

# **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.

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### 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: Fergus, Ontario  
 Building geometry:  
 • Low-rise building, Low-rise roof, pitched parcel  
 • Height (reference height): 40 ft (12.2 m)  
 • Width (smaller plan dimension): 400 ft (122 m)  
 • Length: 500 ft (152 m)  
 Building exposures: Open  
 Building importance: Category 2  
 Building importance: Normal

**Wind loads for roof cladding**

Roof area	Wind load
End zone width, Z = 18 ft (5.5 m)	
Corner	+66 psf (-3.2 kPa)
Edge	+34 psf (-1.6 kPa)
Field	+20 psf (-1.2 kPa)

**Sikaplan Rhinobond Roof System:**

- Min 22Ga 33ksi steel deck
- Sarnavap PE 6 Vapour Retarder adhered loose laid with all laps sealed with Sika Multi-purpose Tape
- 2 layers 2.8" Sarnatherm insulation, mechanically attached as described below
- 60 mil Sikaplan Fastened induction weld Rhinobond Roof System
- 60 mil Sikaplan Adhered flashing membrane adhered with Samacol 2170 adhesive

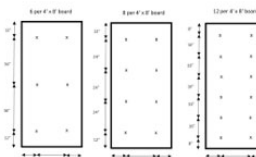
**Attachment:**

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

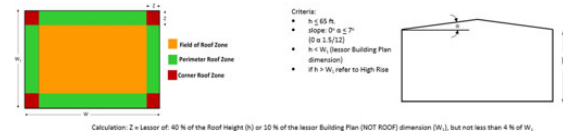
Sika Canada Inc.  
 601 Delmar Avenue, Pointe-Claire, QC H9R 4A9  
 Phone: 514-697-2610 / 1 800-933-7452 Fax: 514-697-4726 www.sika.ca



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



**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, 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 - RHINOBOND 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 - RHINOBOND 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		
Transition Attachment	Select Fastener				0%		Carton		
	Select Bar/Disc				0%				
	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: <a href="#">Click here to enter text.</a>			
Roof Area 1 Name: <a href="#">Click here to enter text.</a>			
Roof Area 2 Name: <a href="#">Click here to enter text.</a>			
Roof Area 3 Name: <a href="#">Click here to enter text.</a>			
Address: <a href="#">Click here to enter text.</a>			
City: <a href="#">Click here to enter text.</a>		Province: <a href="#">Select</a>	P.C. <a href="#">Click here to enter text.</a>
II. BUILDING OWNER			
Name: <a href="#">Click here to enter text.</a>			
Address: <a href="#">Click here to enter text.</a>			
City: <a href="#">Click here to enter text.</a>		Province: <a href="#">Select</a>	P.C. <a href="#">Click here to enter text.</a>
Contact Person: <a href="#">Click here to enter text.</a>		Tel: <a href="#">Click here to enter text.</a>	Email: <a href="#">Click here to enter text.</a>
III. DESIGNER / SPECIFIER			
Name: <a href="#">Click here to enter text.</a>			
Address: <a href="#">Click here to enter text.</a>			
City: <a href="#">Click here to enter text.</a>		Province: <a href="#">Select</a>	P.C. <a href="#">Click here to enter text.</a>
Contact Person: <a href="#">Click here to enter text.</a>		Tel: <a href="#">Click here to enter text.</a>	Email: <a href="#">Click here to enter text.</a>
IV. GENERAL CONTRACTOR			
Name: <a href="#">Click here to enter text.</a>			
Address: <a href="#">Click here to enter text.</a>			
City: <a href="#">Click here to enter text.</a>		Province: <a href="#">Select</a>	P.C. <a href="#">Click here to enter text.</a>
V. AUTHORIZED ROOFING APPLICATOR			
Name: <a href="#">Click here to enter text.</a>			
Address: <a href="#">Click here to enter text.</a>			
City: <a href="#">Click here to enter text.</a>		Province: <a href="#">Select</a>	P.C. <a href="#">Click here to enter text.</a>
Contact Person: <a href="#">Click here to enter text.</a>		Tel: <a href="#">Click here to enter text.</a>	Email: <a href="#">Click here to enter text.</a>
Project Manager: <a href="#">Click here to enter text.</a>		Tel: <a href="#">Click here to enter text.</a>	Email: <a href="#">Click here to enter text.</a>
VI. OTHER			
1. Building Usage: <a href="#">Select</a>		2. Recycle Project: <a href="#">Select</a>	
3a. Roof Access: <a href="#">Select</a>		3b. If "Other" specify: <a href="#">Click here to enter text.</a>	
4a. Roof Membrane Overburden: <a href="#">Select</a>	4b. If "Other" specify: <a href="#">Click here to enter text.</a>	4c. Identify Roof Area with Overburden: <a href="#">Click here to enter text.</a>	
VII. PROJECT INFORMATION			
	Roof Area 1	Roof Area 2	Roof Area 3
1. Anticipated Start Date:	<a href="#">Click here to enter a date.</a>	<a href="#">Click here to enter a date.</a>	<a href="#">Click here to enter a date.</a>
2. Construction Type:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
If Tear-Off specify	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
3. System:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
4. Total Sqft. (include flashings):	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>
5. Warranty Type:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
6. Warranty Length:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
7. Special Warranty Request (Pre-approval required)	<a href="#">Click here to enter text.</a>		
8. Sarnafil Membrane:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
i. Gauge:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
ii. Colour:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
iii. Flashing:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
9. Sikaplan Membrane:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
i. Gauge:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
ii. Colour:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
iii. Flashing:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
VIII. ADHERED ROOF SYSTEM			
1. Adhesive Type:	<a href="#">Select</a>	<a href="#">Select</a>	<a href="#">Select</a>
2. Coverage Rate:	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>

- 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**

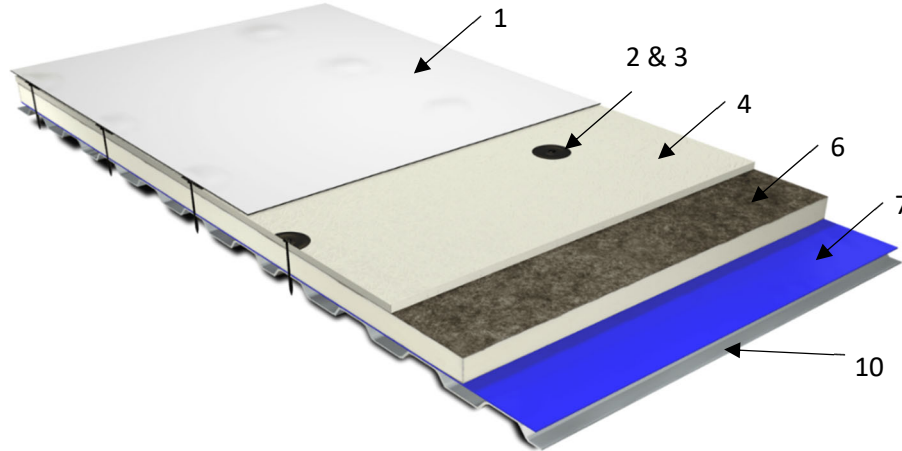
Sarnafil® membranes are loose laid beneath the insulation and ballasted LightGUARD / HeavyGUARD panels

### **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**

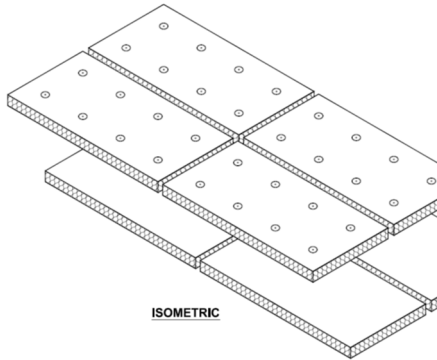


Cross Section Layer Rhinobond	Approved Materials
<b>1. Membrane</b>	1.5, 1.8, or 2.0 mm (60, 72 or 80 mil) Sarnafil® S327 or 1.5 mm (60 mil) Sikaplan® Fastened
<b>2. Membrane &amp; Board Securement</b>	Sarnadisc Rhinobond or Sarnadisc Rhinobond Treadsafe
<b>3. Membrane &amp; Board Securement Fasteners</b>	Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)
<b>4. Cover board (optional)</b>	12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck® & DensDeck® Prime
<b>5. Grounding Layer (optional not shown)</b>	EFVM (Electronic Field Vector Mapping) Grid
<b>6. Insulation</b>	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)
<b>7. Vapour Retarder</b>	Sarnavap®-6, Sarnavap®-10, Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138
<b>8. Vapour Retarder Primers (not shown)</b>	Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap®6 or 10)
<b>9. Thermal Barrier (optional not shown):</b>	12 & 15 mm (½ in & 5/8 in) DensDeck® & DensDeck® Prime
<b>10. 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: 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

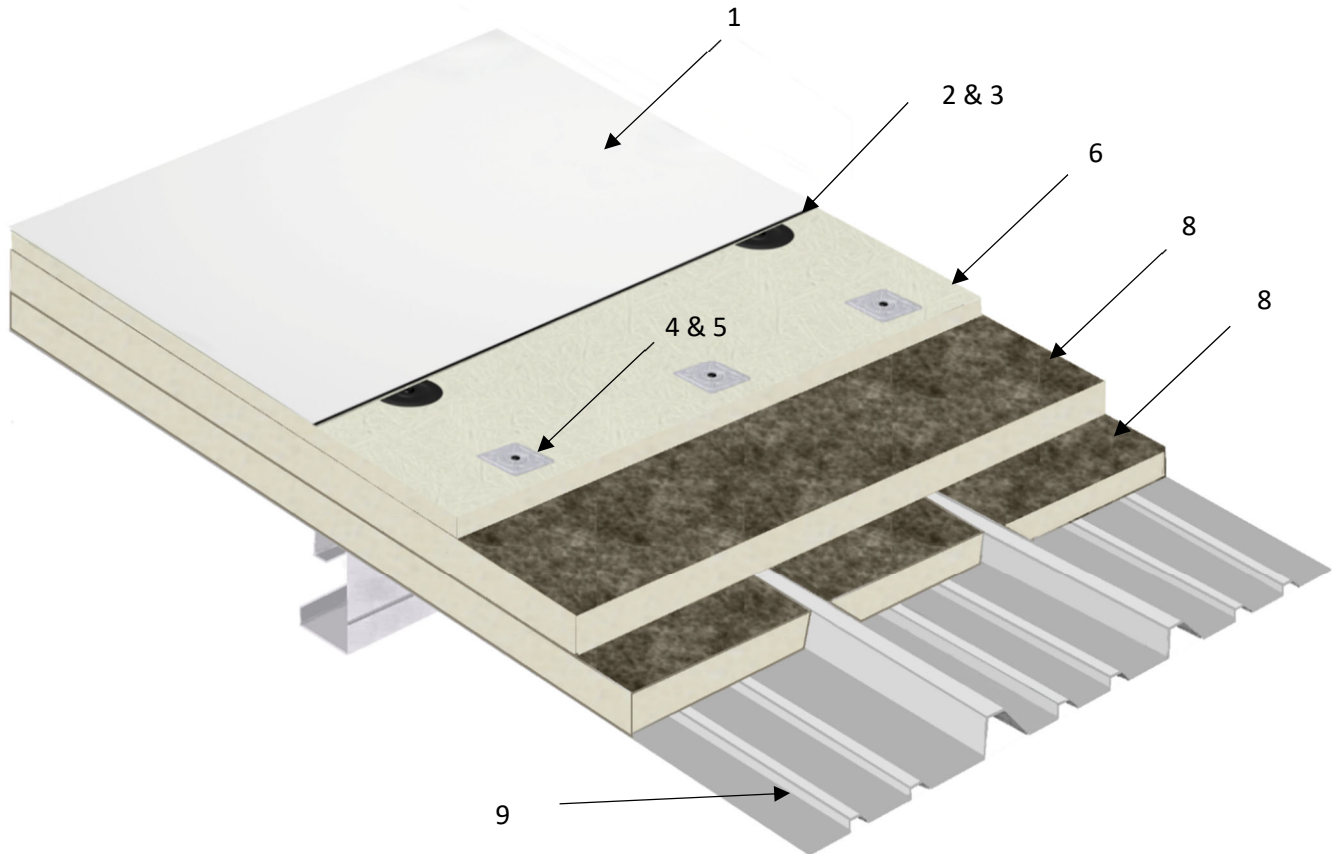
#### Warranty Duration:

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:**

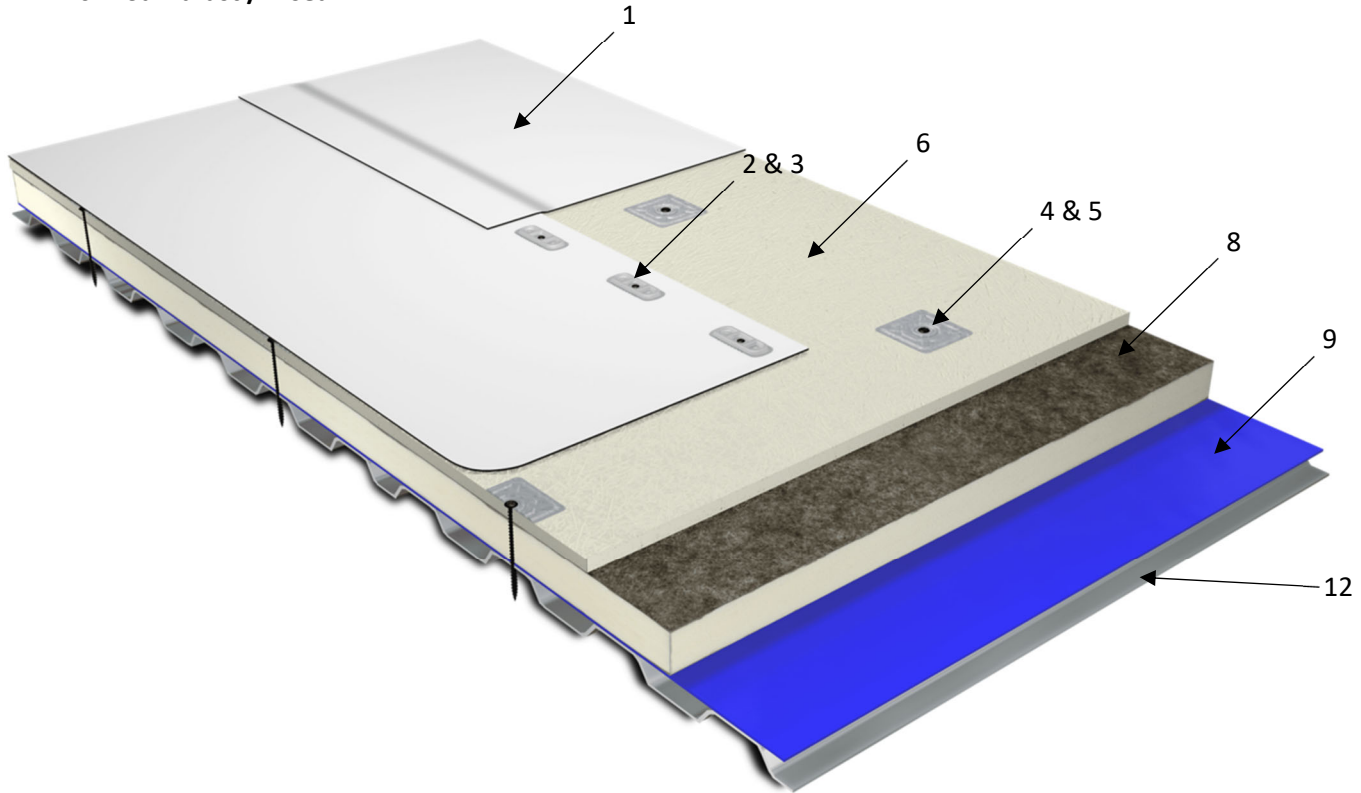
1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\*
3. System: 5, 10, 15, 20, 25\* or 30\* years

**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

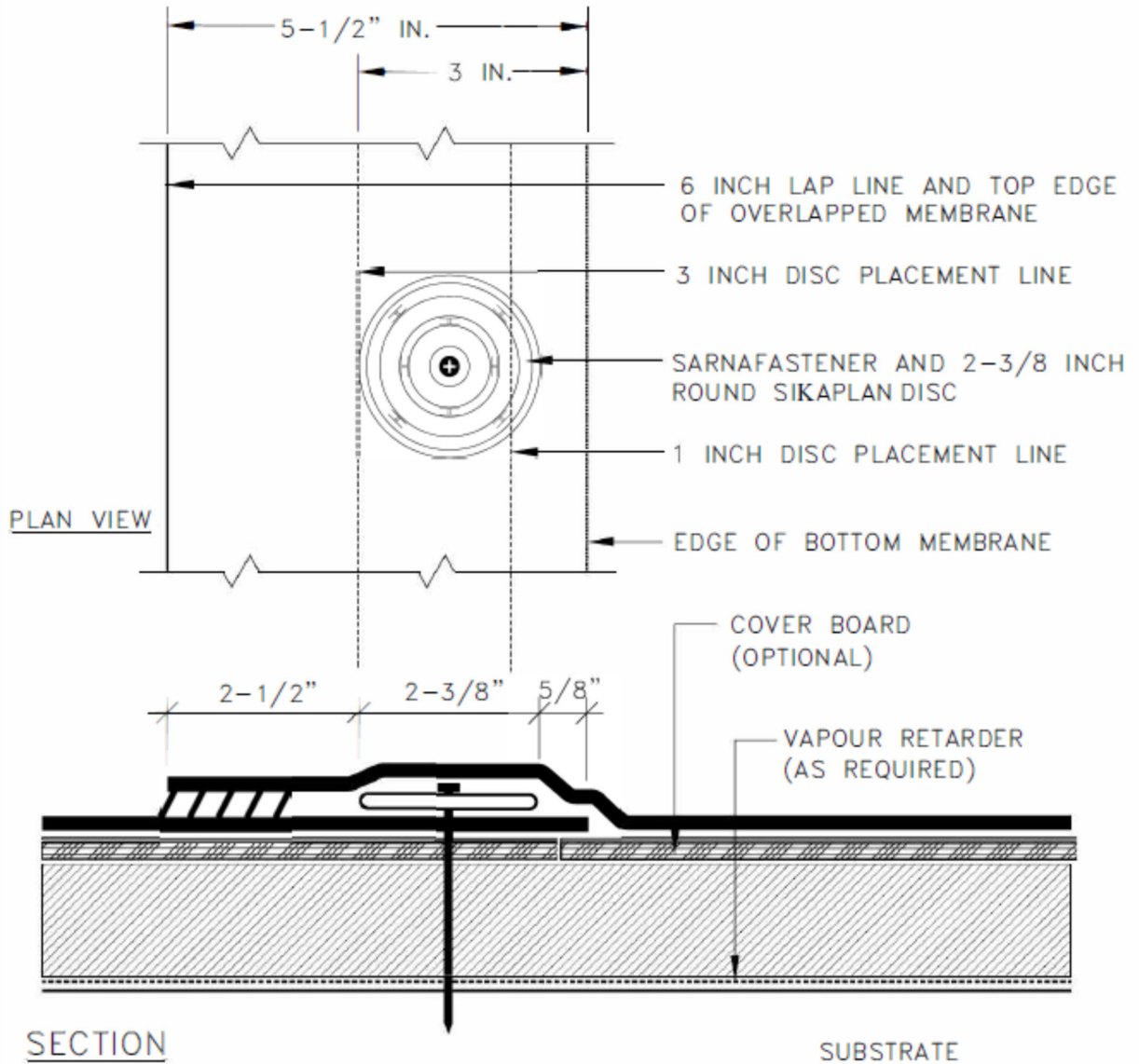
**Warranty Duration:**

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

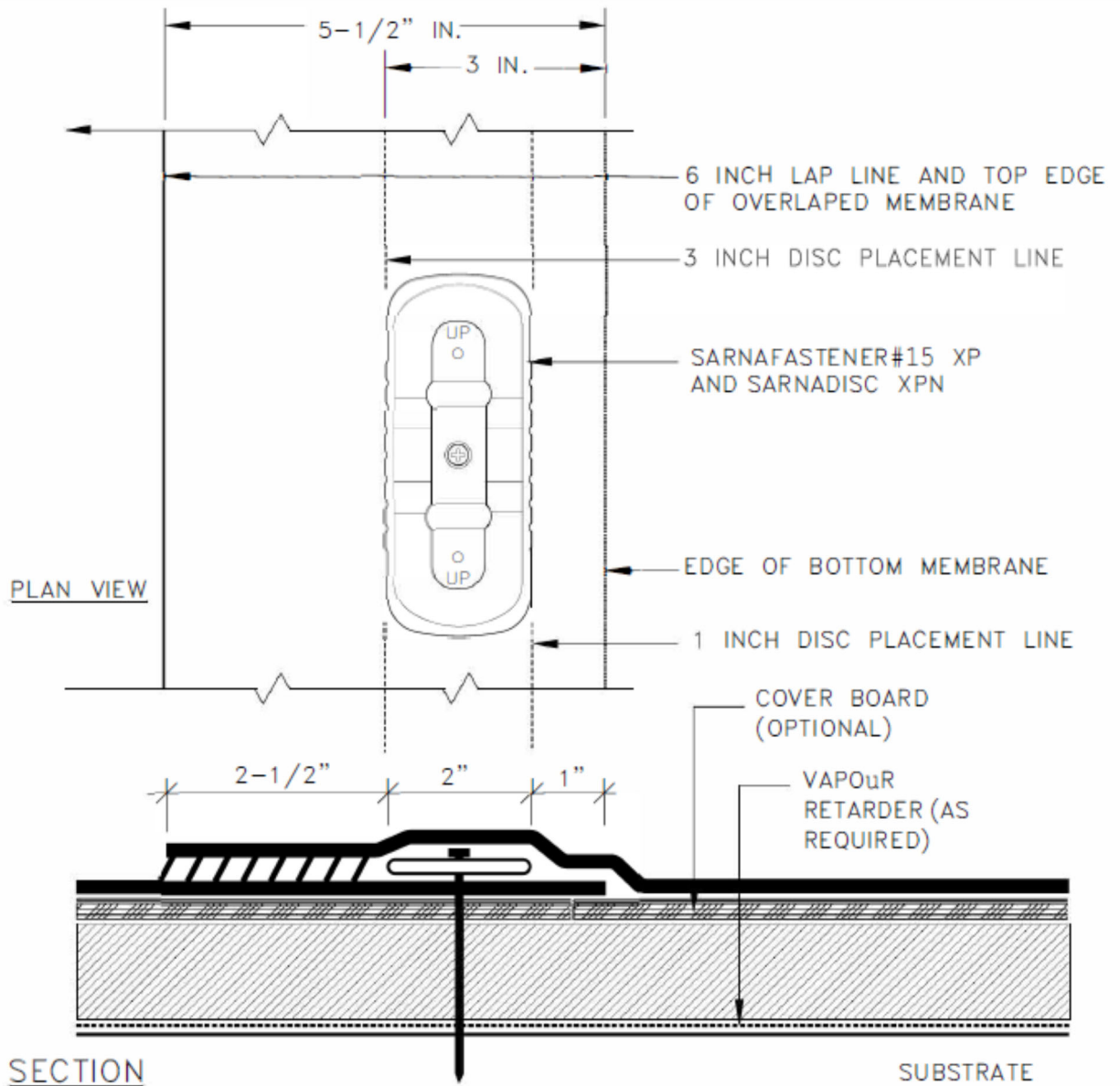
Typical Sarnafast / Inseam System Details



NOTES:

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

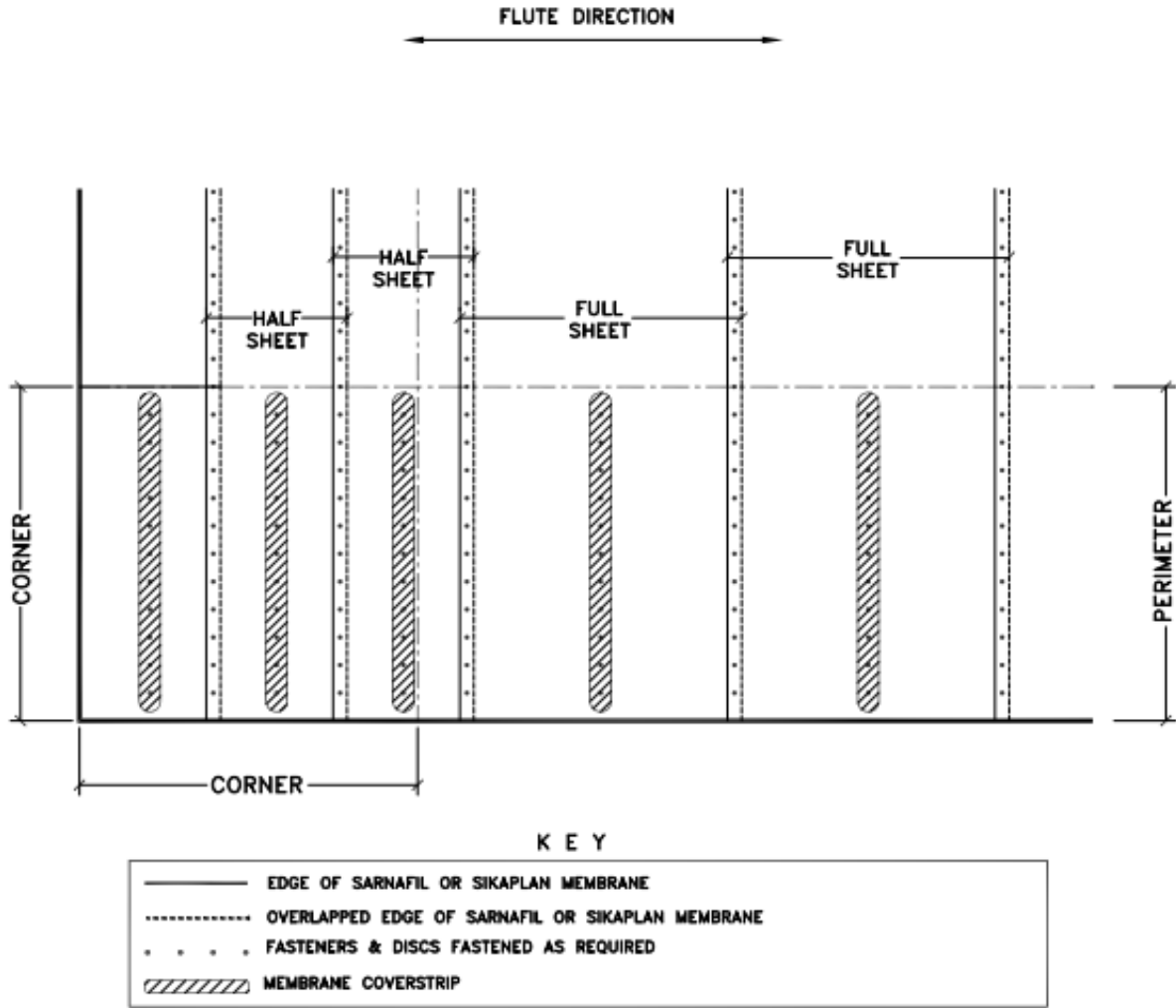
SARNAFASTENER & SIKAPLAN DISC  
2-3/8" PLACEMENT PLAN



NOTES:

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

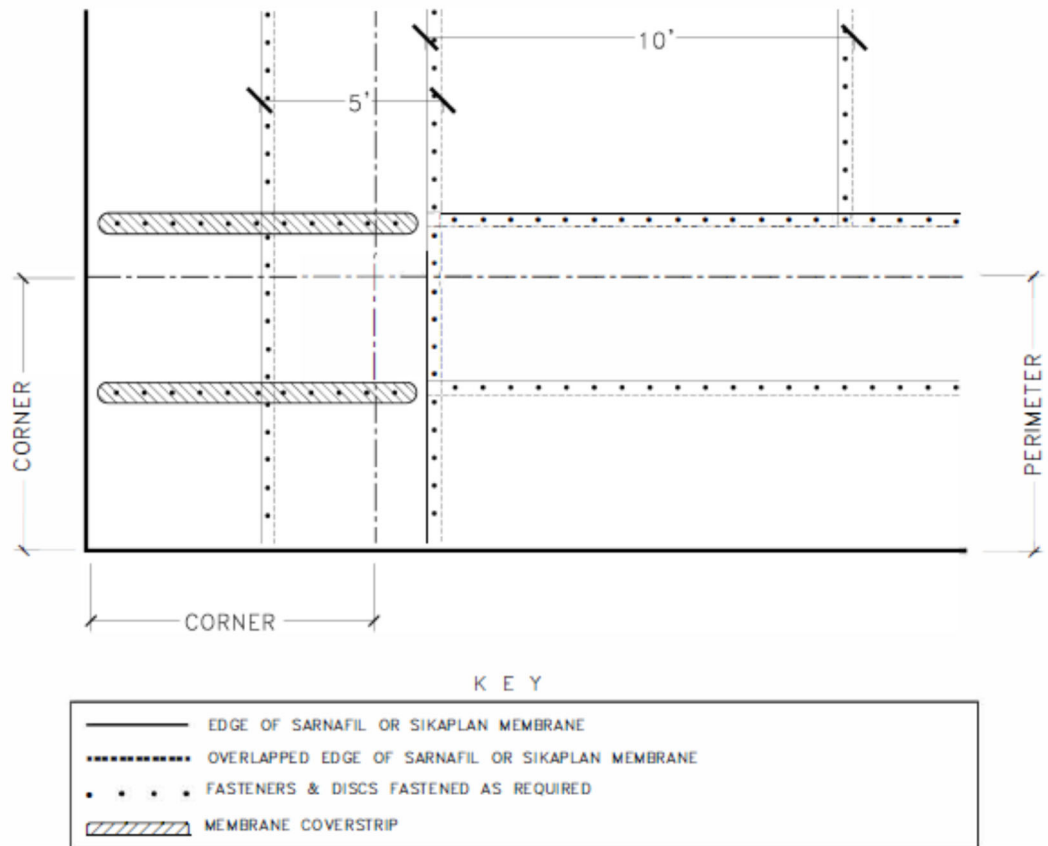
SARNAFASTENER-XP PLACEMENT PLAN



**NOTE:**

1) PERIMETER DETERMINED AS 0.10 x LEAST PLAN WIDTH OR 0.40 x BUILDING HEIGHT. WHICH EVER IS

STEEL DECK

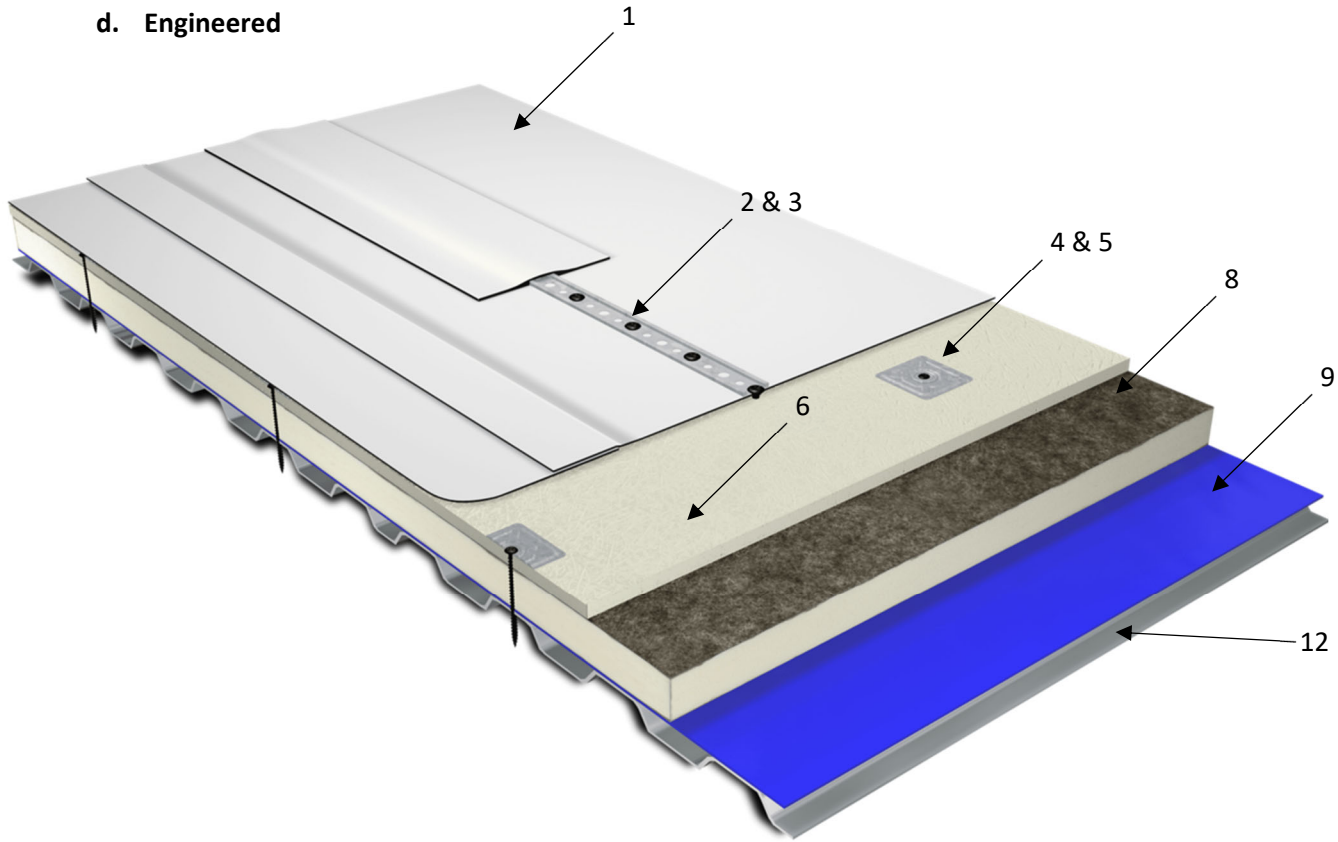


**NOTE:**

- 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:**

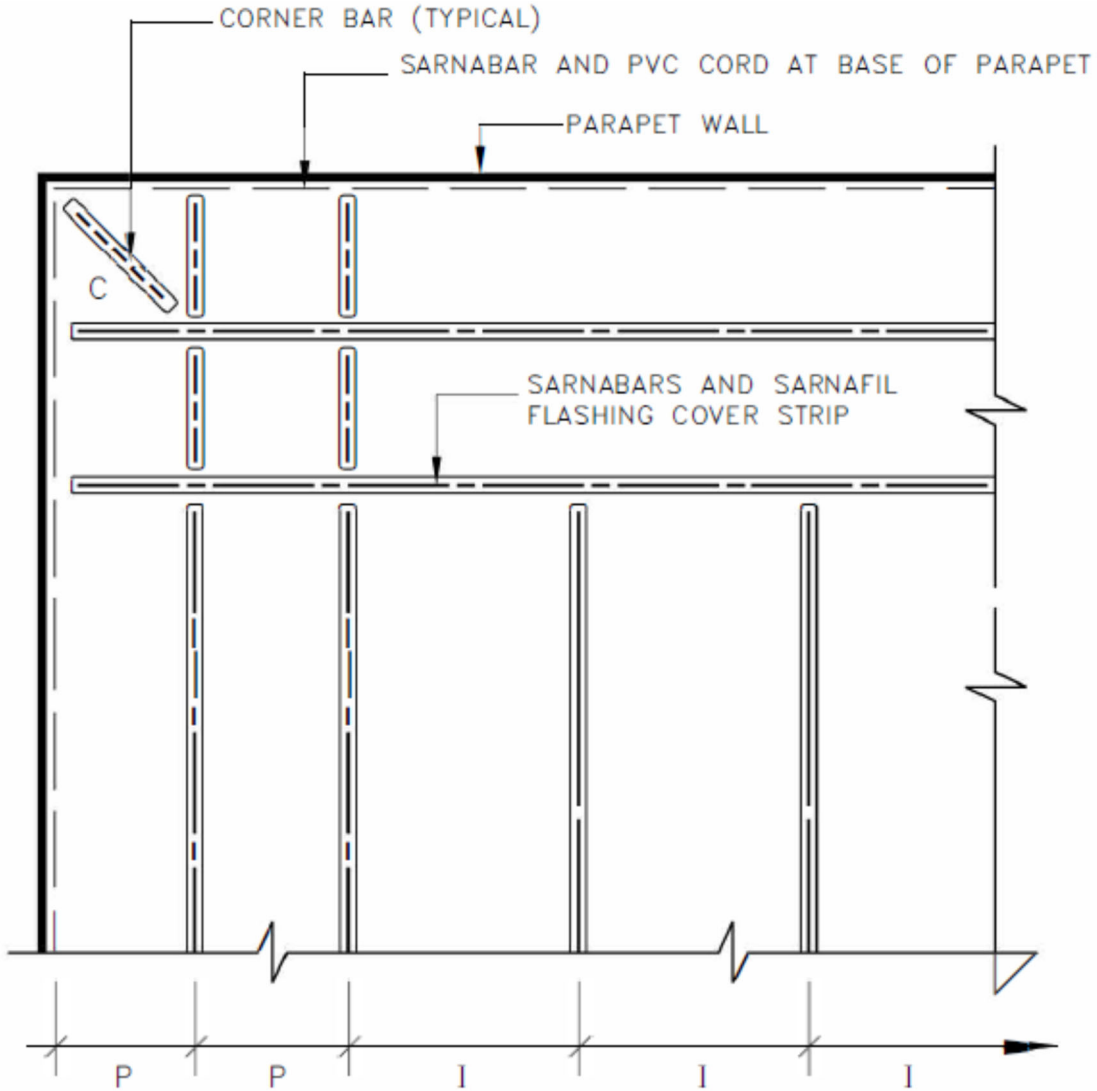
1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\* years
3. System: 5, 10, 15, 20, 25\* or 30\* years

**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



KEY:

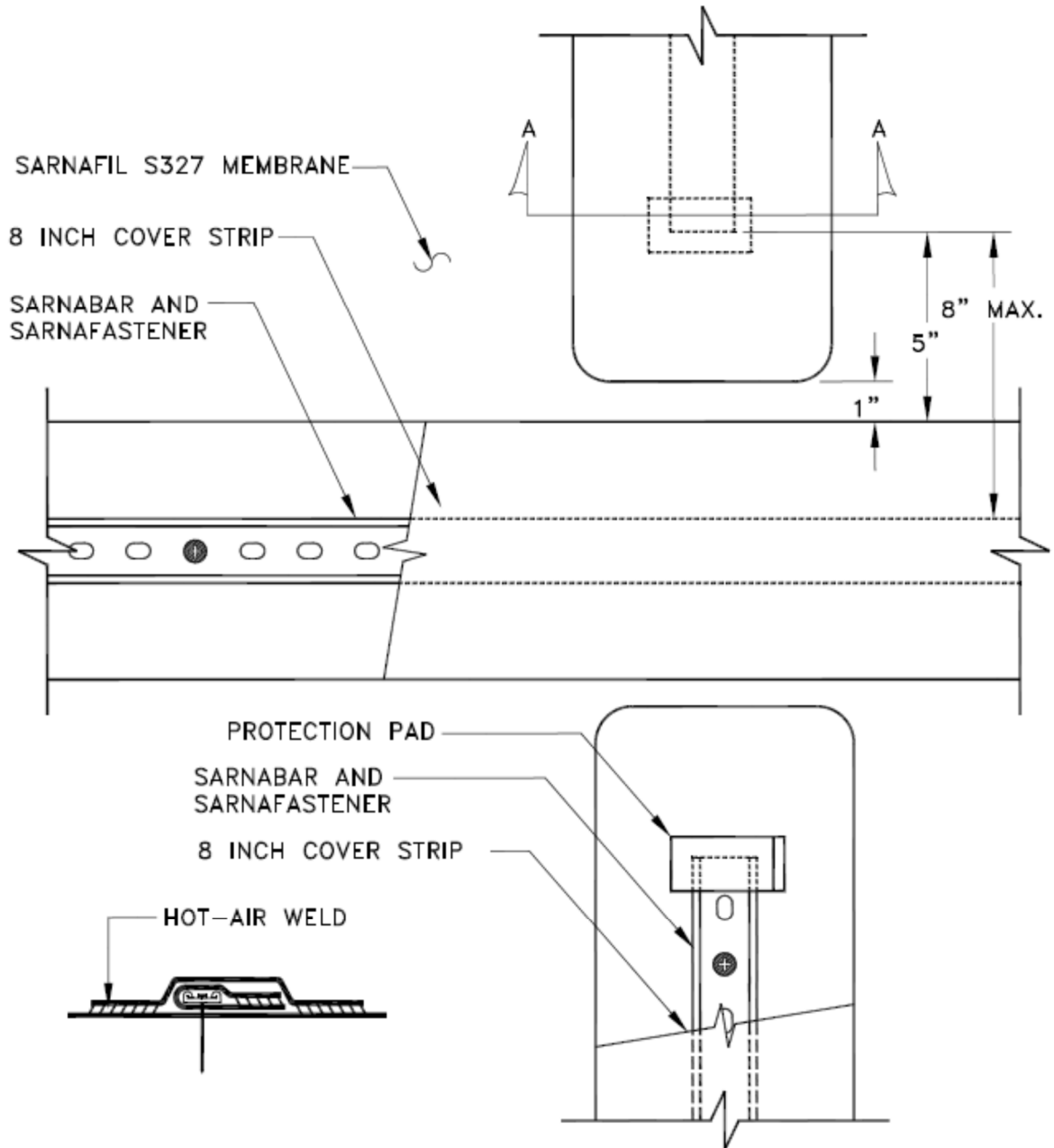
- C = CORNER BAR
- P = PERIMETER BAR
- I = INTERIOR BAR

NOTE:

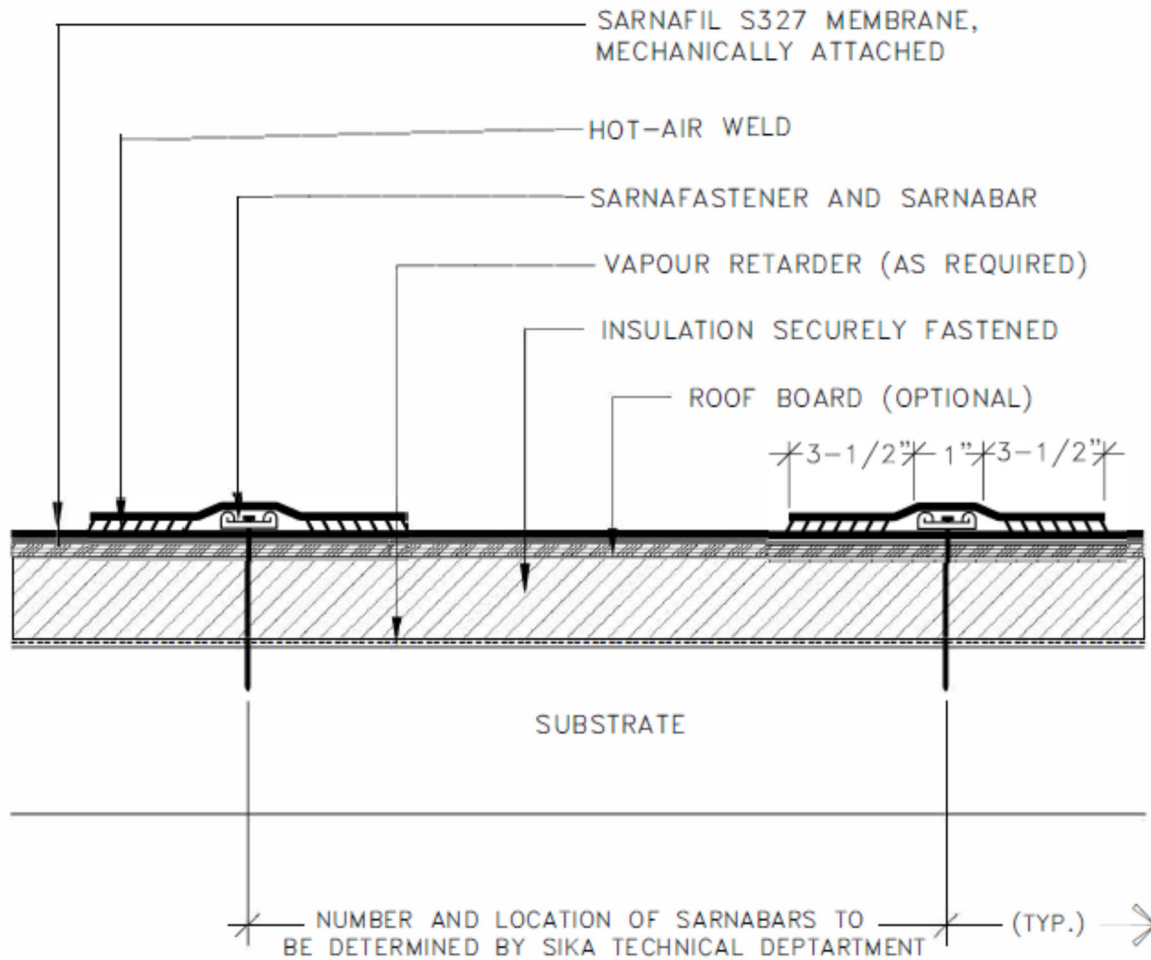
NUMBER OF PERIMETER BARS, BAR SPACINGS, AND FASTENER SPACINGS TO BE CONFIRMED BY SIKA TECHNICAL DEPARTMENT.

TYPICAL PERIMETER/CORNER LAYOUT PLAN





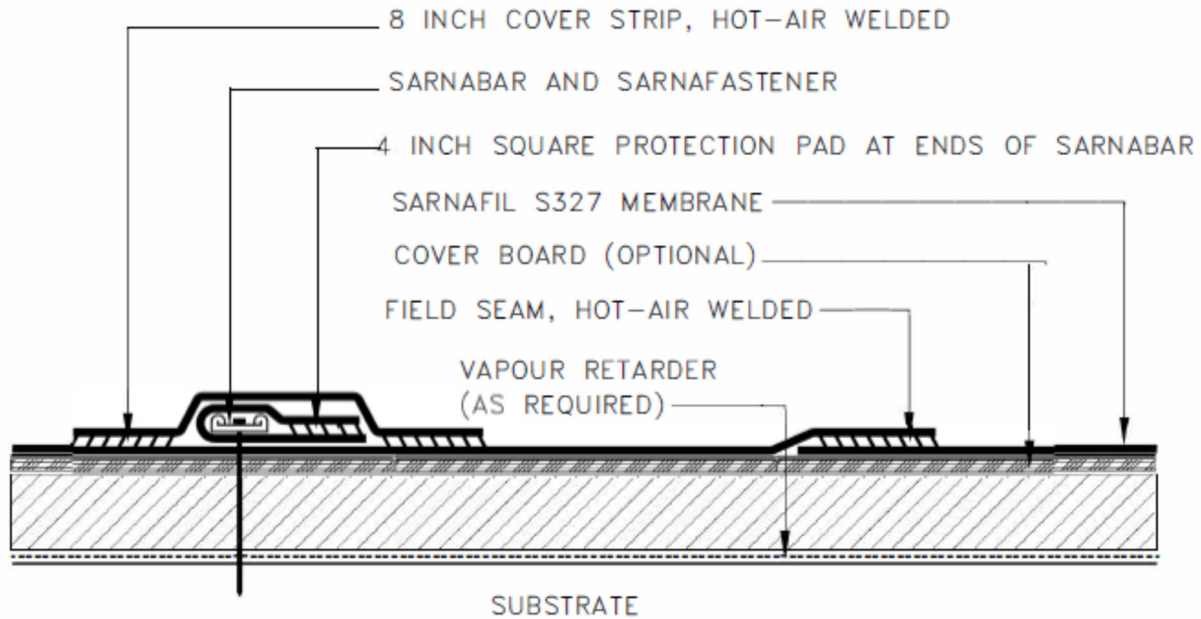
INTERSECTION OF BAR AND COVER STRIP AT CORNER



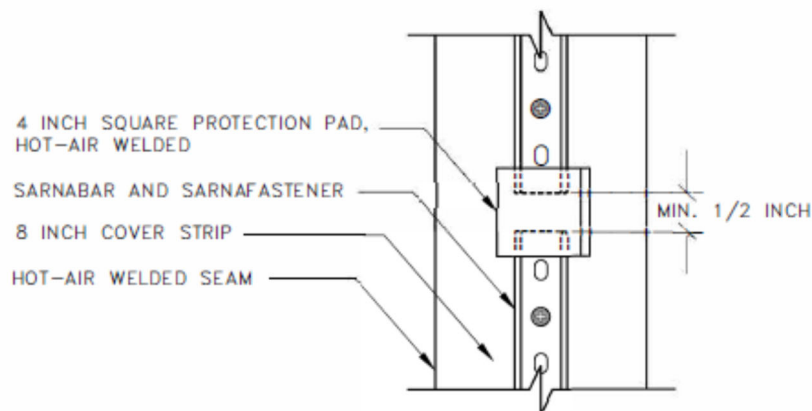
**NOTES:**

- 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



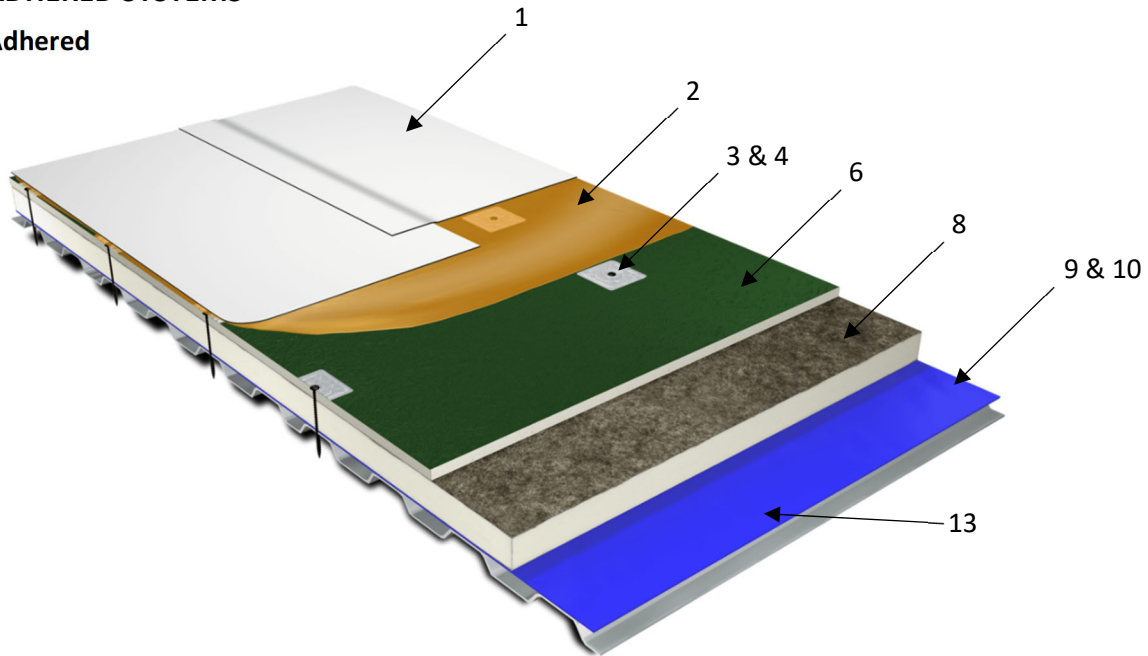
NOTE: VAPOUR RETARDER SHALL BE SEALED AT EDGES



DETAIL AT SARNABAR JOINTS

**6. ADHERED SYSTEMS**

**a. Adhered**



Cross Section Layer Adhered	Approved Materials
<b>1. Membrane</b>	1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil G410 (Feltback), 1.5 mm (60 mil) Sikaplan® Adhered (Feltback)
<b>2. Membrane Securement</b>	Sarnacol®-2170 R, Sarnacol® VC, Sarnacol®-2121 or Sarnacol® Feltback Membrane Adhesive
<b>3. Board Securement, Mechanical</b>	Sarnaplate
<b>4. Board Securement, Mechanical Fasteners</b>	Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)
<b>5. Board Securement, adhesive (not shown)</b>	Sarnacol® LRA, Sarnacol®-2163 or Sarnacol® OM Board Adhesive
<b>6. Cover board (optional)</b>	12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck & DensDeck Prime
<b>7. Grounding Layer (optional not shown)</b>	EFVM (Electronic Field Vector Mapping) Grid
<b>8. Insulation</b>	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).
<b>9. Vapour Retarder (polyethylene)</b>	Sarnavap®-6, Sarnavap®-10
<b>10. Vapour Retarder (modified bitumen)</b>	Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138
<b>11. Vapour Retarder Primers (not shown)</b>	Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap 6 or 10
<b>12. Thermal Barrier (optional not shown)</b>	12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime
<b>13. 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®
- 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 trayed 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:**

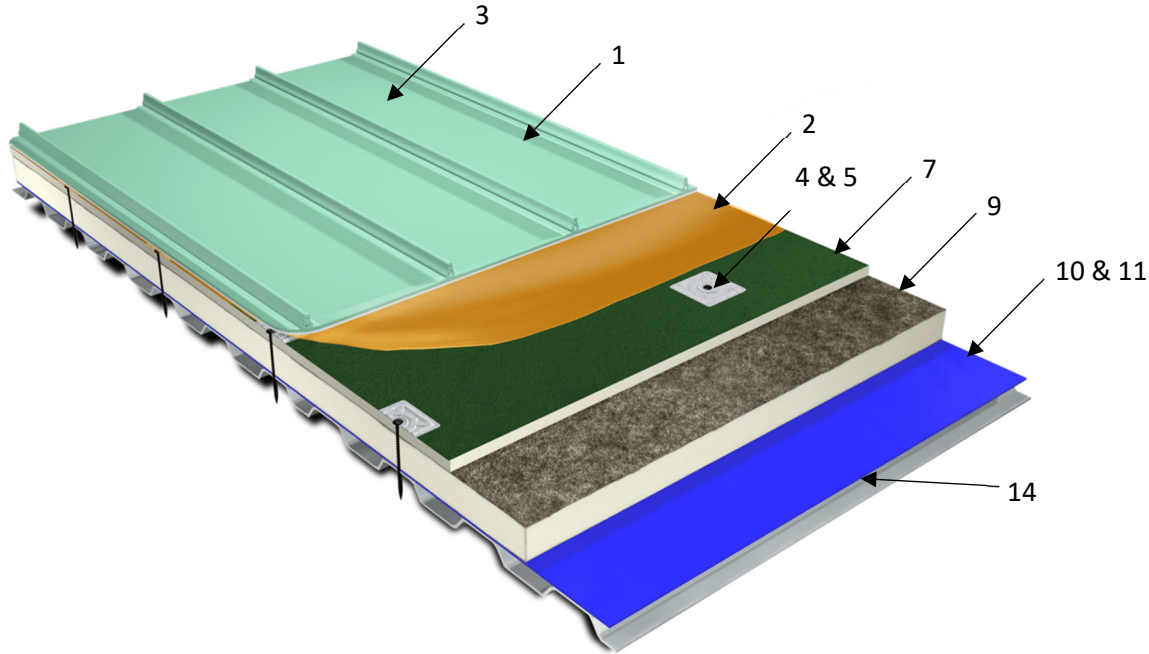
1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\* years
3. System: 5, 10, 15, 20, 25\* or 30\* years

**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
<b>1. Membrane</b>	1.5, 1.8 or 2.0 mm (60, 72 or 80 mil) Sarnafil G410 (Feltback)
<b>2. Membrane Securement</b>	Sarnacol®-2170 R, Sarnacol® VC, Sarnacol®-2121 or Sarnacol® Feltback Membrane Adhesive
<b>3. Rib Profile</b>	Décor Rib
<b>4. Board Securement Mechanical</b>	Sarnaplate or Sarnaplate Low Profile
<b>5. Board Securement Mechanical Fasteners</b>	Sarnafastener #15 XP (Steel & Wood Decks), Sarnafastener #14 (Concrete & Wood Decks)
<b>6. Board Securement Adhesive</b>	Sarnacol® LRA, Sarnacol®-2163 or Sarnacol® OM Board Adhesive
<b>7. Cover board (optional)</b>	12 mm (½ in) Sarnatherm Roof Board A-III, 6, 12 & 15 mm (¼ in, ½ in & 5/8 in) DensDeck & DensDeck Prime
<b>8. Grounding Layer (optional not shown)</b>	EFVM (Electronic Field Vector Mapping) Grid
<b>9. Insulation</b>	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).
<b>10. Vapour Retarder (polyethylene)</b>	Sarnavap 6, Sarnavap 10
<b>11. Vapour Retarder (modified bitumen)</b>	Vapor Retarder SA 31, Vapor Retarder SA 106, Vapor Retarder TA 138
<b>12. Vapour Retarder Primers (not shown)</b>	Vapor Retarder Primer SB, Vapor Retarder Primer VC, Vapor Retarder Primer WB. Note: primers are not required for Sarnavap®-6 or 10
<b>13. Thermal Barrier (optional not shown)</b>	12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime
<b>14. 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
- 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

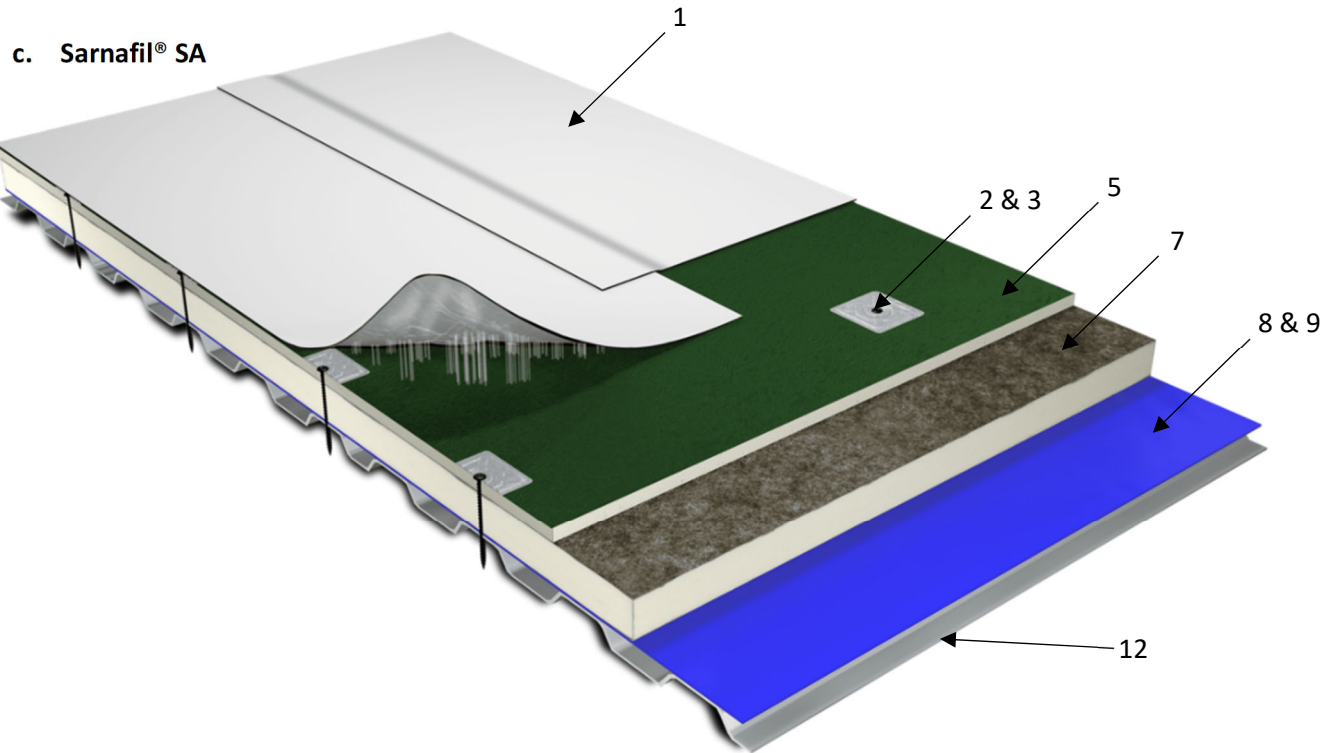
**Warranty Duration:**

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





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 trayed 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:**

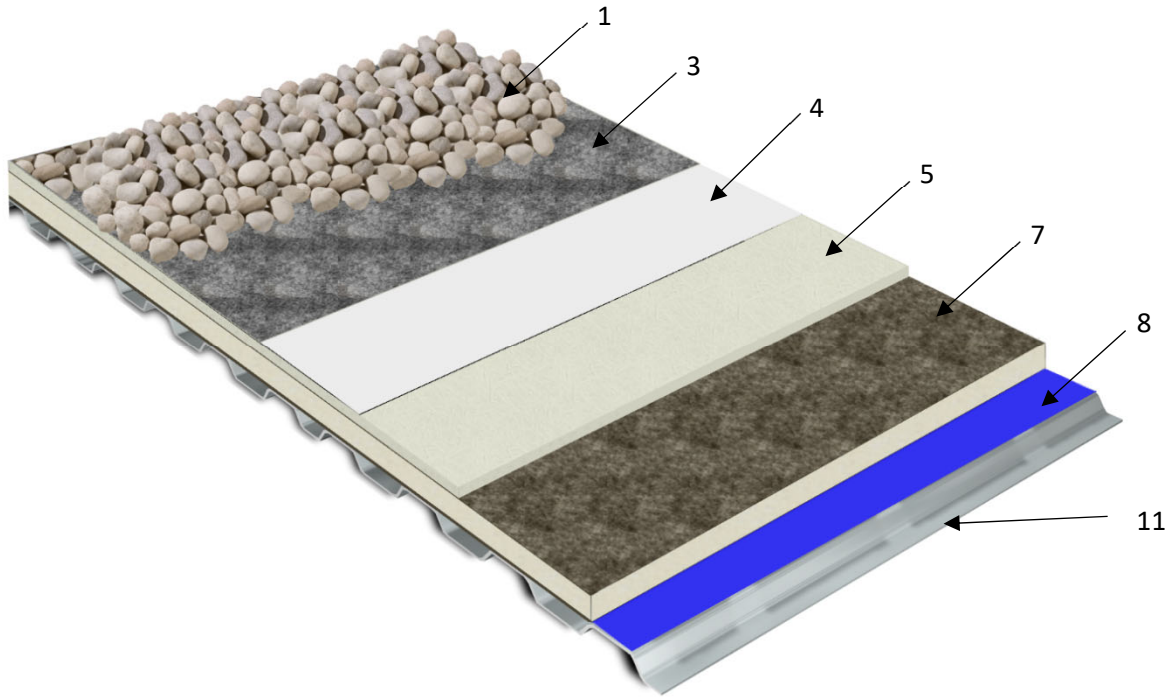
1. Membrane: 5, 10, 15, 20, 25\* or 30\* years
2. Standard: 5, 10, 15, 20, 25\*\* or 30\*\* years
3. System: 5, 10, 15, 20, 25\* or 30\* years

**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

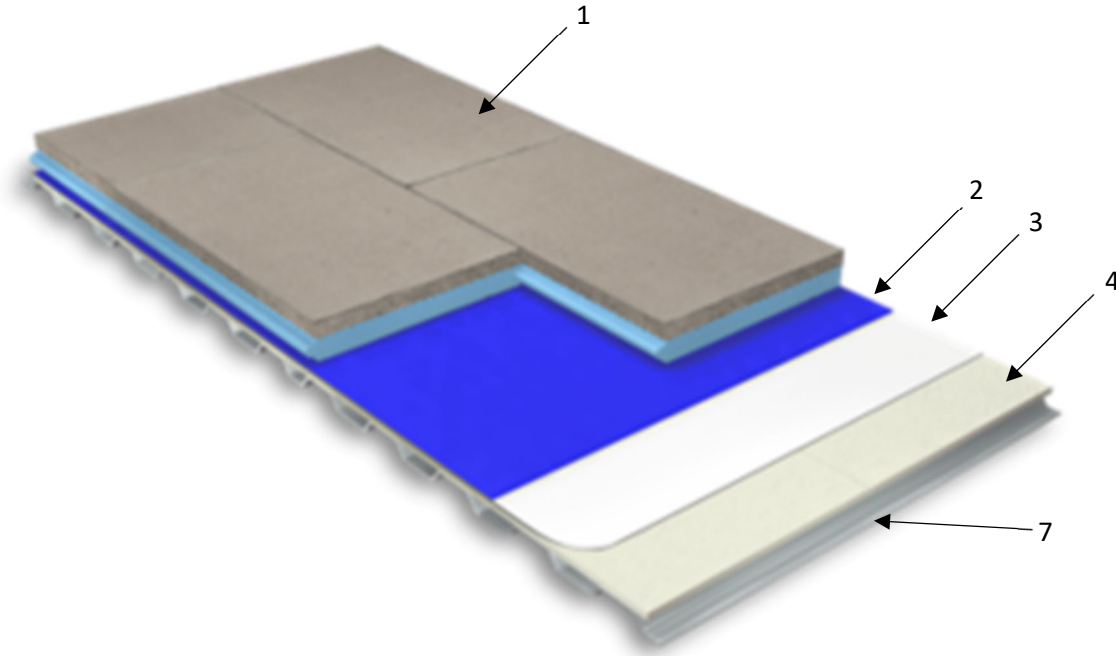
**Warranty Duration - Sarnafil®:**

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 LightGUARD/HeavyGUARD Ballasted PMR	Approved Materials
1. Ballast	LightGUARD / HeavyGUARD insulation
2. Separation Layer	Sarnafelt NWP, Drainage Panel 990
3. Membrane	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. 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
5. Thermal Barrier (required on steel decks)	12 & 15 mm (½ in & 5/8 in) DensDeck & DensDeck Prime
6. Protection Layer (not shown) required on Wood Plank, Plywood and Concrete decks	Sarnafelt NWP HD. The Sarnafelt NWP protection layer may be eliminated if Feltback membranes are used
7. 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
- 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

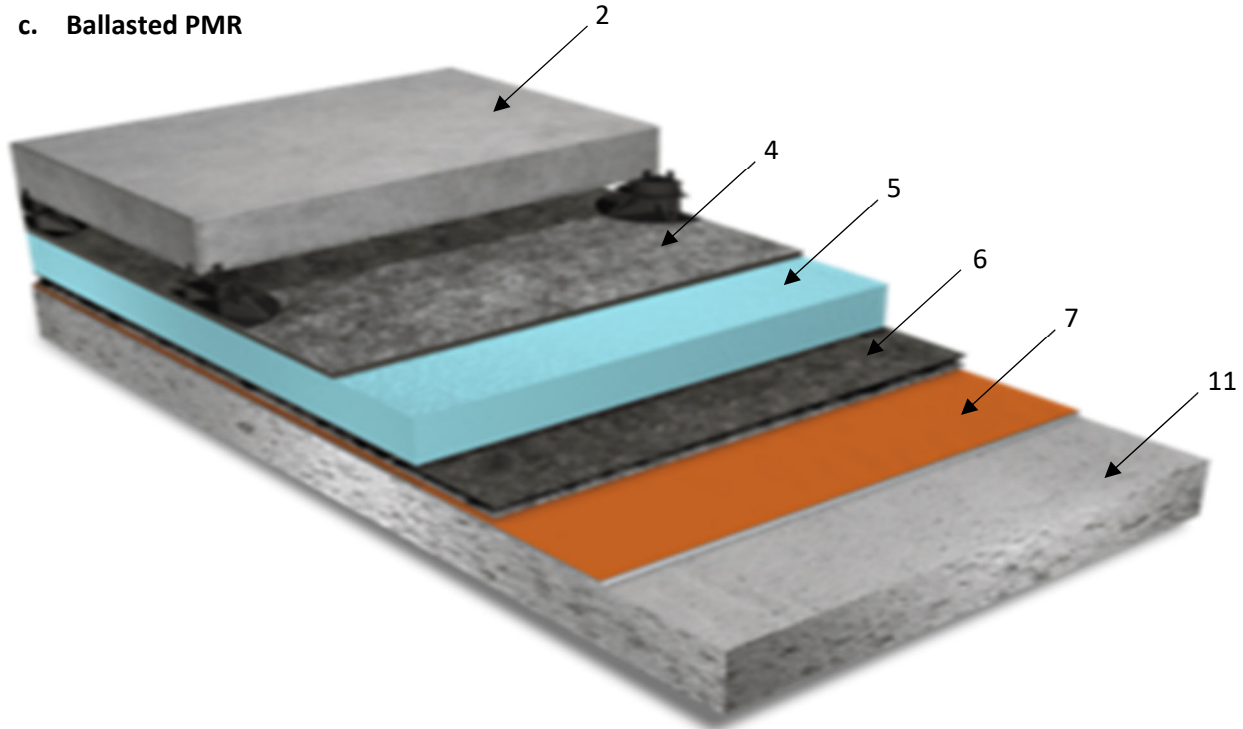
**Warranty Duration - Sarnafil®:**

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 inseam 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 fiberglass 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 fiberglass 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.

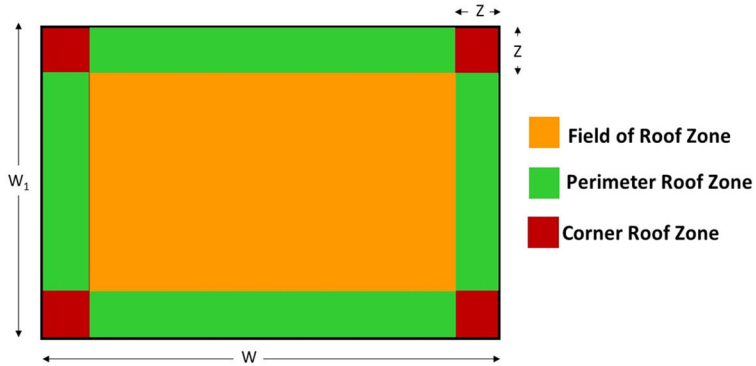
**Prefabricated Detail Flashings**

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

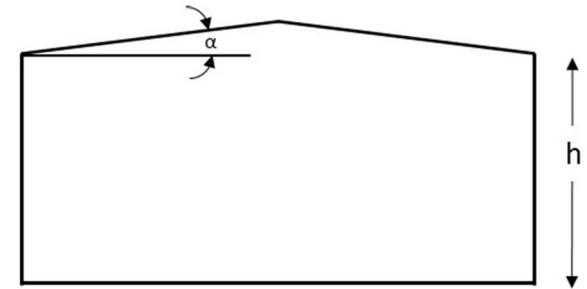
### a. Roof Zone Guide

#### LOW SLOPE



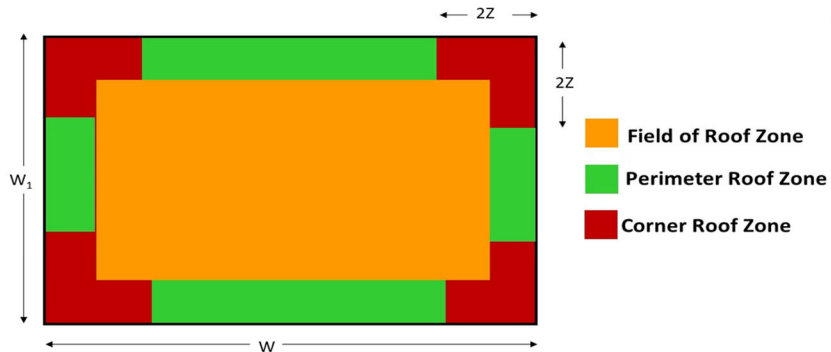
Criteria:

- $h \leq 65$  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



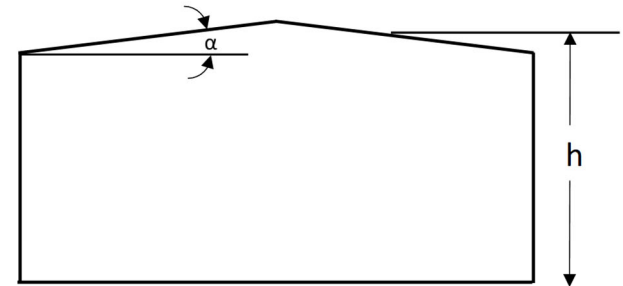
Calculation:  $Z =$  Lessor of: 40 % of the Roof Height ( $h$ ) or 10 % of the lessor Building Plan (NOT ROOF) dimension ( $W_1$ ), but not less than 4 % of  $W_1$

#### HIGH RISE



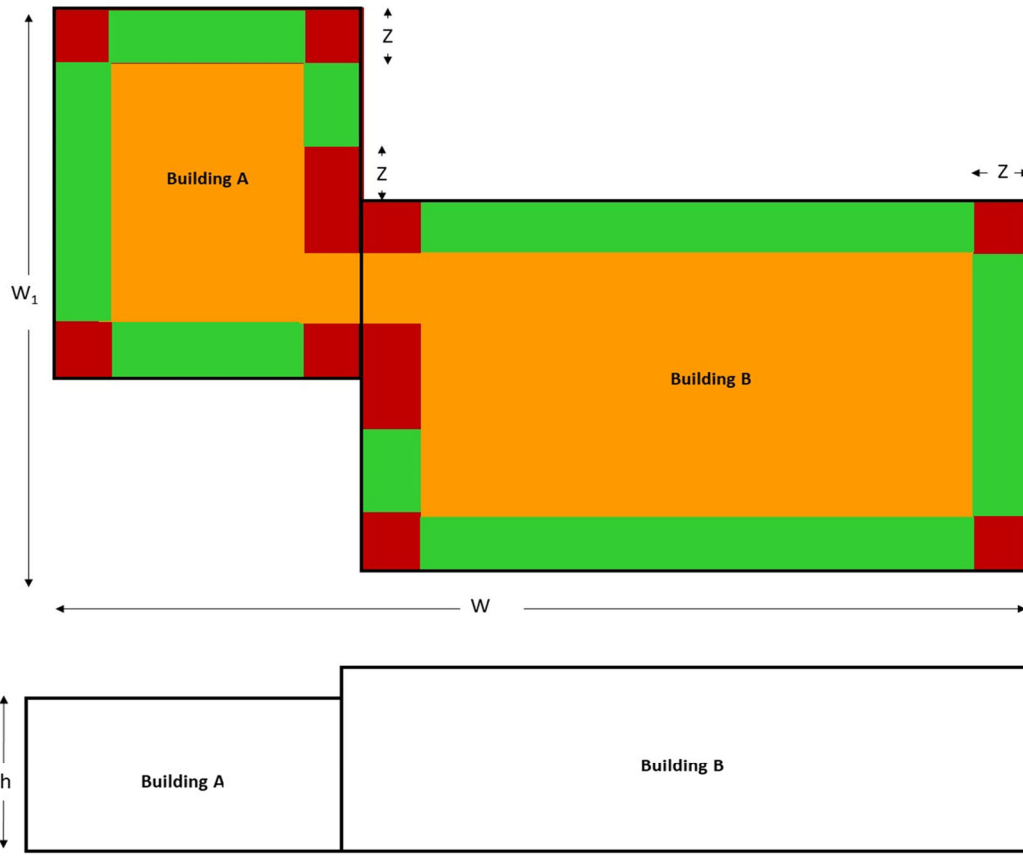
Criteria:

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



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

STEPPED 1



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

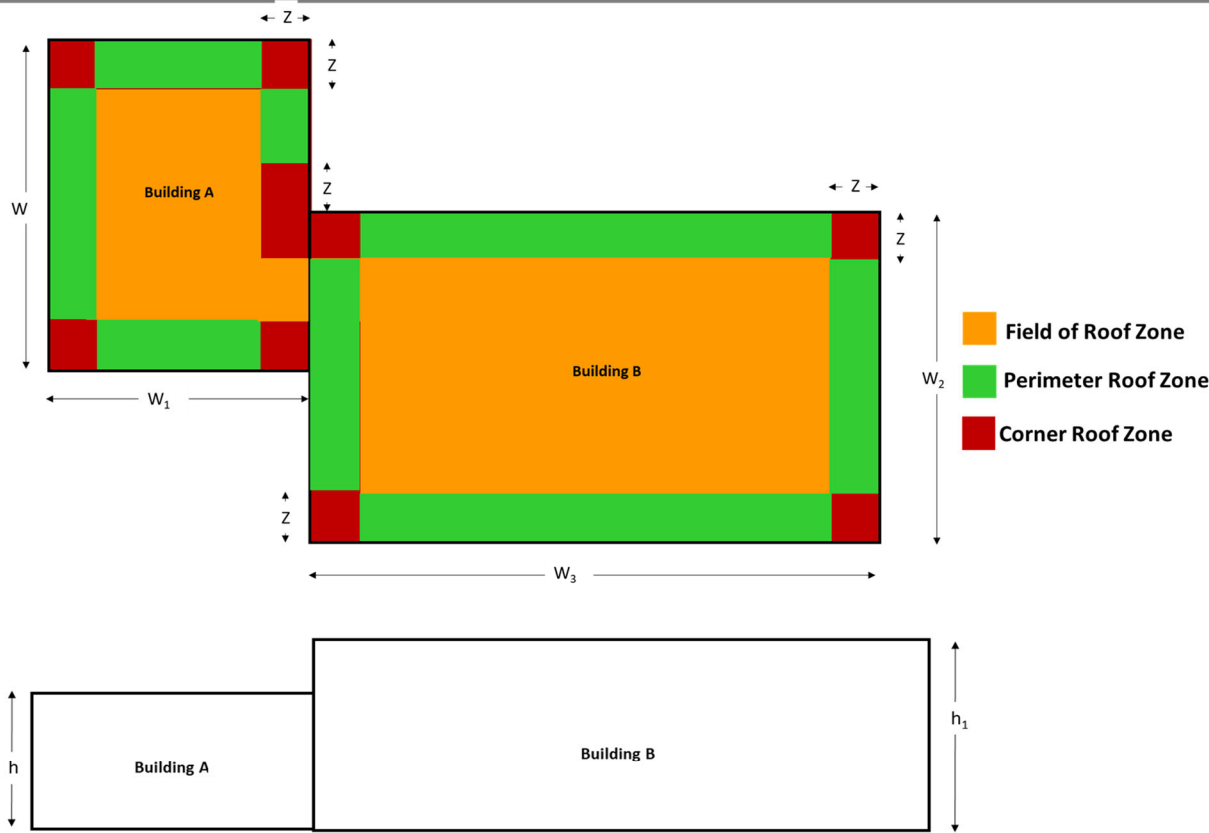
Criteria:

- $h < 65$  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

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



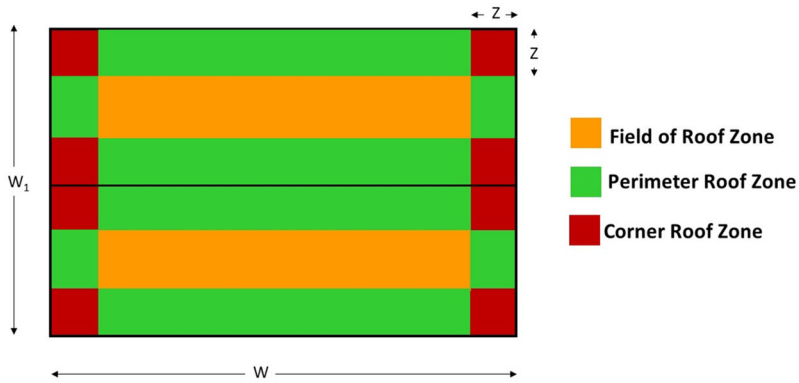
Criteria:

- $h < 65$  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.

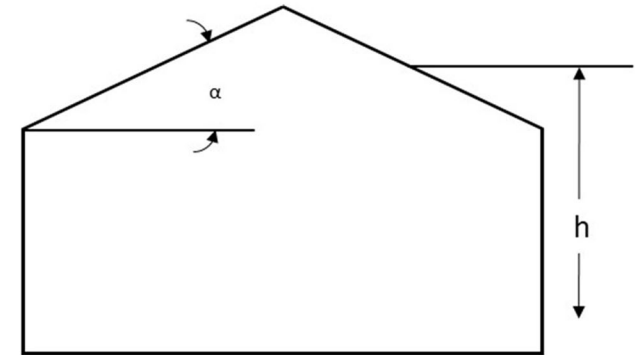
Building A, Calculation:  $Z = \text{Lessor of: } 40\% \text{ of the Roof Height (h) or } 10\% \text{ of the lessor Building Plan (NOT ROOF) dimension (W}_1\text{), but not less than } 4\% \text{ of } W_1.$

**GABLE**



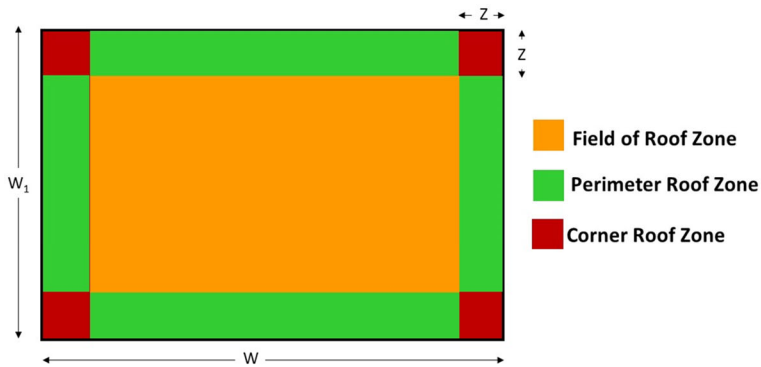
Criteria:

- $h < 65$  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



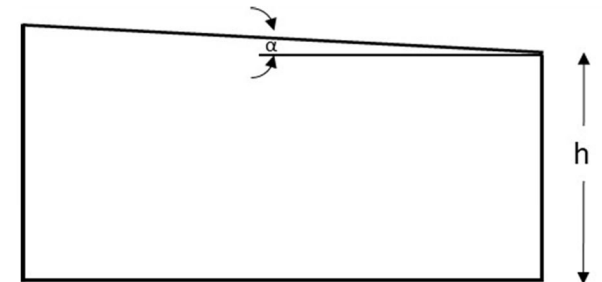
Calculation:  $Z =$  Lessor of: 40 % of the Roof Height ( $h$ ) or 10 % of the lessor Building Plan (NOT ROOF) dimension ( $W_1$ ), but not less than 4 % of  $W_1$

**MONOSLOPE 1**



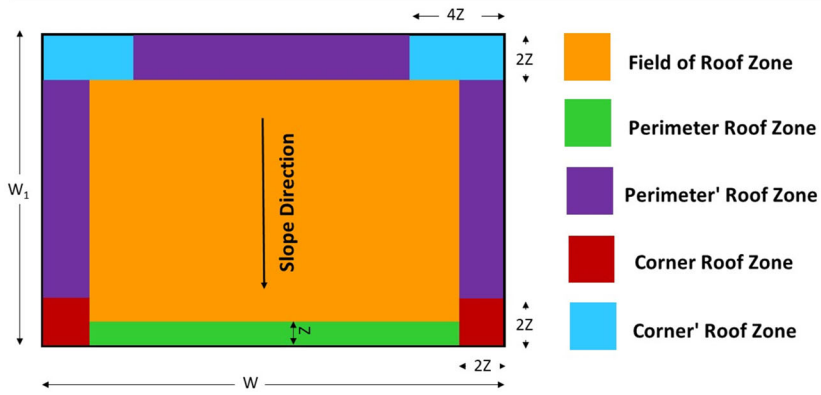
Criteria:

- $h < 65$  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



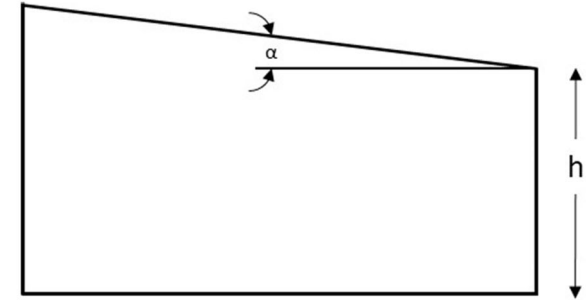
Calculation:  $Z =$  Lessor of: 40 % of the Roof Height ( $h$ ) or 10 % of the lessor Building Plan (NOT ROOF) dimension ( $W_1$ ), but not less than 4 % of  $W_1$

**MONOSLOPE 2**



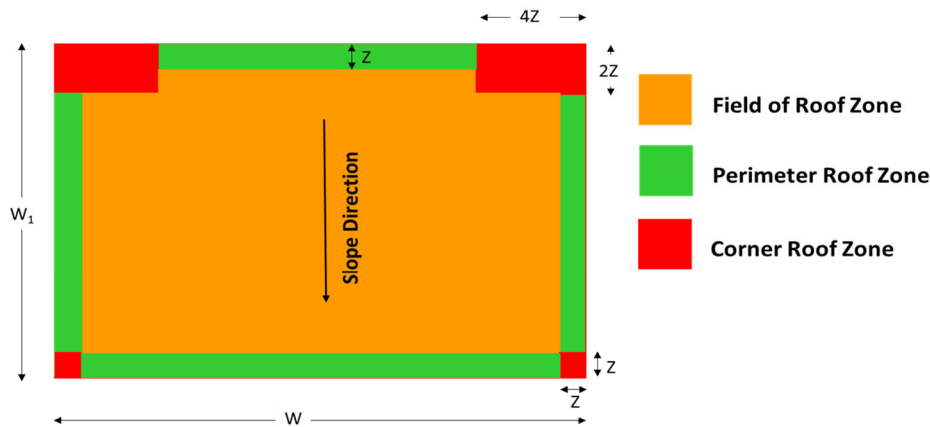
Criteria:

- $h < 65$  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



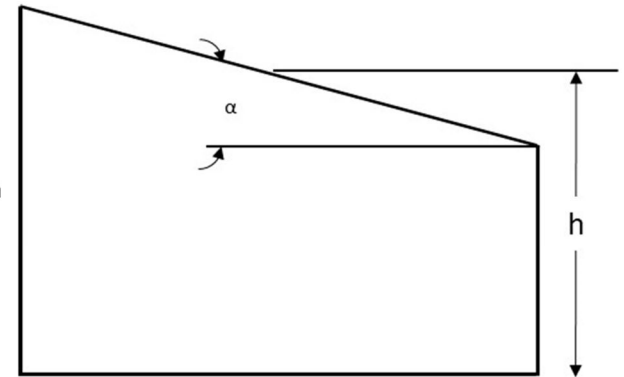
Calculation:  $Z =$  Lessor of: 40 % of the Roof Height ( $h$ ) or 10 % of the lessor Building Plan (NOT ROOF) dimension ( $W_1$ ), but not less than 4 % of  $W_1$

**MONOSLOPE 3**



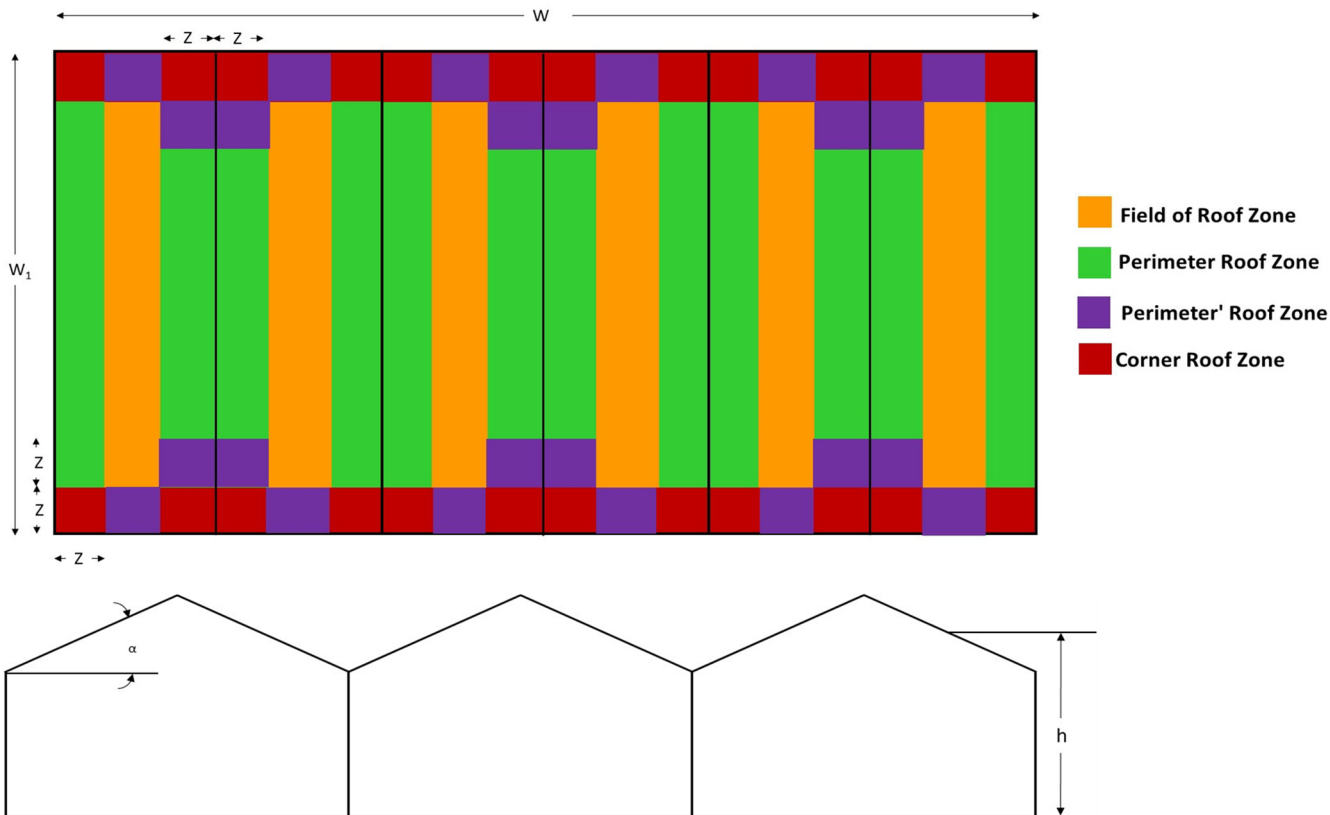
Criteria:

- $h < 65$  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

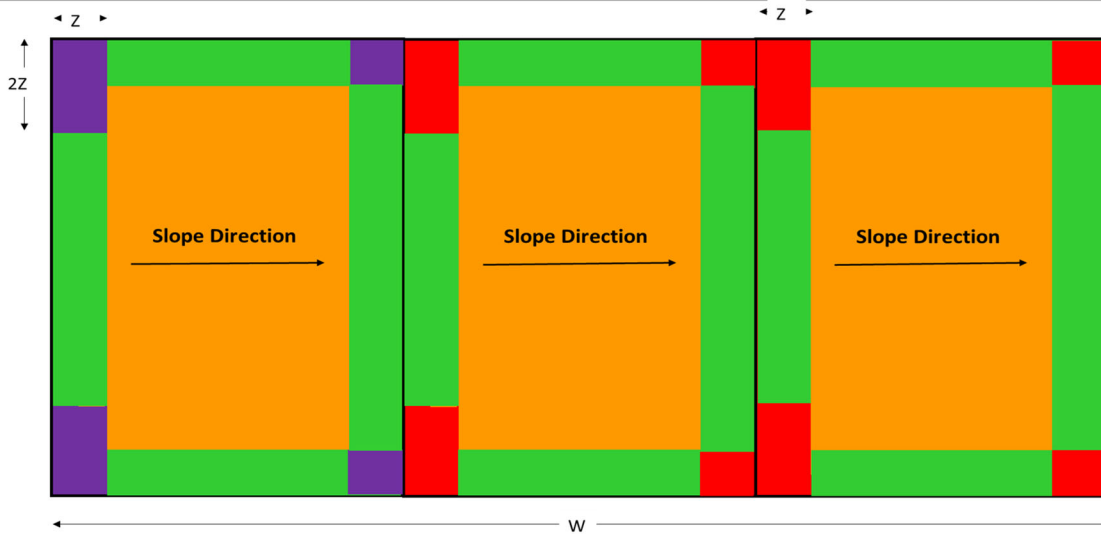


Criteria:

- $h < 65$  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:  $Z =$  Lesser 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  $W_1$

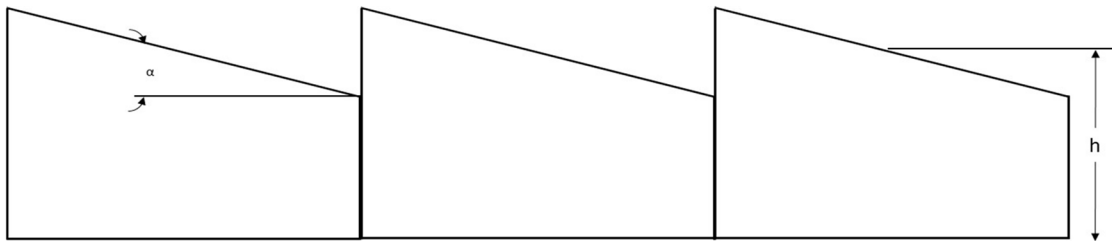
SAWTOOTH



- Field of Roof Zone**
- Perimeter Roof Zone**
- Corner<sup>2</sup> Roof Zone**
- Corner<sup>1</sup> 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:  $Z = \text{Lessor of: } 40\% \text{ of the Roof Height } (h) \text{ or } 10\% \text{ of the lessor Building Plan (NOT ROOF) dimension } (W_1), \text{ but not less than } 4\% \text{ of } W_1$

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

## 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 Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 12" o.c.	CSA A123.21 (specific test reports available upon request)
								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 Insulation/Cover Board adhered with Sarnacol Low Rise Board Adhesive @ 12" o.c.	CSA A123.21 (specific test reports available upon request)
								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. Cover Board adhered with Sarancol Low Rise Board Adhesive @ 12" o.c.	CSA A123.21 (specific test reports available upon request)
								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 (6,7)	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 (6,7)	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 (6,7)	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 (6,7)	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 (6,7)	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

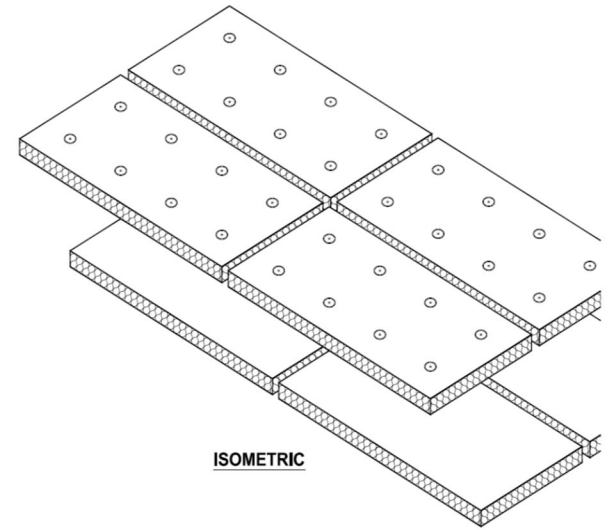
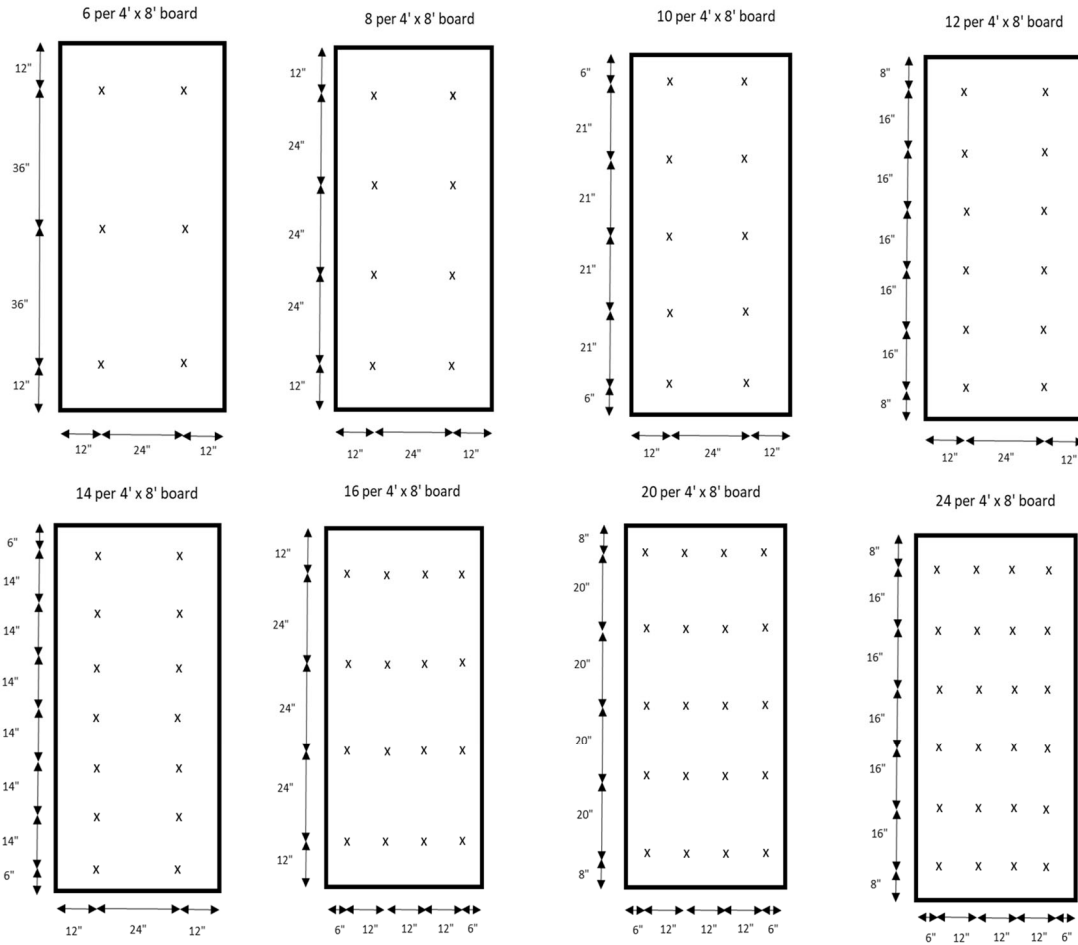
System	Deck <sup>3</sup>	Thermal Barrier <sup>4</sup>	Vapour Retarder	Insulation	Cover Board	Membrane	Field of Roof Pressure	Zones	Attachment	Wind Uplift Approvals
Adhered - AARS - Concrete Deck	Structural Concrete	N.A.	Vapour Retarder SA 31, SA 106 or TA 138	Min 2" Sarnatherm (CG) - maximum board size 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

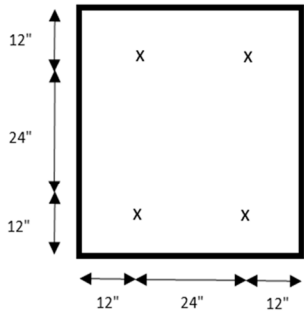
# RHINO BOND 4 FT. X 8 FT. BOARDS



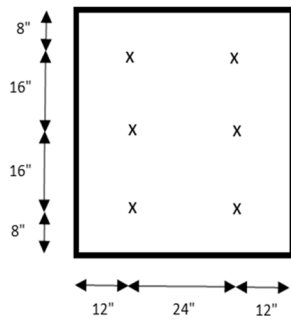
The top layer of the insulation is to be soldiered rather than staggered as with other systems. The top layer is offset from the bottom layer.

# RHINO BOND 4 FT. X 4 FT. BOARDS

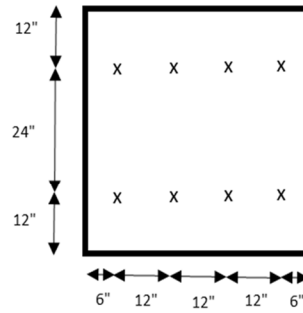
4 per 4' x 4 board



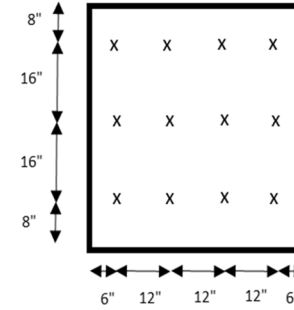
6 per 4' x 4 board



8 per 4' x 4' board

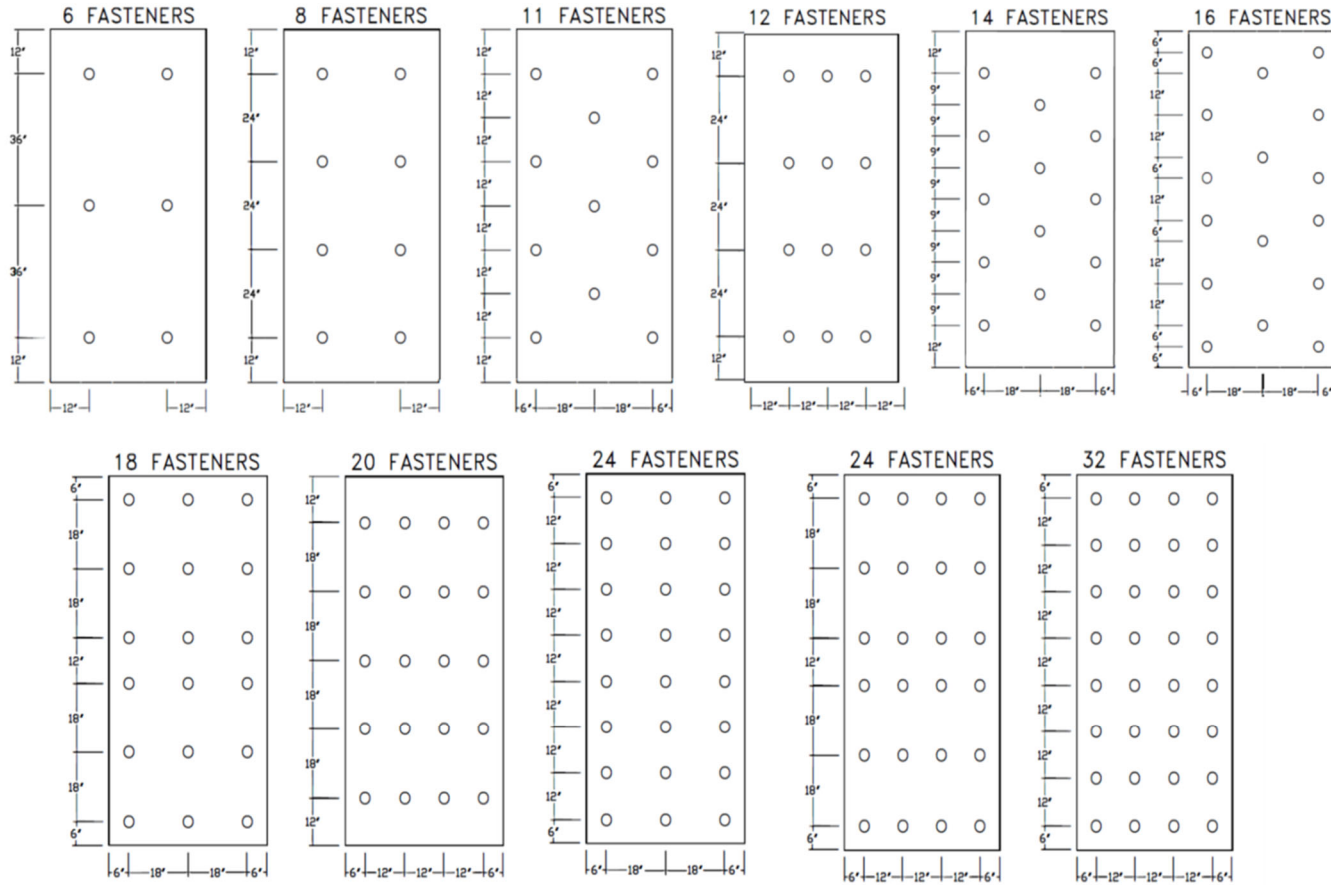


12 per 4' x 4 board

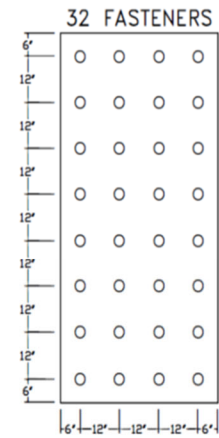
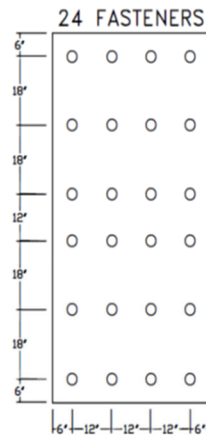
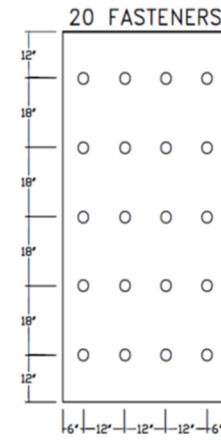
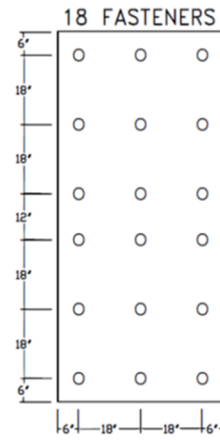
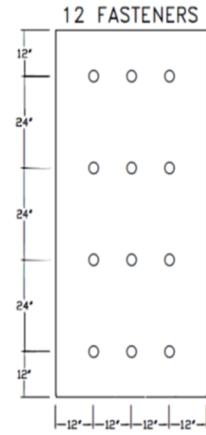
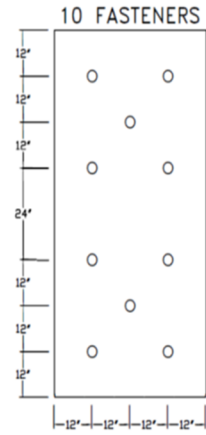
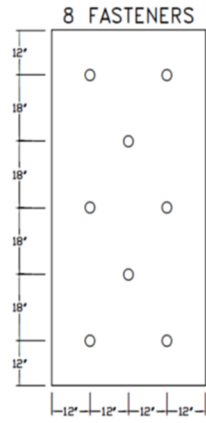
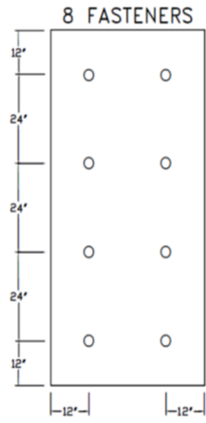


d. Attachment Guide – Boards

## 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 2] (g/[24hr·m 2])	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 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 166-416 sf/gal non-porous	0 with exemption (EPA)* 240 (SCAQMD)* 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 depending on porosity	0
Vapor Retarder Primer TA (torch-applied)	Black	Concrete	14°F (-10°C) & above	166-277 sf/gal 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.

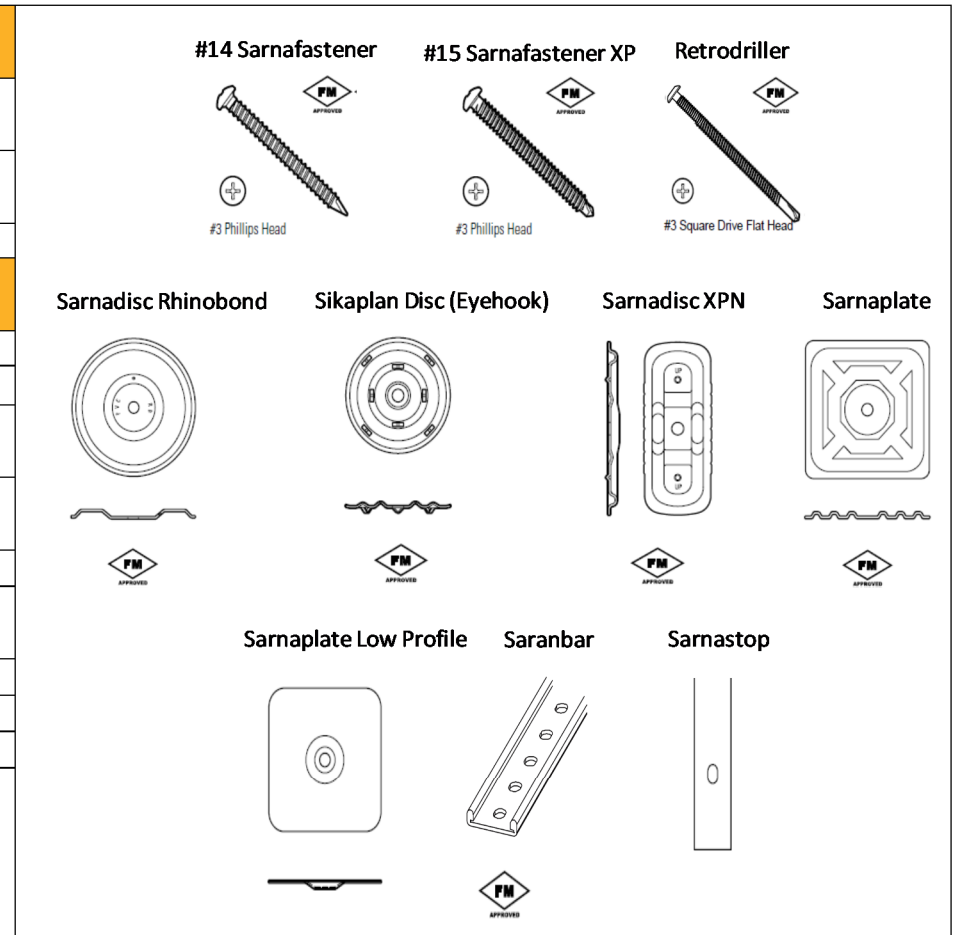


**f. Adhesive Selection Guide**

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					240 g/L
Sarnacol AD Feltback Membrane Adhesive	All membranes - horizontal application	4°C (40°F)	No	Yes	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					
Sarnacol 2121		100 - 133 sqft / gal <sup>3</sup>	Sarnatherm, Sarnatherm CG, Sarnatherm HD Roof Board, DensDeck Prime, Concrete Deck <sup>2</sup> Cellular Concrete <sup>2</sup> & Smooth Plywood		
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					32 g/L
Sarnacol OM Board Adhesive		4°C (40°F)			11 g/L
Sarnacol OM Board Adhesive WG		minus 18°C to 18°C (0 to			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		
<p>Notes:</p> <ul style="list-style-type: none"> <li>* System warranties require all materials from the structural deck up and supplied by Sika</li> <li>* Standard warranties require all materials for membrane/insulation fixation/adhesion to be supplied by Sika</li> <li>* All High Wind Speed and Hail warranties must be approved by the Sika Vice President Technical</li> <li>* 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.</li> <li>* Sika approved vapour retarders are required for all wind warranties</li> <li>* Vegetative roofs are considered PMR systems. A Sika approved cover board is required in there is insulation below the membrane</li> <li>* XPS/EPS insulation, bitumen cannot come into contact with the membrane</li> <li>* Contact the Technical Representative if Coal Tar Pitch is present in the existing roof system</li> </ul> <ol style="list-style-type: none"> <li>1. Criteria for all 25 &amp; 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</li> <li>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.</li> <li>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</li> <li>4. Criteria for 25 &amp; 30 year Standard warranty: Contact your Sales Representative</li> <li>5. 72 mil membrane required</li> <li>6. 80 mil membrane required</li> </ol>				

## i. Guideline for Roof Recover

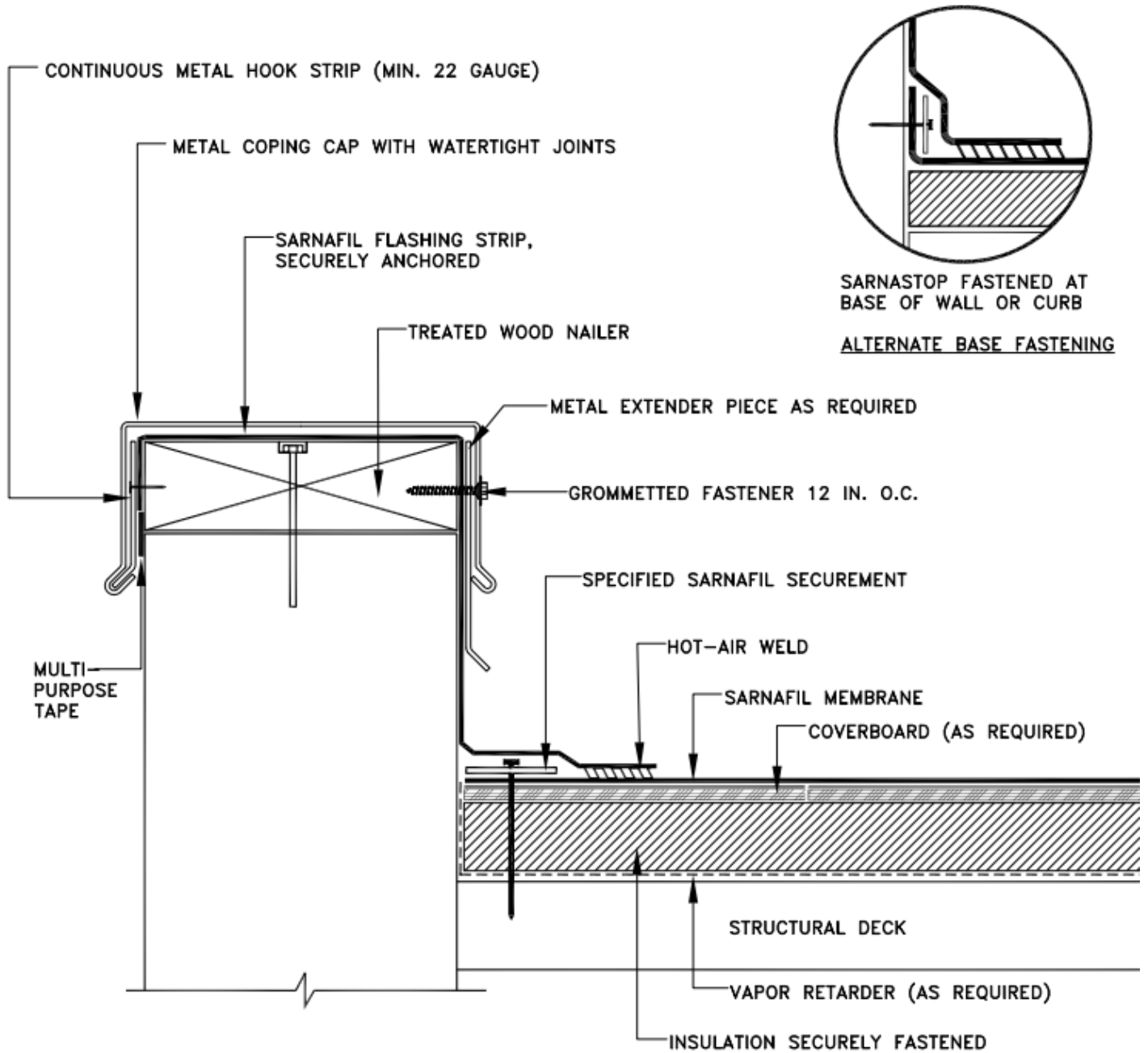
### General Criteria:

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.

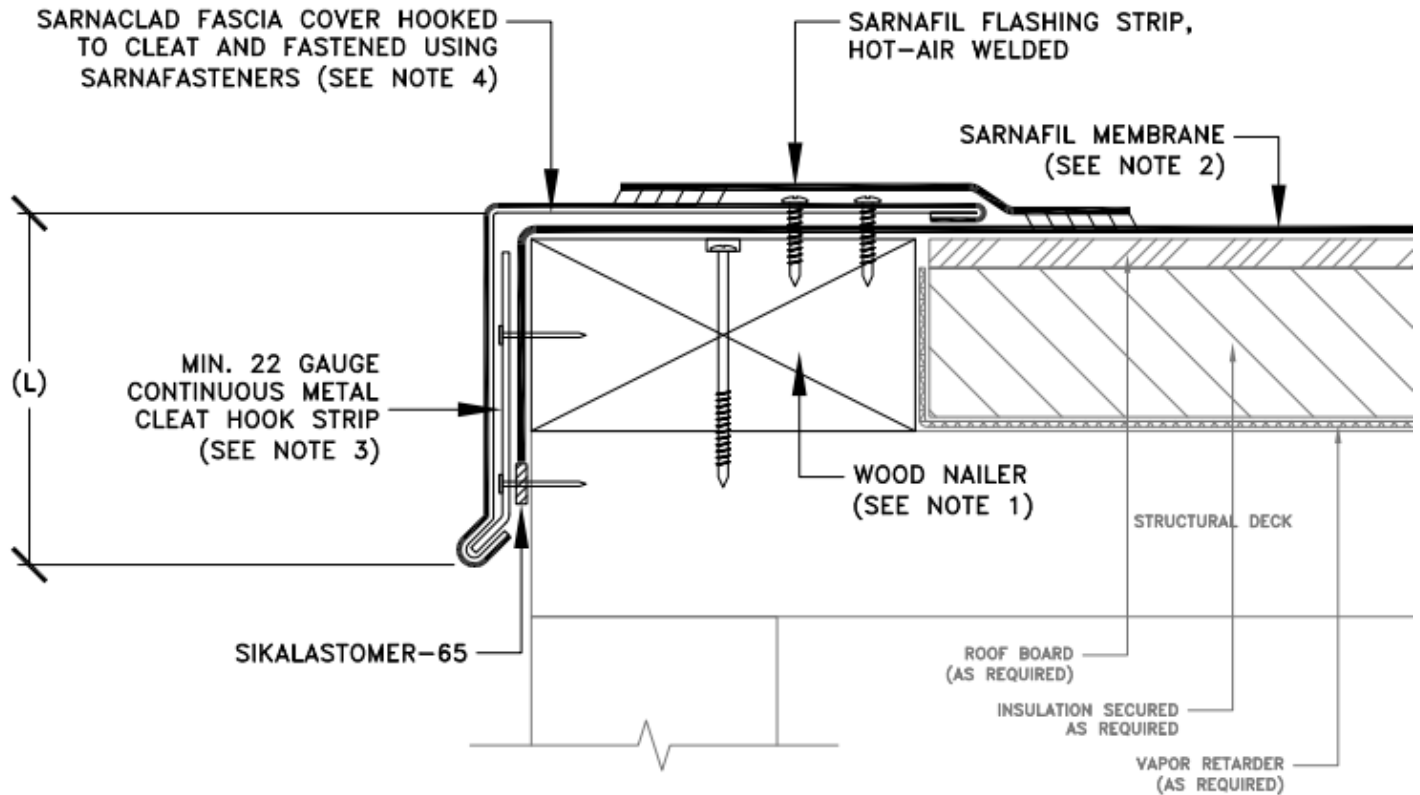
10. TYPICAL DETAIL DRAWINGS



NOTES:

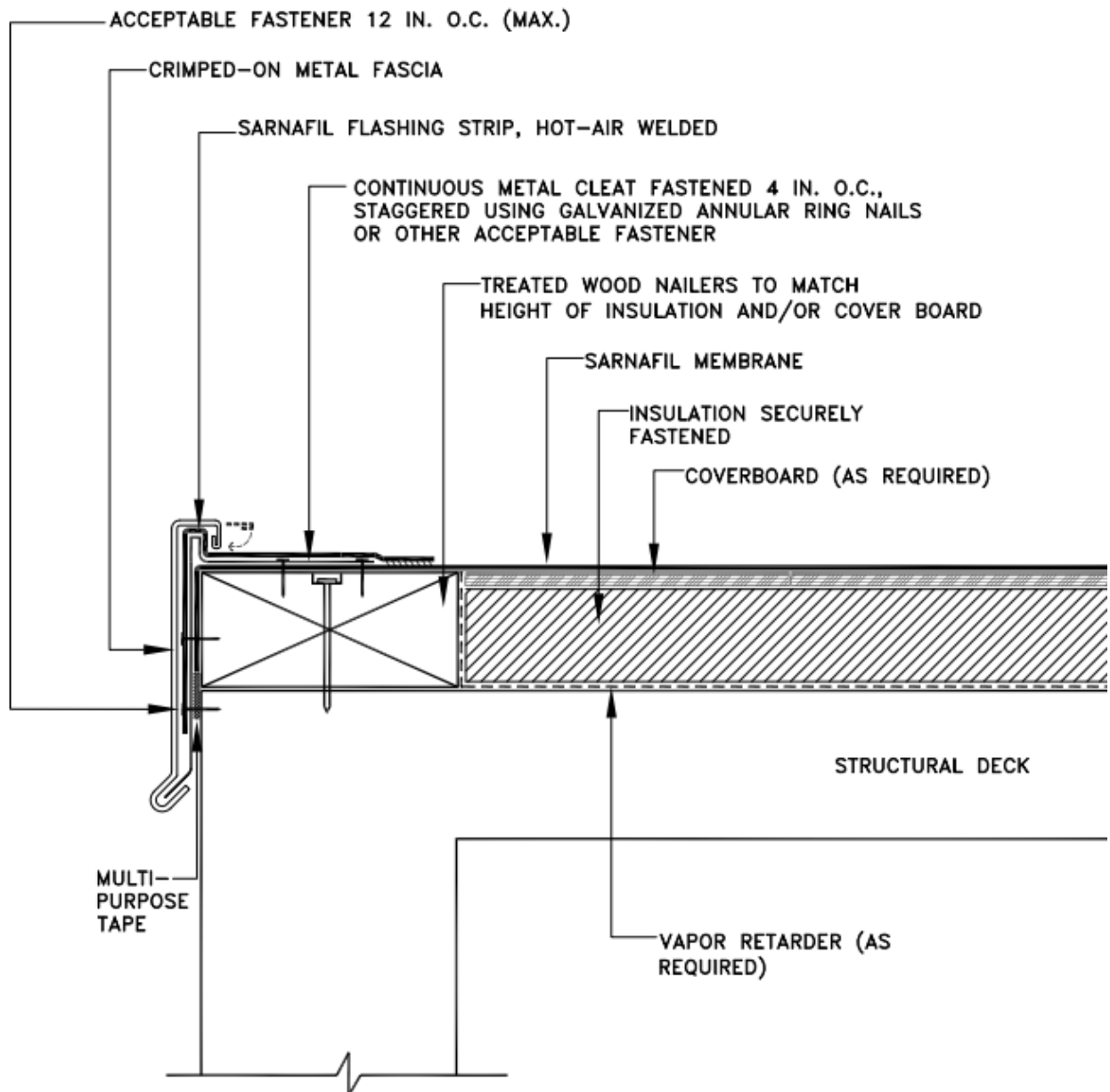
- 1) NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A MINIMUM FORCE OF 300 POUNDS PER LINEAR FOOT. REFER TO FACTORY MUTUAL DATA SHEET 1-49.
- 2) METAL EXTENDER PIECE IS REQUIRED IF EXISTING COUNTERFLASHING IS CONTAMINATED AND OR COUNTERFLASHING FASCIA IS LESS THAN 4-INCHES WIDE.
- 3) VAPOR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

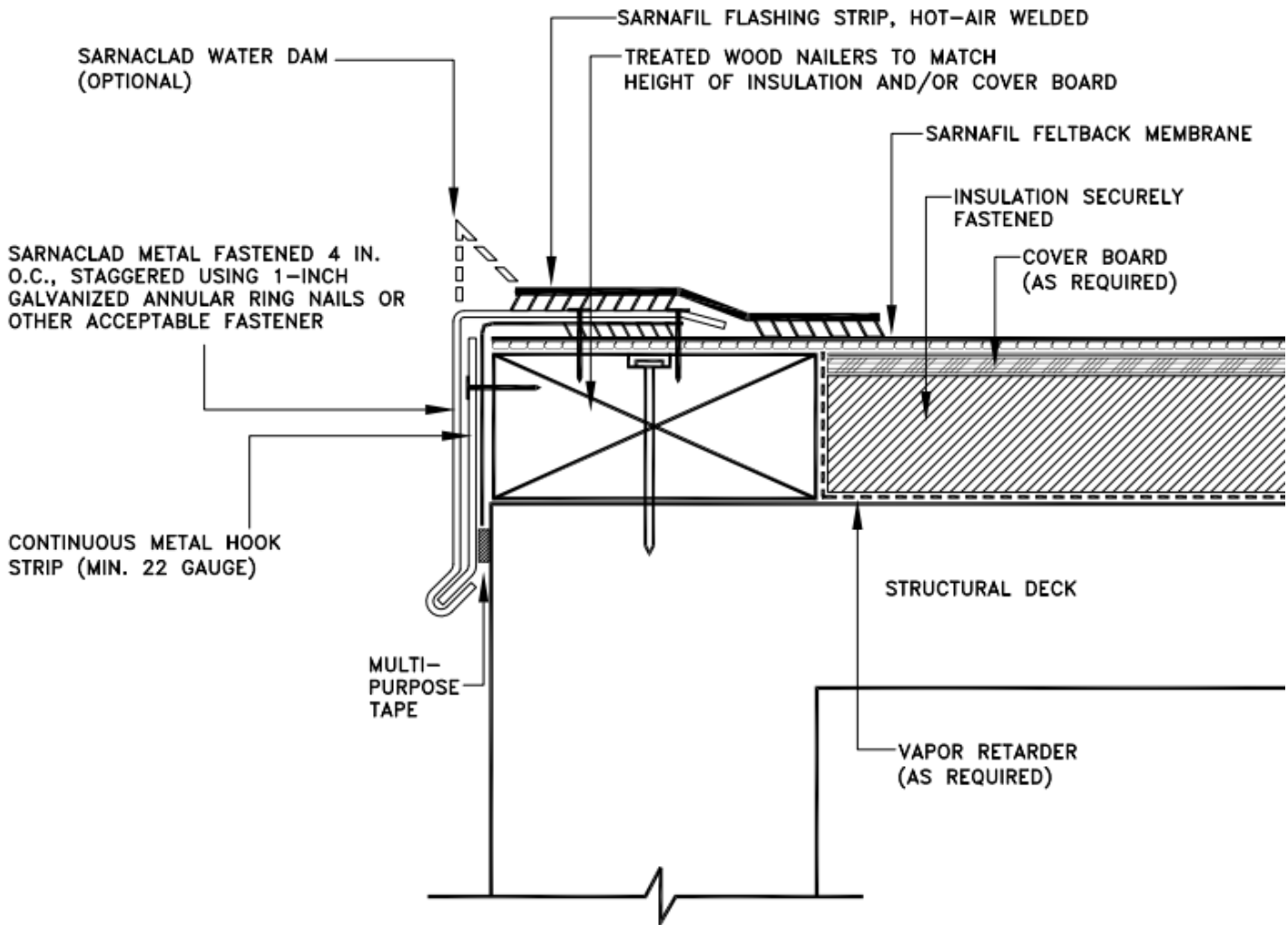
## SARNACLAD METAL EDGE HIGH WIND

**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.

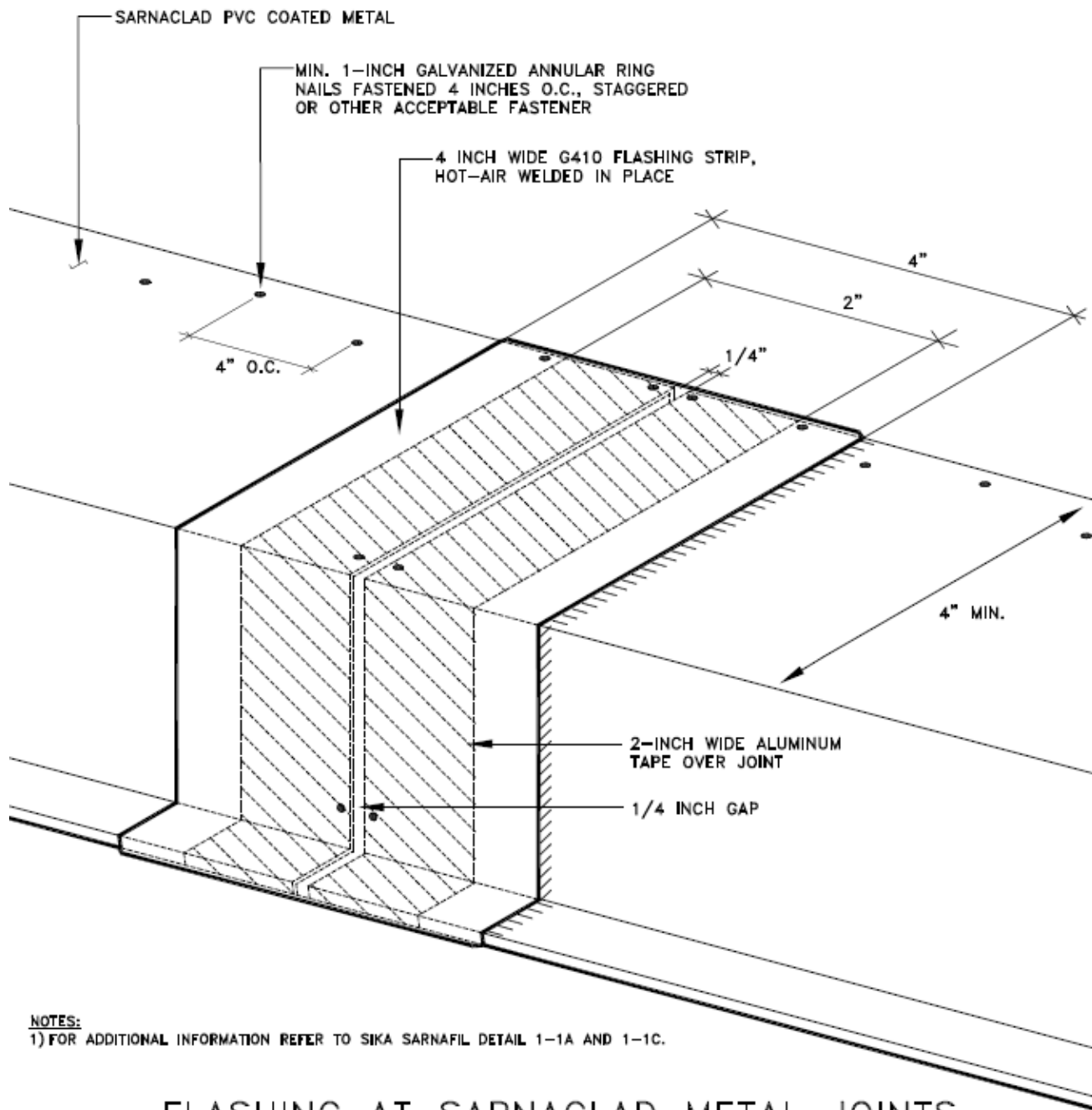
## CRIMPED-ON METAL EDGE



**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.

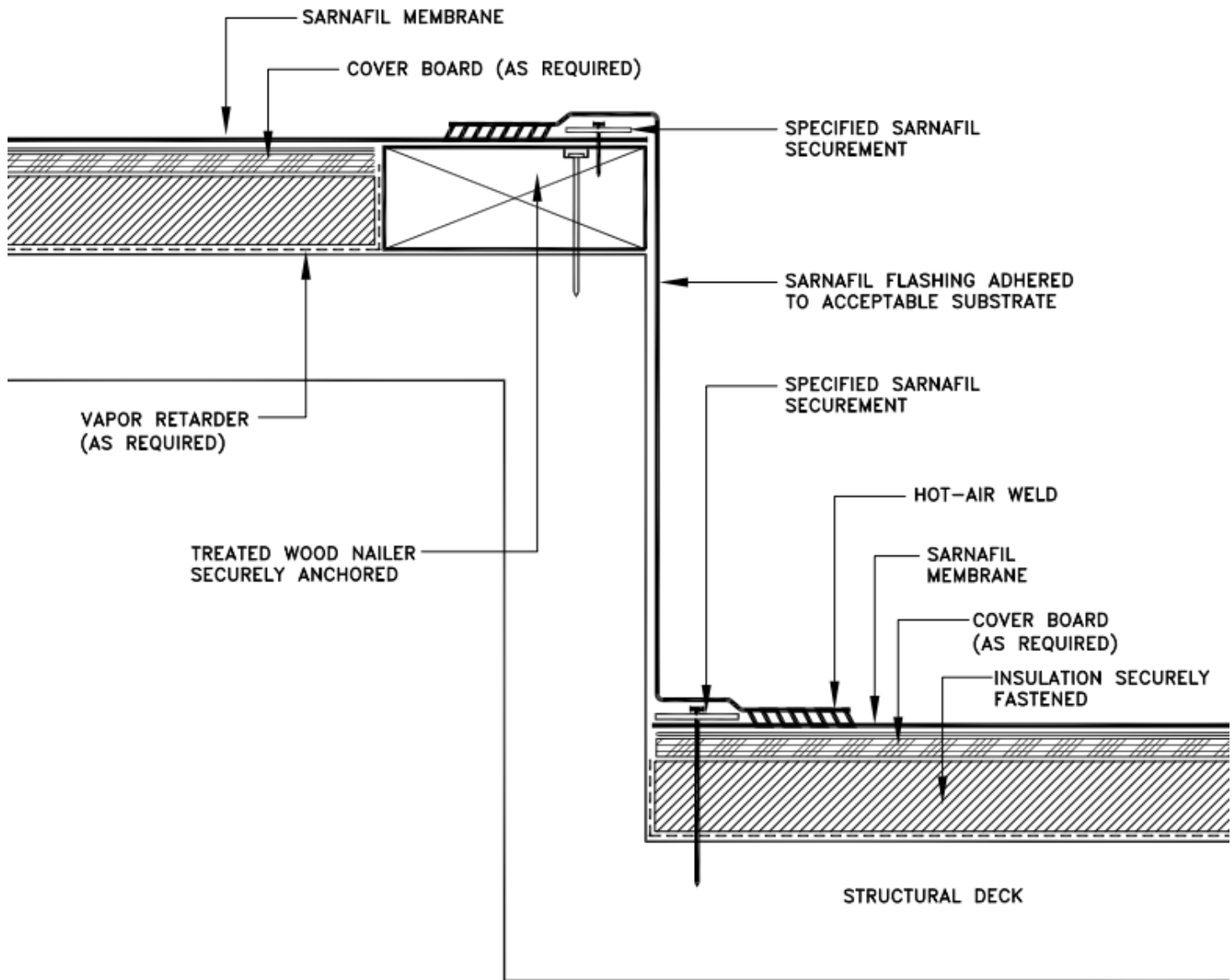
## SARNAFLAD METAL EDGE



## 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.

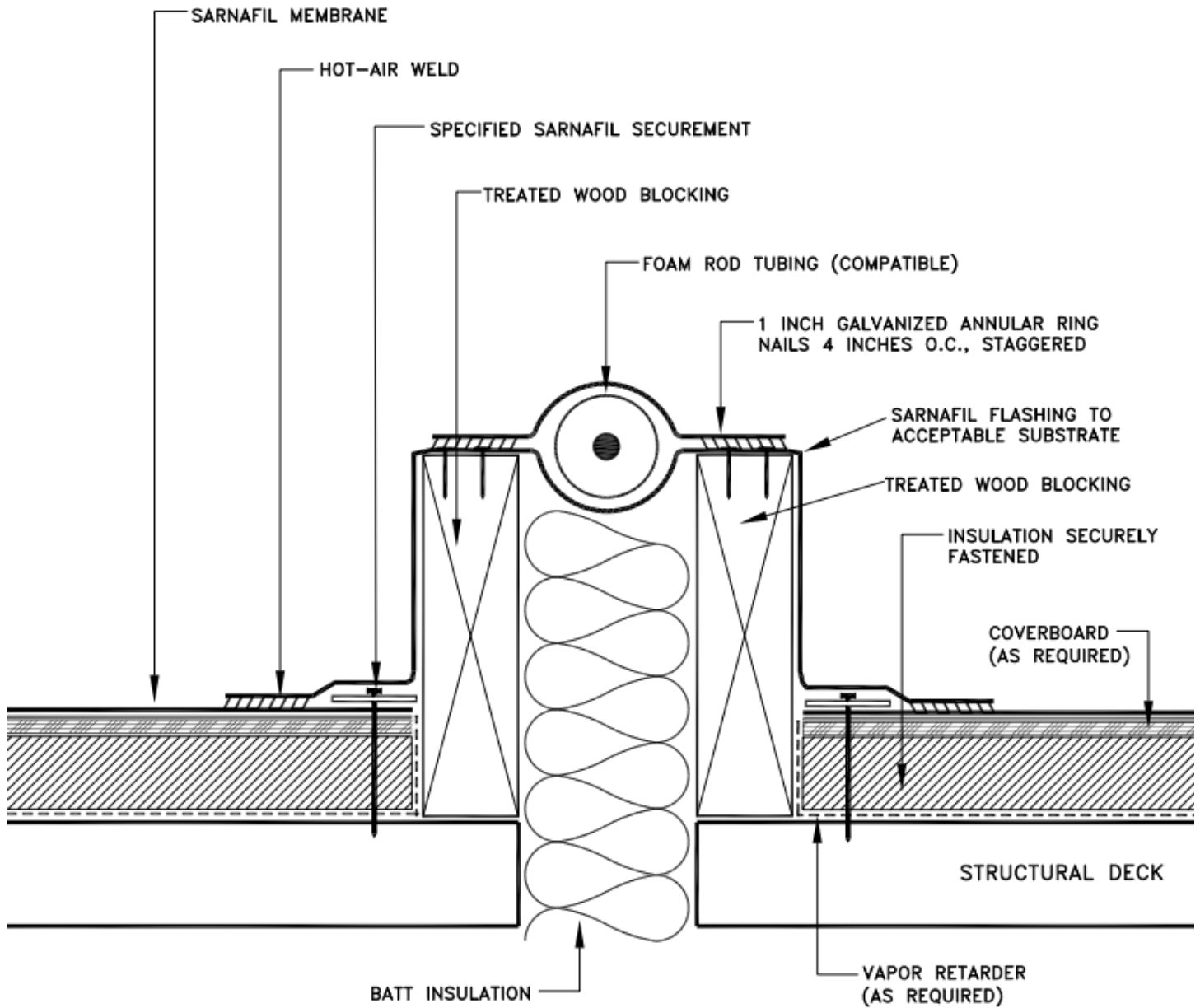
1. Adjacent sheets of Sarnaclad metal shall be spaced  $\frac{1}{4}$  in. (7 mm) apart. Sarnaclad shall be secured at joints. The joint shall be covered with 2 in. (51 mm) wide aluminum foil tape. A 4 in. (102 mm) wide strip of flashing membrane shall be hot air welded over the joint (see detail above).



**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.

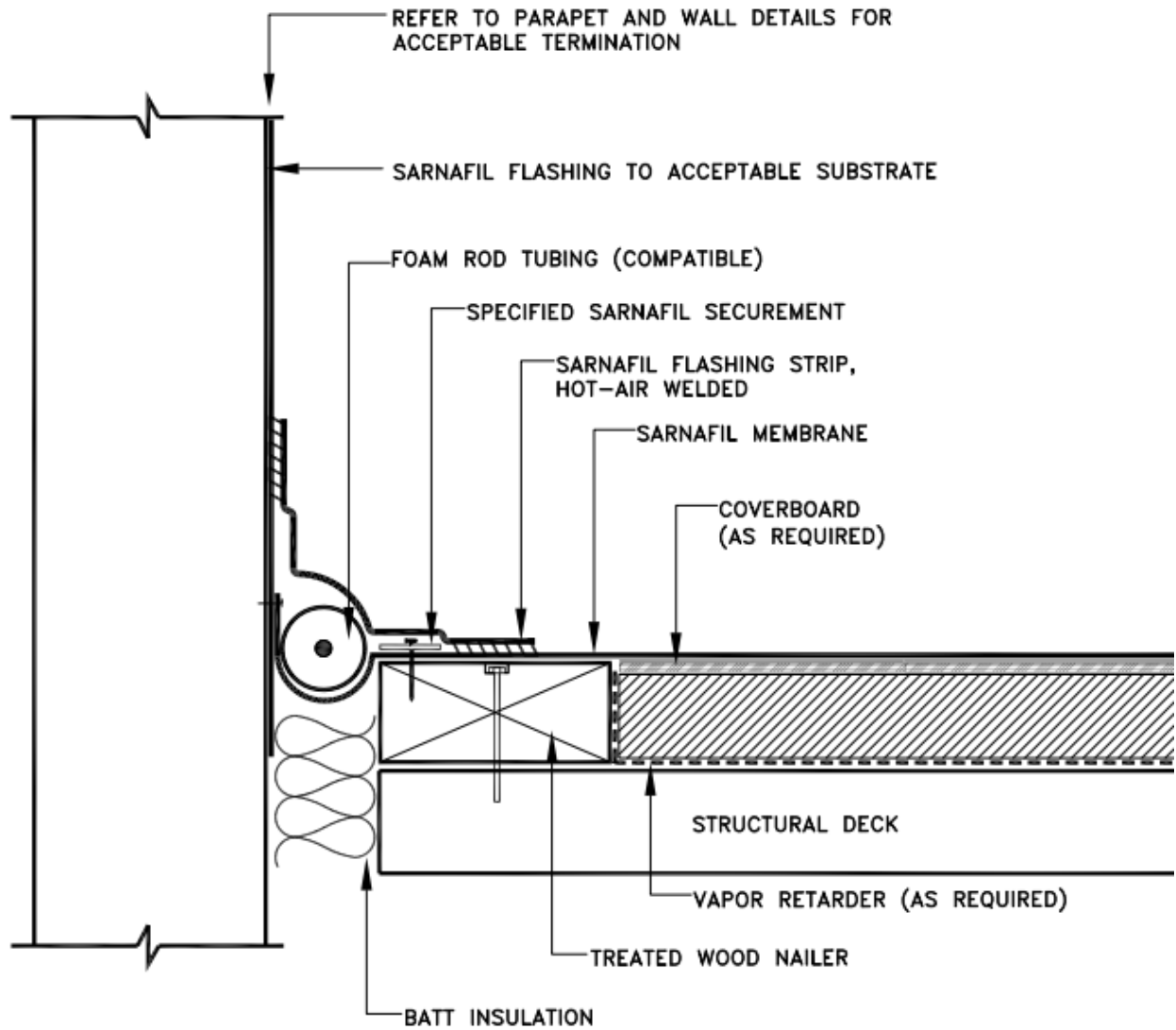
## WALL TRANSITION



**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.

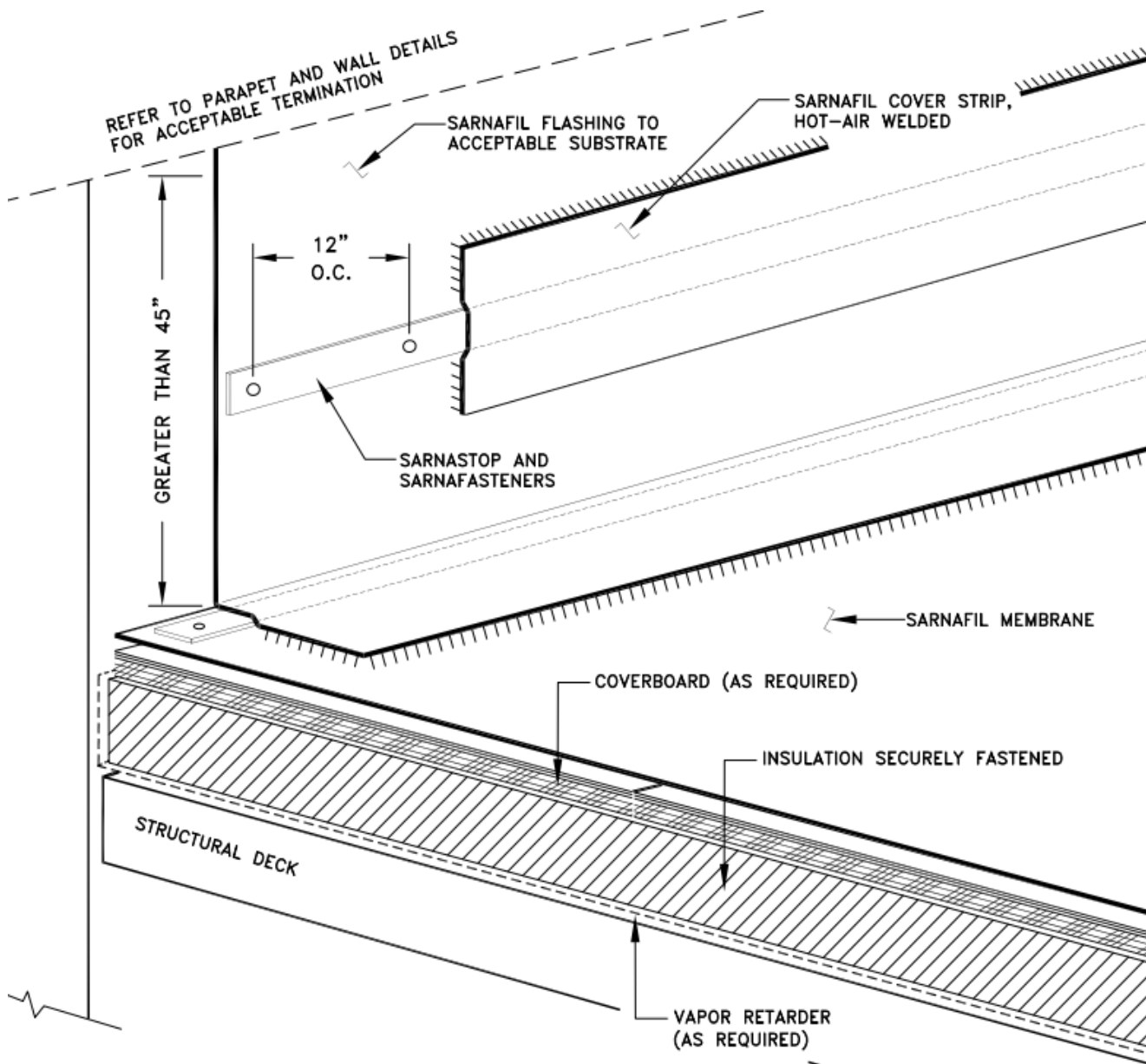
## EXPANSION JOINT ON CURB WITH FOAM ROD



**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

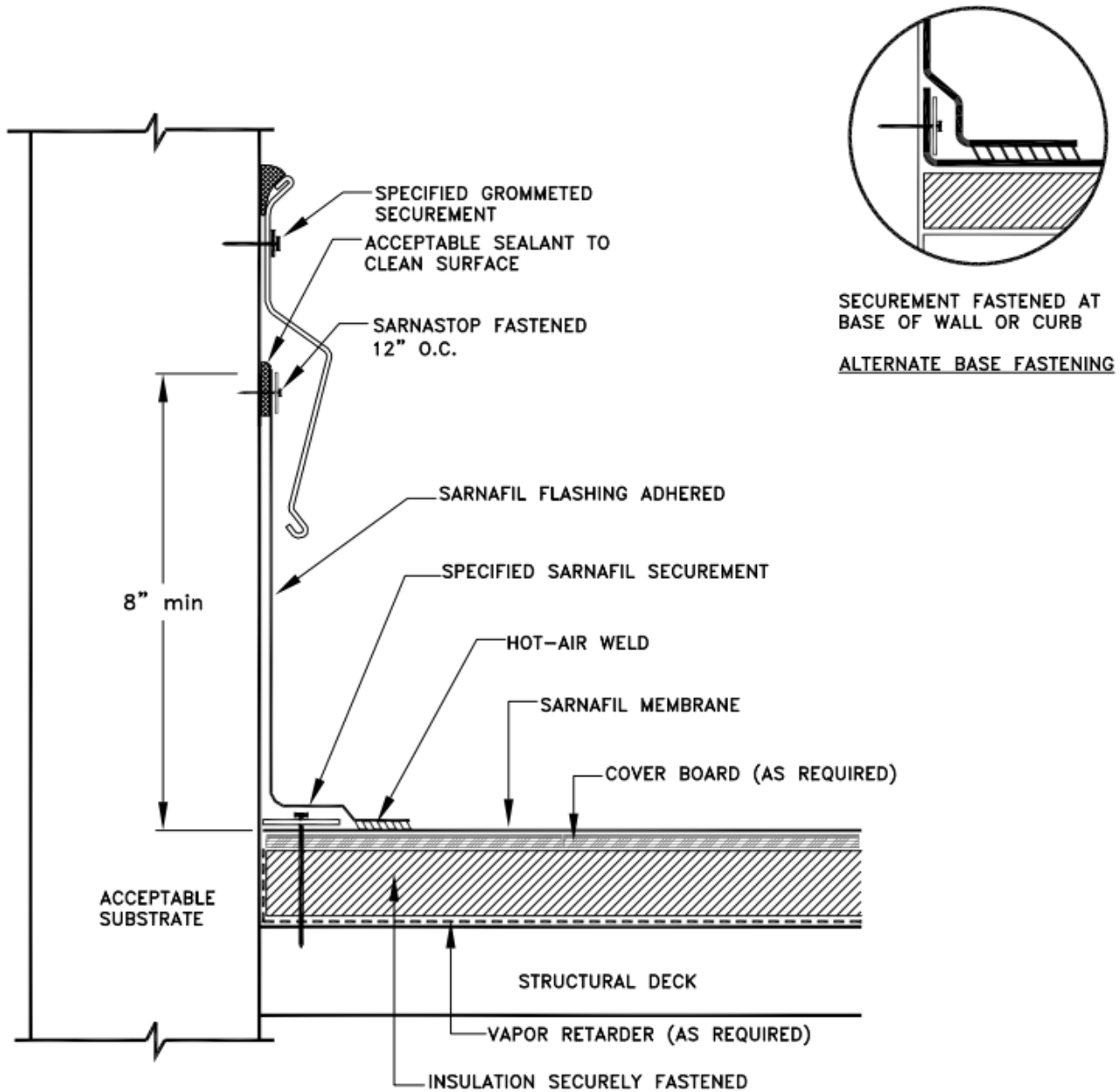


**NOTES:**

- 1) INSTALL SARNASTOP WITH A 1/4" 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 SIKA'S TECHNICAL DEPARTMENT.

**ADHERED HIGH WALL FLASHING**

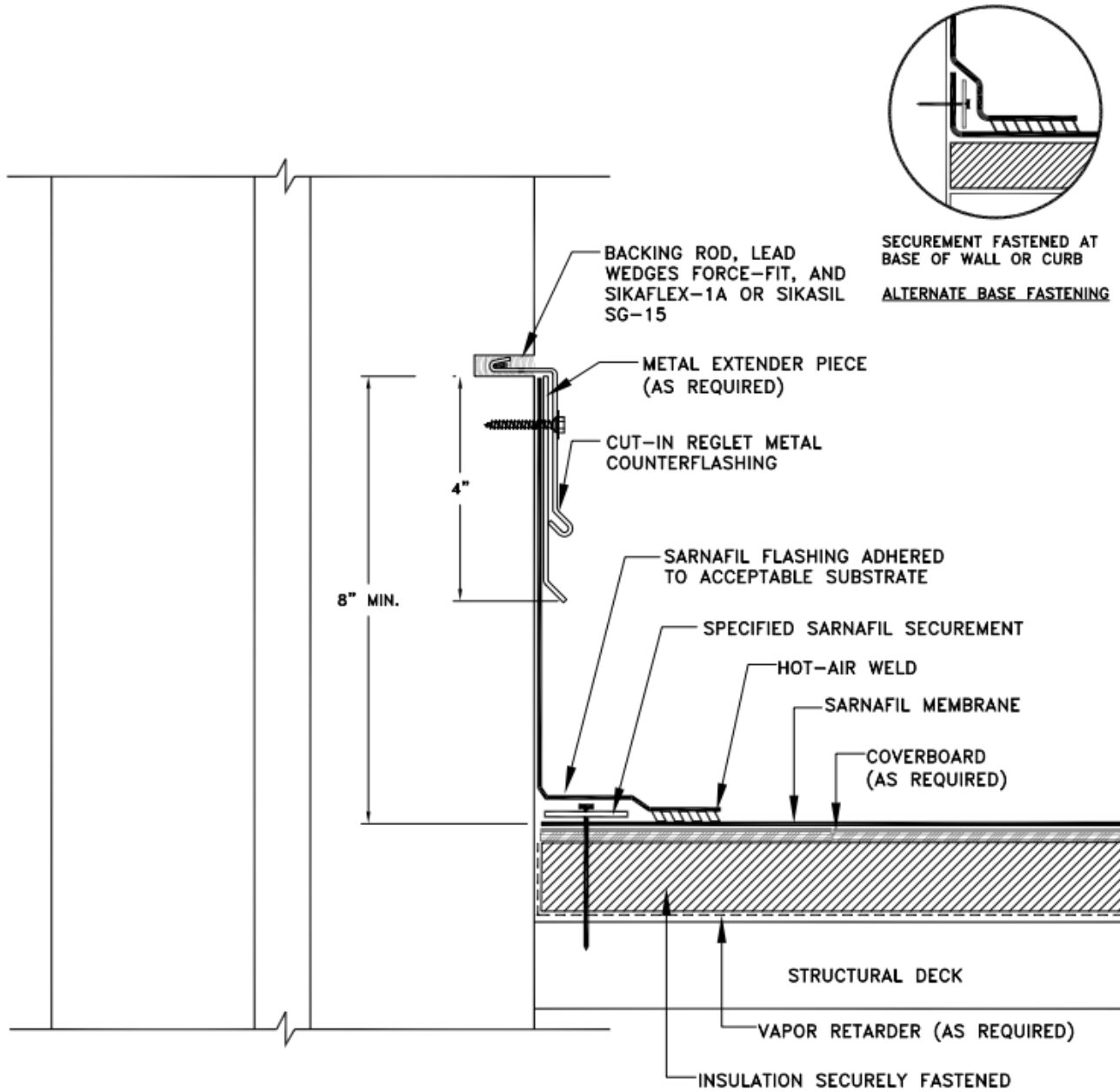




**NOTES:**

- 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

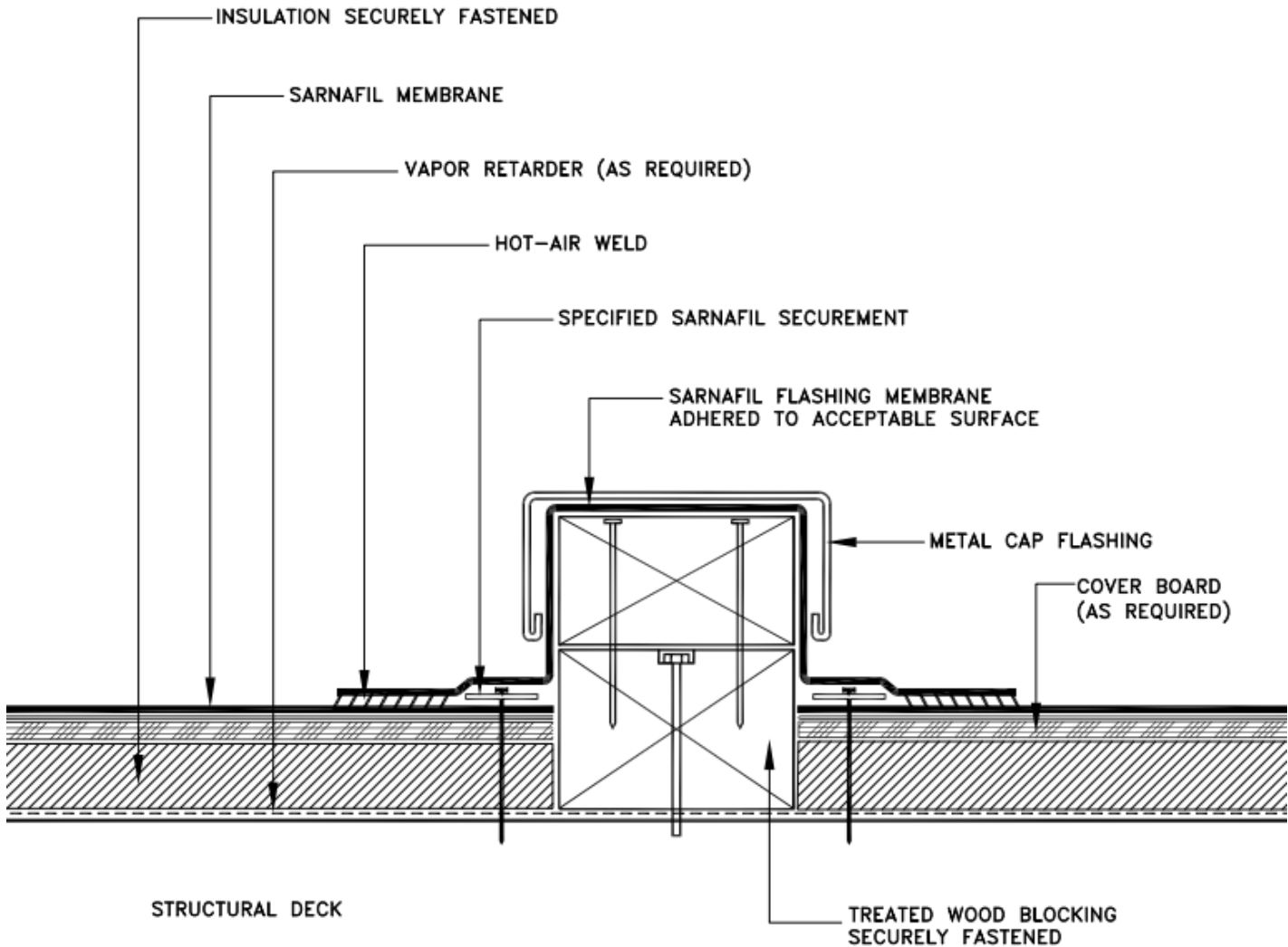


**NOTES:**

- 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**

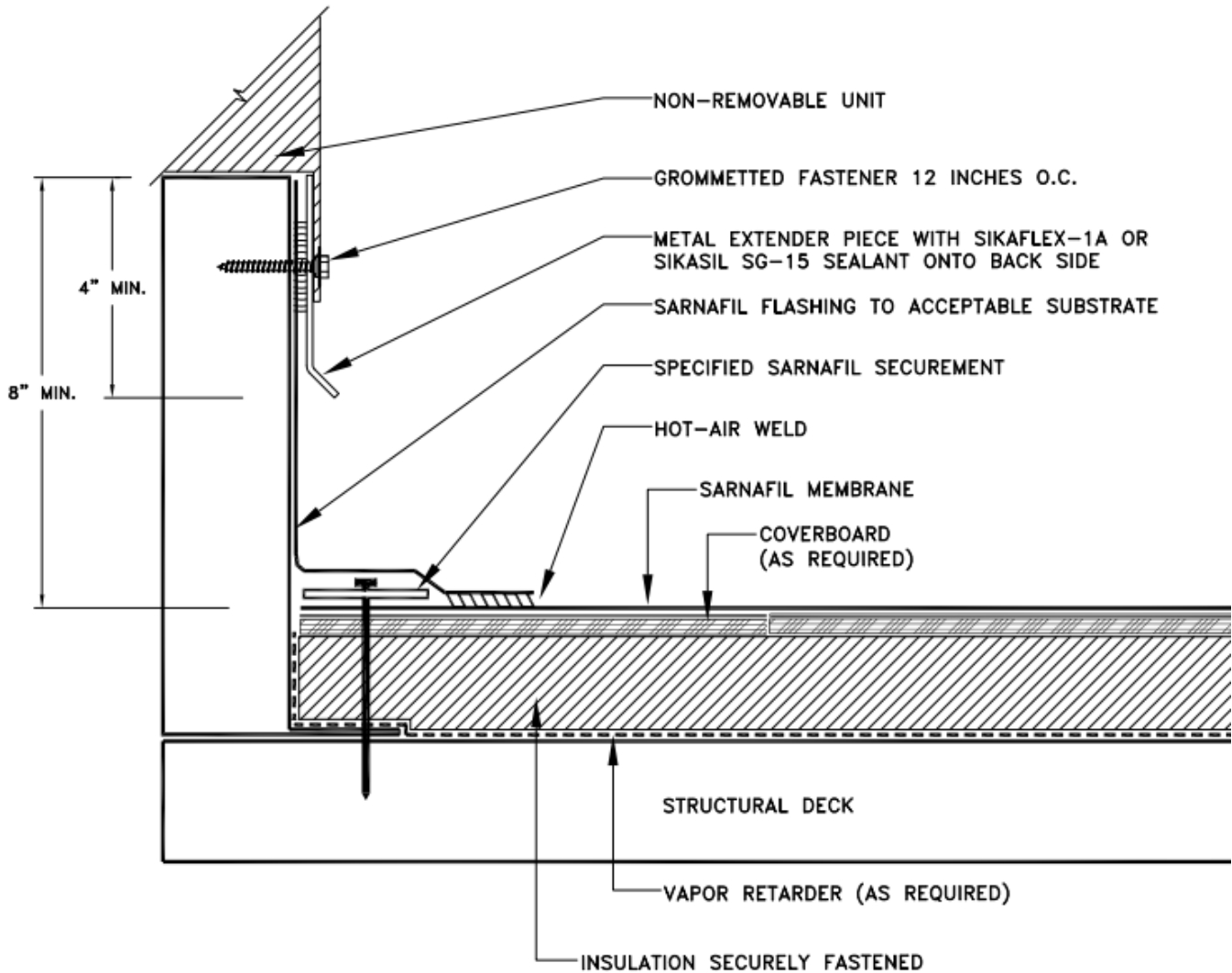




**NOTES:**

- 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.

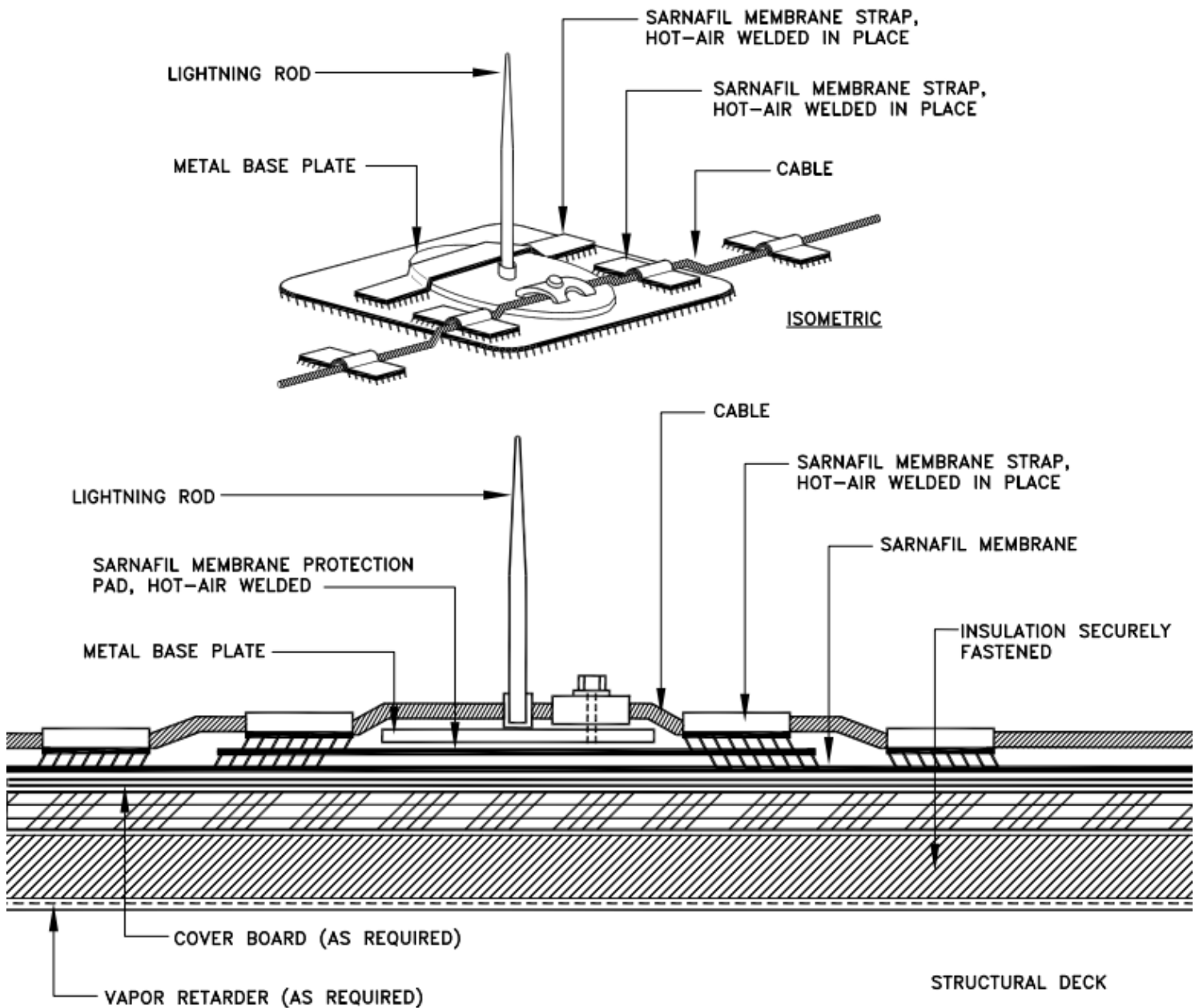
## EQUIPMENT SUPPORT



**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.

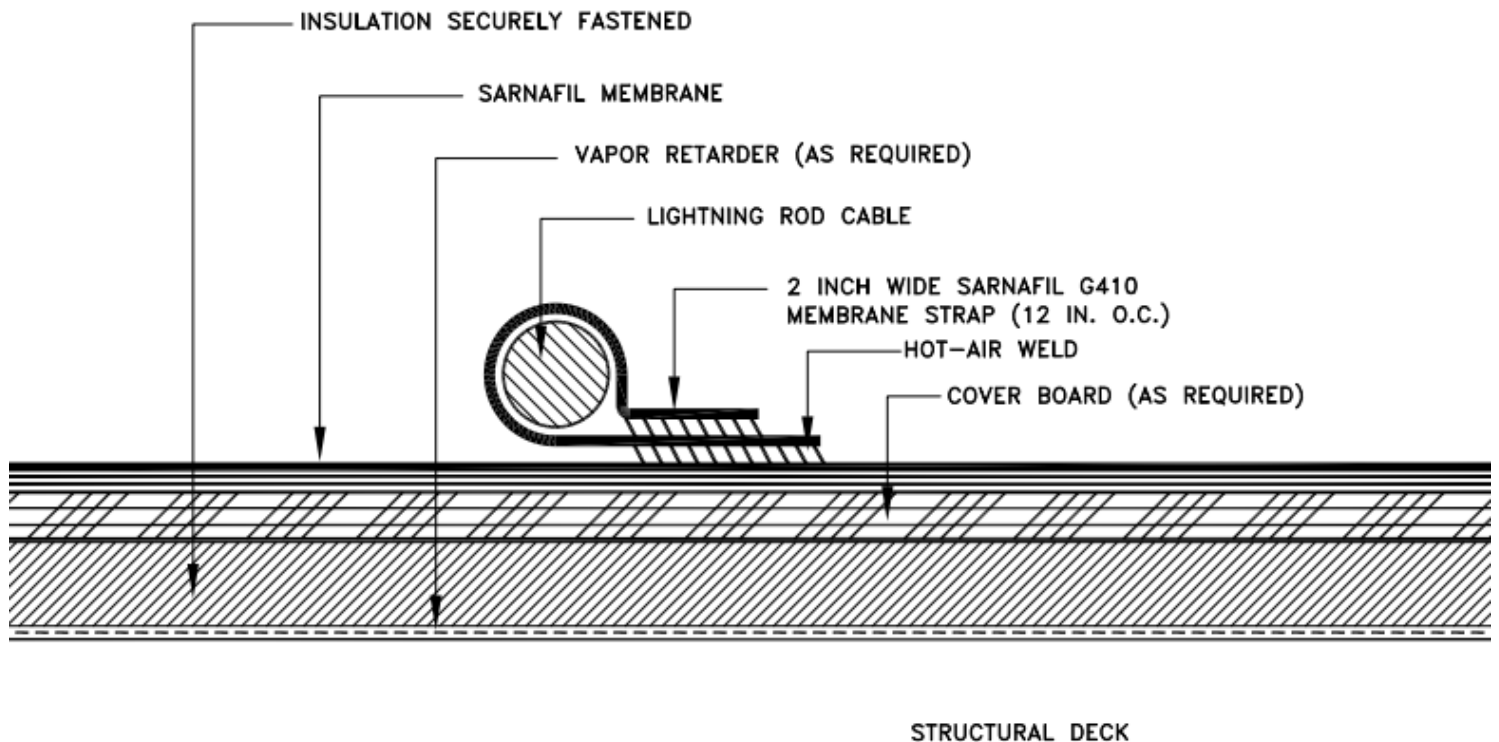
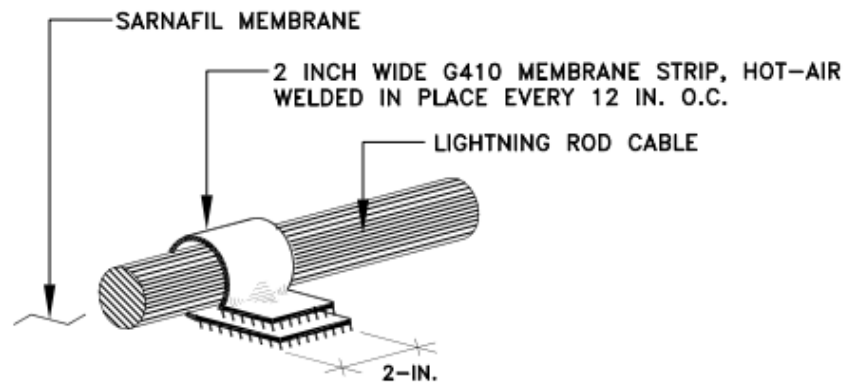
## NON-REMOVABLE CURB FLASHING



**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.

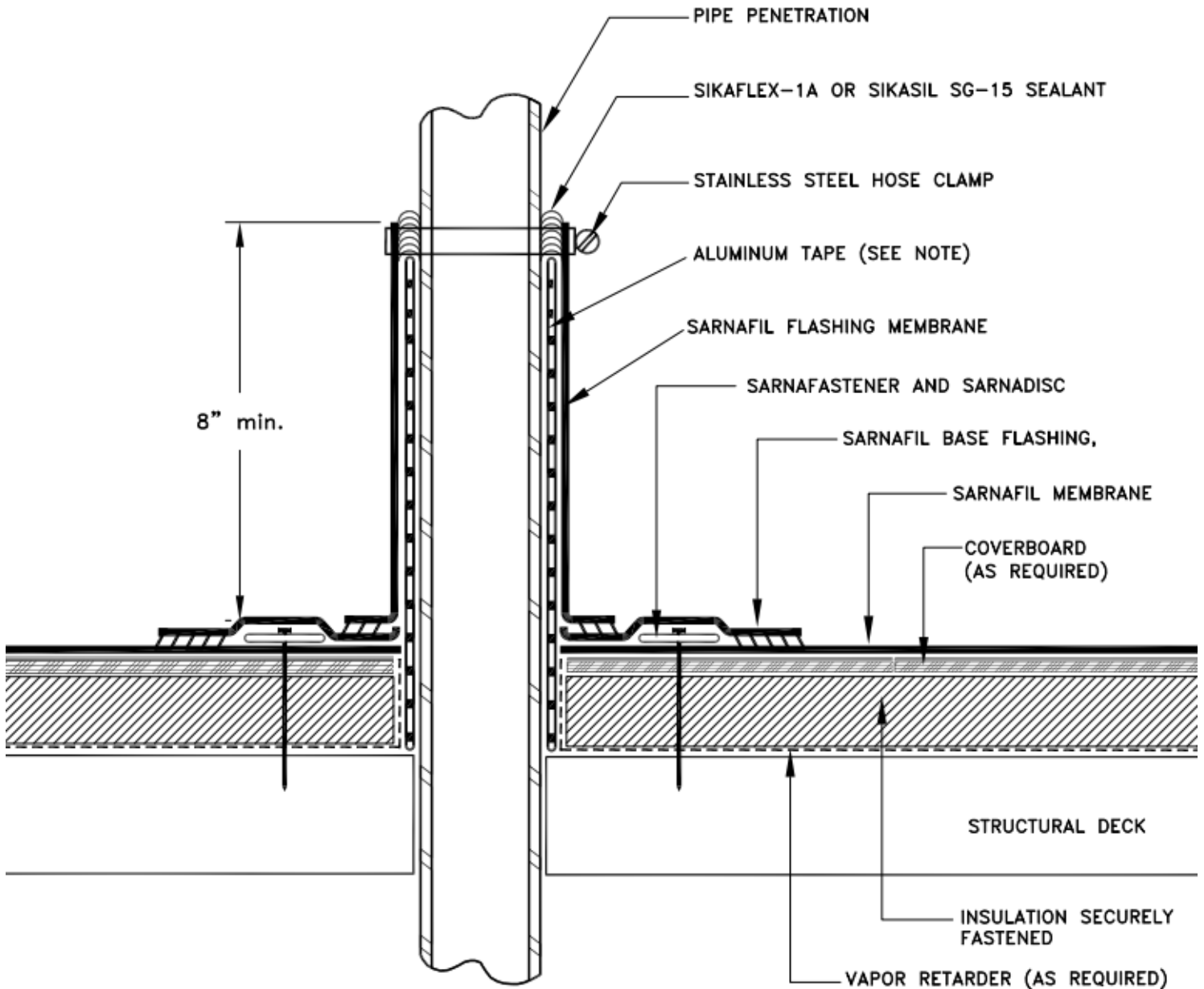
## LIGHTNING ROD

**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

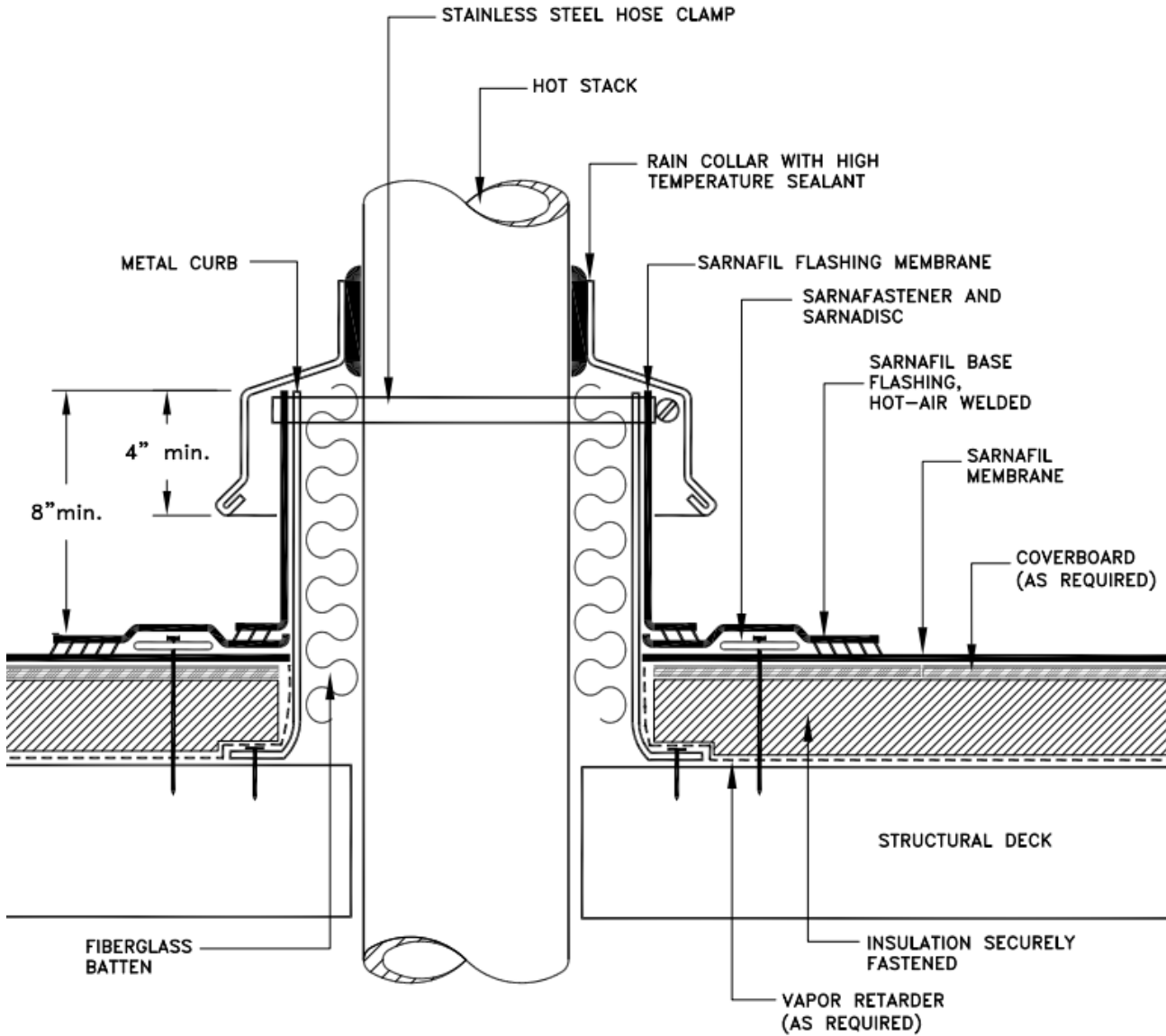
NOTE: As an alternative, lengths of G410 coverstrip can be welded to encapsulate the cable. Leave the ends of the coverstrip unwelded. Contact Sika Sarnafil for further details.



**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



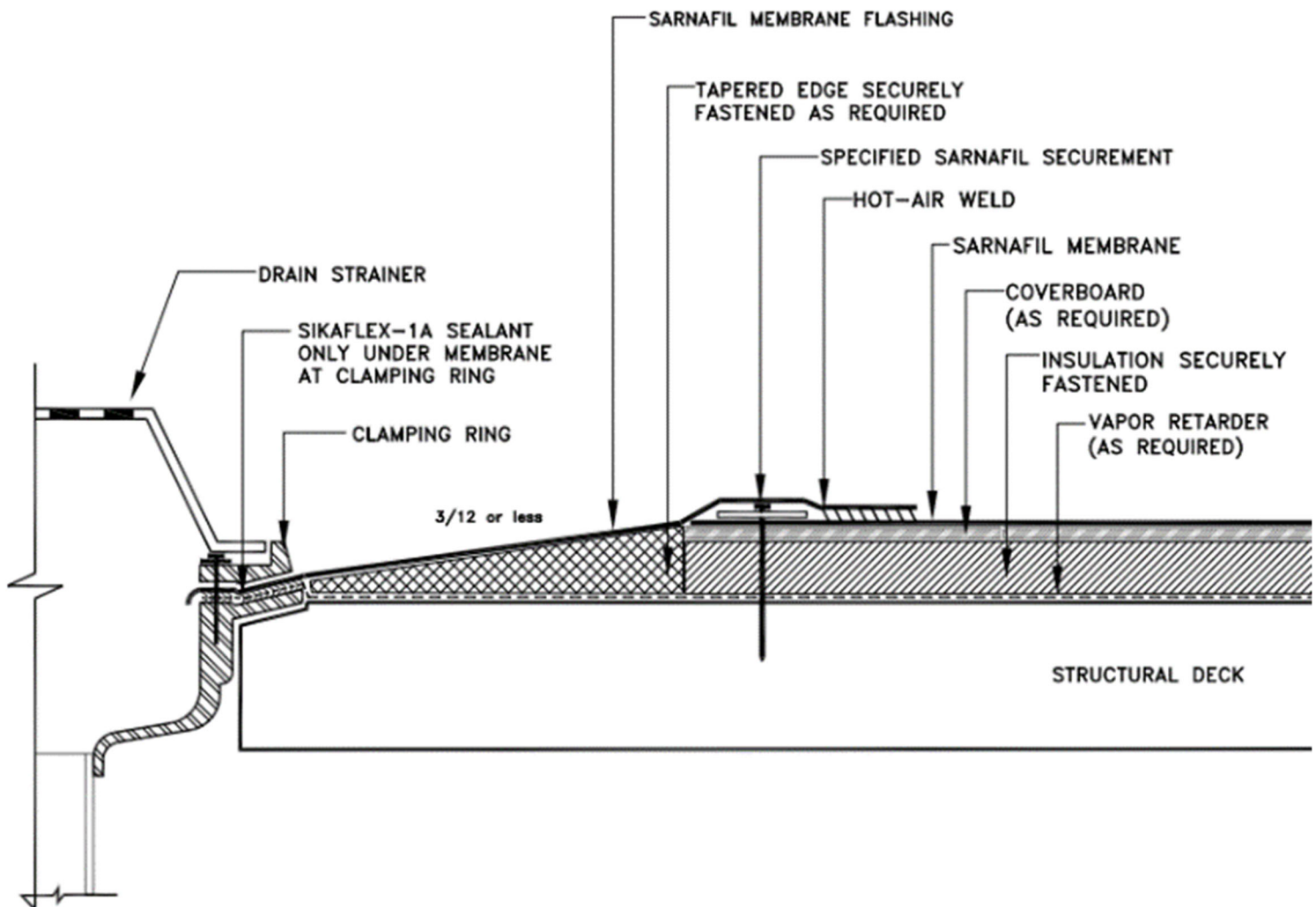
**NOTES:**

- 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



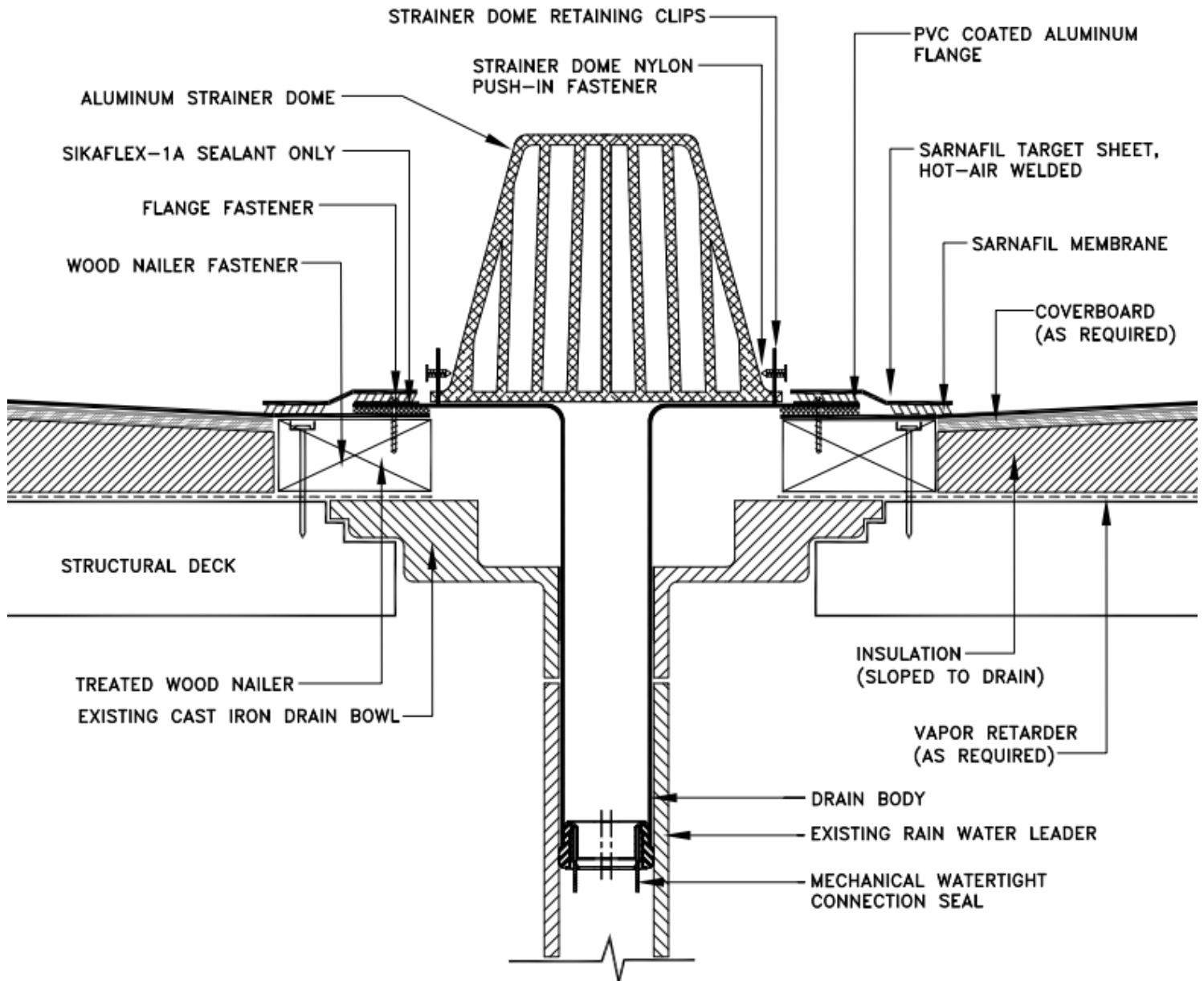


**NOTES:**

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

## SARNADRAIN WITH U-FLOW