



# CARLISLE'S SPEC SUPPLEMENT

G-14-18



**October 2018**

*The information contained in this supplement serves as a criteria for Specifiers and Authorized Applicators regarding the design and installation of Carlisle Roofing Systems and use of roof vents for a vent secured roofing system. In addition to the information contained herein, attached details are included to provide the Specifiers and Authorized Applicators with quick access to specific information. Specifiers and Authorized Applicators are advised to reference all applicable details included with this spec supplement.*

This alternate method with vent securement is for securing Carlisle's Sure-Seal/Sure-White (EPDM), Sure-Tough (EPDM), Sure-Weld (TPO), Sure-Flex (PVC) or Sure-Flex (KEE HP) membrane and is intended to be used with products included within the Carlisle's Thermoset or Thermoplastic Specification and Details.

#### A. Description

The VacuSeal™ Vent Secured Roofing System incorporates the use of a loose-laid thermoset or thermoplastic membranes in conjunction with a sealed roofing/substrate assembly and V<sup>2</sup>T Roof Vents. The roof vents locations are pre-determined by an engineered drawings processed through Carlisle, based on project location and conditions. Air distribution strips are positioned beneath the membrane linking the V<sup>2</sup>T Vents and facilitating air movement beneath the membrane. All gaps and joints in the deck to be sealed in accordance with Carlisle published details or the deck is to be sealed with a continuous air barrier along the perimeter and around all penetrations. The insulation is loose-laid in a single or multiple layers and overlaid with a 1/2 inch gypsum cover board.

**NOTE:** A continuous air seal is critical for performance of the system, closely follow details at perimeters and penetrations. VacuSeal™ Vent Secured Roofing System is limited to 20 Year Maximum warranty with wind speed coverage up to 90 mph. Specific enhancements will be required along the perimeter for systems requiring warranty wind speed coverage greater than 72 mph. Contact Carlisle for enhancement requirements.

#### VacuSeal™ Membrane Systems Warranty Options

Years	Thermoset (Sure-Seal/Sure-Tough/Sure-White EPDM) OR Thermoplastic Membranes (Sure-Weld TPO/ Sure-Flex PVC/Sure-Flex KEE HP)		
	Warranty Wind Speed	Minimum Membrane Thickness (1)	Additional Puncture Coverage
	55, 72, 80 or 90 mph		
5, 10, 15 or 20 year	v(2)	60-mil	Not Available

Notes: v= Acceptable

(1) All "T-Joints" must be overlaid with appropriate flashing material.

(2) Perimeter enhancements required for wind speed coverage greater than 72mph. Contact Carlisle for requirements.



## B. Quality Assurance

1. This securement method using V<sup>2</sup>T Vents requires a pre-engineered drawing developed by V<sup>2</sup>T Technology identifying locations of all vents in the system and specific engineering evaluations completed by V<sup>2</sup>T Technology. Prior to installation, approved engineered drawing must be obtained.
2. This roofing assembly must be installed by an authorized applicator who has been trained for the installation of V<sup>2</sup>T Roof Vents and its components in compliance with the approved engineered drawing.
3. Consult Carlisle to ensure proper seal detailing is provided and appropriate Carlisle roofing details are selected.
4. In addition to final inspection by Carlisle, project scheduling must be coordinated with Carlisle for in-progress inspection coordination.

## C. Submittals

1. Prior to starting work, the roofing contractor must submit the following:
  - a. Roofing Architectural Drawings and Details must be submitted to V<sup>2</sup>T Technology, 13000 S. Tyron St., Suite F-193, Charlotte, NC 28278, (704)-900-1220, [contact@v2roofsystems.com](mailto:contact@v2roofsystems.com) prior to installation to secure an engineered layout for the vent locations.
  - b. Submit V<sup>2</sup>T engineered layout to Carlisle SynTec showing V<sup>2</sup>T vent layout, location of air distribution strips, details of construction and identification of materials.
2. No deviations will be allowed without prior written approval.
3. Upon completion of the installed work, submit notice of completion to Carlisle to schedule Final Inspection.

## D. Products

Products listed in "Part II" of the Carlisle Thermoset/Thermoplastic Roofing System Specifications can be used as part of the VacuSeal Vent Secured Roofing System. In addition, products listed herein are specific to this system:

1. **V<sup>2</sup>T Roof Vent:** A ridged injection-molded PVC plastic roof vent with integrated plastic flange base.
2. **Air Distribution Strip:** A 10" wide, orange polypropylene mesh used to distribute air underneath the membrane and V<sup>2</sup>T roof vent. Available in rolls of 10" wide by 500' long.
3. **Sealant Tape:** An elastomeric butyl rubber sealant, extruded on silicone coated paper, used in conjunction with a termination bar to secure and seal compression type flashing terminations.
4. **Carlisle VapAir Seal 725TR Air and Vapor Barrier** - A 40-mil thick composite consisting of 35-mil self-adhering rubberized asphalt membrane laminated to a 5-mil UV resistant poly film with an anti-skid.
5. **Carlisle VapAir Seal MD Air and Vapor Barrier** – a reinforced composite aluminum foil with self-adhesive SBS backing and removable poly release film. Used for direct application over metal decks.
6. **VapAir Seal Flashing Foam** – a low pressure foam system that utilizes a non-flammable blowing agent. The foam is used to seal penetrations and reduce air leakage, especially at roof perimeters.
7. **Sure-Seal/Sure-White Pressure-Sensitive Elastoform® Flashing:** A 6" X 100' and 9" or 12" wide by 50' long, 60-mil thick Sure-Seal **uncured** EPDM Flashing laminated to a 30-mil Pressure-Sensitive SecurTAPE used in conjunction with EPDM Primer.

Sure-Seal/Sure-White uncured Pressure-Sensitive Elastoform Flashing is used to flash inside and outside corners, pipes, scuppers and field fabricated pourable sealer pockets when the use of Carlisle pre-fabricated flashing accessories is not feasible.

## E. Design Criteria

Follow current Carlisle specifications for installing roof membranes and seaming per specific membrane. [Sure-Seal/Sure-White/Sure-Tough (EPDM), Sure-Weld (TPO), Sure-Flex (PVC) or Sure-Flex (KEE HP)].

## 1. General

- a. The use of a sealed air barrier for this roofing system is required and is critical to the performance and function of this system. Follow all details at perimeters and penetrations.
- b. For this air equalization attachment method, night seal must be completed by the end of each day, perimeter seals must be completed along with the required number of vents in a specific area.

## 2. New Construction / Re-Roof (Complete Tear-Off, Deck Exposed)

- a. For projects with Steel decks, a continuous air seal must be provided at deck level using **VapAir Seal MD Air and Vapor Barrier** over the entire roof and must be continuously sealed along the perimeter and around all penetrations.
- b. Projects with Structural Concrete decks, may incorporate two optional methods depending on the condition of the concrete and the possible need for a continuous vapor seal.
  - 1) Concrete decks without a vapor barrier (sealing gaps and joints only): may be addressed by sealing all the joints along the perimeter and around penetrations refer to appropriate details.
  - 2) Concrete decks with vapor barriers: provide **VapAir Seal 725TR Air and Vapor Barrier** over the entire roof and continuously seal along the perimeter and around all penetrations, ensure perimeter details do not permit air infiltration beneath the roofing membrane.

**NOTE:** Refer to Spec Supplements G-08-18 "Application Procedures for 725TR Air and Vapor Barrier" or G-12-18 "Application Procedures for Carlisle's VapAir Seal MD Air and Vapor Barrier" for further information.

## 3. Re-Roof (Partial Tear Off, Deck Not Exposed)

- a. Partial tear-off does not allow a continuous air seal below the membrane and these projects are not recommended for use with Vented Roof Systems, without verification of an existing air barrier.

## 4. Re-Roof (Recover, No Tear-Off)

- a. To maintain continuous air seal, utilize existing roof membrane and replace or re-seal any flashings which are loose or damaged.

## F. Installation

### 1. Daily Seal

- a. On phased roofing, when the completion of flashings and terminations is not possible by the end of each workday, provisions must be taken to temporarily close the membrane to prevent water and air infiltration.
- b. Temporarily seal any loose membrane edge down slope using Sure-Seal Two Part Pourable Sealer (EPDM only), FAST or Flexible FAST Adhesive, hot asphalt, or a similar product so that the membrane edge will not buck water. Caution must be exercised to ensure positive draining during installation, temporary seal locations should be designated so that drainage is not restricted during construction by partially installed roof sections.
  - 1) When applying FAST or Flexible FAST Adhesive or other sprayed urethane foam, prime the surface of the membrane with Carlisle Primer to ensure proper adhesion.
  - 2) Sure-Seal Pourable Sealer, when utilized, shall be applied as follows:
    - a) The two Pourable Sealer components must be mixed in accordance with the instructions on the container labels.
    - b) Apply the Pourable Sealer along the loose edge of the EPDM membrane. If necessary, use a trowel to spread Pourable Sealer to achieve complete coverage.
- c. When tie-in to existing built-up roofs, remove the gravel. The surface must be clean and dry.
- d. After embedding membrane in daily seal material, CHECK FOR CONTINUOUS CONTACT. Provide continuous pressure over the length of the temporary seal. Provide weight evenly distributed along the length of the daily seal to reduce the wind effect on the continuous temporary seal.

**NOTE:** The use of rigid wood nailers is not recommended due to warping. Constant compression cannot be achieved on an uneven substrate.

- e. When work is resumed, pull the imbedded membrane free; trim and remove daily seal material from membrane

before continuing installation of adjoining sections.

2. Follow guidelines above for the installation and air sealing of roof deck perimeters and penetrations.
3. After placement of insulation and coverboard, layout the vents and air distribution strips per engineered layout drawing provided by V<sup>2</sup>T Technology. Mark placement of vents on substrate with chalk or marker.
4. Loose lay roofing membrane over the air distribution strips and air vent locations. Allow the membrane to relax.
5. Place the V<sup>2</sup>T Roof Vents on previous marks and cut out membrane as needed for installation of vent, follow details for specific requirements for each vent.
6. Flash V<sup>2</sup>T Roof Vent per requirements outlined in detail.
7. Repeat installation for additional vents.

#### G. Field Quality Control

1. Contact V<sup>2</sup>T Technology technical staff for vacuum test of roof system to verify airtight assembly.
2. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.

#### H. Associated Installation Details

Roof Assembly Over Existing Single-Ply Roof .....	V-0.1
Roof Assembly Over Existing Asphaltic Roof.....	V-0.2
Roof Assembly Over Steel Deck.....	V-0.3
Roof Assembly Over Poured-In-Place Concrete Deck.....	V-0.4
Roof Assembly Over Concrete Plank.....	V-0.5
Roof Assembly Over Lightweight Concrete Deck.....	V-0.6
Roof Assembly Wood Deck .....	V-0.7
Roof Edge: Roof Recover .....	V-1.1
Roof Edge: Tear-Off & Re-Roofing .....	V-1.2
Curb Base Flashing – New Construction and Re-Roof (Recover).....	V-5.1
Roof Drain: Re-Roof (Recover) .....	V-6.1
Roof Drain: New Construction.....	V-6.2
V <sup>2</sup> T Vent with Pre-Applied Skirt Flashing .....	V-8.0
Pipe/Structural Steel Tube Through Metal Deck.....	V-8.1
Multiple Penetrations Through Steel Deck – New Construction .....	V-8.2
Single Penetration Through Existing Roof Assembly.....	V-8.3
Cluster of Penetrations Through Existing Roof Assembly.....	V-8.4
Hot Stack Air Flashing – Option A.....	V-8.5A
Hot Stack Air Flashing – Option B.....	V-8.5B
Parapet With Membrane Air Barrier .....	V-12.1
Parapet/Curb: Concrete/Lightweight Concrete Used as an Air Barrier.....	V-12.2
Parapet or Wall: New Construction and Re-Roof (Recover) .....	V-12.3

End of Section

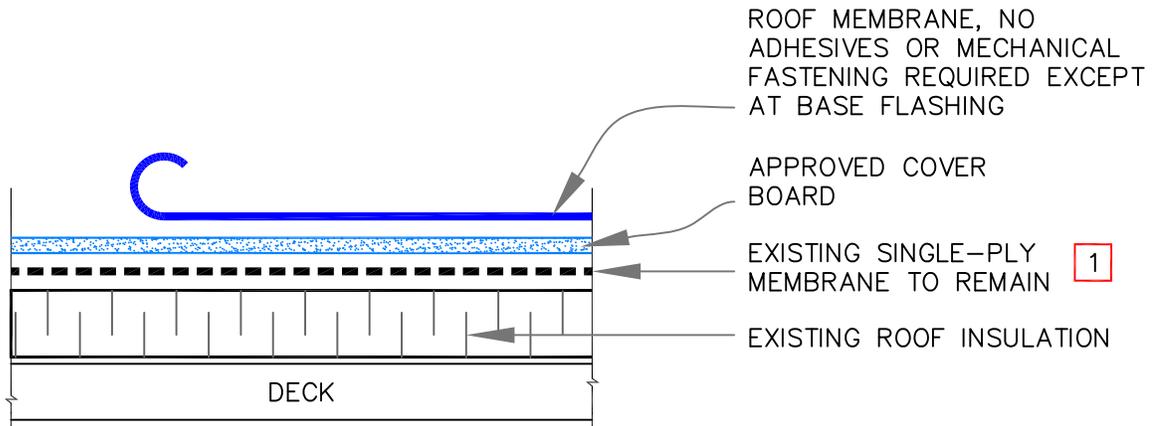
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Carlisle, VacuSeal, Sure-Seal, Sure-Weld and Sure-Flex are Trademarks of Carlisle Construction Materials Incorporated

V<sup>2</sup>T is a Trademark of V2T Technology

This specification represents the applicable information available at the time of its publication. Owners, specifiers and Carlisle Authorized Roofing Applicators should consult Carlisle or their Carlisle Manufacturer's Representative for any information, which has subsequently been made available.

Review the appropriate Carlisle warranty for specific warranty coverage, terms, conditions and limitations.

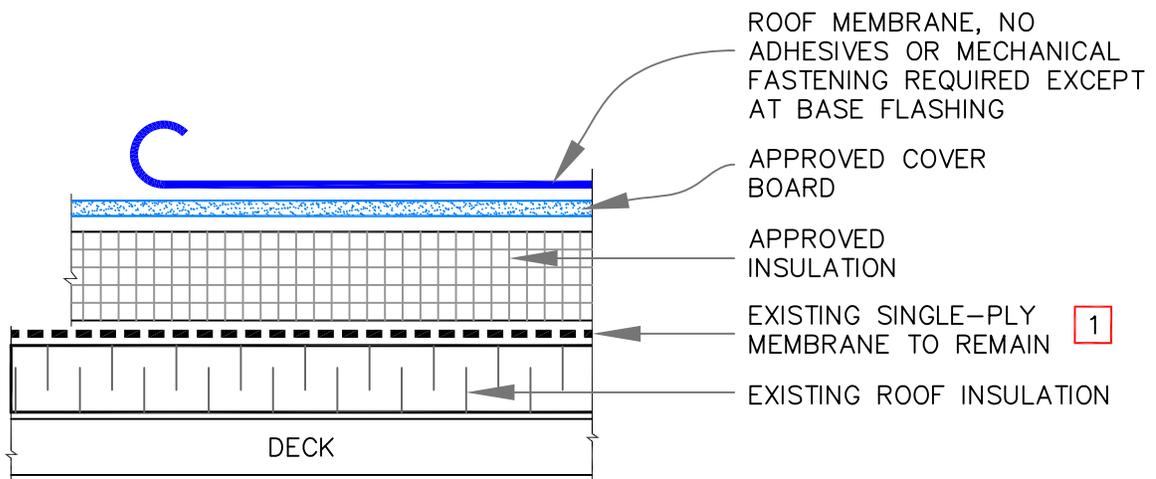
### ROOF ASSEMBLY WITHOUT NEW INSULATION



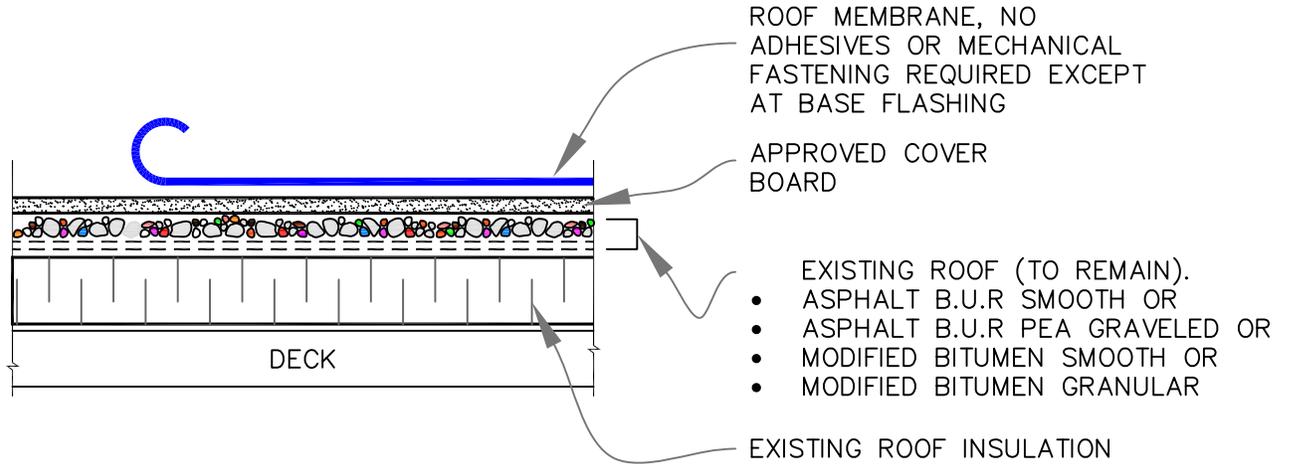
NOTE:

- EXISTING ROOF MEMBRANE MAY BE USED AS AN AIR BARRIER. IT WILL REQUIRE THOROUGH INSPECTION FOR BREACHES, DAMAGES, AND AIR TIGHTNESS OF EXISTING FLASHING. SEAL ALL DEFICIENT CONDITIONS TO ACHIEVE AN AIRTIGHT AIR BARRIER.

### ROOF ASSEMBLY WITH NEW INSULATION



	NEW MEMBRANE		INSULATION	ROOF ASSEMBLY OVER EXISTING SINGLE-PLY ROOF		DETAIL NO.
	EXISTING MEMBRANE	<span style="border: 1px solid red; padding: 2px;">0</span>	SEE NOTE(S)	See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		V-0.1

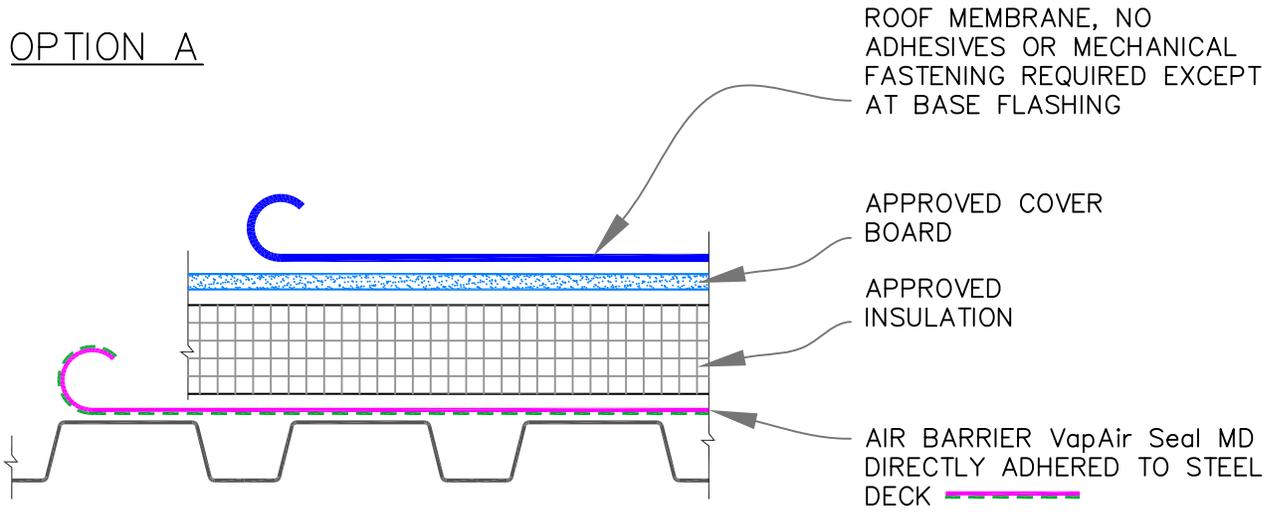


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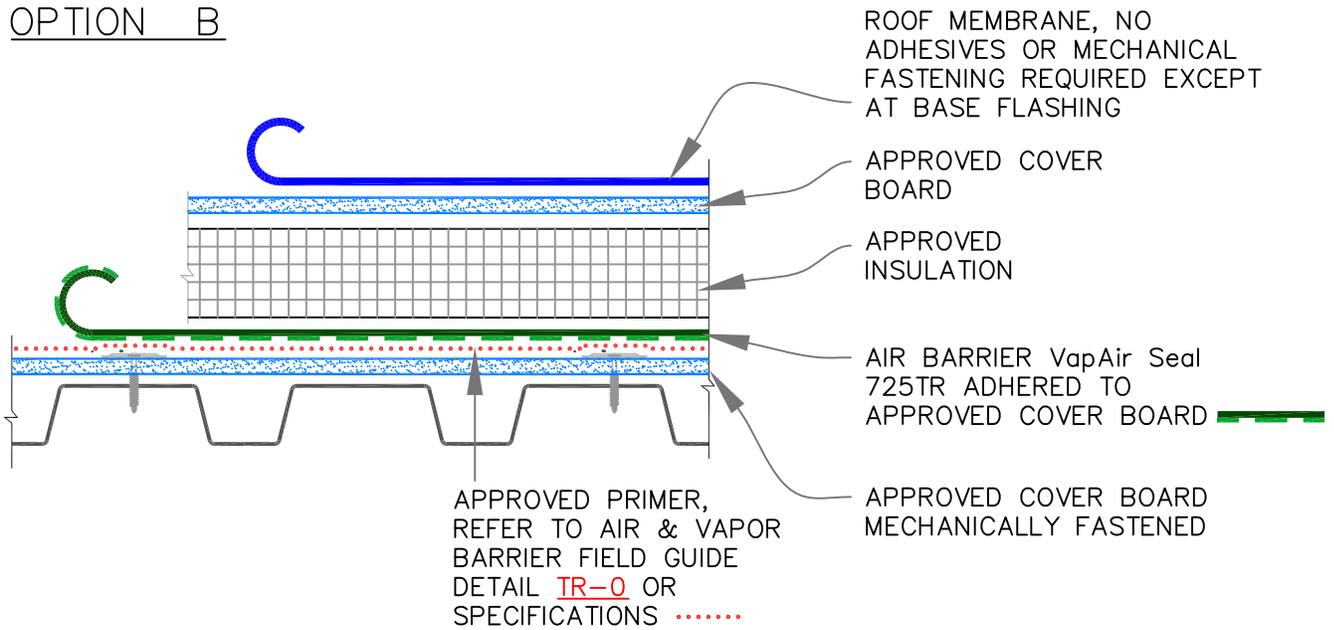
1. EXISTING ROOF MEMBRANE MAY BE USED AS AN AIR BARRIER. IT WILL REQUIRE THOROUGH INSPECTION FOR BREACHES, DAMAGES, BLISTERS, WRINKLES AND AIR TIGHTNESS OF EXISTING FLASHING. SEAL ALL DEFICIENT CONDITIONS TO ACHIEVE AN AIRTIGHT AIR BARRIER.
2. FOR NEW ASSEMBLY OVER COAL TAR PITCHED ROOF, CONTACT CARLISLE SYNTEC.
3. LOOSE GRAVEL OR GRANULES MUST BE REMOVED AND THE SURFACE SHALL BE LEVELED.

NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	ROOF ASSEMBLY OVER EXISTING ASPHALTIC ROOF See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-0.2
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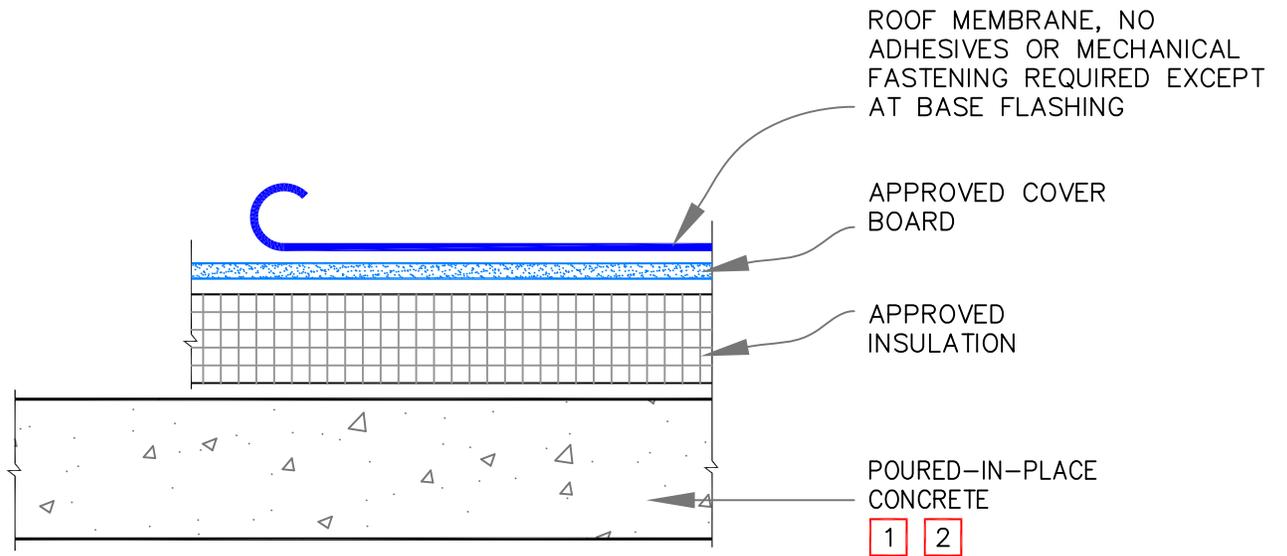
OPTION A



OPTION B



NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	ROOF ASSEMBLY OVER STEEL DECK See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-0.3
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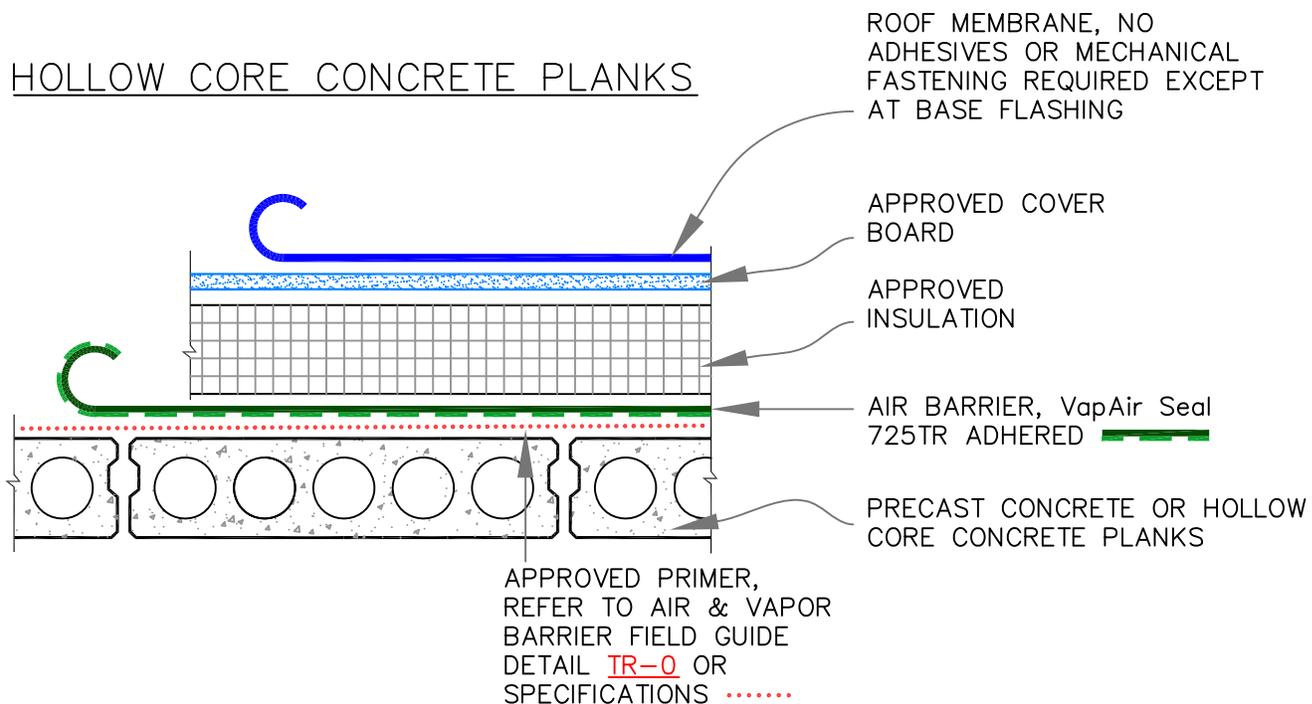


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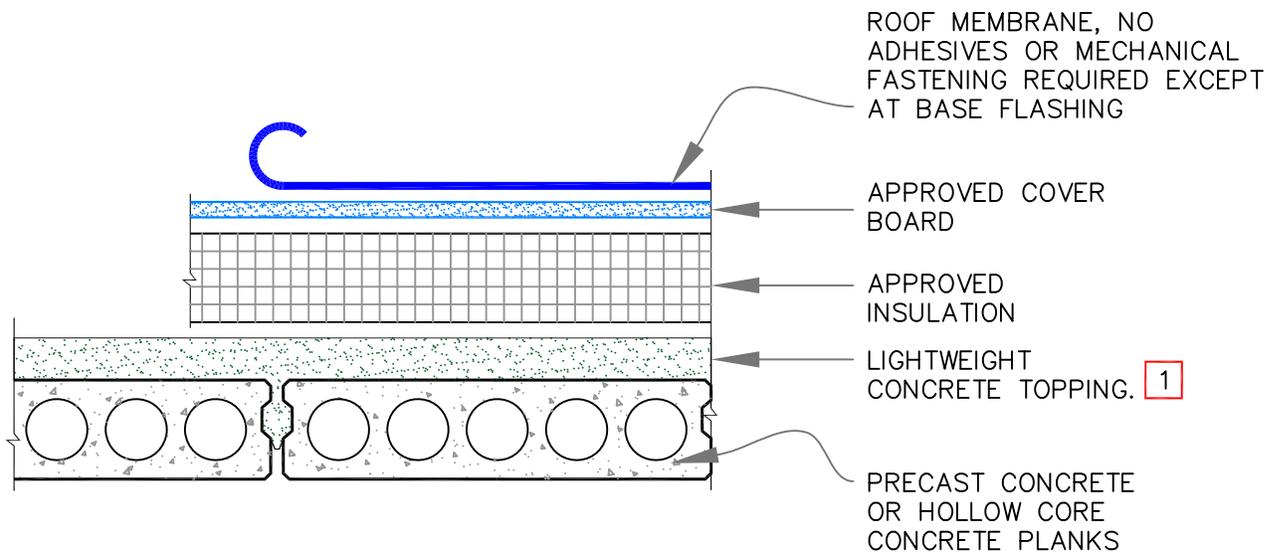
1. THE SUBSTRATE MAY NOT REQUIRE AN ADDITIONAL LAYER OF AIR BARRIER.
2. TO ENSURE THAT A CONTINUOUS AIR-SEAL IS PROVIDED, THE SUBSTRATE MUST BE INSPECTED FOR BREACHES FOR AIR INFILTRATION AT CRACKS, JOINTS, PENETRATIONS, ROOF EDGES, PARAPET WALLS, AND SIMILAR CONDITIONS.

<p>— NEW MEMBRANE</p> <p>- - - EXISTING MEMBRANE</p>	<p> INSULATION</p> <p><span style="border: 1px solid red; padding: 2px;">0</span> SEE NOTE(S)</p>	<p>ROOF ASSEMBLY OVER POURED-IN-PLACE CONCRETE DECK</p> <p>See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> &amp; Specs for additional information</p>	<p></p> <p>DETAIL NO. V-0.4</p>
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HOLLOW CORE CONCRETE PLANKS



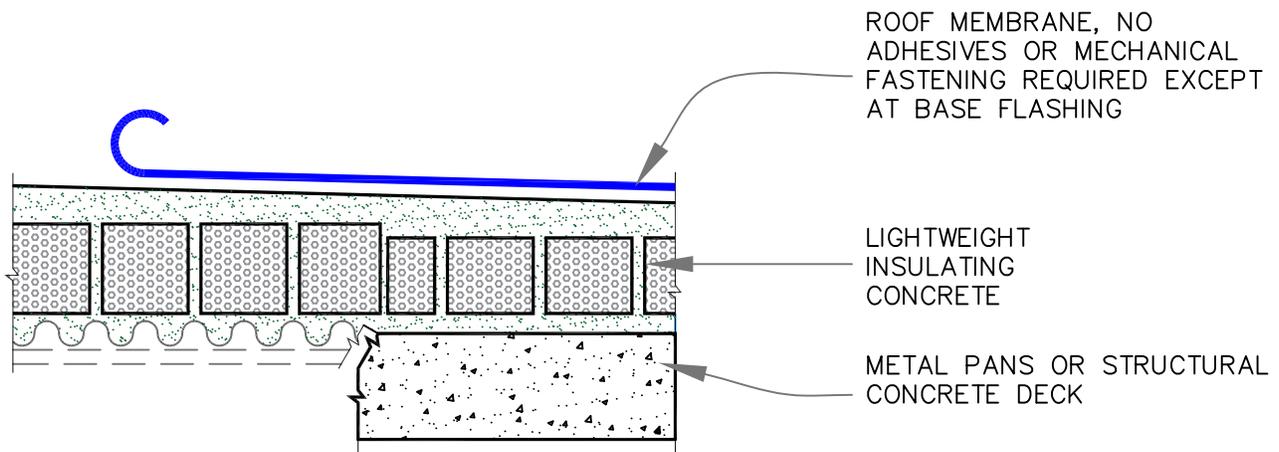
HOLLOW CORE CONCRETE PLANKS WITH TOPPING



NOTE:

1. THE SUBSTRATE MAY NOT REQUIRE AN ADDITIONAL LAYER OF AIR BARRIER WHEN CONCRETE TOPPING EXISTS. TO ENSURE THAT A CONTINUOUS AIR-SEAL IS PROVIDED, THE SUBSTRATE MUST BE INSPECTED FOR BREACHES FOR AIR INFILTRATION AT CRACKS, JOINTS, PENETRATIONS, ROOF EDGES, PARAPET WALLS, AND SIMILAR CONDITIONS & PROPER REPAIRS MUST BE PERFORMED.

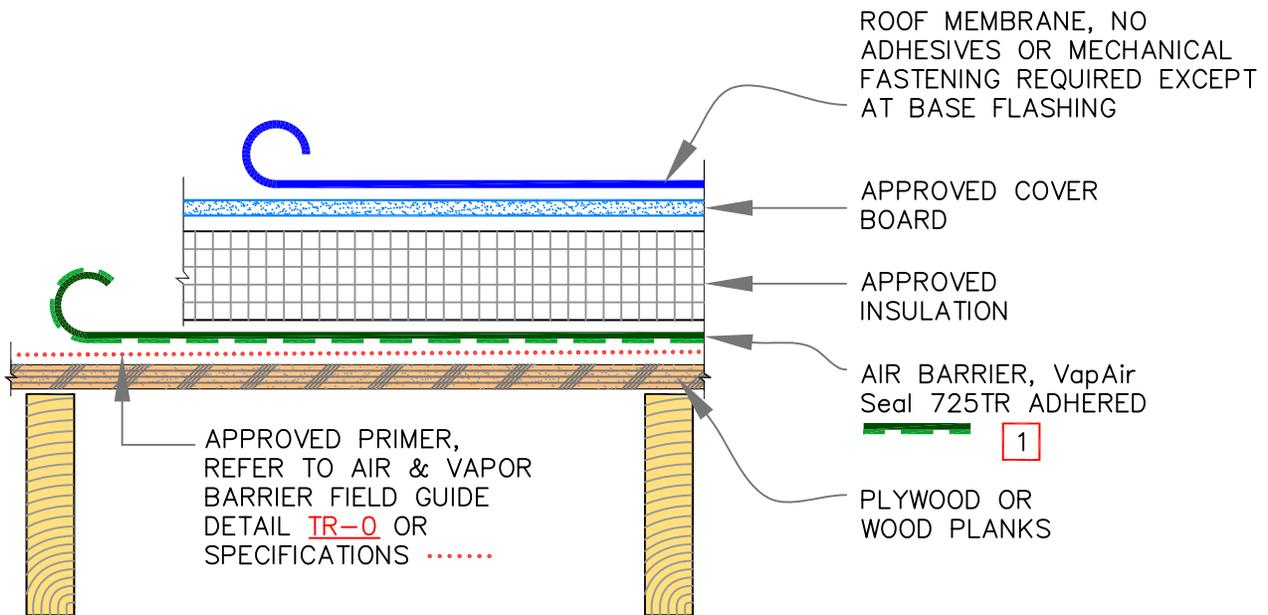
NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	ROOF ASSEMBLY OVER CONCRETE PLANKS See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-0.5
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NOTE:

1. THE SUBSTRATE MAY NOT REQUIRE AN ADDITIONAL LAYER OF AIR BARRIER WHEN CONCRETE TOPPING EXISTS. TO ENSURE THAT CONCRETE SUBSTRATE PROVIDES A CONTINUOUS AIR-SEAL, THE SUBSTRATE MUST BE INSPECTED FOR AIR INFILTRATION. INSPECT FOR BREACHES CRACKS, JOINTS, PENETRATIONS, ROOF EDGES, PARAPET WALLS JUNCTIONS, AND SIMILAR CONDITIONS. PROPER REPAIRS MUST BE PERFORMED TO CREATE AN AIR BARRIER.

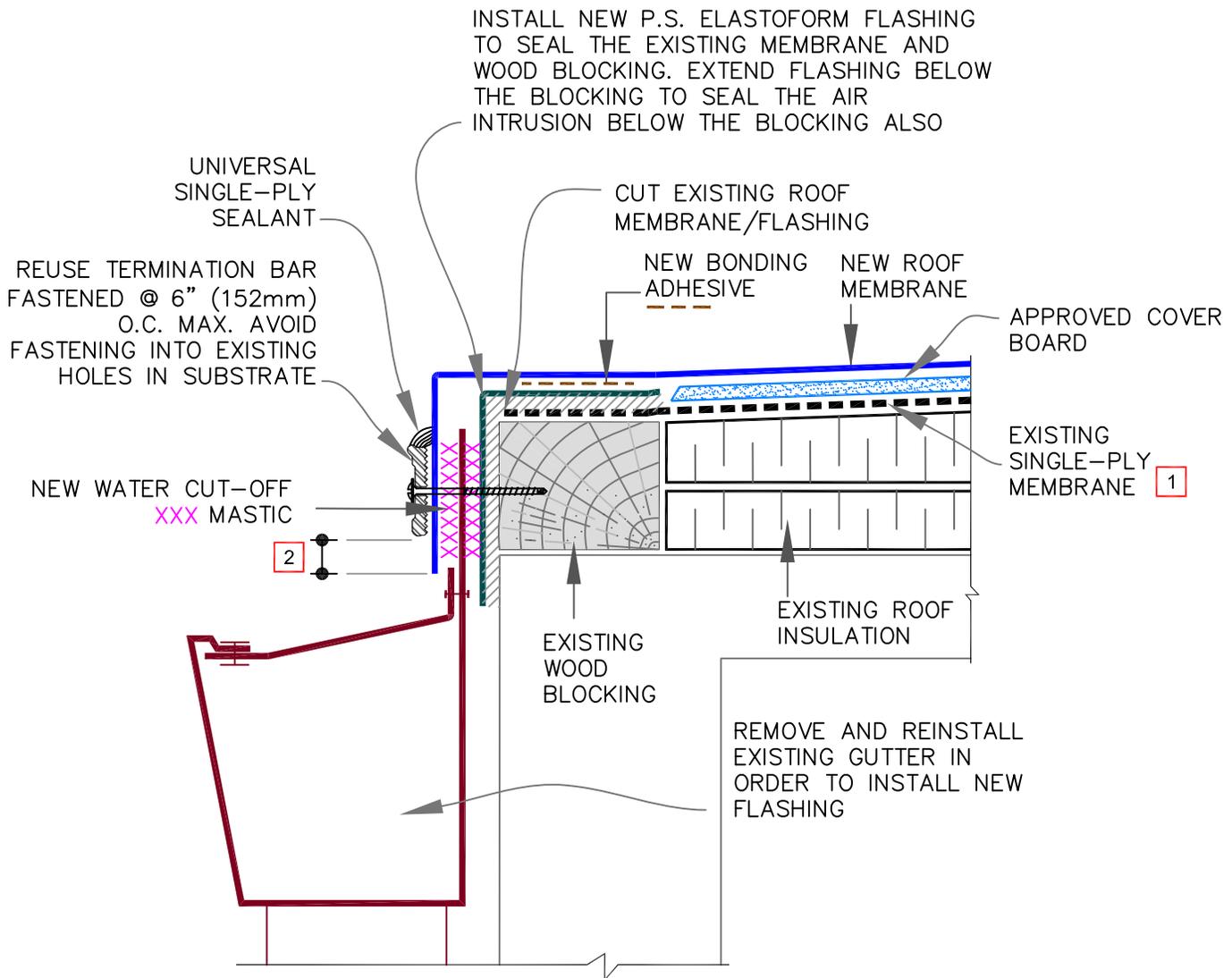
NEW MEMBRANE	INSULATION	ROOF ASSEMBLY OVER LIGHTWEIGHT CONCRETE DECK  See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO.
EXISTING MEMBRANE	SEE NOTE(S)			V-0.6



NOTES:

1. TO AVOID POTENTIAL DAMAGE TO AIR AND VAPOR BARRIER, PROTRUDING NAILS/FASTENERS SHALL BE REMOVED AND REPLACED WITH HEAVY GAUGE THREADED FASTENERS.
2. AS AN OPTION, THE AIR AND VAPOR BARRIER MAY BE ADHERED TO MECHANICALLY FASTENED SECUROCK OR DensDeck PRIME COVER BOARD.

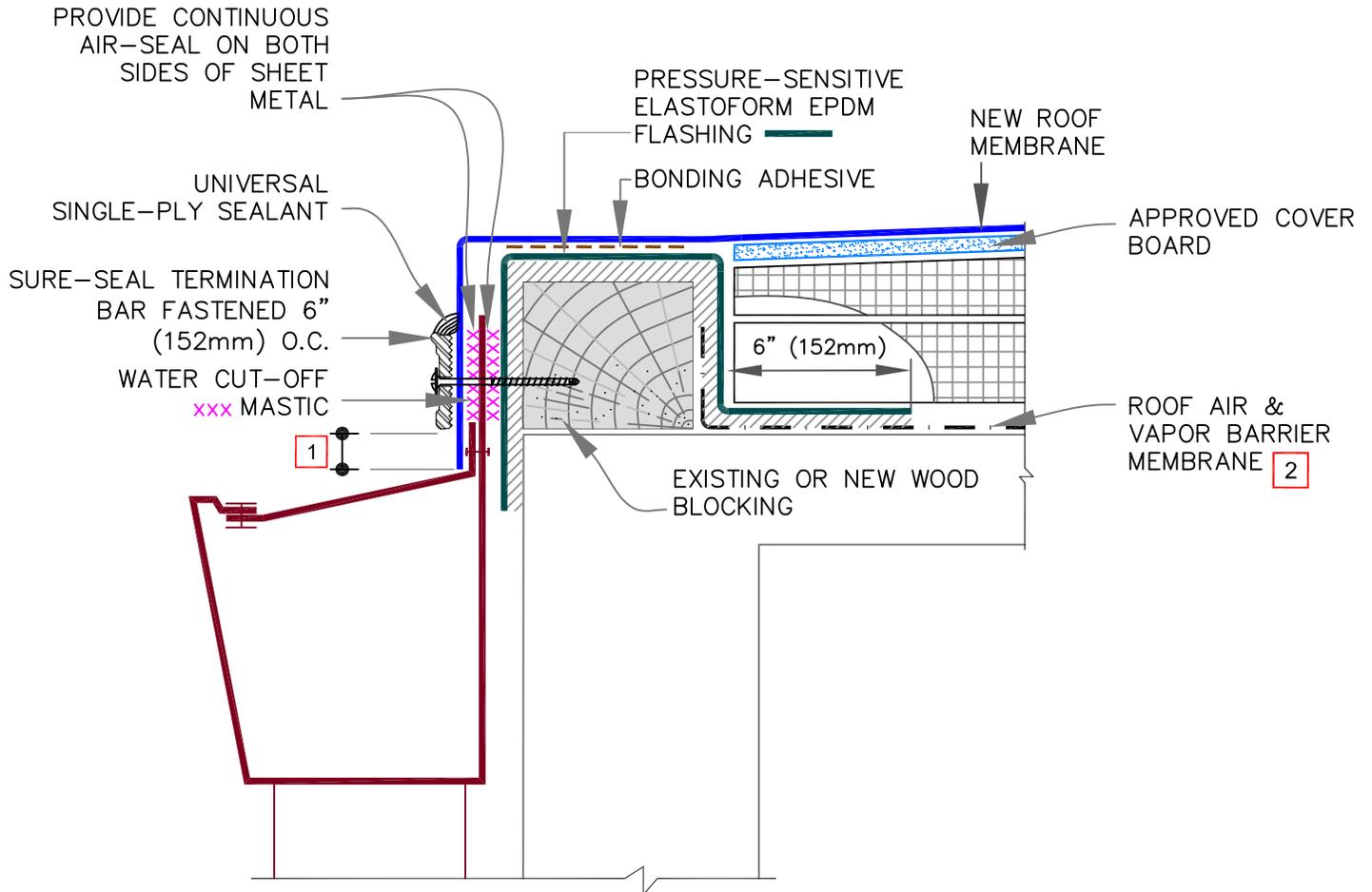
<p><span style="color: blue;">—</span> NEW MEMBRANE</p> <p><span style="color: red;">- - -</span> EXISTING MEMBRANE</p>	<p> INSULATION</p> <p><span style="border: 1px solid red; padding: 2px;">0</span> SEE NOTE(S)</p>	<p>ROOF ASSEMBLY OVER WOOD DECK</p> <p>See sheets <span style="color: red;">V-0.1</span> to <span style="color: red;">V-0.7</span> &amp; Specs for additional information</p>	<p></p> <p>DETAIL NO. <span style="font-size: 2em;">V-0.7</span></p>
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NOTES:

1. EXISTING ROOF MEMBRANE MAY BE USED AS AN AIR BARRIER. IT WILL REQUIRE THOROUGH INSPECTION FOR BREACHES, DAMAGES, AND AIR TIGHTNESS OF EXISTING FLASHING. SEAL ALL DEFICIENT CONDITIONS TO ACHIEVE AN AIRTIGHT AIR BARRIER.
2. ALLOW MEMBRANE SHEET TO EXTEND 1/2" (13mm) MINIMUM BELOW THE METAL TERMINATION BAR.

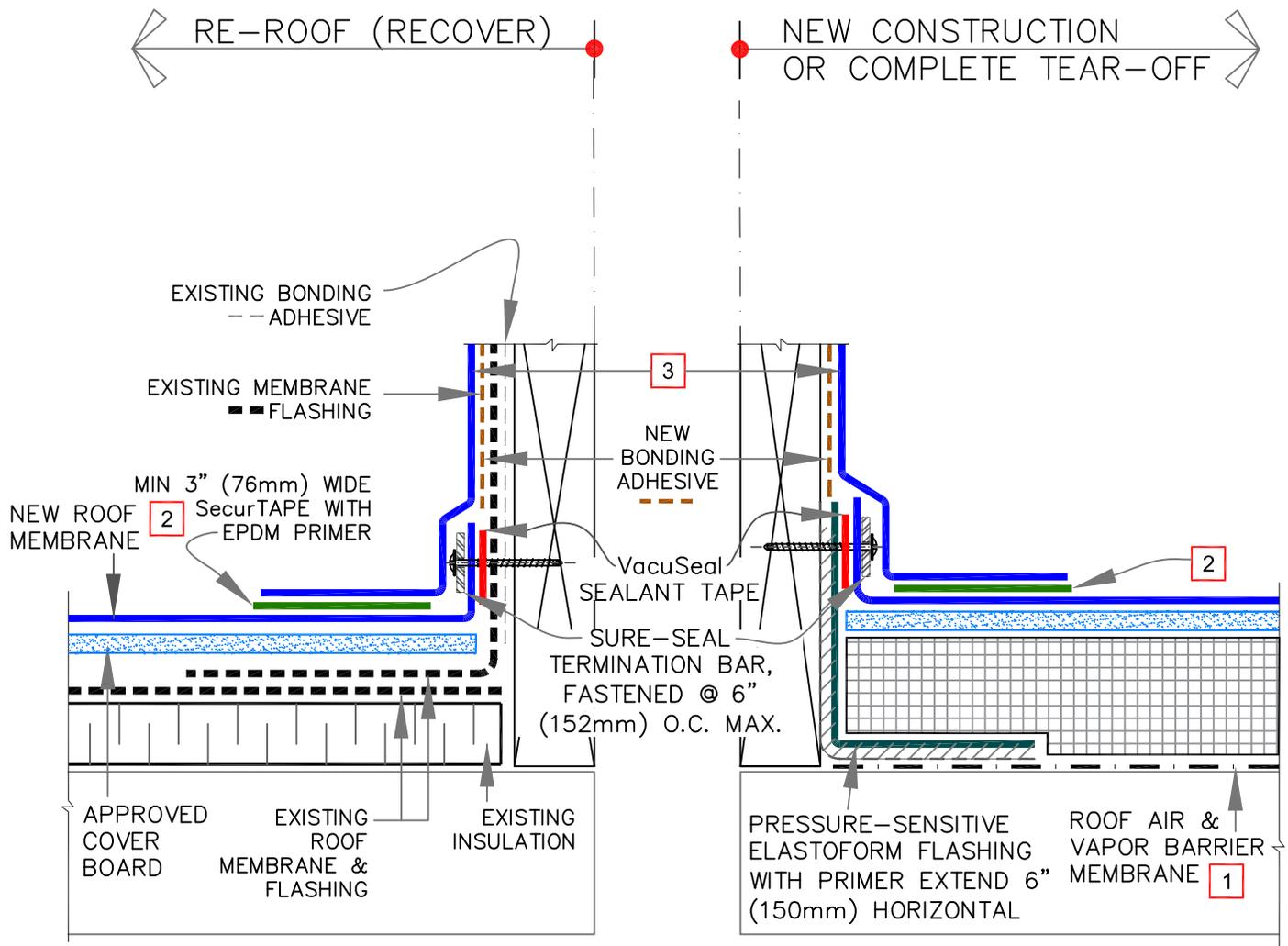
NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	ROOF EDGE: ROOF RECOVER See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-1.1
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NOTES:

1. ALLOW MEMBRANE SHEET TO EXTEND 1/2" (13mm) MINIMUM BELOW THE METAL TERMINATION BAR.
2. USE VapAir Seal 725TR AIR AND VAPOR BARRIER ON CONCRETE DECKS OR VapAir Seal MD ON STEEL DECKS.

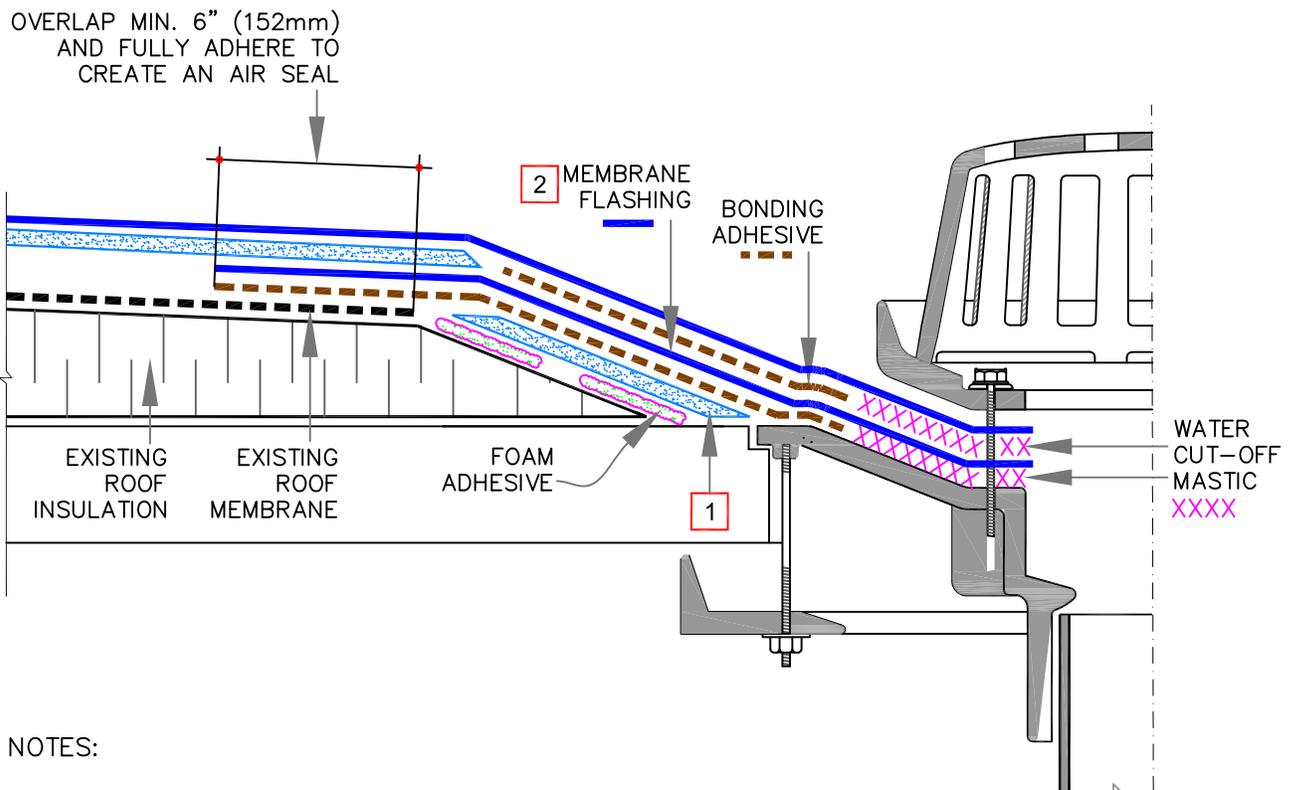
NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	ROOF EDGE: TEAR-OFF & REROOFING See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-1.2
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NOTES:

1. ON STEEL DECKS DIRECTLY ADHERE VapAir Seal MD. USE VapAir Seal 725TR ON CONCRETE & WOOD DECKS OR DECKS WITH APPROVED COVER BOARDS.
2. FOR ADDITIONAL INFORMATION, REFER TO CARLISLE'S THERMOSET DETAIL [U-5A](#) FOR EPDM AND THERMOPLASTIC DETAIL [U-5A](#) FOR TPO/PVC.
3. SELF-ADHERING EPDM CURB WRAP MAY BE SUBSTITUED AS FLASHING ON EPDM ROOFS.

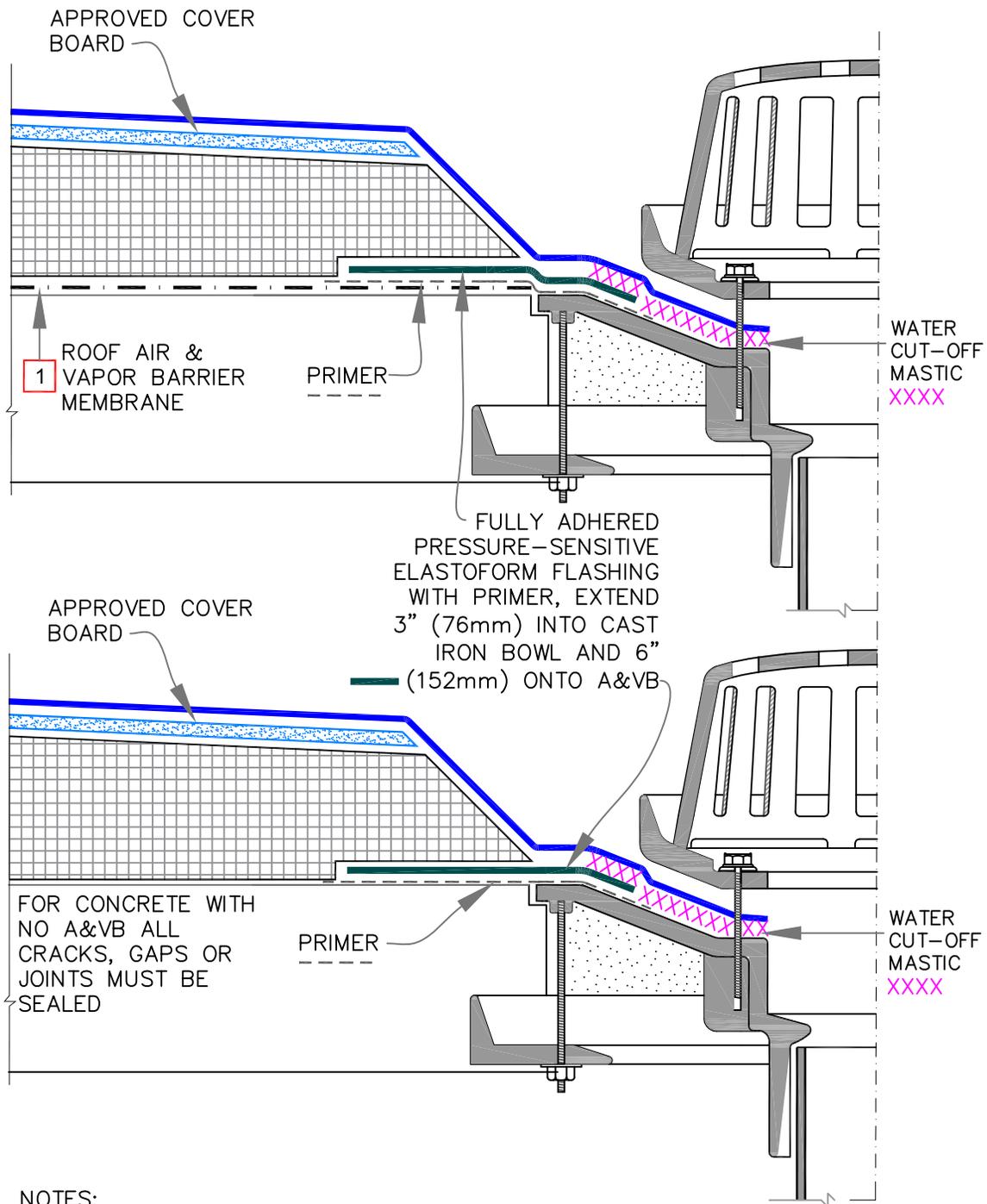
NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	CURB BASE FLASHING – NEW CONSTRUCTION AND RE-ROOF (RECOVER) See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-5.1
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NOTES:

1. INSTALL APPROVED COVER BOARD OVER EXISTING SHAVED INSULATION. CREATE A PROPER SMOOTH SUMP. SET IN FOAM ADHESIVE.
2. FULLY ADHERE MEMBRANE FLASHING TO ACHIEVE AIRTIGHT CONDITION BETWEEN DRAIN AND EXISTING ROOF MEMBRANE. WHERE, THERE IS EXISTING ROOF VAPOR BARRIER, CUT IT BACK, IN ORDER TO PROPERLY AIR SEAL.
3. FOR ADDITIONAL INFORMATION, REFER TO CARLISLE'S THERMOSET DETAIL [U-6](#) FOR EPDM AND THERMOPLASTIC DETAIL [U-6](#) FOR TPO/PVC.

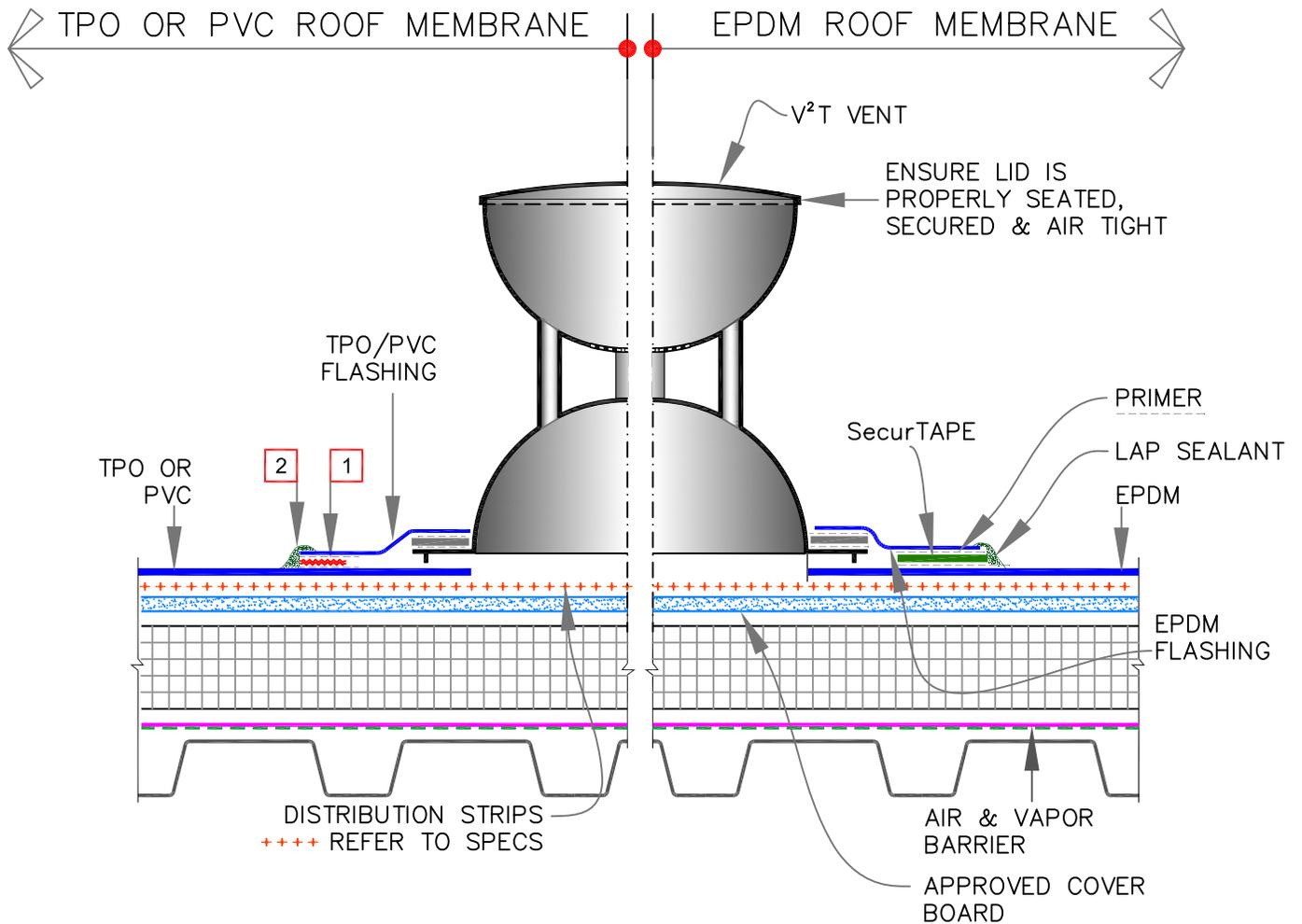
NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	ROOF DRAIN: RE-ROOF (RECOVER) See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information	 DETAIL NO. V-6.1
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NOTES:

1. PROJECTS WITH STEEL DECKS, DIRECTLY ADHERE VapAir Seal MD. USE VapAir Seal 725TR ON CONCRETE, WOOD DECKS OR DECKS WITH APPROVED COVER BOARDS.
2. FOR ADDITIONAL INFORMATION, REFER TO CARLISLE'S THERMOSET DETAIL [U-6](#) FOR EPDM AND THERMOPLASTIC DETAIL [U-6](#) FOR TPO/PVC.

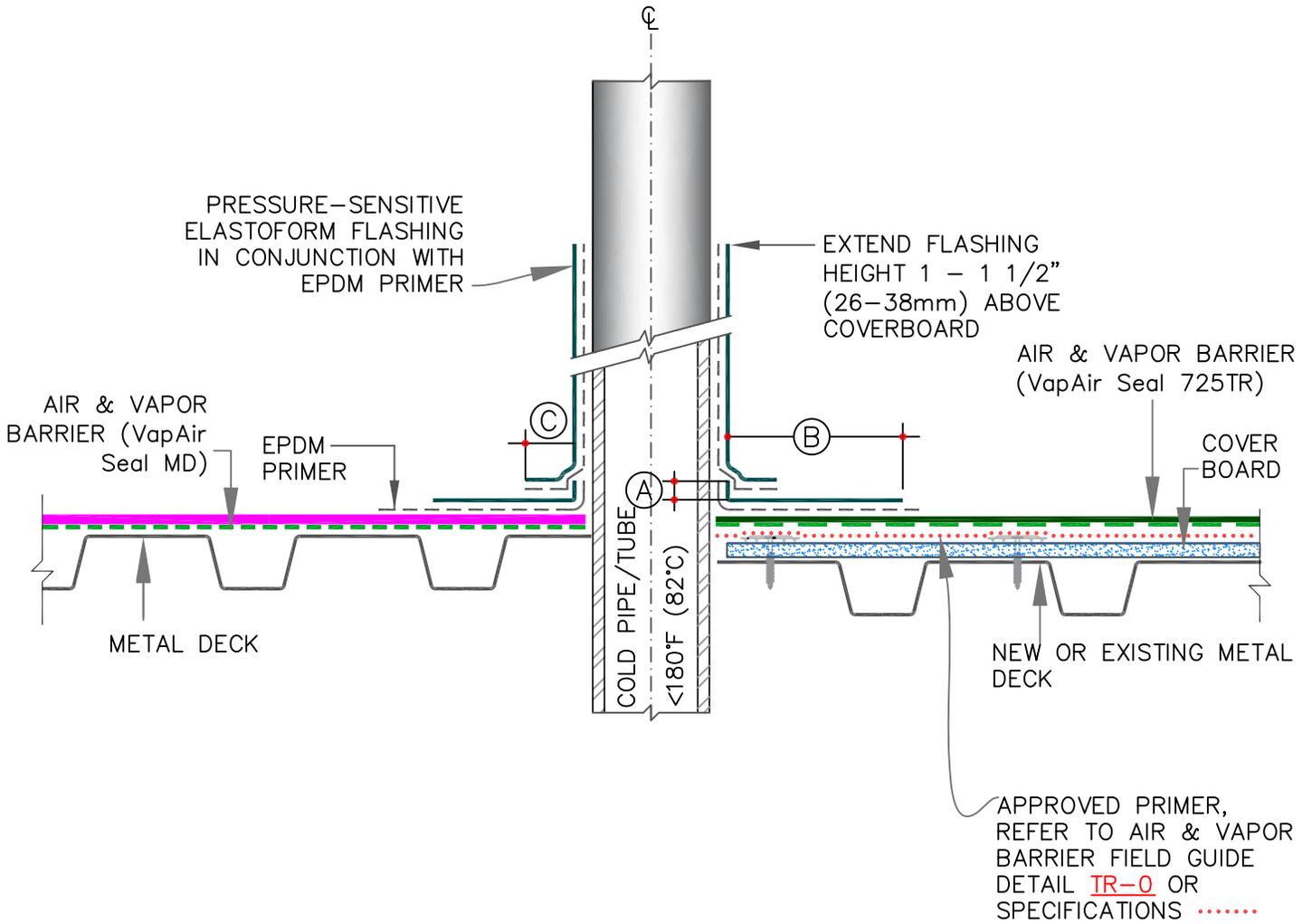
NEW MEMBRANE	INSULATION	ROOF DRAIN: NEW CONSTRUCTION		DETAIL NO.
EXISTING MEMBRANE	<span style="border: 1px solid red; padding: 2px;">0</span> SEE NOTE(S)			V-6.2
See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information				



NOTES:

1. HOT AIR WELD, MIN. 1-1/2" (38mm).
2. FOR TPO USE CUT EDGE SEALANT. EDGE MAY REMAIN EXPOSED WITH PVC.

<p>— NEW MEMBRANE</p> <p>- - - EXISTING MEMBRANE</p>	<p> INSULATION</p> <p><span style="border: 1px solid red; padding: 2px;">0</span> SEE NOTE(S)</p>	<p>V<sup>2</sup>T VENT WITH PRE-APPLIED SKIRT FLASHING</p> <p>See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> &amp; Specs for additional information</p>	<p></p> <p>DETAIL NO. V-8.0</p>
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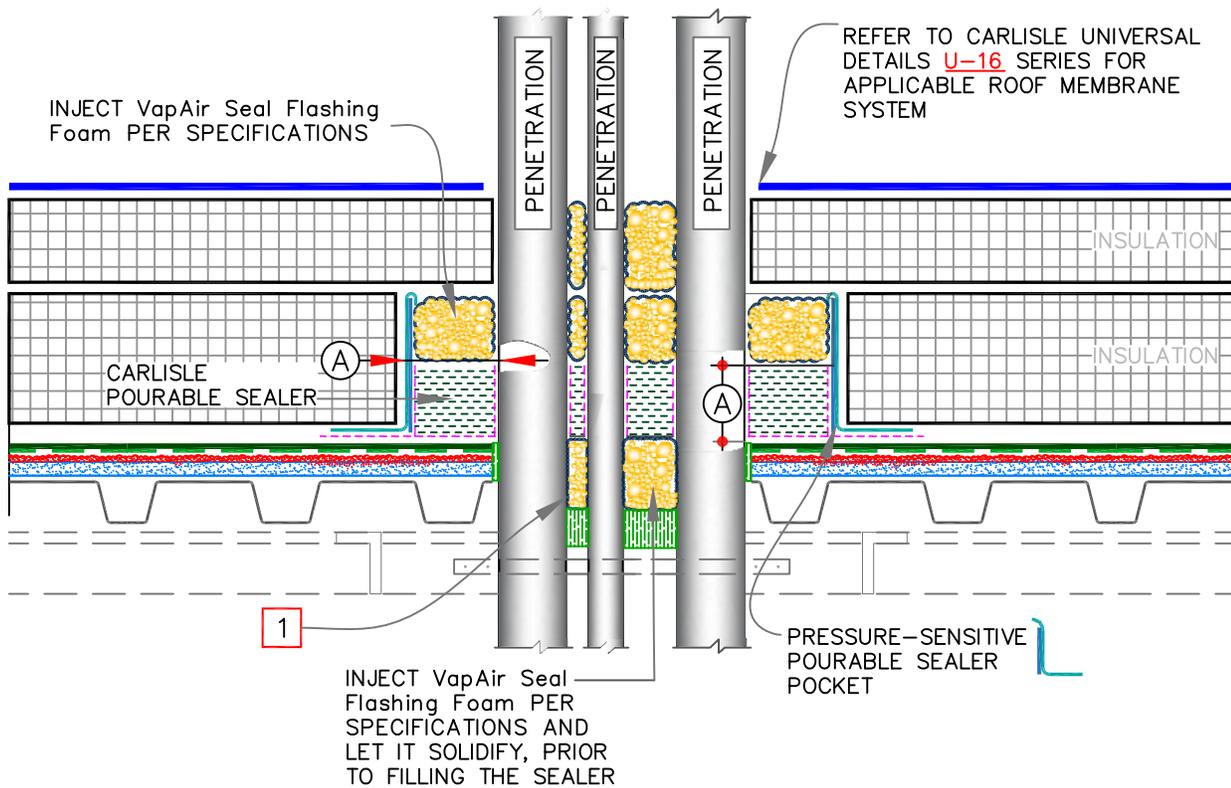


NOTE:

- FOR ADDITIONAL INFORMATION, REFER TO CARLISLE THERMOSET DETAIL [U-8B](#).

DIMENSIONS	mm	
(A)	1/2"	13 MIN.
(B)	5.5"	140 MIN.
(C)	1"	25 MIN.

NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	PIPE/STRUCTURAL STEEL TUBE THROUGH METAL DECK See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-8.1
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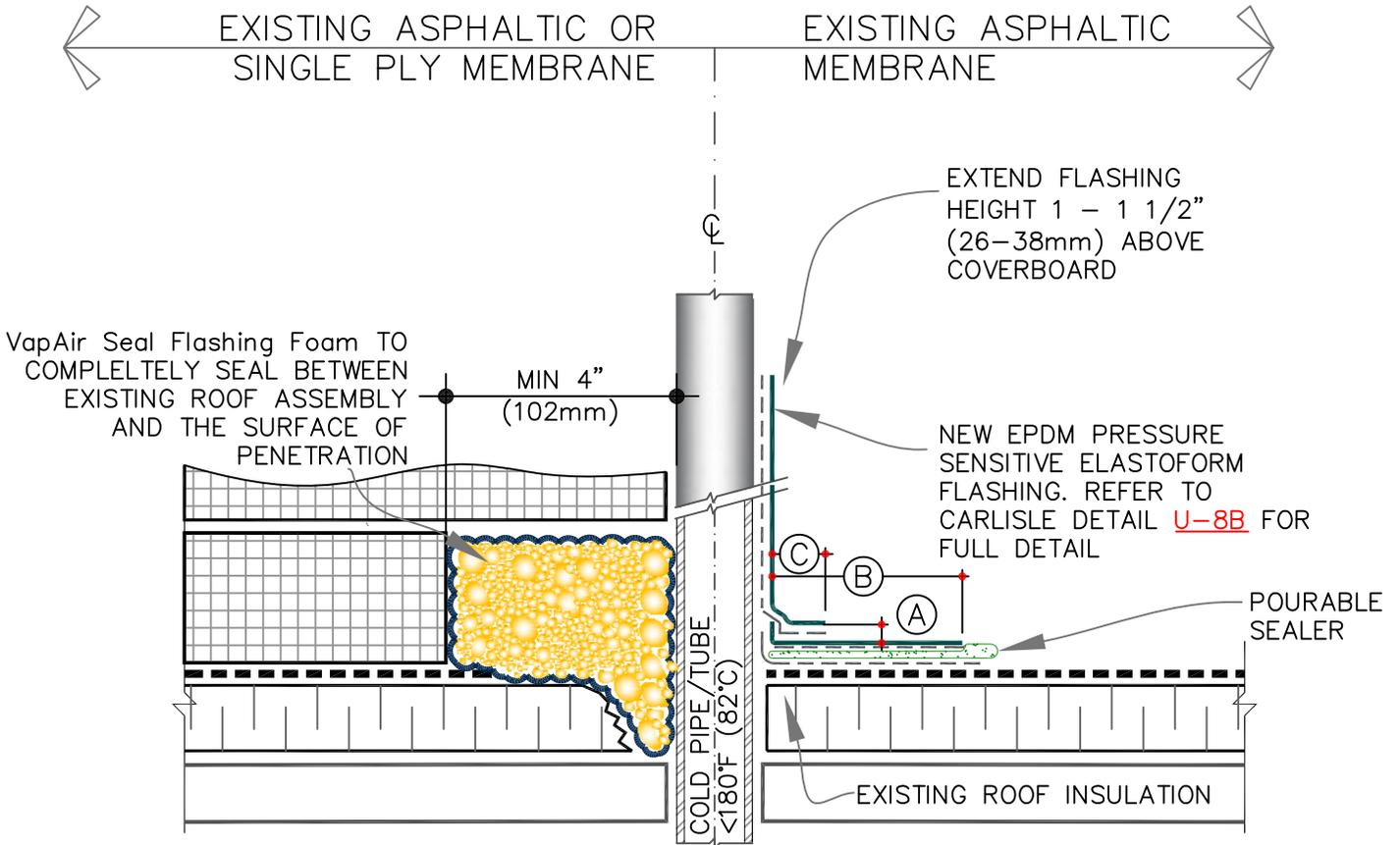


DIMENSIONS		mm	
Ⓐ	1/2"	13	TO
	1"	25	

NOTES:

1. THE MAXIMUM ALLOWABLE SURFACE TEMPERATURE OF THE PENETRATION SHALL NOT EXCEED 180° F (82° C).
2. PENETRATIONS, AIR & VAPOR BARRIER, FLASHING AND METAL (INSIDE POCKET) MUST BE PRIMED WITH EPDM PRIMER PRIOR TO APPLYING POURABLE SEALER. DO NOT PRIME THE BLUE PLASTIC SUPPORT STRIP.
3. POURABLE SEALER MUST CONTACT PRIMED PRESSURE-SENSITIVE ELASTOFORM FLASHING AND AIR & VAPOR BARRIER.
4. PIPE CLUSTERS MUST HAVE MINIMUM 1" (25mm) CLEARANCE BETWEEN PENETRATIONS.

NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	MULTIPLE PENETRATIONS THROUGH STEEL DECK – NEW CONSTRUCTION See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-8.2
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DIMENSIONS		mm	
(A)	1/2"	13	MIN.
(B)	5.5"	140	MIN.
(C)	1"	25	MIN.

	NEW MEMBRANE		INSULATION
	EXISTING MEMBRANE		SEE NOTE(S)

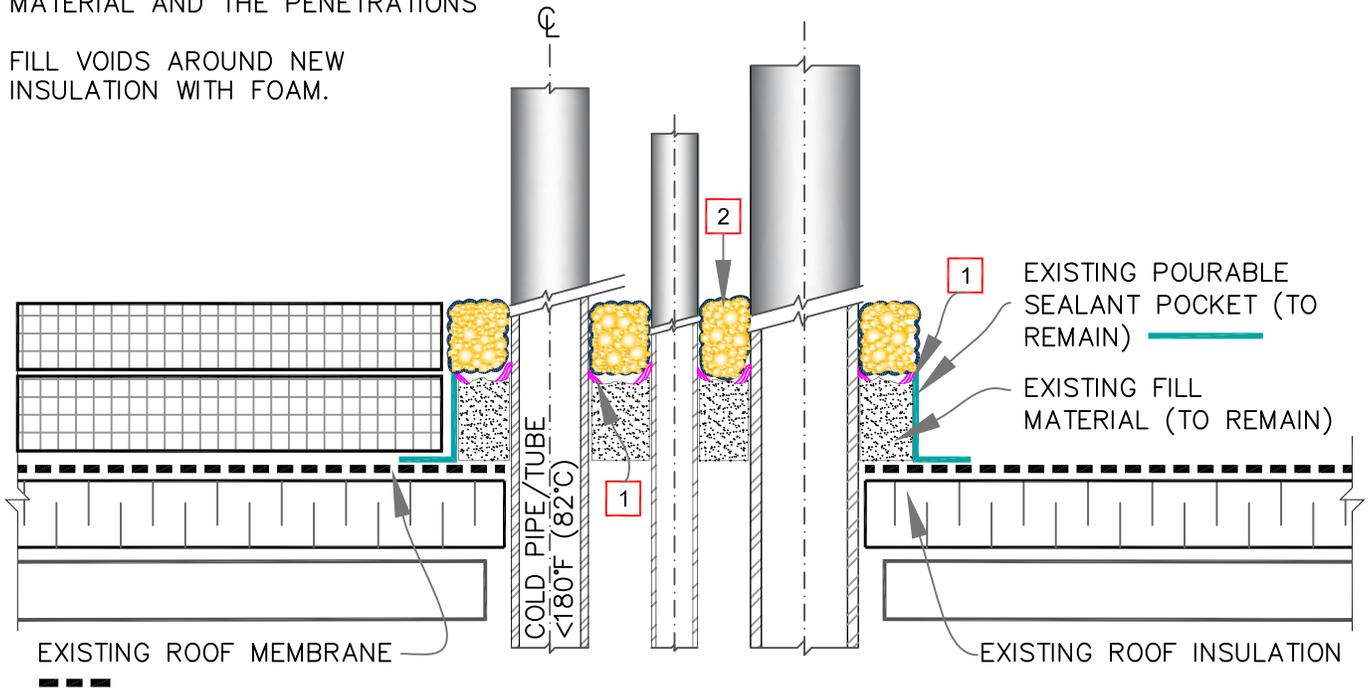
SINGLE PENETRATION THROUGH EXISTING ROOF ASSEMBLY

See sheets [V-0.1](#) to [V-0.7](#) & Specs for additional information

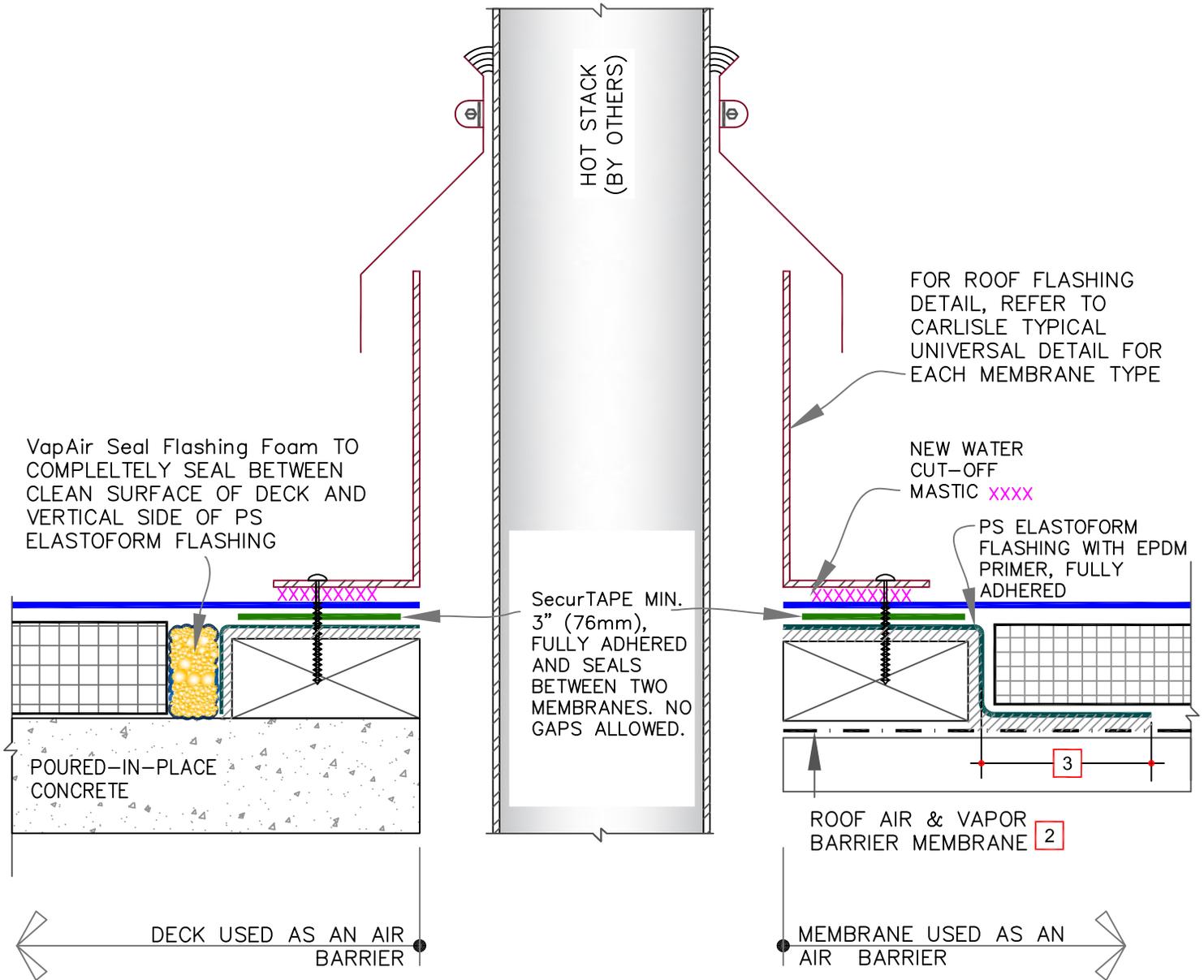
	DETAIL NO.
	V-8.3

NOTES:

1. APPLY NEW SEALANT AT ALL CRACKED AND BREACHED AREAS OF POURABLE SEALERS. ENSURE A PROPER BOND BETWEEN EXISTING MATERIAL AND THE PENETRATIONS
2. FILL VOIDS AROUND NEW INSULATION WITH FOAM.



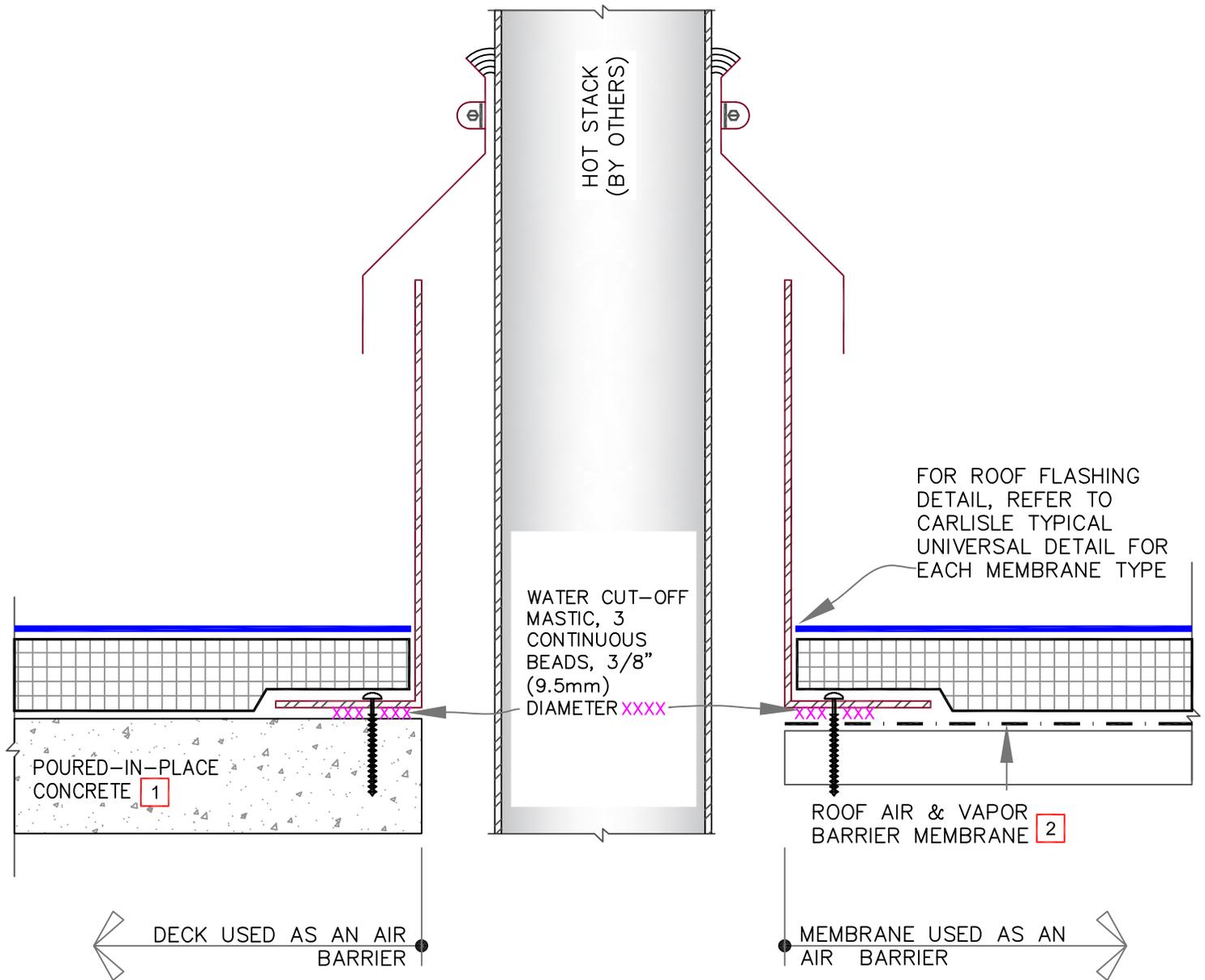
<p> NEW MEMBRANE</p> <p> EXISTING MEMBRANE</p>	<p> INSULATION</p> <p><span style="border: 1px solid red; padding: 2px;">0</span> SEE NOTE(S)</p>	<p>CLUSTER OF PENETRATIONS THROUGH EXISTING ROOF ASSEMBLY</p> <p>See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> &amp; Specs for additional information</p>		<p>DETAIL NO.</p> <p style="font-size: 24px;">V-8.4</p>
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NOTES:

1. REFER TO SPECS FOR SPECIAL CONDITIONS TO SEAL THE CONCRETE DECK FOR CRACKS, BREACHES OPEN JOINTS, ETC.
2. ON STEEL DECKS DIRECTLY ADHERE VapAir Seal MD. USE VapAir Seal 725TR ON CONCRETE & WOOD DECKS OR DECKS WITH APPROVED COVER BOARDS.
3. OVERLAP MIN. 6" (152mm) AND FULLY ADHERE TO CREATE AN AIR SEAL.

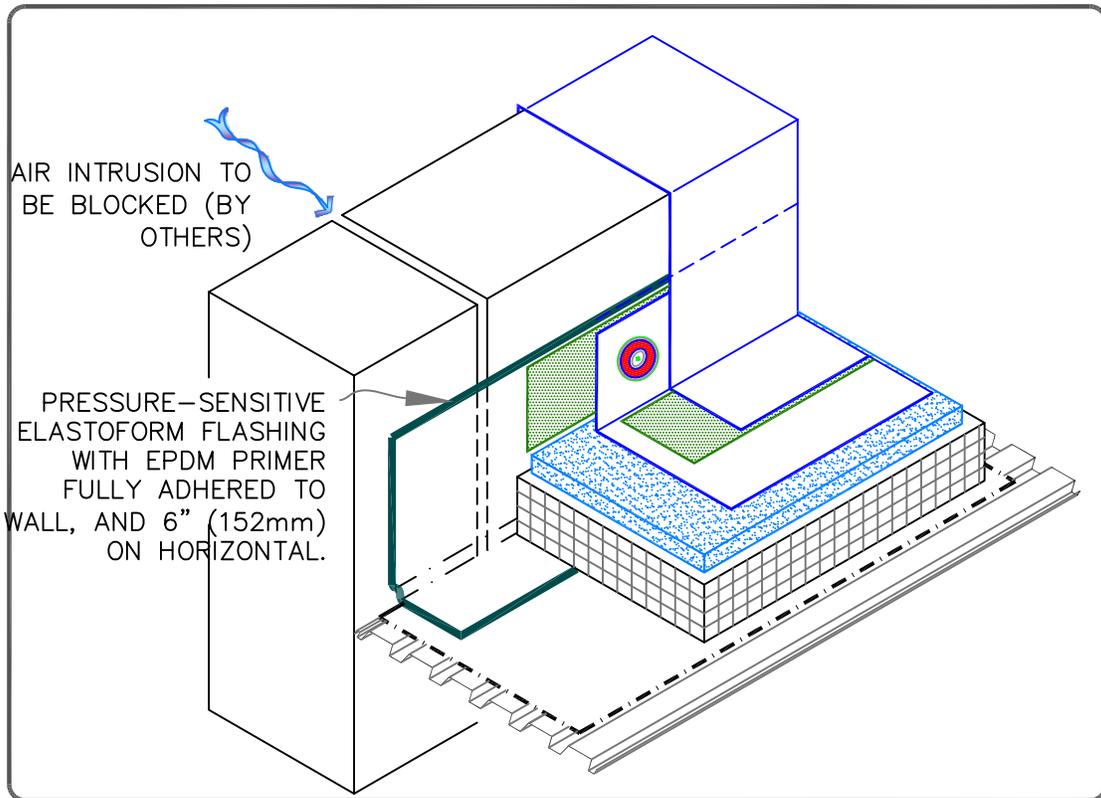
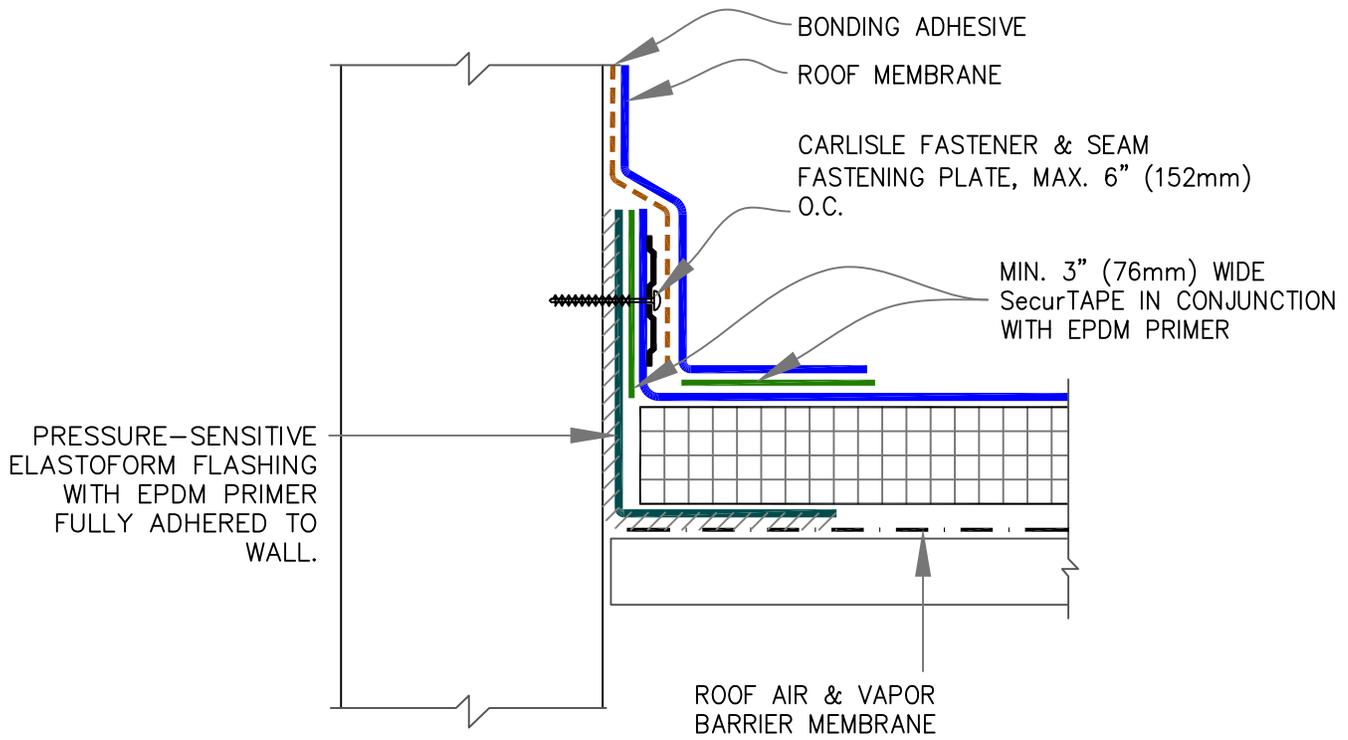
NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	HOT STACK AIR FLASHING – OPTION A See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-8.5A
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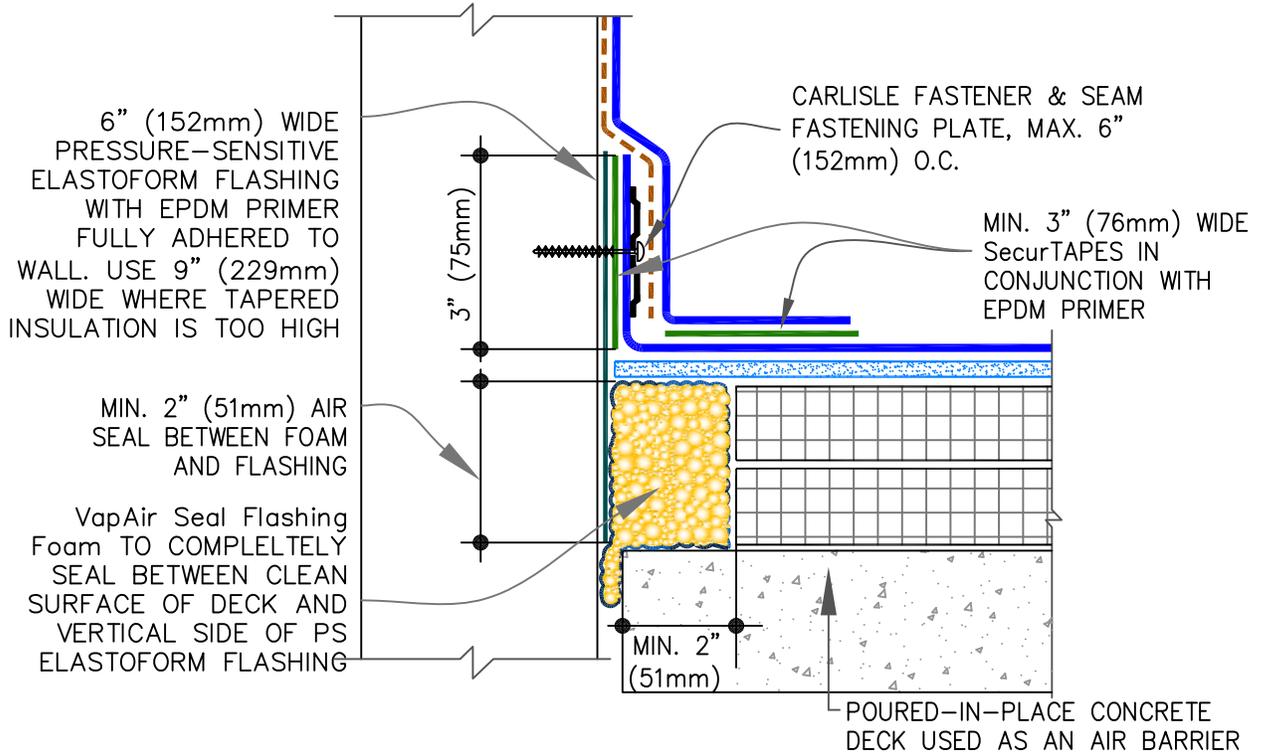
NOTES:

1. REFER TO SPECS FOR SPECIAL CONDITIONS TO SEAL THE CONCRETE DECK FOR CRACKS, BREACHES OPEN JOINTS, ETC.
2. ON STEEL DECKS DIRECTLY ADHERE VapAir Seal MD. USE VapAir Seal 725TR ON CONCRETE & WOOD DECKS OR DECKS WITH APPROVED COVER BOARDS.

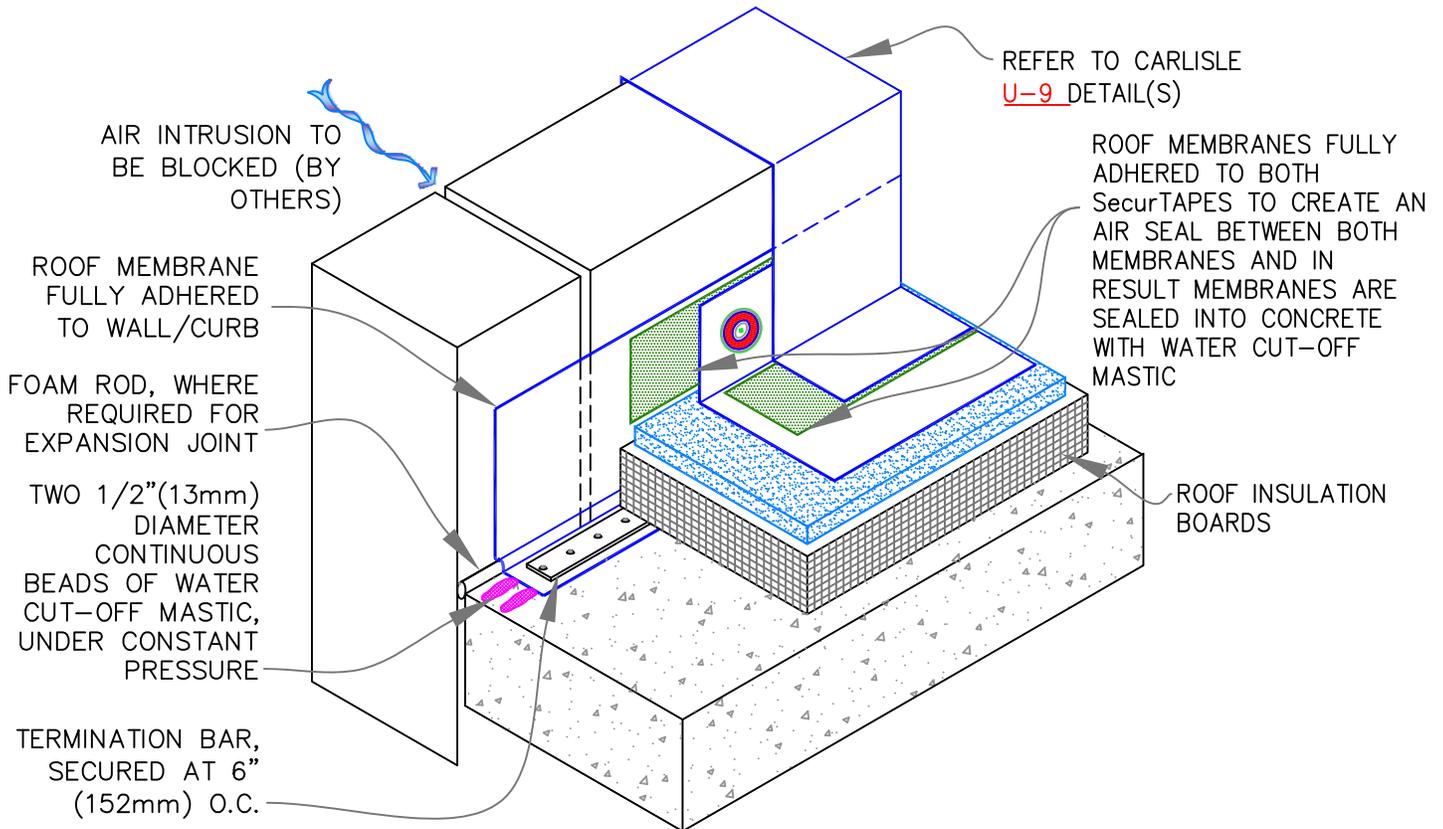
NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	HOT STACK AIR FLASHING – OPTION B See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-8.5B
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	NEW MEMBRANE		INSULATION	PARAPET WITH MEMBRANE AIR BARRIER		DETAIL NO.
	EXISTING MEMBRANE		SEE NOTE(S)			V-12.1
				See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		

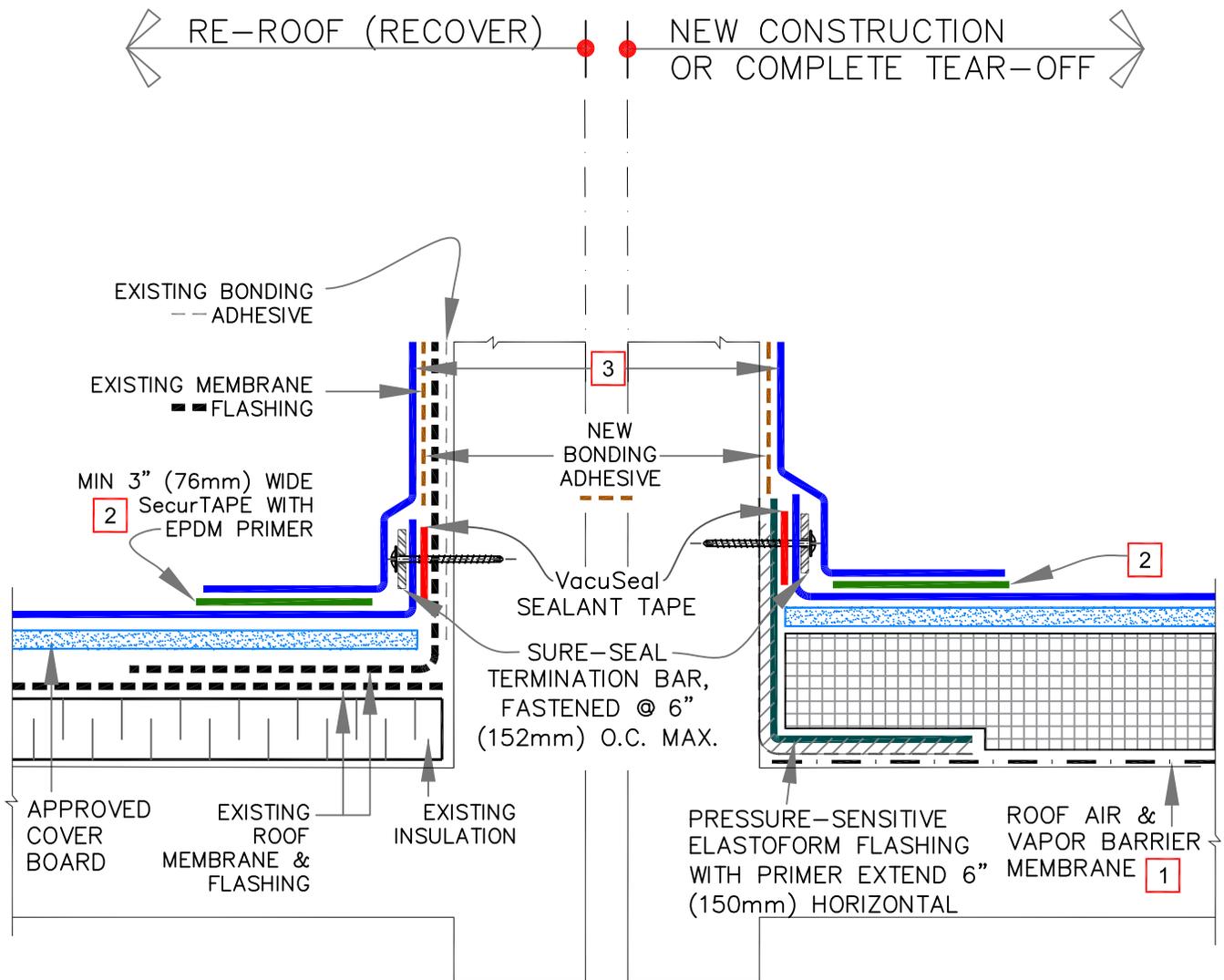


**A** OPTION: AIR SEALING WITH FOAM



**B** OPTION: AIR SEALING WITH MEMBRANE FLASHING

NEW MEMBRANE	INSULATION	PARAPET / CURB: CONCRETE/LIGHTWEIGHT CONCRETE USED AS AN AIR BARRIER		DETAIL NO.
EXISTING MEMBRANE	SEE NOTE(S)			V-12.2
See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information				



NOTES:

- ON STEEL DECKS DIRECTLY ADHERE VapAir Seal MD. USE VapAir Seal 725TR ON CONCRETE & WOOD DECKS OR DECKS WITH APPROVED COVER BOARDS.
- FOR ADDITIONAL INFORMATION, REFER TO CARLISLE'S THERMOSET DETAIL [U-5A](#) FOR EPDM AND THERMOPLASTIC DETAIL [U-5A](#) FOR TPO/PVC.
- SELF-ADHERING EPDM CURB WRAP MAY BE SUBSTITUTED AS FLASHING ON EPDM ROOFS.

NEW MEMBRANE EXISTING MEMBRANE	INSULATION SEE NOTE(S)	PARAPET OR WALL – NEW CONSTRUCTION AND RE-ROOF (RECOVER)  See sheets <a href="#">V-0.1</a> to <a href="#">V-0.7</a> & Specs for additional information		DETAIL NO. V-12.3
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