

# ForceField™ Air & Water Barrier System installation instructions



# Protection and Performance inside and out

The ForceField™ air and water barrier system consists of engineered wood sheathing panels laminated with a proprietary air and water barrier. Once the panels are installed on a structure and the panel joints are taped with ForceField™ seam tape, it creates an integrated weather resistant barrier system for residential or light commercial construction that eliminates the need for house wrap.



## ForceField™ Air & Weather Barrier System

The ForceField system eliminates the need for house wrap. When you skip this unnecessary step it helps save you time and labor costs, which ultimately lowers your total installed cost. ForceField requires only one installer to tape the seams between the panels. House wrap takes at least two installers. Plus, house wrap requires special attention for window and corner details, whereas ForceField makes it easy to flash windows, doors and other penetrations. You'll never have to deal with re-working blown off house wrap again.



## Code Compliance

ForceField is recognized by the APA-The Engineered Wood Association Product Report PR-N136 as a building code and energy code compliant structural wood sheathing, water-resistive barrier and air barrier. The basis of recognition for the ForceField system to be used as a water resistive barrier are IBC Section 104.11 and IRC Section R104.11 (alternative materials to the water-resistive barrier requirement defined in IBC Section 1404.2 and IRC Section R703.2). The ForceField system also serves as a continuous air barrier as prescribed by the 2012 IECC, Section C 402.4 air leakage, for both materials, C 402.4.1.2.1, and assemblies, C402.4.1.2.2, provided the joints, openings, and penetrations are sealed.



## Safety

Follow all OSHA regulations and other safety practices when installing the ForceField system. Wear appropriate safety equipment including but not limited to safety helmets, eye protection, safety belts, harnesses and other fall protection. ForceField system panels are only for use in wall sheathing applications and should only be used in dry conditions. Do not install in rain, snow, frost or other weather that might result in slippery conditions.



[gpforcefield.com](http://gpforcefield.com)

Check out our website or call 800-284-5347  
to learn more about ForceField and other  
high quality wood products from Georgia-Pacific





# ForceField™ Air & Water Barrier System installation

*For detailed instructions on general wall sheathing panel installation, please refer to the APA Engineered Wood Construction Guide, Form No. E30, available at [buildgp.com](http://buildgp.com), the Georgia-Pacific Panel Guide App for iOS or Android, or in the publication section of [apawood.org](http://apawood.org). For support and nail spacing, refer to Table 23, and for additional information on wall bracing in high wind or seismic loading areas, refer to Table 28 of the guide. Video instructions are also available at [buildgp.com](http://buildgp.com) and via the Georgia-Pacific Panel Guide App.*

## **Nailing the Panels**

The weather barrier side of ForceField panels should face outside of the frame. **Spacing of 1/8" should be maintained at all edge and end joints.** Use a minimum 6d common nail spaced 6" o.c. along panel edges and 12" o.c. at intermediate supports (see figures 1 and 2). **If pneumatic nail guns are used, be sure to set air pressure to drive nail heads flush or a maximum 1/16" below the panel surface to avoid loss of nail holding and shear strength, and to avoid creating a potential point of water entry.** Guidelines are included on the panel surface to aid in locating supports for nailing.

## **Cutting the Panels**

When cutting ForceField panels with a circular saw, **the panels should be positioned with the weather barrier side facing down** to help prevent edge fraying. Whenever possible the cut edge of the panel should be installed toward the ground. If the panel's cut edge is vertical or facing away from the ground, tape that edge immediately after installation with ForceField seam tape.

## **Taping the Panel Seams**

ForceField seam tape from Georgia-Pacific must be used to seal the seams between sheathing panels, around openings, penetrations and material transitions. Tape substitutions not covered by the warranty. For best performance results, immediate sealing of joints with tape is required.

**Before the application of tape, ensure that the sheathing surfaces are free from moisture, dirt and other debris.** Center the tape over the seam. ForceField seam tape is a contact tape requiring pressure to adequately seal. Apply modest pressure on the tape surface with your hand or a J-roller to ensure that constant bonding occurs between the tape and the panel and to eliminate wrinkles and air bubbles to achieve the proper seal. Whenever tape splices occur, a 2" overlap should be used. Sequence tape application such that the vertical tape is overlying or underlying the horizontal joint tape to ensure a shingle-type application. At T-joints, the tape should overlap by 1".

### **QUICK TIPS - Panels**

- Select the correct panel thickness or span rating for the application.
- Install ForceField panels with weather barrier side facing out. The panels may be installed either horizontally or vertically.
- Space panels 1/8" apart at panel ends and edges, and around window and door openings.
- Fasten panels with minimum 6d common or deformed shank nails for panels 1/2" thick or less, and with 8d common nails for panels 5/8" thick and above.
- Place nails 3/8" from panel edge and spaced 6" apart along panel edges and 12" apart along intermediate supports.
- Wall sheathing panels should not be glued to framing.
- Apply ForceField tape across areas of over-driven fasteners or on top of nails that have over penetrated by 1/4".

### **QUICK TIPS - Tape**

- Align and position self-adhering ForceField seam tape over the joint. Press the tape firmly onto the joint. Ensure there is at least 1" tape coverage on either side of the joint.
- On horizontal joints or vertical splices, ensure the tape overlaps at least 2" at all ends of the tape. At T-joints, tape should overlap by at least 1".
- Ensure the above taped section is overlapping the lower tape section so that all overlaps are shingle style.
- Press taped joints and overlaps with your hand or a J-roller to ensure a tight seal to the panel and to eliminate air bubbles and loose edges.
- For best performance, do not remove and re-apply tape.
- Tape substitutions for ForceField seam tape are not covered by the warranty.

## **Overlay Repair**

ForceField seam tape can be used to repair damaged areas of the overlay. Center the tape over the affected area and apply modest pressure on the tape surface with your hand or a J-roller to ensure that constant bonding occurs between the tape and the panel and to eliminate wrinkles and air bubbles to achieve the proper seal.

## **Flashing and Sealing Windows, Doors, Penetrations and Transitions**

Use Georgia-Pacific flashing tape for penetrations and terminations of the exterior wall, exterior wall intersections with roofs, chimneys, porches, decks, balconies, and similar projections, and at built-in gutters and similar locations where moisture could enter the wall. Always be sure to follow local building code requirements.

Figures 2 through 11 are representative of typical flashing installations but are not intended to address all possible construction scenarios. Use your hand or a J-roller to ensure proper bonding contact and smooth out any wrinkles to ensure full tape to panel contact.

## **ForceField Sheathing and Tape Limitations**

- Do not use abutted against general stone or masonry without providing a minimum of a 1/2" gap.
- Do not install ForceField tape in temperatures less than 20° F or if panel surface has frost or ice.

## **Sealing Rough Openings Using Georgia-Pacific 4" Self-Adhering Flashing AT Tape**

1. Cut two pieces from the 4" tape and install one into each sill-jamb corner. Cut the two pieces long enough so the tape can be folded onto the panel face approximately 2". The tape will not be smooth because of the fit into the corners and the fold onto the panel.
2. Align and position the tape over the sill. Remove release paper and press firmly into place.
3. Install tape over sill. The tape should fold down approximately 2" onto the sheathing. Slice tape to extend tape a minimum 3" onto the panel surface (and over tape applied in step 1) and minimum 3" up the jambs.
4. Optional for flanged windows: For flashing the two jambs of the opening, repeat step 3 so both jambs are flashed and tape extends minimum 2" onto the panel. Slice tape so that the tape on the panel extends 1" above the top of the opening. Fold the 1" sliced piece to the bottom of the header.
5. Optional for flanged windows: Repeat step 3 over the header portion of the opening. Slice tape so the header frame is flashed and extends minimum 2" onto the panel above the opening and 3" down the jambs or sides of the opening.
6. Ensure the above taped section is overlapping the lower tape section so that all overlaps are shingle style.
7. Press taped joints and overlaps with your hand or a J-roller to ensure a tight seal to the panel and to eliminate air bubbles and loose edges.

## **Sealing Material Transitions using Georgia-Pacific 4" Self-Adhering Flashing AT Tape**

1. If necessary, fill transition gap between the two different substrates with a backer rod if gap is over 1/8" wide to support the tape at the transition joint.
2. Align and position tape, and press firmly into place. Ensure minimum 2" of flashing is on each substrate material surface.
3. Ensure minimum 2" overlap at all end laps of flashing
4. Ensure the above taped section is overlapping the lower tape section so that all overlaps are shingle style.
5. Press taped joints and overlaps with your hand or a J-roller to ensure a tight seal to the panel and to eliminate air bubbles and loose edges.

## **Sealing Exterior Penetrations Using Georgia-Pacific 4" Self-Adhering Flashing AT Tape**

1. If necessary, fill gap around penetration with a backer rod or sealant to support the flashing tape around the penetration.
2. Align and position tape on bottom side of penetration and press firmly into place.
3. Align and position tape on both sides of the penetration as close to the penetration as possible and press firmly into place.
4. Ensure the above taped section is overlapping the lower tape section so that all overlaps are shingle style.
5. Align and position tape on top of the penetration as close to the penetration as possible and press firmly into place.
6. Press taped joints and overlaps with your hand or a J-roller to ensure a tight seal to the panel and to eliminate air bubbles and loose edges.

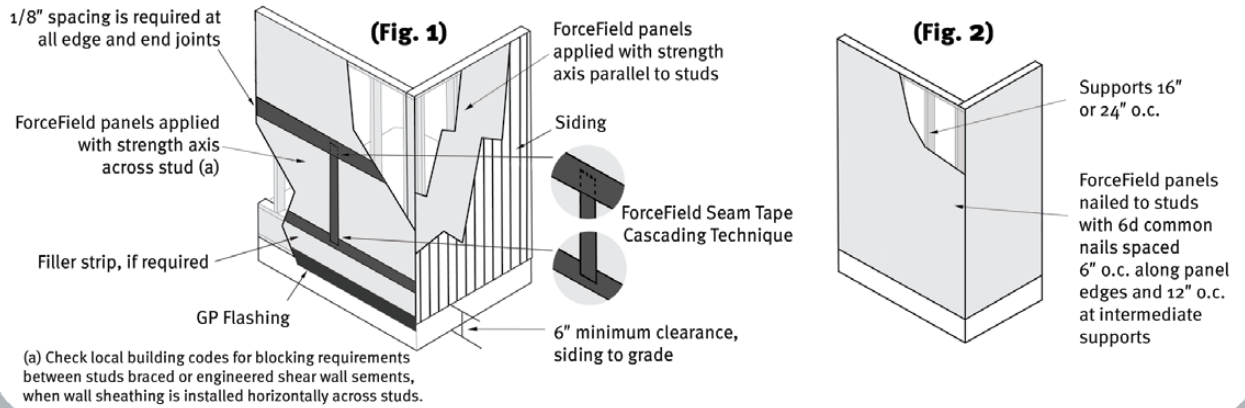
## **Installing Wall Cladding over ForceField Panels**

Conventional exterior claddings- including wood, vinyl, metal or cement composition, stone, brick, EIFS, may be applied over ForceField air and water barrier panels. For stucco, install a vapor-permeable water resistive barrier equal to the performance of Grade D paper over ForceField panels before applying metal lath.

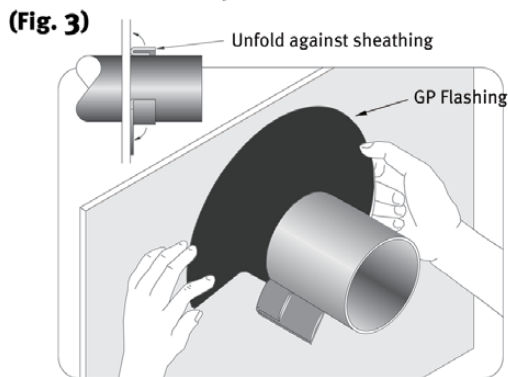


# Quick Reference Guide for ForceField™ Panels

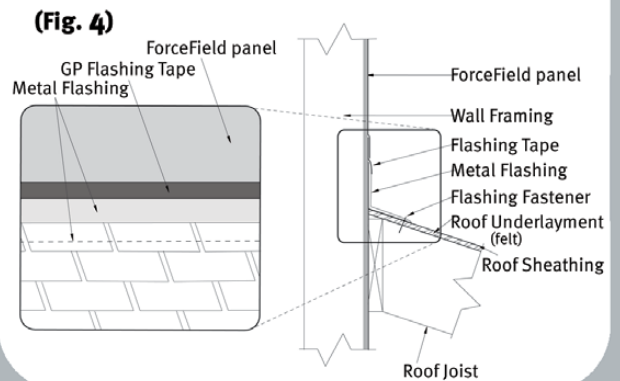
## Installation of ForceField Panels



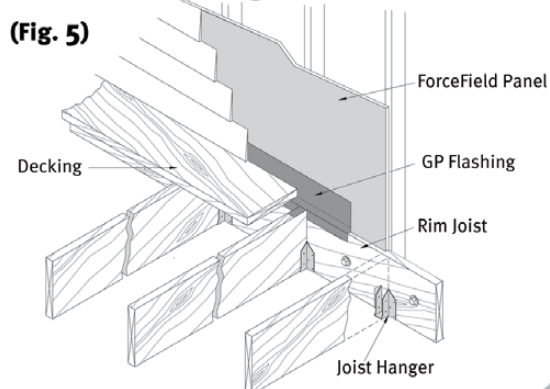
## Installation of Flashing for Pipe Penetration



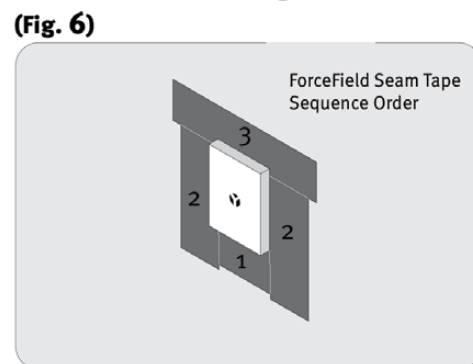
## Installation of Flashing for Roof and Wall Intersection



## Installation of Flashing for Ledger Boards



## Installation of Flashing for Mounting Blocks

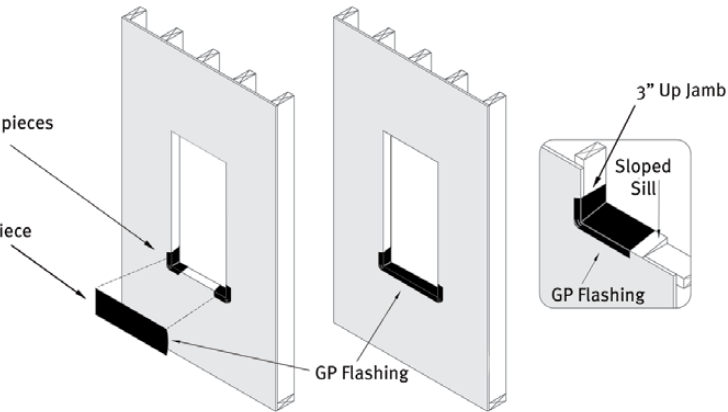


# Quick Reference Guide for Flashing of Flanged Windows

## Installing Window Sill Flashing

**STEP 1**  
Install corner pieces

**STEP 2**  
Install front piece

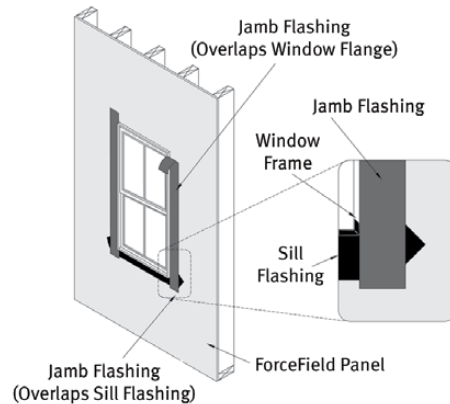


## STEP 3 Installing Flanged Window

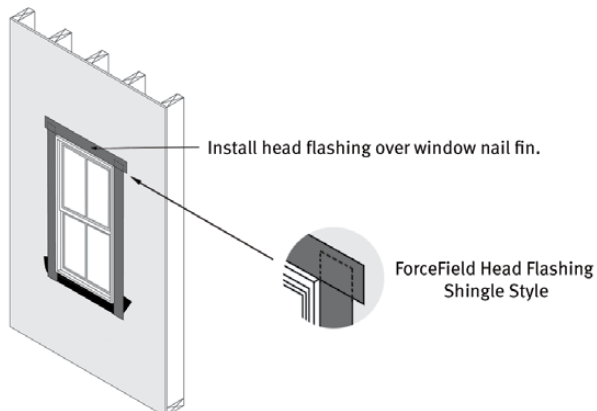
Install window plumb, level and square per manufacturer's instructions.



## STEP 4 Installing Window Jamb Flashing



## STEP 5 Installing Head Flashing



### **Storage for ForceField Panels**

To assure optimum performance, ForceField weather resistant barrier panels must be stored and handled properly. Adhering to the following guidelines will help protect panels from damage in storage, during shipment, and on the jobsite.

### **Handling in Transit**

Take precautions to protect panel ends and edges during shipment. If ForceField panels are shipped on open truckbeds, cover them with a tarp. For open railcar shipment, use lumber wrap to keep panels dry and clean.

### **Storage in the Yard and on the Jobsite**

Whenever possible, store ForceField panels under a roof. Use pieces of lumber to weight down the top panel in a stack to reduce warpage from humidity. If moisture exposure is expected, cut steel bands on bundles to prevent edge damage.

### **Outside Storage**

If ForceField panels must be stored outside, stack them on a level platform supported by at least three 4x4s to keep them off the ground. Place one 4x4 in the center and the other two 12 to 16 inches from the ends. Never leave panels or the platform in direct contact with the ground.

Cover the stacks loosely with plastic sheets or tarps. Anchor the covering at the top of the stack, but keep it open and away from the sides and bottom to ensure good ventilation. Tight coverings prevent air circulation and when exposed to sunlight may promote mold or mildew.



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