



# ROOF INSTALLATION **MANUAL**

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[ZIPSYSTEM.COM](http://ZIPSYSTEM.COM)



**ATTENTION:** This installation guide is intended to provide general information for the designer and end user. The following guidelines will help you safely and properly install the ZIP System® roof and wall sheathing. We urge you, and anyone installing this product, to read these guidelines in order to minimize any risk of safety hazards and to prevent voiding any applicable warranties. This manual is a general installation guide and does not cover every installation condition. Proper installation shall be deemed to mean the most restrictive requirement specified by Huber Engineered Woods (HEW), local building code, engineer or architect of record or other authority having jurisdiction. You are fully and solely responsible for all safety requirements and code compliance. For additional information contact Huber Engineered Woods LLC.






**ENGINEERED  
WOODS**

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**SAFETY GUIDELINES:** Follow all OSHA regulations and any other safety guidelines and safety practices during installation and construction.

-  Use approved safety belts and/or harnesses or other fall protection equipment.
-  Install ZIP System® panels and tape only in dry conditions and on dry surfaces. Do not install in rain, snow, frost or other slippery conditions.
-  Wear rubber-soled or other high-traction footwear while installing ZIP System® sheathing in a roof application. Do not wear footwear with worn soles or heels.
-  Ensure the roofing surface is free from oil, chemicals, sawdust, dirt, tools, electric cords, air hoses, clothing and anything else that might create a tripping hazard.
-  Install temporary toe boards along the ZIP System® sheathing roof surface.



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## **ZIP SYSTEM® SHEATHING // OVERVIEW**

ZIP System® roof and wall sheathing panels are oriented strand board (OSB), wood structural panels with built-in protective overlays that eliminate the need for building wrap or roofing felt. Install the panels, tape the seams with ZIP System™ tape, and the building is rough dried-in.

When used on a wall, ZIP System® sheathing functions as a combination wall sheathing and code-recognized water-resistive and air barrier. The sheathing panel seams are sealed with ZIP System™ tape, protecting the wall from water intrusion. When ZIP System® sheathing is utilized for roof applications, felt underlayment is not required. In wall and roof coverings system requiring multiple layers of water-resistive barriers or underlayment, ZIP System® sheathing and tape is intended to replace only the first layer.

ZIP System® sheathing may be used for roofs and walls in Type V construction, in Type III construction as roof sheathing only, and other construction permitted under the International Residential Code.

ZIP System® sheathing should be covered with the finished roof covering or exterior cladding within 180 days of installation. Limitations and restrictions apply. Visit [ZIPSystem.com](http://ZIPSystem.com) for details.



## **ZIP SYSTEM® SHEATHING // PANEL SIZES**

ZIP System® sheathing panels are available in 4' x 8' sheets with self-spacing edge profiles and tongue and groove edge profile (5/8 only). ZIP System® panels are Exposure 1 rated and are available in the following span ratings and performance categories.

The **green** ZIP System sheathing denotes a 7/16-inch panel while the **sienna** ZIP System sheathing denotes either a 1/2-inch or 5/8-inch panel. Both the green and the sienna can be used interchangeably for the wall or roof.

### **24/16, Structural 1, 7/16 PERF CAT**

**NOTE:** 4' x 8' 7/16-inch Structural 1 are not available in all areas of the country. Please check with your supplier for availability in your area. Available lengths in 7/16" thickness for roof applications:

- 4' x 8'

### **32/16, Structural 1, 1/2 PERF CAT**

Available lengths in 1/2" thickness:

- 4' x 8'

### **40/20, Structural 1, 5/8 PERF CAT**

Available lengths in 5/8" thickness:

- 4' x 8'

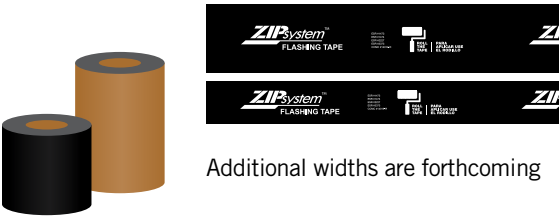
Longer length panels are available for wall applications only.



## ZIP SYSTEM® SHEATHING // TAPE SIZES

ZIP System™ tape rolls are available in 3-3/4 inch and 6 inch widths.

ZIP System™ stretch tape rolls are available in 6 inch and 10 inch widths.



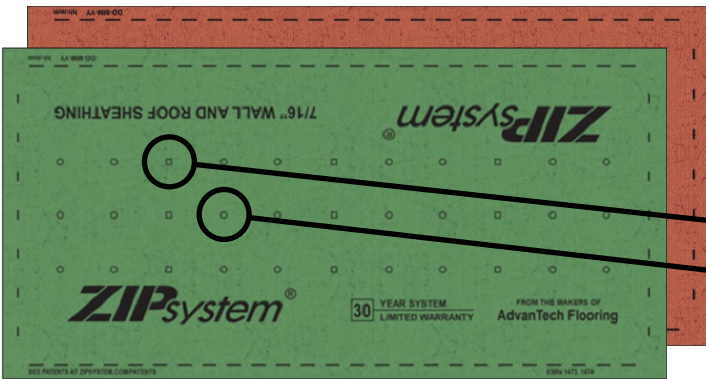
Additional widths are forthcoming



Do not install ZIP System™ tape in temperatures less than 0° F

## ZIP SYSTEM® SHEATHING // FASTENING

ZIP System® sheathing circles denote 16 inch o.c. framing and squares denote 24 inch o.c. framing.

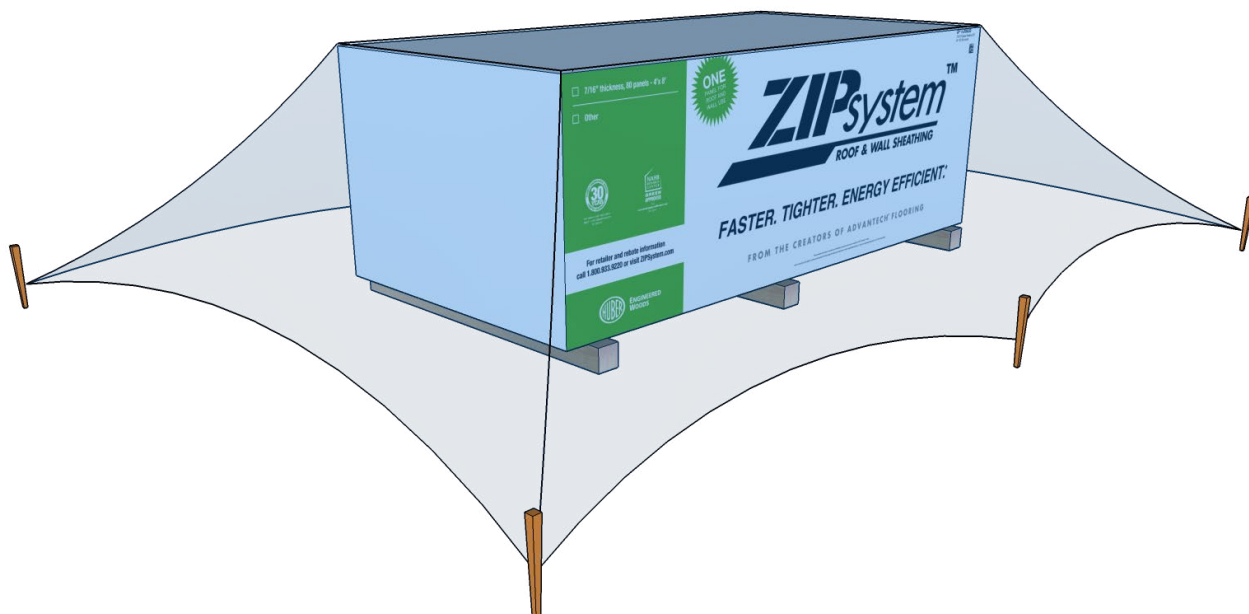


SQUARE = 24 inch o.c. framing

CIRCLES = 16 inch o.c. framing

## ZIP SYSTEM® SHEATHING // STORAGE & HANDLING

- ✓ Set panel stack on three supports (stickers) to keep off the ground.
- ✓ Outdoors, cover panels loosely with waterproof protective material.
- ✓ Anchor covers on top of the stack, but keep away from sides and bottom to assure good air circulation.
- ✓ In high moisture environments, cut banding on the panel stack to prevent edge damage.







## **ZIP SYSTEM® SHEATHING**

### **// GENERAL INFORMATION & COMPATIBILITY**

#### **FASTENERS**

ZIP System® sheathing must be installed with code-approved fasteners and by code approved methods. Please note, fasteners used to install ZIP System® sheathing are not required to be ring-shank, galvanized, stainless steel unless otherwise stated by the local building code, designer of record or the engineer of record.

#### **COMPATIBLE SUBSTRATES**

ZIP System™ tape is compatible with dimensional lumber (treated and untreated), OSB, plywood, house-wraps, PVC, vinyl and metal substrates. Please note, the ZIP System® panel substrate must be dry to the touch and free of any dirt or debris at the time of tape installation.

#### **SEALANTS**

ZIP System® sheathing and tape is compatible with butyl, polyurethane and 100% silicon sealants. When using 100% silicon sealants over ZIP System™ tape use a primer such as 3M Hi-Strength 90 or rub the tape with an acetone cleaner. Please note, when installing ZIP System™ tape over sealants the sealants must be completely cured before the tape is installed.



## **ZIP SYSTEM® SHEATHING**

### **// GENERAL INFORMATION & COMPATIBILITY**

#### **FLASHINGS - TAPES**

ZIP System™ tape must be used where two ZIP System® panels come together to create a seam at valleys, hips and in the same plane; however, other code approved flashing tapes that satisfy AAMA-711 or AC-148 can be used to flash penetrations and fenestrations.

#### **FLASHINGS – FLUID APPLIED**

ZIP System™ liquid flash can be used in lieu of ZIP System™ tape where two ZIP System® panels come together to create a seam at valley, hips and in the same plane. Other code approved liquid applied flashing membranes that satisfy AAMA-714 can be used to flash penetrations and fenestrations. When using Liquid Flash or other fluid applied flashing products over ZIP System™ tape, use a primer such as 3M Hi-Strength 90 or rub the tape with an acetone cleaner. ZIP System liquid flash can be used where ever ZIP System seam tape is shown.

#### **WRINKLES IN THE TAPE**

Rolling the tape during installation will significantly reduce the chance of tape wrinkling occurring. If wrinkles occur in the ZIP System™ tape there are two options. First, try to roll the wrinkles out with the ZIP System™ tape roller. This should help eliminate any wrinkles or fish mouths (avenues for water to get to the seam). Secondly, if rolling the tape does not remove the fish mouths that section of tape can be removed and a new piece of tape must be applied that overlaps the existing tape by three inches or place another piece of tape over the fish mouth and roll the tape.



## ZIP SYSTEM® SHEATHING // GENERAL INFORMATION & COMPATIBILITY

### PARAPET WALL TERMINATION

ZIP System® sheathing used as parapet wall sheathing is compatible with TPO and EPDM built-up roofing membrane terminations. It is recommended to transition from the top of the built-up membrane to the surface of ZIP System® sheathing with a piece of ZIP System™ tape or ZIP System™ liquid flash. Refer to roofing membrane manufacturer's installation instructions to ensure the roofing membrane is firmly attached to the wall sheathing. Please note, a polyurethane or solvent based adhesive should be used when adhering the built-up membrane to ZIP System® sheathing, and that all panel seams should be taped prior to installing the built-up membrane over ZIP System® sheathing.

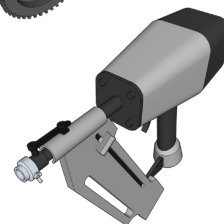
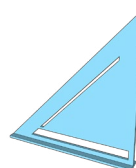
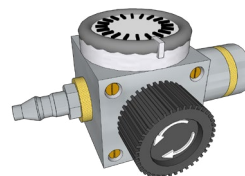
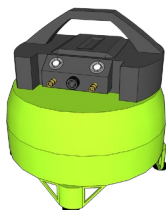
### TOOLS

#### *Common*

- Pneumatic nail gun
- Framing hammer
- Air compressor
- Speed square
- Tape Roller
- PPE







#### *Recommended*

- Flush nail collars
- Air line regulators





## **ZIP SYSTEM® SHEATHING // NOTES & LIMITATIONS**

-  Do not use on roofs with slopes less than 2/12.
-  Do not use abutted against general stone or masonry without providing a minimum of a 1/2" gap.
-  ZIP System products are not recommended for manufactured housing applications that are built under a federal building code administered by the U.S. Department of Housing and Urban Development (HUD).
-  Do not use ZIP System™ tape to permanently seal around circular roof projections (plumbing vents, pipes, curved walls, etc.)
-  When original roofing is removed and replaced on existing ZIP System® sheathing, the roof should be covered with an additional roofing underlayment prior to installation of the new finished roofing or cladding.
-  In roofing systems requiring multiple layers of water-resistive barriers, like clay tile, ZIP System® sheathing is intended to replace only the first layer.



## **ZIP SYSTEM® ROOF SHEATHING** **// GENERAL INSTALLATION - ROOF**

The following installation steps are presented as a general outline of the installation process. These are manufacturer installation recommendations – please visit [ZIPSystem.com](http://ZIPSystem.com) for a library of flashing and installation details. You are fully and solely responsible for all safety requirements. Good construction and safety practices should be followed at all times.

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## **ZIP SYSTEM® ROOF SHEATHING** **// PANEL ORIENTATION AND SPACING**

Ensure that the panel surface is dry and clean of any nails, sawdust, or other debris or protrusions prior to installing or walking on the panels.

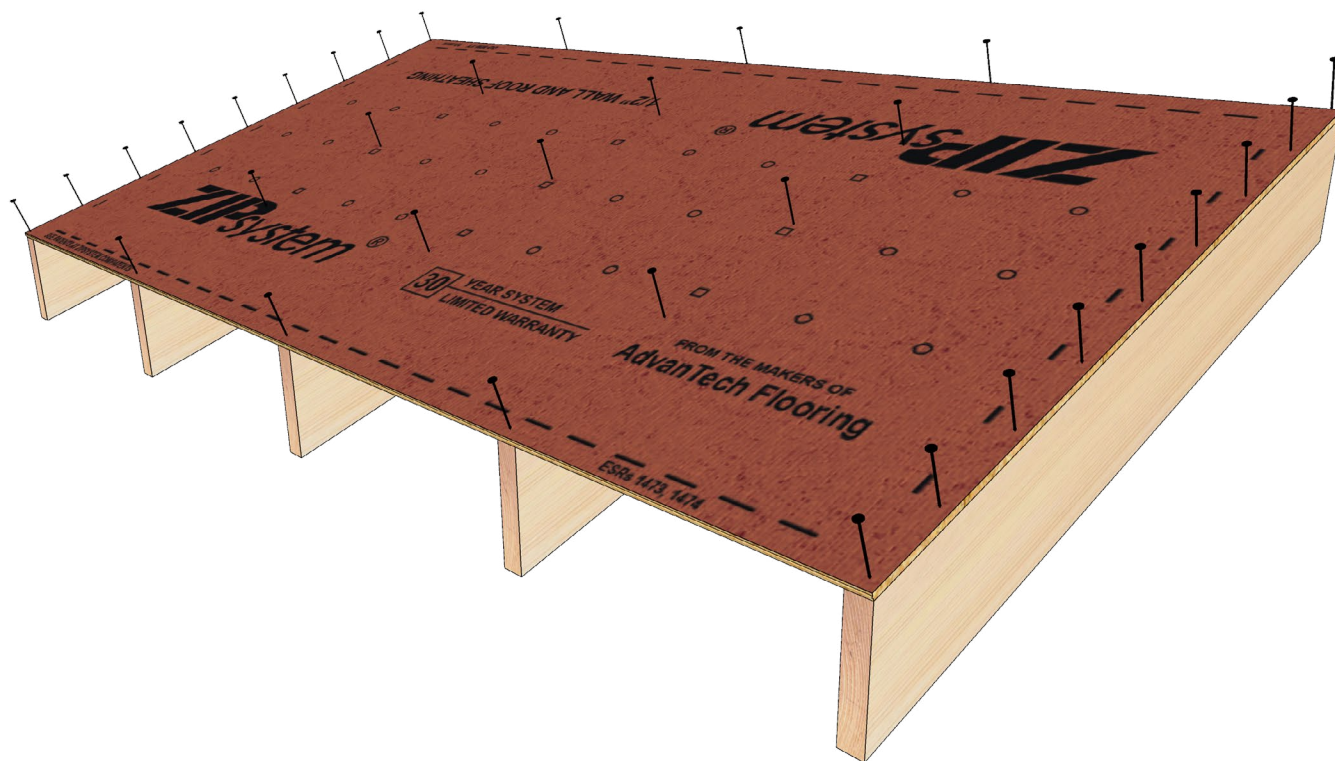
After ensuring compliance with all OSHA and local code safety guidelines, install ZIP System® sheathing panels with the moisture barrier surface facing outside. The long edge (8') should be oriented perpendicular to the framing members, and panels should be installed with the 4' edge seams staggered a minimum of 24"





## ZIP SYSTEM® ROOF SHEATHING // FASTENING

Fasten the panels to the framing members with code approved fasteners. Space fasteners 6" o.c. along supported edges and 12" o.c. at intermediate supports, unless otherwise specified by local code or the designer of record. It's the responsibility of the general contractor to verify proper fastener type and spacing prior to installation. Apply fasteners 3/8" from the ends and corners. ZIP System sheathing does not have proprietary diaphragm values and have the same diaphragm values of OSB or plywood of equivalent thickness.





## ZIP SYSTEM® ROOF SHEATHING // PANEL ORIENTATION AND SPACING

1/8" spacing between square edges of all adjacent panels is recommended, in accordance with industry standards for wood sheathing. The unique edge profile is designed to accommodate incremental panel expansion and does not require manual gapping along the 8' edges.



8' edge meets 8' edge



8' edge meets 4' edge



4' edge meets 4' edge

Maintain 1/8" space wherever the tongue and tongue profile does not exist. Unique edge profile is on 8' edges only. Ensure that ZIP System® panels span at least three framing members and a framing member supports the entire 4' edge of the panels.

We recommend the use of code recognized fasteners with the head of the fastener driven flush to the surface of the ZIP System® panel. Flush fastener placement is best achieved by properly setting the nail gun air compressor to the manufacturer's recommended setting or using in-line pressure regulators. Many nail guns have depth control adjustments to ensure fasteners are driven flush. For tools that do not have a depth control adjustment feature, we recommend fitting a flush drive attachment collar on the end of the gun to help limit fastener embedment depth.













## **ZIP SYSTEM® ROOF SHEATHING // TAPING**

Apply ZIP System™ tape after all ZIP System® sheathing panels are fully fastened to wall-framing members. ZIP System™ tape is a contact tape that requires pressure for an adequate seal.

### **REMEMBER TO ALWAYS:**

-  Apply ZIP System™ tape after all ZIP System® sheathing panels are fully fastened to roof framing members. Only ZIP System™ tape should be used to seal the seam of ZIP System® panels.
-  Ensure that the panel surface is dry and free of sawdust and dirt prior to taping.
-  Ensure that the tape is centered over the seam within +/- 1/2" to provide adequate coverage
-  Wherever tape splices occur at a horizontal or vertical seam, create an overlapping splice of at least 3".
-  At T-joints, tape pieces should overlap by at least 1".
-  Tape over any areas of the panel that are damaged during construction.
-  Use the ZIP System® tape gun or roller to apply pressure to the tape and smooth out any wrinkles.
-  Avoid stepping on tape in high temperature environments.





## **ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL**

### **ROOF COVERINGS**

ZIP System® sheathing is code recognized sheathing and underlayment and is approved for use with following roof coverings:

- Asphalt-fiberglass Shingles
- Metal Roofs (shingles and panels)
- Clay, Concrete Tile
- Slate and Slate-type Shingles
- Wood Shingles and Wood Shakes

When installing roof coverings follow applicable codes and manufacturer's suggested instructions. Some roof coverings require a slip-sheet in addition to conventional underlayment. Where slip-sheets are required, they should be installed over ZIP System® sheathing panels after all seams are taped with ZIP System™ tape. Visit [ZIPSystem.com](http://ZIPSystem.com) for updates and installation details.

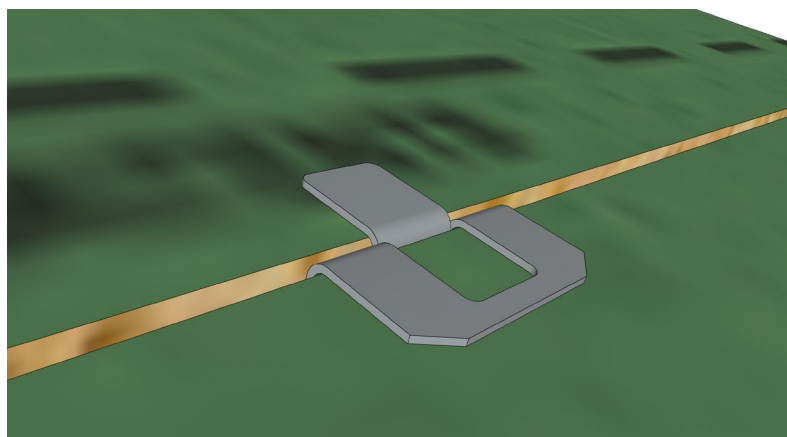
ZIP System® sheathing is intended to replace the first layer of underlayment required by the IBC and/or IRC. Additional layers of underlayment may be required by code depending on the local climate. ZIP System® sheathing is not be construed as a replacement for interlayment. Apply wood shakes on roofs with slopes 4/12 or greater. Install wood shakes according to applicable codes and manufacturer's instructions. Finished roof should be installed per the manufacturer's installation instructions.



## ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

### H-CLIPS

Huber Engineered Woods requires panel edge support for 7/16" ZIP System® sheathing installed on roof supports spaced more than 16" on center. Panel Edge support might be blocking, tongue-and-groove edges or panel edge clips (H-clips).

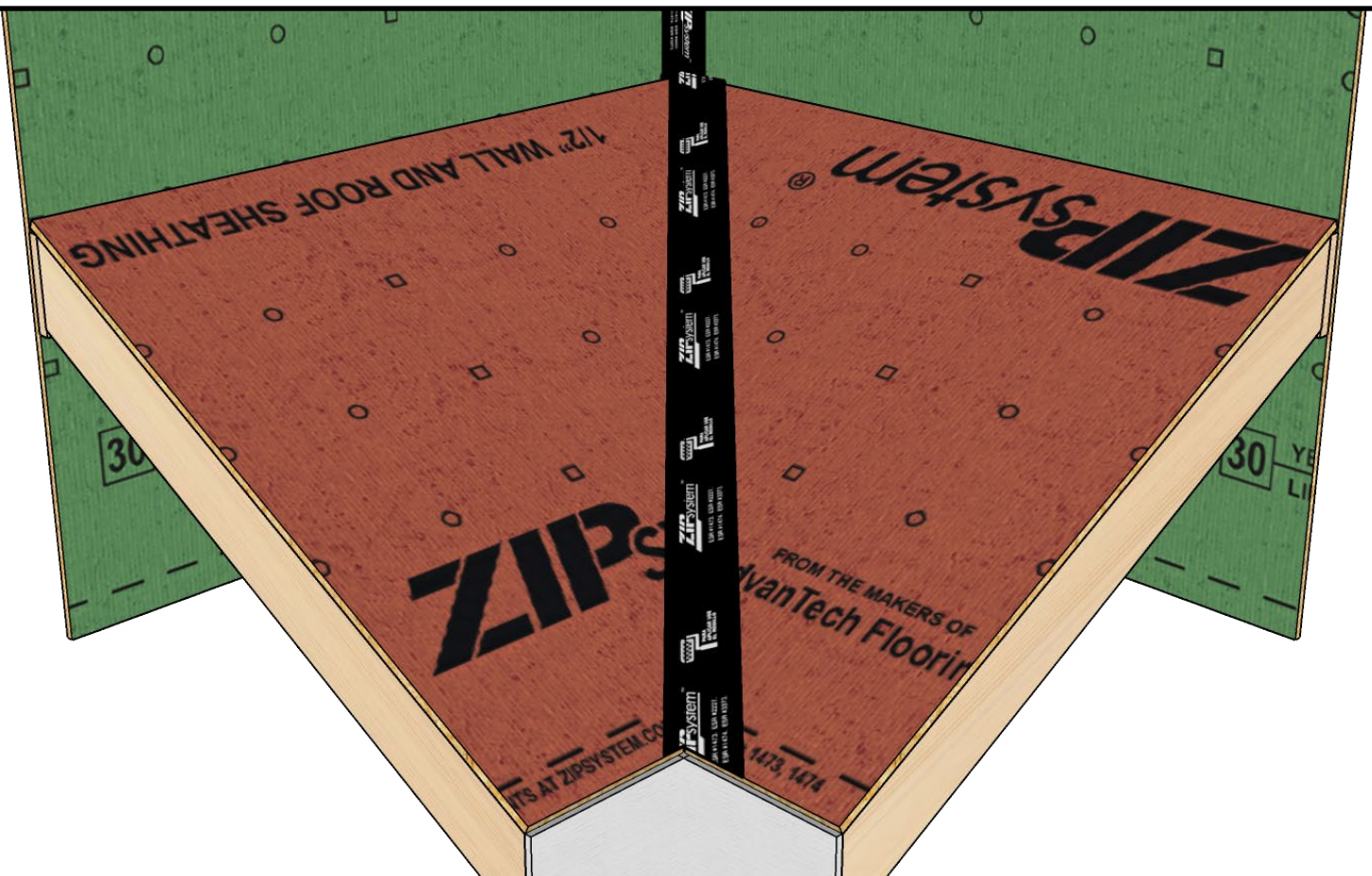


When taping over H-clips, it is important to make sure that the tape is centered and adequate pressure is applied on all sides of the clip to ensure a proper seal. It should be noted that the use of edge support (H-clips, blocking, tongue-and-groove edges, etc.) does not increase the maximum allowable load on a roof for a given truss or rafter spacing.

## ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

## ALTERNATIVE DETAILS // TAPING ROOF VALLEYS

For valley areas of framing, we recommend you use 6" wide ZIP System™ tape. This tape is wider than panel seam tape and is designed to give you optimal protection in valley areas. Starting from the bottom and working your way up, apply one continuous piece of 6" tape so that the center of the tape is over the valley seam. Roll the tape to apply pressure to the tape to ensure proper contact with the panel and to eliminate any wrinkles that might have occurred in the tape. Take special care to seat tape completely into the valley. It is important to pay extra attention to valley taping as water is directed toward the valleys during rain events.



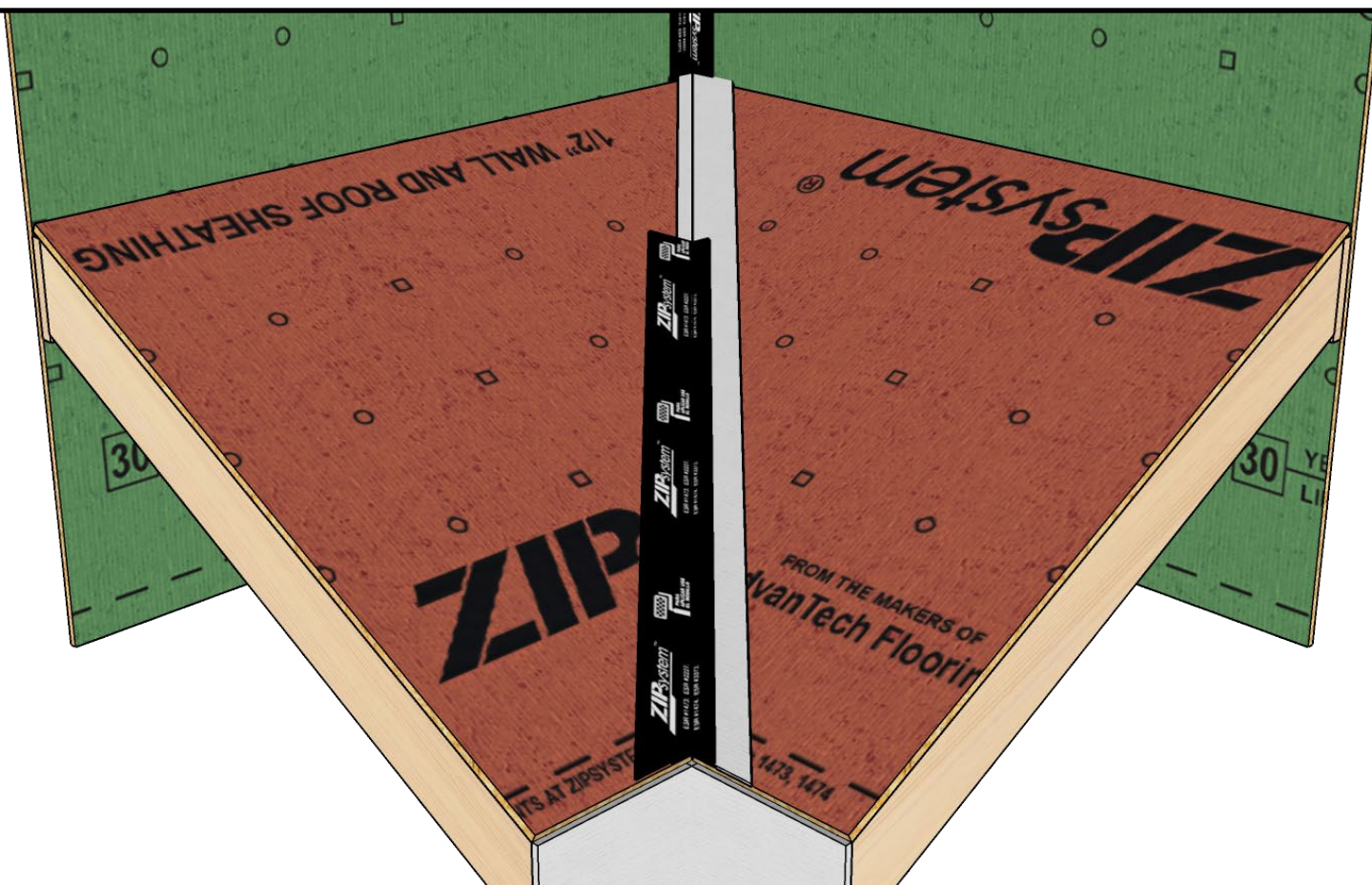




## ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

### ALTERNATIVE DETAILS // TAPING ROOF VALLEYS

If 6" ZIP System™ tape is not available, use two continuous pieces of 3-3/4" ZIP System™ tape over the entire length of the valley seam, overlapping the pieces on the valley seam by at least 1". Starting from the bottom, install the first piece of tape overlapping the valley seam by at least 1". Roll the tape to apply pressure to the tape to ensure proper contact with the panel and to eliminate any wrinkles that might have occurred in the tape. Apply the second piece of tape, overlapping the first piece in the valley seam by 1". Roll the tape to apply pressure and the tape is adequately adhered and tightly pressed into the valley seam. It is important to pay extra attention to valley taping as water is directed toward the valleys during rain events.



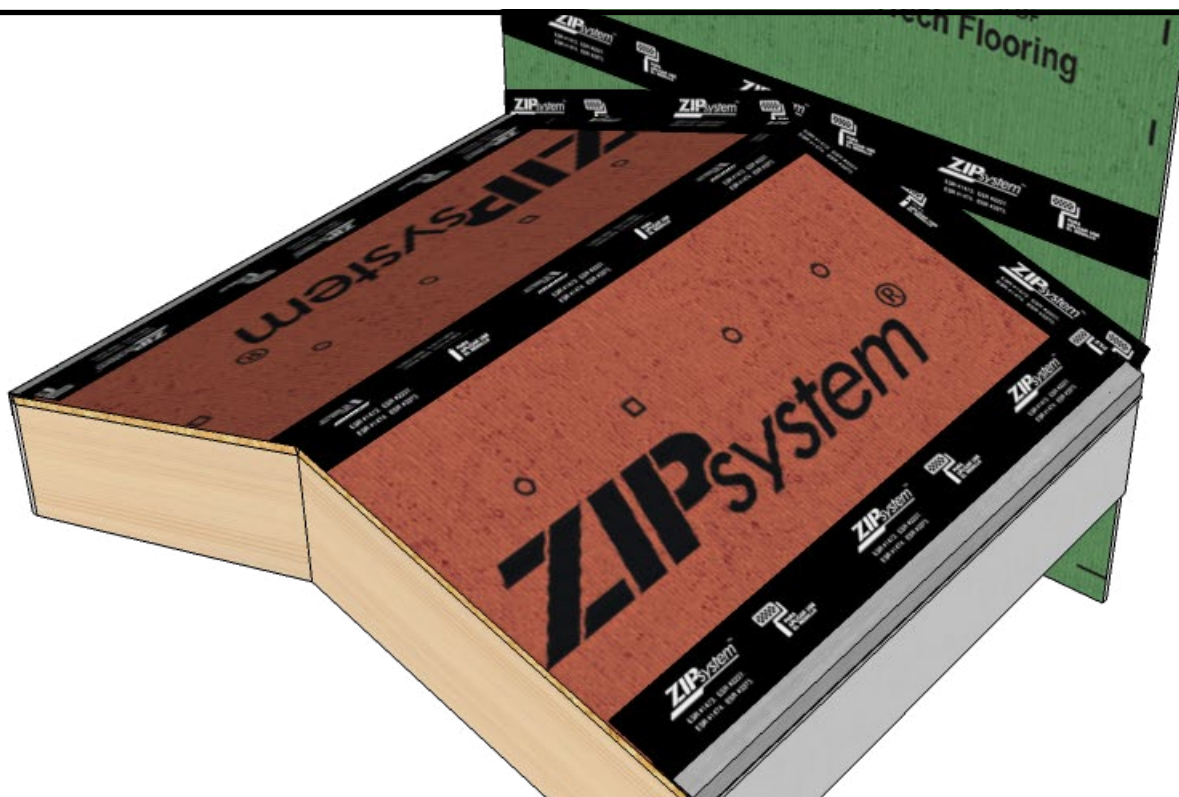


## ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

### ALTERNATIVE DETAILS // TAPING HIPS & RIDGES

To provide temporary weather protection to roof/wall intersections of dormers or other wood-sheathed projections, apply 2" of the tape width up the vertical projection from where it intersects with the roof. The remaining tape width can be adhered to the ZIP System® roof sheathing panels. Roll the tape to to apply pressure to the tape and smooth out any wrinkles.

Install ZIP System™ tape over hips and ridges by centering the tape over the peak seam. Apply tape in sufficient length to completely extend the length of the hip or ridge. Starting from the lowest point of the hip and working up, press tape into place keeping tape centered over the hip. Apply pressure onto the surface of the tape to ensure a secure bond between the panel and the tape. Cut ridge tape as required for ventilation prior to installing ridge vent.

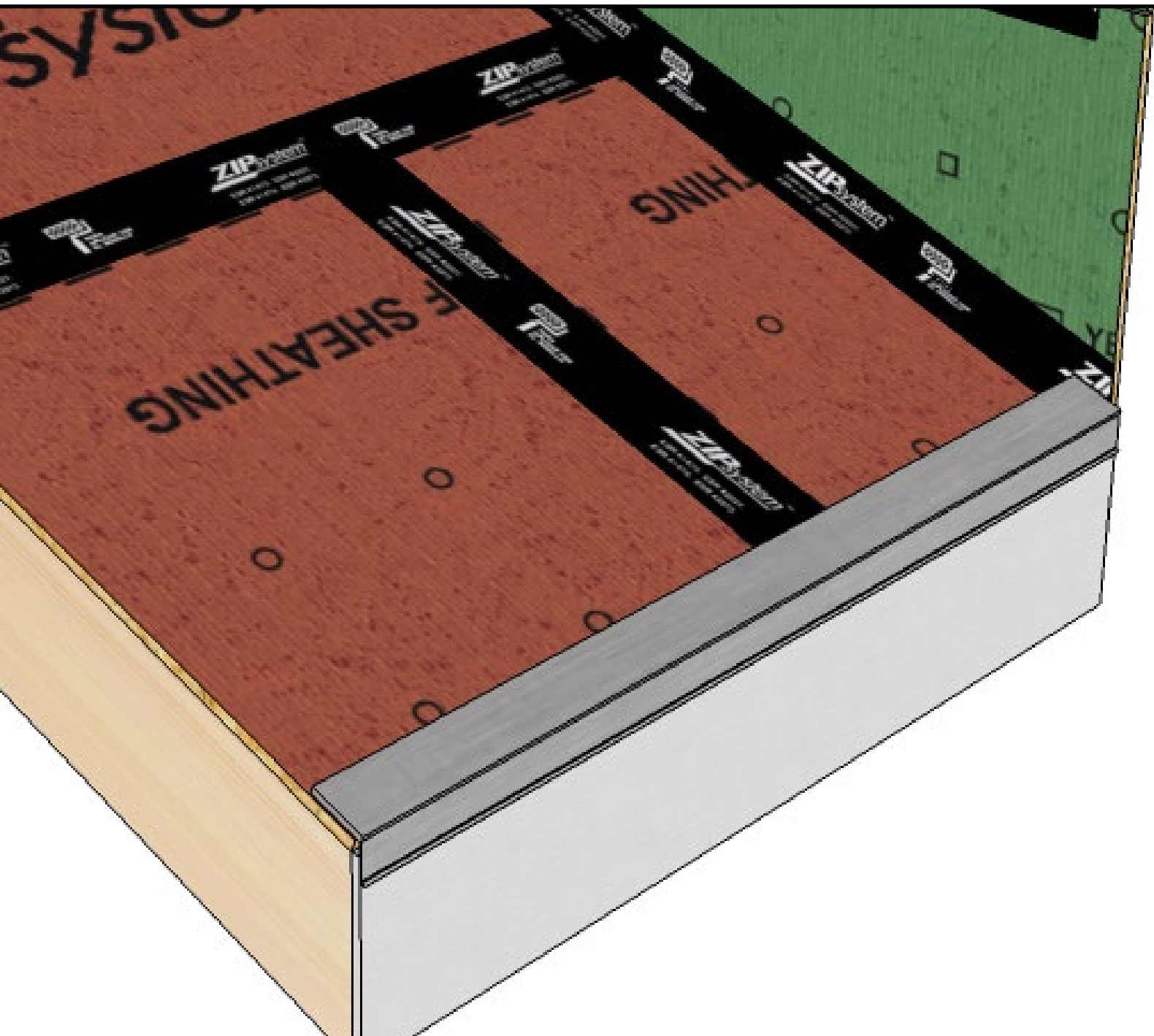




**ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL**

**ALTERNATIVE DETAILS // DRIP EDGE**

**STEP 1:** Install the drip edge  
per manufacturer recommendations

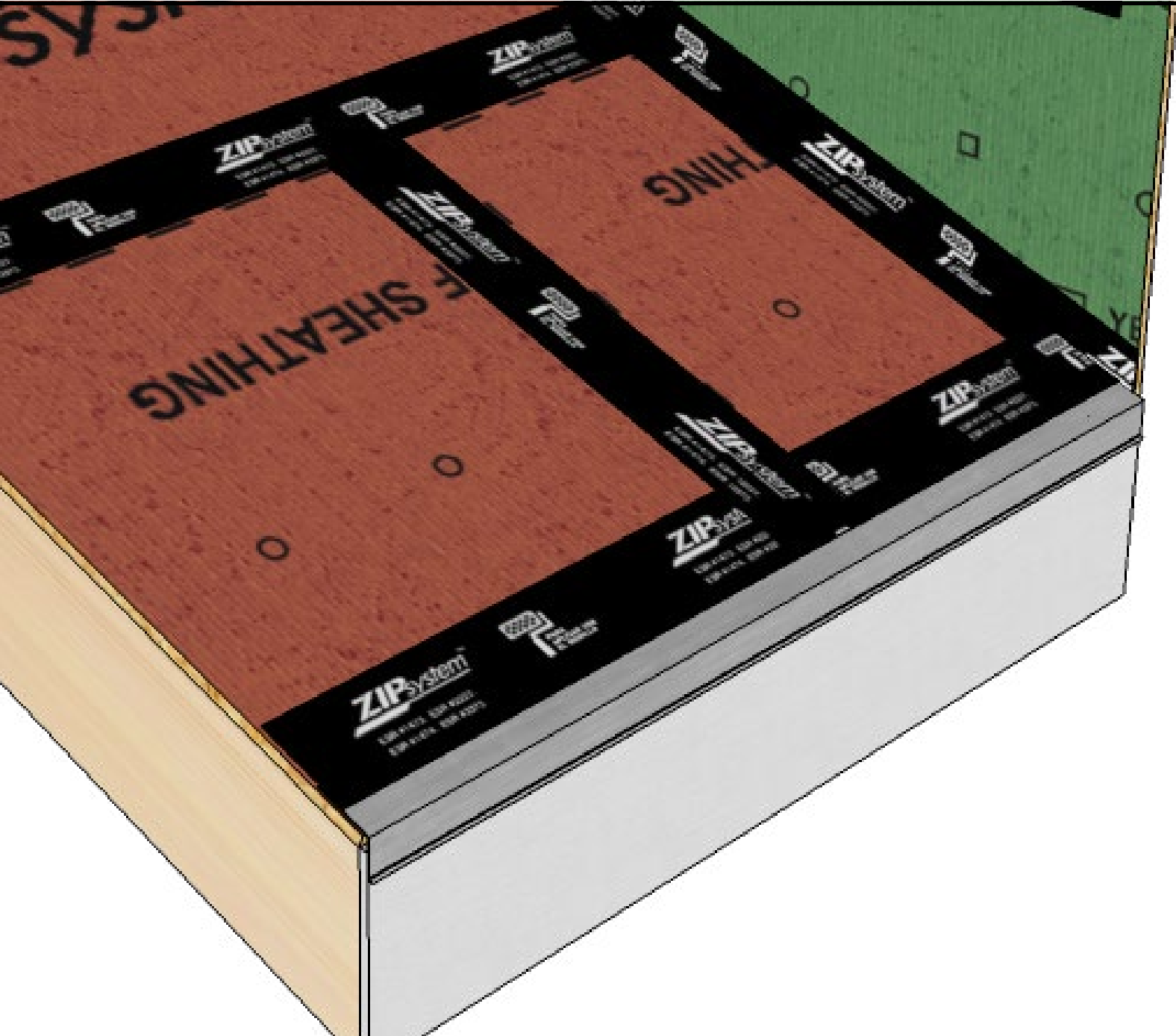
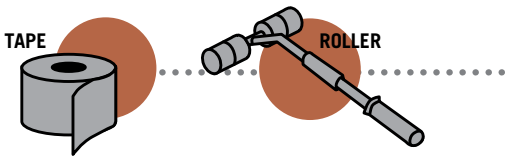




**ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL**

**ALTERNATIVE DETAILS // DRIP EDGE**

**STEP 2:** Tape the top edge of the drip edge back to the surface of ZIP System sheathing with ZIP System™ tape.

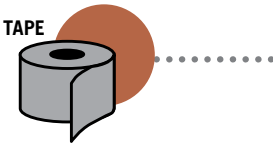




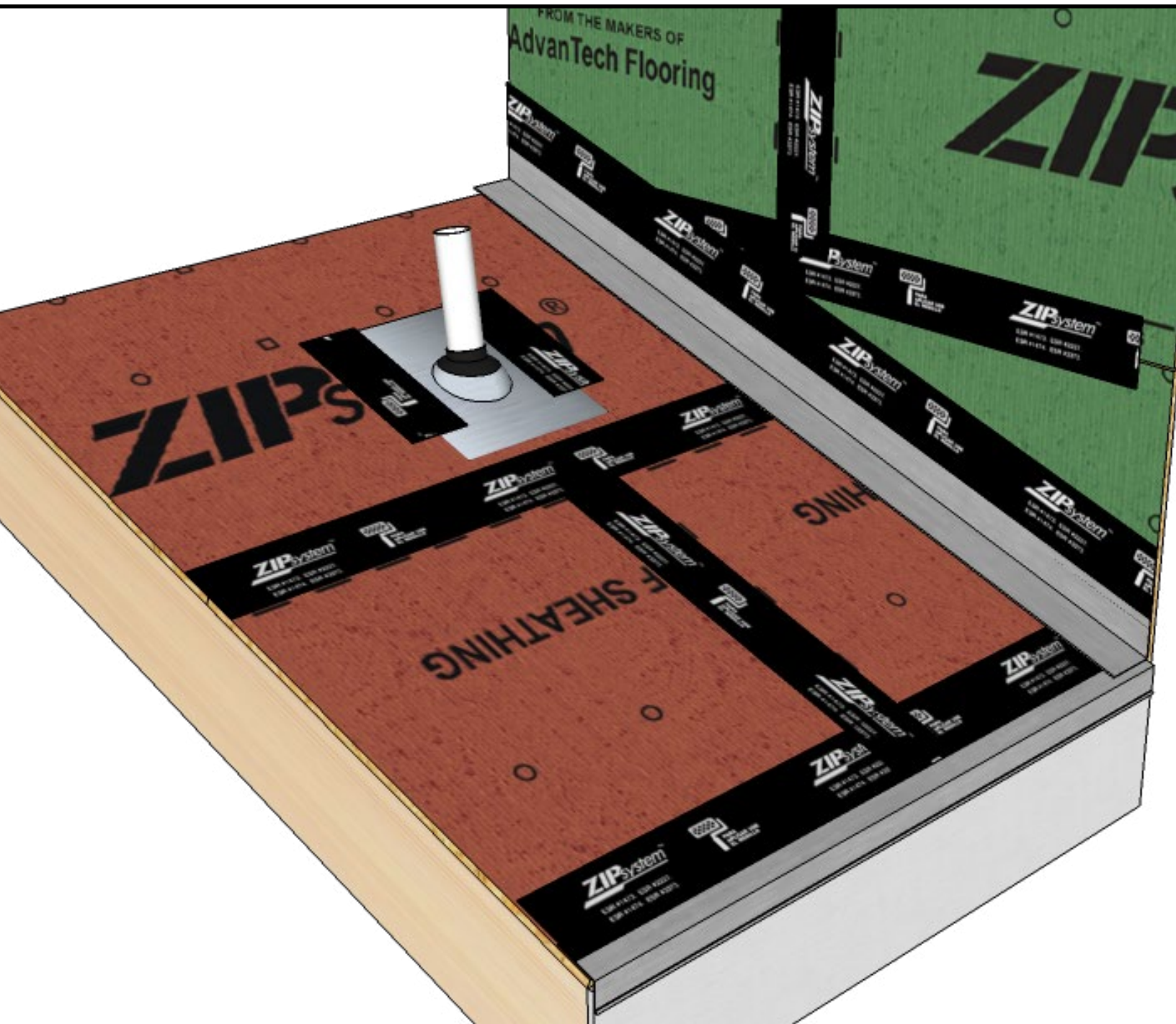


**ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL**

**ALTERNATIVE DETAILS // PIPE BOOTS**



**STEP 1:** Starting from each of the jambs, apply ZIP System™ tape.



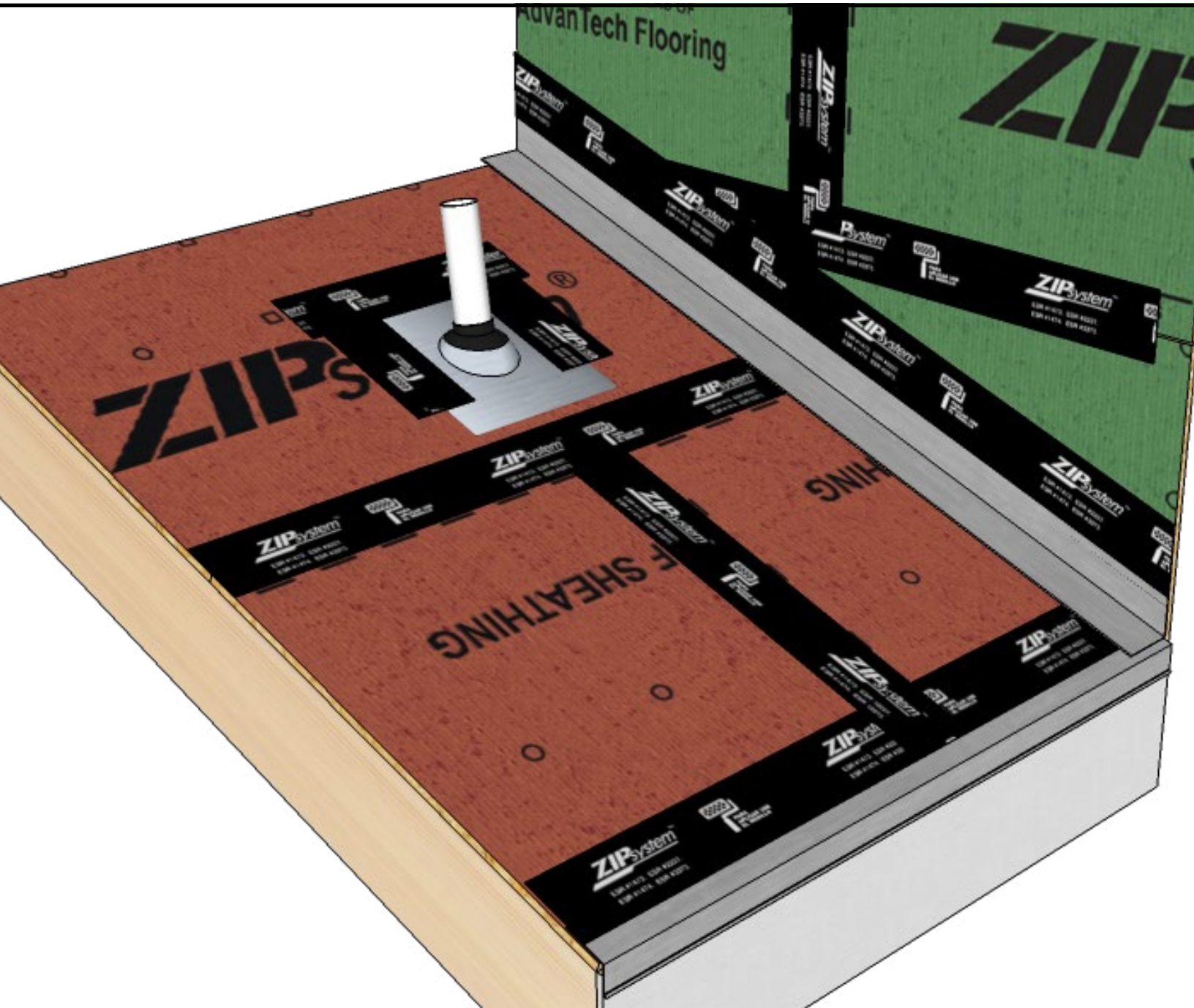
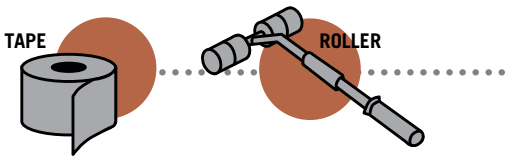




**ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL**

**ALTERNATIVE DETAILS // PIPE BOOTS**

**STEP 2:** Apply a piece of ZIP System™ tape along the top of the plumbing vent and roll the tape.

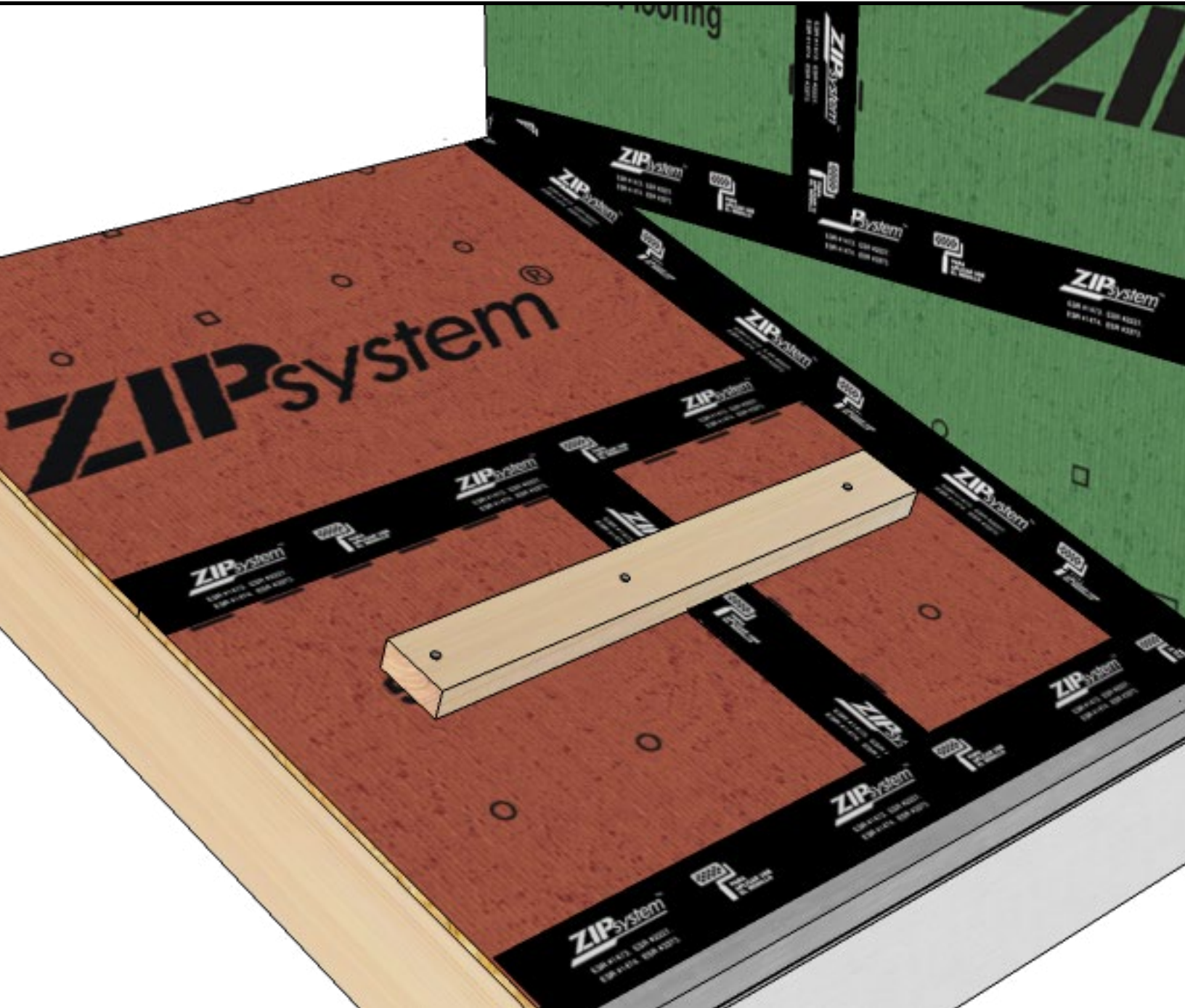




# ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

## ALTERNATIVE DETAILS // TOE BOARD

**STEP 1:** Often times toes boards are used to assist the installer during the installation of the panels.

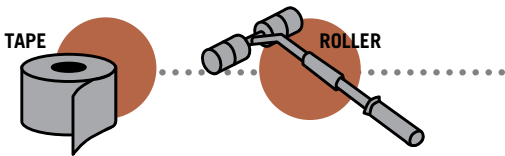




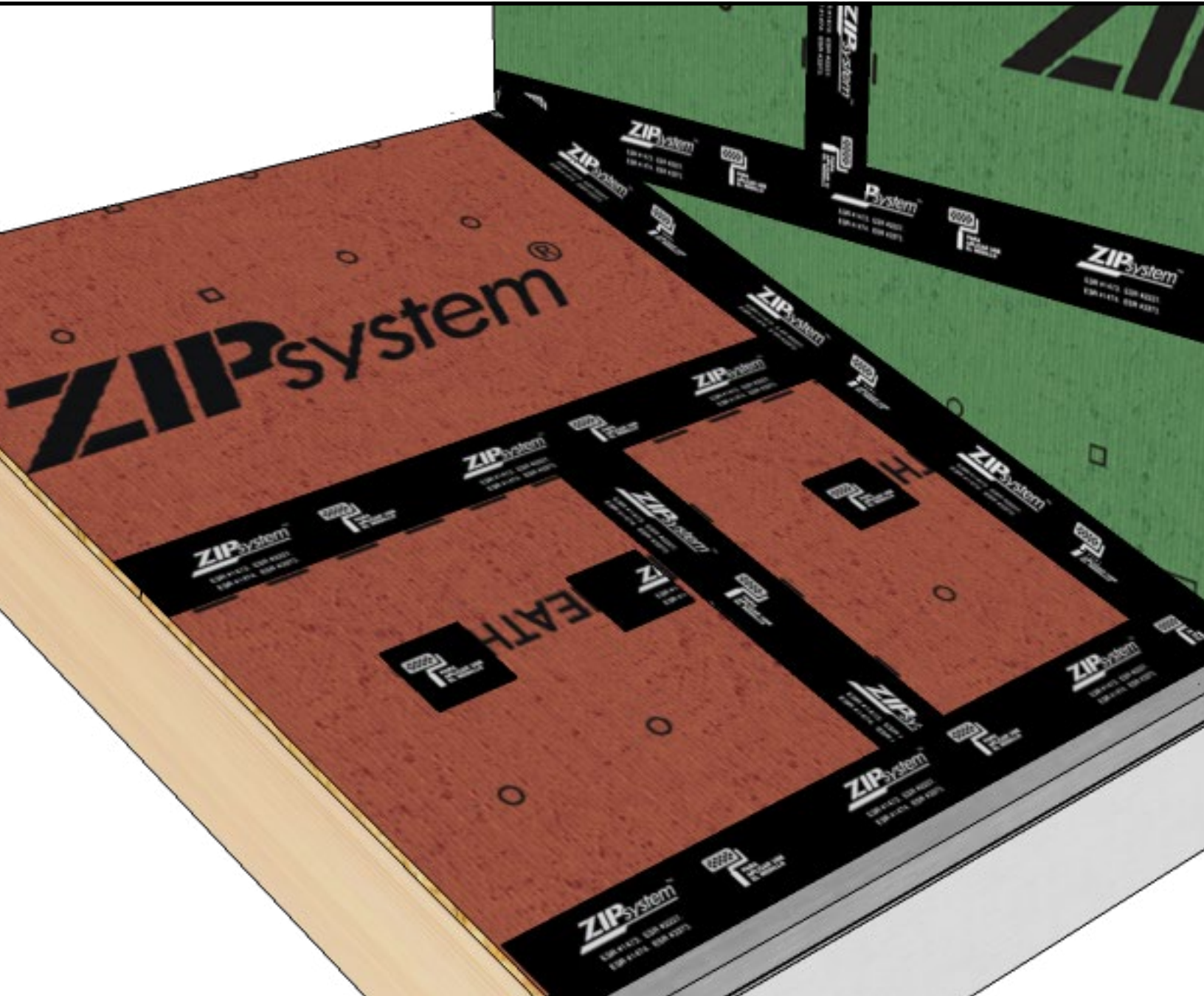


# ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

## ALTERNATIVE DETAILS // TOE BOARD



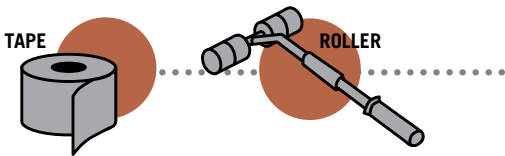
**STEP 2:** For fastener holes from toe boards or other temporary nailing, install ZIP System™ tape or ZIP System™ liquid flash a minimum of 1" around the fastener hole.



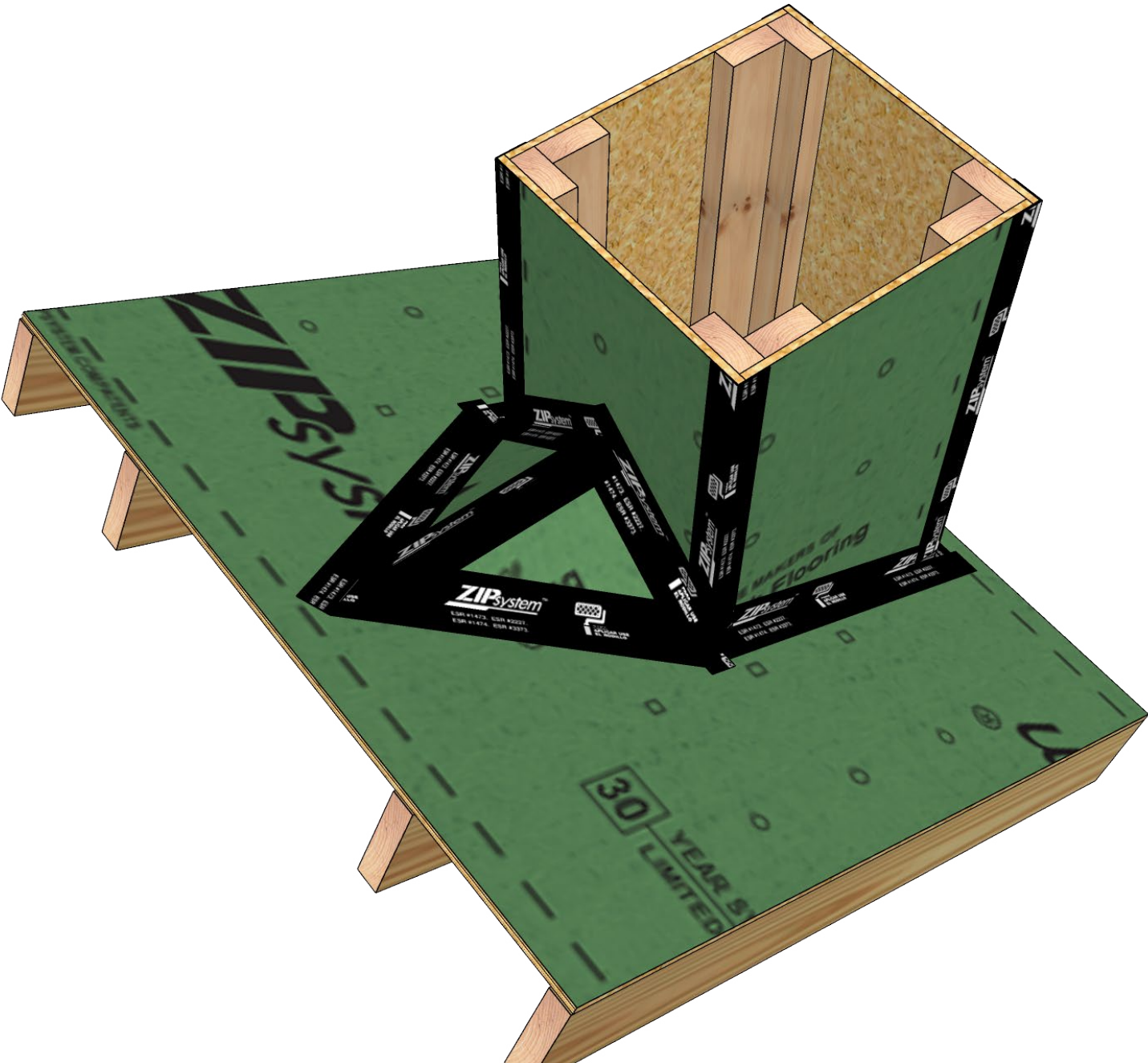


# ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

## ALTERNATIVE DETAILS // CHIMNEY CRICKET



**STEP 1:** Tape all panel joints of the ZIP System® panels. Roll the tape.

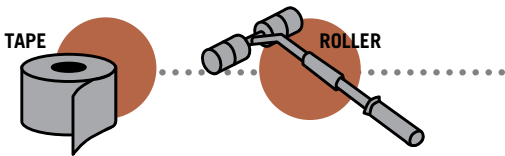




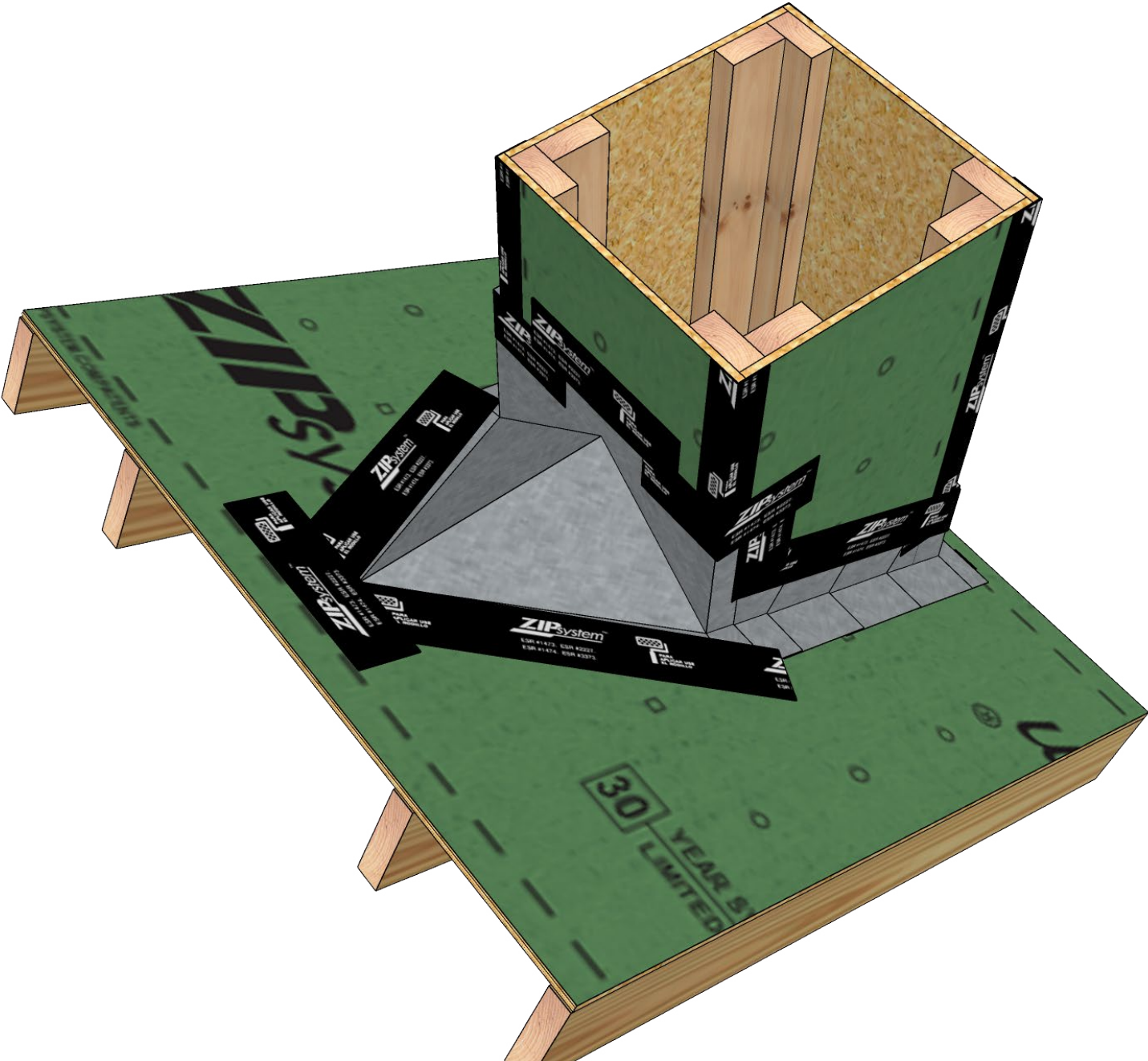


ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

ALTERNATIVE DETAILS // CHIMNEY CRICKET



**STEP 2:** Install all step flashing and cricket flashing. Use ZIP System™ tape to flash back to ZIP System® sheathing.





## ZIP SYSTEM® ROOF SHEATHING // COMMON DETAIL

### ICE AND WATER MEMBRANES

Self-adhering ice and water barriers may be required by local building code, the authority having jurisdiction or the designer of record. ZIP System™ tape is not considered a replacement for self-adhering ice and water barriers. Therefore, when self-adhering ice and water barriers are required, they should be installed in addition to ZIP System™ tape. If desired, install a piece of ZIP System™ tape over the top edge of the ice and water membrane.

