

ROOFSHIELD® Roof Underlayment - INSTALLATION INSTRUCTIONS

ROOF UNDERLAYMENT FASTENERS

For Wood Sheathing Substrate

Galvanized/stainless steel nails, screws or staples (for spec see ICC ESR – 1368 downloadable at www.vaproshield.com)

For Metal Girts or Metal Deck Substrate

Pancake head self-drilling screws with gasket and/or VaproAdhesive sprayed at 2" wide.

For Rigid Insulation Substrate

Use nails/screws with roofing plates as recommended by insulation manufacturer.

EXTREME WEATHER STATEMENT

Roofshield® passes all water hold-out test requirements in accordance with ICC-ES AC48 (Acceptance Criteria for Roof Underlayments for use in Severe Climate Areas) and AC 207 (Acceptance Criteria for Polypropylene Roof Underlayments). As many areas in the country are experiencing extreme weather conditions such as heavy and prolonged rainfall, "Best Building Practice" would suggest and VaproShield recommends that RoofShield be augmented with additional waterproofing materials (e.g., tarps) DURING THE CONSTRUCTION PHASE to ensure that interiors are protected until the primary roofing material is applied.

Neither VaproShield LLC nor any of its affiliated companies, including product suppliers and manufacturers, shall be liable for damages, including but not limited to consequential damages, that result from water infiltration through RoofShield® during the construction phase.

STEP 1 – BEGIN FLASHING PENETRATIONS

1. Cut a piece of RoofShield to act as a "skirt" around counter-flashed penetrations i.e. ducts/housings or pipes. Distance from penetration to edge of underlayment "skirt" minimum 12".
2. Make four cuts to form a star shape and place over penetration snugly.
3. Extend "ears" of material up penetration and seal with VaproTape Single-Sided.
4. Tape top edge of "skirt" to roof using VaproTape Single-Sided. Do not tape bottom edge.

STEP 2 – ATTACH ROOF UNDERLAYMENT

1. In climates conducive to ice damming, install peel and stick along eaves and valleys as per UBC/IBC.
2. Along valley, hip and ridge lay a single layer of RoofShield vertically. Fasten at 12" on center
3. At valleys and hips ensure vertical overlap at minimum 18" on center both sides.
4. At ridge ensure horizontal overlap at minimum 12" on center both sides.
5. Starting at lowest eaves, unroll RoofShield horizontally across roof substrate (overlap peel and stick minimum 4").
6. Extend 4" over gable ends and fasten onto fascia board at 12" on center
7. Fasten at top and bottom of roll width. Distance from edge of underlayment to center of fasteners maximum 2".
8. Fasten at maximum 2' 0" on center
9. Shingle next layers of RoofShield ensuring minimum 4" horizontal laps and minimum 6" vertical laps. Best practice: 12" horizontal and 12" vertical laps taped with VaproTape Single-Sided at vertical laps.
10. Extend RoofShield up vertical abutments. Cover with metal flashing.
11. For delayed installation of roof covering, determine fasteners and reduced fastener spacing for wind exposure (i.e. cap nails).

STEP 3 – FINISH FLASHING PENETRATIONS

1. Ensure RoofShield layer is slipped under bottom edge of RoofShield "skirt" and shingled down over taped top edge.
2. Seal top and sides with VaproTape Double-Sided.
3. Ensure whole "skirt" assembly is flashed appropriately with metal.

STEP 4 – INSTALL ROOF COVERING

1. Cedar shingles/Slate – nail directly through RoofShield into sheathing.
2. Metal – per metal roof system installation requirements.
3. Clay Tile – fasten/hang on battens and counter battens.



ICC Certifications #ESR -1368 and #ESR - 1916
Manufactured for: A. Proctor Group Ltd
Manufacturing location: Forfar, Angus, Scotland
Installation Instructions Revised 8.22.07
Insert #044

IMPORTANT

1. If installing in high wind conditions take health and safety precautions.
2. Do not tape tears. Install a patch under tear. Shingle patch down to next horizontal overlap and extend 12" beyond sides of tear.
3. Wall and roof substrates should be dry, free of frost, loose nails and dirt. Water resistance may be adversely affected by building site chemicals (i.e. surfactants).
4. Cover WallShield/WrapShield with primary wall covering within 9 months of installation (cover within 1 month for open-jointed cladding applications).
5. Cover RoofShield with primary roof covering within 6 months of installation.
6. During RoofShield installation, prevent rainwater runoff draining from upper roofs to lower roofs (overhangs/eaves/valleys onto RoofShield underlayment).
7. Limit heavy foot traffic on RoofShield.
8. RoofShield is not recommended for use on slopes 2:12 and below and should not be covered by asphalt shingles.

TOOLS & MATERIALS

Box Cutter
Tape Measure
Fasteners
Tools for nails/screws
Tape Roller
Vapro Tape Expanding Foam
VaproTape Double-Sided
VaproTape Single-Sided
VaproTape UV Black
VaproTape "AB" (Air Barrier)
VaproAdhesive
VaproBatten
VaproVent Strip
VaproSill Saver
VaproFlashing



WALLSHIELD[®] Water Resistive Barrier

WRAPSHIELD[®] Water Resistive Barrier & Air Barrier

WATER RESISTIVE BARRIER FASTENERS

For Wood Sheathing/Exterior Gypsum Substrate

Galvanized/stainless steel nails, screws or staples or brick veneer anchors (for spec see ICC ESR – 1916 downloadable at www.vaproshield.com).

For Metal Girts

VaproAdhesive sprayed at 2" wide and/or pancake head self-drilling screws with gasket/washer.

For Concrete Substrate

Spot attach with VaproAdhesive 2" wide at 18" on center Mechanically attach per cladding manufacturer's instructions.

For Masonry Substrate

Wall ties/mechanical fasteners as per building code requirements.

AIR BARRIER FASTENERS

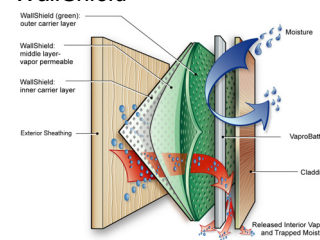
For Wood Sheathing/Exterior Gypsum Substrate

Galvanized/stainless steel cap nails with caps at minimum of 1" diameter, screws with washers at minimum 1" diameter or brick veneer anchors (for spec see ICC ESR – 1916 at www.vaproshield.com).

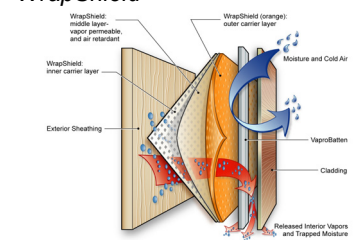
For Metal Girts

VaproAdhesive sprayed at 2" wide and/or pancake head self-drilling screws with gasket/washer.

WallShield



WrapShield



WATER RESISTIVE BARRIER APPLICATIONS

STEP 1 – BEGIN FLASHING PENETRATIONS

1. Cut a piece of WallShield/WrapShield to act as a "skirt" around counterflashed penetrations i.e. ducts/housings or pipes. Distance from penetration to edge of barrier "skirt" minimum 12".
2. Make four cuts to form a star shape and place over penetration snugly.
3. Extend "ears" of material along vertical penetration and seal with VaproTape Single-Sided.
4. Tape top edge of "skirt" to wall using VaproTape Single-Sided. Do not tape bottom edge.

STEP 2 – ATTACH WATER RESISTIVE/AIR BARRIER

1. Starting at base of wall, unroll WallShield/WrapShield horizontally across wall. Best Practice: place a continuous bead of non-skinning butyl sealant or butyl tape on foundation wall and seal WallShield/WrapShield to it.
2. Extend 6" over starting corner.
3. Fasten at top and bottom or roll width with 2" from edge of WallShield/WrapShield to center of fasteners.
4. Fasten at maximum 2' 0" on center
5. Shingle next layers of WallShield/WrapShield ensuring minimum 6" horizontal and minimum 12" vertical laps. Ensure minimum 6" horizontal and minimum 6" vertical laps if taped with VaproTape Single-Sided at vertical laps. Do not place vertical laps above windows.
6. For delayed installation of siding/masonry determine fasteners and reduced fastener spacing for wind exposure (i.e. cap nails).
7. Please contact VaproShield toll-free (866) 731-7663 for high rise (>6 stories/ >75ft) installation instructions.

STEP 3 – FINISH FLASHING PENETRATIONS

1. Ensure WallShield/WrapShield is slipped under bottom edge of penetration "skirt" and shingled over taped top edge.
2. Seal top and sides with VaproTape Double-Sided.
3. Ensure whole "skirt" assembly is flashed appropriately with metal.

STEP 4 – INSTALL SIDING/MASONRY

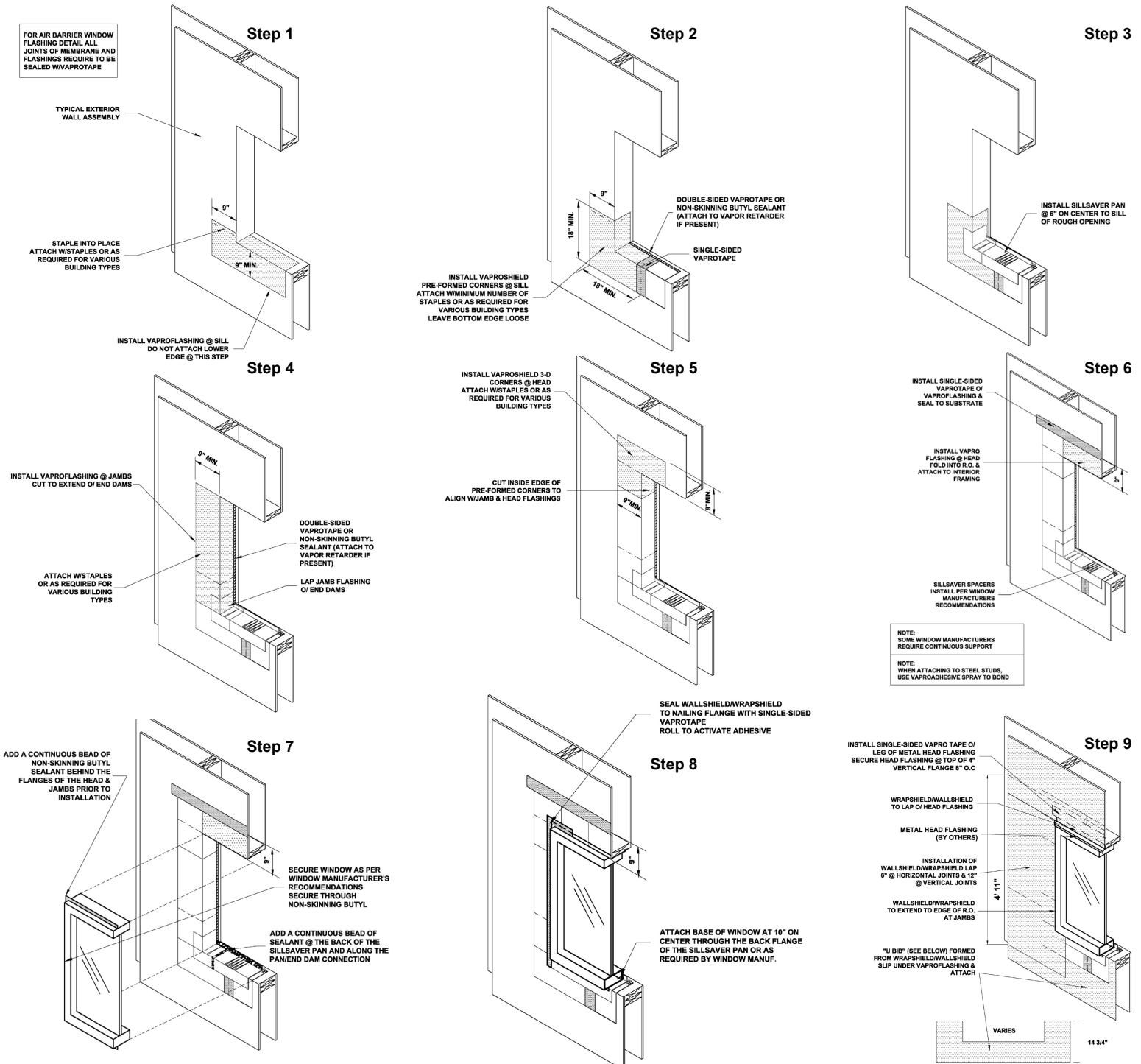
1. Cladding boards – per cladding system installation requirements. For information on use of Black WrapShield in open joint applications refer to Page 2 or www.vaproshield.com.
2. Masonry – wall ties/mechanical fasteners/veneer anchors as per building code requirements.

AIR BARRIER APPLICATIONS

1. Install WrapShield between sill plate and foundation gasket and seal to foundation wall with a bead of non-skinning butyl or butyl tape (VaproTape Double-Sided).
2. Method A: Flash penetrations and install WrapShield according to water resistive barrier installation instructions. Install using 1" diameter plastic cap nails or screws with 1" diameter gaskets/washers every 12" o.c. up vertical stud lines (max. 16" on horizontal). Method B (wood sheathings only): Install using 1" crown staples or 7/16" crown cap staples every 6" o.c. up vertical stud lines. Method A&B: During installation, ensure rainwater cannot drain behind air barrier (use tape).
3. Tape all vertical and horizontal laps using VaproTape "AB" (air barrier) or VaproTape Single-Sided.
4. Overlap WrapShield and ceiling air barrier and seal with VaproTape Single-Sided.

Flanged Window Flashing Details-Method A

Additional Window Details for: Non-Flanged, Post-Wrap, Retrofit, Rain Screen and Air Barrier Applications on www.VaproShield.com



VAPROTAPE™ Guidelines (not "AB" Tape)

1. Keep tape at room temperature (68° F +) before use.
2. Apply to a clean dry surface only. If surface has moisture or frost, dry prior to application. If surface is below 50° F:
 1. Heat the surface with a hot air gun and/or
 2. Heat the tape to a warmer temperature (comfortable to the touch) and/or
 3. Wait for the surface to warm up naturally
3. Peel off approximately 4" of release liner (protective film).
4. Apply to surface, covering the seam.
5. Roll with tape roller for full adhesive contact.
6. Minimize UV exposure to tapes, except UV Black.

VAPROSHIELD Open Joint Rain Screen Systems

RAIN SCREEN DESIGN

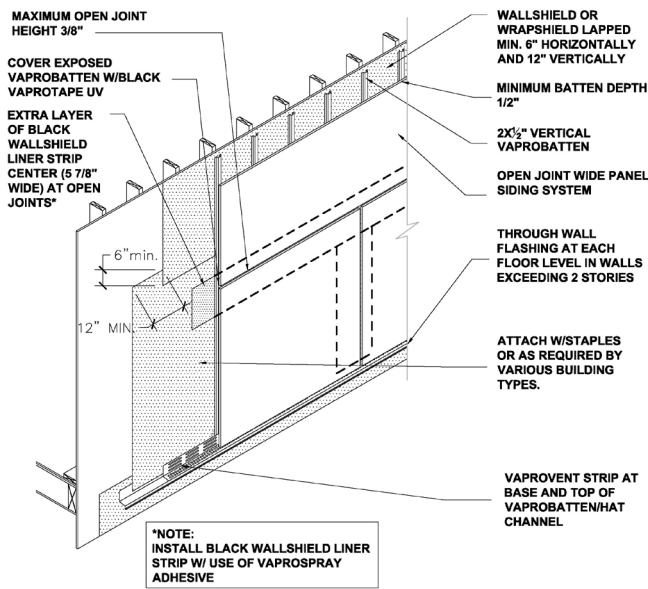
A multiple-element approach to control water penetration into exterior walls.

1. First line of defense manages the driving forces of weather.
2. Second line of defense designed to intercept all water passing through first line of defense and allowing it to drain to the exterior.

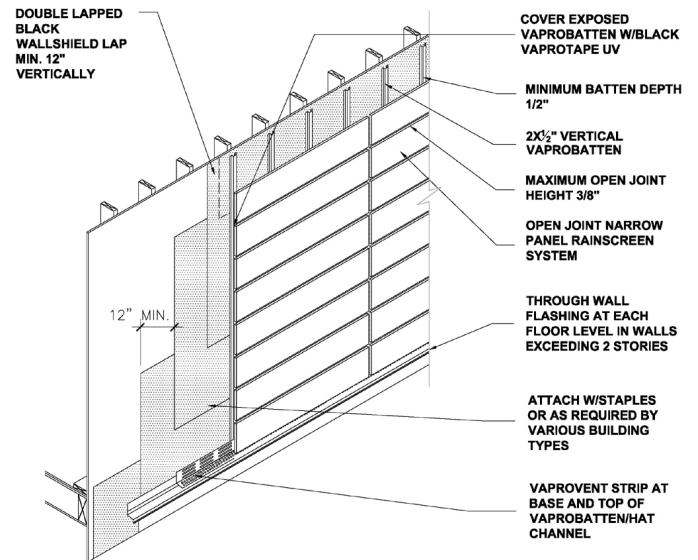
VAPROSHIELD BEST PRACTICES

1. Please contact VaproShield toll-free at (866) 731-7663 for high rise installation instructions (>6 stories/ >75ft).
2. Install primary cladding within 30 days **only** when using membranes in open-jointed rain screen applications.
3. Cladding must have a batten between it and water resistive barrier/air barrier. At open joints cover exposed VaproBatten with VaproTape UV Black (see Image C).
4. Ensure minimum 1/2" batten depth and maximum 3/8" open joint height.

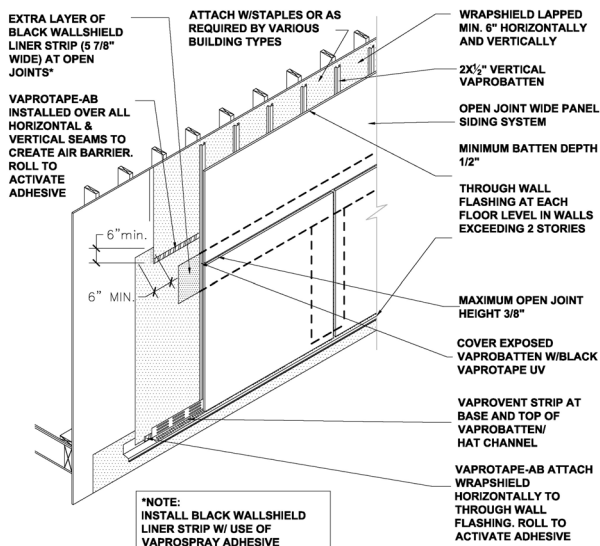
(A) Open Joint Rain Screen – Wide Panel



(B) Open Joint Rain Screen – Narrow Panel



(C) Open Joint Rain Screen – Wide Panel – Air Barrier



(D) Open Joint Rain Screen – Narrow Panel – Air Barrier

