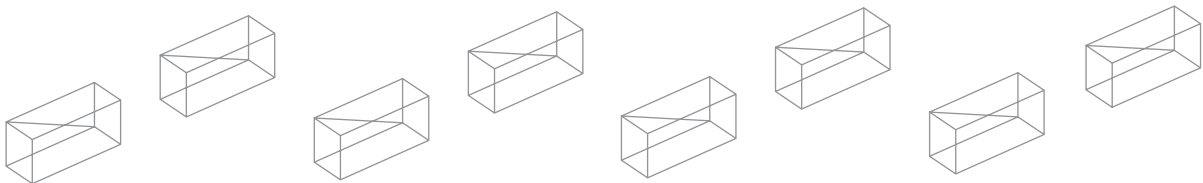




Installation Guide

Version 2020.6

EVOLVESTONE.COM



Contents

Product Usage and Overview	3
Tools and Materials	3
Safety	3
Installation Instructions	4
Standard Installation Method (Nail On over Wood Substrate)	4
Alternate Installation Method (Glue-Up over Cementitious Substrate)	9
Installation Pattern Guide	13
Appendix: Typical Evolve Stone Installation Details	18
Over Wood Wall and Band Board	18
At Foundation Wall Base	19
Inside Corner	20
Outside Corner	21
Over Wood Framing	22
Transition	23
At Sidewall and Roof	24
At Deck Termination	25
Typical Wall Types	26
At Window/Door	27
Flanged Penetration Flashing	28
Non-Flanged Penetration Flashing	29
Over Concrete or CMU	30
At Wood Framing to Foundation Wall	31

Product Usage and Overview

The next evolution in decorative stone is here. Evolve Stone™ is the most innovative stone siding product to date, surpassing its predecessors in value, ease, and accessibility. Formulated from patented Evolve material, it is the very first stone cladding that can be face nailed in the same fashion as traditional siding, reducing installation time dramatically. Like real stone, this proprietary material holds its color throughout, so it can be cut to fit on-site while maintaining the highest appearance standards.

Be sure to follow all applicable state and federal code/laws when using Evolve Stone. **Please note that Evolve Stone is manufactured in both a Fire Rated and Non Fire Rated form. It is the user's responsibility to install the correct product. Unless otherwise stated during ordering, Non Fire Rated product will be provided by default. Make sure to check the packaging label prior to installation.**

Tools and Materials

Required for STANDARD installation:

- + Finish Nailer with an adjustable countersink depth
- + 16-gauge stainless steel Finish Nails at 2 ½" length or long enough to penetrate through the structural substrate
- + 1/8" Evolve Rainscreen or equal in the United States. 3/8" Rainscreen permitted in Canada.
- + Appropriate cutting tools
- + Chalk-line
- + Level
- + Tape Measure
- + Proper Personal Protective Equipment

Required for ALTERNATE installation:

- + Caulk Gun
- + TremGrip adhesive and Vulkum 171 primer or equal
- + Appropriate cutting tools
- + Chalk-line
- + Level
- + Tape Measure

Required for SILL installation:

- + Drill with fastener specific bit
- + Appropriate Exterior-grade screws per installation method
- + Appropriate cutting tools
- + Chalk-line
- + Level
- + Tape Measure

OPTIONAL tools and materials:

- + Hammer (for adjusting stone layout or texturing cut edges if needed)
- + Pry-Bar (to remove stones from substrate if needed)
- + End-Cutting Pliers (to remove nails from the back of the stones if needed)
- + Nail Set Tool (to counter-sink nails that fail to penetrate below the surface of the stone if needed)
- + Laser Level (to replace the standard level and chalk-line)
- + Caulk Gun (for filling sill gaps or screw countersinks if needed)
- + Color matched exterior grade polyurethane sealant (for filling sill gaps or screw countersinks if needed)
- + Speed Square and pencil (for quick cutting)

Safety

Be Safe. When installing any Evolve Stone Inc. products always be aware of your surroundings and the environment in which you are installing. When working with tools and equipment, always follow the safety requirements set forth in that product's manufacturer's user manual. Follow all applicable safety regulations and OSHA guidelines. Always wear proper eye protection and required PPE during the course of your work.

Be safe when using a nail gun or other installation equipment. Follow the equipment's manufacturer's guidelines and OSHA regulations. Be aware that when installing Evolve products, nails and screws will penetrate the OSB plywood substrate.

Be safe. Ensure no one is on the other side of your substrate or may be in a position to be injured by the penetrating nails.

Be safe. Ensure all electrical cables, wires, conduits, pipes, junction boxes, panels, and related electrical equipment, plumbing and HVAC equipment, and all related parts to these systems are not pierced by nails or screws. Electrical shock is a possibility if you are unaware of the nail locations and back stop.

Installation Instructions

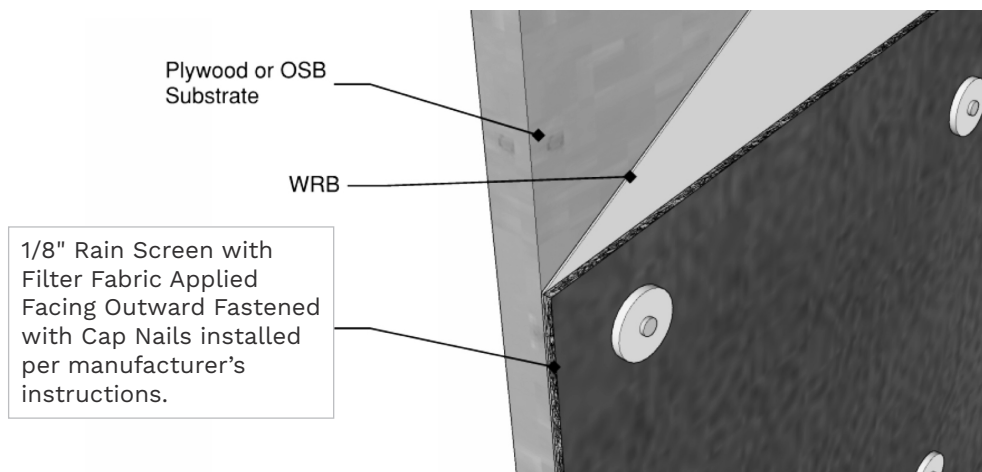
For a quick overview, please view our installation video(s) online at EvolveStone.com.

Each box of Evolve Stone products come pre-blended based on the selected style. This simply means that the stone sizes vary within each box and are portioned appropriately to allow the selected patterns to emerge.

1.0 Standard Installation Method (Nail On over Wood Substrate)

1.1 Pre-Assembly Requirements

Before installation of the Evolve Stone™ product can begin, verify the sub-surface is properly installed. The substrate should be a minimum of 7/16" thick exterior sheathing made of OSB or plywood. Only a water-resistive barrier complying with ASTM E2556 Type I or Type II should be used; Typar, or commercial grade Tyvek or equal is recommended. Rainwater management is important in all wall assemblies. One of the keys to rainwater management is correct installation of water-resistive barriers. Water-resistive barrier continuity with windows, doors, roof-wall interfaces, flashings and service penetrations is necessary. Make sure Evolve Rainscreen 1/8" is properly installed over the WRB with the fabric side facing outward; Keene Driwall Rainscreen 013-1 is permitted as a substitute. Keene 3/8" Driwall Rainscreen to be used in Canada ONLY. **[Note that the installed rainscreen must be cut and abutted at all inside and outside corners rather than being wrapped around the corners to prevent tenting or bunching]** (See Details #4 and #5). Make sure to follow all other manufacturers' fastening instructions when installing other products.



Notes:

1. Install an 1/8" drainage mat over the fully installed watertight WRB. The mat shall be entangled mesh with water open, black, UV resistive, fabric adhered to one face. The 1/8" rainscreen drainage mat must be installed according to the manufacturer's instructions. Butt the horizontal lines of the mat, do not overlap. Cut at an inside and outside corners and butt these joints only. Do not overlap or allowing any 'tenting'. Ensure the mat is installed smoothly and tightly against the wall. **See Detail #1**

2. Evolve Stone requires a fully installed water and airtight WRB system prior to the install of the drainage mat and pin nailed stone. This WRB system includes flashings, self-adhered joint tapes, flashing tapes, sealants and door and window watertight installations. The Evolve drainage mat requirements ensure a clear drainage and drying path.
3. The bottom of the 1/8" drainage mat must be left open to allow for water drainage and air circulation. If an insect barrier is requested, we suggest two methods.
 - Simply wrap the excess fabric under the bottom of the mat and attach to the back of the mat by securing in place with cap nails
 - Supply and install a fabric wrapped corrugated drainage starter strip as manufactured by MTIDry or Equal. Ensure the corrugated strips match the 1/8" mat thickness.
See Detail #2. (MTIDry.com Model #CLSS2316)
4. Evolve Stone must be installed into a minimum of a 7/16" OSB or plywood that is structurally attached to the studs placed at 16" O.C.
5. The sheathing must be placed and fastened as per code, APA instructions and the manufacturer's instructions. This substrate must not be water compromising or degraded by the environment or other condition. Evolve Stone must be nailed to a sound structural sheathing intended to receive and hold pin nails.
6. When abutting Evolve Stone against different materials (trim, windows, doors, etc), make sure to check other MFG's for any hold-off or spacing requirements

1.2 Setup

Using a chalk-line, make level guidelines spaced at regular intervals up the wall to assist in the installation. The stone veneer product does not need to terminate at these guidelines and the stones may overlap them. These guidelines are used only to ensure that the courses are being applied to the wall in a level fashion to reduce the possibility of skew.

***Pro-Tip:** using a laser level may help you to layout your chalk lines to mark out better course guidelines and eliminate potential sagging in the center of your layout.*

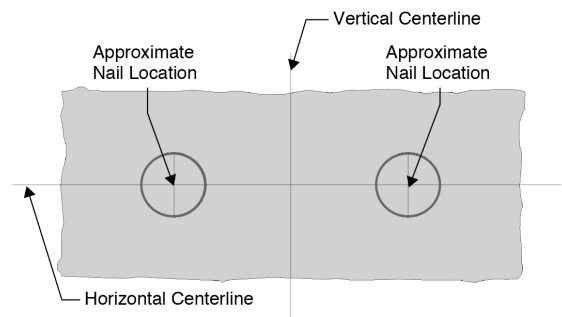
2.0 Stone Installation

2.1 Nail Pattern Guidelines

To fasten Evolve Stone products to the wall, adjust the countersink depth on the finish nailer to ensure that the nail heads will recess slightly below the surface of the stone. Apply 16-gauge stainless steel finish nails in the arrangements depicted below based on the stone's size. 304 grade stainless steel to be used for standard exterior applications. 316 grade stainless steel is required in extreme or coastal environments.

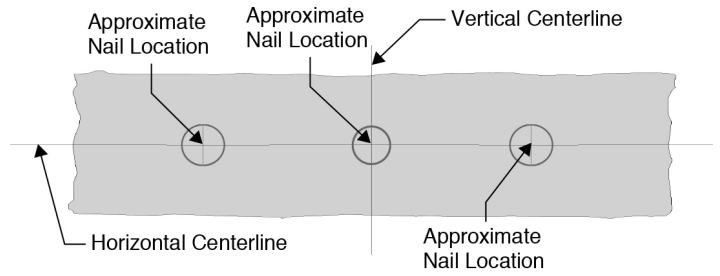
2.1.1 Small Stones:

For stones that are less than 10" long and less than 5" tall, apply two or more 16-gauge stainless steel finish nails at slight angles into the stone on the left and right sides along the horizontal centerline as depicted in the image at right:



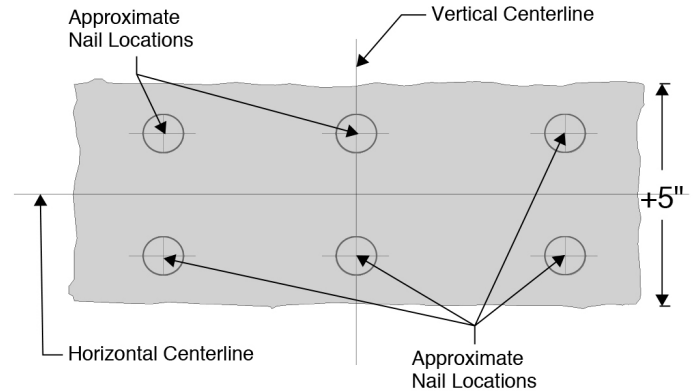
2.1.2 Medium Stones:

For stones that are between 10" and 18" long and less than 5" tall, apply three or more 16-gauge stainless steel finish nails at slight angles on the left, right and the center along the horizontal centerline as depicted in the image at right



2.1.3 Large Stones:

For stones that are larger than 5" tall, apply two rows of nails following the patterns described above based on their lengths as depicted in the image at right:

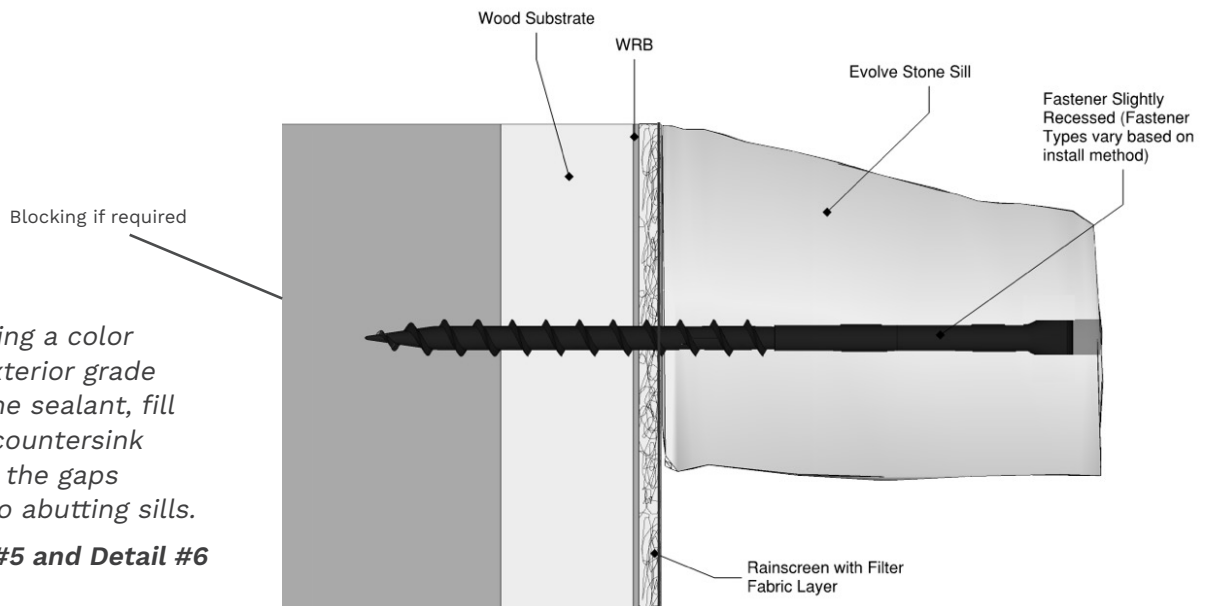


Notes:

1. *The Evolve Stones must be pressed firmly against the mat. Hold the stone true, straight, tightly against the mat and pin nail into place. Evolve has specified the minimum nailing pattern. It may be necessary to install additional pin nails to allow for a firm and stable feel, tapping the installed stone with your hand will 'show' the stones requiring more nails.*
2. *It is critical water is allowed to drain from behind the Evolve Stone. It must not be directed into water sensitive areas*

2.2 Install Sills (Optional)

Beginning at the corners, make cuts or miter as necessary. Fasten the sill pieces through the face using two exterior (or more as necessary) grade self-tapping trim screws centered 4" from each end. Recess the screw slightly below the face of the stone.



Pro-Tip: Using a color matched exterior grade polyurethane sealant, fill any screw countersink holes or fill the gaps bridging two abutting sills.

See Detail #5 and Detail #6

2.3 Corners Fabricated with Field Stone

Evolve Stone can be mitered, cut and butted so as to create outside corners (Start at either the top or bottom of your corner assembly and work toward the opposite end. Fasten each leg of the corners with 16-gauge stainless steel finish nails. Treat each leg as its own stone and follow the appropriate nailing pattern guidelines as specified in section “1.5.1 Nail Pattern Guidelines” above.)

Some practice with stone edge manipulation quickly shows the level of skill required to ‘create’ field stone corners.

Pro-Tip: Treat the out or ‘clipped’ edges with Thompson’s Water Seal™ to match the Evolve Stone factory finish. This is a cosmetic measure and not a waterproofing measure.

2.3.1 Install Outside Corners (Optional)

Start at either the top or bottom of your corner assembly and work toward the opposite end. Fasten each leg of the corners with 16-gauge stainless steel finish nails. Treat each leg as its own stone and follow the appropriate nailing pattern guidelines as specified in section “2.1 Nail Pattern Guidelines” above. It is recommended that vertical beads of exterior caulk or adhesive be applied to the backside of the outside corners prior to fastening. This should help solve any ‘wobble’ resulting from the substrate or outside corner being out of square. **See Detail #5**

Pro-Tip: Install your outside corners according to a comfortable lift height for the installer. Generally, this means 12 to 18 inches at a time and then install your field stones before beginning the next lift of your corners.

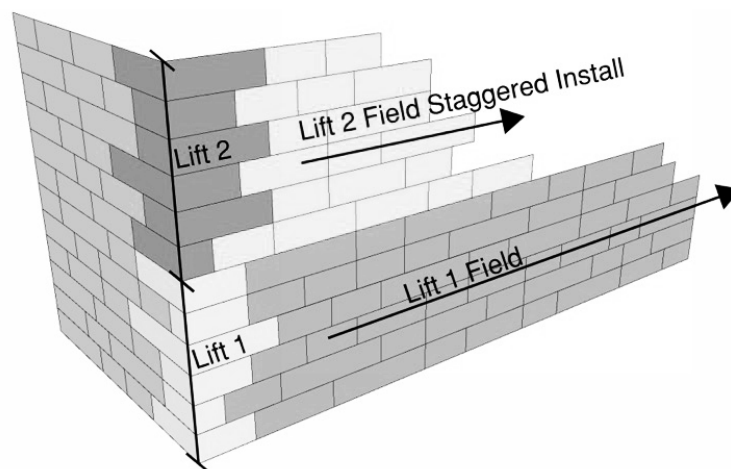
Pro-Tip: Alternate corner leg orientations of your outside corners as best as possible to avoid creating matching vertical seams.

Notes:

- Height of corner stones may vary slightly from the field stones. Adjust corner height as necessary.
- Do not wrap the drainage material around corners. Cut the mat and slightly hold back from the inside or outside corner. **(Detail #3 and Detail #4)**

2.4 Installing the Stones

Start installing stones in lifts at the perimeter of your wall and work your way toward the opposite side, limiting your cut ends.



See Details #3, 4 and 5

Pro-Tip: Open multiple boxes before installing to verify stone colors. If color varies, blend boxes of stone together prior to installation. Stones should be installed in staggered lifts in the same direction.

Pro-Tip: Avoid installing the same size stone adjacent to one another if possible.

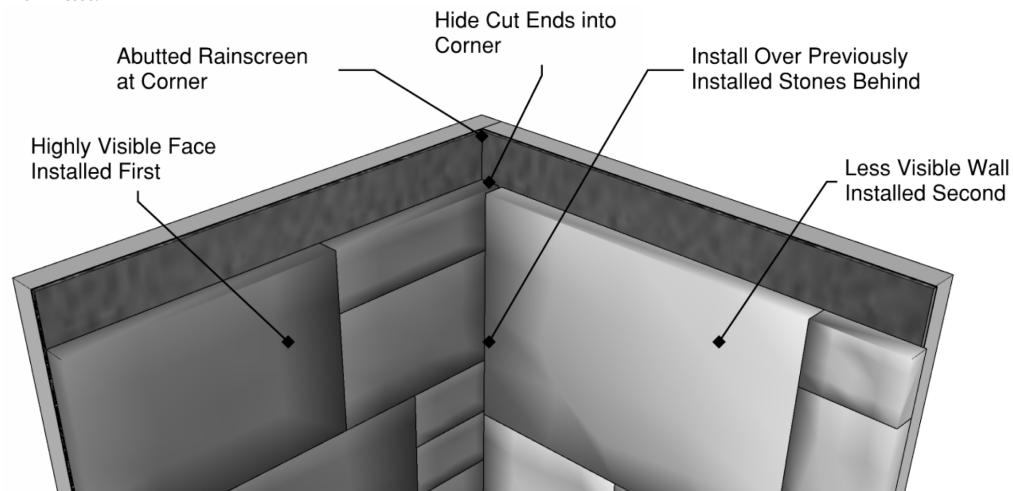
Pro-Tip: Stagger stones to avoid long running vertical seams.

Pro-Tip: Depending on the stone style selected, avoid long running horizontal seams.

Pro-Tip: Tap the stones square with a hammer and ensure they are positioned in a level fashion.

Pro-Tip: When a stone needs to be removed, use a small pry-bar to carefully remove the stone from the substrate and snip the exposed nail flush with the back of the stone. No need to remove the embedded portion of the fastener. These stones may be reapplied, but **DO NOT CUT THESE STONES.**

Pro-Tip: In the case of inside corners, install the more visible plane before moving on to the adjacent wall. Bury your cut ends into the exposed substrate, then install the stones on the adjacent wall.



2.5 Cutting Evolve Stones

When installing the stones, there will be instances where cuts are needed. To do so, first measure the desired length and pick out a stone that is larger. Mark the desired dimension on the stone and cut to the correct size.

Caution: Contains trace amount of crystalline silica. Dust may create hazardous conditions. Refer to OSHA cutting standards with regards to crystalline silica. Always wear a properly fitted NIOSH approved N-95 series respirator when modifying or cutting.

Pro-Tip: Mark the face of the stone after measuring, use a speed square to continue your mark across the whole face of the stone. Lay the stones with the flat side facing downward, cutting safely through the face.

Pro-Tip: Texture the smooth cut surfaces by marring the surface with the use of a hammer (waffle head hammers work great)

Pro-Tip: In the case of highly visible cuts, clear exterior sealants such as Thompson's Water-Seal can be used to restore color vibrance.

- 2.6 Evolve Stone at side wall/roof intersection – See Detail #7
- 2.7 Evolve Stone at deck structure – See Detail #8
- 2.8 Evolve Stone at various walls – See Detail #9
- 2.9 Evolve Stone at windows and penetrations – See Details #10, 11 and 12

3.0 Alternate Installation Method (Glue-Up over Cementitious Substrate)

3.1 Pre-Assembly Requirements

Ensure the surfaces are prepped, clean, dry and free of cracks and contaminants. It is the installer's responsibility to verify proper adhesion between the substrate and Evolve Stone. Do this prior to full installation. Water management is the responsibility of others. Adhesive primers must be installed on the back of the Evolve Stone and the face of the concrete/block wall per the manufacturer's instruction. Do not use primer inside on exterior walls as this could create an unwanted vapor barrier.

3.2 Setup

Follow the same instructions as outlined in "1.2 Setup" in the Standard Install Method above.

***Pro-Tip:** Begin by installing a starter-strip to ensure that the stones do not sag during the glue-up installation.*

3.3 Stone Installation with Adhesive

3.3.1 Clean and prep all surfaces per Tremco's requirements prior to installing a complete coat of Vulkum 171 primer.

3.3.2 Vulkum 171 primer is to be installed on the exterior wall surface. Follow Tremco's installation instructions carefully.

3.3.3 Remove dirt and dust from the back of the Evolve Stone. Coat the back of the Evolve Stone completely with Vulkum 171 primer. Follow Tremco's instructions. Allow to dry. Be careful not to allow the 171 to coat the front or sides of the Evolve Stones.

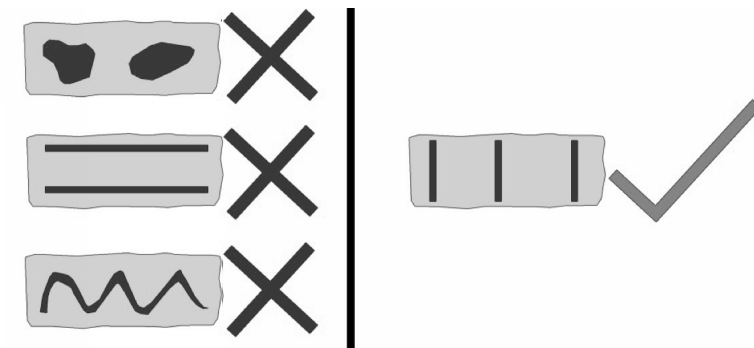
3.3.4 Plan ahead for the layout of the Evolve Stone. Understand the pattern. It is best to layout the stone in the pattern you plan to install on a clean, dry surface. Set up a level line and work up or down from that line. Install heavy vertical beads of Tremco TREMGrip Adhesive to the back of the Evolve Stone. **See Details #13 and #14.**

The TREMGrip Adhesive shall be installed per Tremco and Evolve's requirements. **See details #13 and #14 showing spacing.** Generous vertical beads shall be placed on the back surface of the Evolve Stone and the stone securely pressed into place leaving a minimum gap of 1/8" between the concrete/masonry wall and the back of the Evolve Stone. This 1/8" clear gap ensures drainage and drying (air circulation).

3.3.5 Adhesive Guidelines

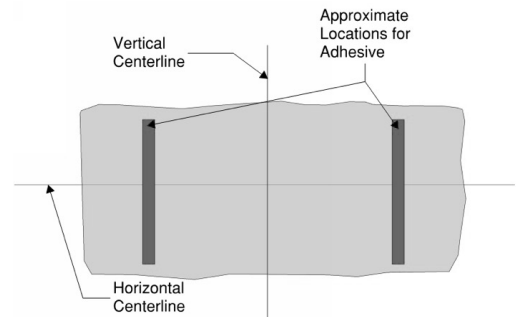
To fasten Evolve Stone products to the wall with adhesive, apply a 1/2" to 3/4" diameter bead of exterior grade Tremco TREMGrip adhesive vertically in the arrangements depicted below based on the stone's size. Press the stones firmly into place maintaining an appropriate drainage plane. The stone once adhered must maintain an 1/8" air gap between the stone and the substrates. Avoid pressing the stones completely flush onto the substrate. Do not create large globs, horizontal lines or zig-zag patterns.

See Details #13 and #14



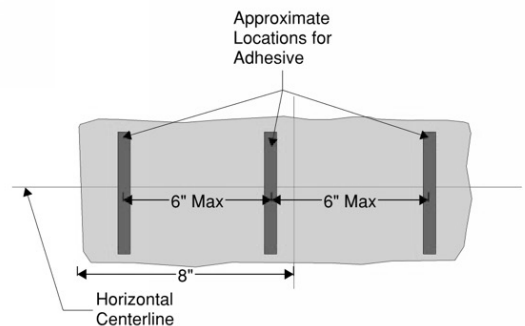
3.3.5.1 Short Stones:

For stones that are less than 8" long, apply two, evenly spaced, beads vertically onto the back of the stone on the left and right sides of the stones as depicted in the image at right:



3.3.5.2 Long Stones:

For stones that are greater than 8" long, apply three or more beads as required, evenly spaced not more than 6" apart as depicted in the image at right:



Note:

More beads may be used if necessary, to ensure a firm connection to the wall. The bead's thickness may vary to contour the back surface of the stone. Keep beads more than 1" away from the outside edges of the stones. Do not impede the drainage plane.

3.4 Install Sills (Optional)

Beginning at the corners, make cuts or miter as necessary. To Fasten the sill piece:

3.4.1 Using a Simpson A21Z “L” bracket, open the existing bracket holes with a drill to a 1/4" diameter (2 brackets should be used for each section of sill).

3.4.2 Attach brackets to the sill using 1 1/4" long exterior grade screws. Brackets should be held 4" from either end of the sill with the leg of the bracket to fit flush against your mounting surface.

3.4.3 Dry fit the sill with attached brackets to your mounting surface. Pre-drill locations where Tapcons are to be later installed.

3.4.4 Brush primer on mounting surface and back of sill. Allow primer to tack.

3.4.5 Once primer has tacked, apply thick vertical beads of adhesive to the back of the sill, allowing a 1/8" drainage/drying gap.

3.4.6 Apply sill to mounting surface and install 1/4" by 2" long Tapcons into pre-drilled locations.

3.4.7 Verify drainage/drying gap has been maintained.

Pro-Tip: Using a color matched exterior grade polyurethane sealant fill any screw countersink holes or fill the gaps bridging two abutting sills.

3.5 Install Outside Corners (Optional)

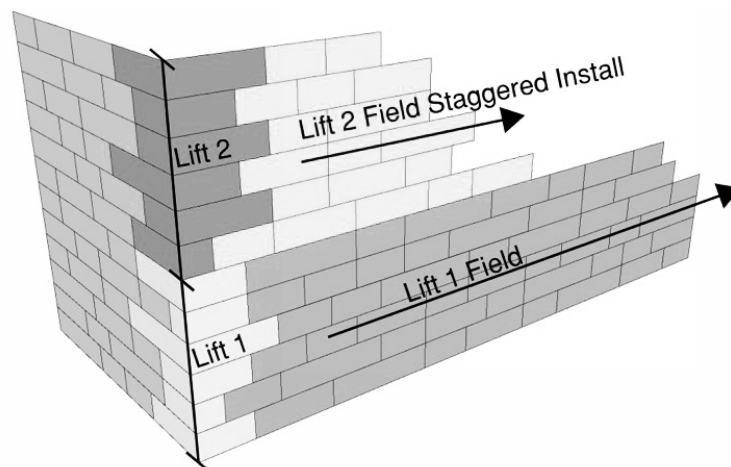
Start at the bottom of your corner assembly and work your way up. Fasten each leg of the corners with Tremco™ TREMGrip adhesive. Treat each leg as its own stone and follow the appropriate adhesive guidelines as specified in section “3.3.5 Adhesive Guidelines” above.

Pro-Tip: Install your outside corners according to a comfortable lift height for the installer. Generally, this means 12 to 18 inches at a time and then install your field stones before beginning the next lift of your corners.

Pro-Tip: Alternate corner leg orientations of your outside corners as best as possible to avoid creating matching vertical seams.

3.6 Installing the Stones

Start installing stones in lifts at the perimeter of your wall and work your way toward the opposite side, limiting your cut ends.



Pro-Tip: Open multiple boxes before installing to verify stone colors. If color varies, blend boxes of stone together prior to installation. Stones should be installed in staggered lifts in the same direction.

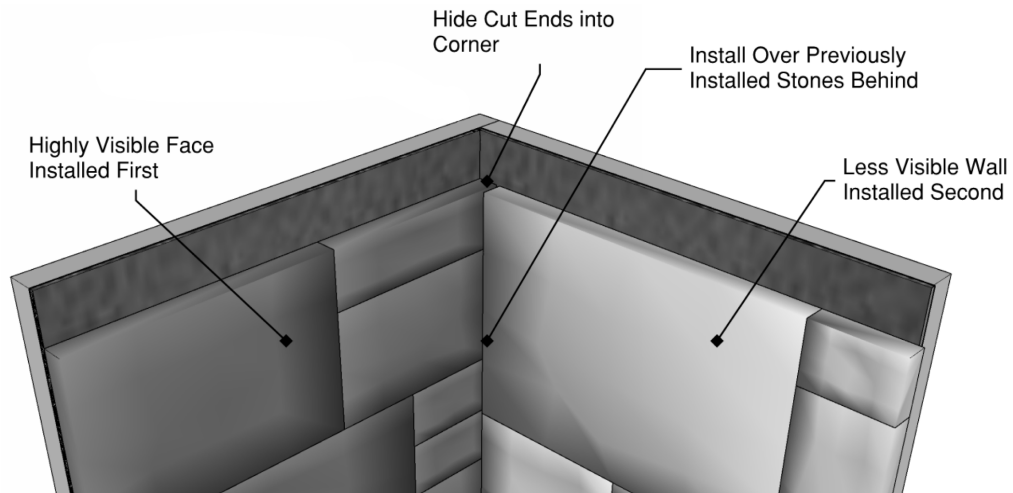
Pro-Tip: Avoid installing the same size stone adjacent to one another if possible.

Pro-Tip: Stagger stones to avoid long running vertical seams.

Pro-Tip: Depending on the stone style selected, avoid long running horizontal seams.

Pro-Tip: Tap the stones square with a hammer and ensure they are positioned in a level fashion.

Pro-Tip: In the case of inside corners, install the more visible plane before moving on to the adjacent wall. Bury your cut ends into the exposed substrate, then install the stones on the adjacent wall.



3.7 Cutting Evolve Stones

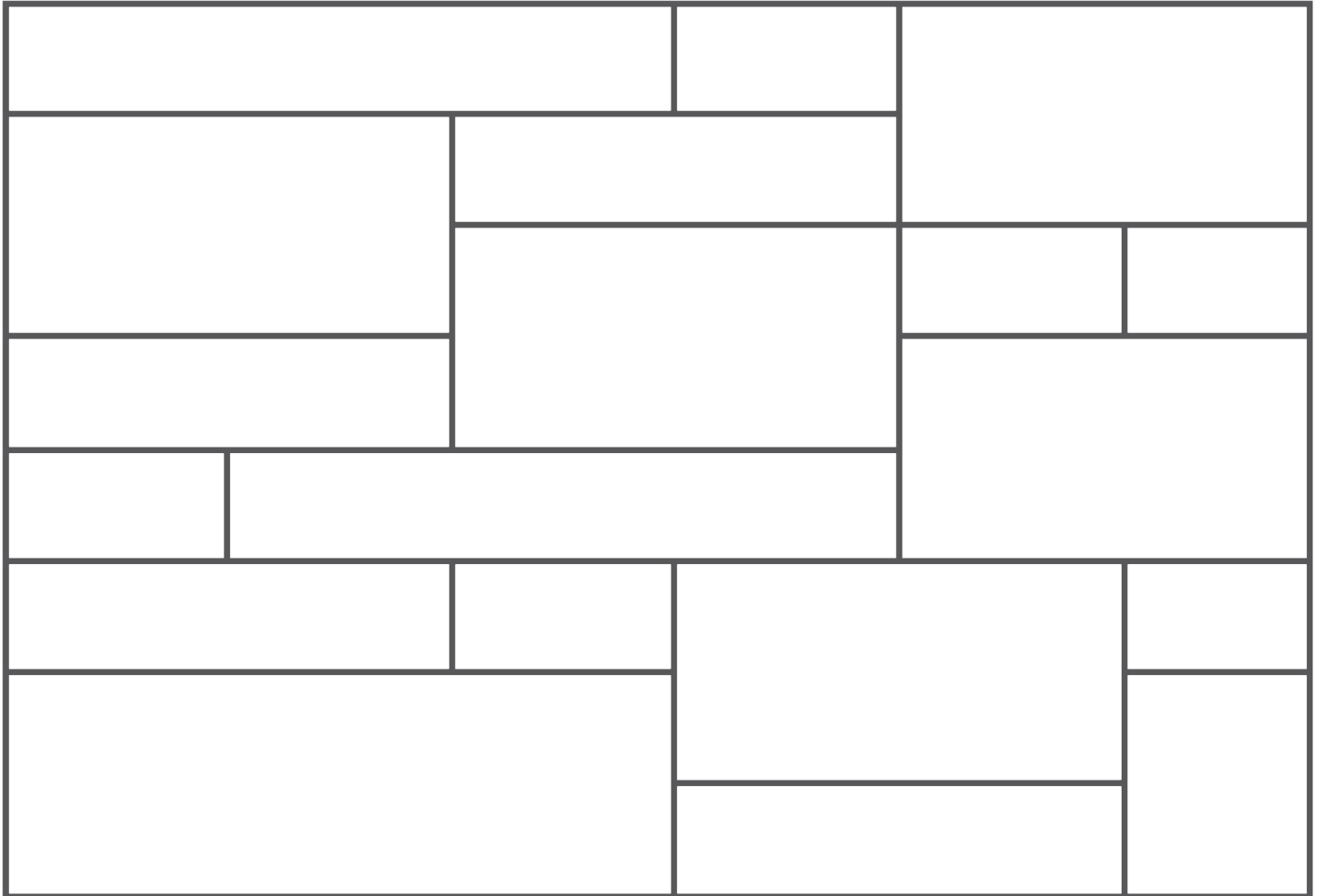
Follow the same instructions as outlined in “2.5 Cutting Evolve Stones” in the Standard Install Method above.

4.0 Installation Pattern Guide for all Five Evolve Stone Styles

4.1 Patterns

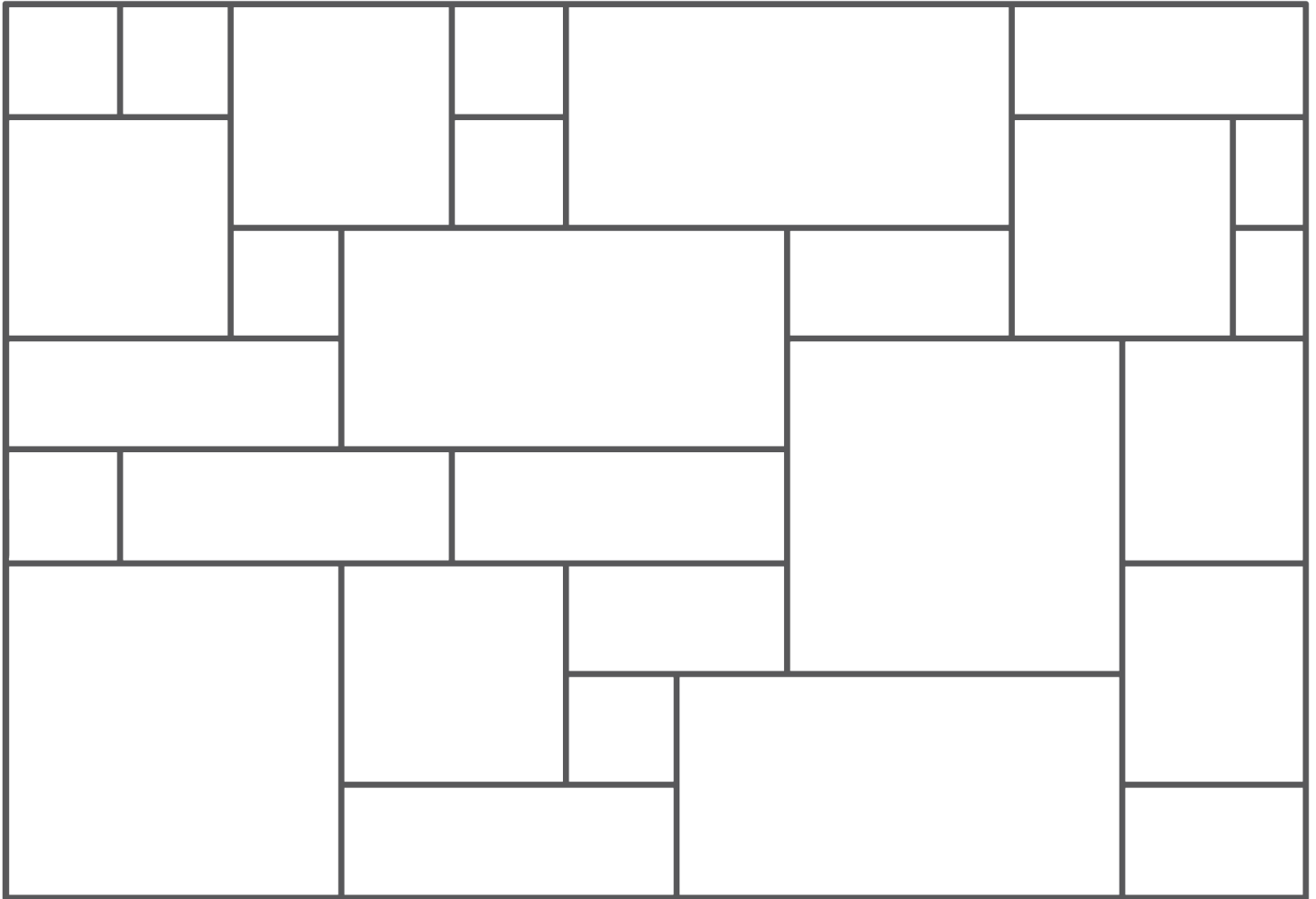
Please review this “Installation Guide” document in full before installing product. The pattern outlines below will act as a visual guide for the installer to understand what the end product, for each style, should look like. **NOTE:** these are for reference only, not 100% to scale.

4.1.1 Capital Sky Style

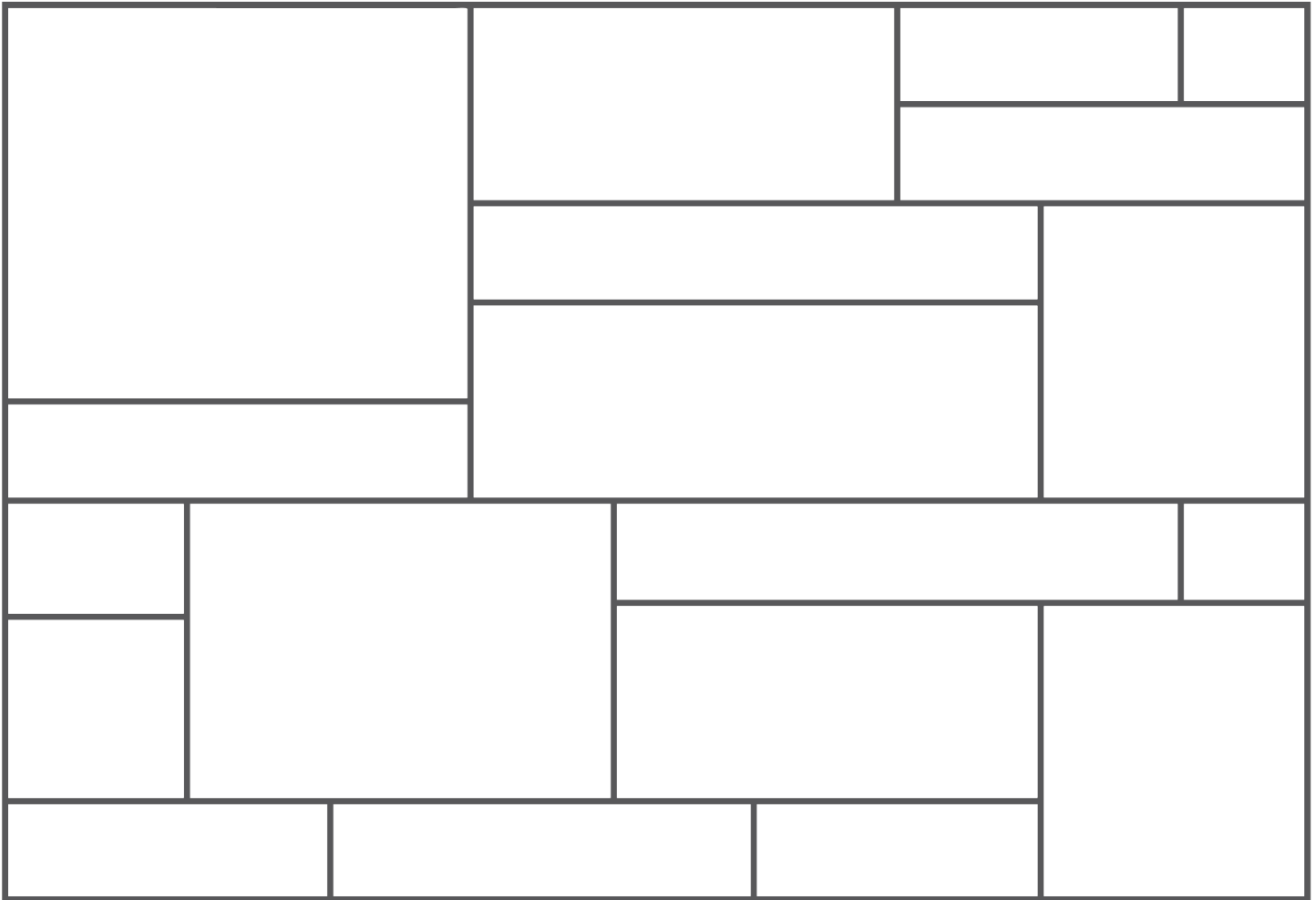


4.1.2 District View Style

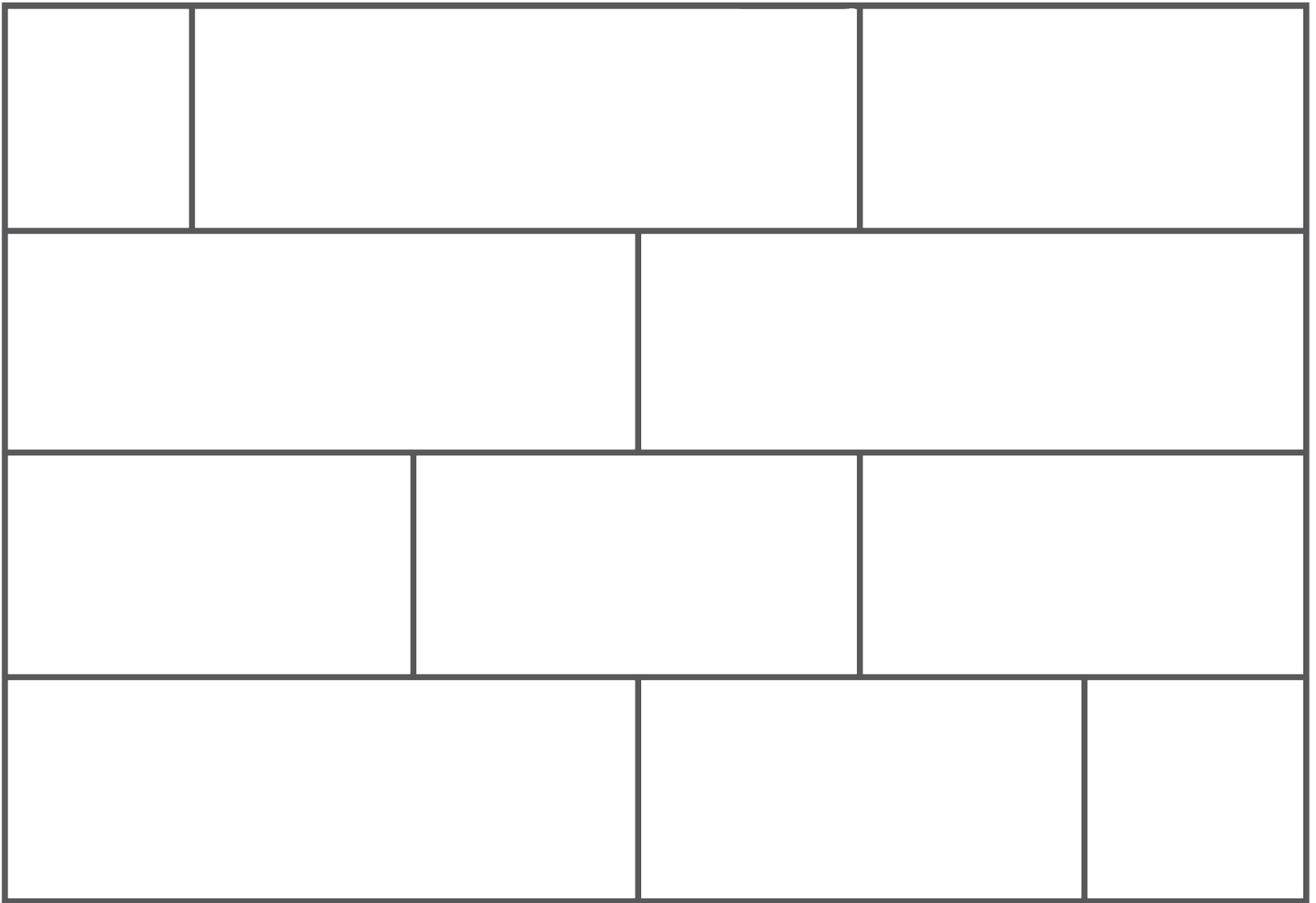
4.1.3 Potomac Trail Style

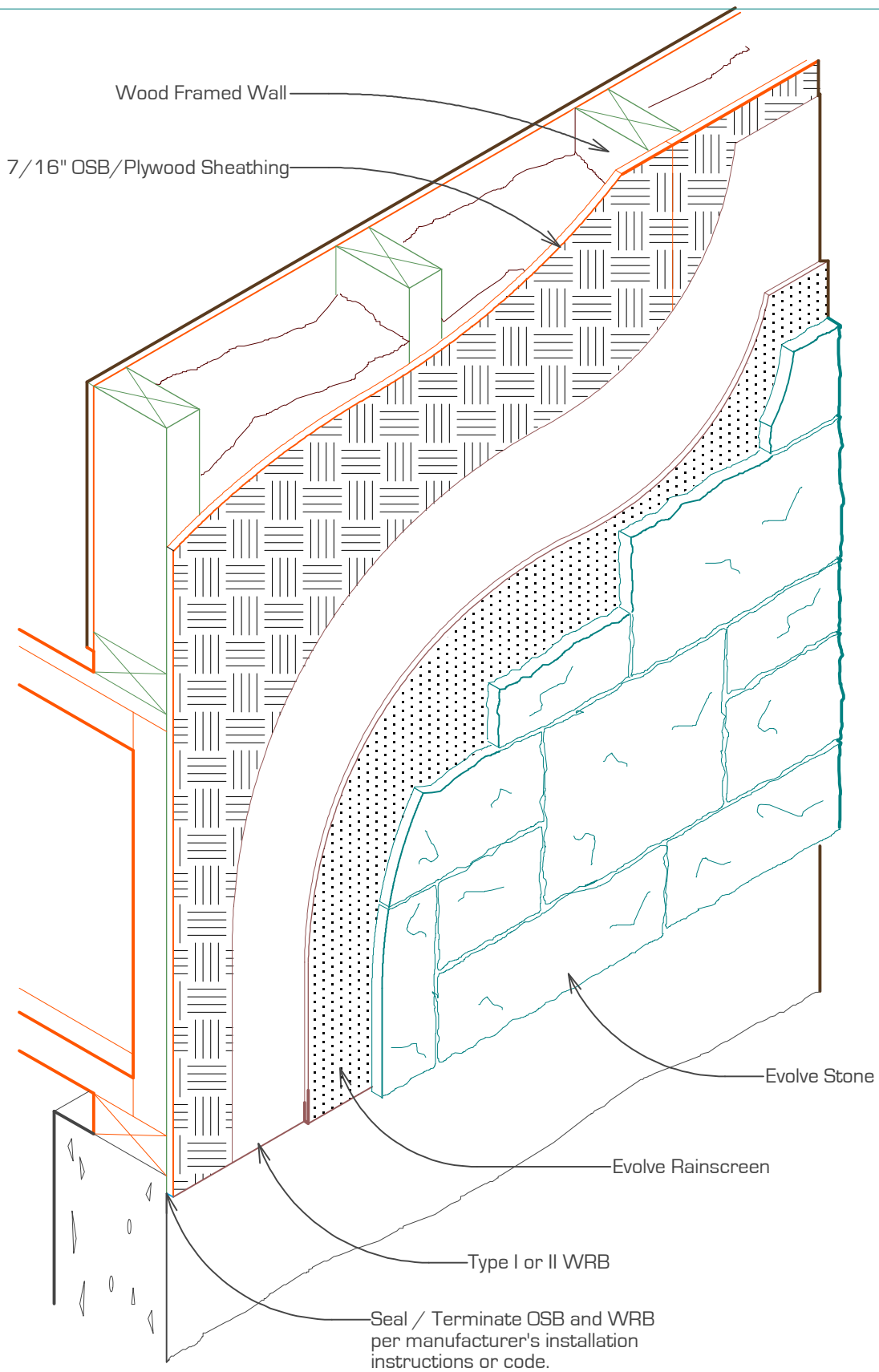


4.1.4 Georgetown Run Style



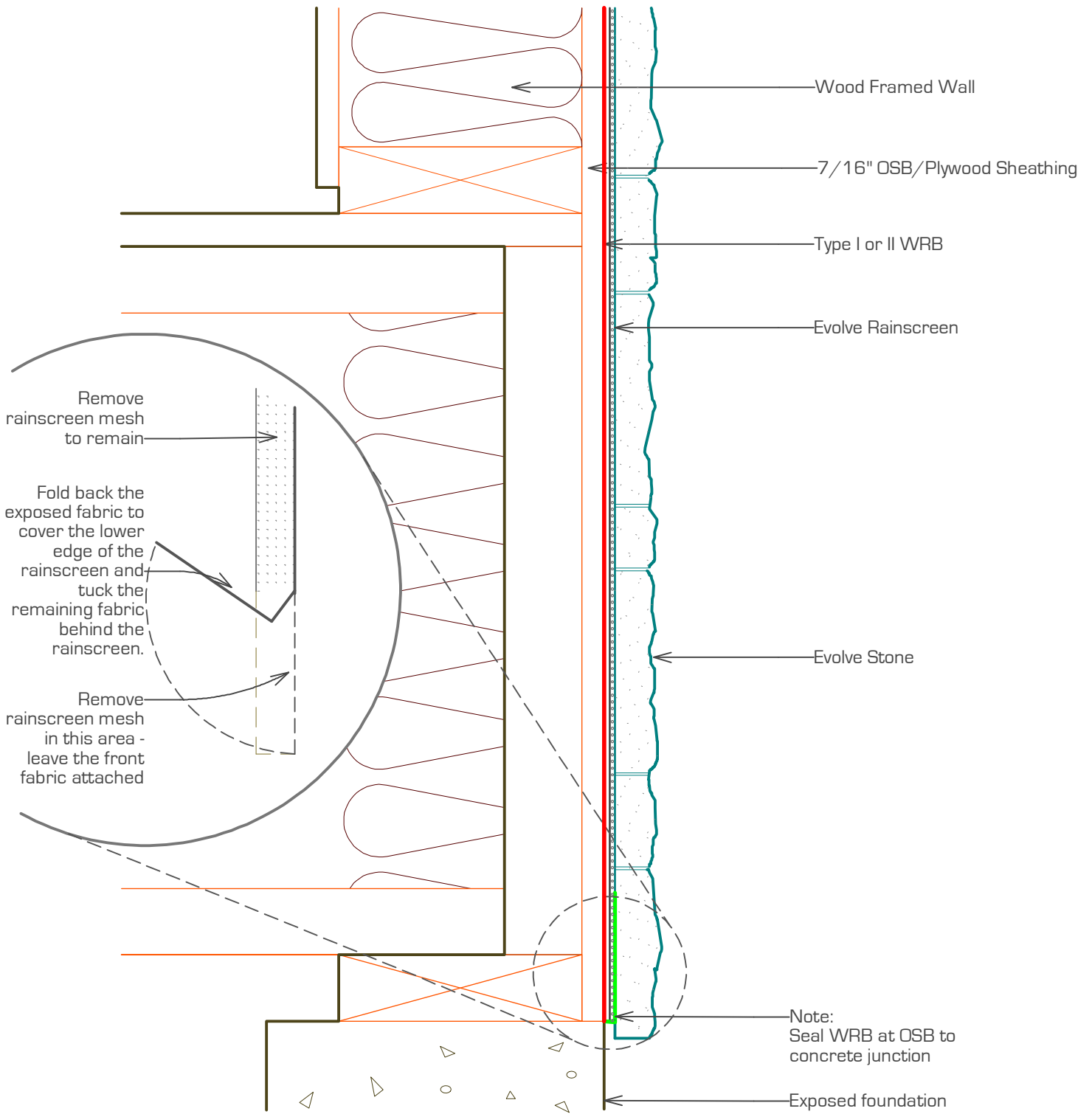
4.1.5 National True Style





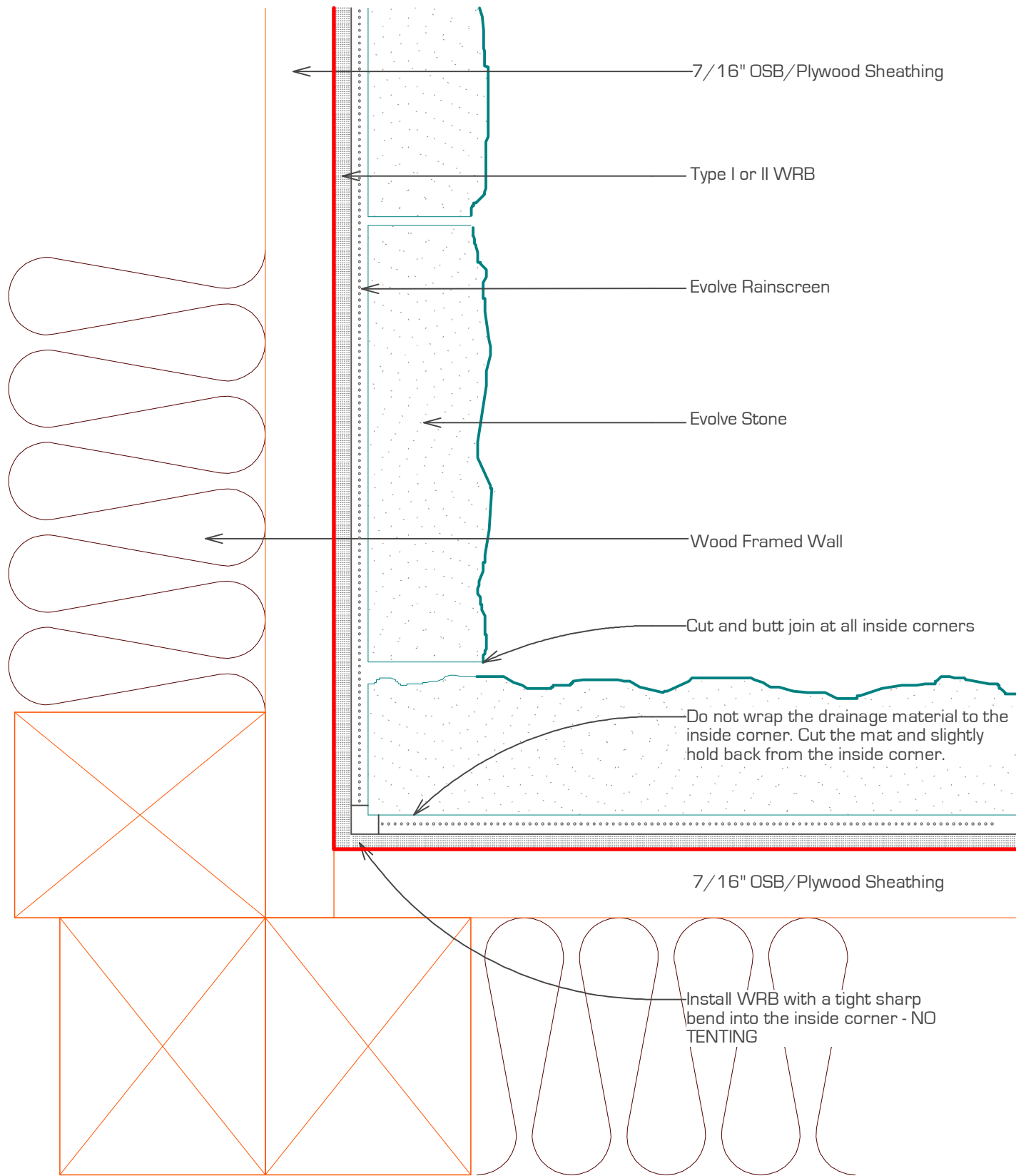
DETAIL #1

TYPICAL EVOLVE STONE INSTALLATION OVER WOOD WALL AND BAND BOARD



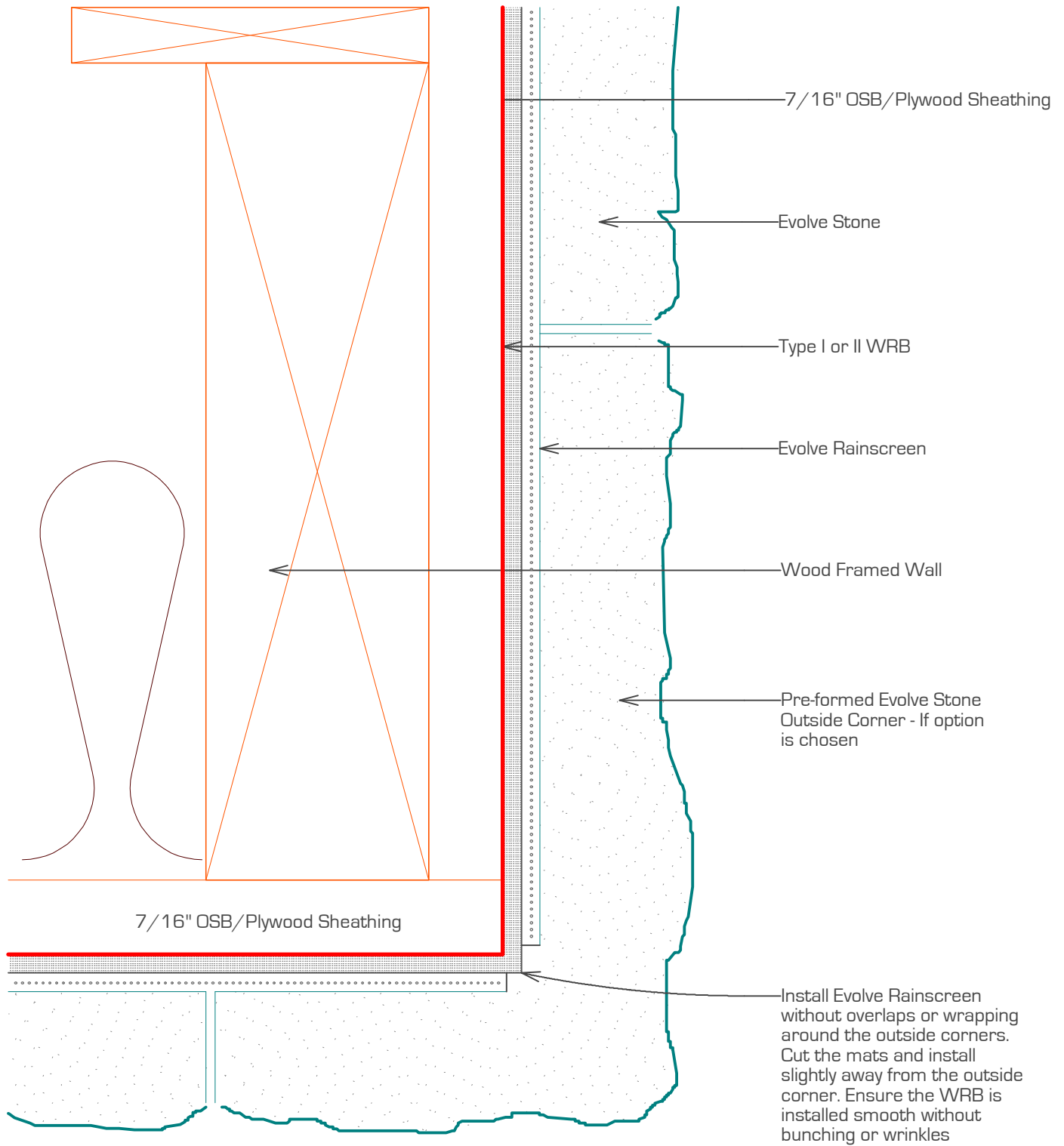
DETAIL #2

TYPICAL EVOLVE STONE AT FOUNDATION WALL BASE DETAIL



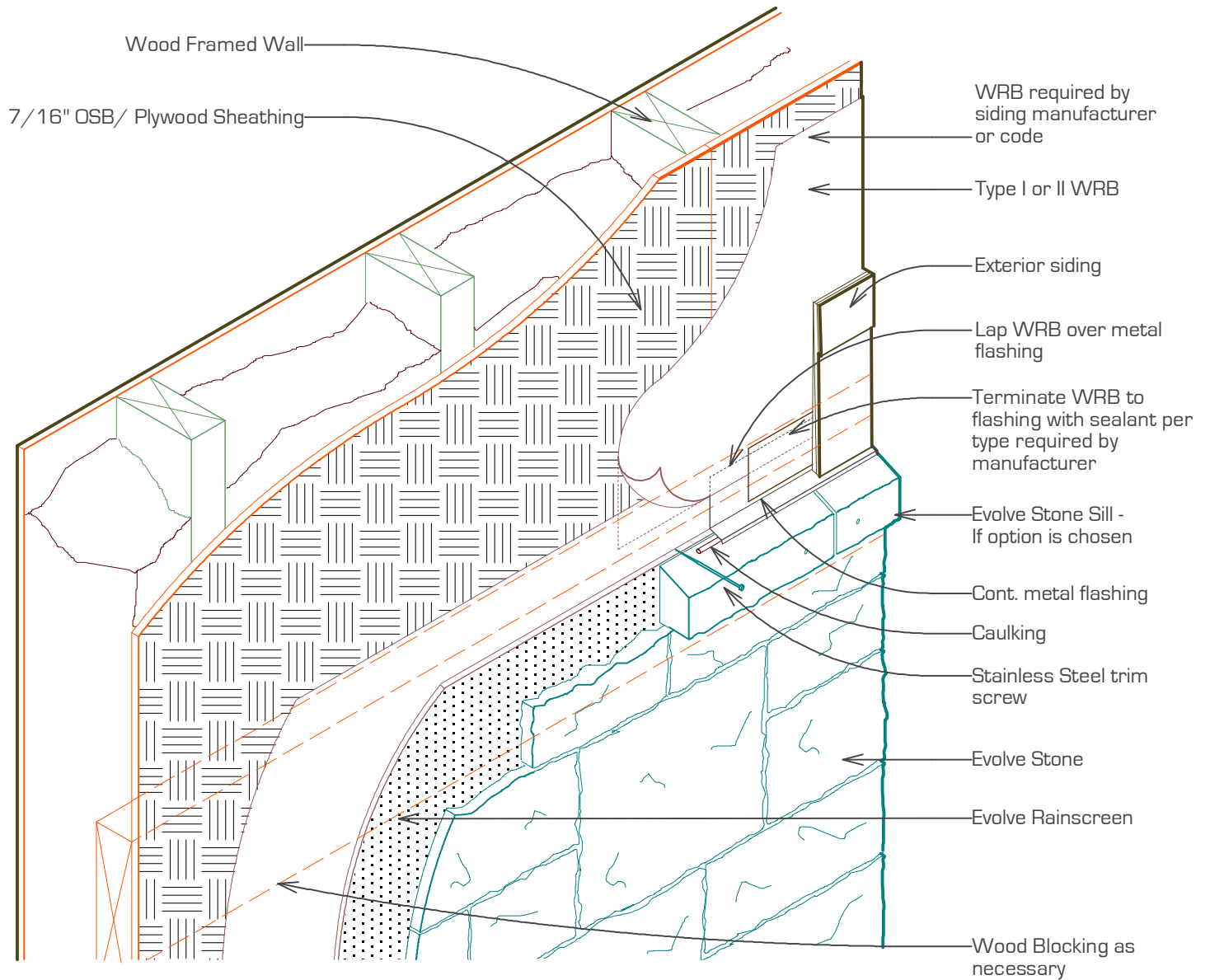
DETAIL #3

TYPICAL EVOLVE STONE INSIDE CORNER DETAIL



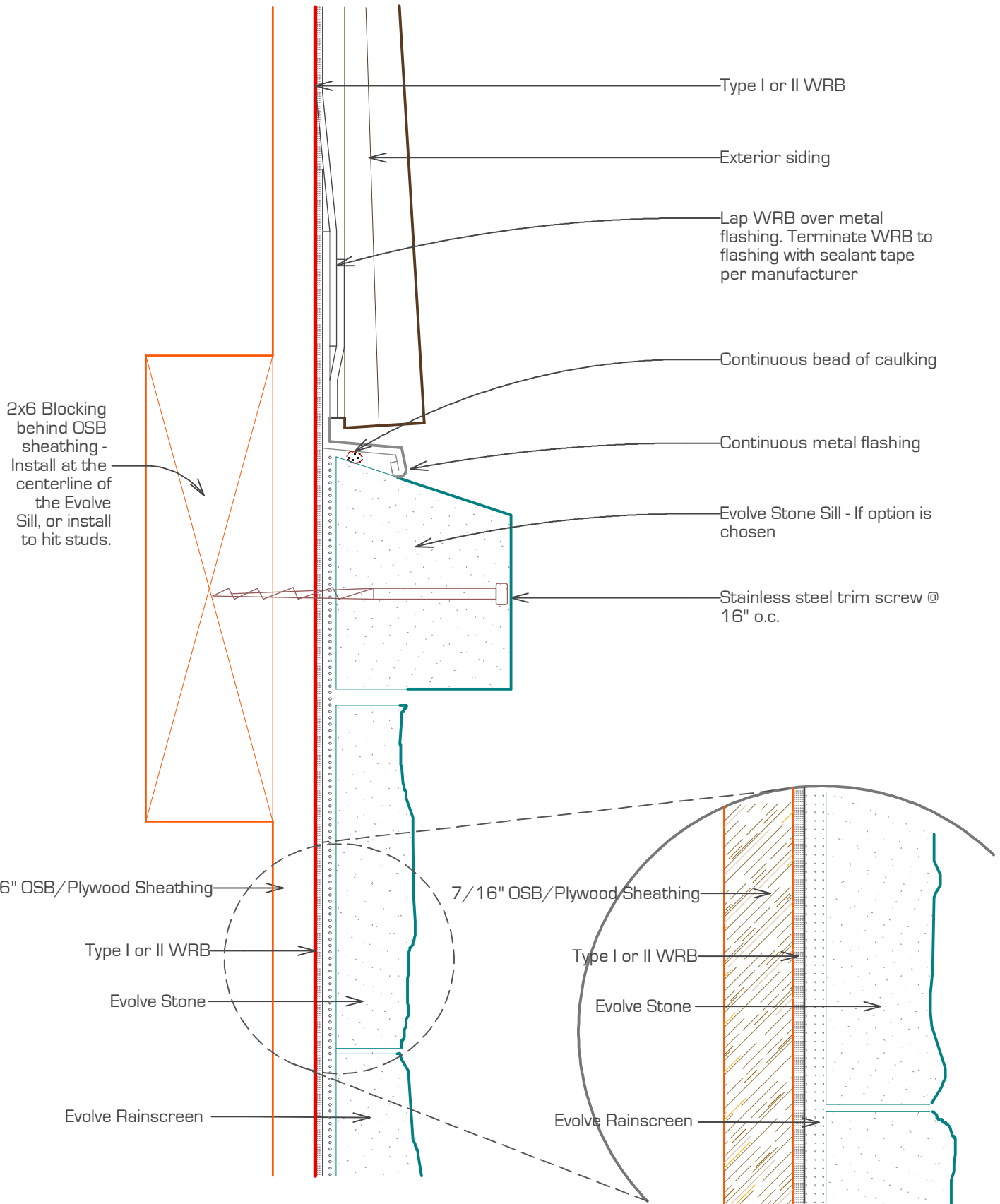
DETAIL #4

TYPICAL EVOLVE STONE OUTSIDE CORNER DETAIL

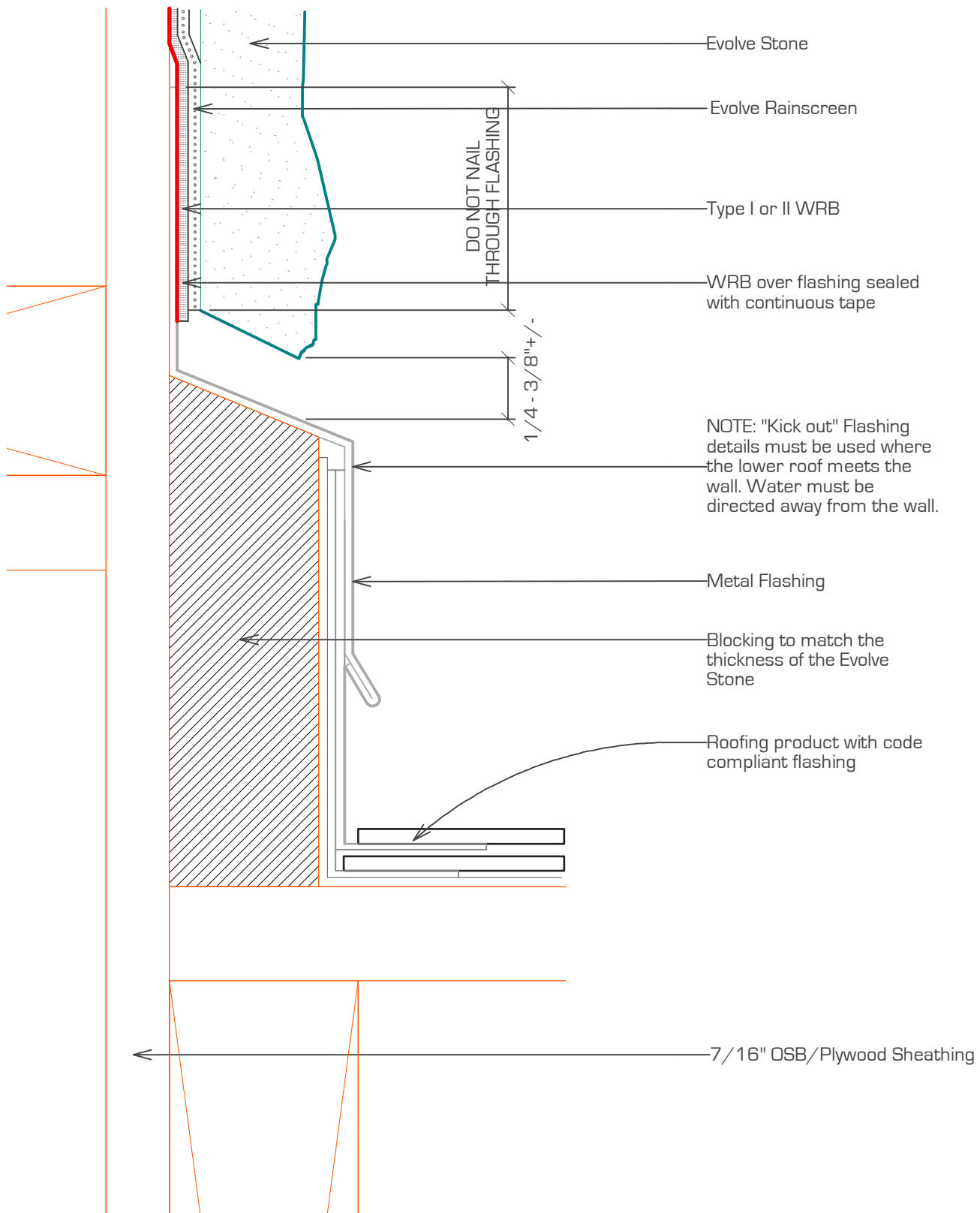


DETAIL # 5

TYPICAL EVOLVE STONE INSTALLATION OVER WOOD FRAMING

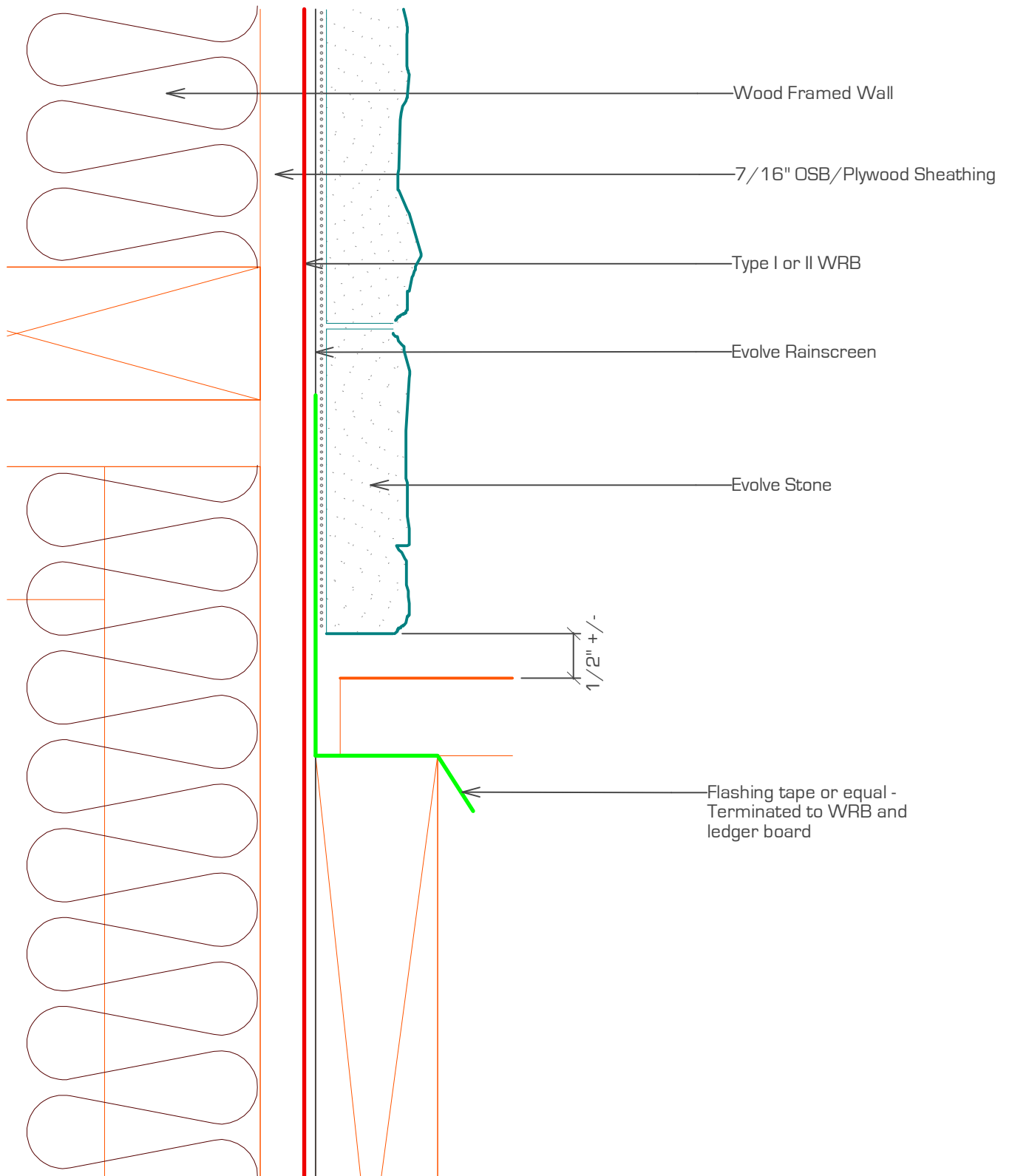


TYPICAL EVOLVE STONE TRANSITION - DETAIL #6



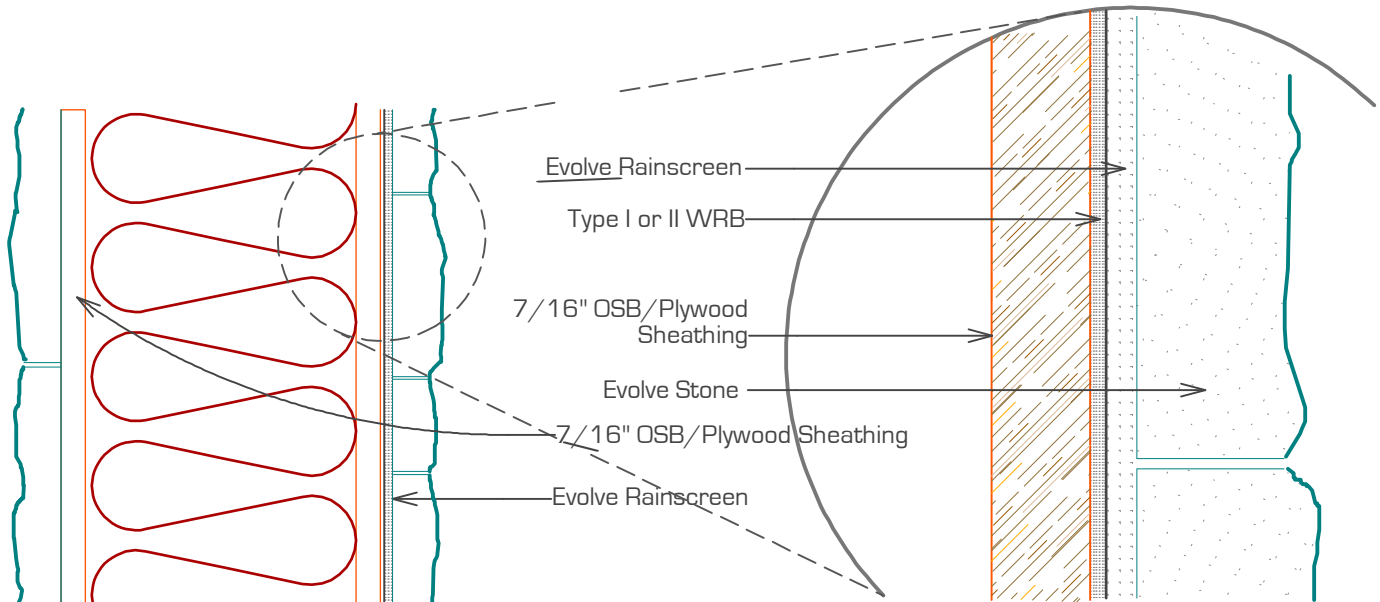
DETAIL #7

TYPICAL EVOLVE STONE AT SIDEWALL AND ROOF DETAIL



DETAIL #8

TYPICAL EVOLVE STONE AT DECK TERMINATION DETAIL



Evolve Stone must be installed into a minimum of a 7/16" OSB or 1/2" plywood that is structurally attached to the studs placed at 16" O.C.

The sheathing must be placed and secured by code, APA instructions and the manufacturer's instructions. This substrate must not be water or moisture compromising or degraded by the other environmental conditions.

Evolve Stone must be nailed to a sound structural sheathing intended to receive and hold pin nails.

Evolve Stone requires a fully installed water and airtight WRB system prior to the install of the drainage mat and pin nailed stone.

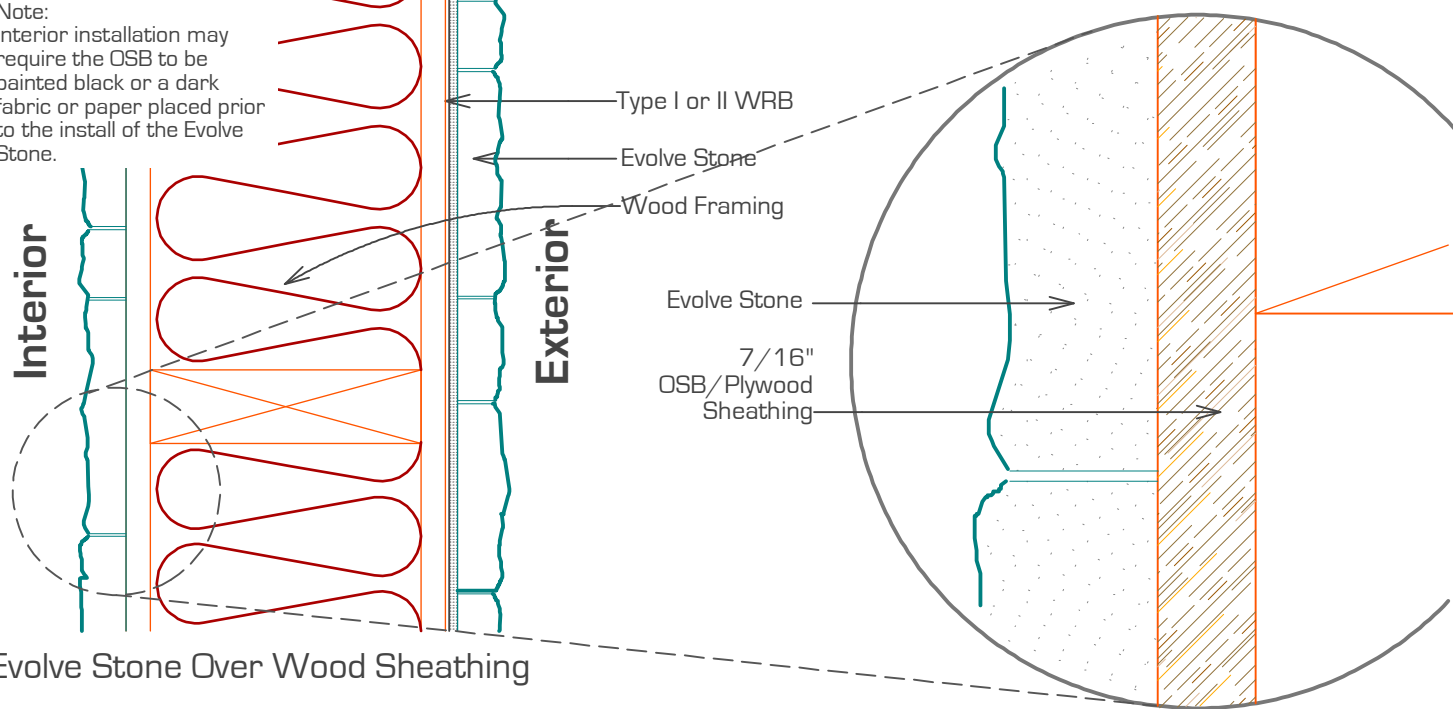
The WRB system includes flashings, self-adhered joint tapes, flashing tapes, liquid applied WRBS sealants, doors and windows must be properly installed, made water and airtight, properly flashed and integrated into the WRB system per code and manufacturer's details and instructions.

The Evolve Rainscreen ensures a clear drainage and drying path.

Note:
Interior installation may require the OSB to be painted black or a dark fabric or paper placed prior to the install of the Evolve Stone.

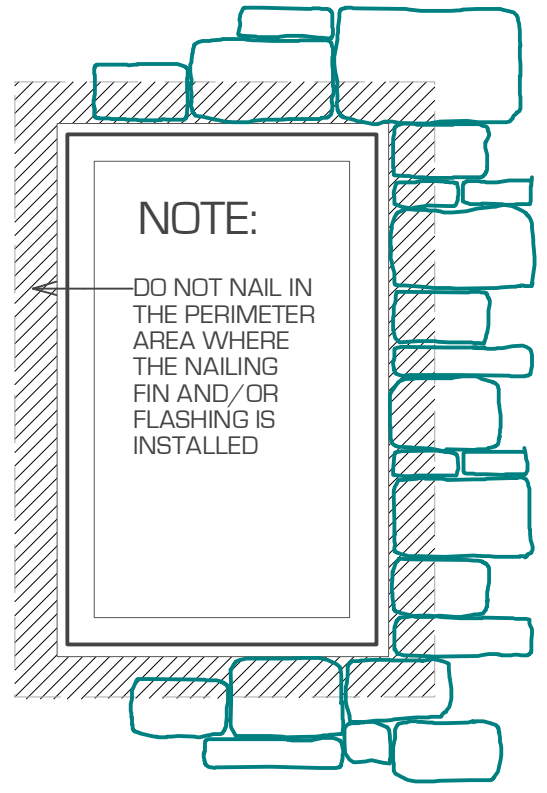
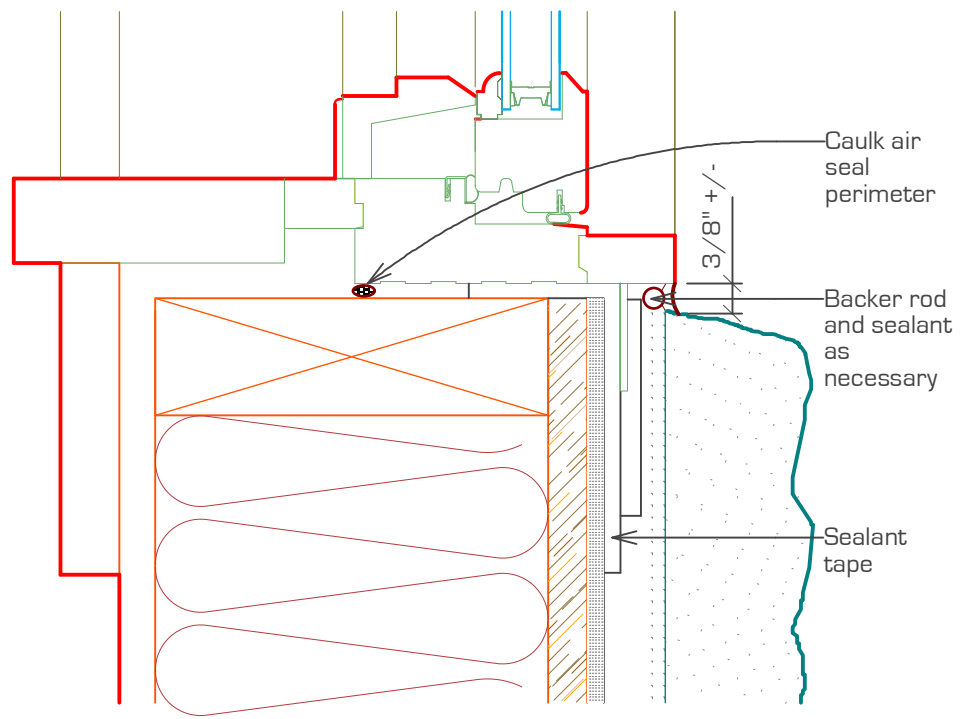
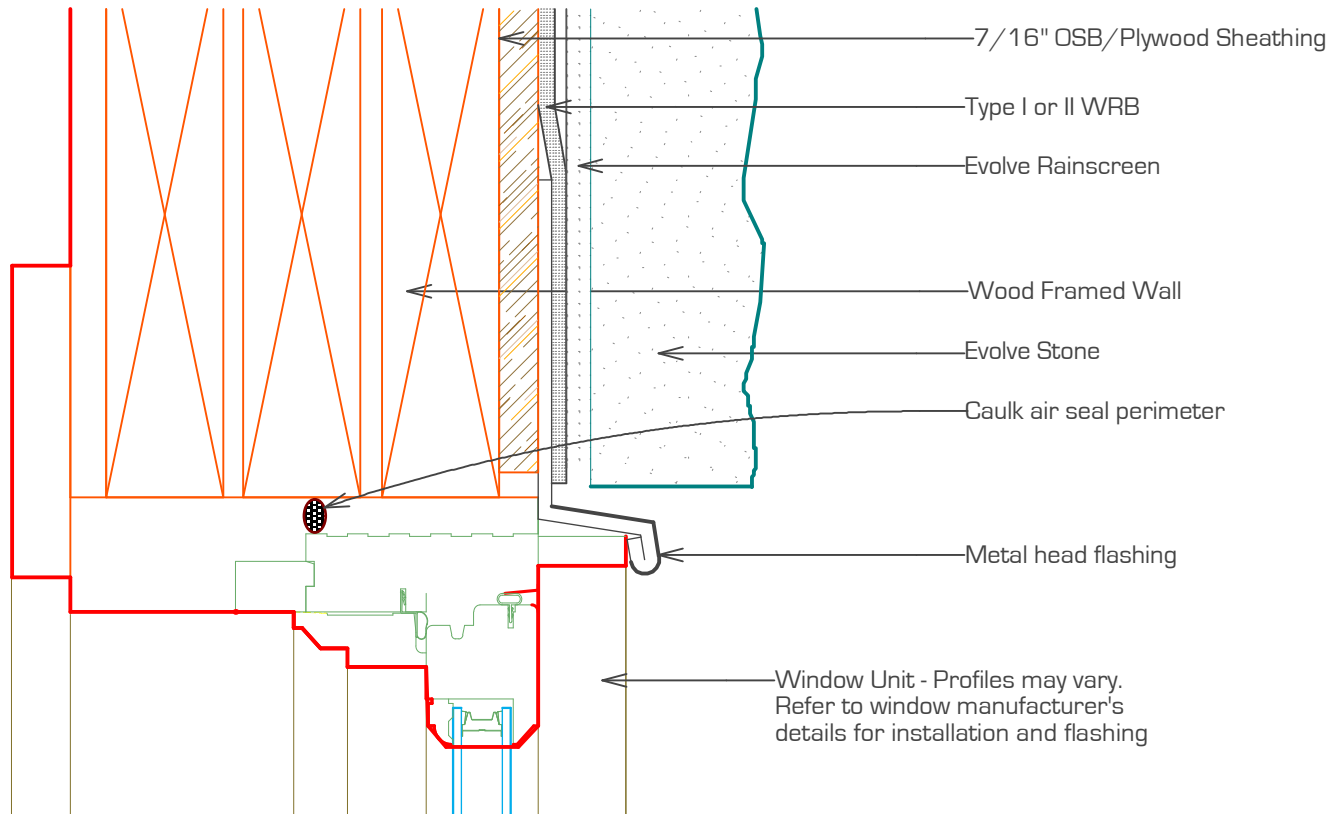
Interior

Exterior



Evolve Stone Over Wood Sheathing

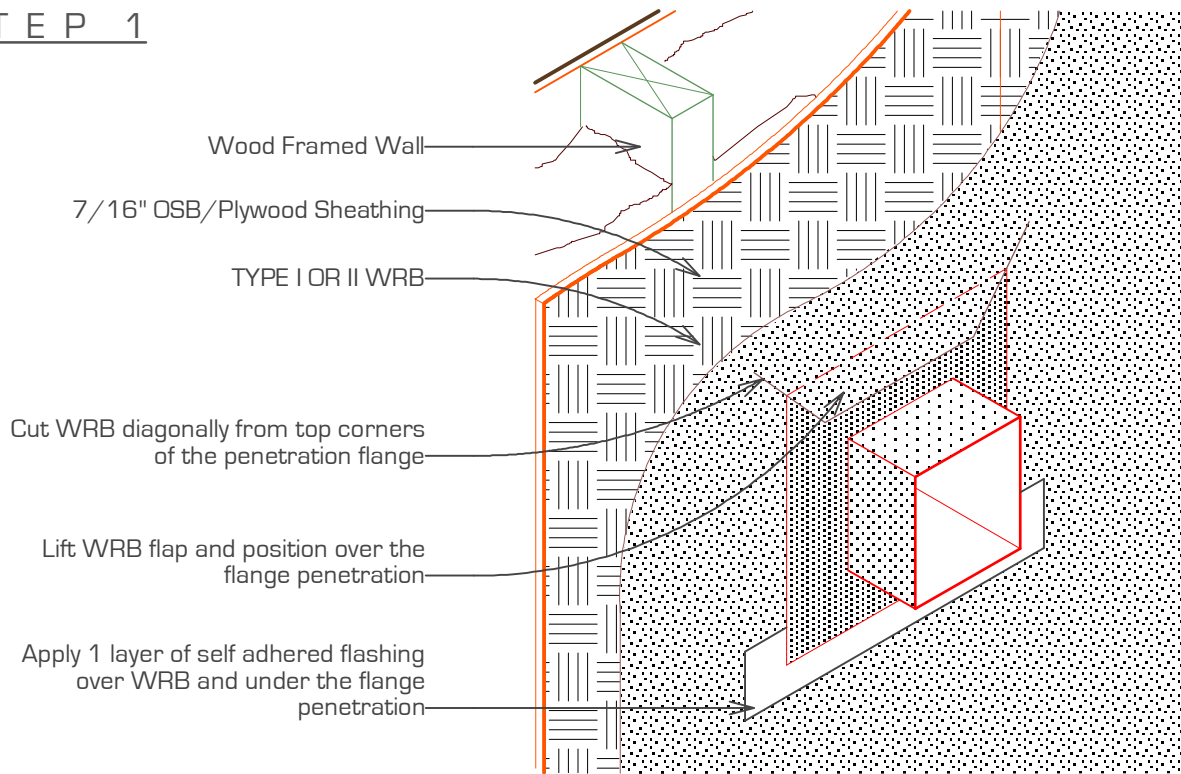
EVOLVE STONE TYPICAL WALL TYPES - DETAIL #9



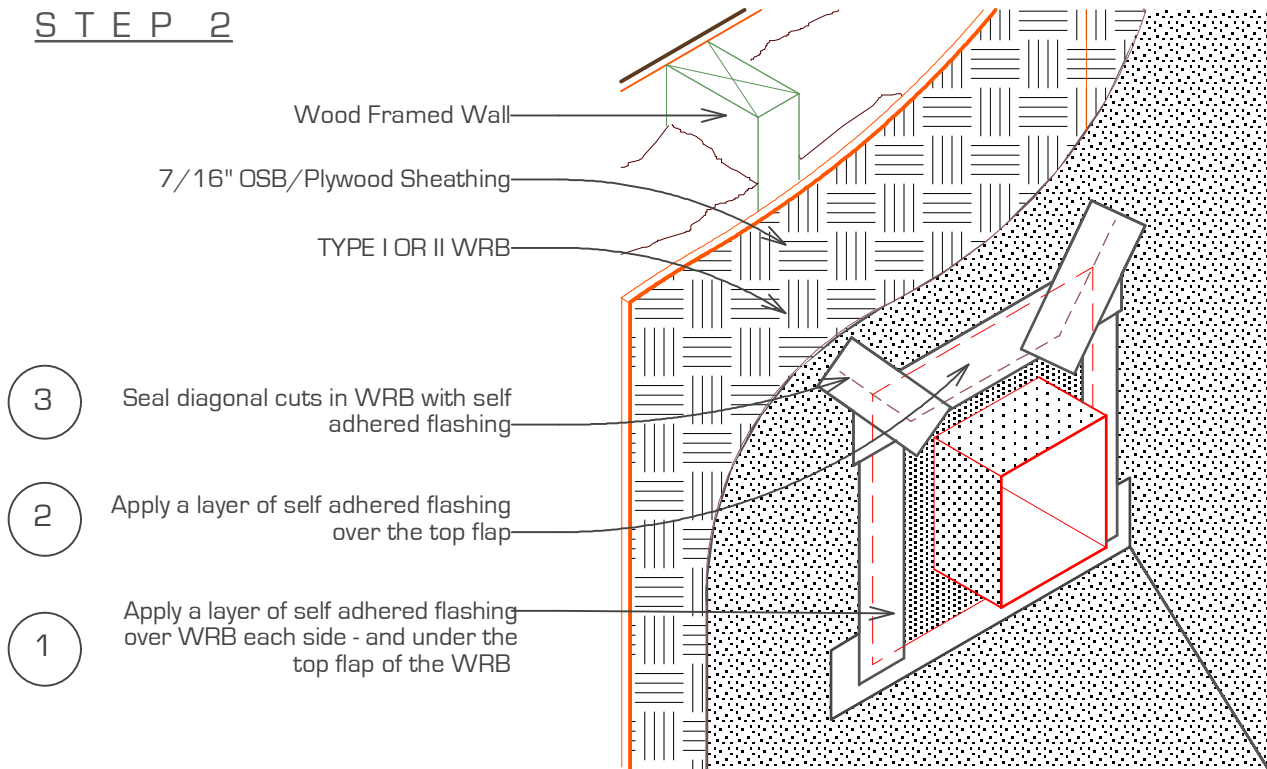
DETAIL # 10

EVOLVE STONE AT WINDOW / DOOR

STEP 1

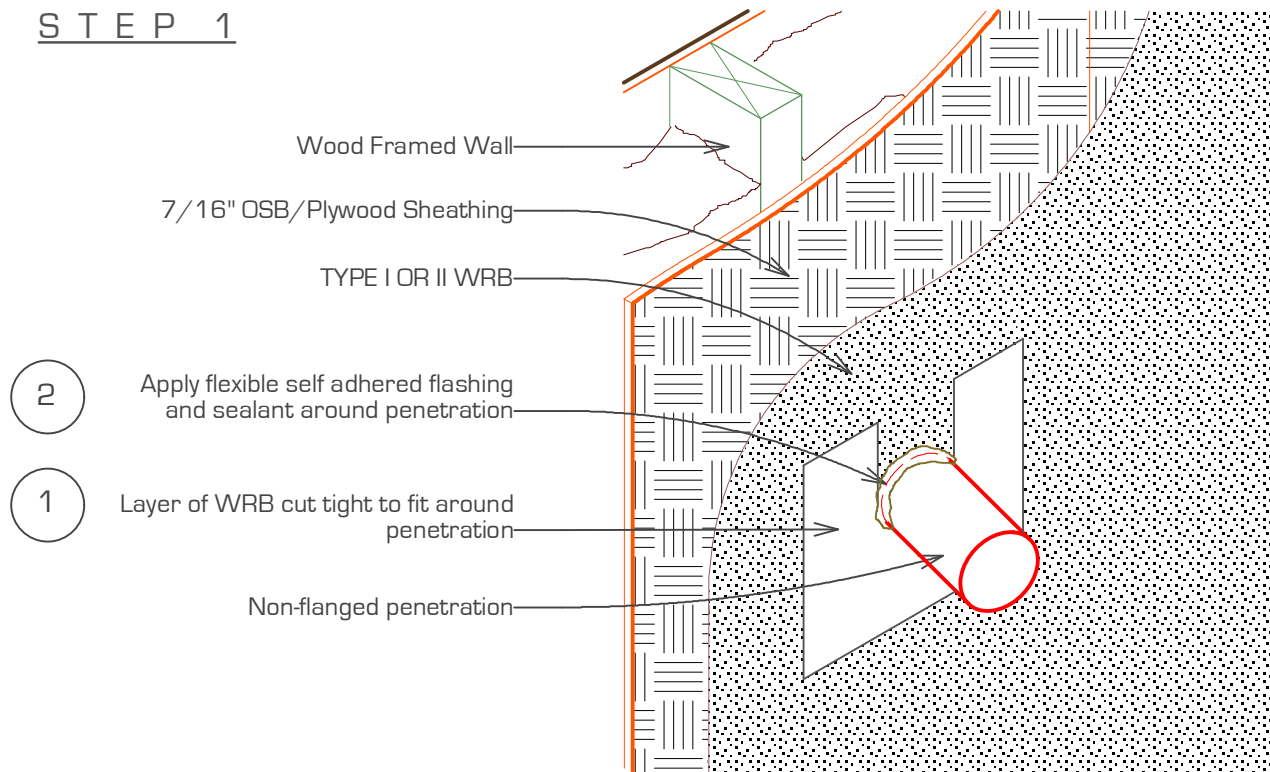


STEP 2

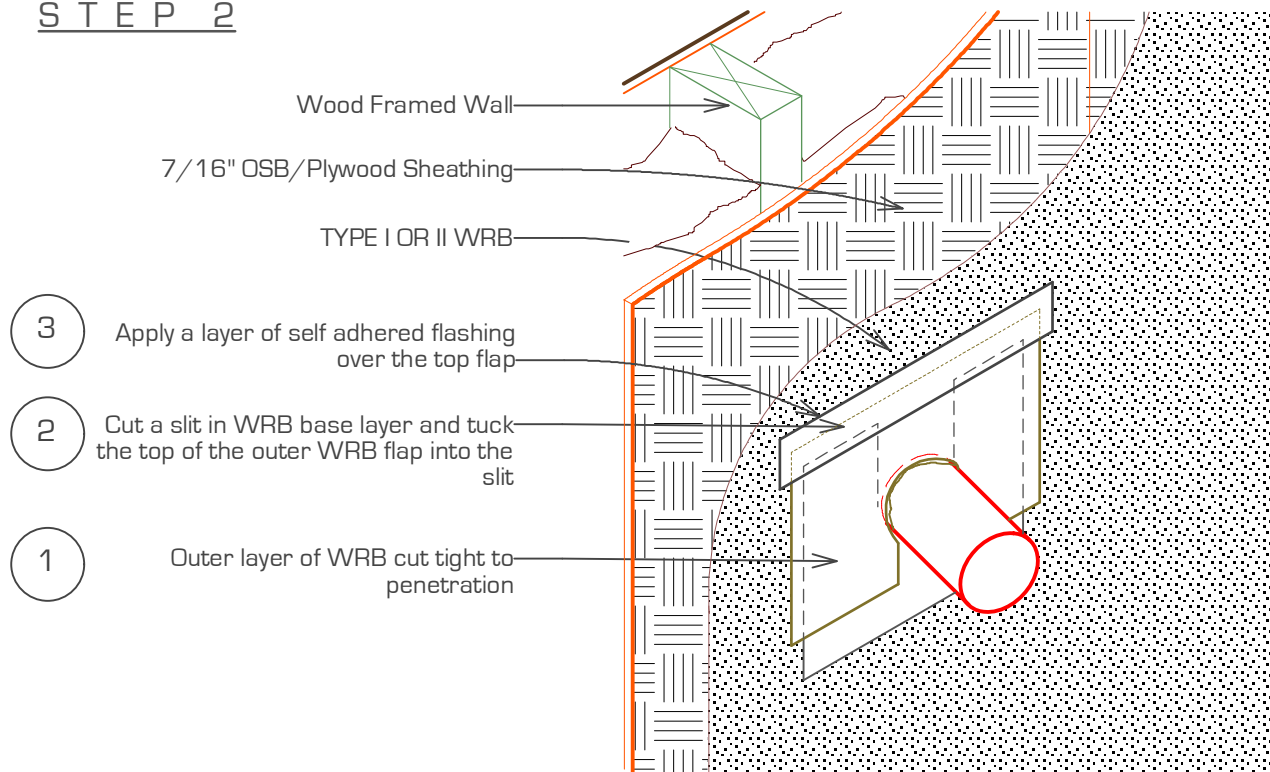


TYPICAL FLANGED PENETRATION FLASHING - DETAIL #11

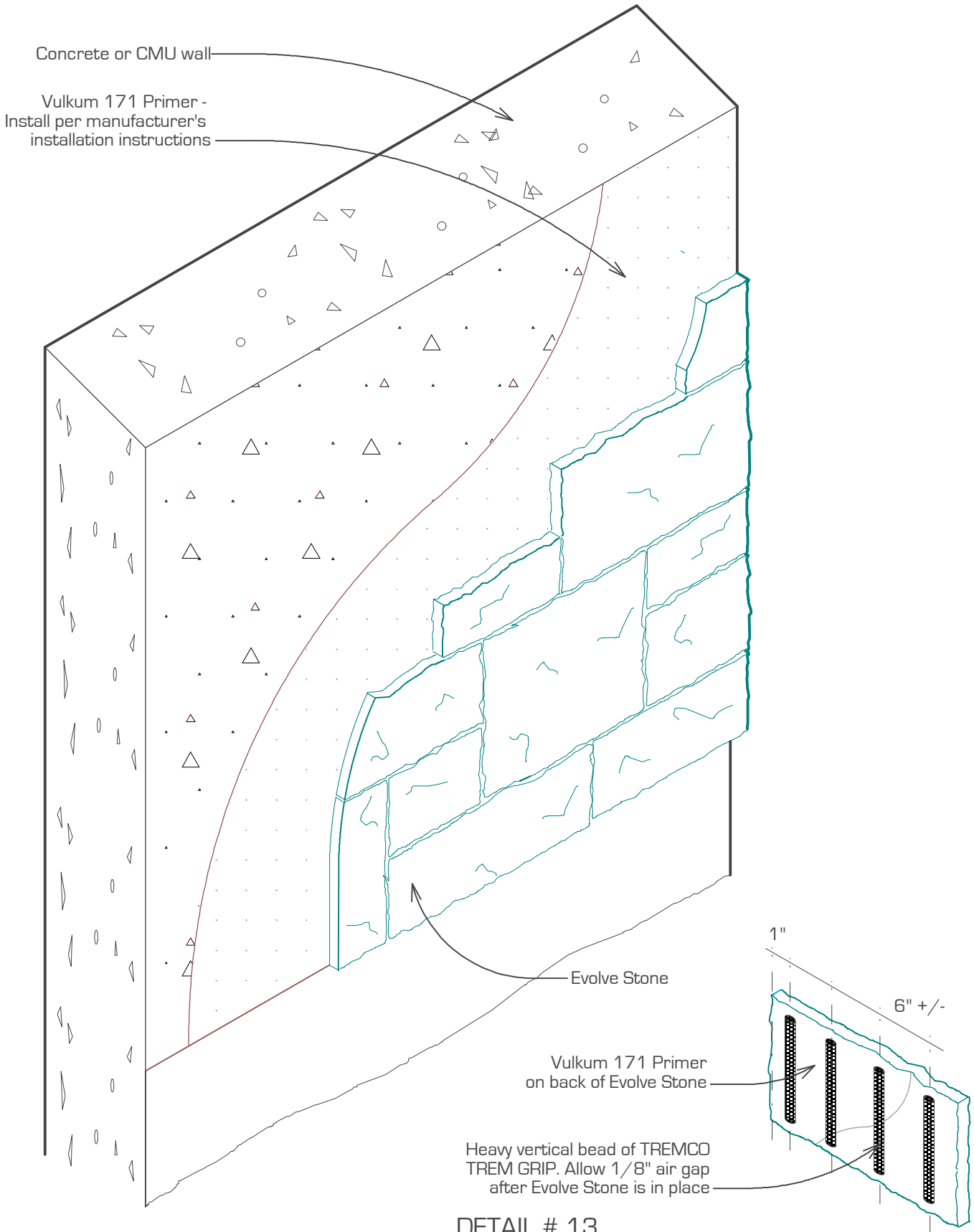
STEP 1



STEP 2

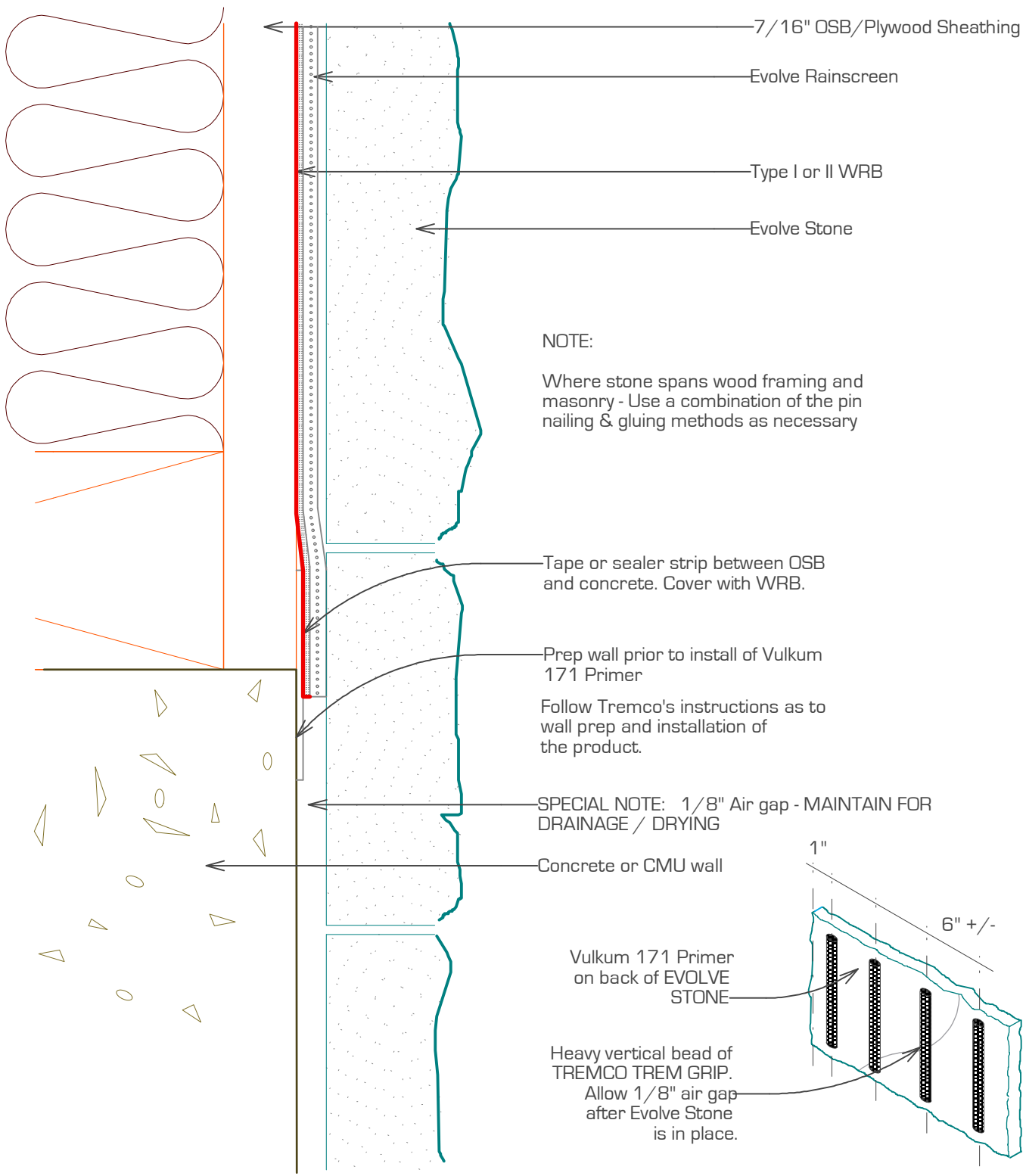


TYPICAL NON - FLANGED PENETRATION FLASHING - DETAIL #12



DETAIL # 13

TYPICAL EVOLVE STONE INSTALLATION OVER CONCRETE OR CMU



NOTE:
 Where stone spans wood framing and masonry - Use a combination of the pin nailing & gluing methods as necessary

Tape or sealer strip between OSB and concrete. Cover with WRB.

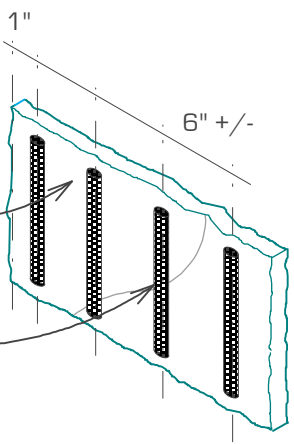
Prep wall prior to install of Vulkum 171 Primer
 Follow Tremco's instructions as to wall prep and installation of the product.

SPECIAL NOTE: 1/8" Air gap - MAINTAIN FOR DRAINAGE / DRYING

Concrete or CMU wall

Vulkum 171 Primer on back of EVOLVE STONE

Heavy vertical bead of TREMCO TREM GRIP. Allow 1/8" air gap after Evolve Stone is in place.



SEE EVOLVE STONE INSTALLATION OVER CONCRETE/CMU

DETAIL #14

TYPICAL EVOLVE STONE AT WOOD FRAMING TO FOUNDATION WALL DETAIL