

CARLISLE'S SPEC SUPPLEMENT

G-14



July 2024

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 VacuSeal Roof Vents. The VacuSeal Vent 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 VacuSeal Vents and facilitating air movement beneath the membrane. The insulation is loose-laid in a single or multiple layers and overlaid with a 1/2 inch gypsum cover board or Ecostorm VSH 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 VacuSeal Vents requires a VacuSeal Project Layout Drawing developed by Carlisle identifying locations of VacuSeal system components, including VacuSeal Vents, air distribution strip, and sealant tape. Prior to installation, approved project layout drawing must be obtained.



2. This roofing assembly must be installed by an authorized applicator who has been trained for the installation of VacuSeal system components in compliance with the approved project layout 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. A completed VacuSeal Job Evaluation Request Form prior to installation. This is required to receive a project layout from Carlisle for the VacuSeal system components. For questions – email VacuSeal@Carlisleccm.com.
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. **VacuSeal 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 VacuSeal 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. 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. Direct Overlays (no newly installed insulation or coverboard) may be acceptable depending on the existing waterproofing layer and newly installed membrane. Reference Substrate Criteria for VacuSeal Reroof (Recover, No Tear-Off) chart for details.

SUBSTRATE CRITERIA FOR VACUSEAL REROOF (RECOVER, NO TEAR-OFF)⁽¹⁾

Acceptable Roof Deck / Substrate (1)	TPO Membrane	PVC / KEE HP PVC Membrane	EPDM Membrane
Existing Smooth Surface BUR (7) or Mineral Surface Cap Sheet	Direct Application (8) (9)	½" min. approved coverboard	Direct Application (2) (9)
Gravel Surfaced BUR (3) or Coal Tar Pitch (3) (4)	½" min. approved coverboard	½" min. approved coverboard	½" min. approved coverboard
Modified Bitumen (9)	Direct Application (6) (8)	½" min. approved coverboard	Direct Application (6) (8)
Existing Single-Ply (5)(9)	Direct Application	Direct Application	Direct Application
Sprayed-in-place Urethane	½" min. approved coverboard	½" min. approved coverboard	½" min. approved coverboard

Notes:

- (1) Existing roof system must be securely attached.
- (2) Sure-Seal (black) may be applied directly to the substrate provided asphalt on existing smooth surfaced built-up roof has a softening point above 185°F (85°C). Sure-White (White-on-black) Roofing Systems are not recommended for direct application over smooth BUR or granule surface BUR or in conjunction with HP mat. Make sure substrate is clean and free of roofing cement and fresh asphalt to avoid sheet contamination and staining of white color membrane.
- (3) Loose gravel must be removed to avoid entrapment of moisture.
- (4) Existing coal tar could drip back into the building, especially when new insulation does not provide sufficient thermal value to prevent the surface of the coal tar from softening.
- (5) Not Approved over existing ballasted single-ply systems (even if ballast removed). An approved underlayment is required over existing roofing systems of any type.
- (6) Direct application permitted over smooth surfaced modified bitumen. Membrane shall be positioned with length of sheets parallel to modified bitumen field seams. At end laps or other locations where splices intersect modified bitumen field seams, 6" wide Sure-Weld or Sure-Flex Flashing must be heat welded over intersections. For Sure-Seal, 6" wide Elastoform or Pressure Sensitive Flashing must be applied over intersections.
- (7) Existing Type III or IV smooth asphalt BUR only.
- (8) Possible staining/discoloration of light-colored membrane may result when installing this system directly over existing smooth surfaced BUR or modified bitumen. If aesthetics is critical, an approved insulation should be specified beneath the membrane.
- (9) Maximum warranty available 20 YR with 55 MPH peak gust wind speed coverage. Carlisle may be contacted for other warranty options.

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

- a. All deck types (Steel, Concrete, Wood, Cementitious Wood Fiber, or Gypsum) require a continuous air seal which can be achieved utilizing an air barrier at the deck level.

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), 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 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. Layout the vents and air distribution strips per project layout drawing provided by Carlisle. 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 VacuSeal Vents on previous marks and cut out membrane as needed for installation of vent, follow details for specific requirements for each vent.
6. Flash VacuSeal Vent per requirements outlined in detail.
7. Repeat installation for additional vents.

G. Field Quality Control

1. 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
Carlisle SecurEdge 2000	V-1D
Gravel Stop Edge.....	V-1E
Roof-to-Wall Flashing.....	V-1F
Curb Base Flashing – New Construction and Re-Roof (Recover).....	V-5.1
Curb Base Flashing – New Construction and Re-Roof (Recover).....	V-5.2
Roof Drain: Re-Roof (Recover).....	V-6.1
Roof Drain: New Construction.....	V-6.2
VacuSeal Vent with Pre-Applied Skirt Flashing.....	V-8.0
Pipe/Structural Steel Tube Through Metal Deck.....	V-8.1

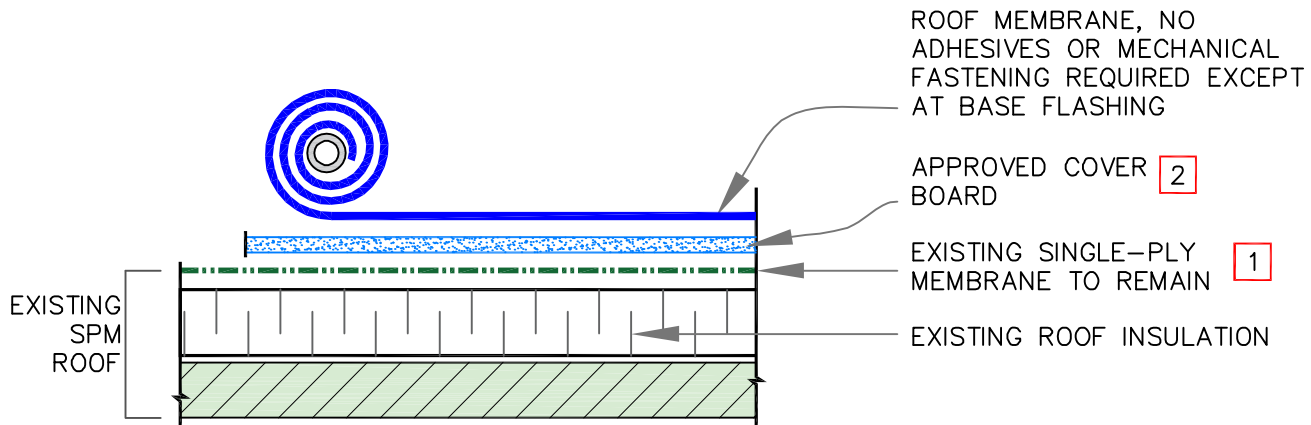
Multiple Penetrations Through Steel Deck – New Construction	V-8.2
Single Penetration Through Existing Roof Assembly	V-8.3
Cluster of Penetrations Through Existing Roof Assembly	V-8.4
Hot Stack Air Flashing – Option A.....	V-8.5A
Hot Stack Air Flashing – Option B.....	V-8.5B
Parapet With Membrane Air 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
Parapet or Wall – New Construction and Re-Roof (Recover)	V-12A

End of Section

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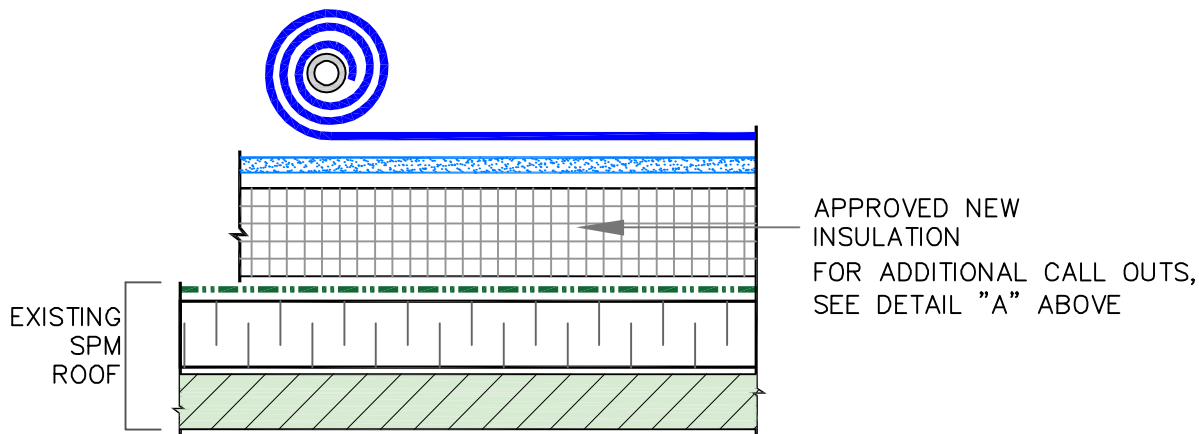
Review the appropriate Carlisle warranty for specific warranty coverage, terms, conditions and limitations.



A EXISTING SPM ROOF WITHOUT NEW INSULATION
SPM (SINGLE-PLY MEMBRANE)

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. REFER TO SUBSTRATE CRITERIA FOR VACUSEAL REROOF (RECOVER, NO TEAR-OFF) CHART FOR DETAILS.



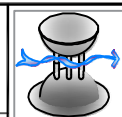
B EXISTING SPM ROOF ABOVE WITH NEW INSULATION
SPM (SINGLE-PLY MEMBRANE)

MATERIALS VARY



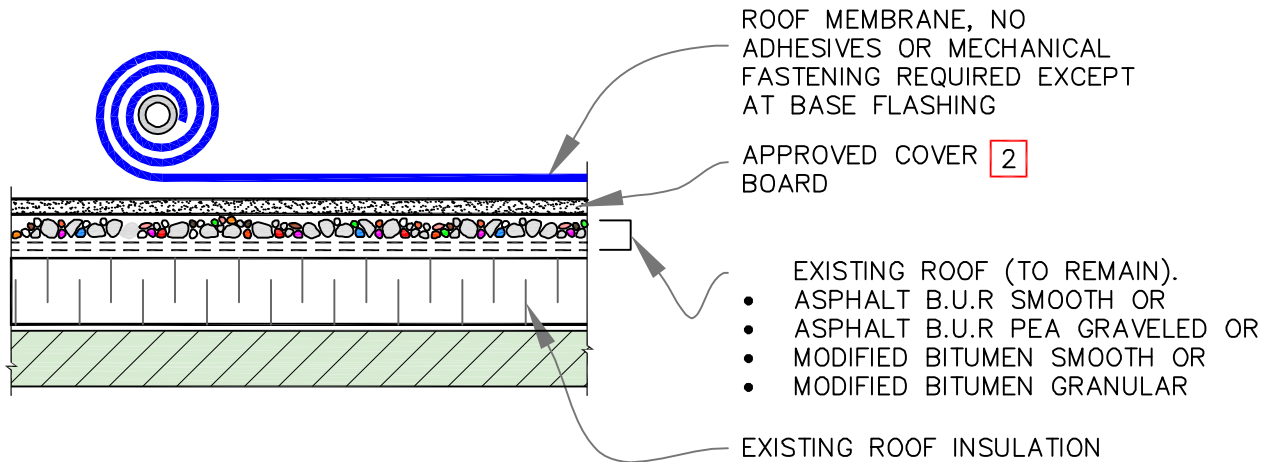
ROOF ASSEMBLY OVER EXISTING
SINGLE-PLY ROOF

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-0.1

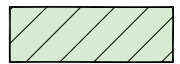


A EXISTING BUR ROOF WITHOUT NEW INSULATION

BUR (BUILT-UP ROOF)

NOTES:

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. DIRECT OVERLAYS (NO NEWLY INSTALLED INSULATION OR COVERBOARD) MAY BE ACCEPTABLE DEPENDING ON THE EXISTING WATERPROOFING LAYER AND NEWLY INSTALLED MEMBRANE. REFERENCE SUBSTRATE CRITERIA FOR VACUSEAL REROOF (RECOVER, NO TEAR-OFF) CHART FOR DETAILS.
3. FOR NEW ASSEMBLY OVER COAL TAR PITCHED ROOF, CONTACT CARLISLE SYNTEC.
4. LOOSE GRAVEL OR GRANULES MUST BE REMOVED AND THE SURFACE SHALL BE LEVELED.

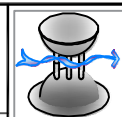


MATERIALS VARY



ROOF ASSEMBLY OVER EXISTING
ASPHALTIC ROOF

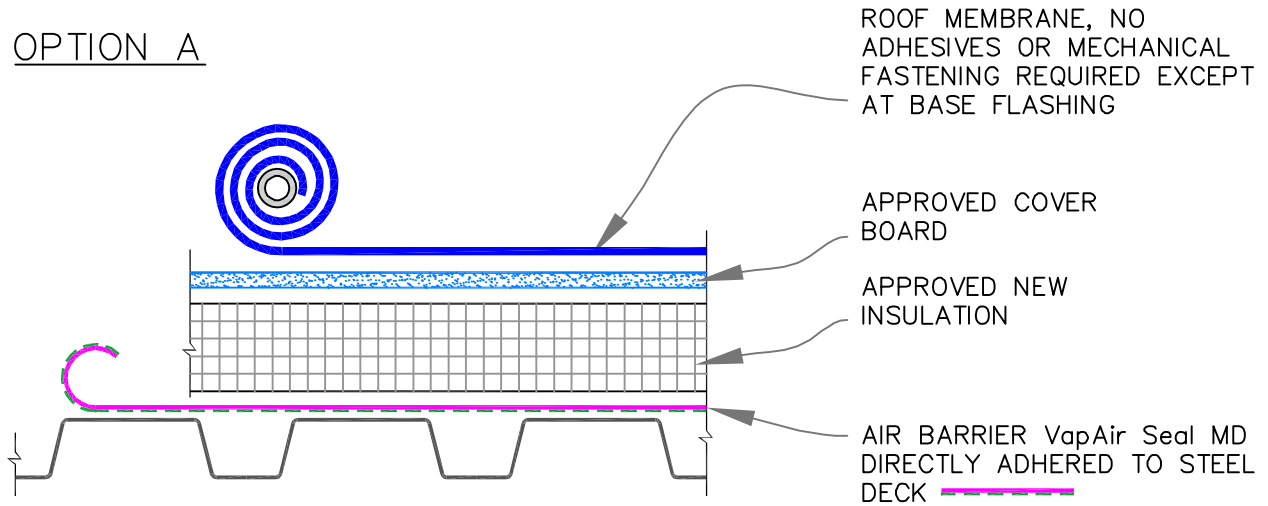
MAXIMUM WARRANTY: 20 YEARS



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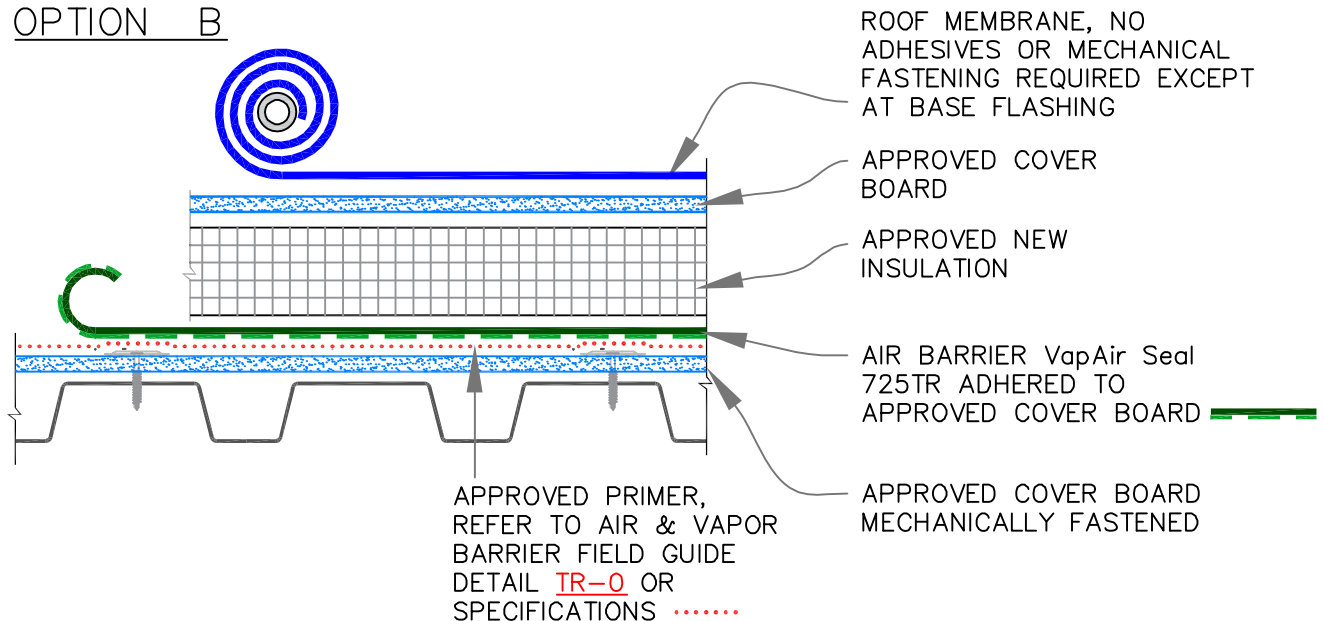
V-0.2

OPTION A



A NEW ROOF WITH AIR BARRIER ADHERED TO STEEL DECK

OPTION B



B NEW ROOF WITH AIR BARRIER ADHERED TO COVER BOARD

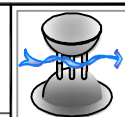


MATERIALS VARY



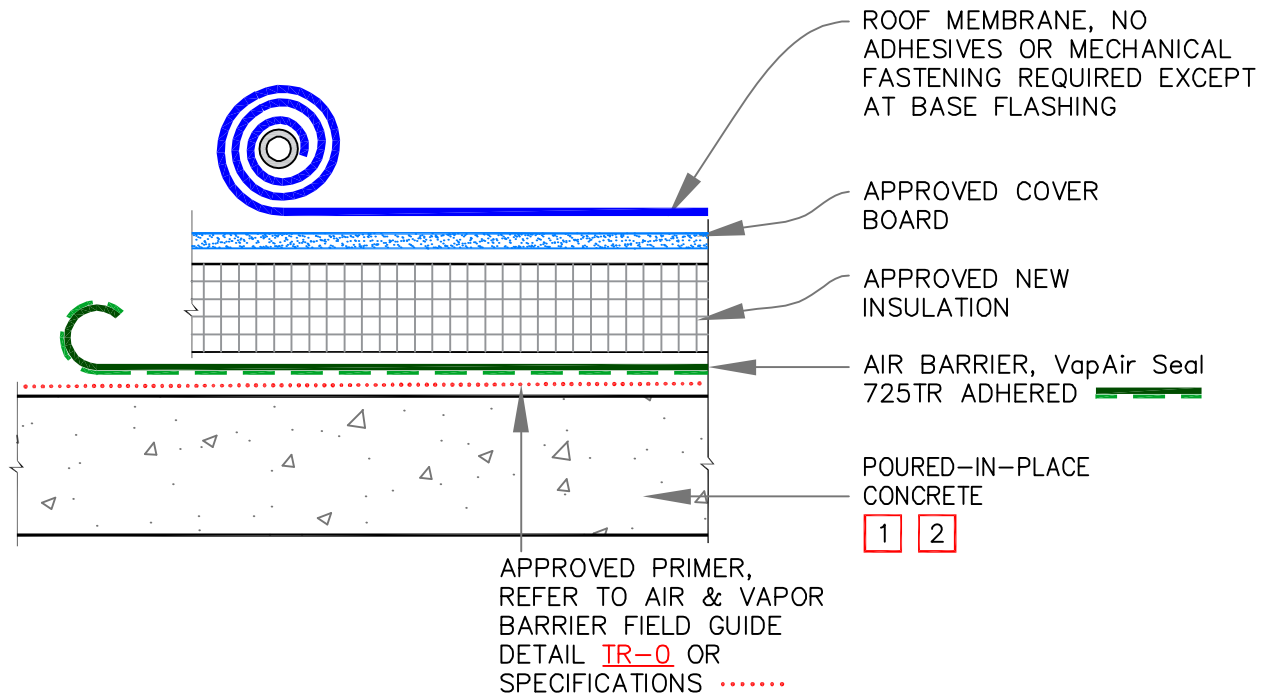
ROOF ASSEMBLY OVER STEEL DECK

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-0.3



NOTES:

1. THE SUBSTRATE MAY NOT REQUIRE AN ADDITIONAL LAYER OF AIR BARRIER. 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.

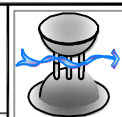


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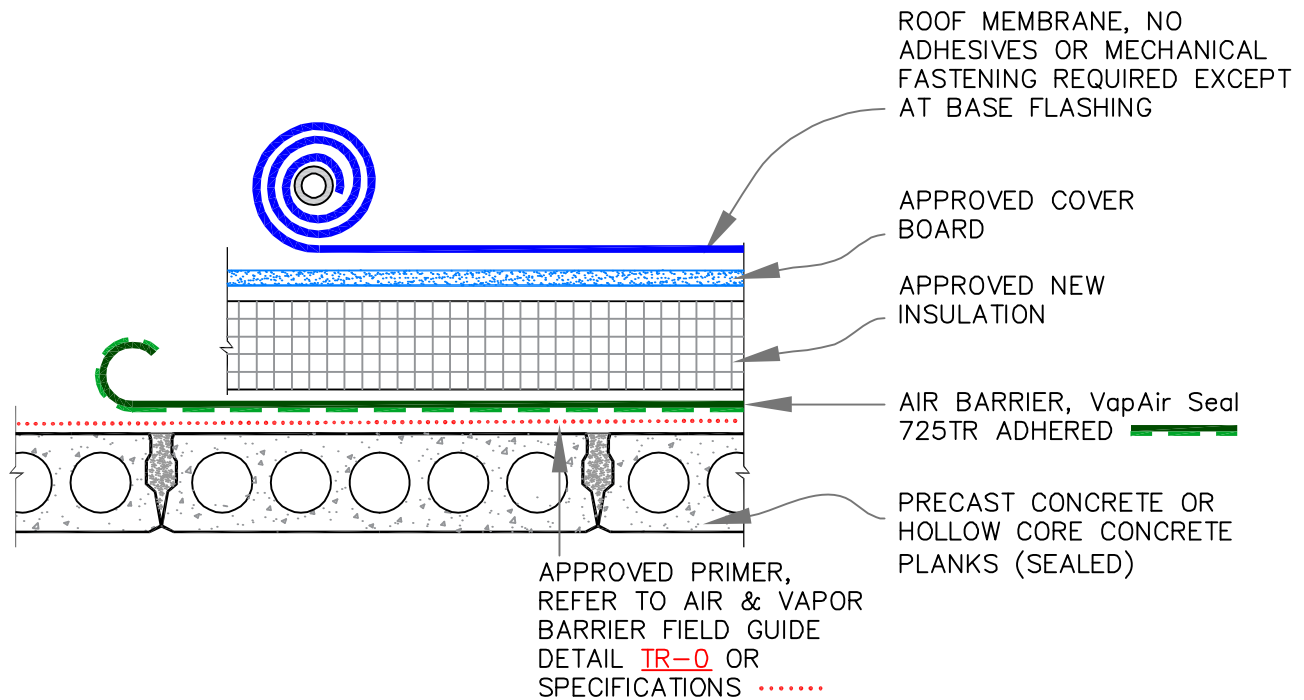
ROOF ASSEMBLY OVER
POURED-IN-PLACE CONCRETE DECK

MAXIMUM WARRANTY: 20 YEARS

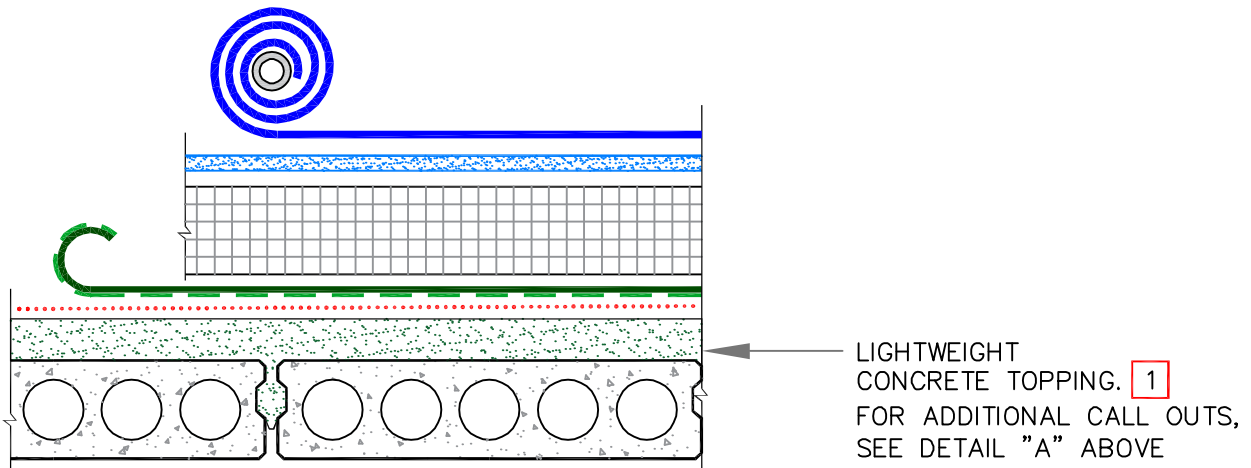


DETAIL NO.

V-0.4



A NEW ROOF OVER CONCRETE PLANKS (NO TOPPING)



B NEW ROOF OVER CONCRETE PLANKS, WITH LWC TOPPING

LWC (LIGHT-WEIGHT CONCRETE)

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.

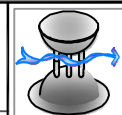


MATERIALS VARY



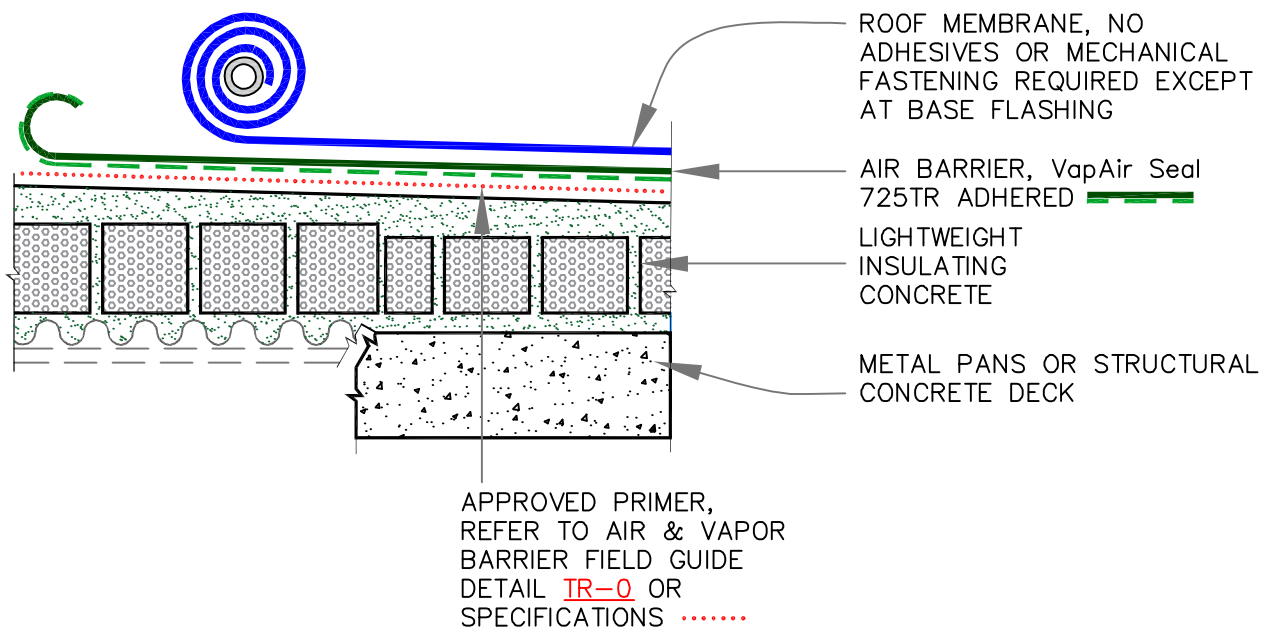
ROOF ASSEMBLY OVER CONCRETE PLANKS

MAXIMUM WARRANTY: 20 YEARS



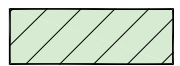
DETAIL NO.

V-0.5



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.

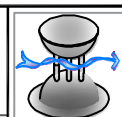


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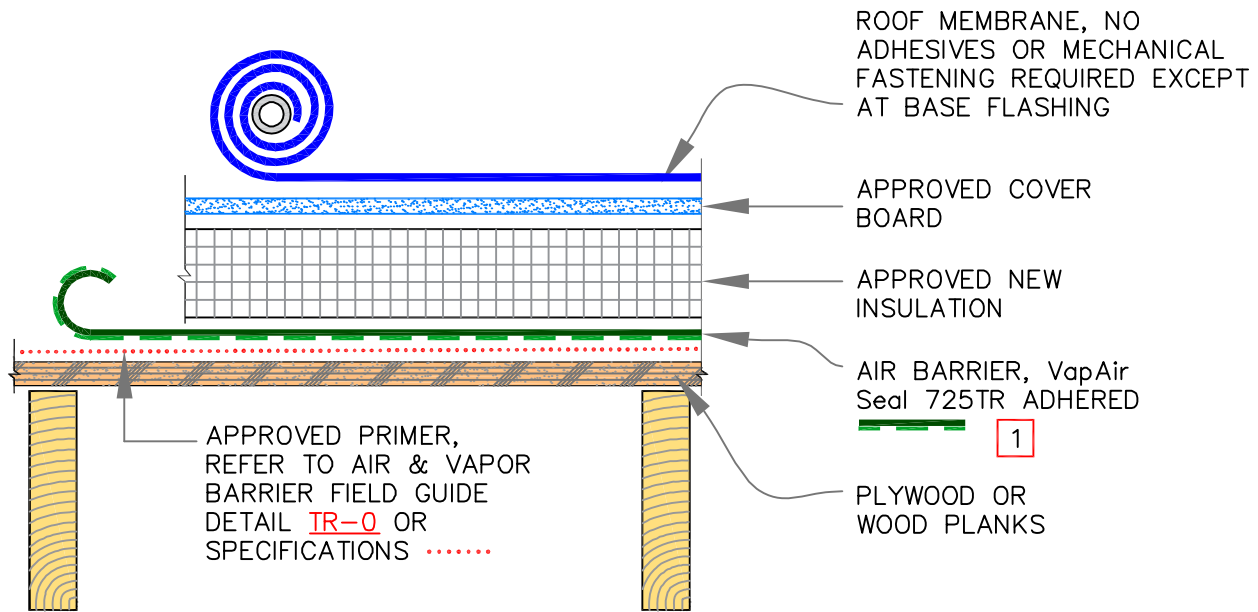
ROOF ASSEMBLY OVER LIGHTWEIGHT CONCRETE DECK

MAXIMUM WARRANTY: 20 YEARS



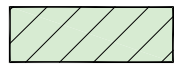
DETAIL NO.

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.

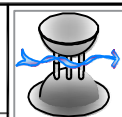


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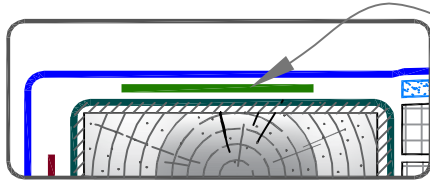
ROOF ASSEMBLY OVER WOOD DECK

MAXIMUM WARRANTY: 20 YEARS

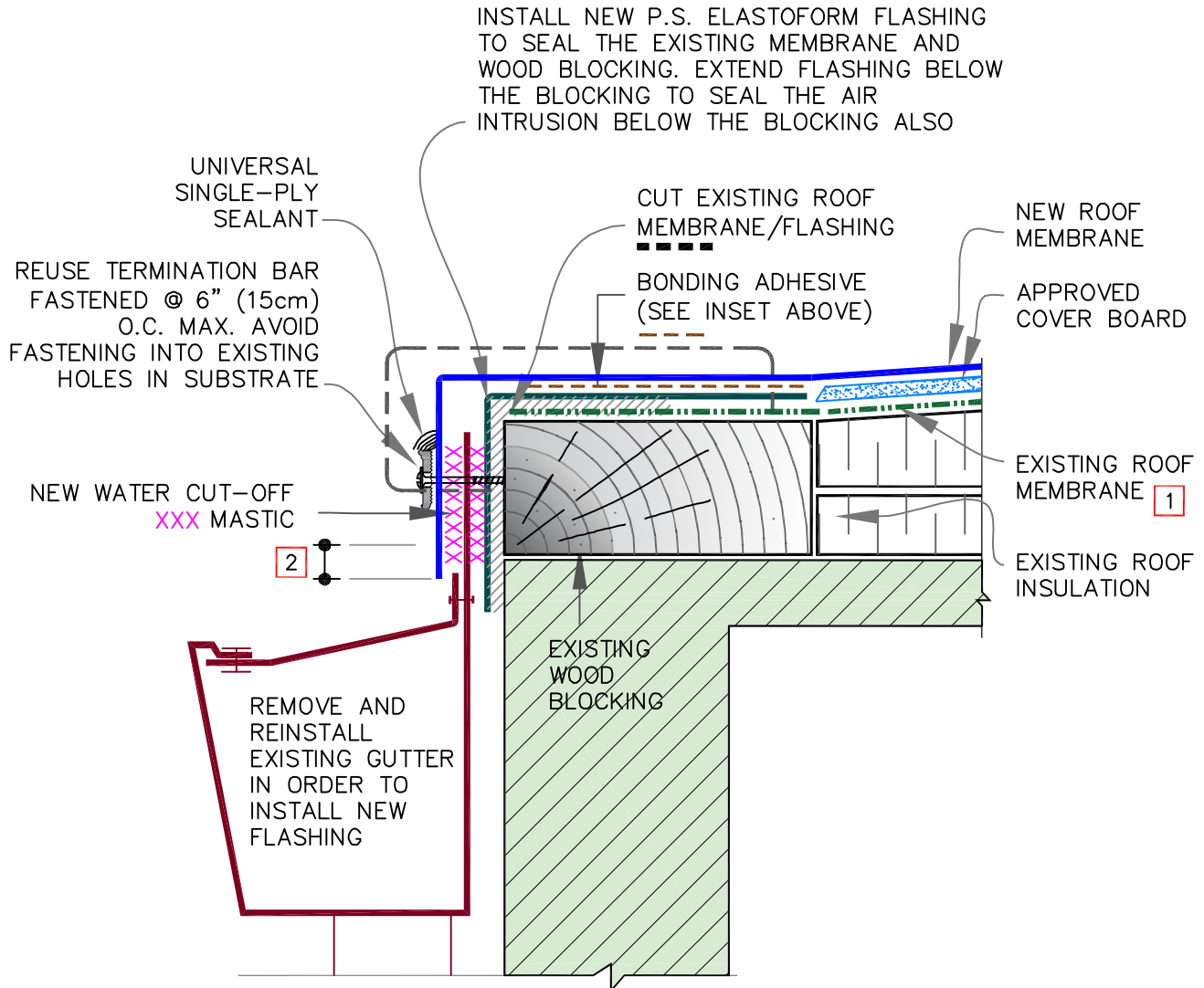


DETAIL NO.

V-0.7

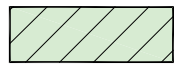


IN LIEU OF BONDING ADHESIVE,
3" (7.5cm) WIDE SecurTAPE
MAY BE USED WITH PRIMER TO
SEAL BOTH THE MEMBRANES



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" (1.5cm) MINIMUM BELOW THE METAL TERMINATION BAR.

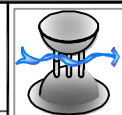


MATERIALS VARY



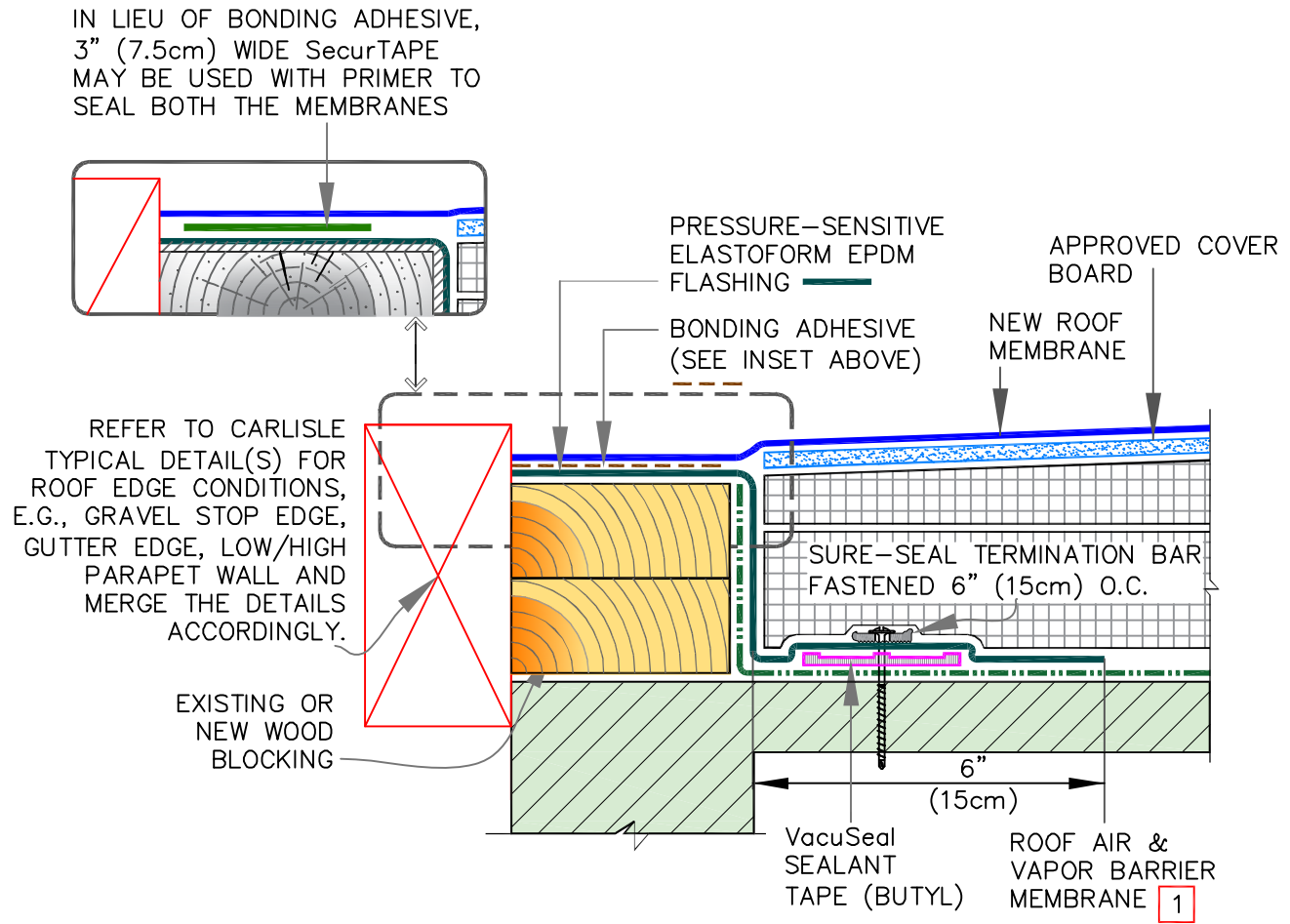
ROOF EDGE: ROOF RECOVER

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-1.1



NOTES:

1. USE VapAir Seal 725TR AIR AND VAPOR BARRIER ON CONCRETE DECKS.
2. IN CASE OF METAL DECK, COORDINATE WITH CARLISLE.

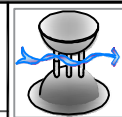


MATERIALS VARY



ROOF EDGE: TEAR-OFF & REROOFING

MAXIMUM WARRANTY: 20 YEARS

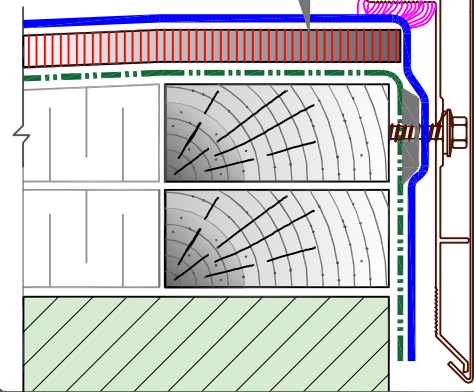


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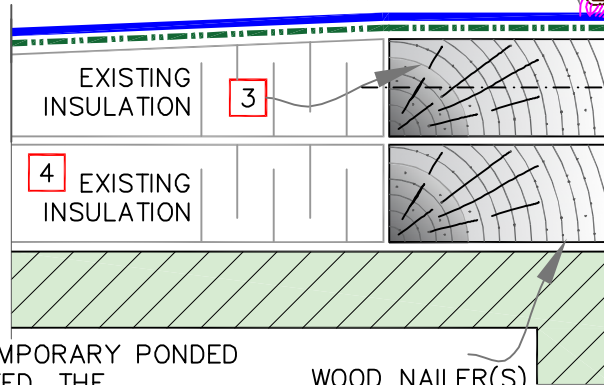
V-1.2

OPTION WITH COVER BOARD

1/2" (1.3cm) THICK COVER BOARD AS APPROVED



WATER CUT-OFF MASTIC, 10 LINEAR FEET (30.5m) PER TUBE, USING A 7/16" (1.2cm) BEAD



EXISTING INSULATION

3

EXISTING INSULATION

4

FASCIA COVER

VacuSeal SEALANT TAPE

OF WOOD BLOCKING

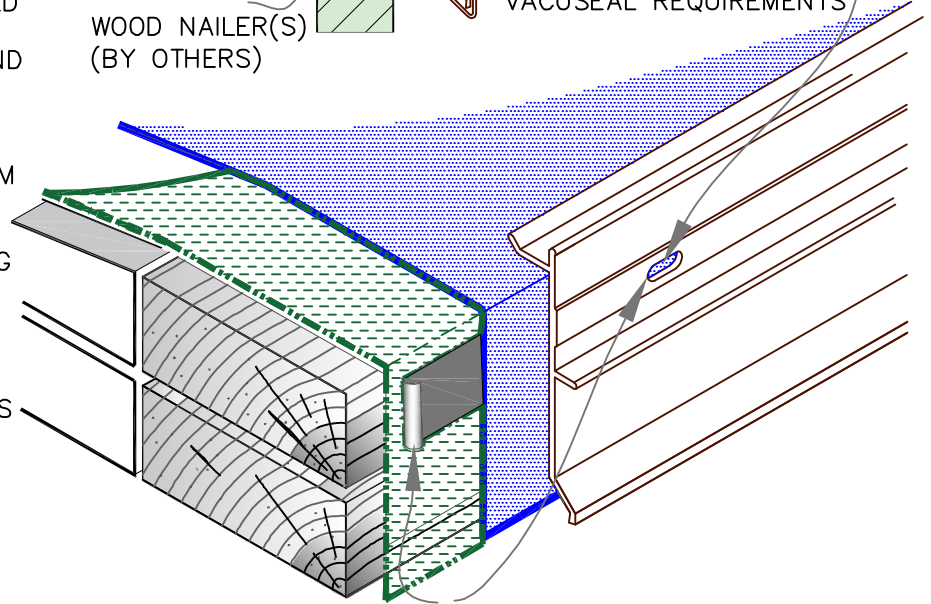
#10 x 2" STAINLESS STEEL FASTENERS W/M2600 STAINLESS WASHER, 6" (15.2cm) O.C. REQUIRED TO MEET VACUSEAL REQUIREMENTS

WOOD NAILER(S) (BY OTHERS)

NOTES:

1. IF INCIDENTAL/TEMPORARY PONDED WATER IS EXPECTED, THE SecurEdge MUST BE ELEVATED AND SCUPPERS PROVIDED FOR DRAINAGE.
2. ENSURE ROOF SLOPES AWAY FROM SecurEDGE.
3. ENSURE, EXISTING WOOD BLOCKING IS PROPERLY SECURED. FIELD VERIFY AND REINFORCE/REPLACE AS NEEDED.
4. FIELD VERIFY THE DRY CONDITIONS OF EXISTING INSULATION WITH DELMHURST MOISTURE METER FOR DRY CONDITIONS.

	NEW ROOF MEMBRANE (EPDM, TPO OR PVC)
	EXISTING ROOF MEMBRANE OR APPROVED AIR BARRIER



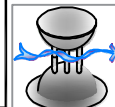
VacuSeal SEALANT TAPE IS CENTRALLY ALIGNED AT FASTENERS' PENETRATION POINTS TO ACHIEVE CONSTANT COMPRESSION

MATERIALS VARY



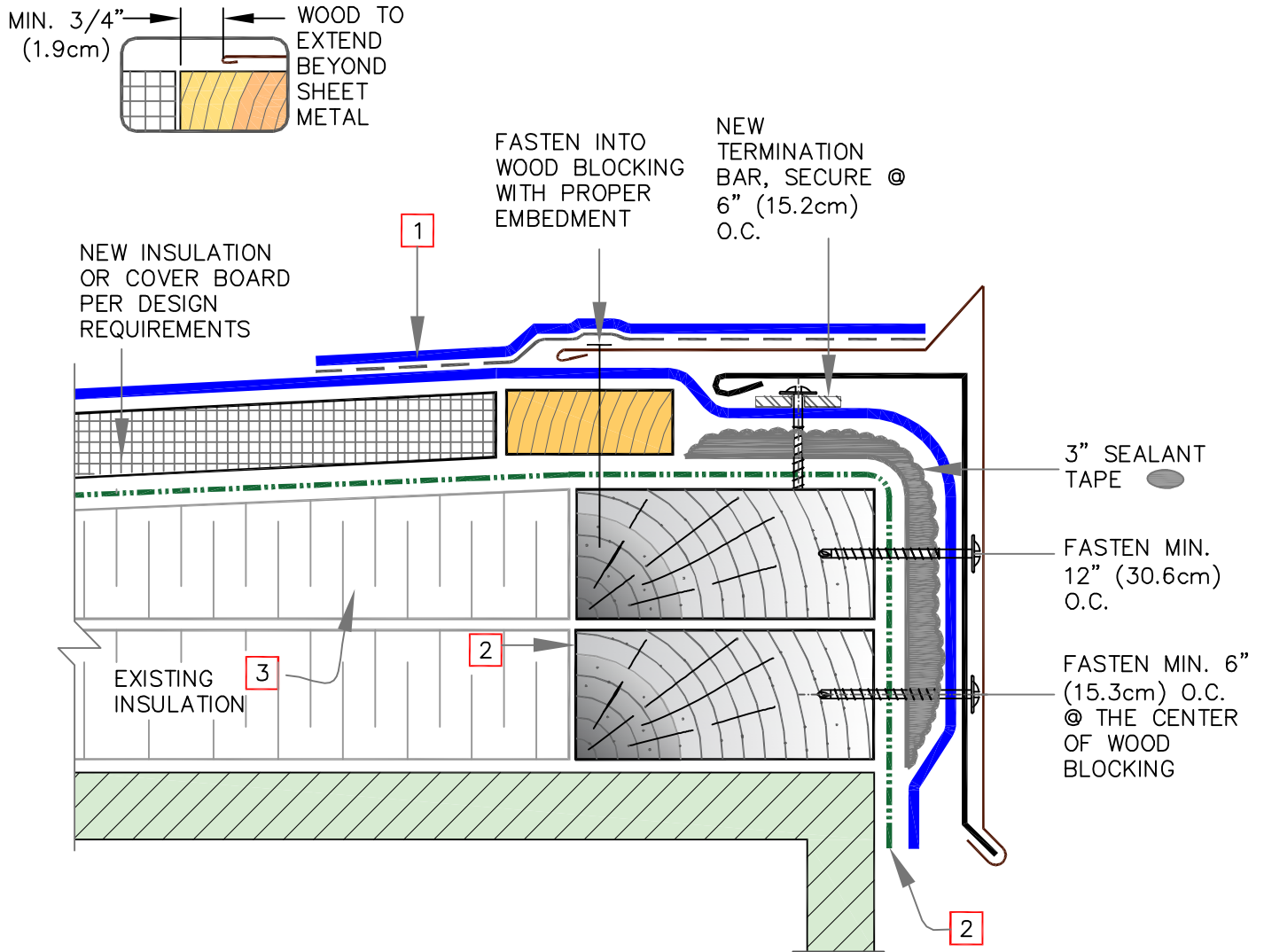
CARLISLE SecurEdge 2000

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-1D



NOTES:

1. ROOF FLASHINGS ARE SUBJECT TO THE TYPE OF ROOF MEMBRANE ASSEMBLY. REFER TO CARLISLE TYPICAL DETAILS FOR EACH MEMBRANE TYPE.
2. ROOF EDGES:
 - 2.1. ENSURE EXISTING WOOD BLOCKING IS PROPERLY SECURED. FIELD VERIFY AND REINFORCE OR REPLACE AS NEEDED.
 - 2.2. AFTER REMOVAL OF EXISTING EDGE METAL & IT'S NAILS, INSPECT FOR BREACHES IN THE MEMBRANE, IT'S SEAMS AND SEAL THEM ACCORDINGLY TO CREATE AN AIR BARRIER.
3. FIELD VERIFY THE DRY CONDITIONS OF EXISTING INSULATION WITH DELMHURST MOISTURE METER FOR DRY CONDITIONS.

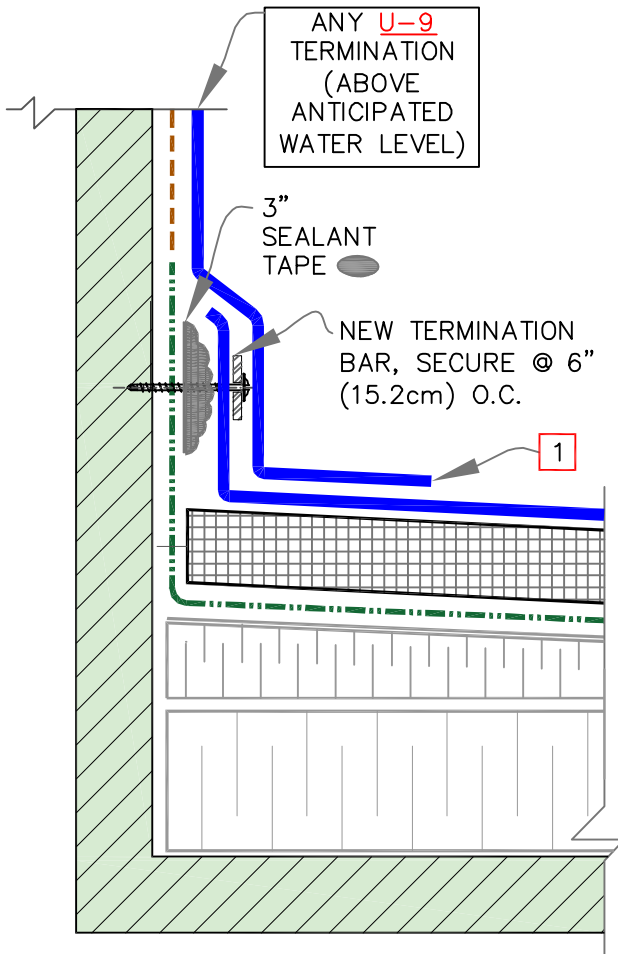
	NEW ROOF MEMBRANE (EPDM, TPO OR PVC)
	EXISTING ROOF MEMBRANE OR APPROVED AIR BARRIER



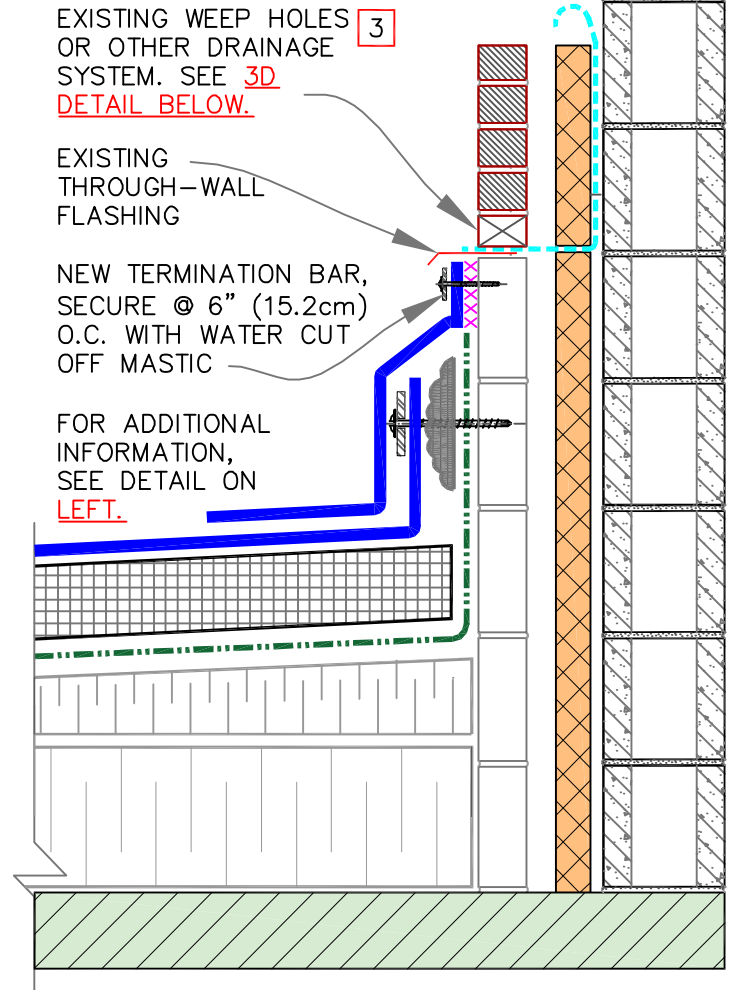
MATERIALS VARY

	GRAVEL STOP EDGE		DETAIL NO.
	MAXIMUM WARRANTY: 20 YEARS		V-1E

WALL WITHOUT DRAINAGE SYSTEM



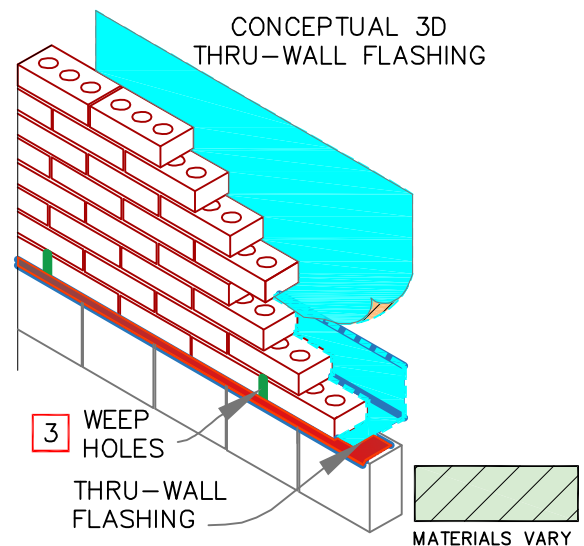
WALL WITH DRAINAGE SYSTEM



	NEW ROOF MEMBRANE (EPDM, TPO OR PVC)
	EXISTING ROOF MEMBRANE OR APPROVED AIR BARRIER

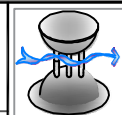
NOTES:

1. ROOF FLASHINGS ARE SUBJECT TO THE TYPE OF ROOF MEMBRANE ASSEMBLY. REFER TO CARLISLE TYPICAL DETAILS FOR EACH MEMBRANE TYPE.
2. FIELD VERIFY THE DRY CONDITIONS OF EXISTING INSULATION WITH DELMHURST MOISTURE METER FOR DRY CONDITIONS.
3. IT IS CRITICAL THAT WEEP HOLES OR ANY OTHER WALL DRAINAGE SYSTEM IS NOT COVERED WITH NEW FLASHING. STOP THE FLASHING BELOW THE THROUGH-WALL FLASHING. CONTACT CARLISLE FOR REVIEW.



ROOF TO WALL FLASHING

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

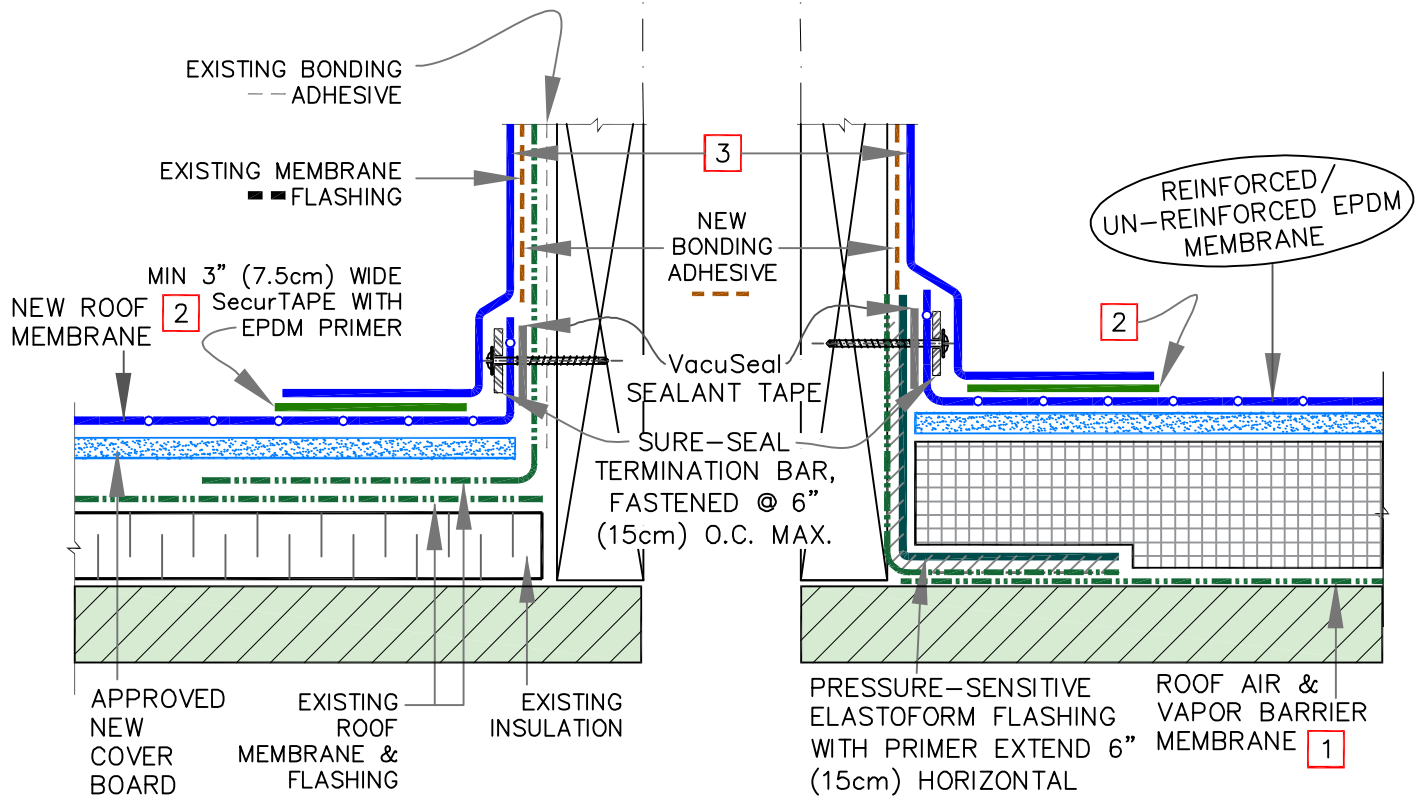
V-1F

RECOVER EXISTING ROOF OR RE-ROOF THE EXISTING ROOF, AFTER COMPLETE TEAR-OFF

(DRAWING DEPICTS RECOVER)

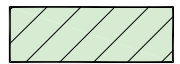
NEW CONSTRUCTION OR RE-ROOF THE EXISTING ROOF, AFTER COMPLETE TEAR-OFF

(DRAWING DEPICTS NEW ROOF)



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.

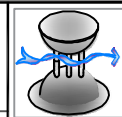


MATERIALS VARY



CURB BASE FLASHING — NEW CONSTRUCTION AND RE-ROOF (RECOVER)

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

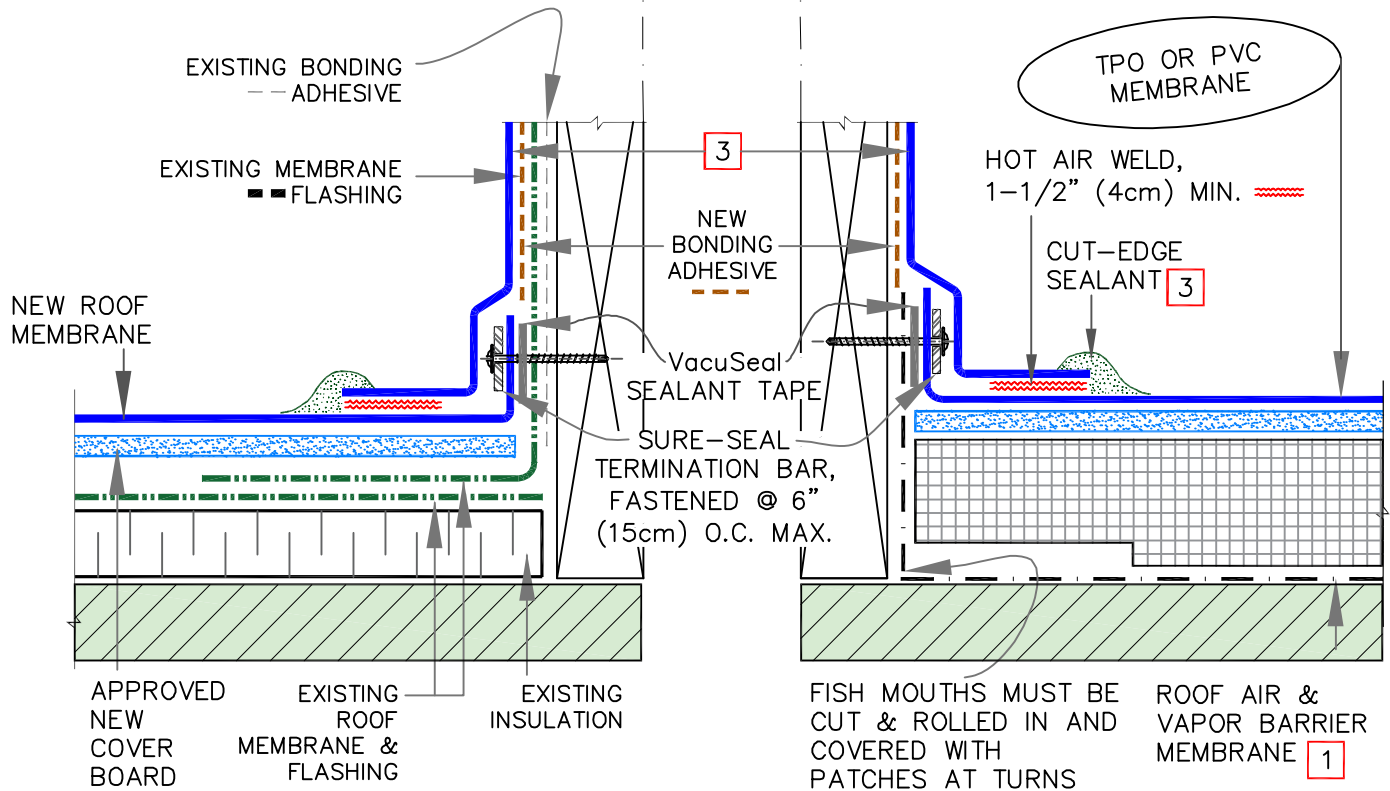
V-5.1

RECOVER EXISTING ROOF OR RE-ROOF THE EXISTING ROOF, AFTER COMPLETE TEAR-OFF

(DRAWING DEPICTS RECOVER)

NEW CONSTRUCTION OR RE-ROOF THE EXISTING ROOF, AFTER COMPLETE TEAR-OFF

(DRAWING DEPICTS NEW ROOF)



NOTES:

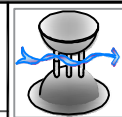
- ON STEEL DECKS DIRECTLY ADHERE VapAir Seal MD. USE VapAir Seal 725TR ON CONCRETE & WOOD DECKS OR DECKS WITH APPROVED COVER BOARDS.
- FOR ADDITIONAL INFORMATION, REFER TO CARLISLE'S THERMOPLASTIC DETAIL [U-5A](#) FOR TPO/PVC.
- CUT EDGE SEALANT IS NOT REQUIRED ON PVC MEMBRANES.



MATERIALS VARY

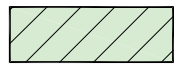
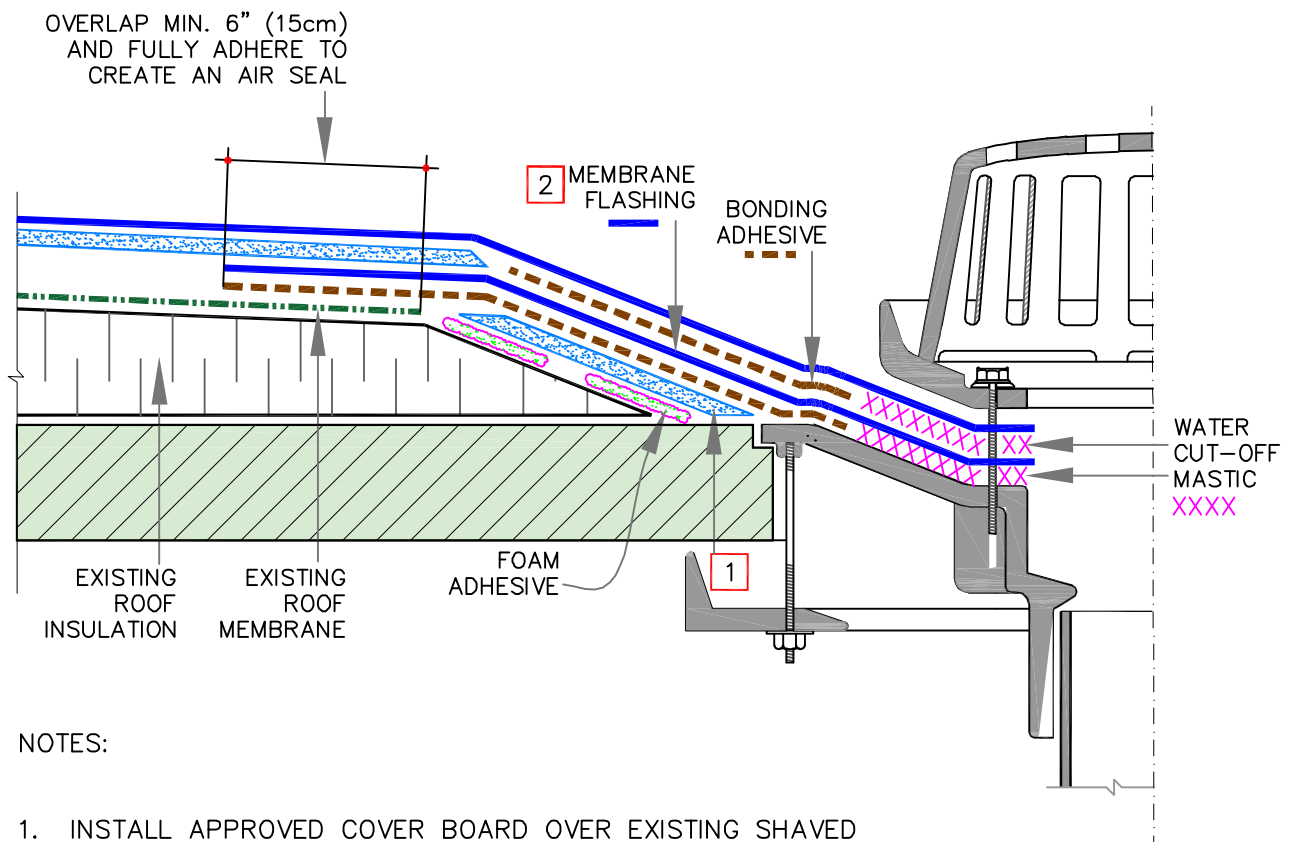

CURB BASE FLASHING – NEW
CONSTRUCTION AND RE-ROOF (RECOVER)

MAXIMUM WARRANTY: 20 YEARS

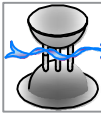


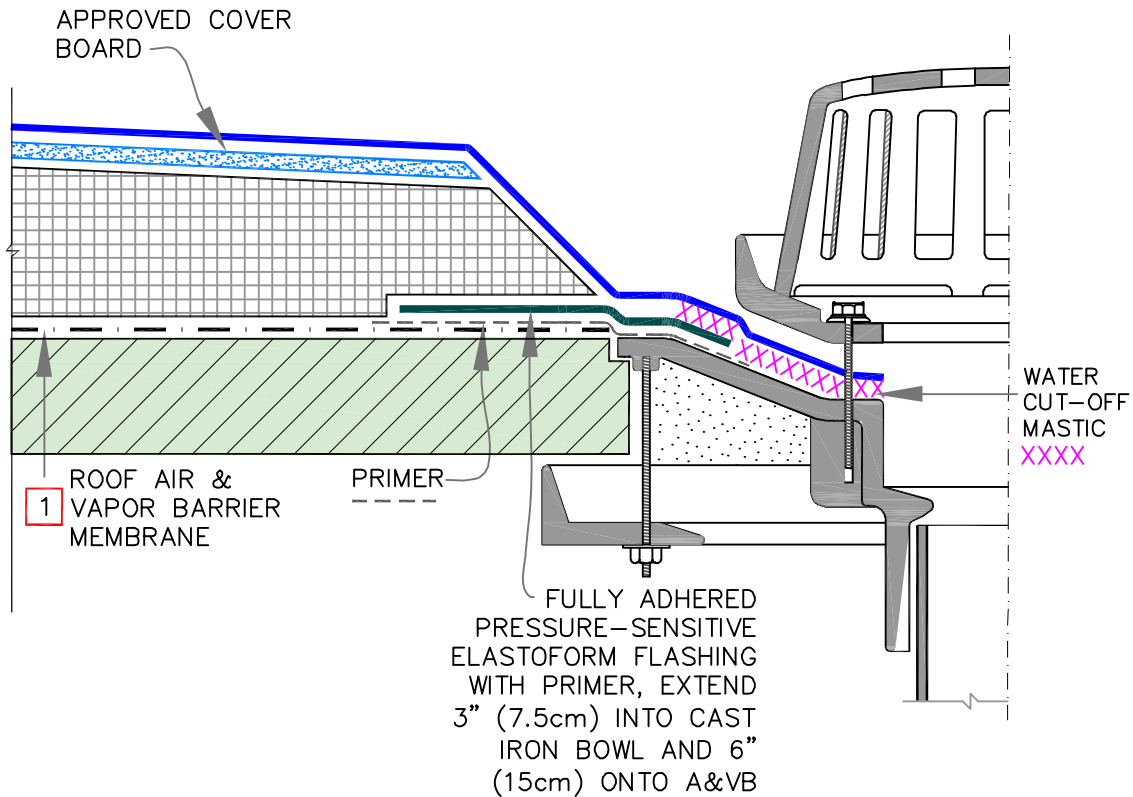
DETAIL NO.

V-5.2



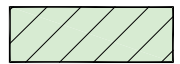
MATERIALS VARY

	<p>ROOF DRAIN: RE-ROOF (RECOVER)</p> <p>MAXIMUM WARRANTY: 20 YEARS</p>		<p>DETAIL NO.</p> <p>V-6.1</p>
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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.

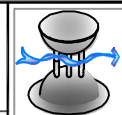


MATERIALS VARY



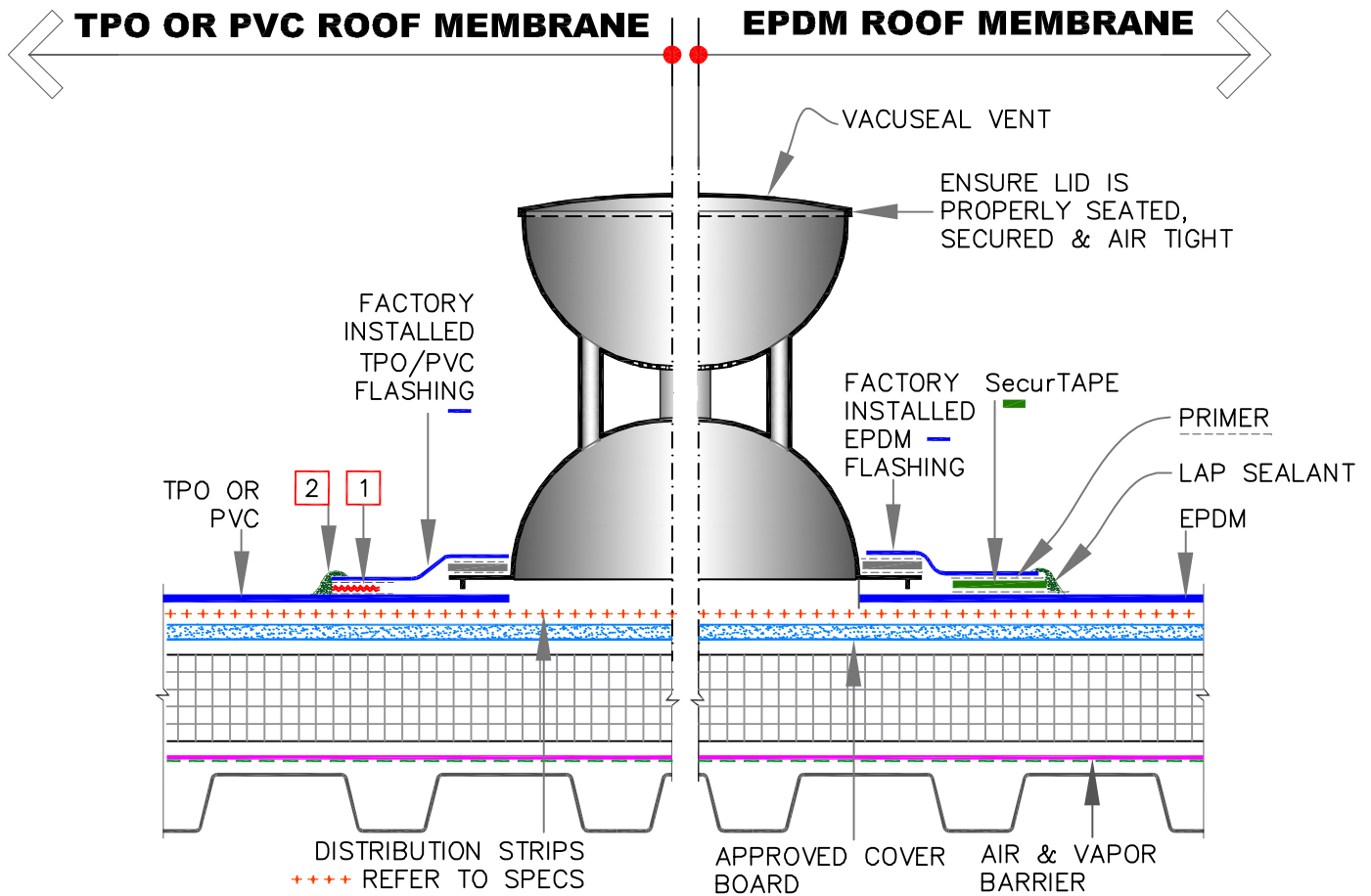
ROOF DRAIN: NEW CONSTRUCTION

MAXIMUM WARRANTY: 20 YEARS



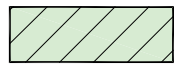
DETAIL NO.

V-6.2



NOTES:

- HOT AIR WELD, MIN. 1-1/2" (4cm).
- APPROXIMATELY 1/8" (0.5cm) DIAMETER BEAD OF CUT-EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE.

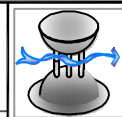


MATERIALS VARY



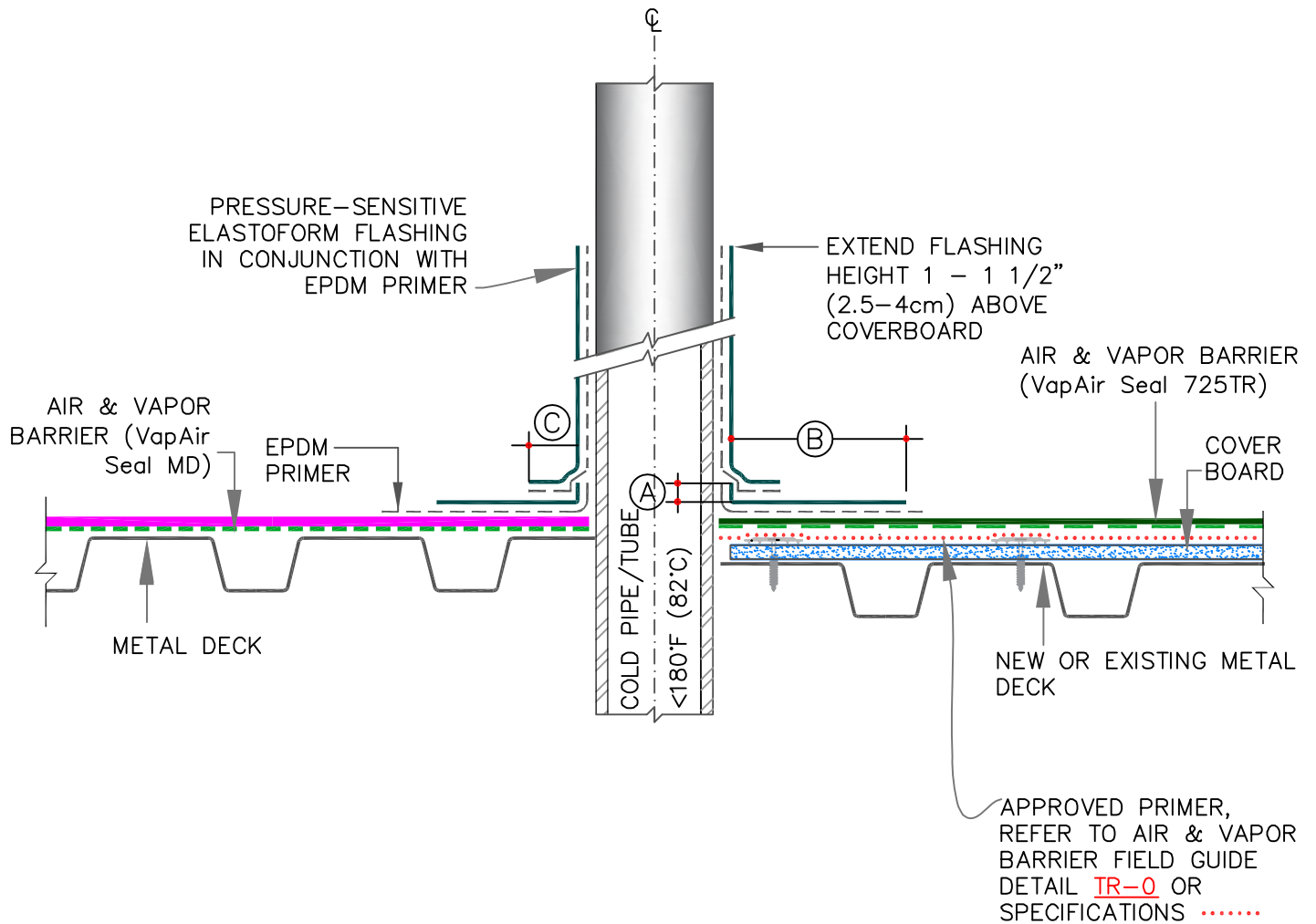
VACUSEAL VENT WITH PRE-APPLIED SKIRT FLASHING

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

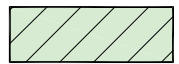
V-8.0



NOTE:

1. FOR ADDITIONAL INFORMATION, REFER TO CARLISLE THERMOSET DETAIL **U-8B**.

DIMENSIONS		cm	
(A)	1/2"	1.5	MIN.
(B)	5.5"	14	MIN.
(C)	1"	2.5	MIN.

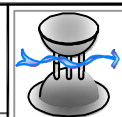


MATERIALS VARY



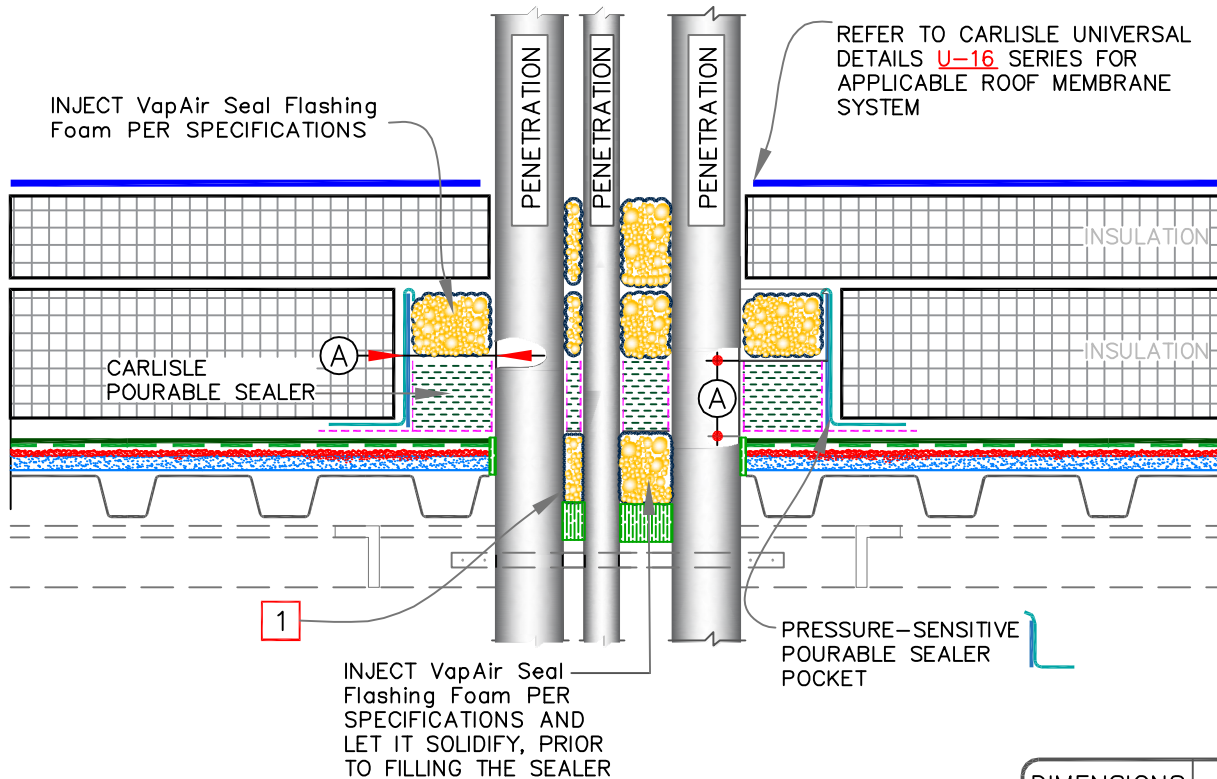
PIPE/STRUCTURAL STEEL TUBE THROUGH METAL DECK

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-8.1



DIMENSIONS		cm	
(A)	1/2"	1.5	TO
	1"	2.5	

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" (2.5cm) CLEARANCE BETWEEN PENETRATIONS.

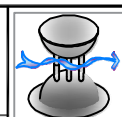


MATERIALS VARY



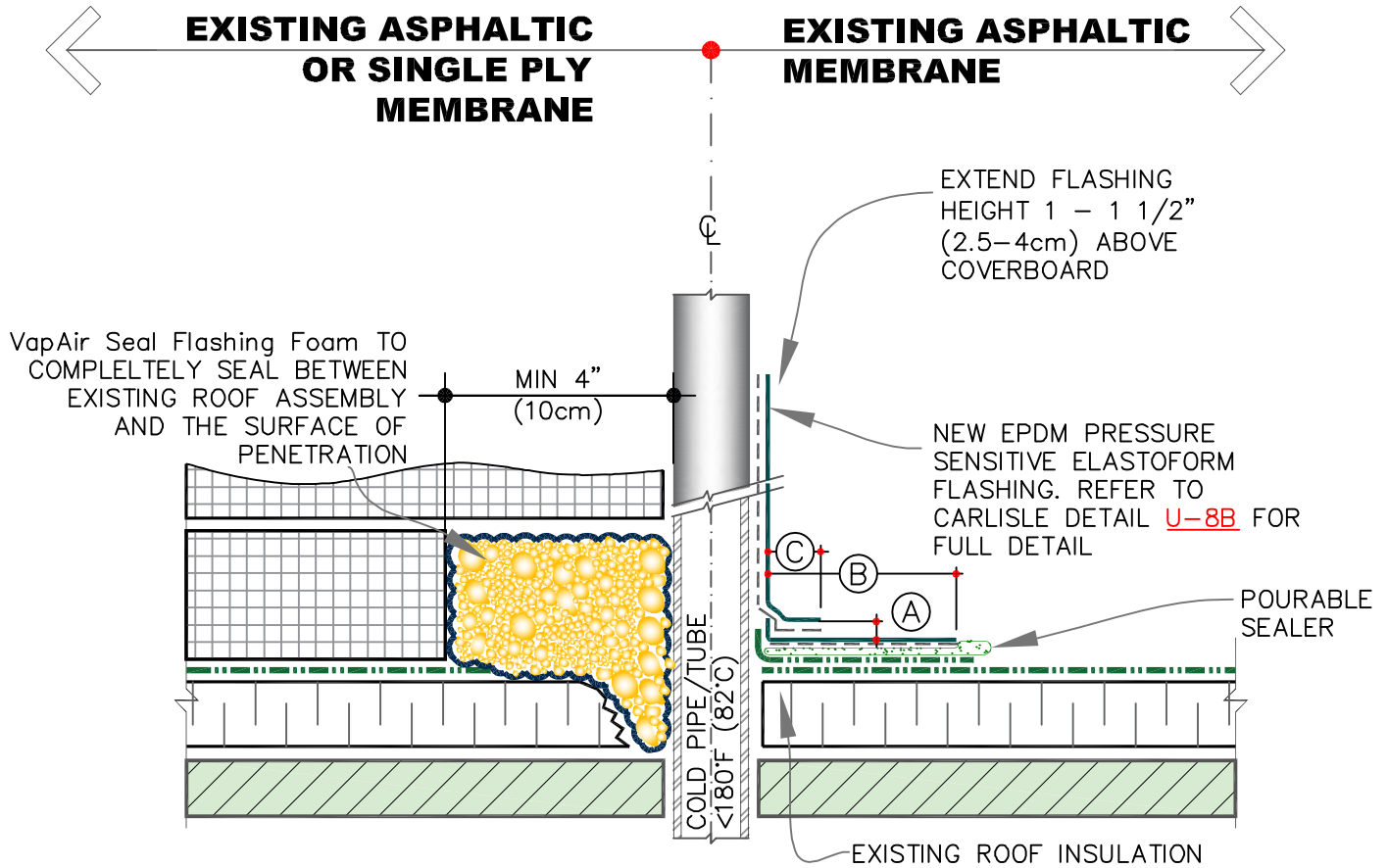
MULTIPLE PENETRATIONS THROUGH STEEL
DECK – NEW CONSTRUCTION

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-8.2



DIMENSIONS		cm	
(A)	1/2"	1.5	MIN.
(B)	5.5"	14	MIN.
(C)	1"	2.5	MIN.

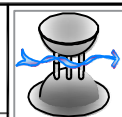


MATERIALS VARY



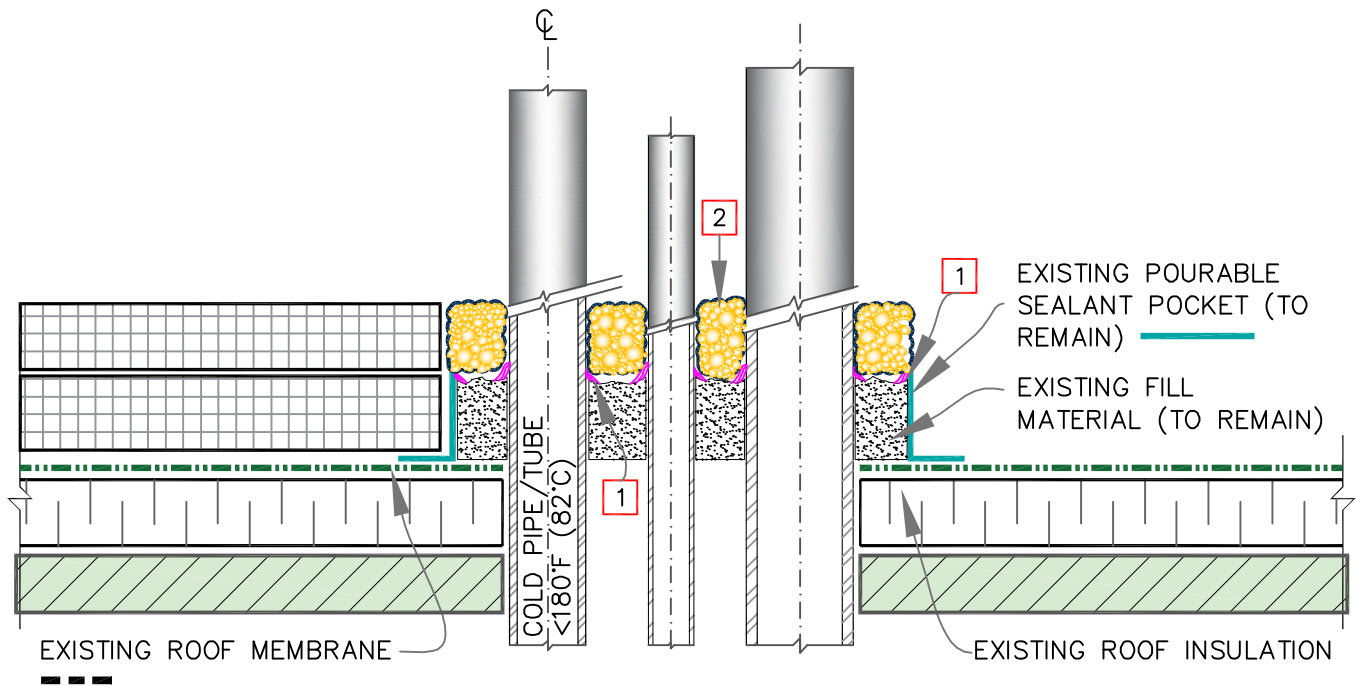
SINGLE PENETRATION THROUGH EXISTING ROOF ASSEMBLY

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-8.3

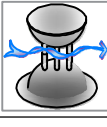


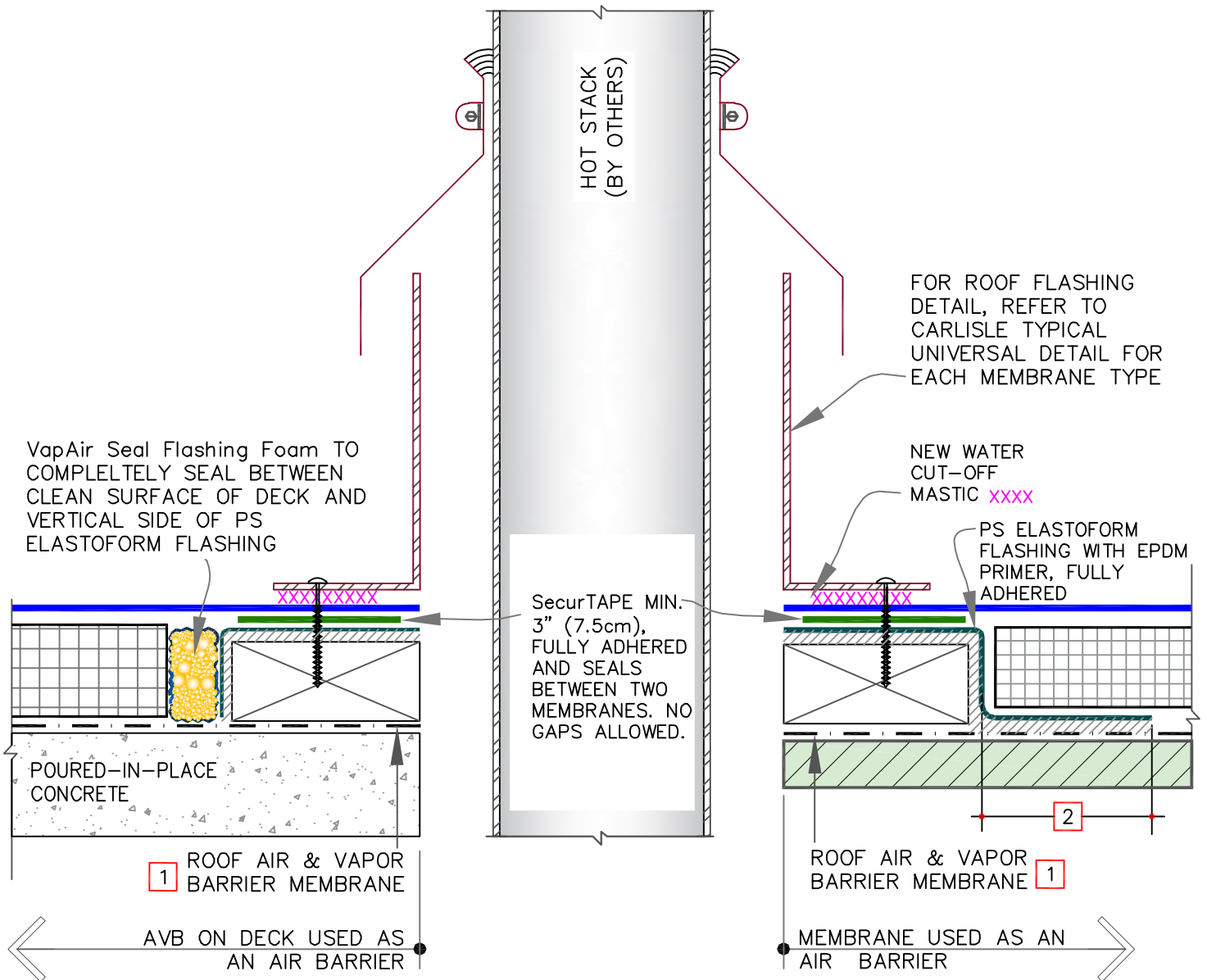
NOTES:

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.



MATERIALS VARY

	<p>CLUSTER OF PENETRATIONS THROUGH EXISTING ROOF ASSEMBLY</p> <p>MAXIMUM WARRANTY: 20 YEARS</p>		<p>DETAIL NO.</p> <p>V-8.4</p>
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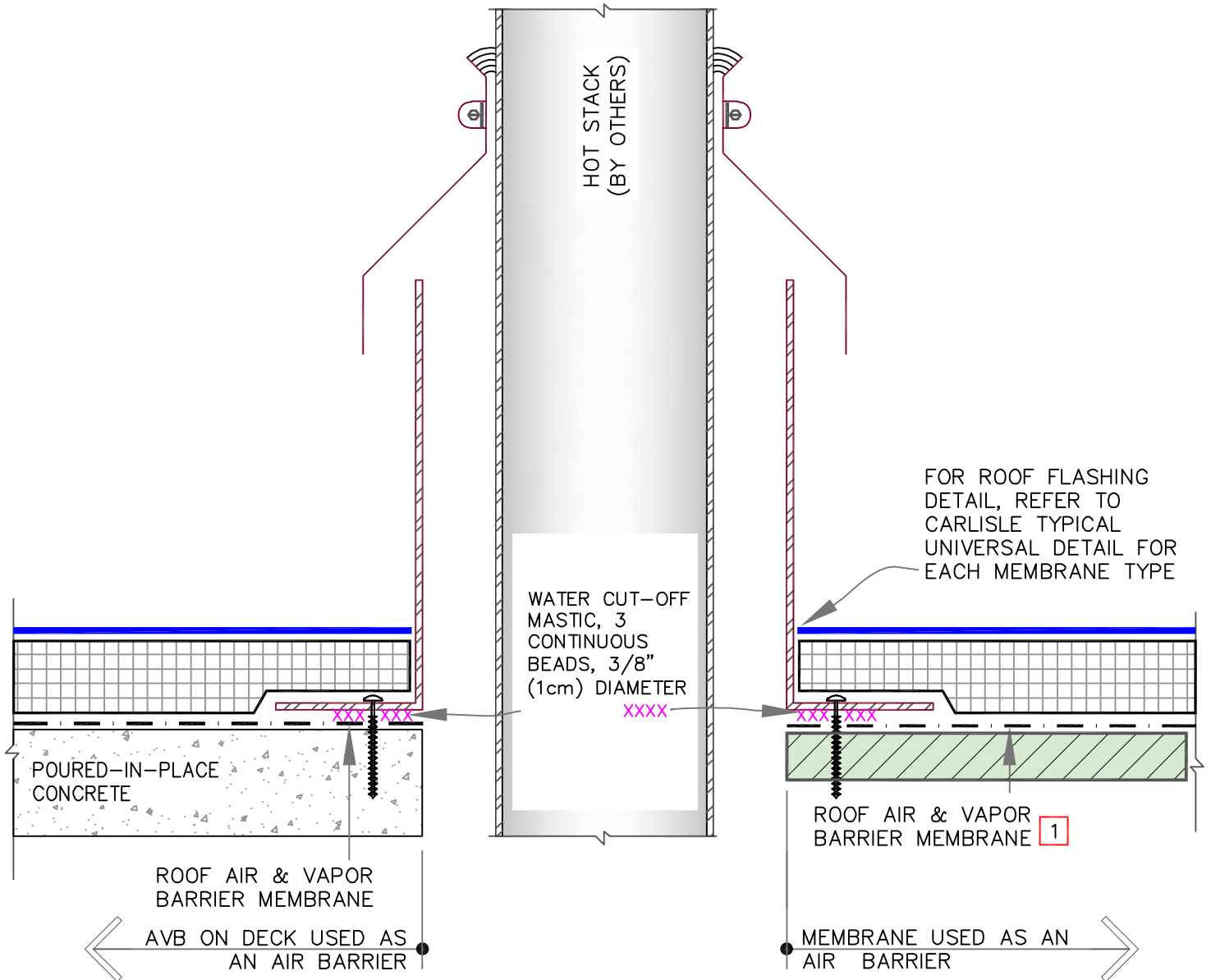
NOTES:

1. ON STEEL DECKS DIRECTLY ADHERE VapAir Seal MD. USE VapAir Seal 725TR ON CONCRETE & WOOD DECKS OR DECKS WITH APPROVED COVER BOARDS.
2. OVERLAP MIN. 6" (15cm) AND FULLY ADHERE TO CREATE AN AIR SEAL.



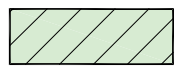
MATERIALS VARY

	<p>HOT STACK AIR FLASHING – OPTION A</p> <p>MAXIMUM WARRANTY: 20 YEARS</p>		<p>DETAIL NO.</p> <p>V-8.5A</p>
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NOTE:

1. ON STEEL DECKS DIRECTLY ADHERE VapAir Seal MD. USE VapAir Seal 725TR ON CONCRETE & WOOD DECKS OR DECKS WITH APPROVED COVER BOARDS.

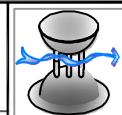


MATERIALS VARY



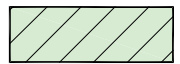
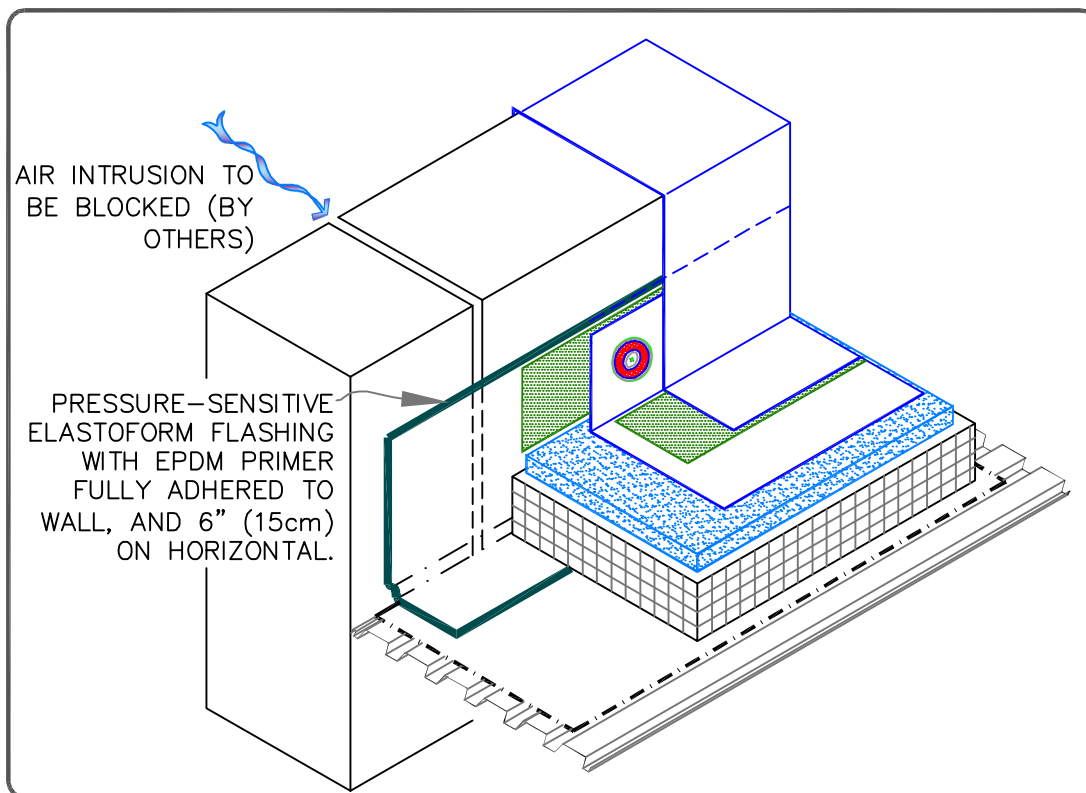
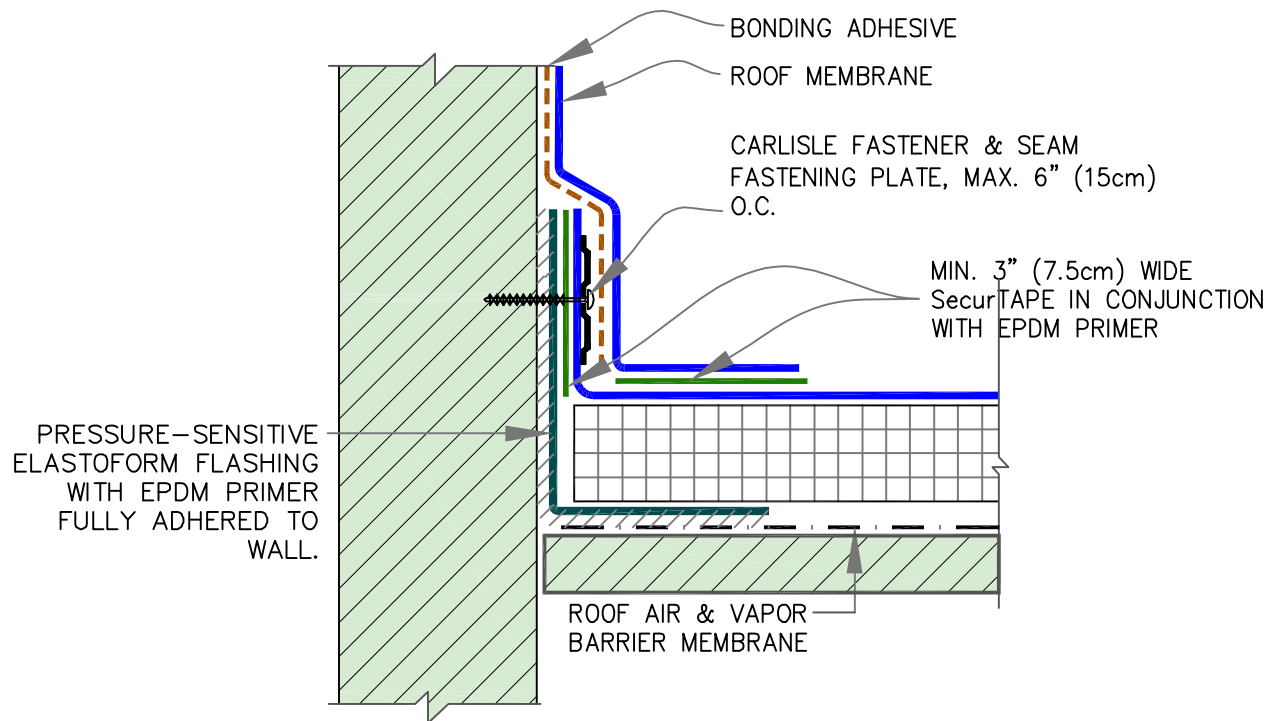
HOT STACK AIR FLASHING — OPTION B

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-8.5B

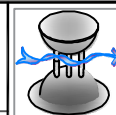


MATERIALS VARY



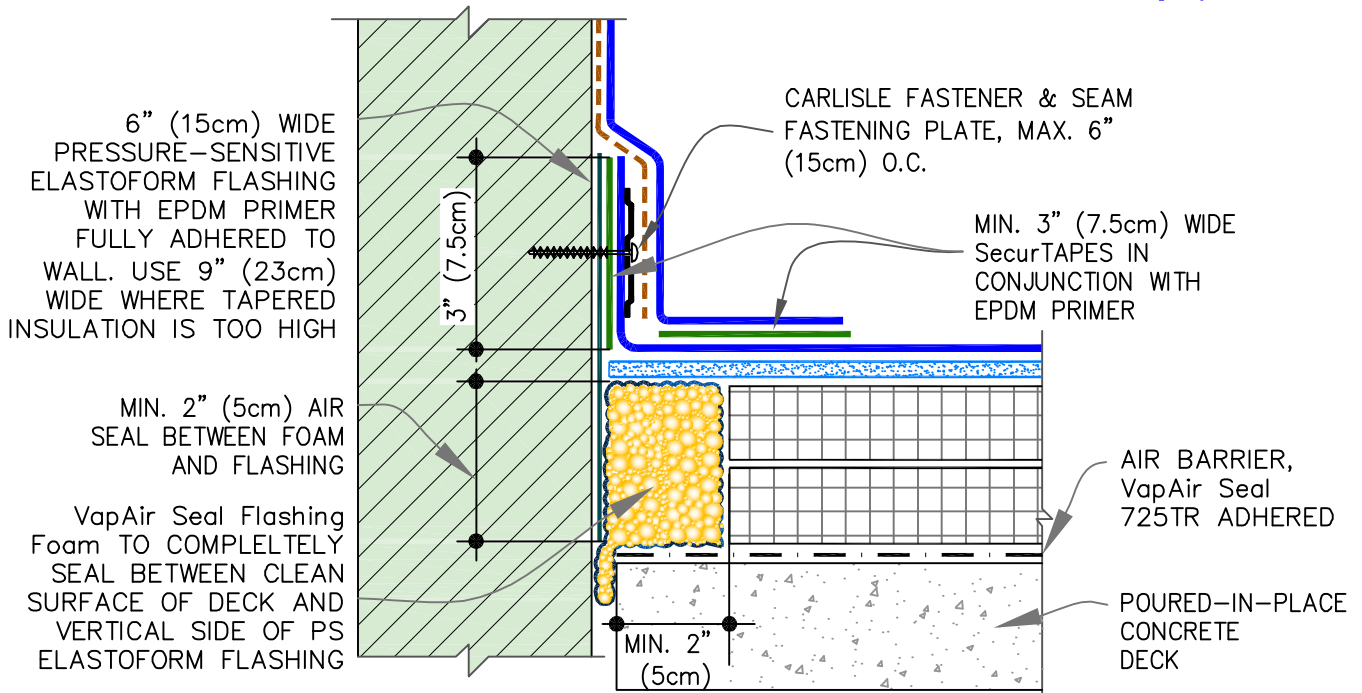
PARAPET WITH MEMBRANE AIR BARRIER

MAXIMUM WARRANTY: 20 YEARS

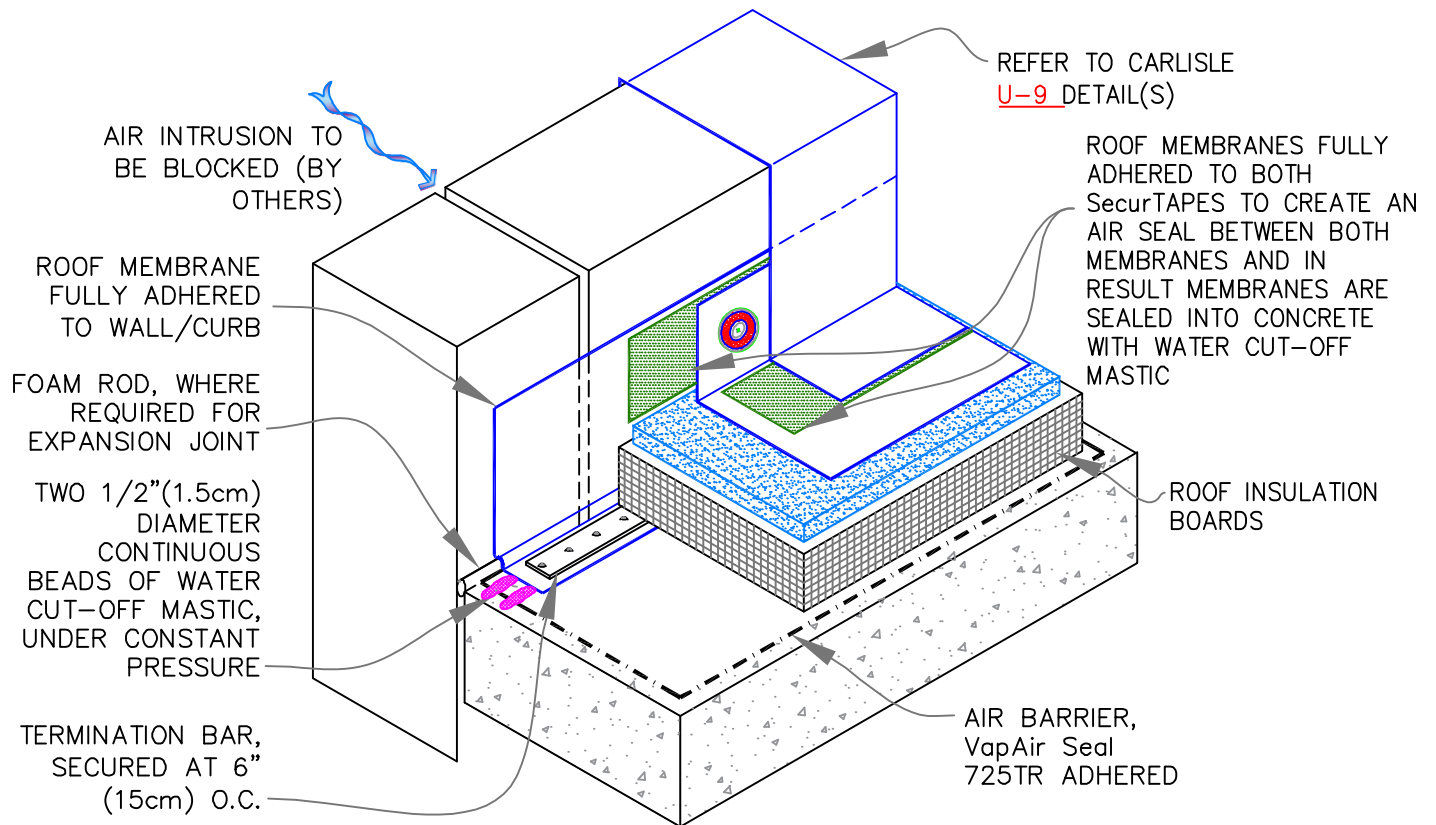


DETAIL NO.

V-12.1



A OPTION: AIR SEALING WITH FOAM

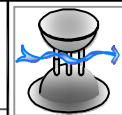


B OPTION: AIR SEALING WITH MEMBRANE FLASHING

MATERIALS VARY



PARAPET / CURB:
CONCRETE/LIGHTWEIGHT CONCRETE WITH
DECK LEVEL AIR/VAPOR BARRIER
MAXIMUM WARRANTY: 20 YEARS



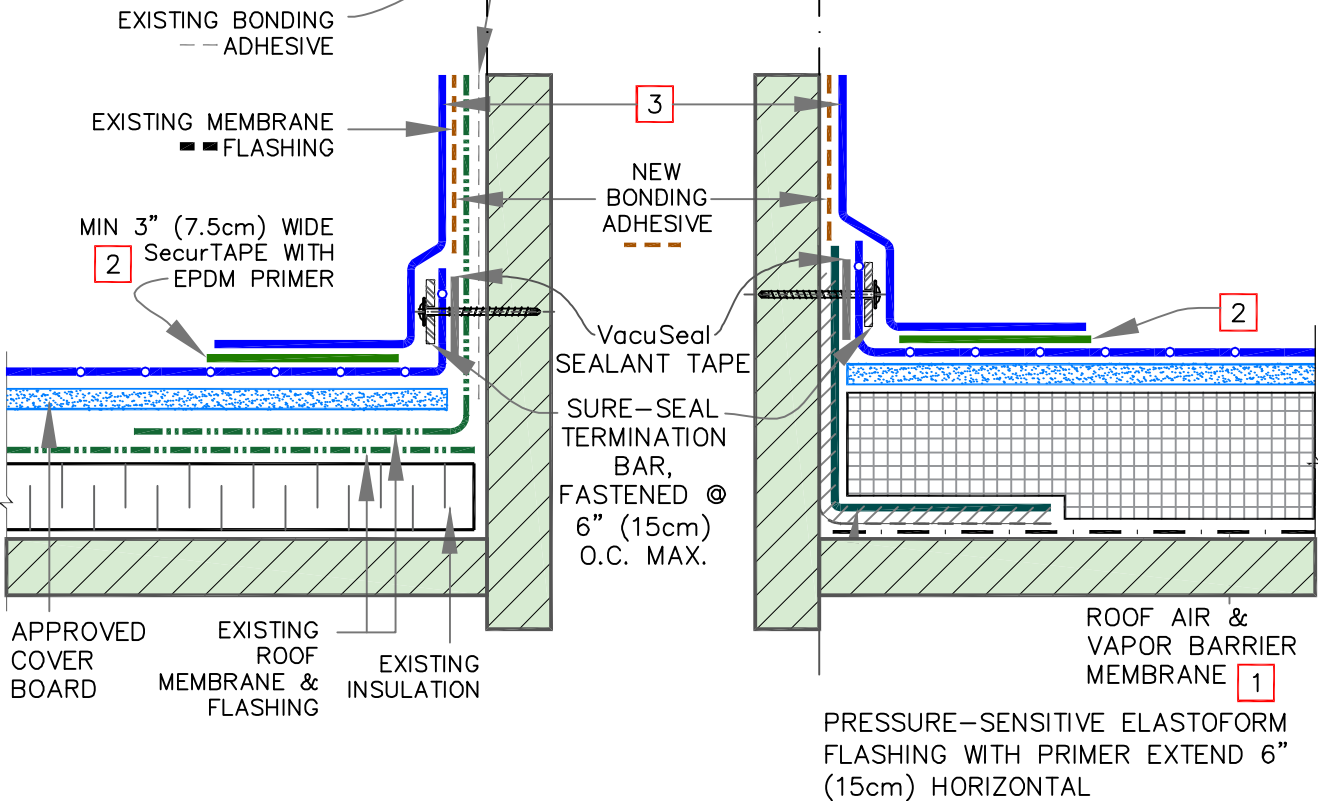
DETAIL NO.
V-12.2

RECOVER EXISTING ROOF OR RE-ROOF THE EXISTING ROOF, AFTER COMPLETE TEAR-OFF

(DRAWING DEPICTS RECOVER)

NEW CONSTRUCTION OR RE-ROOF THE EXISTING ROOF, AFTER COMPLETE TEAR-OFF

(DRAWING DEPICTS NEW ROOF)



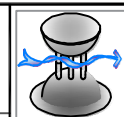
NOTES:

- 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

MATERIALS VARY


PARAPET OR WALL — NEW CONSTRUCTION
AND RE-ROOF (RECOVER)

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

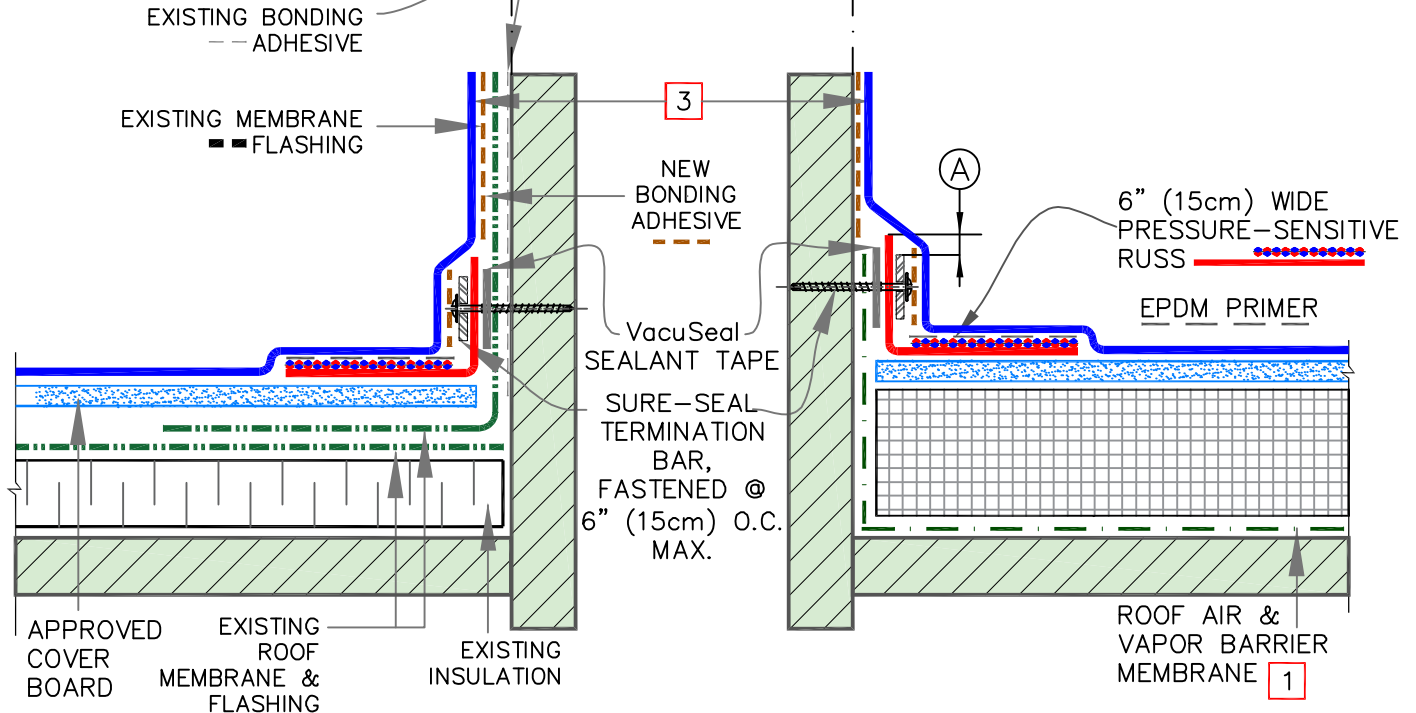
V-12.3

RECOVER EXISTING ROOF OR RE-ROOF THE EXISTING ROOF, AFTER COMPLETE TEAR-OFF

(DRAWING DEPICTS RECOVER)

NEW CONSTRUCTION OR RE-ROOF THE EXISTING ROOF, AFTER COMPLETE TEAR-OFF

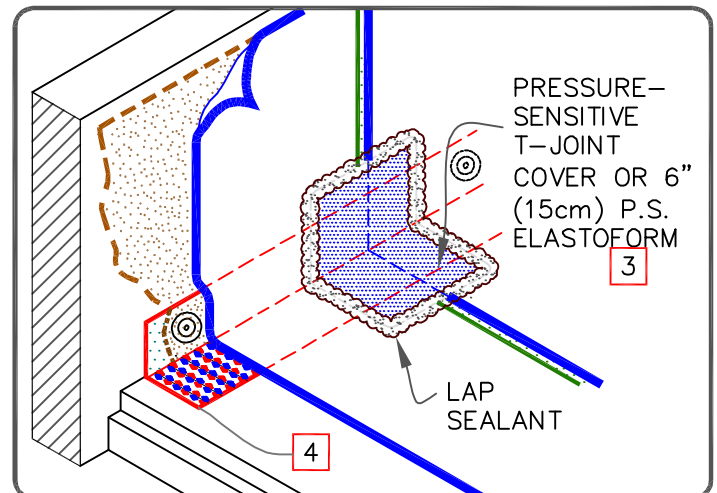
(DRAWING DEPICTS NEW ROOF)



DIMENSION	cm
(A) 1/8"–1"	0.5–2.5

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.

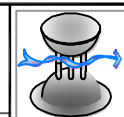


MATERIALS VARY



PARAPET OR WALL – NEW CONSTRUCTION
AND RE-ROOF (RECOVER)

MAXIMUM WARRANTY: 20 YEARS



DETAIL NO.

V-12A