

TECHNICAL BULLETIN

FOR TARGET MARKET ROOFING



BUILDING TRUST



Subject: Wall Air Barrier to Roof Tie-In Details

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The 2012 IECC (International Energy Conservation Code) and ASHRAE Standard 90.1 – 2013 require a continuous air barrier in the building envelope for new commercial building construction in Climate Zones 4-8 (see U. S. Climate Zone Map below). Adoption of these codes is at the discretion of state and local jurisdictions. As state and local jurisdictions adopt the new code and standard, designers are faced with the challenge of connecting dissimilar materials to create a continuous air barrier.

To address this challenge, Sika Corporation launched a comprehensive product compatibility testing program as part of its SikaSmart™ Building Envelope initiative to provide designers with a clear direction on the use and application of Sika products and systems used in the building envelope.

One aspect of the program focused on the connection between Sika's wall air barrier systems and Sarnafil® roof systems with the goal of developing tie-in details using Sika products that are compatible and exhibit adequate adhesion at the connection interface to maintain the continuity of the air barrier.

Following are two details illustrating the connection between the Sikagard® 530 Liquid Applied Vapor Permeable Air Barrier used in the exterior wall assembly and the Sarnafil adhered or mechanically attached roof system.

Detail AB-1: Sikagard Wall Air Barrier Tie-In, Adhered Roof

Detail AB-1 is used with an **adhered** Sarnafil roof system that ties into the Sikagard 530 wall air barrier. The adhered Sarnafil roof system meets the requirements of a continuous air barrier according to Section C402.4.1.2.1 of the 2012 IECC and Section 5.4.3.1.3 of the 2013 ASHRAE Standard 90.1.

In this detail, the adhered Sarnafil roof flashing is installed and terminated on the exterior face of the back-up wall. When the Sikagard 530 wall air barrier is installed, the Sarnafil roof flashing termination is primed with Sikaflex 449 primer and allowed to dry, then sealed with a 3/8" (10 mm) bead of Sikaflex-11 FC sealant centered over the flashing termination (see Roof Note 3). The Sikaflex-11 FC sealant must cure at least 4 hours before applying the Sikagard 530 wall air barrier over the sealant. Terminate the Sikagard 530 wall air barrier onto the Sikaflex-11 FC sealant to complete the connection.

If the project design calls for a vapor retarder in the roof assembly, install a Sika Sarnavap vapor barrier and terminate it 3" (76 mm) down the exterior face of the back-up wall (see Detail AB-2 callout). Seal the Sika Sarnavap termination with SikaMultiSeal® 515 Self-Adhered Seam Tape before installing the Sikagard 530 wall air barrier.

Detail AB-2: Sikagard Wall Air Barrier Tie-In, Mechanically Attached Roof

Detail AB-2 is used with a **mechanically attached** Sarnafil roof system. Since a mechanically attached single ply roof membrane does not meet the air barrier requirements according to the 2012 IECC and 2013 ASHRAE Standard 90.1, a Sika Sarnavap air barrier must be installed.

Install the Sarnavap air barrier according to the project specifications and terminate it 3" (76 mm) down the exterior face of the back-up wall. When the Sikagard 530 wall air barrier is installed, seal the Sarnavap air barrier termination with SikaMultiSeal 515 Self-Adhered Seam Tape (see Roof Note 4). The Sikagard 530 wall air barrier can be installed immediately over the SikaMultiSeal 515 Self-Adhered Seam Tape.

Sarnafil Roof Flashing in Contact with Non-Compatible Wall Air Barrier Products

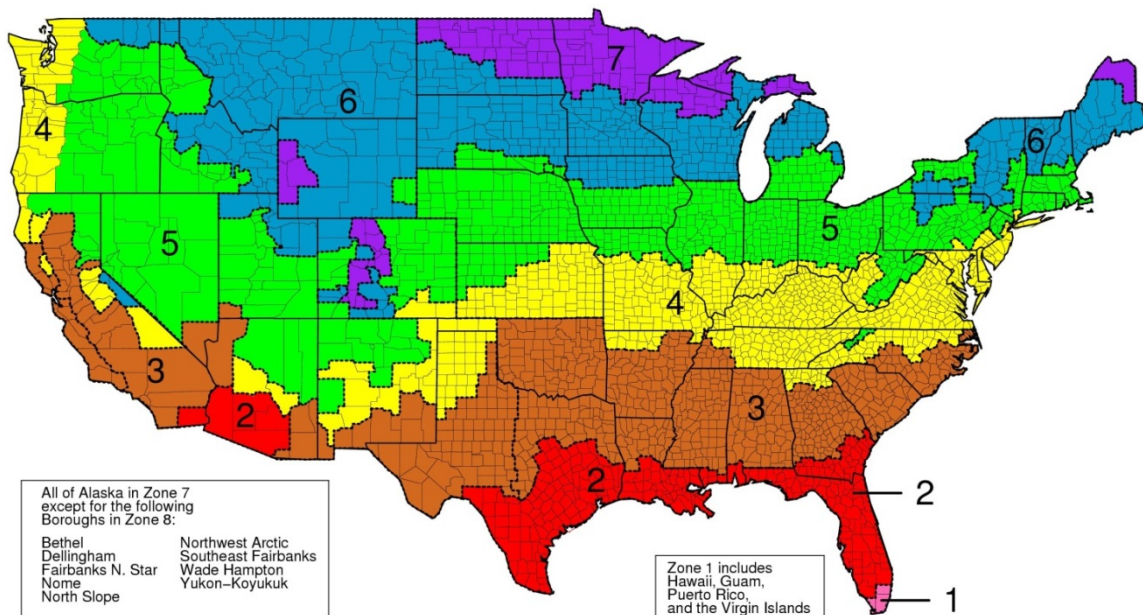
Details AB-1 and AB-2 are supported by Sika's product compatibility testing program. However, there may be instances when the wall air barrier is not supplied by Sika so its compatibility with the Sarnafil roof system or Sarnavap air barrier may not be known.

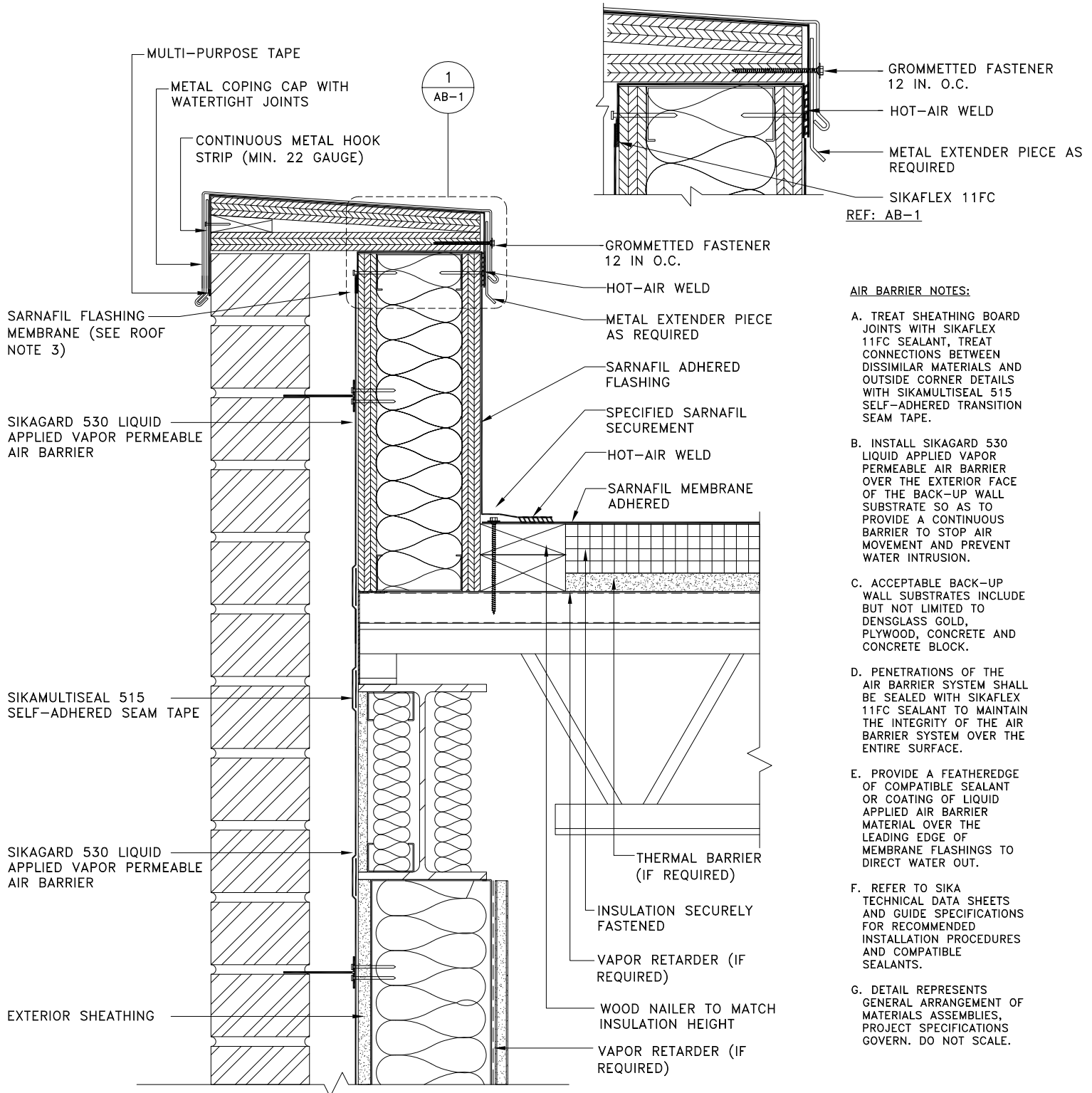
In these situations, Sika's Aluminum Tape is used as a separation layer between the wall air barrier product and the

- a) adhered Sarnafil roof flashing in an adhered Sarnafil roof (see Detail AB-1A), or
- b) Sarnavap in a mechanically attached Sarnafil roof (see Detail AB-2A)

The designer should consult with the wall air barrier manufacturer to confirm the compatibility and adhesion of the wall air barrier product to the aluminum face of the Sika Aluminum Tape.

U. S. Climate Zone Map





- AIR BARRIER NOTES:**
- A. TREAT SHEATHING BOARD JOINTS WITH SIKAFLEX 11FC SEALANT, TREAT CONNECTIONS BETWEEN DISSIMILAR MATERIALS AND OUTSIDE CORNER DETAILS WITH SIKAMULTISEAL 515 SELF-ADHERED TRANSITION SEAM TAPE.
 - B. INSTALL SIKAGARD 530 LIQUID APPLIED VAPOR PERMEABLE AIR BARRIER OVER THE BACK-UP WALL SUBSTRATE SO AS TO PROVIDE A CONTINUOUS BARRIER TO STOP AIR MOVEMENT AND PREVENT WATER INTRUSION.
 - C. ACCEPTABLE BACK-UP WALL SUBSTRATES INCLUDE BUT NOT LIMITED TO DENSGLOSS GOLD, PLYWOOD, CONCRETE AND CONCRETE BLOCK.
 - D. PENETRATIONS OF THE AIR BARRIER SYSTEM SHALL BE SEALED WITH SIKAFLEX 11FC SEALANT TO MAINTAIN THE INTEGRITY OF THE AIR BARRIER SYSTEM OVER THE ENTIRE SURFACE.
 - E. PROVIDE A FEATHEREDGE OF COMPATIBLE SEALANT OR COATING OF LIQUID APPLIED AIR BARRIER MATERIAL OVER THE LEADING EDGE OF MEMBRANE FLASHINGS TO DIRECT WATER OUT.
 - F. REFER TO SIKA TECHNICAL DATA SHEETS AND GUIDE SPECIFICATIONS FOR RECOMMENDED INSTALLATION PROCEDURES AND COMPATIBLE SEALANTS.
 - G. DETAIL REPRESENTS GENERAL ARRANGEMENT OF MATERIALS ASSEMBLIES, PROJECT SPECIFICATIONS GOVERN. DO NOT SCALE.

- ROOF 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) TRANSITION SEQUENCE: 1) INSTALL THE ADHERED SARNAFIL FLASHING MEMBRANE AND FINAL TERMINATION. 2) PRIME WITH SIKAFLEX PRIMER 449 AND APPLY A 3/8" BEAD OF SIKAFLEX 11FC ALONG THE EDGE OF THE SARNAFIL FLASHING MEMBRANE AND ALLOW TO CURE. 3) APPLY SIKAGARD 530 LIQUID AIR BARRIER TERMINATING ON THE BEAD OF SIKAFLEX 11FC.

SIKAGARD WALL AIR BARRIER TIE-IN, ADHERED ROOF

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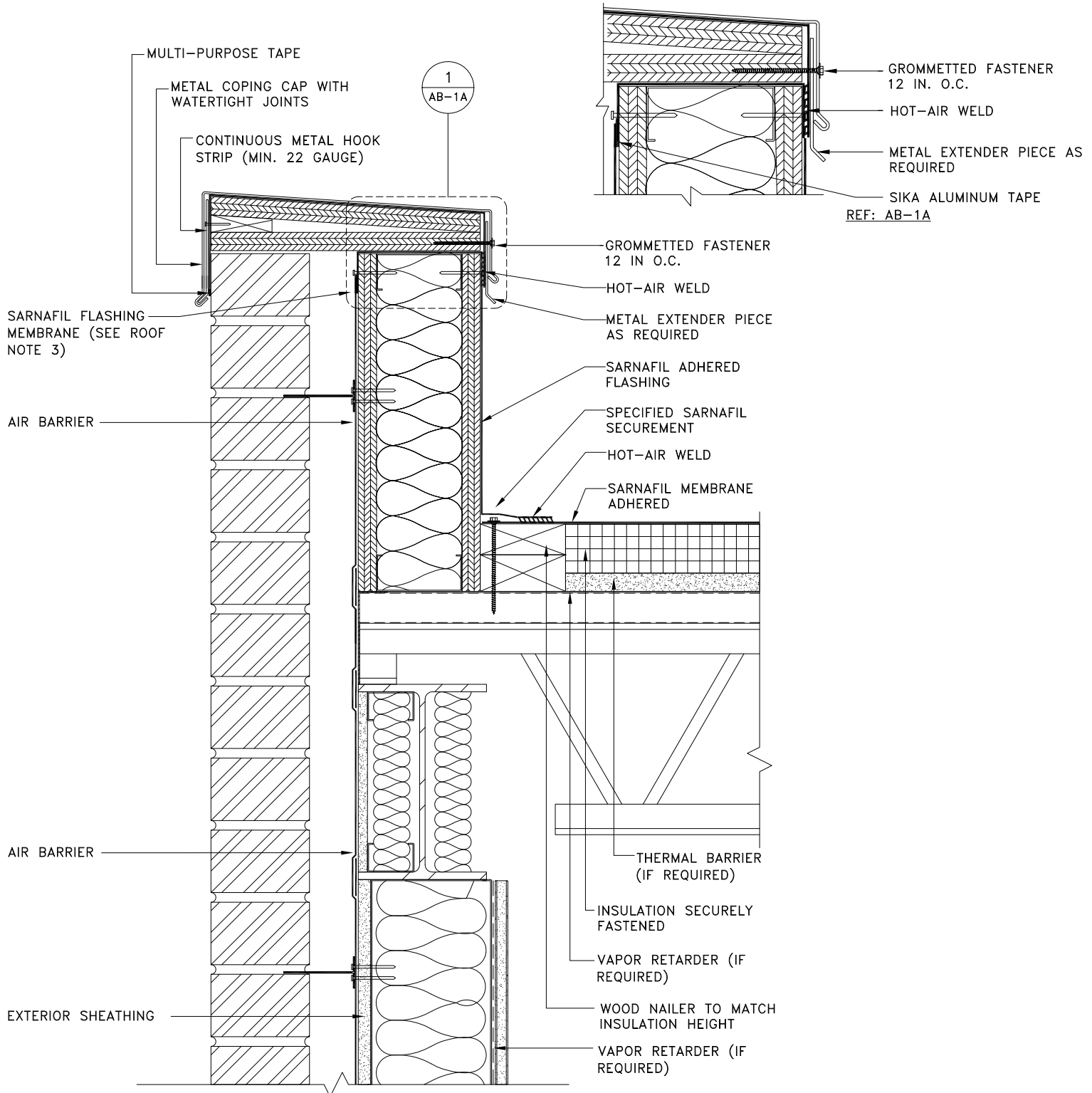
SCALE: N.T.S.

DATE: 1/14

FILE NO.:

DRW. NO.: AB-1

AS A MEMBRANE MANUFACTURER, SIKA CORPORATION ("SIKA") REVIEWS DETAILS PREPARED BY THE CONSULTANT, ARCHITECT AND/OR ENGINEER FOR A PROJECT SOLELY FOR THE PURPOSE OF DETERMINING IF A SIKA WARRANTY MAY ISSUE FOR THE PROJECT. THIS REVIEW IS NOT TO BE CONSTRUED AS APPROVAL OF DETAILS BY SIKA AND IS NOT BEING CONDUCTED IN LIEU OF SOUND ENGINEERING AND ARCHITECTURAL PRACTICES AND JUDGMENT AND SHOULD NOT BE RELIED UPON FOR THAT PURPOSE. SIKA CORPORATION ASSUMES NO LIABILITY WITH RESPECT TO THE DESIGN OF THE ROOFING OR WATERPROOFING SYSTEM. THE ARCHITECT, CONSULTANT AND/OR ENGINEER OR DESIGN PROFESSIONAL FOR A PARTICULAR PROJECT BEARS THE SOLE RESPONSIBILITY FOR THE DESIGN OF THE ROOFING OR WATERPROOFING SYSTEM. FOR THE PREPARATION AND APPROVAL OF THE DETAILS AND SHOP DRAWINGS, AND FOR DETERMINING THEIR SUITABILITY FOR A PARTICULAR PROJECT OR APPLICATION, WHILE SIKA PROVIDES GENERAL INSTRUCTIONS FOR THE INSTALLATION OF ITS MEMBRANE AS WELL AS TRAINING FOR SIKA AUTHORIZED APPLICATORS, THE MEANS AND METHODS USED BY THE CONTRACTOR FOR SURFACE PREPARATION AS WELL AS THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR IN THE INSTALLATION OF THE SIKA MEMBRANE ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL SALE OF SIKA PRODUCTS AND SERVICES ARE SUBJECT TO SIKA' TERMS AND CONDITIONS OF SALE AVAILABLE AT USA.SARNAFIL.SIKA.COM.



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- 3) TRANSITION SEQUENCE: 1) INSTALL THE ADHERED SARNAFIL FLASHING MEMBRANE AND FINAL TERMINATION. 2) INSTALL SIKA ALUMINUM TAPE OVER EDGE OF SARNAFIL FLASHING MEMBRANE. 3) APPLY AIR BARRIER TERMINATING ON THE SIKA ALUMINUM TAPE.

NON-COMPATIBLE WALL AIR BARRIER TIE-IN, ADHERED ROOF

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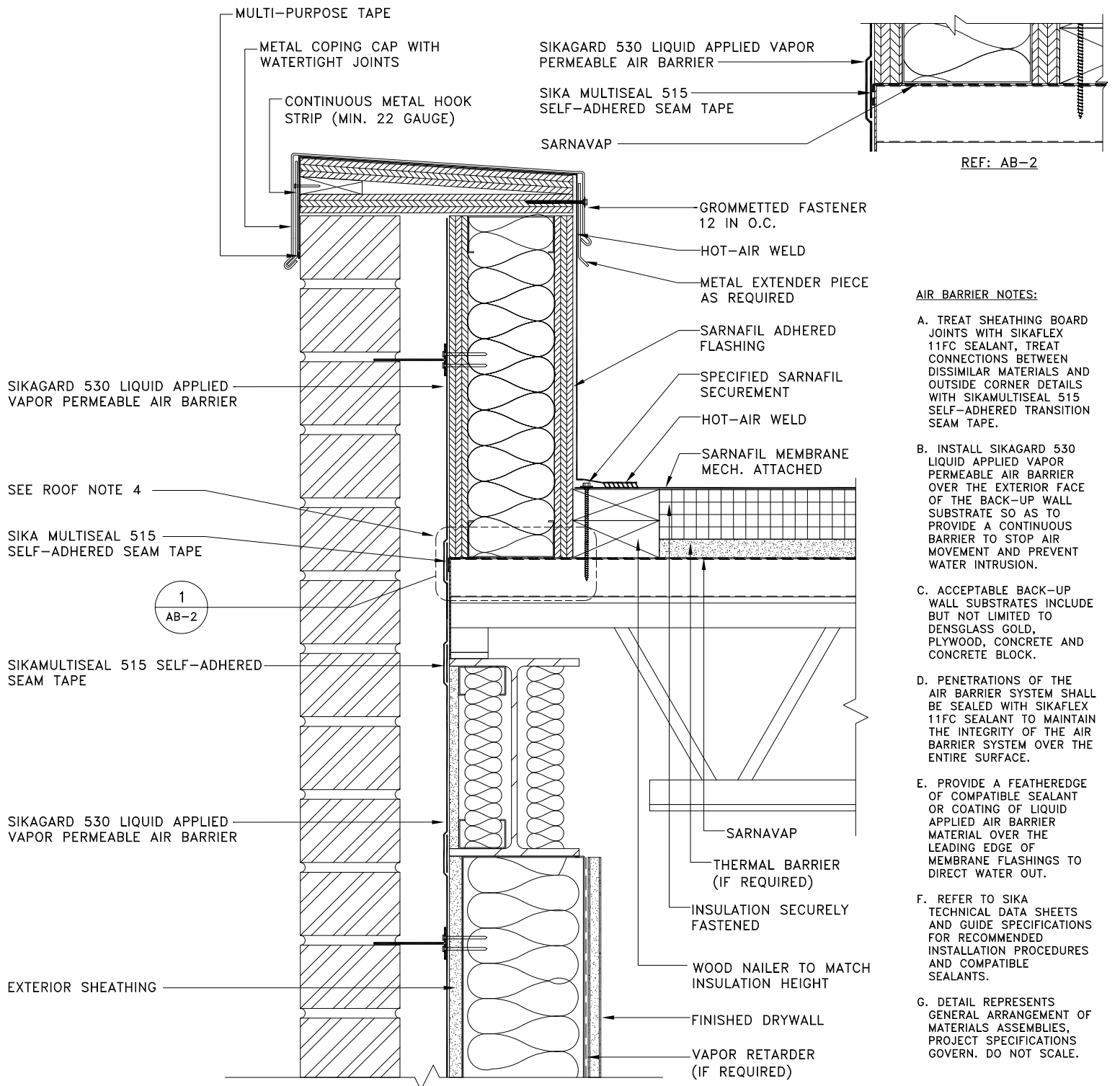
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FILE NO.:

DRW. NO.: AB-1A


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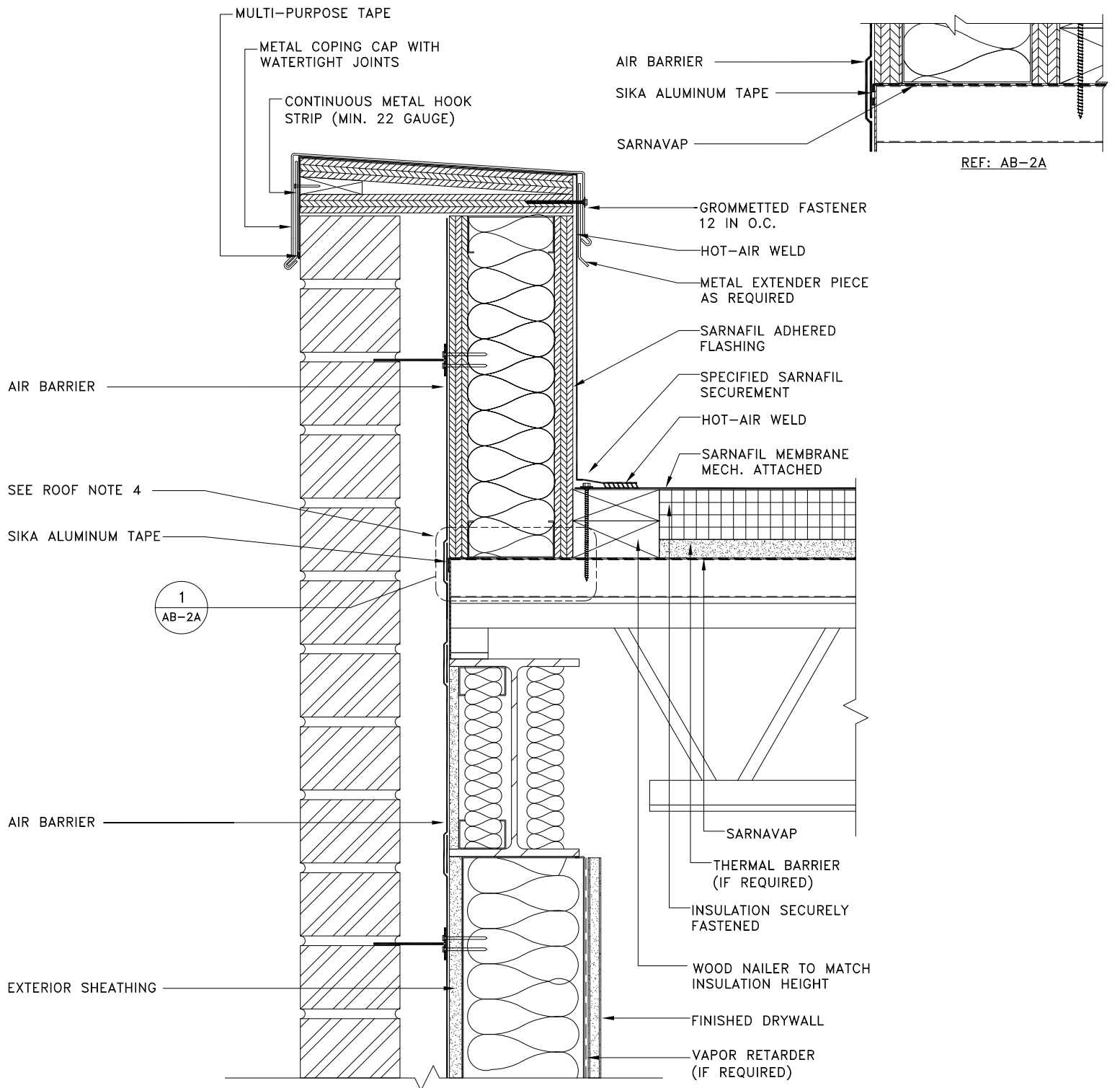
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 - 3) AIR BARRIER SHALL BE SEALED AT EDGES.
 - 4) SARNAVAP IS INSTALLED AND TURNED DOWN THE WALL 3" AND THEN SEALED WITH SIKA MULTISEAL 515 SELF ADHERED SEAM TAPE.

SIKAGARD WALL AIR BARRIER TIE-IN, MECHANICALLY ATTACHED ROOF

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AS A MEMBRANE MANUFACTURER, SIKA CORPORATION ("SIKA") REVIEWS DETAILS PREPARED BY THE CONSULTANT, ARCHITECT AND/OR ENGINEER FOR A PROJECT SOLELY FOR THE PURPOSE OF DETERMINING IF A SIKA WARRANTY MAY ISSUE FOR THE PROJECT. THIS REVIEW IS NOT TO BE CONSTRUED AS APPROVAL OF DETAILS BY SIKA AND IS NOT BEING CONDUCTED IN LIEU OF SOUND ENGINEERING AND ARCHITECTURAL PRACTICES AND JUDGMENT AND SHOULD NOT BE RELIED UPON FOR THAT PURPOSE. SIKA CORPORATION ASSUMES NO LIABILITY WITH RESPECT TO THE DESIGN OF THE ROOFING OR WATERPROOFING SYSTEM, THE ARCHITECT, CONSULTANT AND/OR ENGINEER OR DESIGN PROFESSIONAL FOR A PARTICULAR PROJECT BEARS THE SOLE RESPONSIBILITY FOR THE DESIGN OF THE ROOFING OR WATERPROOFING SYSTEM. FOR THE PREPARATION AND APPROVAL OF THE DETAILS AND SHOP DRAWINGS, AND FOR DETERMINING THEIR SUITABILITY FOR A PARTICULAR PROJECT OR APPLICATION, WHILE SIKA PROVIDES GENERAL INSTRUCTIONS FOR THE INSTALLATION OF ITS MEMBRANE AS WELL AS TRAINING FOR SIKA AUTHORIZED APPLICATORS, THE MEANS AND METHODS USED BY THE CONTRACTOR FOR SURFACE PREPARATION AS WELL AS THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR IN THE INSTALLATION OF THE SIKA MEMBRANE ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL SALE OF SIKA PRODUCTS AND SERVICES ARE SUBJECT TO SIKA' TERMS AND CONDITIONS OF SALE AVAILABLE AT USA.SARNAFIL.SIKA.COM.



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NON-COMPATIBLE WALL AIR BARRIER TIE-IN, MECHANICALLY ATTACHED ROOF

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