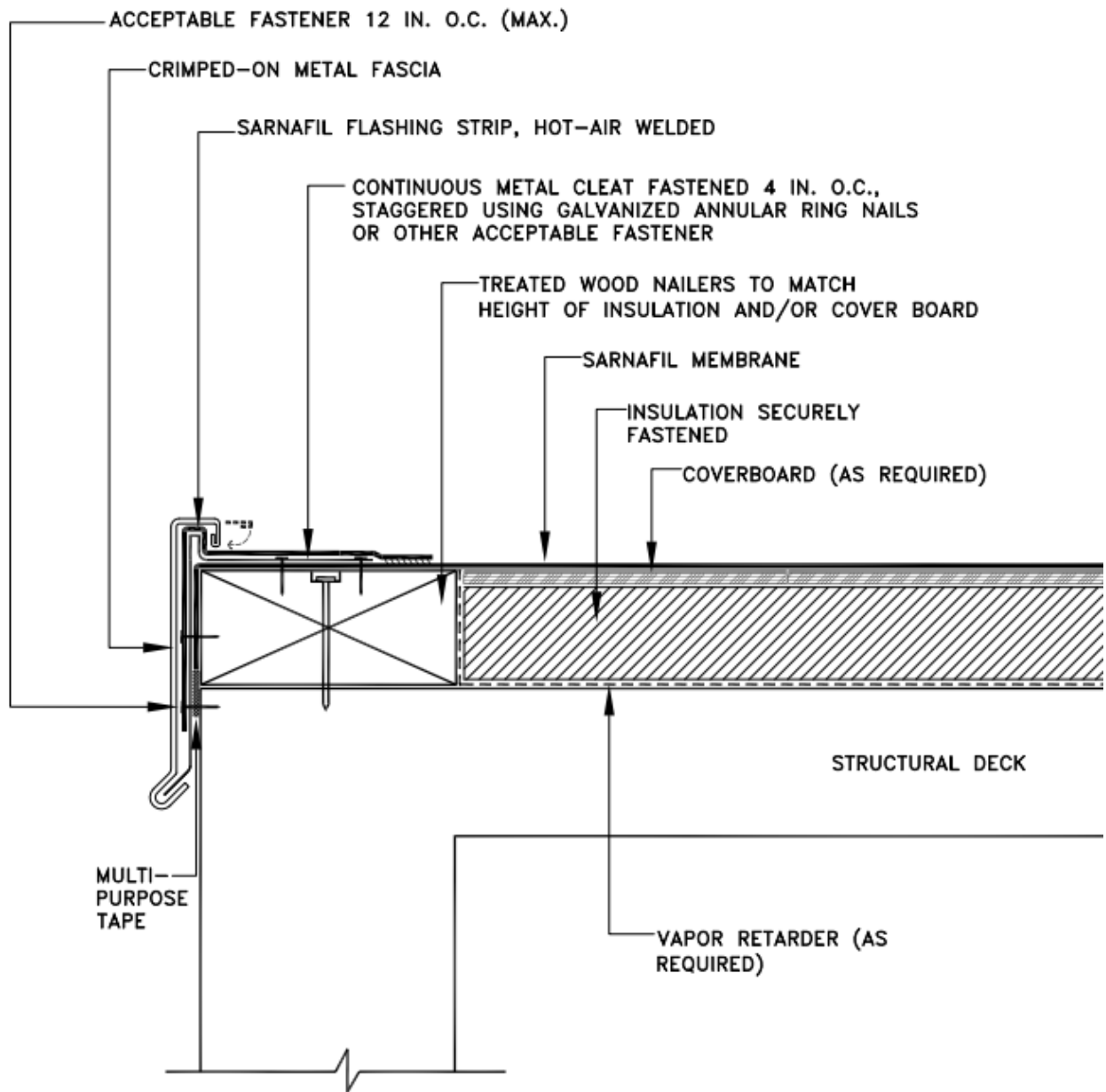
- 1) NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A MINIMUM FORCE OF 300 POUNDS PER LINEAR FOOT. REFER TO FACTORY MUTUAL DATA SHEET 1-49.
- 2) METAL EXTENDER PIECE IS REQUIRED IF EXISTING COUNTERFLASHING IS CONTAMINATED AND OR COUNTERFLASHING FASCIA IS LESS THAN 4-INCHES WIDE.
- 3) VAPOR BARRIER SHALL BE SEALED AT EDGES.

## PARAPET WALL WITH METAL COPING CAP

**NOTES:**

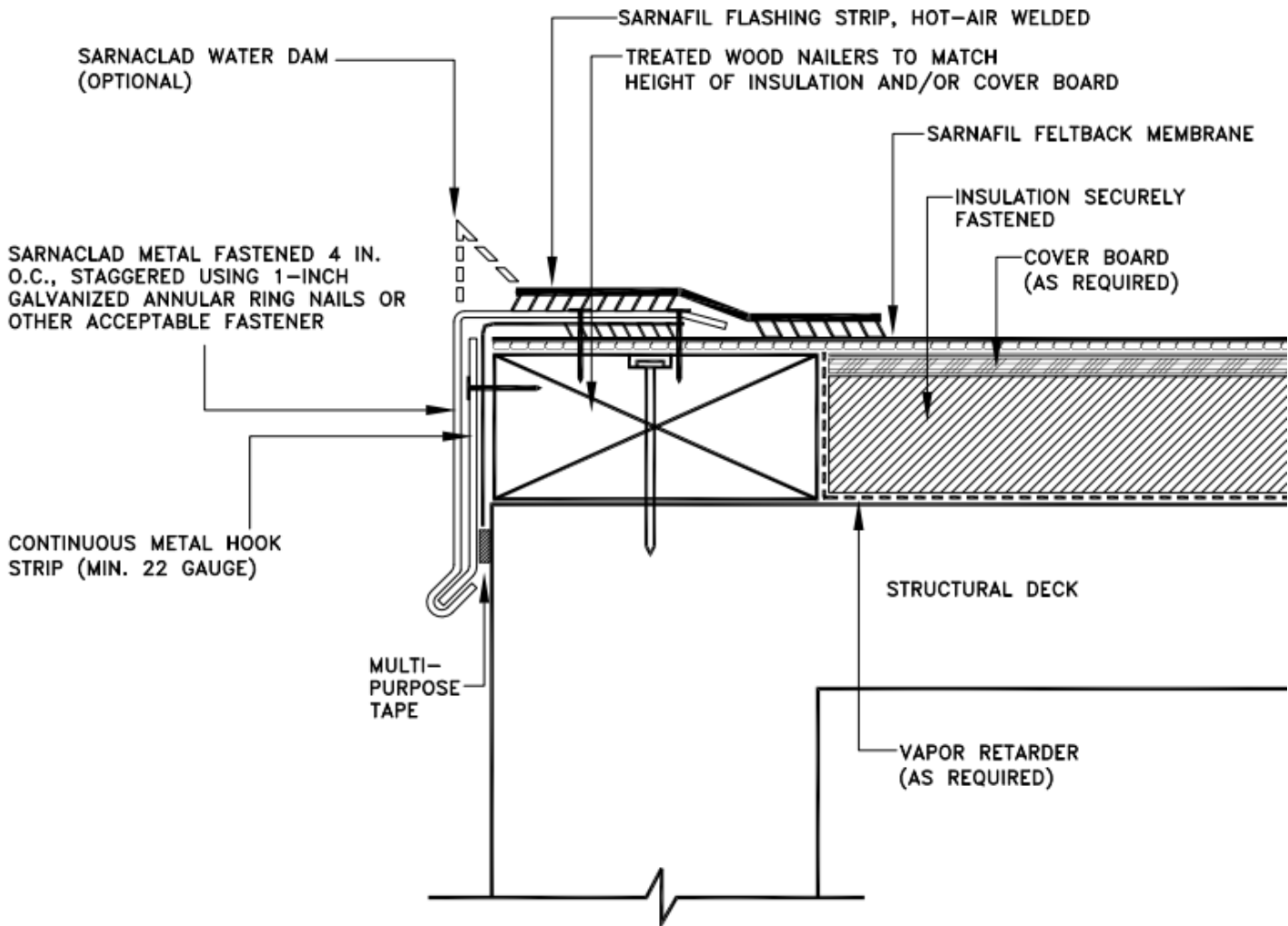
- 1) NEW OR EXISTING WOOD NAILERS SHALL BE ATTACHED ACCORDING TO THE D.O.R., LOCAL CODE, OR INSURANCE REQUIREMENTS, WHICHEVER IS MORE STRINGENT. NAILER HEIGHT TO MATCH TOP SURFACE TO WHICH MEMBRANE IS TO BE APPLIED.
- 2) BRING BAREBACK MEMBRANE OVER ROOF EDGE AND DOWN OUTSIDE FACE OF WALL, COVERING WOOD NAILER(S) COMPLETELY. BRING FELTBACK MEMBRANE TO ROOF EDGE ONLY.
- 3) FASTENER WITHDRAWAL RESISTANCE SHOULD BE 100 LB MIN. USE EITHER GALVANIZED ANNULAR RING NAILS PENETRATING 1-1/4" MIN. OR NO. 8 MIN. SCREWS PENETRATING 3/4". FASTENERS ARE STAGGERED 3" O.C. TOP FASTENER IS PLACED EITHER CENTERED INTO TOP WOOD NAILER OR 1" FROM TOP EDGE OF CLEAT HOOK STRIP. BOTTOM FASTENER IS PLACED 1" FROM BOTTOM OF CLEAT HOOK STRIP.
- 4) FASTENED 4" O.C. AND STAGGERED BETWEEN 1" AND 1-1/2" FROM TOP BACKSIDE EDGE OF FASCIA COVER. THE MAXIMUM RATING ACHIEVED FOR (L) DIMENSION FASCIA HEIGHT IS AS FOLLOWS:  
320 PSF • 8", 400 PSF • 6", AND 610 PSF • 4"

## SARNACLAD METAL EDGE HIGH WIND

**NOTES:**

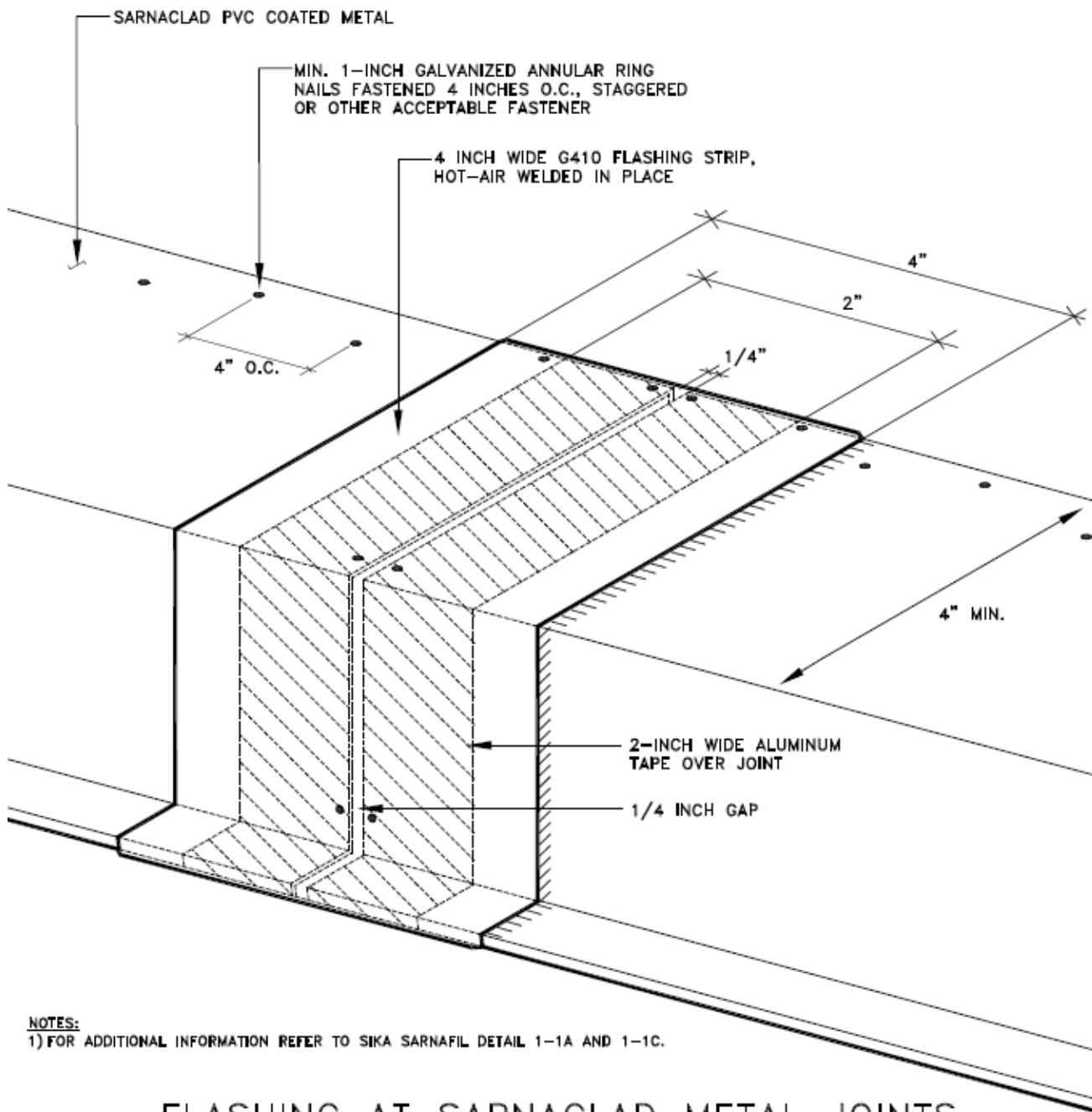
- 1) NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A MINIMUM FORCE OF 300 POUNDS PER LINEAR FOOT. FOLLOW FACTORY MUTUAL LOSS PREVENTION DATA SHEET 1-49 RECOMMENDATIONS.
- 2) THE THICKNESS OF THE NAILER SHALL MATCH THE HEIGHT OF THE INSULATION OR SURFACE TO WHICH THE MEMBRANE IS TO BE APPLIED.
- 3) VAPOR RETARDER SHALL BE SEALED AT EDGES.
- 4) POSITION THE SARNAFIL MEMBRANE (NON-FELTED) OVER THE ROOF EDGE AND DOWN OUTSIDE FACE OF WALL, COVERING TREATED WOOD NAILER(S) COMPLETELY.

## CRIMPED-ON METAL EDGE

**NOTES:**

- 1) NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A MINIMUM FORCE OF 300 POUNDS PER LINEAR FOOT. FOLLOW FACTORY MUTUAL LOSS PREVENTION DATA SHEET 1-49 RECOMMENDATIONS.
- 2) THE THICKNESS OF THE NAILER SHALL MATCH THE HEIGHT OF THE INSULATION OR SURFACE TO WHICH THE MEMBRANE IS TO BE APPLIED.
- 3) VAPOR RETARDER SHALL BE SEALED AT EDGES.
- 4) POSITION THE SARNAFIL MEMBRANE (NON-FELTED) OVER THE ROOF EDGE AND DOWN OUTSIDE FACE OF WALL, COVERING TREATED WOOD NAILER(S) COMPLETELY.

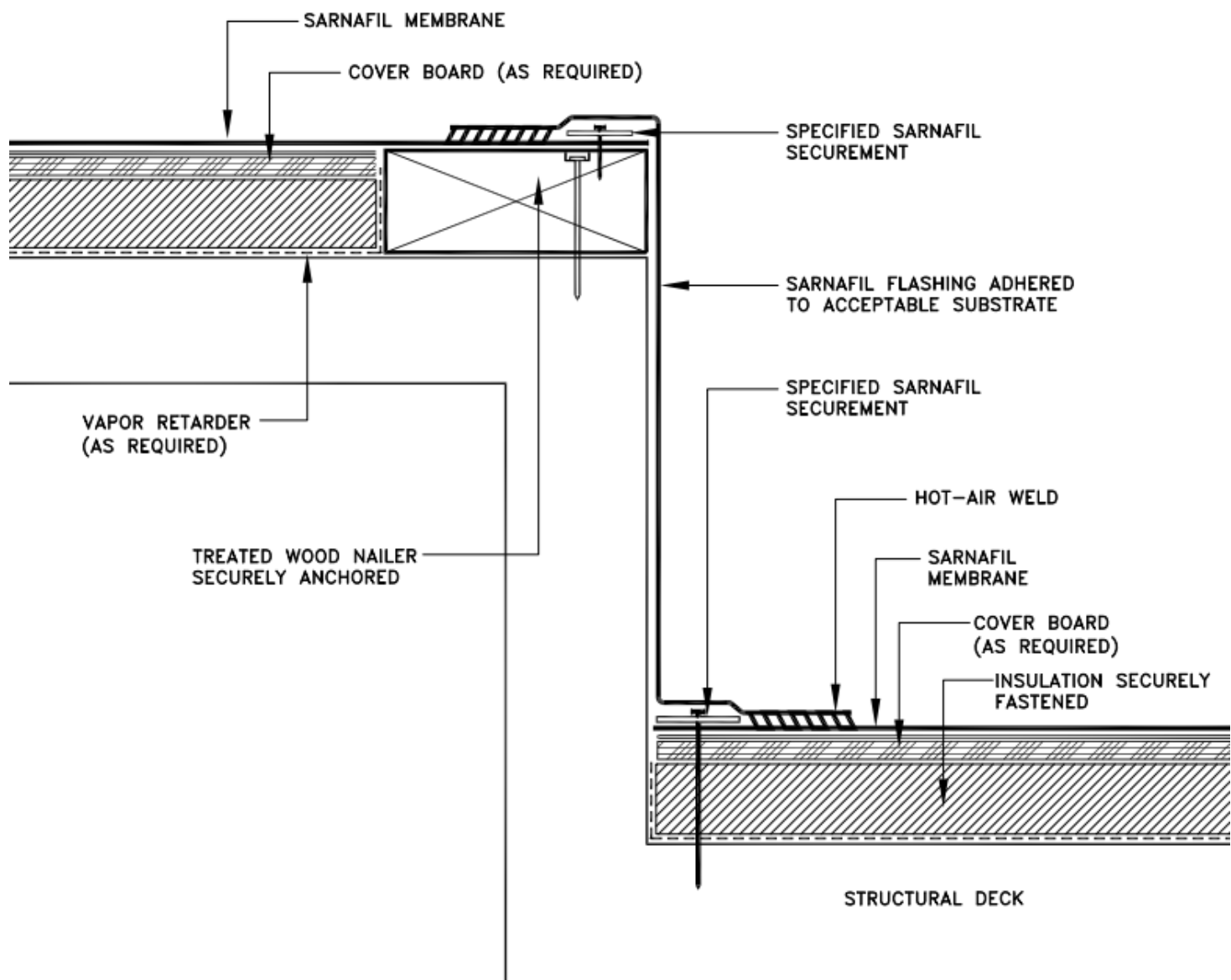
## SARNACLAD METAL EDGE



## FLASHING AT SARNACLAD METAL JOINTS

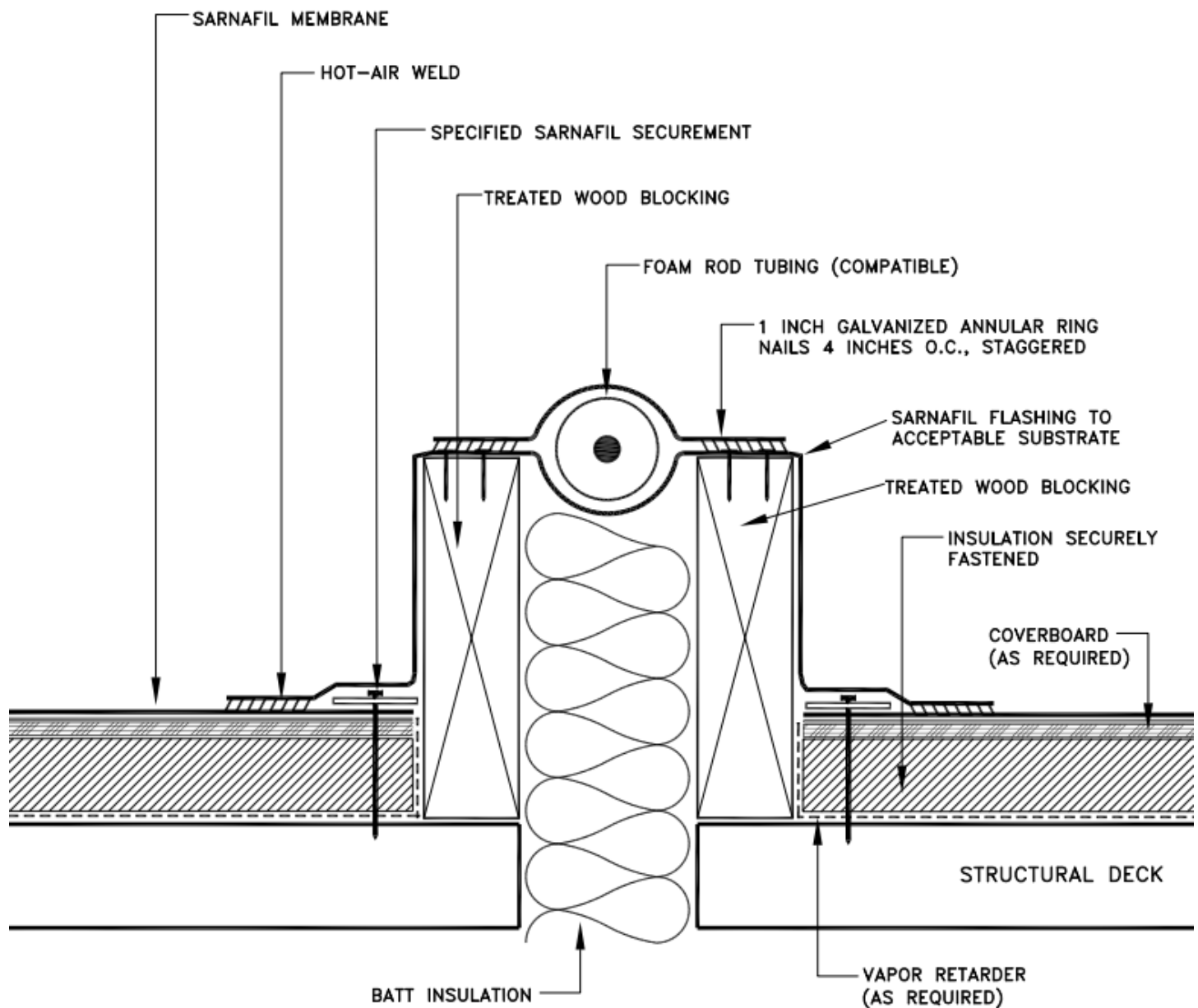
When installing Sarnaclad metal, ensure that metal foil tape is installed prior to welding the G410 patch over the joint.

1. Adjacent sheets of Sarnaclad metal shall be spaced  $\frac{1}{4}$  in. (7 mm) apart. Sarnaclad shall be secured at joints. The joint shall be covered with 2 in. (51 mm) wide aluminum foil tape. A 4 in. (102 mm) wide strip of flashing membrane shall be hot air welded over the joint (see detail above).

**NOTES:**

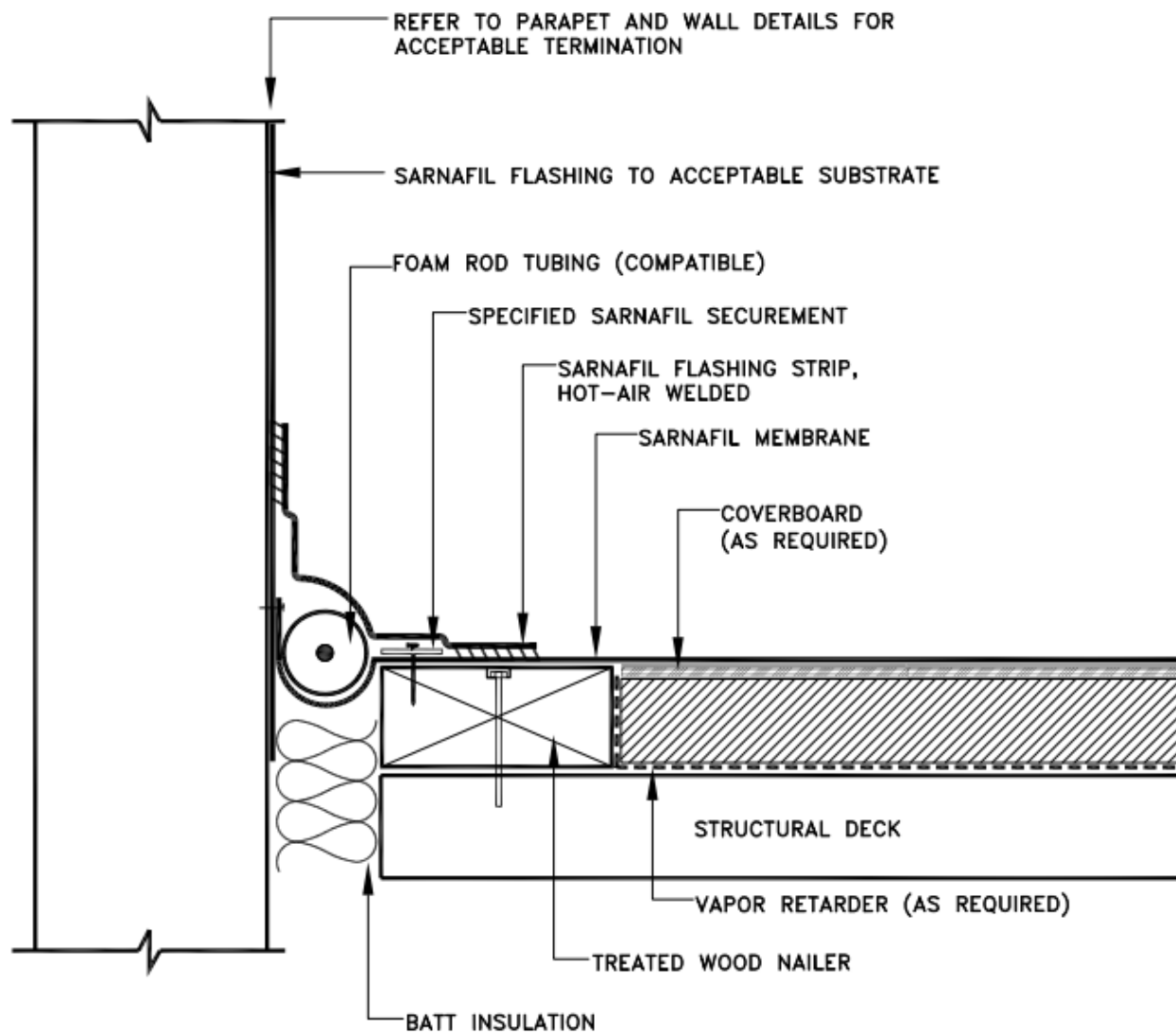
- 1) NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A FORCE OF 300 POUNDS PER LINEAL FOOT IN ANY DIRECTION.
- 2) AIR / VAPOR BARRIER TIE-IN ALONG VERTICAL TRANSITION TO BE INSTALLED PER DESIGNER RECOMMENDATION.
- 3) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## WALL TRANSITION

**NOTES:**

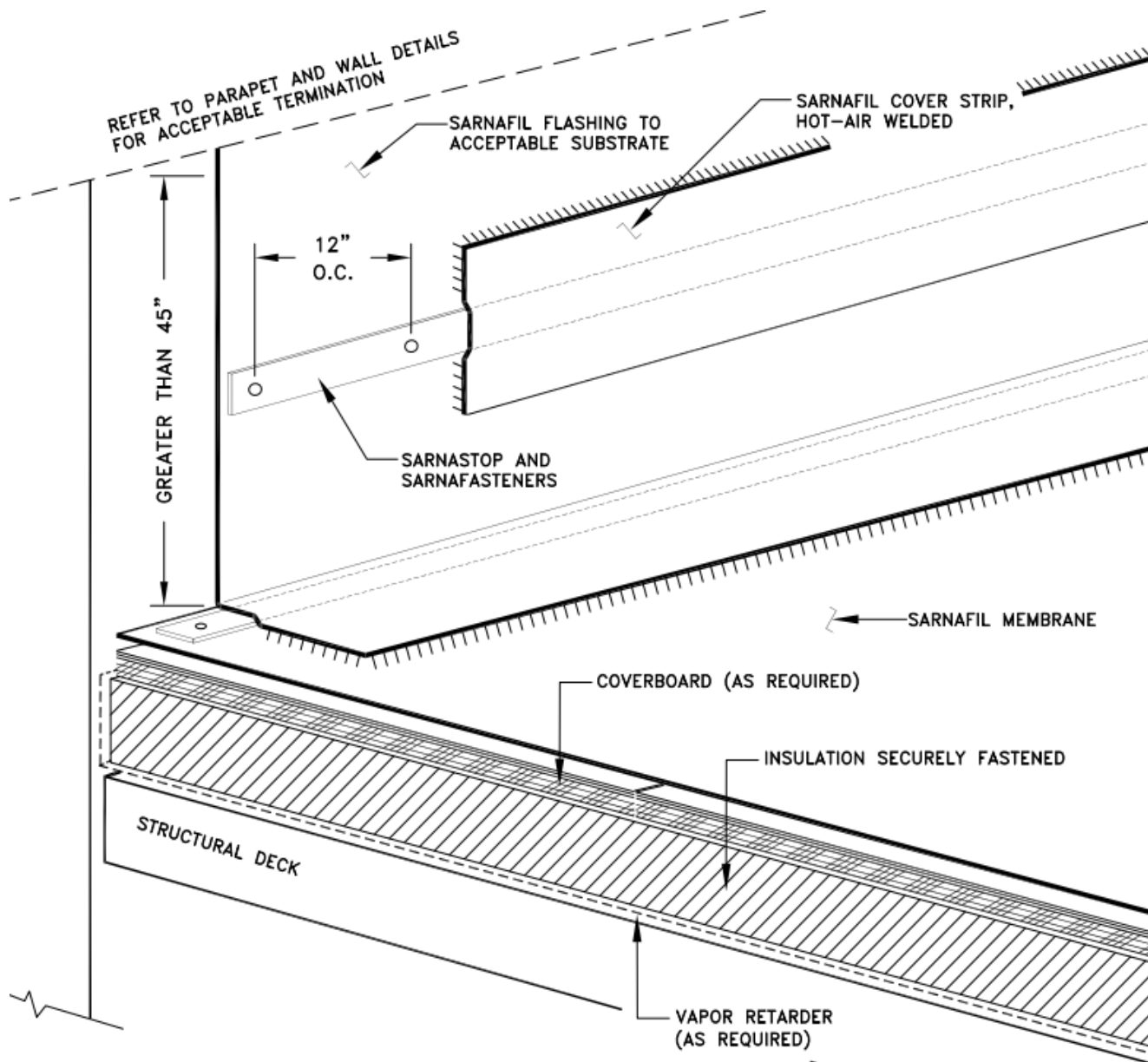
- 1) NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A FORCE OF 300 POUNDS PER LINEAL FOOT IN ANY DIRECTION.
- 2) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## EXPANSION JOINT ON CURB WITH FOAM ROD

**NOTES:**

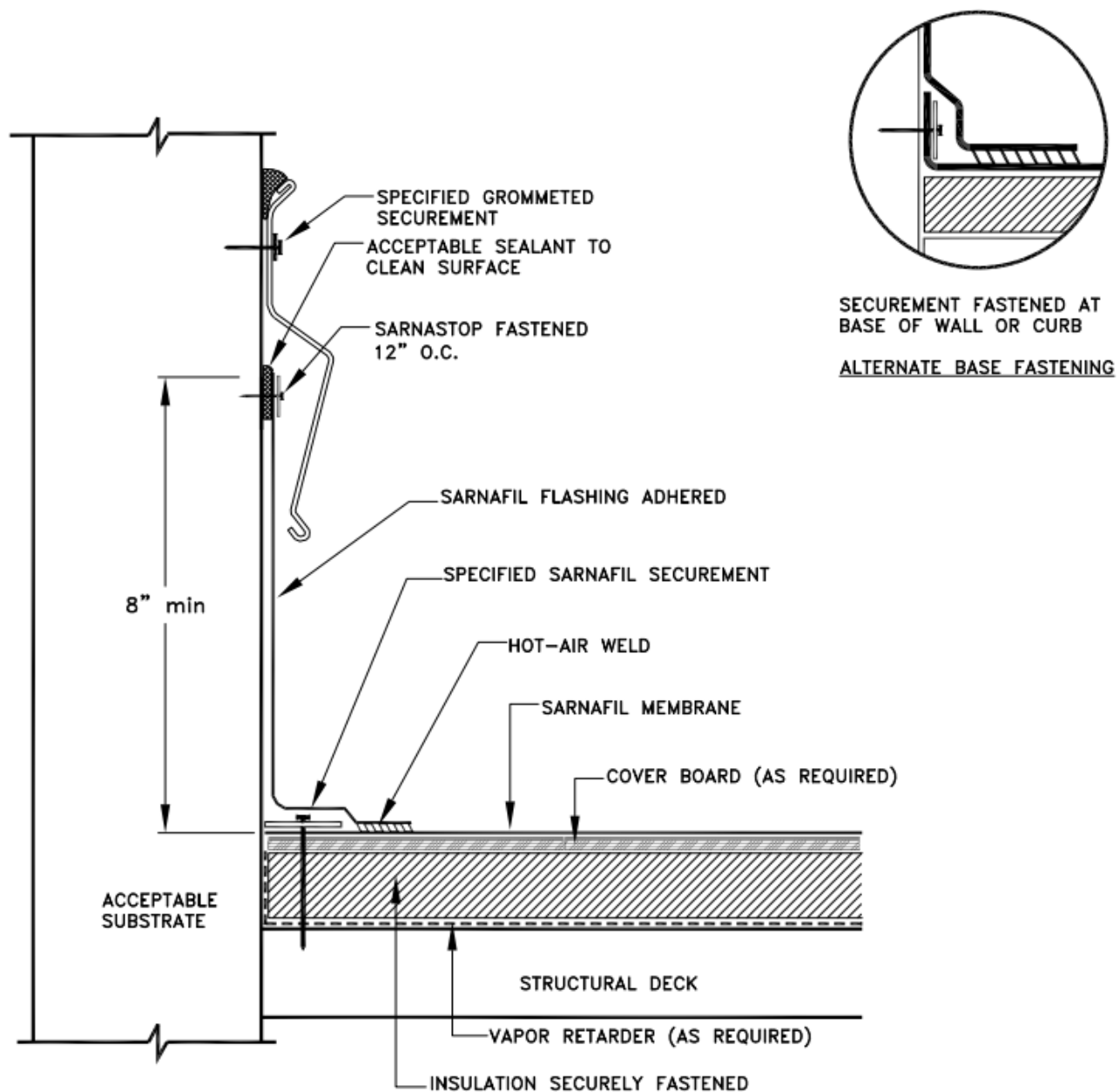
- 1) NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A FORCE OF 300 POUNDS PER LINEAL FOOT IN ANY DIRECTION.
- 2) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## EXPANSION JOINT AT WALL WITH FOAM ROD

**NOTES:**

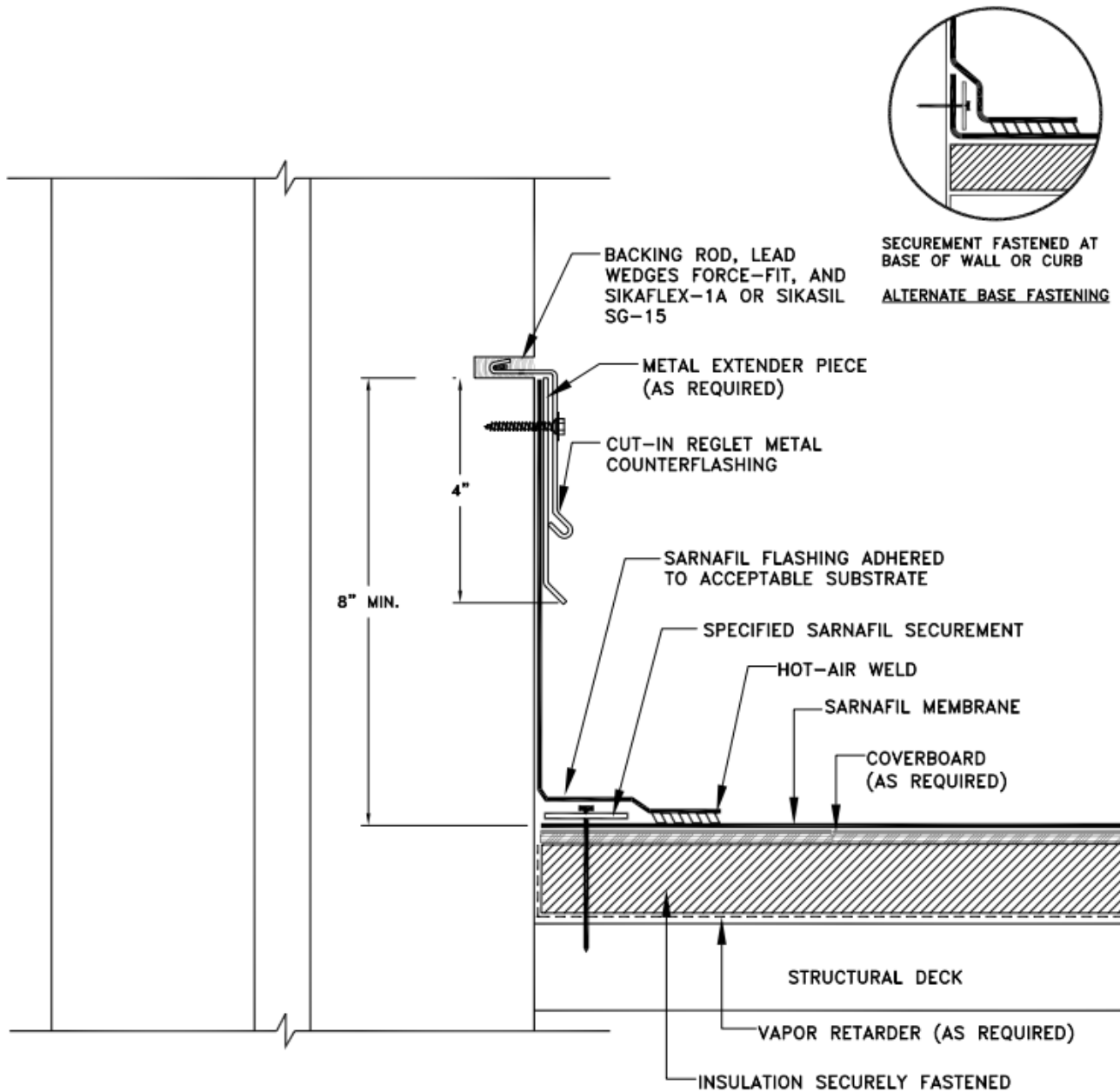
- 1) INSTALL SARNASTOP WITH A  $\frac{1}{2}$ " GAP BETWEEN ADJOINING SECTIONS.
- 2) SARNASTOP MUST BE CUT AT INSIDE AND OUTSIDE CORNERS. DO NOT BEND AROUND CORNERS.
- 3) SARNASTOP MUST BE FASTENED WITHIN 1" MAX. OF EACH BAR END.
- 4) VAPOR RETARDER SHALL BE SEALED AT EDGES.
- 5) WALLS 45" OR GREATER IN HEIGHT REQUIRE INTERMEDIATE FIXATION, TO BE LOCATED HALFWAY UP THE WALLS. FOR WALLS HIGHER THAN 60" CONTACT SIKAS TECHNICAL DEPARTMENT.

## ADHERED HIGH WALL FLASHING

**NOTES:**

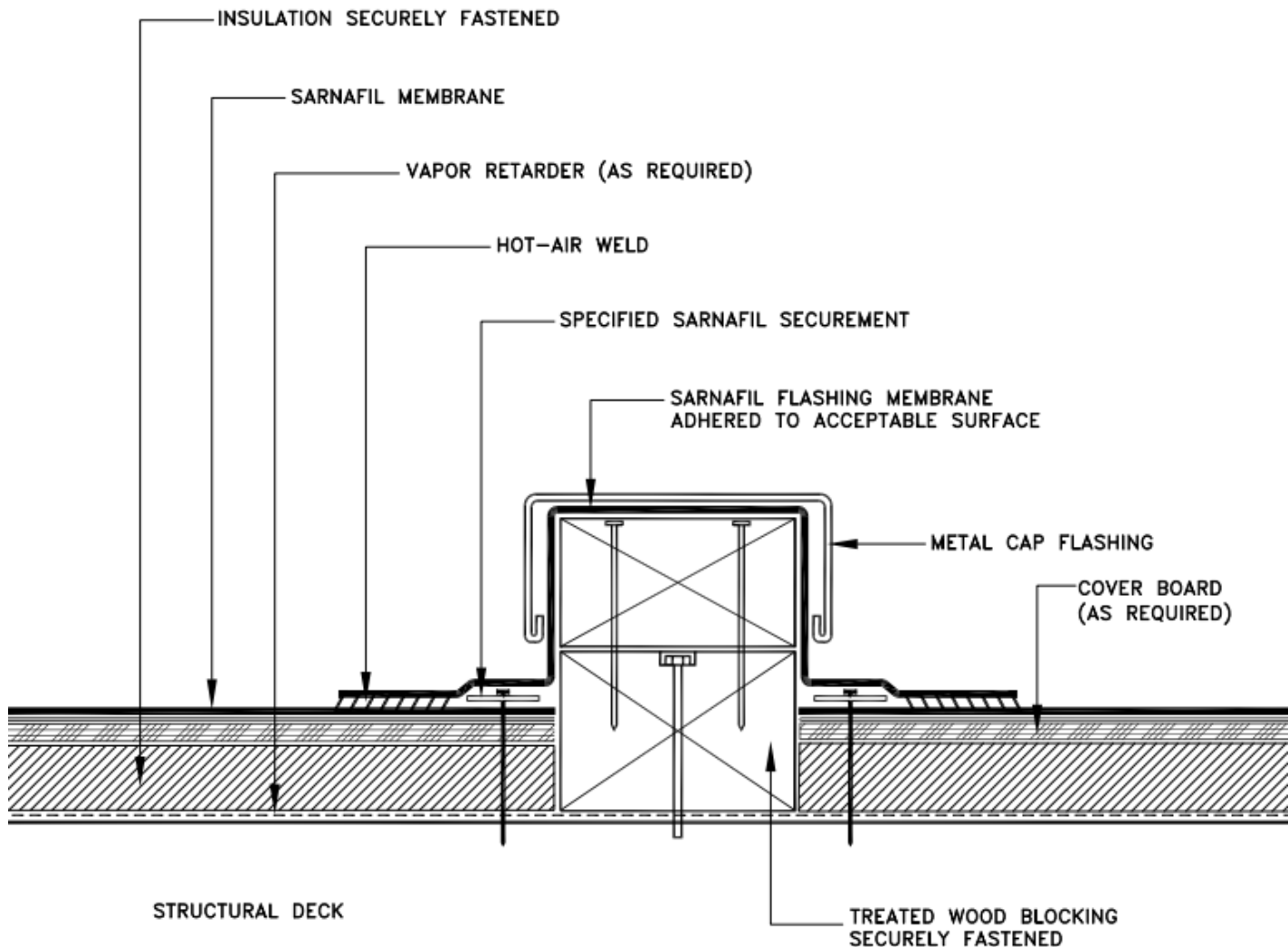
- 1) SEALANT IS A MAINTENANCE ITEM AND IS NOT COVERED UNDER THE SARNAFIL WARRANTY.
- 2) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## SURFACE MOUNTED COUNTER FLASHING

**NOTES:**

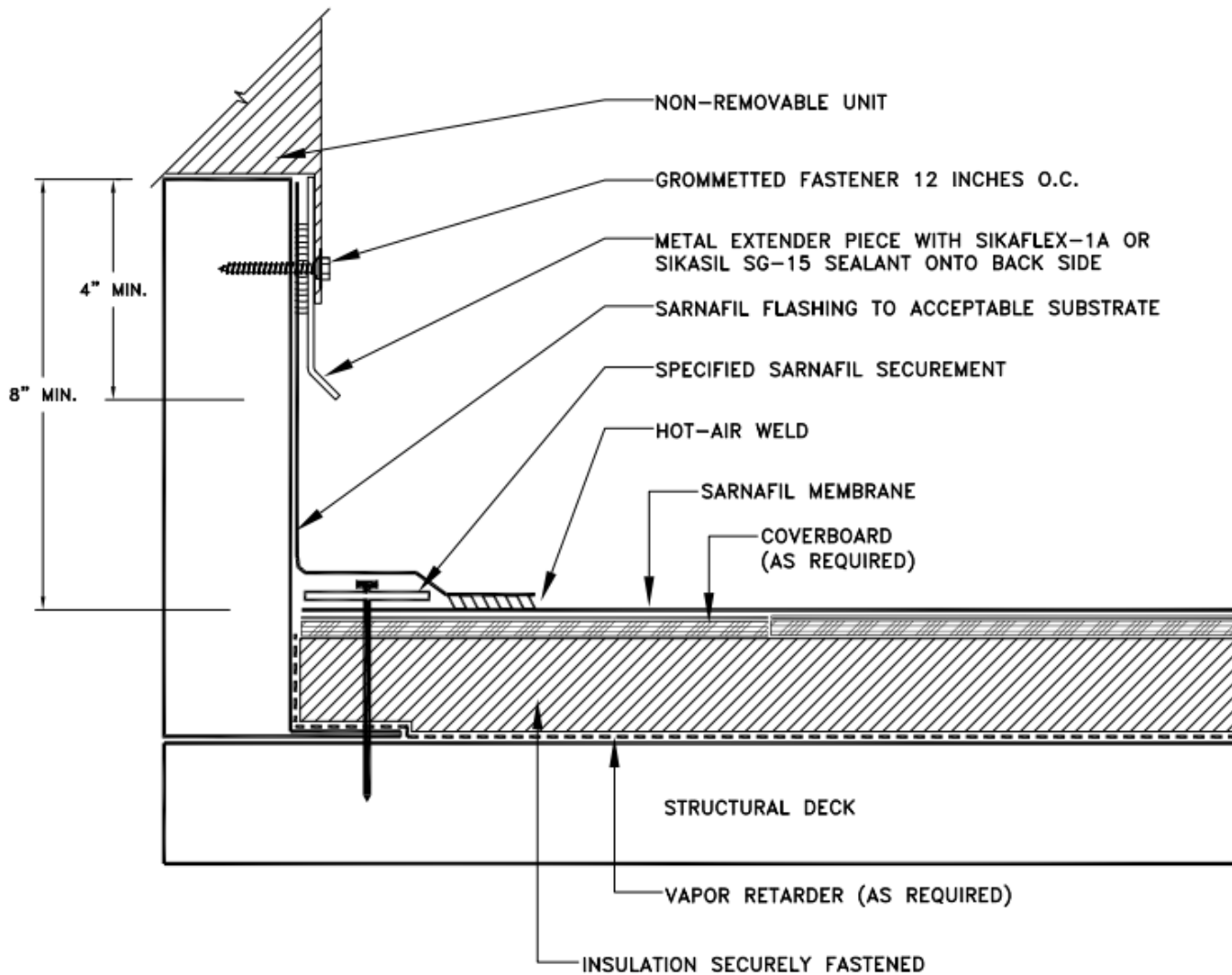
- 1) METAL EXTENDER PIECE IS REQUIRED IF EXISTING COUNTERFLASHING IS CONTAMINATED AND OR COUNTERFLASHING FASCIA IS LESS THAN 4-INCHES WIDE.
- 2) METAL COUNTERFLASHING IS TO BE INSTALLED TO MEET LOCAL CODES AND REQUIREMENTS.
- 3) VAPOR RETARDER SHALL BE SEALED AT EDGES.

**CUT-IN REGLET**

**NOTES:**

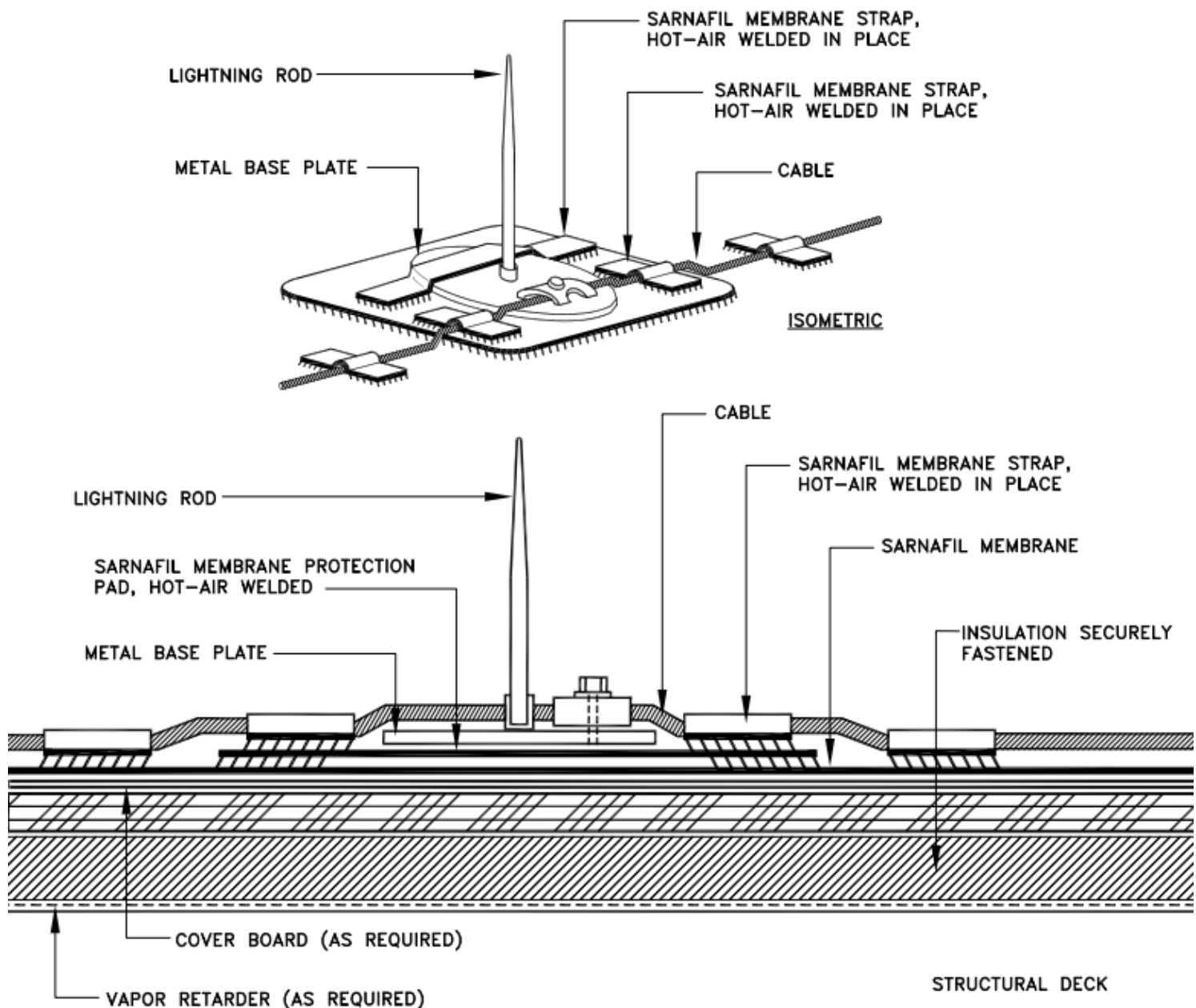
- 1) NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A FORCE OF 300 POUNDS PER LINEAL FOOT IN ANY DIRECTION.
- 2) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## EQUIPMENT SUPPORT

**NOTE:**

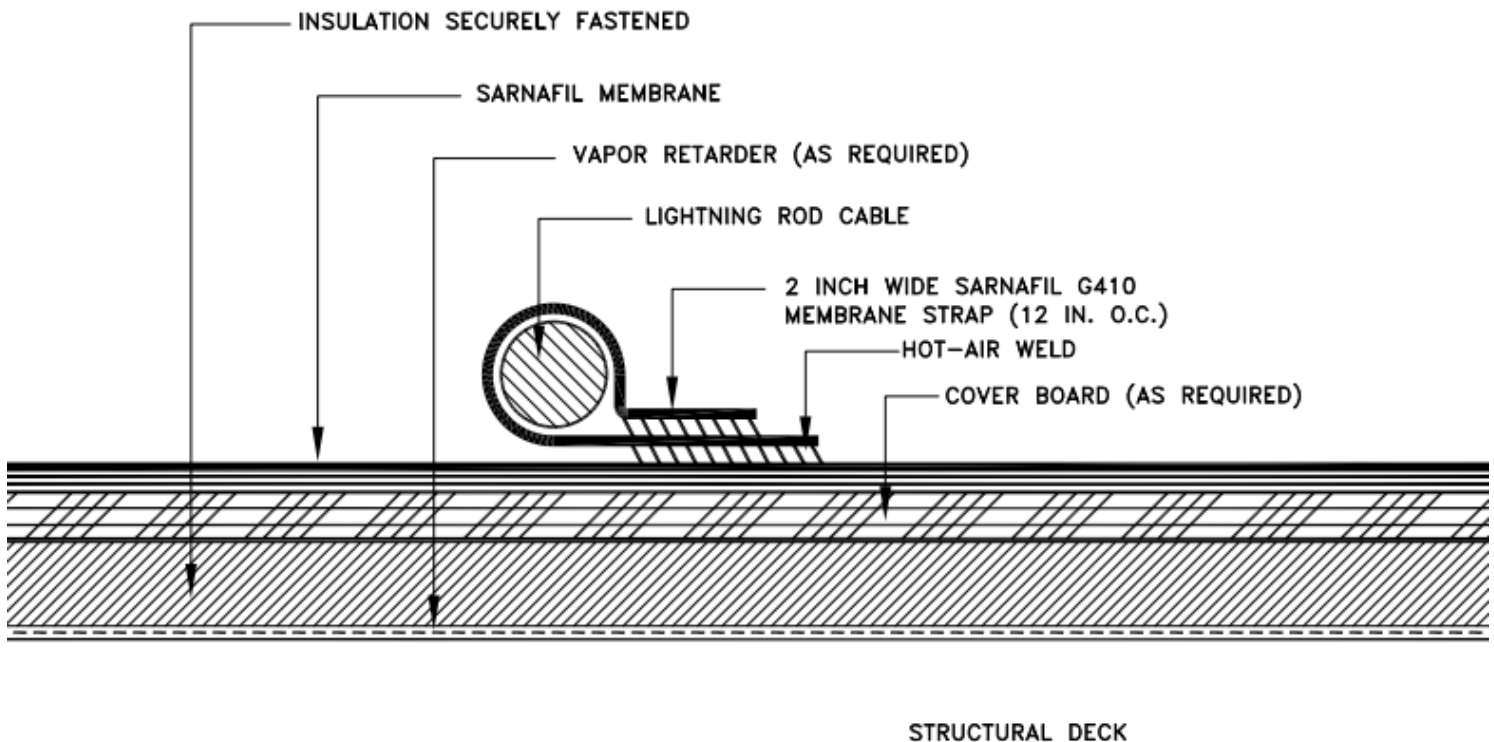
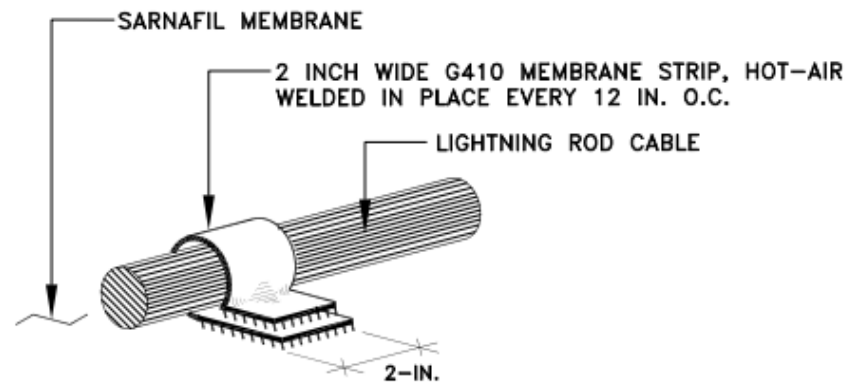
- 1) METAL EXTENDER PIECE IS REQUIRED IF EXISTING COUNTERFLASHING IS CONTAMINATED AND OR COUNTERFLASHING FASCIA IS LESS THAN 4 INCHES WIDE. FASTENED 12 INCHES O.C. WITH GROMMETTED FASTENER.
- 2) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## NON-REMOVABLE CURB FLASHING

**NOTES:**

- 1) EXISTING CABLE SHALL BE CLEANED FREE OF ASPHALT CONTAMINATION AS REQUIRED PRIOR TO REINSTALLATION.
- 2) IF ASPHALT CONTAMINATION CAN NOT BE CLEANED, SIKA SARNAFIL REQUIRES A CONTINUOUS LAYER OF G459 FLASHING UNDER LOCATION OF CABLE. HOT-AIR WELDED IN-PLACE.
- 3) SIKA SARNAFIL IS NOT RESPONSIBLE FOR LIGHTNING DAMAGE TO SARNAFIL ROOF.

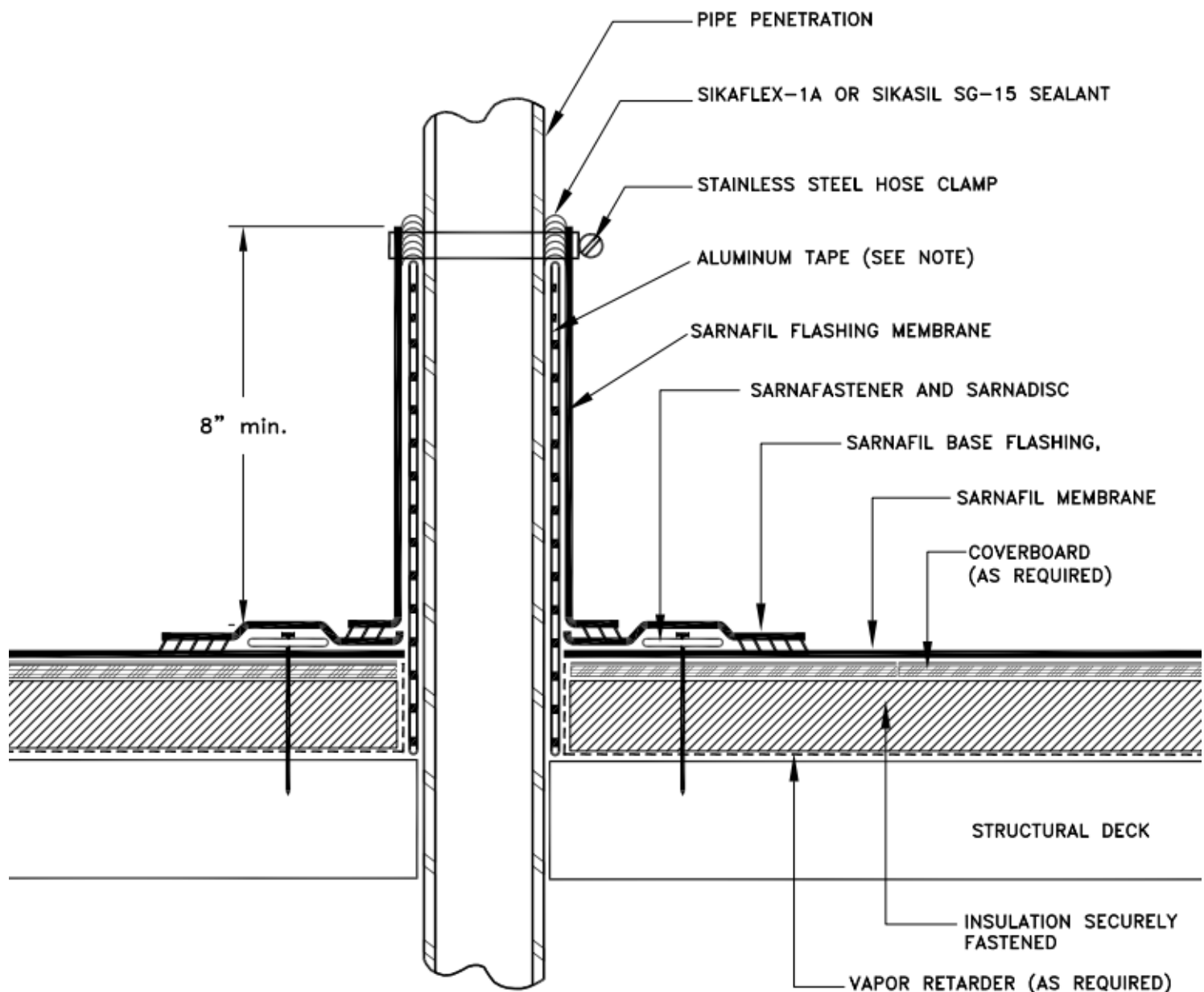
## LIGHTNING ROD

**NOTES:**

- 1) EXISTING CABLE SHALL BE CLEANED FREE OF ASPHALT CONTAMINATION AS REQUIRED PRIOR TO REINSTALLATION.
- 2) IF ASPHALT CONTAMINATION CAN NOT BE CLEANED, SARNAFIL REQUIRES A CONTINUOUS G459 FLASHING STRIP UNDER LOCATION OF CABLE. HOT-AIR WELDED IN-PLACE.
- 3) SIKA SARNAFIL IS NOT RESPONSIBLE FOR LIGHTNING DAMAGE TO SARNAFIL ROOF.
- 4) VAPOR RETARDER SHALL BE SEALED AT EDGES.

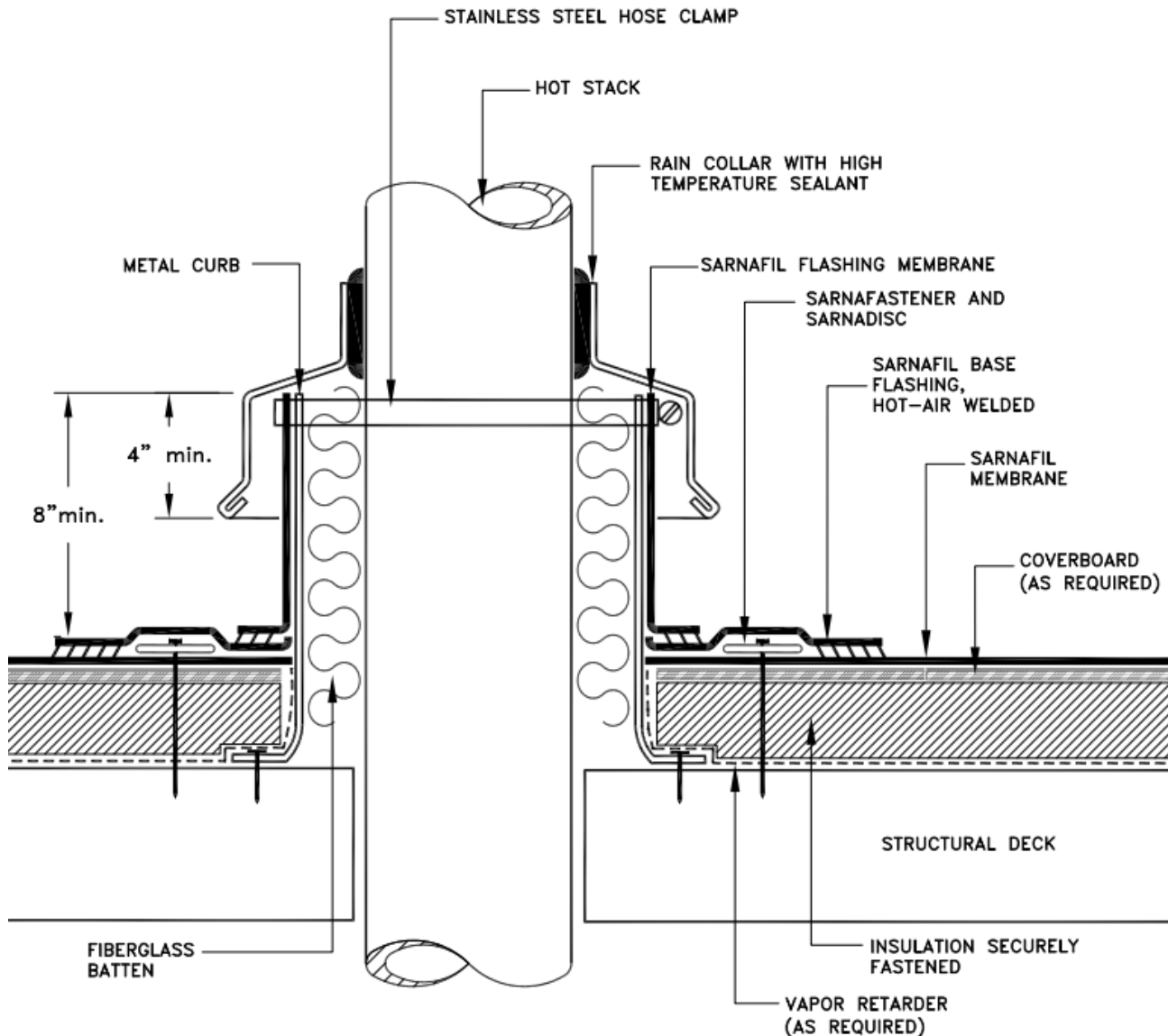
## LIGHTNING ROD CABLE

NOTE: As an alternative, lengths of G410 coverstrip can be welded to encapsulate the cable. Leave the ends of the coverstrip unwelded. Contact Sika Sarnafil for further details.

**NOTES:**

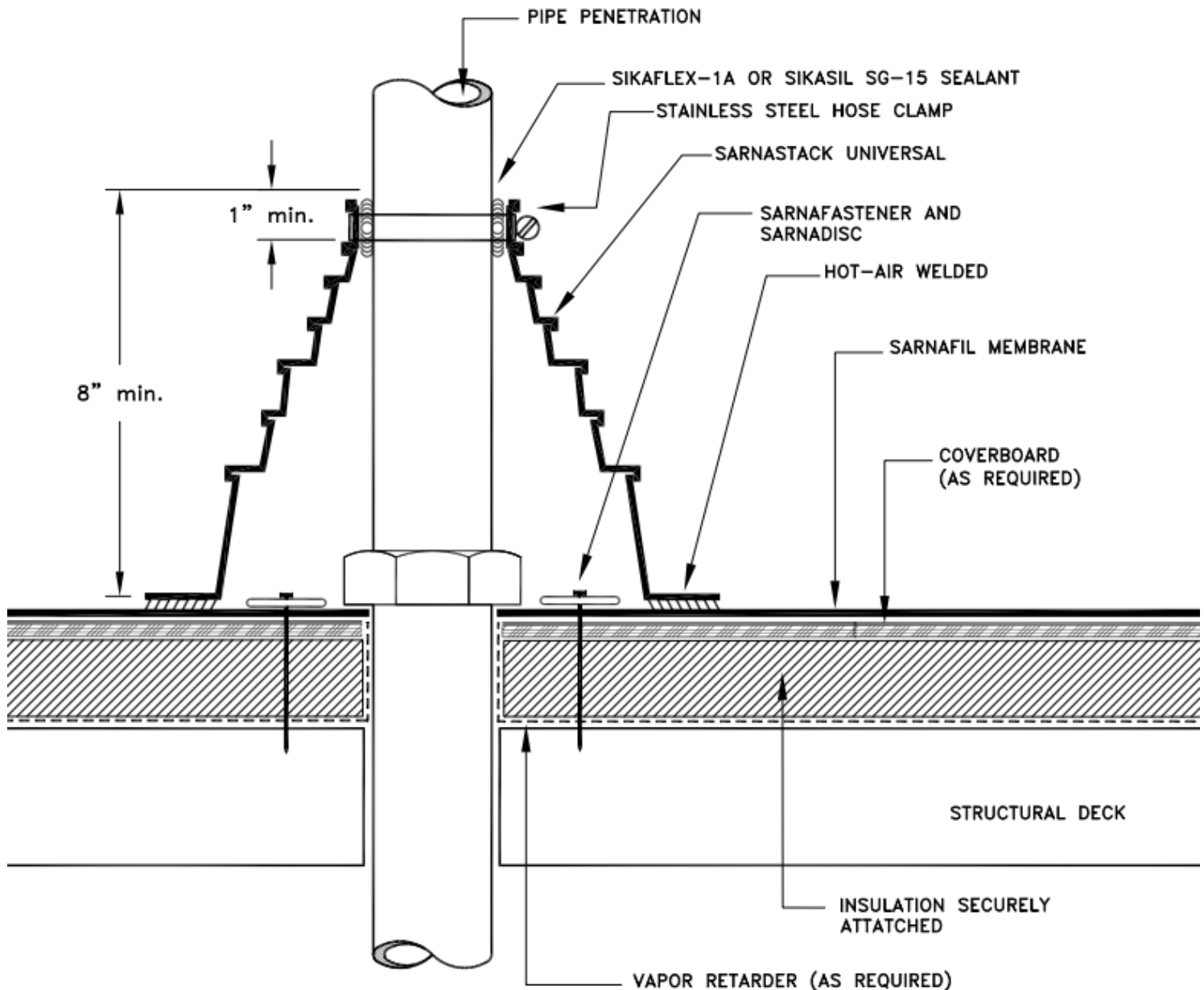
- 1) ALUMINUM TAPE IS REQUIRED IF EXISTING PENETRATION IS CONTAMINATED.
- 2) SEALANT IS A MAINTENANCE ITEM, MAINTENANCE IS NOT COVERED UNDER THE SARNAFIL WARRANTY.
- 3) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## PIPE PENETRATION FLASHING

**NOTES:**

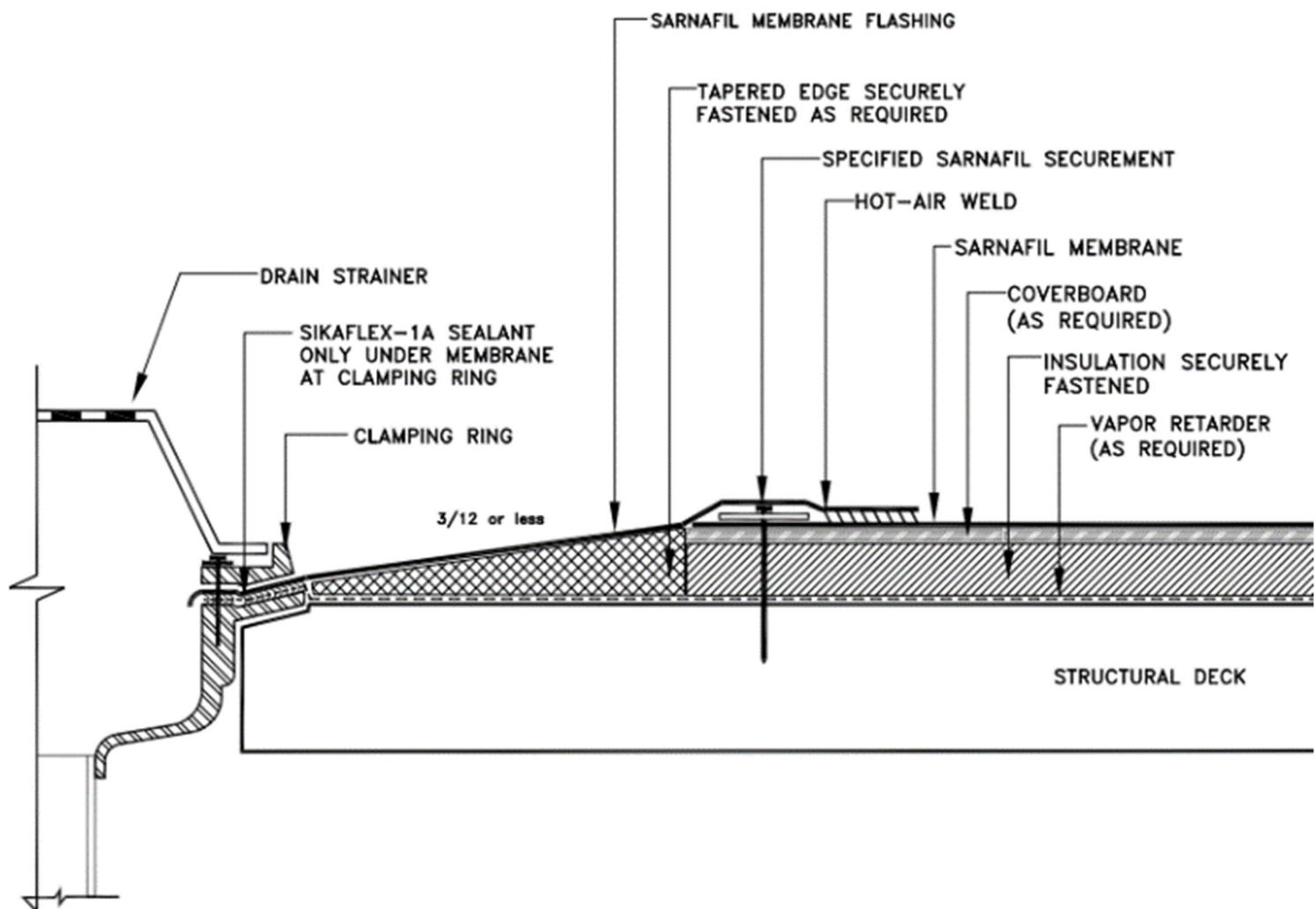
- 1) SARNAFIL MEMBRANE SHALL NOT BE IN CONTACT WITH SURFACES HAVING SUSTAINED TEMPERATURES ABOVE 160°F.
- 2) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## HEATED STACK FLASHING

**NOTE:**

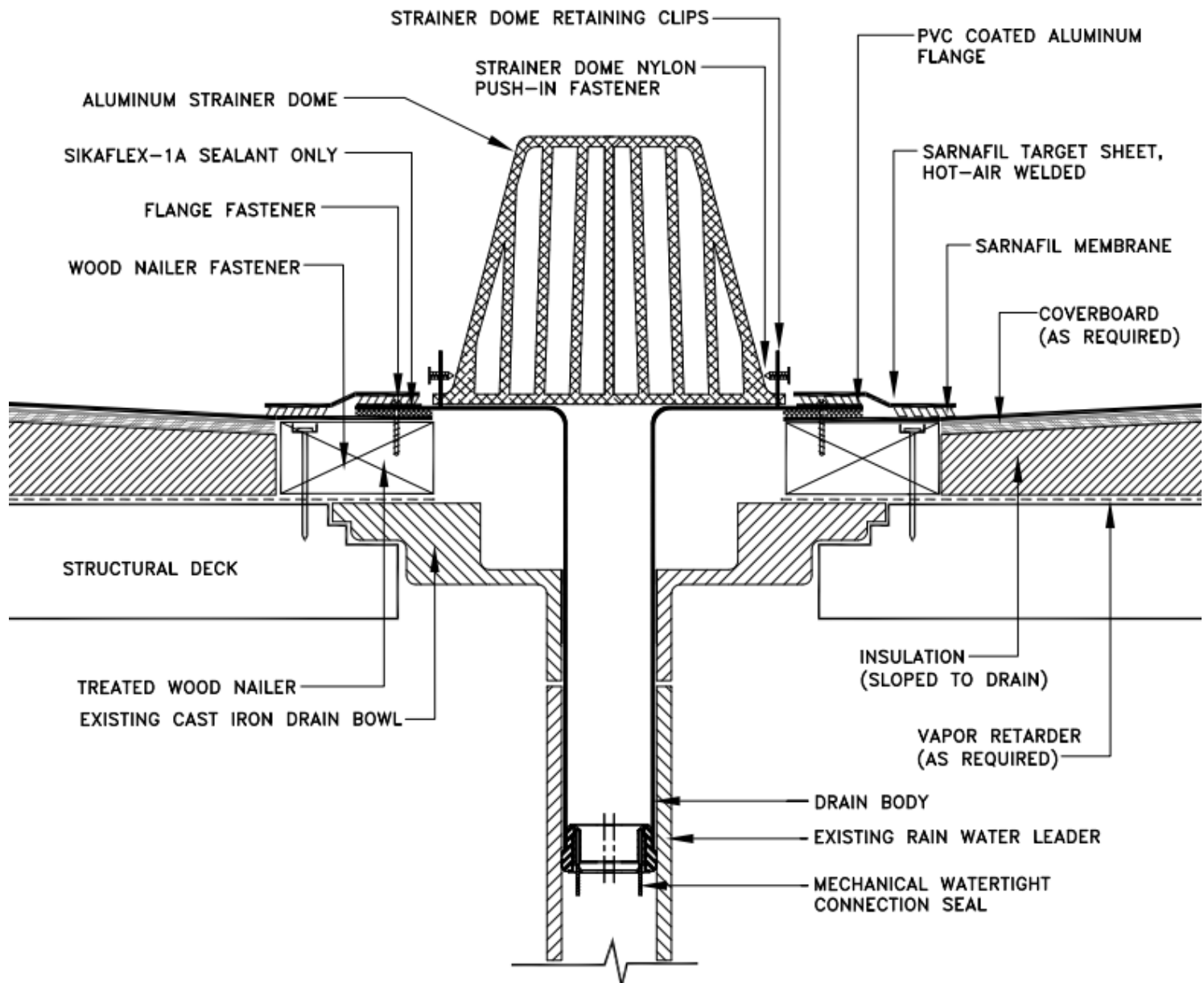
- 1) SEALANT IS A MAINTENANCE ITEM. MAINTENANCE IS NOT COVERED UNDER SARNAFIL WARRANTY.
- 2) VAPOR RETARDER SHALL BE SEALED AT EDGES.
- 3) PIPE SEAL MUST HAVE INTACT RIB AT TOP EDGE, REGARDLESS OF PIPE DIAMETER.
- 4) DECK FLANGES OF THE PRE-MOLDED PIPE SEAL SHALL NOT BE OVERLAPPED, CUT OR APPLIED OVER ANY ANGLE CHANGE.
- 5) THE EMPTY SPACE MAY BE FILLED WITH AN EXPANDING URETHANE FOAM. THIS WILL MINIMIZE CONDENSATION FORMATION AS WELL AS PROVIDING SOME RESILIENCY TO THE FINISHED DETAIL.

## SARNASTACK UNIVERSAL

**NOTES:**

- 1) EXISTING DRAIN BOWL, CLAMPING RING AND DRAIN ACCESSORIES ARE TO BE CLEANED FREE OF ALL CONTAMINATES.
- 2) SARNAFIL G459 MEMBRANE MUST BE USED IN AREAS OF ASPHALT CONTAMINATION.
- 3) VAPOR RETARDER SHALL BE SEALED AT EDGES.
- 4) FOR SUMPS GREATER THAN 3/12 REFER TO STEEP SUMP TECH BULLETINS

## CLAMPING RING DRAIN

**NOTES:**

- 1) SIKA SARNAFIL IS NOT RESPONSIBLE FOR WATER BLOCKAGE OR BACK-UP IN DRAIN LINES.
- 2) CONSULT SIKA SARNAFIL REGIONAL TECHNICAL DEPARTMENT FOR ADDITIONAL INFORMATION.
- 3) VAPOR RETARDER SHALL BE SEALED AT EDGES.

## SARNADRAIN WITH U-FLOW