

Secondary Water Barrier – Sealed Roof Deck

A Secondary Water Barrier also sometimes referred to as a Sealed Roof Deck is a backup system to prevent water intrusion (through the joints in the roof decking) into the home in the event the primary roof covering and underlayment is blown off.

For the South Carolina Safe Home Program, when a home is being upgraded as part of the Program and the roof covering is removed and replaced, one of the following methods of providing a Secondary Water Barrier shall be performed:

Note: These methods are similar to the requirements for the Institute of Business and Home Safety (IBHS), FORTIFIED Re-Roofing Checklist standards.

Method A

All joints in structural panel roof sheathing or decking shall be covered with a minimum 4-inch-wide strip of self-adhering polymer modified bitumen tape meeting ASTM D 1970 or AAMA 711-13 Level 3 compliant self-adhering flashing tape applied directly to the sheathing or decking. The deck and self-adhering polymer modified bitumen tape shall be covered with one of the underlayment systems approved for the specific roof covering to be applied to that home using at least 30# underlayment. See Figure C-1.

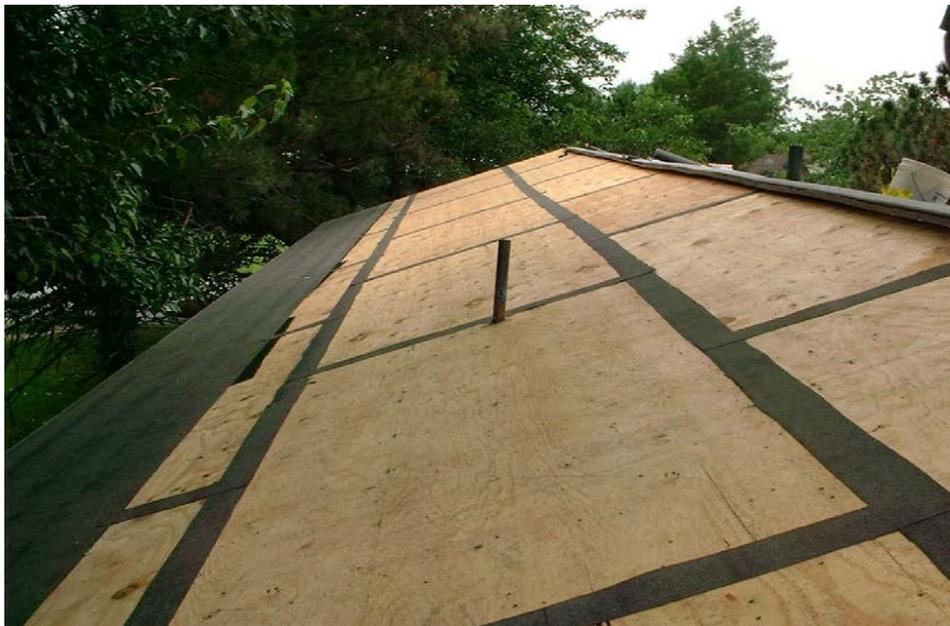


Figure C-1

Roof deck joints covered with approved material. Note application of underlayment started at lower end of roof deck.

Method B

The entire roof deck shall be covered with an approved self-adhering polymer modified bitumen sheet or self-adhered underlayment meeting ASTM D 1970. These are sometimes referred to as “peel and stick” or “peel and seal” coverings. This can be used on a dimensional lumber deck as well as panel sheathing.

Notes:

- 1. Some shingle manufacturers recommend #15 roofing paper/felt between the self-adhered underlayment and the shingles as a bond break. IBHS recommends this as well.*
- 2. Some manufacturers recommend evaluating existing attic ventilation when using a complete covered roof deck in this fashion.*

It is recommended that these items be determined to be in compliance with the manufacturer of the specific brand of roof covering material being used.



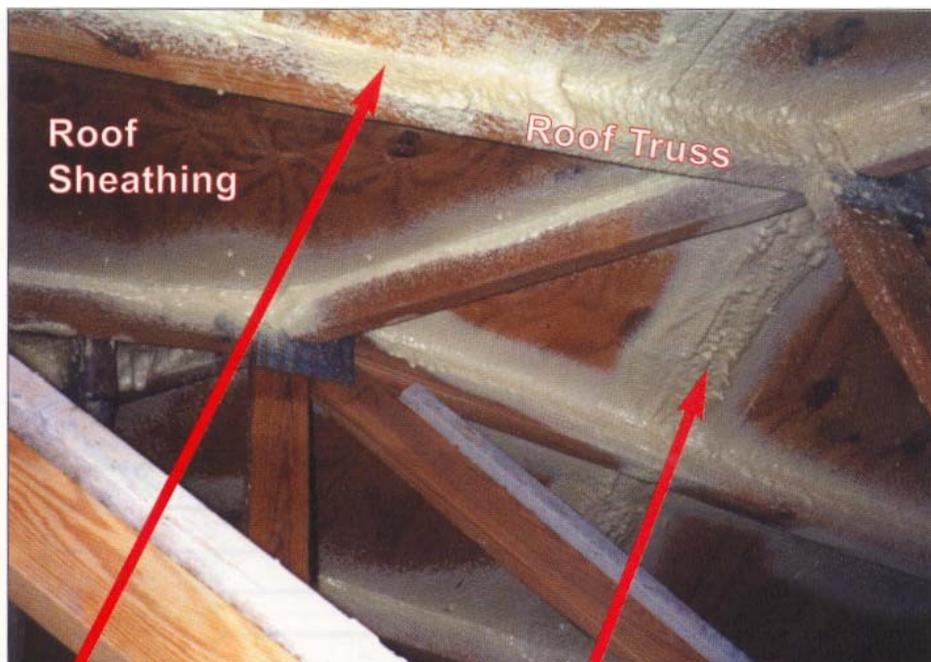
Figure C-2
Full Deck as a Secondary Water Barrier

Method C

An approved self-adhering underlayment installed in accordance with the manufacturer’s installation instructions. No additional underlayment shall be required on top of this sheet. This can be used on a dimensional lumber deck.

Method D

Application of a two-part urethane based closed cell spray-on adhesive to the attic side of the joints between the sheathing shall be deemed to meet the requirements for the secondary water barrier. See Figure C-4.



Roof deck/ truss joint with foam adhesive Sheathing joints with foam adhesive

Figure C-4
Sprayed Closed Cell Polyurethane Adhesive