TECHNICAL
SUBMITTAL PACKET

VERSETTA STONE®

STONE SIDING

COMPANY NAME: ....

CONTACT NAME: ....

PROJECT TITLE: ....

STREET ADDRESS: ....

CITY, STATE, ZIP ....

We would like to congratulate you on your upcoming project which incorporates mechanically applied stone siding veneers. Enclosed in this packet are the required Versetta Stone submittal forms and technical documents. We have also enclosed additional support materials and installation details commonly requested by architects and contractors.

Visit VersettaStone.com/resources to view all digital materials available for download.

<div align="center">

SUBMITTAL FORM

TECHNICAL DATA SHEET

WARRANTY

CERTIFICATE OF QUALITY

FREQUENTLY ASKED QUESTIONS

CARE & MAINTENANCE

RUSTOLEUM SPRAY PAINT COLOR MATCH

INSTALLATION GUIDELINES

FLASHING DETAILS

3-PART SPEC

ICC EVALUATION REPORT

MATERIAL SAFETY DATA SHEET

</div>

As part of our commitment to service, we would like to reccommend that you take advantage of our consulting services. We have trained Technical Field Service representatives that will walk through your project with you prior to installation. This can help prevent improper installations and in some cases identify where additional stone or accessories may be needed.

Thank you again for choosing Versetta Stone. Should you have any questions, please do not hesitate in contacting us. We are grateful for the opportunity to be a part of your project needs.

Sincerely,

Sales Representative
Versetta Stone

VERSETTA STONE REPRESENTATIVE: ....

PROJECT DETAILS

PROJECT NAME: ....

PROJECT ADDRESS: ....

CITY, STATE, ZIP: ....

VERSETTA STONE

PROFILE: .... COLOR: ....

APPROXIMATE SQ FT: ....

MANUFACTURING LOCATION (please check):   NAPA ☐   CHESTER ☐

OWNER	Please fill in all known information.	ARCHITECT

COMPANY NAME: ....

CITY, STATE: ....

CONTACT NAME: ....

CONTACT PHONE: ....

COMPANY NAME: ....

CITY, STATE: ....

CONTACT NAME: ....

CONTACT PHONE: ....

BUILDER	CONTRACTOR

COMPANY NAME: ....

CITY, STATE: ....

CONTACT NAME: ....

CONTACT PHONE: ....

COMPANY NAME: ....

CITY, STATE: ....

CONTACT NAME: ....

CONTACT PHONE: ....

PROJECT NOTES: ....

....

PRE-INSTALLATION PROJECT TEAM MEETING SCHEDULED?   YES ☐   NO ☐   DATE SCHEDULED: ....

Your signature below acknowledges receipt of the Versetta Stone "Submittal Packet"
and the above information is accurate to the best of your knowledge.

RECEIVED BY: ....

COMPANY: ....

VERSETTA STONE REPRESENTATIVE: ....

VERSETTA STONE®

VersettaStone.com | 800-521-8486

PERFORMANCE

- Built-in ¼" rain screen†
- Drain holes in nail strip and starter channel allow incidental water to exit the system
- G-90 galvanized nail strip
- Nail strip embedded in concrete provides 200 lb. pull out strength in 6" sample, and 1,200 lb. for a full panel
- ICC Evaluation Services Report ESR-2859
- Minimum 50% Recycled Content as verified by UL
- 50-year transferable Limited Warranty

FIRE PERFORMANCE

Property	Test Method	Result
Surface Burning Characteristics	ASTM E 84	Flame Spread = 0 Smoke Developed = 0

PHYSICAL PROPERTIES (Expressly For Warranty Purposes, Excl. Dimensions)

Property	Test Method	Result
Heat/Rain Resistance	AC90/ASTM C 1185	Pass
Wind Load*	ASTM E 330	> 120 psf uniform load test pressure > 90 mph most exposures
Freeze Thaw	ASTM C 666/ ASTM C 67	< 3% Mass Loss, 50 Cycles
Flexural Strength	1. Manufacturer 2. AC90	1. Average equil. flex. = 528 psi 2. Flexural strength retention = 85%
Efflorescence	AC51/ASTM C 67	No notable efflorescence
Water Tightness	AC90/ASTM C 1185	No water droplets observed.
Dimensions; Tolerances	Manufacturer	Tolerance from the nominal shall be 2% with a maximum variation of 1⁄8 in. (3.175)
Weight	ASTM C 567	Average coverage weight 8.8 psf

† For material produced prior to October 1, 2015, the rain screen may measure 3/16" but is fully compatible with products produced after that date.

* Specific details of exposure, height, area and safety factors will be required for wind resistance on a specific project

DIMENSIONS (NOMINAL)

Flat Panel
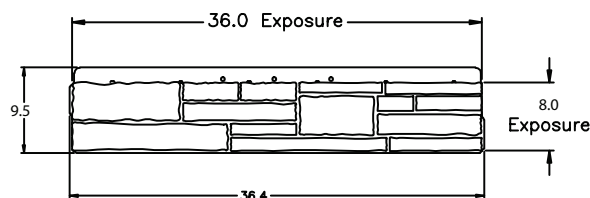
Wainscot Cap
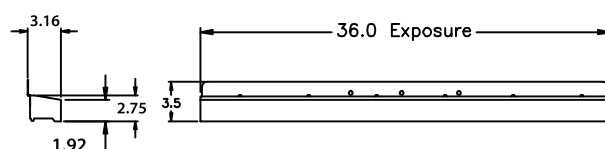
Trim Panel
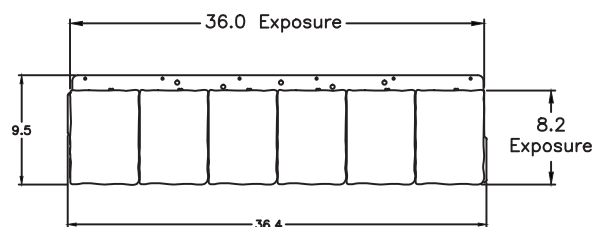
Universal Corner (Un-cut)

VERSETTA STONE®

50-Year Transferable Limited Warranty on Versetta Stone® Products
Limitations on the transferability of this warranty are set forth herein

INTRODUCTION
Thank you for your recent purchase of Boral Versetta Stone® panelized, manufactured stone veneer products ("Product(s)"). This express limited warranty ("Warranty") only covers Boral Versetta Stone® panelized, manufactured stone veneer products manufactured by Boral Stone Products LLC ("Boral").

WHO IS COVERED AND FOR HOW LONG
Subject to the following terms, Boral warrants its Products for fifty (50) years to the original consumer purchaser (the "Purchaser") (based upon the date of retail purchase, date of substantial completion of the installation if professionally installed, or date of settlement of the purchase of a newly constructed building, whichever is applicable). This Warranty is personal to you; however, the Warranty may be transferred to any subsequent purchaser(s) of your home or building during the first fifteen (15) years after the original purchase date (as described above), but the warranty period as to such subsequent owners is limited to fifteen (15) years from the original purchase date (as described above).

WHAT BORAL WARRANTS
Boral, subject to the conditions and limitations listed herein, warrants its Products to be manufactured to substantially exhibit the physical properties at time of manufacture that are described on the Boral Versetta Stone® data sheet as found on our website at www.versettastone.com.

WHAT IS NOT COVERED
We do not cover damage to the Product due to any cause not expressly covered herein. This Warranty does not cover any problems with non-defective material caused by conditions or handling beyond our control. Some examples of conditions not covered by this Warranty include:

1. Improper application, use of accessories which do not properly receive and/or secure our Products, or installation not in strict adherence to the applicable installation instructions or installation not in accordance with local building code requirements.

2. Damage resulting from accident, misuse, neglect, casualty, fire, vandalism, plant growth, impact of foreign objects, salt or de-Icing chemicals, excessive exposure to water due to things such as standing water, water backups, improper flashing, leaks, seepage or irrigation systems, failure of or damage to the wall substrate on which the Product was applied caused by movement, distortion, cracking, or settling of such wall or the foundation of the building, surface discolouration due to airborne stains, pollutants, algae, fungi, lichens or cyanobacteria, moss and mold growth, exposure to harmful chemicals, external heat sources (including, but not limited to, a barbecue grill, fire, or reflection from windows doors), acts of God, or other such occurrences beyond the control of Boral;

3. Material that has been painted, varnished, sealed with non-breathable sealer, or similarly coated over the manufacturer's original finish; and

4. The use of sandblasting, power washing, silicone treatments, or any other form of chemical wash

Products shall not be in breach of this Warranty if they contain or exhibit (i) minor chipping, as defined under ASTM C1364, Section 8.2; or (ii) minor cracks, as defined under ASTM C 90-05, Section 7.2.1, incidental to the usual methods or materials of manufacture or minor chipping resulting from customary methods of handling in shipment and delivery which do not affect the proper placement of the unit or significantly impair the strength or permanence of the construction.

Products are not warranted against discolouration caused by air pollution, exposure to harmful chemicals, or "normal weathering" resulting from exposure to the elements. "Normal weathering" is defined as the damaging effects of sunlight and extremes of weather and atmosphere that may cause any coloured surface to oxidize, fade, or become soiled or stained over time.

Boral strives to accurately reproduce the colours of its masonry stone veneer Products in its marketing literature and sample boards. The Product colours that you see are as accurate as technology allows. Boral makes no warranty with respect to any real or perceived colour differences between those depicted in its marketing literature and sample boards and those of the actual Products that will be installed on or within the home or building. Boral recommends that you look at actual Product samples before making a colour selection for your home or building.

WHAT IS YOUR REMEDY
1. Coverage Period. During the warranty period, if the Products are not in conformance with our Warranty, Boral will, in its sole discretion, either (i) repair or replace the nonconforming Products, or (ii) refund the price paid for the Products, all in accordance with the provisions stated below. Labor costs for removal or installation are not covered. Any Products repaired or replaced hereunder will continue to be covered under the terms of this Warranty for the remainder of the applicable warranty period.

2. Prorated Period. During the warranty coverage period, we will take into account the number of months of use you and your predecessor have enjoyed the Products through the date of your claim, and reduce the amount of our payment to you accordingly. That is, we will prorate amount of your payment through the date of your claim. For example: if you are the purchaser, you have a 50-year warranty (600 months). If you make your claim in the last month of the 20th year of the warranty (i.e., the 240th month), we will not cover labor but will pay you, at our sole discretion, either (i) 360/600ths of the price paid for the Product or (ii) 360/600ths of the reasonable material cost to repair or replace the Product. The prorated period will change based on the remaining warranty duration if the Purchaser transfers the Warranty to a subsequent owner as described above.

3. Exceptions. At all times, Boral's obligation to pay for repair or replacement of the defective product is subject to certain limitations Specifically, all material costs must be pre-approved by Boral and Boral retains the right to provide materials in lieu of compensation. Additionally, Boral will not pay for any accessories or related work.

SUBMITTING A WARRANTY CLAIM
To make a claim under this Warranty, you shall notify Boral of the claim promptly following its discovery and you shall submit with such notification proof date of the purchase and/or installation, and proof of property ownership, in order to provide Boral an opportunity to investigate the claim and examine the material claimed to be defective.

All notifications shall be provided to Boral at Boral Stone Products Warranty Department, 2256 Centennial Road, Toledo, Ohio 43617 or call 1-866-577-8663. Shortly after we receive your communication, we will contact you regarding your claim. To fully evaluate your claim, we may ask you to provide pictures of your Products or samples for us to test. If you have any questions, do not hesitate to write us at the address above or call 1-866-557-8663.

REPLACEMENT AND PRODUCT VARIATIONS
As a result of our ongoing efforts to improve and enhance our product line, we reserve the right to discontinue or modify our Products, including their colours, without notice to you and we shall not be liable to you as a result of such discontinuance or modification. We are not liable to you if you make a warranty claim in the future and any replacement Products you receive vary in colour or finish because of normal weathering or changes in our product line. You should understand that if we replace any Products under this Warranty, we reserve the right to provide you with substitute Products that are comparable only in quality and price to your original Products.

LIMITATIONS
EXCEPT AS SET FORTH ABOVE, BORAL MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ANY PRODUCT SOLD. ORAL STATEMENTS CONCERNING THE PRODUCT(S) COVERED BY THIS WARRANTY, OR STATEMENTS CONTAINED IN BORAL'S GENERAL ADVERTISING, PAMPHLETS OR OTHER PRINTED MATERIALS DO NOT CONSTITUTE WARRANTIES, AND PURCHASER ACKNOWLEDGES THAT IT HAS NO RIGHT TO RELY UPON SAME. BORAL, WHETHER AS A MANUFACTURER OR CARRIER, SHALL NOT BE LIABLE FOR ANY COMMERCIAL LOSSES, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES, OR FOR ANY LOSS, DAMAGE OR EXPENSE ARISING UNDER OR IN CONNECTION WITH ANY SALE OF PRODUCT. BORAL'S LIABILITY FOR DAMAGES OF ANY KIND SHALL IN NO EVENT EXCEED THE ORIGINAL PURCHASE PRICE OF THE PARTICULAR ORDER, LOT OR SHIPMENT (OR THE ORIGINAL PURCHASE PRICE OF THAT PORTION THEREOF WHICH IS NOT REPAIRED OR REPLACED) WITH RESPECT TO WHICH A CLAIM IS ASSERTED. IN PARTICULAR, BORAL SHALL NOT BE LIABLE FOR LOSS OF SALES, REVENUES OR PROFITS OR CLAIMS OF ANY THIRD PARTIES.

LEGAL RIGHTS
Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation on incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If the laws of a particular state require terms other than or in addition to those contained in this Warranty, this Warranty shall be deemed modified so as to comply with the appropriate laws of such state, but only to the extent necessary to prevent the invalidity of this Warranty or any provision of this Warranty or to prevent the imposition of any fines, penalties or any liability.

VERSETTA STONE®

DATE:

ATTN:

PROJECT TITLE:

PROJECT CITY, STATE:

ARCHITECT:

STONE PROFILE, COLOR:

GENERAL CONTRACTOR:

This letter is to certify that the product manufactured by Versetta Stone® for the project specified above will meet the Acceptance Criteria for Precast Stone Veneer set by ICC Evaluation Service, as specified in the Evaluation Report No. ESR-1215.

Sincerely,

Rick Garagliano

Director of Quality
Versetta Stone

WHAT IS THE DIFFERENCE BETWEEN MANUFACTURED STONE SIDING, NATURAL STONE, AND STONE VENEER?

Manufactured stone siding is cast from molds made of real stone which makes it lighter than natural stone. Natural stone and stone veneer applications will require lath, mortar and a qualified mason to install, whereas mechanically fastened stone veneer siding can be installed with mechanical fasteners by a siding contractor, carpenter, or homeowner.

WHAT ARE THE BENEFITS OF USING MANUFACTURED STONE SIDING?

No previous stone experience is required, easy installation can be performed by a siding contractor or carpenter using screws or nails. Panel design allows for faster installation. Due to being less weight than traditionally applied stone no additional footings are needed for support. A rainscreen is engineered into the panel to provide an unparalleled air and moisture management system.

WHERE CAN I INSTALL VERSETTA STONE® SIDING?

Versetta Stone Siding can be applied to any structurally sound surface on the interior or exterior of a building to include block, brick, and poured concrete walls. The ease of installation makes it a great fit for residential, commercial or any home remodel project. For questions regarding specific applications you may contact your local sales representative, technical representative, or our customer service department **800-521-8486**. For inspirational ideas, visit **VersettaStone.com.**

HOW DOES VERSETTA STONE WITHSTAND FREEZE/THAW CYCLES?

Versetta Stone Siding exceeds rigorous freeze/thaw testing requirements which are designed to examine a product's durability across all climate types. As with any installation, making sure to incorporate good building practices that include proper flashing and water diversion techniques will help ensure a successful installation.

WHAT IS THE MATERIAL COMPOSITION OF THE VERSETTA STONE SIDING PANEL?

Versetta Stone Siding is constructed of lightweight fiber reinforced concrete using a minimum of 50% recycled content. A 26-gauge galvanized strip is embedded into to each panel for fastening and to provide the ground-breaking built-in air and moisture management system.

WHAT IS THE WEIGHT AND DIMENSION OF THE VERSETTA STONE SIDING PANEL?

Each Versetta Stone Siding panel weighs approximately 17 lbs. and covers 2 sqft (8-½ lbs per sqft). The dimensions of the exposed siding panel are 36" long by 8" high by approximately 1-½" - 2" thick.

WILL VERSETTA STONE SIDING FADE?

Versetta Stone utilizes synthetic iron oxide pigments and UV inhibitors that significantly reduce the amount of fading over time.

WHAT TYPE OF COVERAGE CAN BE EXPECTED?

Each full panel of Versetta Stone Siding covers 2 sq. ft. of wall. Approximately 250 square feet per man per day can be installed. The amount that can be installed per day will vary depending on the wall layout, complexity of the job, organization, cleanliness of the jobsite and the working pace of the installer.

WHERE CAN I BUY VERSETTA STONE® SIDING?

Versetta Stone Siding can be found at distributors and dealers throughout the United States and Canada. Visit **VersettaStone.com** and select [Where to Buy] at the top of the page to find a location near you or by contacting your local sales representative.

DOES VERSETTA STONE SIDING MEET BUILDING CODE REQUIREMENTS?

Versetta Stone Siding meets all applicable building code requirements. A copy of the technical data sheet is available online at **VersettaStone.com** under the resources section.

IS VERSETTA STONE SIDING COMBUSTIBLE?

Versetta Stone Siding is not combustible, the product is not explosive. Versetta Stone Siding maintains a Class A fire rating for zero smoke and flame spread.

WHAT HAPPENS IF VERSETTA STONE SIDING GETS DAMAGED?

Small chips and cracks to the face of the stone can be repaired using our color touch up kit that can be obtained through the customer service department **800-521-8486** or by using the Versetta Stone Textured Finishing Adhesive. If an entire panel needs to be replaced, we offer complete instructions on how to remove and reinstall in our installation instructions found on **VersettaStone.com**

I HAVE AN END CUT THAT SHOWS THE AGGREGATE OF THE STONE SIDING PANEL, HOW CAN I COVER THAT UP?

Rust-oleum® has color-match textured spray paint that matches Versetta Siding colors and can be applied to end cuts to cover the aggregate (see page 10).

HOW DO I CLEAN VERSETTA STONE SIDING?

Cutting dust and general construction dust can be removed with a 5% vinegar / 95% water solution and a nylon brush. Stubborn dirt may require the addition of a granulated general detergent. Do not clean with harsh chemicals or acid products. Do not use a pressure washer.

CAN I SEAL VERSETTA STONE SIDING?

Sealing Versetta Stone is not required, but a water-based silane or siloxane repellant can be used. Try in a small area first. Using a sealer can alter the color of the stones.

WHAT KIND OF WEATHER RESISTANT BARRIER CAN I USE?

It is recommended to use a minimum of one layer of Grade D building paper or other WRB material meeting the requirements of ICC Acceptance Criteria #38 or ASTM E 2556/E 2556M. #15 felt provides a dark background and ensures appropriate aesthetics should the WRB be visible. Two layers of WRB are required for the inside and outside corners. See flashing details in the resource section Always check with your local building code before beginning installation.

HOW DO I CUT VERSETTA STONE® SIDING?

When cutting Versetta Stone, it is recommended to use a circular saw, hand grinder or a miter saw with a 10" diamond segmented blade, and proper *dust extraction/vaccum system**. Always wear a disposable filtering face piece respirator, safety glasses and protective gloves when cutting Stone Siding. It is also recommended to wear long sleeve shirts and long pants for protection. Wash your hands and face immediately with soap and warm water immediately after handling this product.

WHAT MEASURES SHOULD BE TAKEN WHEN INSTALLING VERSETTA STONE SIDING IN HOT/COLD CLIMATES?

Versetta Stone can be installed in any climate. No additional precautions or steps need to be taken regardless of the ambient temperature.

WHAT MEASURES SHOULD BE TAKEN FOR APPLICATIONS OVER 30 FT?

For applications exceeding 30 ft. in height, Versetta Stone recommends consulting with a structural engineer and building code official for approval.

WHAT KIND OF WIND LOAD TESTING HAS BEEN APPLIED TO VERSETTA STONE SIDING?

ASTM E330-02 wind load testing where product exceeds 110 MPH wind resistance.

WHERE CAN I LEARN MORE ABOUT VERSETTA STONE SIDING?

Contact your local Sales or Architectural Representative, visit **VersettaStone.com,** or talk to your local distributor to learn more about why Versetta Stone may be the best solution for your next project. To be connected to your local sales representative you may contact our customer service department **800-521-8486.**

*Please refer to the OSHA 1926.1153 Respirable Crystalline Silica Table on page 11.

RUST-OLEUM

Rust-Oleum Multicolor Textured Spray Paint can be used for touching up cut ends or rip cuts on Versetta Stone panels. Below shows each color of Versetta Stone with a corresponding color of Rust-Oleum Textured Spray Paint.

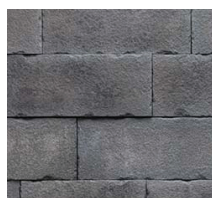**RUST-OLEUM PAINT COLOR**   **VERSETTA STONE COLOR**

Desert Bisque	Plum Creek	Sterling	Terra Rosa
Aged Iron*	Graphite	Midnight	Northern Ash
Autumn Brown	Terra Rosa		
Caribbean Sand	Sand	Sea Salt	Mission Point

* Alternate standard flat black spray paint can be used with graphite.
¹Rust-Oleum® is a registered trademark of Rust-Oleum Corp. The Versetta Stone® products shown and detailed in this brochure are products of Boral Building Products Inc., and are not affiliated with, endorsed, sponsored, or approved by Rust-Oleum Corporation.

§1926.1153 Respirable crystalline silica.

(c) <u>Specified exposure control methods</u>. (1) For each employee engaged in a task identified on Table 1, the employer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified for the task on Table 1, unless the employer assesses and limits the exposure of the employee to respirable crystalline silica in accordance with paragraph (d) of this section.

Table 1: Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(i) Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
(ii) Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. − When used outdoors. − When used indoors or in an enclosed area.	None APF 10	APF 10 APF 10

HANDLING AND STORAGE

Versetta Stone® should be transported and stored in the original shipping package until ready to use. When sub packs are removed, transport and store with top (nailing flange) up.

CLEANING

Cutting dust and general construction dust can be removed with a 5% vinegar / 95% water solution and a nylon bristle brush. Inspect your Versetta Stone® periodically for excessive buildup of dirt and other debris. Stubborn buildup may require the addition of a mild detergent or a granulated general detergent and a soft, nylon bristle brush. When using a detergent, be sure to rinse the area completely with a garden hose. Do not allow soapy water or detergent to dry on Versetta Stone.

OIL AND GREASE

If installed in an area where oil or grease splatter may occur (such as a kitchen backsplash or behind a cooktop), it is recommended that Versetta Stone be sealed with a water based product such as Silane or Siloxane. These sealants typically last about four years before needing to be reapplied. Be sure to follow any application, care and cleaning recommendations issued by your sealant manufacturer in addition to the guidelines outlined here.

SALT AND DE-ICING CHEMICALS

All concrete and masonry materials are vulnerable to damage by salt and de-icing chemicals. Do not use salt or de-icing chemicals on the product or in areas adjacent that may splash onto it. See warranty for more details.

PANEL REPAIR/REPLACEMENT

Using a masonry saw or grinder with a diamond blade and proper personal protective equipment, cut out the area to be replaced. Take care to avoid damaging the weather resistive barrier behind the panel. Trim new panels to fit the area you just cut out. Repair any damage to the water resistive barrier, making sure to lap and seal in shingle fashion. Follow the partial panel installation method to install replacement panel. See complete Versetta Stone Installation Instructions for further details.

CLEANING WITH THE WRONG CHEMICALS OR MATERIALS MAY REMOVE COLOR OR IMPACT THE LONG-TERM DURABILITY OF YOUR VERSETTA STONE SIDING. WE DO NOT RECOMMEND THESE PRACTICES.

• Use of harsh chemicals
• Use metal-bristled brushes
• Use high pressure sprayers
• Acid washing

Building code requirements vary and it is suggested that you check with local authorities to determine requirements for your area. Carefully read all installation instructions before proceeding with installation. Observe all safety precautions.

Versetta Stone® mortarless stone veneer panels are designed for application over wood framing, spaced 16" on center and covered by a code approved, nailable sheathing product. Currently, Boral requires a minimum 7/16" OSB or ½" plywood sheathing beneath the Versetta Stone product. Wall framing should be designed to limit out-of-plane wall deflection to a minimum of L/240. At a minimum, the building's corners should be sheathed to meet local building code requirements and to mitigate the effects of wall racking. Roofing and interior wallboard should be installed prior to starting installation. Walls are to be plumb within ¼" per 10 lineal feet. Expansion joints for the Versetta Stone product should be provided as specified by the registered design professional. Testing and evaluations for this product apply to applications up to 30' in height. Installations above 30' must be approved by the design professional. Provide a means for drainage and ventilation at all horizontal terminations. This is typically achieved by using Starter Strip and J Channel in conjunction with flashing products and generally accepted practices.

HANDLING AND STORAGE
The product should be transported and stored in the original shipping package until ready to use. When sub packs are removed, transport and store with top (nailing flange) up. See Figure 1.

Figure 1 - storage
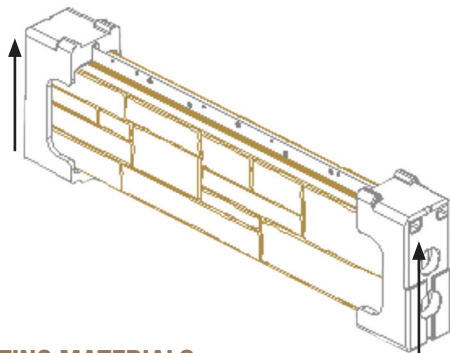
ESTIMATING MATERIALS
1. Determine the net wall area to be covered. Do this by multiplying the wall width (in feet) by the wall height (in feet). Subtract the area of windows, doors or any other area that will not be covered. This is your net wall area.

2. Universal Corners (UC) are used to finish outside corners, inside corners or to provide an attractive end of wall termination. Each end of the Universal Corner will provide 8" of height coverage for a total 16" per panel (8" x 2 ends). Multiply the total height (in feet) of total wall terminations by 0.75 to calculate the number of Universal Corners panels needed. Don't forget to add a few for scrap.

   Important Note: Each Universal Corner Panel will provide one left and one right after cutting the panel into two pieces.

3. In addition, using an entire Universal Corner Panel provides 2 ft.² of wall area coverage. This coverage will be subtracted from the Total Wall Area to determine the number of Flat Panels needed.

Formulas
Net Wall Area = width × height (in feet)

# of Universal Corners = Corner Height (in feet) × 0.75

Universal Corner Coverage = # of Universal Corners × 2

Flat Panel Area = Net Wall Area – Universal Corner Coverage

# of Flat Panels = Flat Panel Area ÷ 2

A factor for scrap should be included, and it is suggested you start with 5–10% Universal Corners. As you become more familiar with the product you will be able to drive this requirement lower.

Fasteners
Each full Flat Panel requires a minimum of 4 fasteners. Install 4 fasteners per panel when the length is greater than 18". Panels greater than 18" should have 2 of the 4 fasteners into framing. Add one additional fastener if only one framing location occurs behind the panel. For more information refer to the 'Special Applications' section.

Starter Strip
Starter Strip requirements are equal to base wall width measured in feet and rounded up to the nearest 10 foot increment. See Figure 2.

J Channel

J Channel requirements are determined by measuring the perimeter of window and door openings, trim material transitions, cladding transitions and any control joints. See Figure 3.
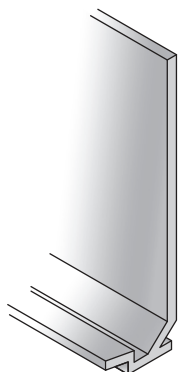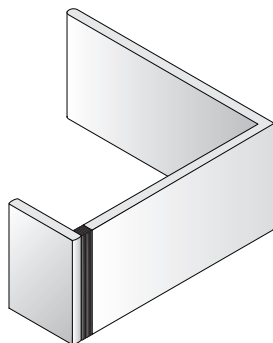
Figure 2 - Starter strip   **Figure 3 - J channel**

Tools

Hammer, circular saw, hand grinder, chop saw (ex. 10" sliding compound miter with a segmented diamond blade) or wet saw with continuous diamond turbo blade, level, laser level (optional), chalk line, tape measure, pneumatic roofing nail gun (optional), tin snips, 5⁄16" rod or dowel (optional), brush, small screwdriver. Follow the tool manufacturer's safety instructions.

Versetta Stone Textured Finishing Adhesive

Versetta Stone™ Textured Finishing Adhesive is the recommended adhesive for Versetta Stone. It may be used to conceal any supplementary fasteners or odd material terminations, and to install accessories and partial panels. Likely areas where partial panels will be installed include: under windows, eave terminations, and at horizontal material transitions. Each 10 fl. oz. cartridge will adhere approximately 4 partial panels. Determine estimated length of these areas and divide by 3 and then by 4. This will provide an estimated number of 10 oz. tubes you may need.

Personal Protective Equipment

Safety glasses or goggles, ANSI Z87.1 Grinding Face Shield, a properly fitted NIOSH approved N-95 series disposable particulate filtering facepiece respirator (formerly referred to as "dust masks"), gloves, ear plugs or muffs, steel toe boots and hard hat.

SUNDRY MATERIAL REQUIREMENTS
Water Resistive Barrier (WRB)

Minimum one layer of Grade D building paper or other WRB material meeting the requirements of ICC Acceptance Criteria #38 or ASTM E 2556/E 2556M. #15 felt provides a dark background that helps conceal any area where texture or installation allow the WRB to show. Local building code or climate may require 2 layers of WRB.

Fasteners

Fasteners must be corrosion-resistant galvanized roofing nails or screws with head diameter 3⁄8" minimum and shank 1⁄8", and length suitable to penetrate framing material minimum 1". Electro-galvanized are acceptable but may exhibit premature corrosion. Boral Stone Products recommends the use of quality, hot-dipped galvanized nails or screws. Boral is not responsible for the corrosion resistance of fastener.

Important Note: Treated lumber may react with metal or coating of fastener. Determine material compatibility when selecting fasteners.

L Bracket

Some sill applications will require the use of a support bracket. You may purchase the bracket from Boral or source or fabricate a bracket to the specifications shown in Figure 4. Material of "L" shape shall be galvanized to G90 and be of minimum 26 gauge thickness.

Figure 4 - L Bracket
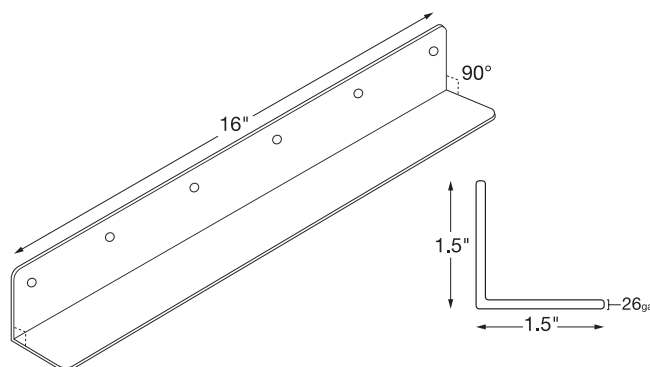
BEFORE YOU BEGIN

Inspect the area of installation to determine that framing has been done 16" on center and that the sheathing material is minimum 7⁄16" OSB or minimum ½" plywood. Verify that an appropriate water resistive barrier, flashing and caulking have been installed, or that they are part of your installation package. Check walls for plumb and square and identify any defects or protrusions. Contact the builder, registered design professional or contractor to correct any deficiencies before you proceed.

SURFACE PREPARATION
Water Resistive Barrier (WRB) Application

Cover sheathing with minimum one layer of WRB, following the installation instructions provided by the manufacturer and local building code requirements. Wrap WRB minimum 16" past all inside and outside corners to ensure no vertical seam is present at the corner. A second layer of WRB extending 16" past each corner is recommended for additional protection.* Integrate WRB with all flashing. Do not fasten bottom 12" at this time.

* Application of second layer must meet all WRB manufacturer's installation guidelines.

Wall Layout
Marking Framing Locations
Mark vertical framing locations with pencil or chalk line. It may also be helpful to mark horizontal framing locations in areas around windows, doors and wall terminations.

PRODUCT DIMENSIONS AND SPECIFICATIONS
(Subject to normal manufacturing tolerances)
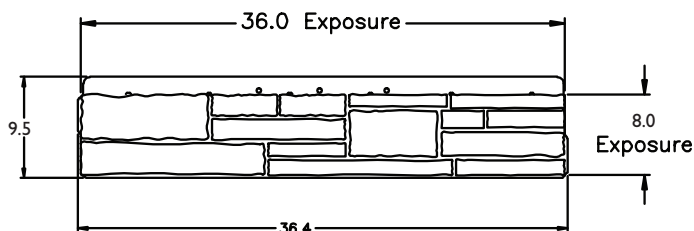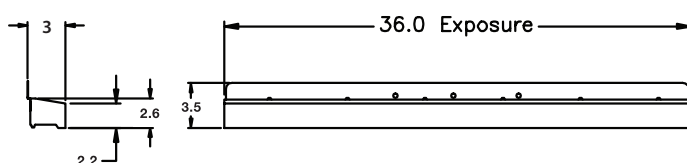**Figure 5 - Flat Panel**

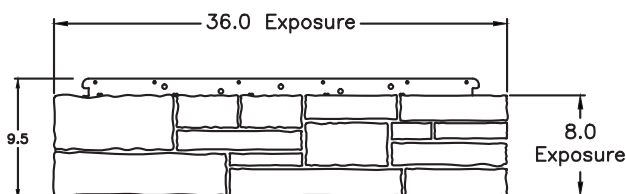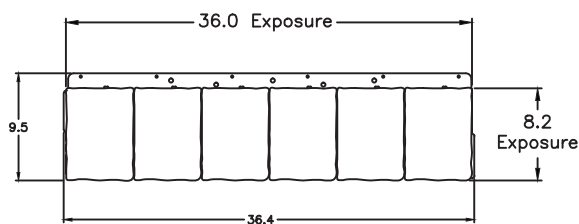**Figure 6 - Wainscot Cap**

Figure 7 - Universal Corner (un-cut)

Figure 8 - Trim Panel

DETERMINE AND MARK YOUR STARTING POINT
The product must maintain a clearance from grade of a minimum 4" if soil and 2" if a hard surface such as paving or concrete. It is critical that your starting line be a level line and positioned so that appropriate clearance from grade is achieved. This location will also determine the size of partial units when you reach penetrations like windows and doors. Take time to plan a location that optimizes panel usage above and below windows and doors. Product dimensions have been provided to assist you with this step. See Figures 5–8.

Verify that your intended starting line provides an equal height distance to overhang, trim or cladding. Once a starting location has been determined, tack or tape up WRB and mark on sheathing. Account for Starter Strip nailing flange, so that bottom of Starter Strip lands on your desired starting location. Extend a chalk line or pencil line across the entire surface to be covered.

Markings to Stay Level
Panels are designed to help maintain level and plumb courses but it is also advised that you mark level lines periodically up the wall as a reference. A level line every 24" is recommended. This allows you to quickly measure to the line to verify panels are still running level. Adjusting panel spacing to catch up distance or level can be done, but this must be done in 1/16" or less increments.

INSTALLATION
Starter Strip
Install Starter Strip perfectly level at your starting point line. Fasten with roofing nails or screws every 8"-10". Fasteners should be placed in the center of nail slots and driven straight. Fasteners should not be driven tight. Allow 1/32" gap between fastener head and strip. Additional fasteners may be added to assure strip does not easily pull away from wall at bottom edge. Allow ¼" clearance at material butt joints and ½" clearance at corners and end wall terminations to allow for proper alignment of panels. Lap WRB over starter strip nail flange. See Figure 9.

Figure 9 - WATER RESISTIVE Barrier

water-resistive barrier
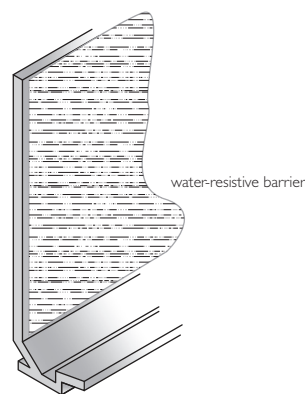
J Channel
Install J Channel at windows, doors, material transitions, penetrations or terminations. Fasten with roofing nails or screws every 8"-10". Fasteners should be placed in the center of nail slots and driven straight. Fasteners should not be driven tight. Allow 1/32" gap between fastener head and channel. Allow ¼" clearance at material butt joints. When used in horizontal applications, drill 3/8" drain holes every 12" in trim channel.

INSTALLING PANELS: GENERAL RULES AND TIPS FOR INSTALLATION

· Panels are installed from bottom to top.
· Panels are lapped in shingle fashion, so that tongue seats completely in groove.
· Panels should be staggered from one row to the next to avoid the alignment of vertical joints. Corners will provide stagger if used. See important note in the 'Installing Universal Corners' section.
· Fasteners should be driven straight and flush.
· Pneumatic nails should be driven directly through nail flange.
· Panels and corners must be installed level and plumb.

Versetta Stone panels may be hand nailed or applied with pneumatic nail gun or screw gun. Fasteners should be a minimum of ½" from any edge of the panel, and into framing as detailed later in these instructions.

CUTTING AND MODIFICATIONS

Always follow safe tool operation instructions provided by tool manufacturer. Always wear eye protection, hearing protection and a dust mask while cutting or trimming[†]. **Use of additional face protection provided by a full face shield is recommended and required with some cutting tools. Consult specific tool manufacturer for details.**

Do not cut more than one panel at a time. Straight and angle cuts can be made with any of the cutting tools outlined in the tool section of this document. Tools with a fence provide a clean and fast cut, i.e. table saw or miter saw. Cut panels with the tongue facing the fence. If making a miter cut (45° or 22 ½°), cut on the same location of the stone panel so that the grout lines line up. Trimming and staggered cuts are best made with a hand grinder utilizing a masonry blade. Holes can be made with a masonry hole saw, drill or grinder with a masonry blade. Always safely support and stabilize the panel during modification.

[†]**CAUTION:** Contains Crystalline Silica. Dusts from cutting or sawing may create possible cancer hazard. Dusts of this product may cause irritation of the nose, throat and respiratory tract. Avoid prolonged or repeated inhalation of dusts from this product. Refer to OSHA cutting standards for further information.

A properly fitted NIOSH approved N-95 series disposable particulate filtering face piece respirator (formerly referred to as "dust masks") should be used when mechanically altering this product (e.g., sawing, cutting, drilling or similar dust generating processes). Wear long-sleeved shirt, long pants, gloves and safety glasses with side shields when handling and installing material. Wash hands and face with soap and warm water immediately after handling this product.

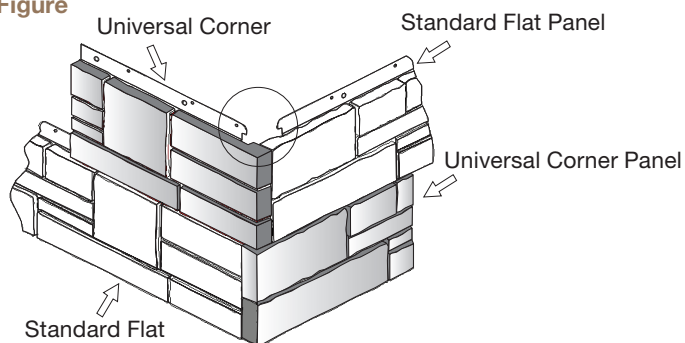## INSTALLING UNIVERSAL CORNERS

Important Note: Universal Corners must be cut into 2 pieces to create left and right. Ideally you want to cut random lengths to assist with wall staggered appearance and avoid pieces shorter than 8". See Figure 10.

Figure
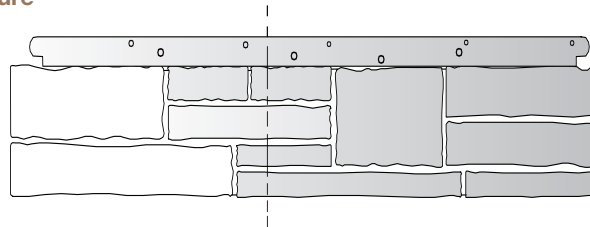
Used as Outside Corner

Figure

Universal Corner

Standard Flat Panel

Universal Corner Panel

Standard Flat

Start at bottom of wall and position one half of a Universal Corner, nail flange up, cut edge away from corner, into the Starter Strip. Set a standard Flat Panel into the Starter Strip on the adjacent wall. Slide the Universal Corner to extend past the wall edge and slide the standard Flat Panel to intersect with the Universal Corner. See Figure 11. The standard Flat Panel side tongue will need to be removed. The Flat Panel can then tightly seat against the back of the Universal Corner. Fine tune the corner appearance with slight adjustments of both pieces until you get the best fit. Fasten the Universal Corner per the instructions for Flat Panels which appear later in this document. Each Universal Corner will require a minimum of 2 fasteners when length is 18" or less, with at least 1 into framing. Install 4 fasteners per panel when the length is greater than 18". Panels greater than 18" should have 2 of the 4 fasteners into framing. Add one additional fastener if only one framing location occurs behind the panel. Alternate the use of left and right end of the Universal Corner Panel on each course.

Used as Inside Corner

The Universal Corner is manufactured so that 2" at each end of the panel has minimal texture. This minimal texture provides a superior fit when a standard Flat Panel is terminated into the face of the Universal Corner. Use of the Universal Corner here translates to smaller gaps and superior appearance.

Start at bottom of wall and position one half of a Universal Corner, nail flange up, cut edge away from corner, into the Starter Strip. The Universal Corner panel must be pushed all the way into the corner before proceeding. See Figure 12. Install a standard Flat Panel into the Starter Strip of the adjacent wall and butt into the face of the Universal Corner. If you are using un-cut standard Flat Panel, it will be necessary to remove the side tongue from the standard Flat Panel on the end that will butt into the face of the Universal Corner. Fasten the Universal Corner per the instructions above for use as outside corner. Fasten the standard Flat Panel per the instructions for Flat Panels. Start the next course inside corner with the remaining half of your original Universal Corner Panel. This step will enable the courses to alternate providing a woven inside corner. Continue up the wall following the same steps.

Important note: The Universal Corner Panel must be pushed all the way into the corner before installation of adjacent Flat Panel. See Figure 12.

Figure 12

Universal

Standard Flat

Standard Flat
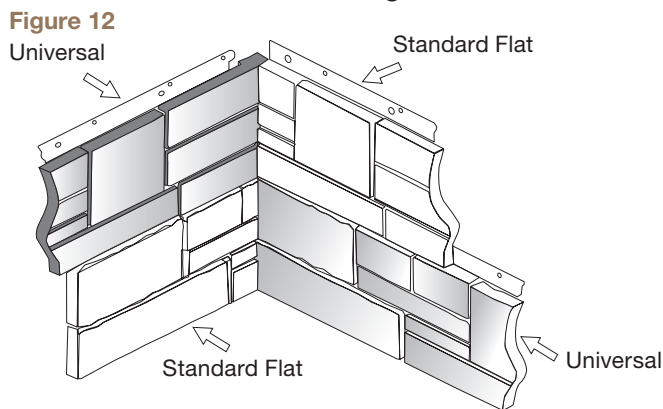
Universal

Used as End Wall Termination

Figure
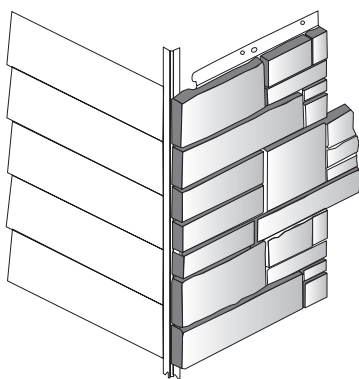
In applications where the Versetta Stone System will terminate without a corner return, the Universal Corner can be used to create an attractive finished end. Keep in mind, once cut, your Universal Corner provides you both Left and Right ends. If your termination application is only on one end of the wall, you will not be able to utilize both ends of the Universal Corner Panel.

Start the installation as you would a standard Flat Panel or outside corner application. The cut edge of the Universal

Corner will face away from the termination point. You have the option to extend the Universal Corner beyond the wall termination up to 3" to achieve the best transition to the adjoining wall covering. For best appearance align all courses to have a similar overhang. See Figure 13.
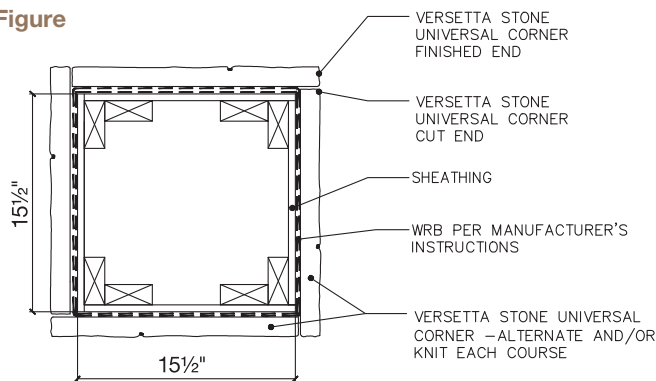
INSTALLING FLAT PANELS

Flat Panels

Starting at the bottom of the wall, position first panel, with nailing flange up, and tongue into the Starter Strip. Fasten panel with total of 4 fasteners in the top nailing flange. A minimum of 2 fasteners must penetrate framing, end fasteners must be located within 3" of the end of the panel. Next, position second panel into the Starter Strip and slide to nest end tabs with edge of the first panel. Install fasteners as you did for the first panel. Continue down the wall repeating this procedure until you reach the end. Before next course clean any debris from first course groove. A brush or small screwdriver works well for cleaning grooves. If Universal Corners are not being used, start next course with the leftover piece from the end cut, so long as it exceeds 8". Each course should have a minimum of 8" stagger between courses.

An automatic stagger is created by the long and short leg of Universal Corner Panel. Therefore, a half panel every other course is not required when Universal Corner Panel are used.

Used in Column Applications

Versetta Stone can be used to create square columns. To build an easy 18" finished column using only Universal Corner Panels, start by framing out the column so that each side measures no more than 15.5" from sheathing to sheathing. The Universal Corners in this application will all be cut in half so that each half measures 18" in length. See Figure 14.

Figure

VERSETTA STONE UNIVERSAL CORNER FINISHED END

VERSETTA STONE UNIVERSAL CORNER CUT END

SHEATHING

WRB PER MANUFACTURER'S INSTRUCTIONS

VERSETTA STONE UNIVERSAL CORNER —ALTERNATE AND/OR KNIT EACH COURSE

15½"

15½"

Starting at the base of the column, position the left half of a Universal Corner Panel into the Starter Strip with the finished end extending roughly 1.5" past the left edge of the column. Next, position another left half of a Universal Corner Panel on the other three sides of the column. Panels may be cut and adjusted for length so that joints are tight. On the next course, repeat the same process using the right halves of the Universal Corner Panels. Alternate the

direction of finished ends on each course as you work your way up the column. Finishing a column in this manner will require two bundles of Universal Corner Panels for every 16" in height.

PARTIAL PANELS AND ACCESSORIES

Important Note: Versetta Stone Textured Finishing Adhesive is the recommended adhesive for Versetta Stone. If using another adhesive, reference the manufacturer's application guidelines specific to that product.

Throughout the project full panels will need to be cut and modified to fit. In some cases flanges will be removed. Products without nail flanges must be fastened using adhesive. Adhesive can not be expected to hold if bonded directly to water resistive barrier. In order to achieve good bond and mechanical connection to framing, a material must be first nailed to framing in the area where adhesive will bond. Non-painted, clean metal flashing or expanded metal lath, fastened 16" on center into framing provides an adequate bonding surface. After bonding surface has been prepared, apply quarter-sized dabs of adhesive a minimum of ½" tall, every 3"-4" to the wall, the back of the partial panel or accessory, or both. Install partial panel and press into adhesive to assure complete contact. It may be necessary to insert a wedge or shim between partial panel and trim to hold during curing. If the partial panel or accessory will not be retained by Versetta Stone J Channel or other wood/composite trim material, or the partial panel is more than 4 feet above ground, supplementary fasteners are required to hold panel during adhesive curing. Screws are the fastener of choice for this step. As a general rule, one additional fastener every 16" will be sufficient to supplement the adhesive. The Versetta Stone panel or accessory will need to be pre-drilled with a masonry drill bit of an appropriate size, as recommended by the fastener manufacturer. See "Sundry Material Requirements" section for fastener requirements. The head of this fastener will likely be visible when the installation is complete. To conceal it, we recommend a dab of Versetta Stone Textured Finishing Adhesive. Fasteners are easier to conceal in shaded or darker areas of the stone, but may crack a panel if installed in the simulated mortar joints. Do not over tighten fasteners. Use enough force to pull the panel into the adhesive and maintain substantial contact during curing.

INSTALLING VERSETTA STONE WAINSCOT CAP PRODUCT IN A WAINSCOT APPLICATION

Place the Versetta Stone Wainscot Cap product on top of previously installed Versetta Stone panel application with tongue on back of sill into groove of Versetta Stone Flat Panels below. Fasten with a minimum of 4 fasteners through the nailing flange. A minimum of 2 fasteners must penetrate framing. End fasteners must be located within 3" of the end of the nail flange. If desired, you may supplement the application with adhesive as outlined in the "Partial Panels

and Accessories" section of these instructions. "L" brackets are not required when using this method.

INSTALLING VERSETTA STONE WAINSCOT CAP PRODUCT IN A WINDOW SILL APPLICATION

In applications where the Versetta Stone Wainscot Cap will be used under an existing window or opening, removal of the exposed portion of the nailing flange is necessary. Utilize a grinder with appropriate wheel or metal snips to remove the nailing flange. CAUTION: THIS STEP MAY PRODUCE SHARP EDGES WHICH SHOULD BE AVOIDED. HANDLE WITH CARE AND WEAR CUT RESISTANT GLOVES. Once the nailing flange has been removed, follow the "Partial Panels and Accessories" section of these instructions. In some cases, "L" brackets may be needed to provide additional support. See "Sundry Material Requirements" section for "L" Bracket requirements. To facilitate proper fit of the bracket, a portion of the backside tongue will need to be removed in the locations the bracket will contact the sill. Utilize hand grinder to remove the tongue in these locations. Brackets will be mounted at framing locations and should be spaced to allow 2 brackets per Versetta Stone Wainscot Cap. Following the application instructions for "Partial Panels and Accessories" and install metal flashing or metal lath material at location where Versetta Stone Wainscot Cap will be installed. Hold Versetta Stone Wainscot Cap under window and mark bottom location. Next mark framing locations and install "L" brackets, with screws that penetrate framing minimum 1", at locations marked. Apply adhesive in quarter-sized dabs, a minimum of ½" tall, every 3"- 4" to the wall, the back of the sill or both. Adhesive should extend onto both surfaces of the "L" bracket. Note: The "L" bracket's vertical surface is an acceptable mounting location for adhesive and can act as the mechanical connection to framing discussed in the "Partial Panels and Accessories" section of these instructions. Place Versetta Stone Wainscot Cap into place, level, and press firmly into adhesive. It is important to maintain full adhesive contact. Shim the Cap or bend "L" brackets to achieve full adhesive contact and level status.

Additional temporary support such as clamps, shims, or supplemental fasteners may be needed to maintain full adhesive contact until adhesive cures.

INSTALLING VERSETTA STONE WAINSCOT CAP PRODUCT USING A COMBINATION METHOD

In some applications the Versetta Stone Wainscot Cap product will extend beyond the jamb of a window and a combination of both methods above may be used. Hold the Versetta Stone Wainscot Cap under window and determine how much of it will extend beyond the window jamb. Mark and remove the appropriate portion of the nail flange as outlined in the "Installing Versetta Stone Wainscot Cap Product in a Window Sill Application" section of these instructions. Follow the instructions in that section to prepare the surface with metal flashing or metal lath and "L" brackets. See "Sundry Material Requirements"

section for "L" Bracket requirements. Extend this treatment behind entire Versetta Stone Wainscot Cap mounting location. Apply adhesive as directed to the entire mounting location. Place Versetta Stone Wainscot Cap into place, level, and press firmly into adhesive. It is important to maintain full adhesive contact. Shim the Cap or bend "L" brackets to achieve full adhesive contact and level status. Install fasteners through available nail flange as outlined in the "Installing Versetta Stone Wainscot Cap Product in a Wainscot Application" section of these instructions.

Additional temporary support may be needed to maintain full adhesive contact until adhesive cures.

INSTALLING VERSETTA STONE TRIM STONE

Prepare the surface as outlined in the "Partial Panels and Accessories" section of these instructions. Apply quarter-sized dabs of adhesive a minimum of ½" tall, every 3"- 4" to flashing/lath, back of trim stone or both. Note: It is critical that the adhesive bead be large enough to create contact between stone and flashing. Place trim stone tight to adjacent window/door/trim and press firmly into adhesive. Continue trim stone installation by attaching stone to wall, with 6 screws through pre-drilled nailing flange holes. Do not use nails for this application.

Note: If the Versetta Stone Trim Stone will not be retained by a Versetta Stone J Channel or Starter Strip, or other wood/composite trim material, or the partial panel is more than 4 feet above ground, supplementary fasteners are required to hold panel during adhesive curing. Additional fasteners are required through the masonry portion of the panel. Screws are the fastener of choice for this step. As a general rule, one additional fastener every 16" will be sufficient to supplement the adhesive. The Versetta Stone Trim Stone will need to be pre-drilled with a masonry drill bit of an appropriate size, as recommended by the fastener manufacturer. See "Sundry Material Requirements" section for fastener requirements. The head of this fastener will likely be visible when the installation is complete. To conceal it, we recommend a dab Versetta Stone Textured Finishing Adhesive. Fasteners are easier to conceal in shaded or darker areas of the stone, but may crack a panel if installed in the simulated mortar joints. Do not over tighten fasteners. Use enough force to pull the panel into the adhesive and maintain substantial contact during curing.

INSTALLING VERSETTA STONE ACCESSORIES RECEPTACLE BOX AND LIGHT BOX

Identify electrical box connection location and verify that power has been disconnected. Prepare the surface as outlined in the "Partial Panels and Accessories" section of these installation instructions. Prior to installation of metal flashing/lath, trace enclosed electrical box extension onto the flashing or lath. Flashing material should be a minimum of 4" larger than the product being installed. Cut hole into flashing material to match outline of electrical box extension. Install flashing material over existing outlet box. Flashing/lath material fasteners should penetrate framing a minimum of 1". Fasten electrical box extension to existing electrical box keeping box level and plumb. If a telescoping electrical box extension is being used, fasten it using 1-½" screws. The extension box flange should be set equal to the thickness of the Versetta Stone Accessory Box thickness. Weatherproof the perimeter of box penetration with additional flashing/caulk. Apply a self adhered flashing material over top edge of flashing, overlapping 1". Temporarily place Accessory Box stone over box extension making sure it is level and plumb. Trace Accessory Box stone perimeter onto flashing material. Remove Accessory Box stone and store for installation later. Install Versetta Stone panels, using standard installation, up and around traced Accessory Box stone lines. Continue with balance of the panel installation to complete the wall. Once the wall is completed you are ready to install the Accessory Box stone. Apply 3/8" beads of adhesive in an upside-down "U" shape. Adhesive beads must be thick enough to make substantial contact with back of Accessory Box stone. Install Accessory Box stone and press into adhesive to assure complete contact. Maintain pressure against Accessory Box stone to ensure proper initial bond. It may be necessary to insert a wedge or shim between box extension and Accessory Box stone or Versetta Stone panels, to hold level and plumb during curing.
CAUTION: TEMPORARY PRESSURE OR SUPPORT MAY BE REQUIRED TO MAINTAIN FULL ADHESIVE CONTACT UNTIL CURED.

Refer to adhesive manufacturer installation instructions for temperature and cure time recommendations. See Figure 15 and Figure 16 for examples of accessories.
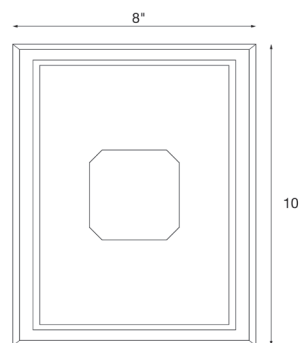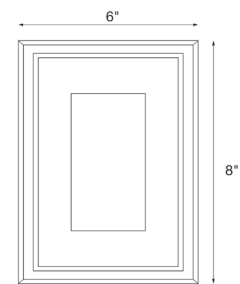
Figure 15 - Light box

8"

10"

Figure 16 - Receptacle box

6"

8"

CLEANING

Cutting dust and general construction dust can be removed with clean water and a nylon bristle brush. Stubborn dirt may require the addition of a granulated general detergent. Do not clean with harsh chemicals or acid products. Do not pressure wash.

SALT AND DE-ICING CHEMICALS

All concrete and masonry materials are vulnerable to damage by salt and de-icing chemicals. Do not use salt or de-icing chemicals on the product or in areas adjacent that may splash onto it. See printed warranty for more details.

GOOD BUILDING PRACTICES

Make sure the product is being applied to a wall or structure that meets all building code requirements. Code-approved flashing materials must be present at all terminations, penetrations and material transitions. Control water and minimize penetration caused by roof run off, gutters and downspouts. If there is any question as to the integrity of the wall or water management principles, contact the appropriate owner, registered design professional or builder for corrective measures.

REPAIR/REMOVE/REPLACE

Using a masonry saw or grinder with a diamond blade and proper personal protective equipment, cut out the area to be replaced. Take care to avoid damaging the weather resistive barrier behind the panel. Trim new panels to fit the area you just cut out. Repair any damage to the water resistive barrier, making sure to lap and seal in shingle fashion. Follow the partial panel installation method to install replacement panel.

SPECIAL APPLICATIONS

Follow the instructions in the table below to apply Versetta Stone to additional substrates not addressed in the previous sections. These instructions focus on the recommended fasteners to use for these applications. Except where noted below, spacing and quantity of fasteners per Flat Panel, Universal Corner, Partial Panel and Accessory all remain the same as the standard Versetta Stone installation instructions. Fasteners must be corrosion resistant and suitable for exterior use and exposure. Fasteners must be compatible with galvanized sheet metal. Boral Stone Products LLC recommends the use of quality, hot-dipped galvanized nails or screws. Boral Stone Products LLC is not responsible for the corrosion resistance of the fasteners.

FASTENER RECOMMENDATIONS

Application Groupings	Sheathing	Fastener Description	Fastener Image	Fastener Penetration	Max. Head Thickness	Min. Head Dia.	Min. Shaft Dia.
-Wood Framing	-7/16" OSB -1/2" Plywood -1/2" Drywall -1/2" Insulation Board	-Versetta Stone Fastening Screws* -Exterior Wood Screws -Roofing Nails**		1" penetration into framing	0.13 inch	0.375 inch	0.125 inch
-CMU Block -Concrete -Brick	N/A	Tapcon Flat Head Concrete Anchors		1" penetration into masonry	0.13 inch	0.375 inch	0.1875 inch
-Steel Framing	-7/16" OSB -1/2" Plywood	#8 or #10 (ASTM C1513) Self Tapping, Self Drilling Screw		Minimum 3 thread penetration through framing	0.13 inch	0.375 inch	0.164 inch

Note 1: Concrete anchors may be reduced to 3 per Flat Panel when located with one at each end and one at center.

Note 2: Pre-drilled holes in Versetta Stone nail flange are 3/16". If you choose to increase the diameter of the fastener, the pre-drilled holes will also need to be enlarged.

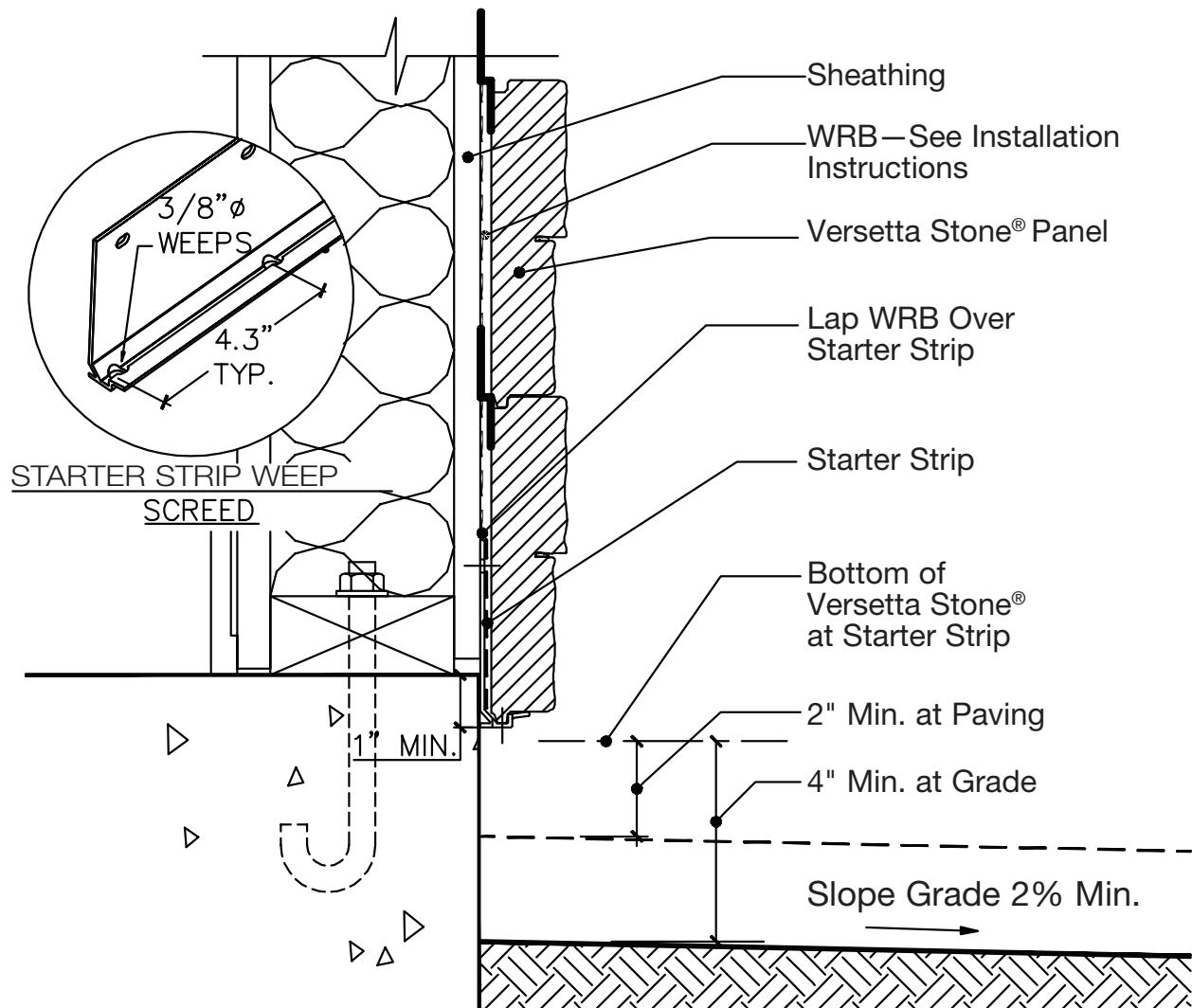**Note 3:** Versetta Stone can be installed over 1/2" rigid insulation if maintaining the prescribed penetration.

*Versetta Stone Fastening Screws are available in two sizes: 10 x 1-5/8" and 10 x 2-1/4".
**Panels may be difficult to remove if installed with roofing nails.

Recommended Installation Tools: Hammer, Circular Saw w/ Diamond Blade, Hand Grinder, Chop Saw or Wet Saw, Level, Chalk Line, Tape Measure, Tin Snips, Brush, Small Screwdriver

These construction details are provided to assist in the installation of Versetta Stone® product(s). They will not necessarily apply to every design circumstance that you encounter. These instructions may, and most likely will, require modifications to meet your particular design requirements. Manufacturer accepts no responsibility or liability for the use of these or other construction details.

3/8"ø WEEPS

4.3" TYP.

STARTER STRIP WEEP SCREED

1" MIN.

Sheathing

WRB—See Installation Instructions

Versetta Stone® Panel

Lap WRB Over Starter Strip

Starter Strip

Bottom of Versetta Stone® at Starter Strip

2" Min. at Paving

4" Min. at Grade

Slope Grade 2% Min.

SHEATHING AND WOOD STUDS — FOUNDATION WALL BASE

SCALE: 3" = 1'– 0"

1-X 1.1

SHEATHING

VERSETTA STONE PANEL

WRB — SEE INSTALLATION INSTRUCTIONS

DOUBLE WRAP WRB AROUND CORNER 16" MIN. — BOTH SIDES

WALL FRAMING AT CORNER

VERSETTA STONE PANEL (WITH END TAB REMOVED)

VERSETTA STONE UNIVERSAL CORNER —ALTERNATE AND/OR KNIT EACH COURSE (SHOWN DASHED)

16" WRAP, TYP. (NTS)
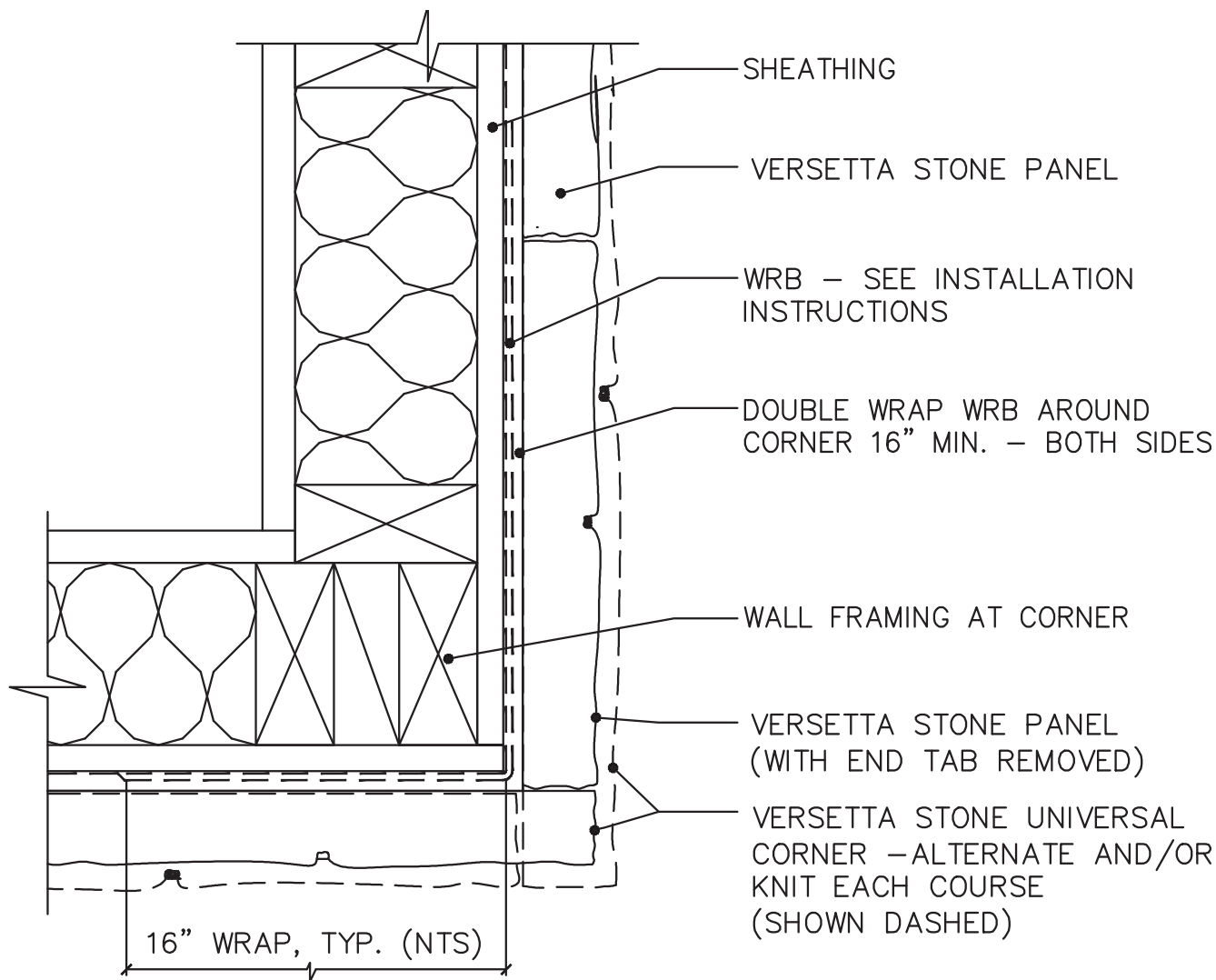
1-X
1.2

SHEATHING AND WOOD STUDS — UNIVERSAL CORNER

SCALE: 3" = 1'– 0"

DARK COLORED FLASHING MAY
BE HELPFUL TO CONCEAL WRB

VERSETTA STONE PANEL

VERSETTA STONE UNIVERSAL
CORNER —ALTERNATE AND/OR
KNIT EACH COURSE
(SHOWN DASHED)

DOUBLE WRAP WRB AROUND
CORNER 16" MIN. — BOTH SIDES

VERSETTA STONE UNIVERSAL
CORNER —ALTERNATE AND/OR
KNIT EACH COURSE
(SHOWN DASHED)

SHEATHING

WRB — SEE INSTALLATION
INSTRUCTIONS

16" WRAP, TYP. (NTS)
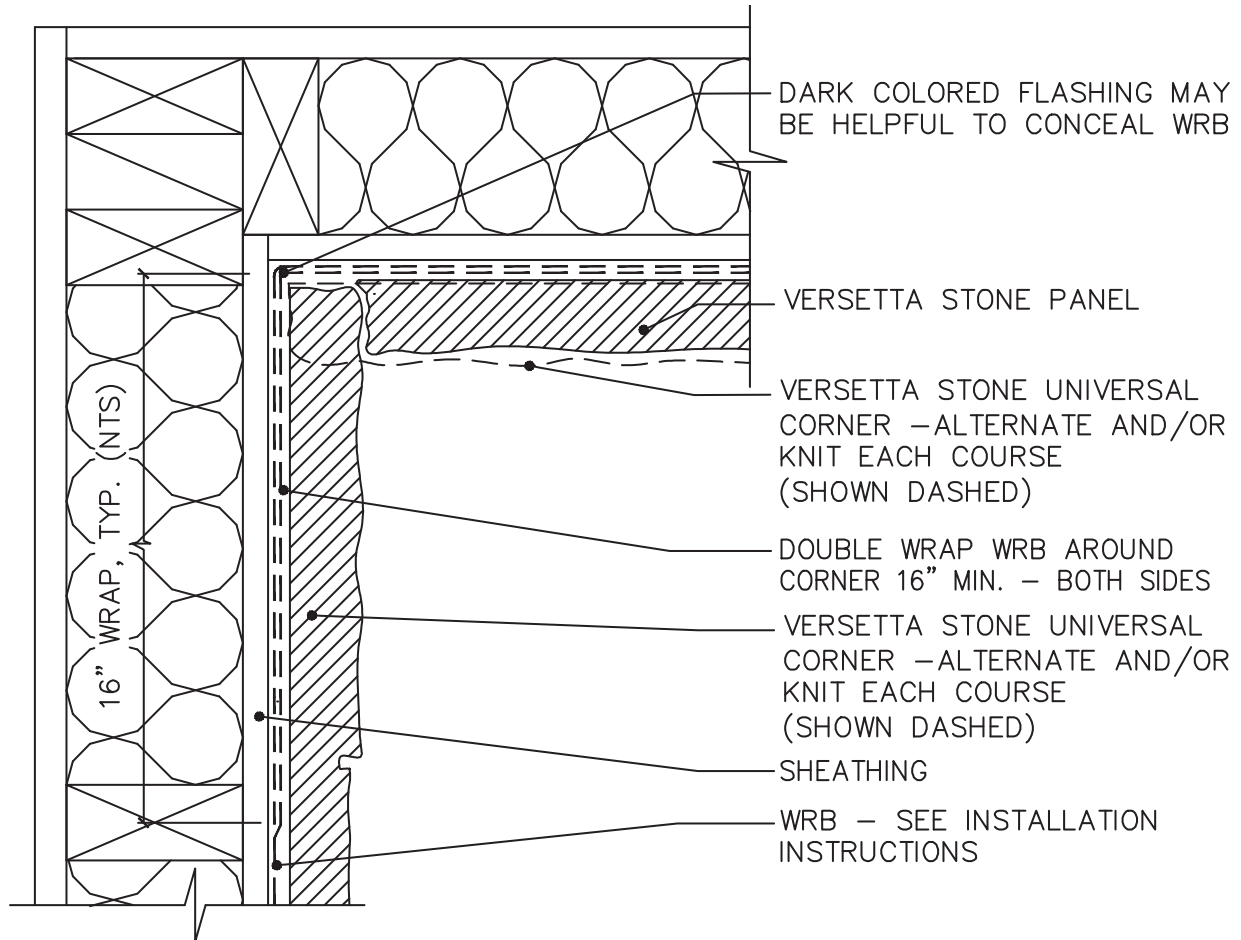
1-X
1.3

SHEATHING AND WOOD STUDS — INSIDE CORNER

SCALE: 3" = 1'– 0"

NOTE:
OTHER FINISHES MAY BE USED

FINISH SIDING (WOOD SHOWN)

WRB — SEE INSTALLATION INSTRUCTIONS

STRIP OF SAF — LAP OVER GSM FLASHING Z

SCREWS OR NAILS INTO FRAMING

LEAVE GAP AT BASE OF SIDING FOR WEEP

GSM TRIM FLASHING WITH 3" MIN. VERTICAL LEG

SEALANT PER INSTALLATION INSTRUCTIONS

VERSETTA WAINSCOT SILL

SCREWS OR NAILS INTO FRAMING

BLOCKING (OPTIONAL)

VERSETTA STONE PANEL

WRB — SEE INSTALLATION INSTRUCTIONS

SHEATHING

EXTEND WRB 6" MIN. ABOVE GSM FLASHING

4"

1-X
1.4
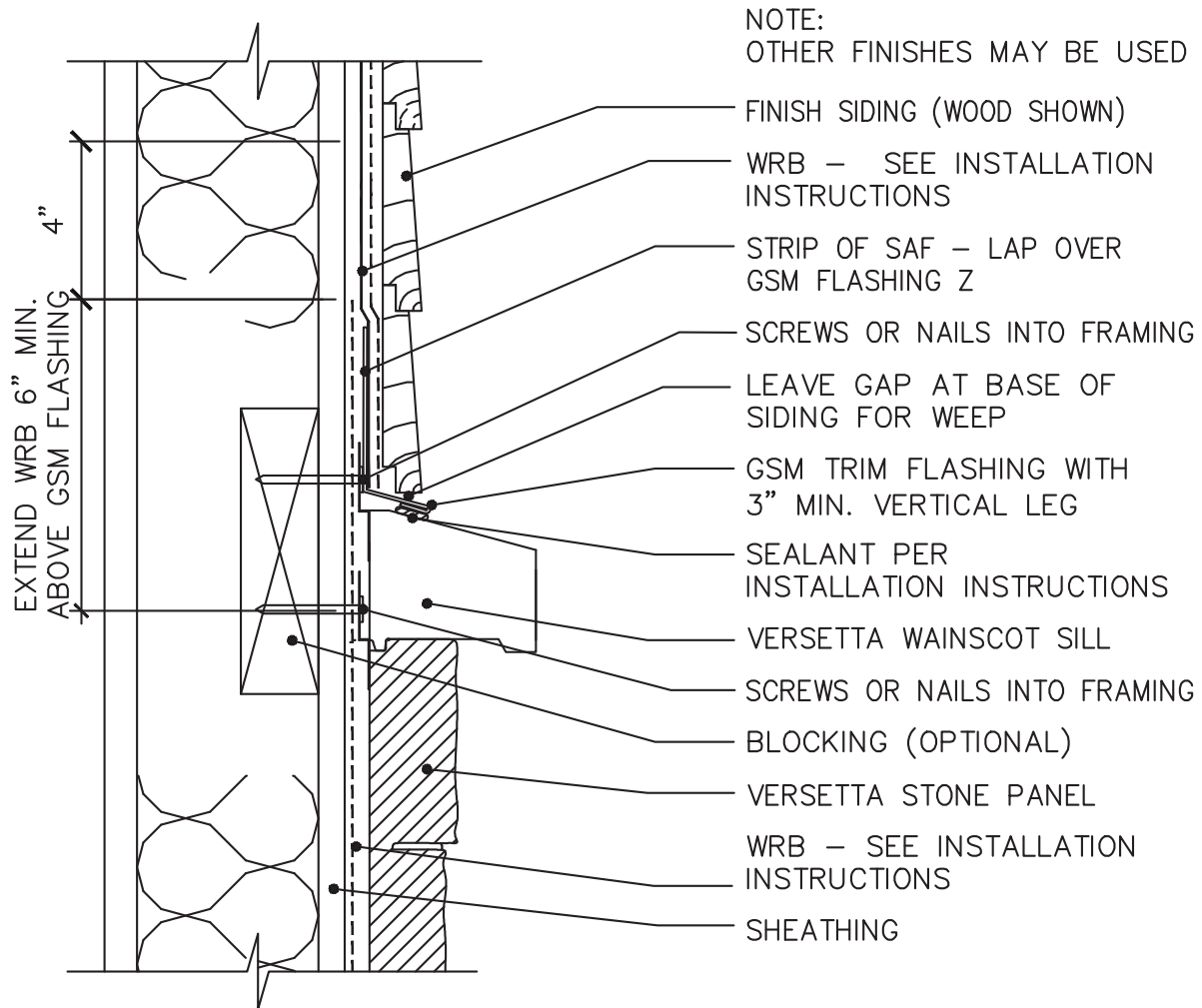
**SHEATHING AND WOOD STUDS —
SIDING TERMINATION WITH VERSETTA SILL**

SCALE: 3" = 1'– 0"

VERSETTA STONE®

ALUMINUM OR VINYL WINDOW FRAME PROFILE MAY VARY — REFER TO MFR'S. DETAILS FOR INSTALLATION AND FLASHING

BEDDING SEALANT UNDER WINDOW FIN

BACKER ROD AND SEALANT

ADHESIVE PER INSTALLATION INSTRUCTIONS

FLASHING OR LATH PER INSTALLATION INSTRUCTIONS

SCREWS OR NAILS INTO FRAMING

VERSETTA WINDOW SILL

ADHESIVE PER INSTALLATION INSTRUCTIONS (OPTIONAL)

VERSETTA STONE PANEL

WRB — SEE INSTALLATION INSTRUCTIONS

SHEATHING

3⁄8"
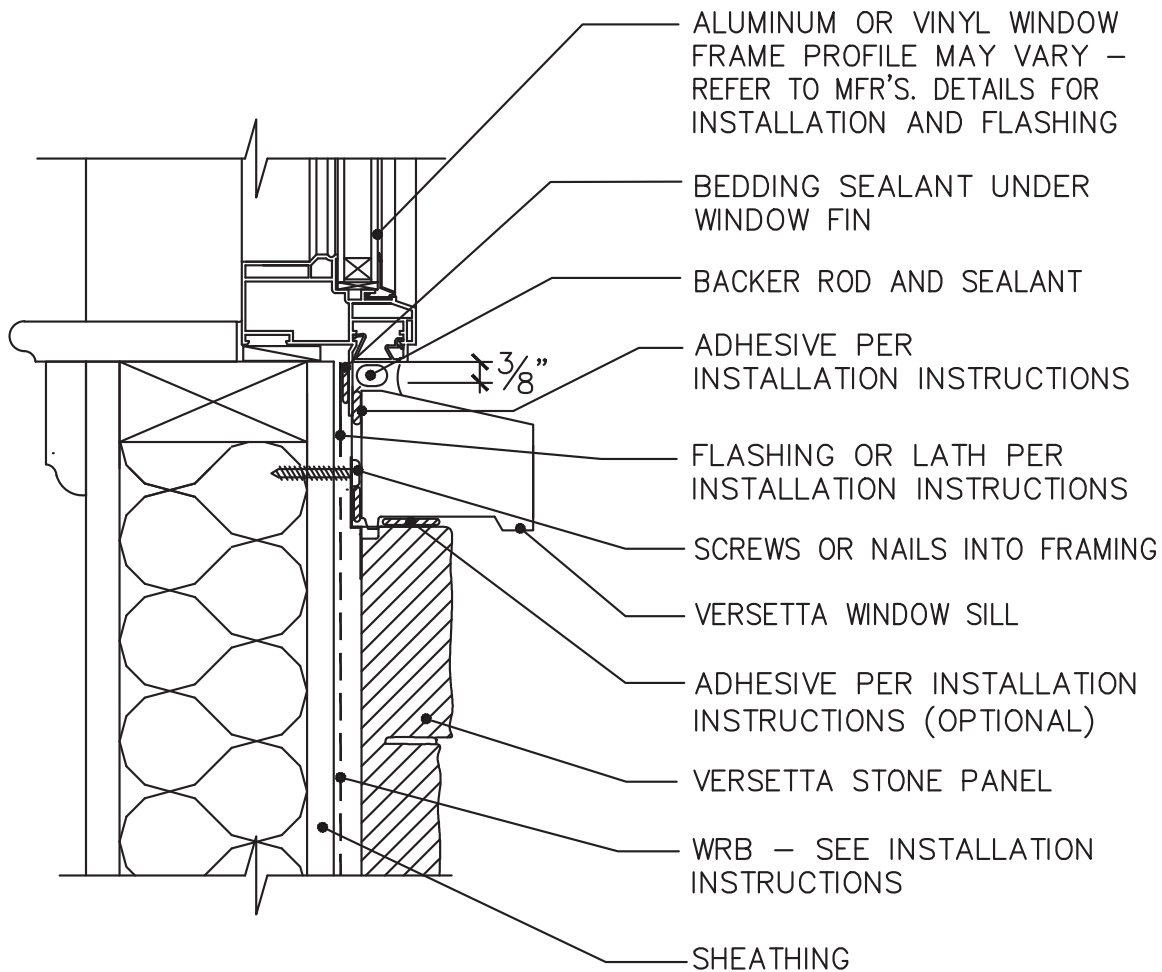
1-X 1.6 **SHEATHING AND WOOD STUDS — WINDOW SILL**

SCALE: 3" = 1'– 0"

ALUMINUM OR VINYL WINDOW FRAME PROFILE MAY VARY — REFER TO MFR'S. DETAILS FOR INSTALLATION AND FLASHING

BEDDING SEALANT UNDER WINDOW FIN

BACKER ROD AND SEALANT

ADHESIVE PER INSTALLATION INSTRUCTIONS

ADHESIVE UNDER SILL (OPTIONAL)

VERSETTA WINDOW SILL (BACK TONGUE REMOVED)

ADHESIVE PER INSTALLATION INSTRUCTIONS

VERSETTA STONE PARTIAL PANEL

FLASHING OR LATH PER INSTALLATION INSTRUCTIONS

WRB — SEE INSTALLATION INSTRUCTIONS

SHEATHING

6" LAP

3/8"
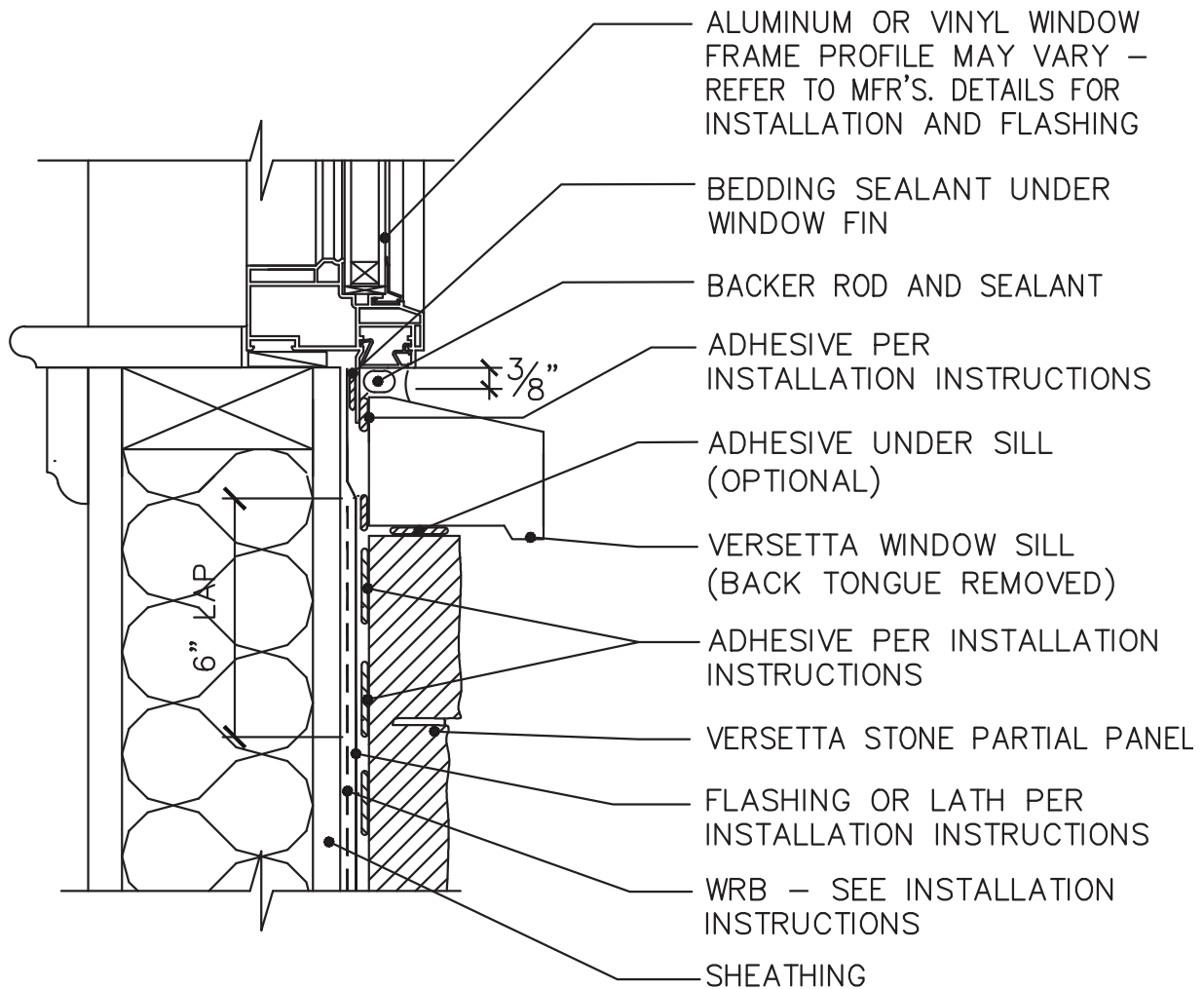
**SHEATHING AND WOOD STUDS —
WINDOW SILL - STONE PARTIAL PANEL**

1-X
1.21

SCALE: 3" = 1'– 0"

BED WINDOW FIN IN SEALANT OVER SAF

SAF JAMB FLASHING UNDER WINDOW FIN

SHEATHING

WRB — SEE INSTALLATION INSTRUCTIONS — LAP OVER SAF BED EDGE IN SEALANT AT WINDOW FIN

J—CHANNEL (OPTIONAL)

VERSETTA FLAT PANEL

BACKER ROD AND SEALANT

J—CHANNEL FLEXIBLE HINGE

ALUMINUM OR VINYL WINDOW FRAME PROFILE MAY VARY — REFER TO MFR'S. DETAILS FOR INSTALLATION AND FLASHING

9" (N.T.S.)

3/8"
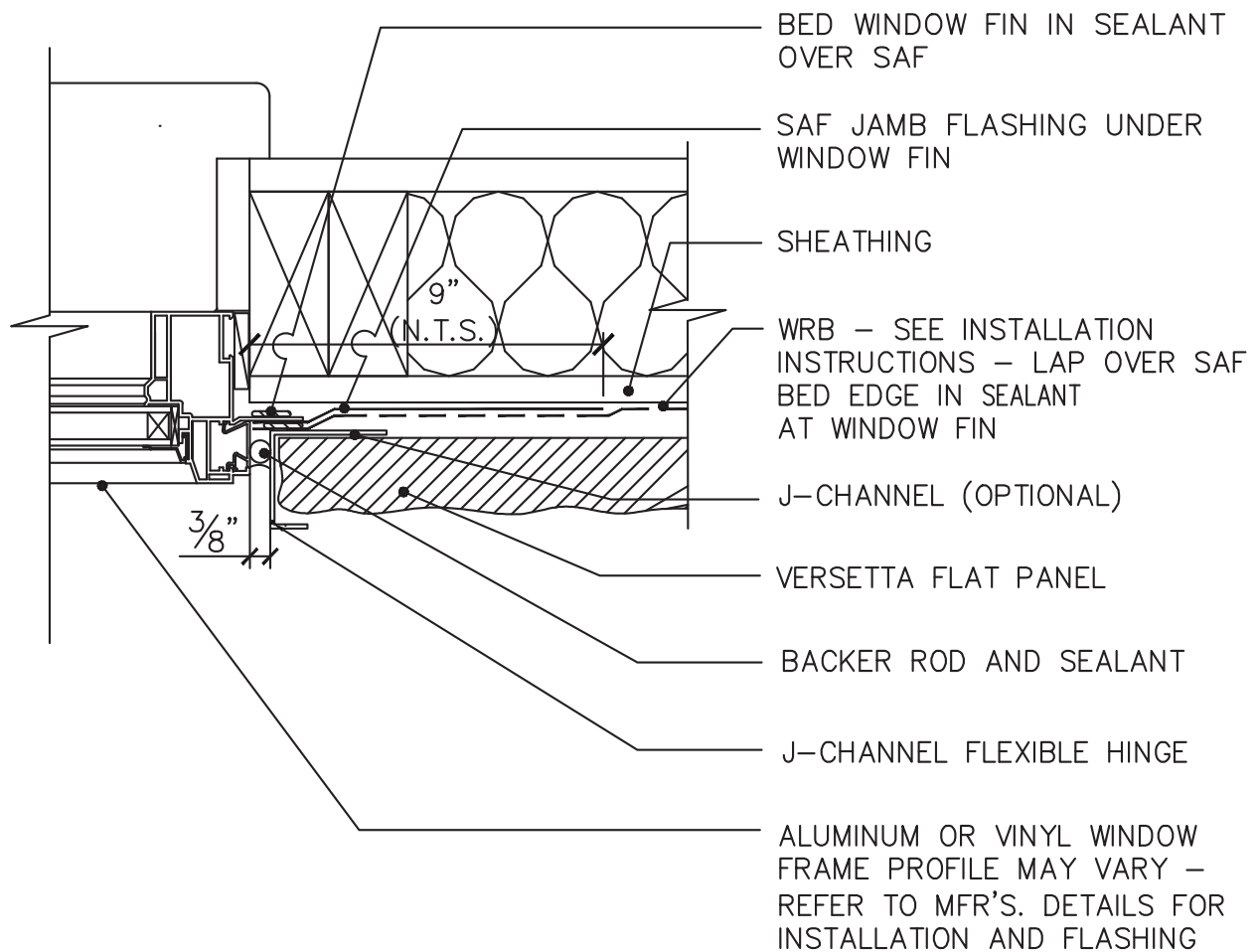
1-X 1.7 **SHEATHING AND WOOD STUDS — WINDOW JAMB**

SCALE: 3" = 1'– 0"

SHEATHING

WRB — SEE INSTALLATION INSTRUCTIONS

VERSETTA STONE PANEL

LAP WRB OVER SAF AND HEAD FLASHING — SEAL EDGE

J— CHANNEL

GSM HEAD FLASHING

J—CHANNEL FLEXIBLE HINGE

1/4" GAP (NO SEALANT)

BEDDING SEALANT UNDER WINDOW FIN

WINDOW FRAME PROFILE MAY VARY — REFER TO MFR'S. DETAILS FOR INSTALLATION AND FLASHING

9" MIN. SAF OVER HEAD FIN
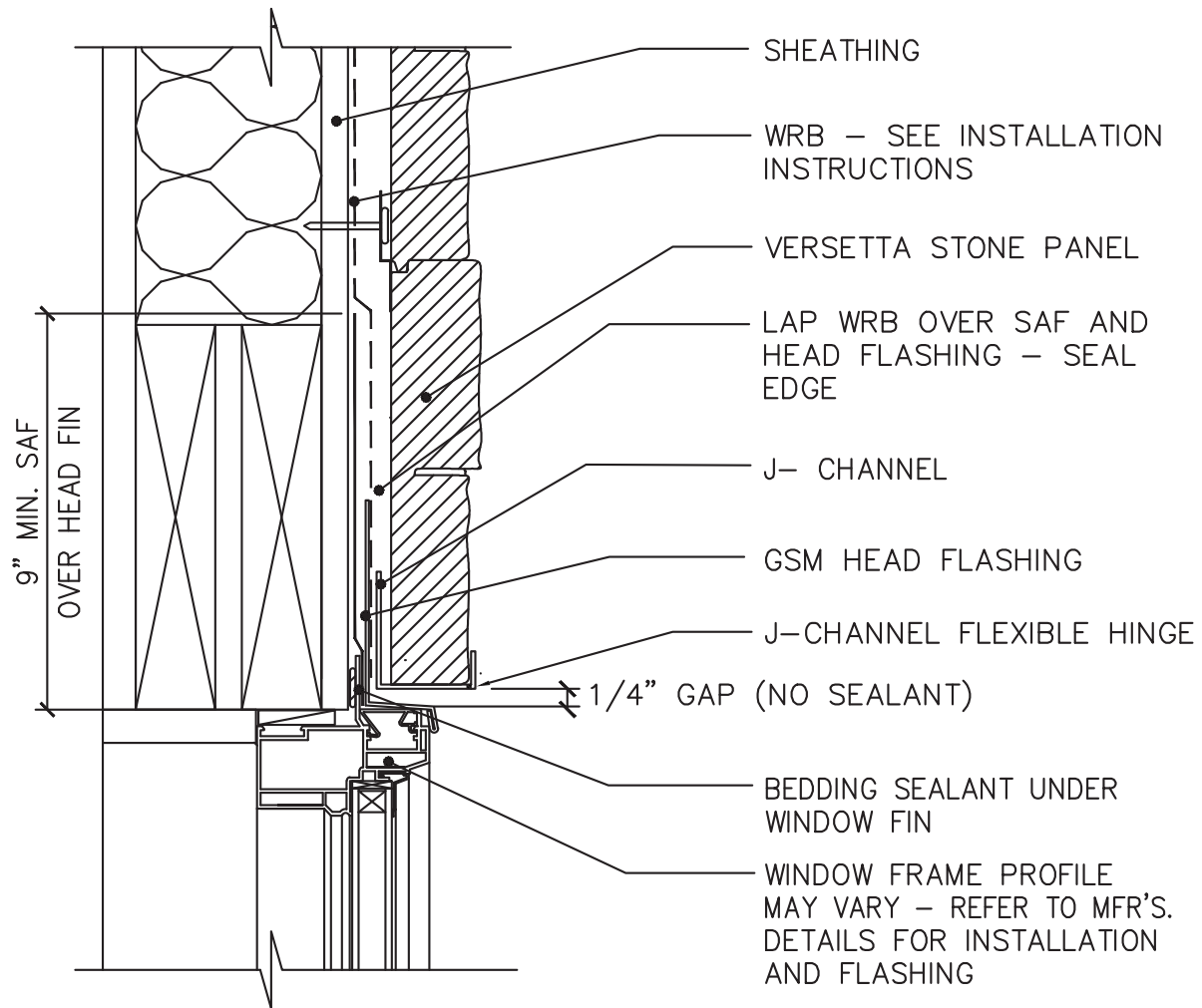
**SHEATHING AND WOOD STUDS —
WINDOW HEAD - TYP., NAIL-FIN**

1-X
1.8

SCALE: 3" = 1'– 0"

SHEATHING

WRB — SEE INSTALLATION INSTRUCTIONS

VERSETTA STONE PANEL

LAP WRB OVER SAF AND HEAD FLASHING — SEAL EDGE

J— CHANNEL

GSM HEAD FLASHING

J—CHANNEL FLEXIBLE HINGE

1/4" GAP (NO SEALANT)

BEDDING SEALANT UNDER WINDOW FIN

WINDOW FRAME PROFILE MAY VARY — REFER TO MFR'S. DETAILS FOR INSTALLATION AND FLASHING

9" MIN. SAF OVER HEAD FIN

1-X 1.8A

SHEATHING AND WOOD STUDS — WINDOW HEAD - TYP., NAIL-FIN

SCALE: 3" = 1'– 0"

NOTE:
ROOF TYPE, EDGE TRIM
AND FRAMING MAY VARY

EAVE DRIP EDGE

GUTTER (WHERE SPECIFIED)

SPACED 1" FILLER

J-CHANNEL
SEE INSTALLATION
INSTRUCTIONS FOR OTHER
TERMINATION OPTIONS

J-CHANNEL FLEXIBLE HINGE

SAF OR WRB STRIP BEHIND
TRIM. LAP OVER WRB AT WAL

VERSETTA STONE PANEL

ADHESIVE PER INSTALLATION
INSTRUCTIONS

FLASHING OR LATH PER
INSTALLATION INSTRUCTIONS

WRB — SEE INSTALLATION
INSTRUCTIONS

SHEATHING

4" MIN. LAP
SAF OVER WRB

1-X **1.12A** **TOP OF FRAMED WALL AT ROOF — TIGHT EAVE**

SCALE: 3" = 1'– 0"

BLOCKING AT PANEL EDGE

SAF BEHIND TRIM — EXTEND UNDER ADJACENT FINISH AS REQ'D.

ADJACENT FINISH VARIES

BACKER ROD AND SEALANT

WRB — SEE INSTALLATION INSTRUCTIONS

SHEATHING

WOOD TRIM (PRIMED) SIZE AND PROFILE MAY VARY

J—CHANNEL FLEXIBLE HINGE

J—CHANNEL (OPTIONAL)

VERSETTA STONE PANEL OR VERSETTA UNIVERSAL CORNER IF J—CHANNEL IS NOT USED

⅜" MIN. JOINT

EXTEND SAF UNDER PANEL 6" MIN.
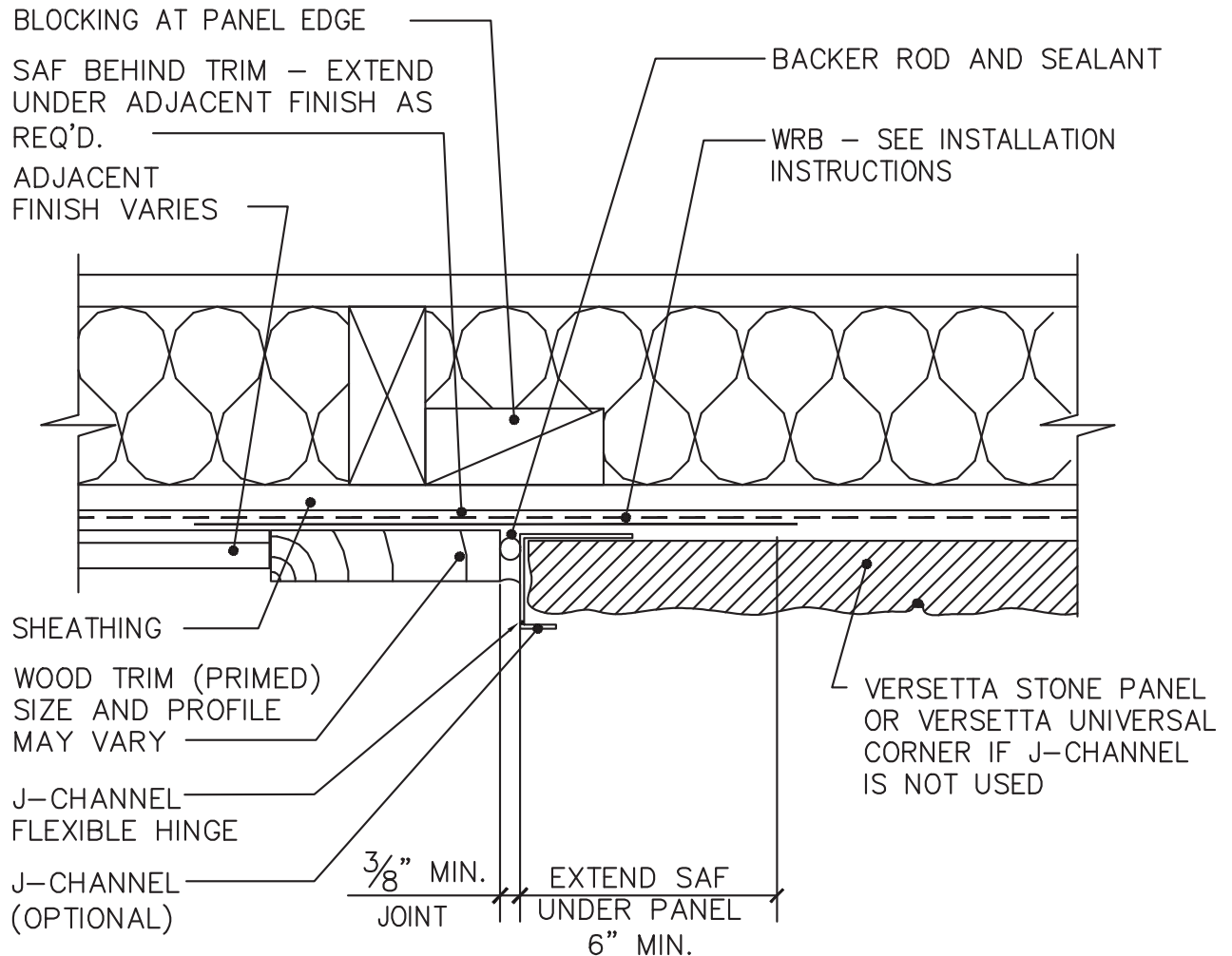
1-X	**SHEATHING AND WOOD STUDS - VERTICAL WOOD TRIM**
1.13	SCALE: 3" = 1'– 0"

NOTE:
OTHER FINISHES MAY BE USED

FINISH SIDING (WOOD SHOWN)

WRB — SEE INSTALLATION INSTRUCTIONS

GSM TRIM FLASHING WITH 3" MIN. VERTICAL LEG

HORIZONTAL WOOD TRIM (PRIMED)

STRIP OF SAF — LAP OVER GSM FLASHING

BLOCKING FOR GSM FLASHING

BEDDING SEALANT UNDER FLASHING

GSM TOP OF WALL FLASHING

LEAVE GAP AT TOP OF PANEL FOR VENTILATION — NO CAULK

VERSETTA STONE PANEL

ADHESIVE PER INSTALLATION INSTRUCTIONS

WRB — SEE INSTALLATION INSTRUCTIONS

FLASHING OR LATH PER INSTALLATION INSTRUCTIONS

SHEATHING

EXTEND WRB 6" MIN. ABOVE GSM FLASHING

6" SAF FLASHING

1-X
1.14A
HORIZONTAL TRIM FLASHING
SCALE: 3" = 1'– 0"

NOTE:
OTHER FINISHES MAY BE USED

FINISH SIDING (WOOD SHOWN)

WRB – SEE INSTALLATION INSTRUCTIONS

STRIP OF SAF – LAP OVER GSM FLASHING Z

BLOCKING FOR GSM FLASHING

LEAVE GAP AT BASE OF SIDING FOR WEEP

BEDDING SEALANT UNDER FLASHING

GSM TRIM FLASHING WITH 3" MIN. VERTICAL LEG

LEAVE GAP AT TOP OF PANEL FOR VENTILATION – NO CAULK

VERSETTA STONE PANEL

ADHESIVE PER INSTALLATION INSTRUCTIONS

WRB – SEE INSTALLATION INSTRUCTIONS

SHEATHING

EXTEND WRB 6" MIN. ABOVE GSM FLASHING

4"

6" METAL FLASHING
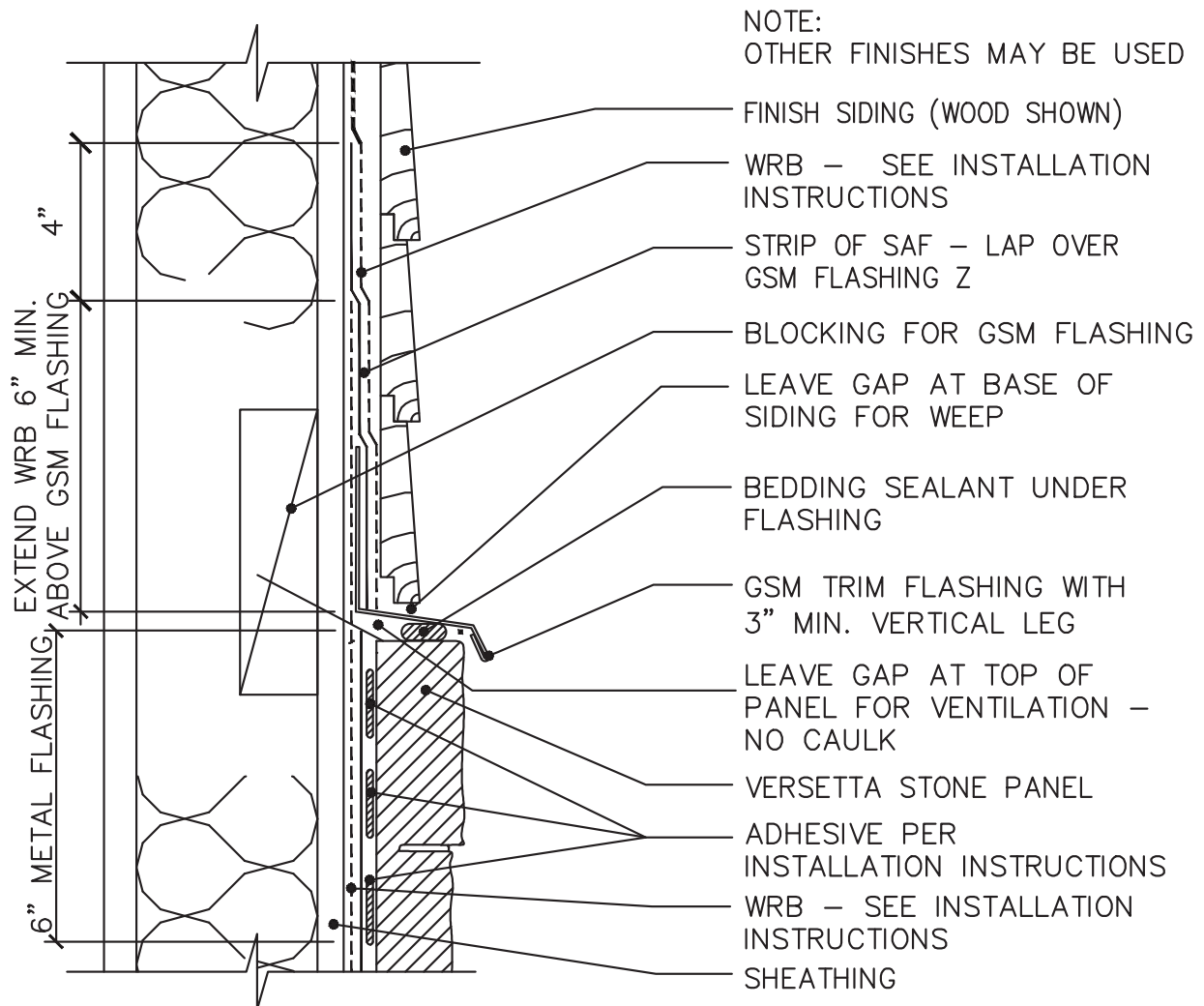
**SHEATHING AND WOOD STUDS –
SIDING TERMINATION WITHOUT VERSETTA SILL**

1-X
1.14B

SCALE: 3" = 1'– 0"

VERSETTA STONE®

BED WINDOW FIN IN SEALANT OVER SAF

SAF JAMB FLASHING UNDER WINDOW FIN

SHEATHING

WRB — SEE INSTALLATION INSTRUCTIONS — LAP OVER SAF. BED EDGE IN SEALANT AT WINDOW FIN

FASTEN PER INSTALLATION INSTRUCTIONS (6 SCREWS PER PANEL)

VERSETTA STONE PANEL

FLASHING OR LATH PER INSTALLATION INSTRUCTIONS

ADHESIVE PER INSTALLATION INSTRUCTIONS

J—CHANNEL (OPTIONAL)

VERSETTA STONE TRIM STONE

BACKER ROD AND SEALANT

J—CHANNEL FLEXIBLE HINGE

ALUMINUM OR VINYL WINDOW FRAME PROFILE MAY VARY — REFER TO MFR'S. DETAILS FOR INSTALLATION AND FLASHING

9" (N.T.S.)

3/8"

1-X
1.15

TRIM STONE WINDOW JAMB TERMINATION

SCALE: 3" = 1'– 0"

SAF JAMB FLASHING UNDER DOOR TRIM

SHEATHING

WRB

FASTEN PER INSTALLATION INSTRUCTIONS (6 SCREWS PER PANEL)

VERSETTA STONE PANEL

FLASHING OR LATH PER INSTALLATION INSTRUCTIONS

ADHESIVE PER INSTALLATION INSTRUCTIONS

J-CHANNEL (OPTIONAL)

VERSETTA STONE TRIM STONE

BACKER ROD AND SEALANT

J-CHANNEL FLEXIBLE HINGE

DOOR TRIM PROFILE MAY VARY REFER TO MFR'S. DETAILS FOR INSTALLATION AND FLASHING

9" (N.T.S.)

3/8"
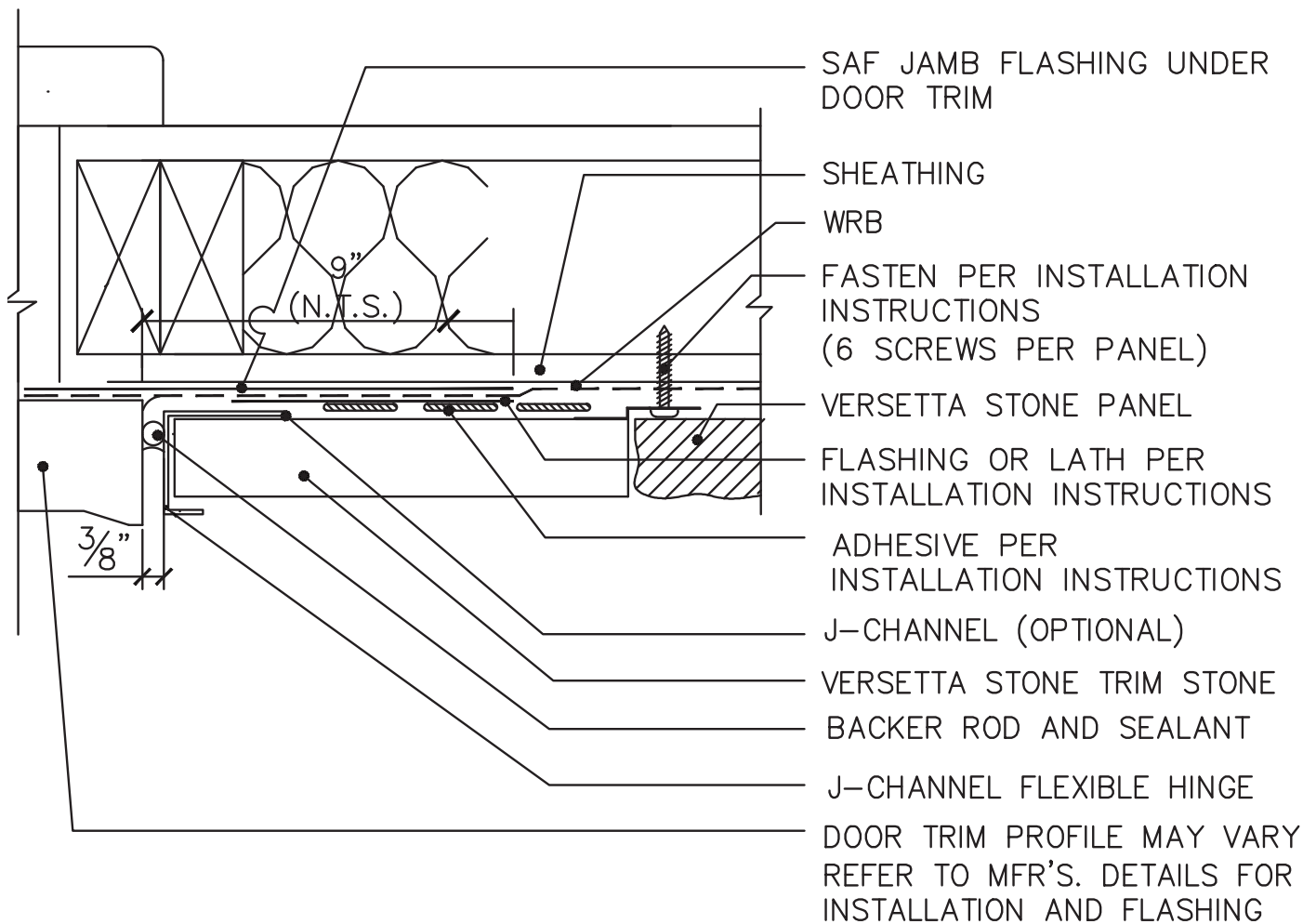
1-X 1.16 **TRIM STONE DOOR JAMB TERMINATION**

SCALE: 3" = 1'– 0"

NOTE:
 ROOF TYPE, EDGE TRIM
 AND FRAMING MAY VARY

SOFFIT SYSTEM MAY VARY

J–CHANNEL
SEE INSTALLATION
INSTRUCTIONS FOR OTHER
TERMINATION OPTIONS

J–CHANNEL FLEXIBLE HINGE

SAF OR WRB STRIP BEHIND
TRIM. LAP OVER WRB AT WALL

VERSETTA STONE PARTIAL
PANEL

ADHESIVE PER INSTALLATION
INSTRUCTIONS

FLASHING OR LATH PER
INSTALLATION INSTRUCTIONS

WRB – SEE INSTALLATION
INSTRUCTIONS

SHEATHING
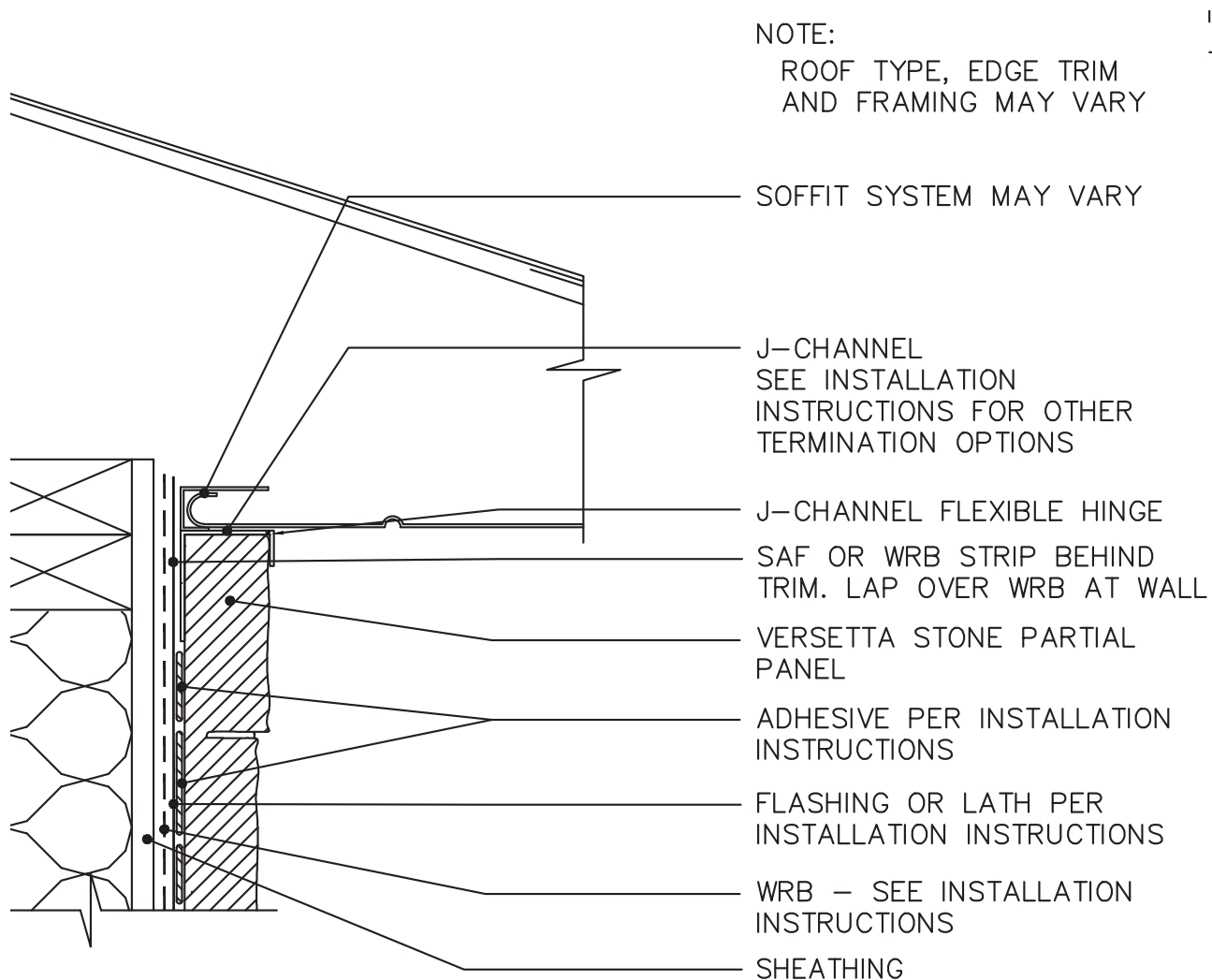
1-X	**SOFFIT TERMINATION**
1.17	SCALE: 3" = 1'– 0"

WRB — SEE INSTALLATION INSTRUCTIONS

STRIP OF SAF TO SEAL TOP EDGE OF FLASHING

VERSETTA STONE PANEL

FLASHING OR LATH PER INSTALLATION INSTRUCTIONS

ADHESIVE PER INSTALLATION INSTRUCTIONS

VERSETTA STONE ELECTRICAL/LIGHT BOX

ELECTRICAL BOX EXTENSION

VERSETTA STONE PANEL

ADHESIVE PER INSTALLATION INSTRUCTIONS

WRB — SEE INSTALLATION INSTRUCTIONS

SHEATHING

1-X
1.18
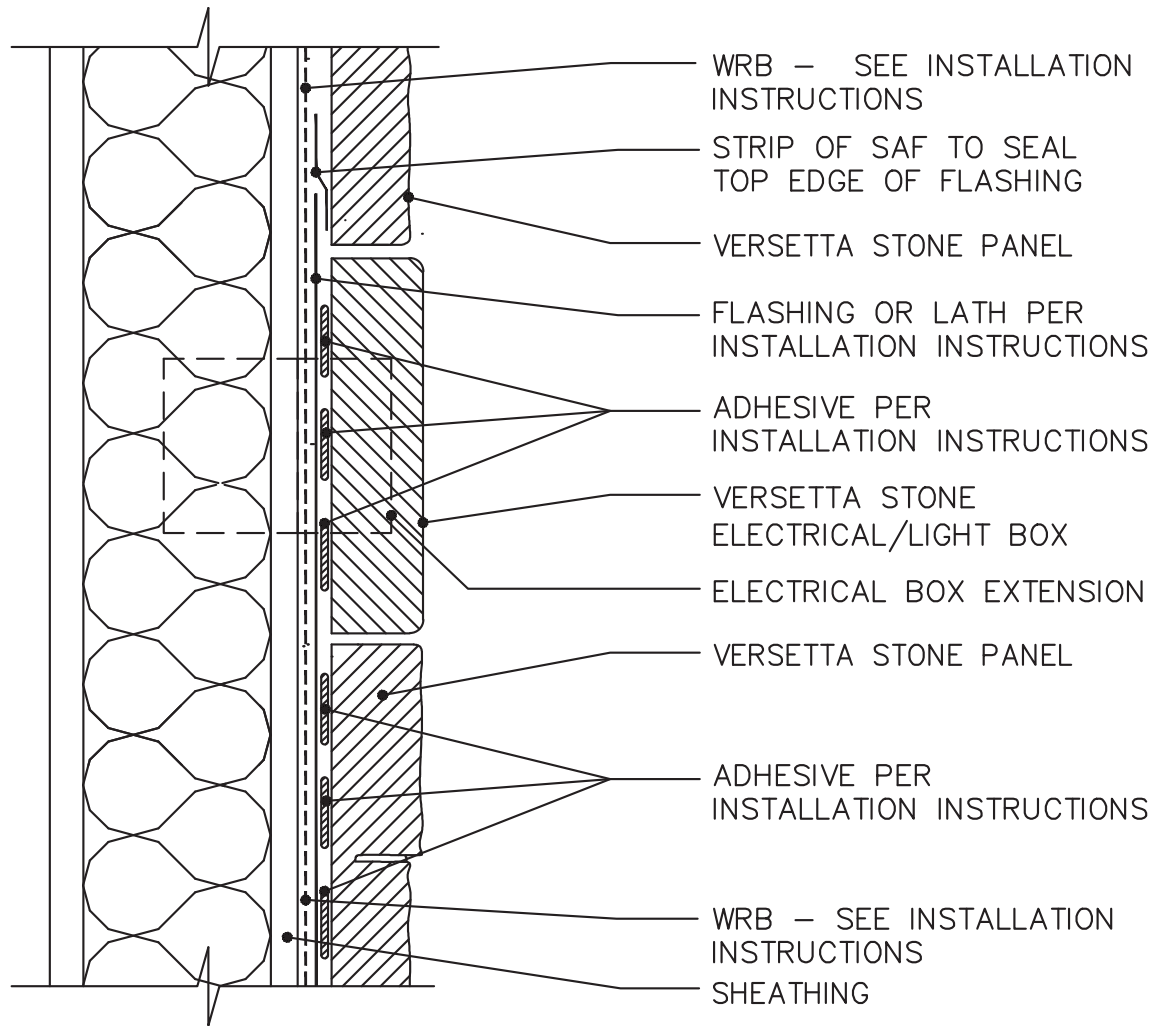
ELECTRICAL / LIGHT BOX ACCESSORY

SCALE: 3" = 1'– 0"

VERSETTA STONE UNIVERSAL CORNER FINISHED END

VERSETTA STONE UNIVERSAL CORNER CUT END

SHEATHING

WRB PER MANUFACTURER'S INSTRUCTIONS

VERSETTA STONE UNIVERSAL CORNER —ALTERNATE AND/OR KNIT EACH COURSE

16"

16"
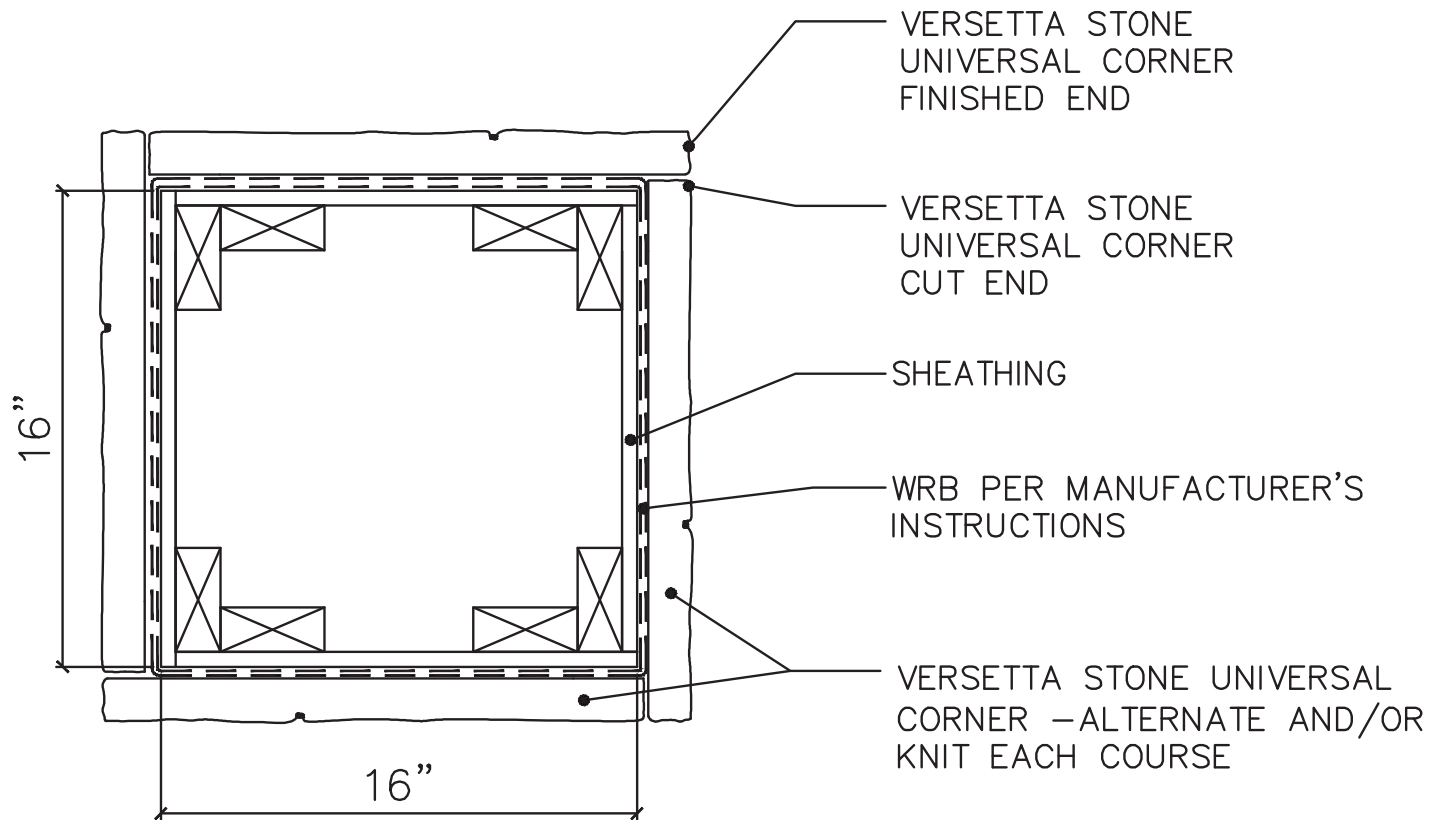
1-X 1.19

16" SQUARE COLUMN

CONSTRUCTED WITH ALL UNIVERSAL CORNERS

22.5°

45°

BAY WINDOW

WRB PER MANUFACTURER'S INSTRUCTIONS

SAF – MINIMUM 12" WIDTH

VERSETTA STONE PANEL

STONE CUT EQUALS HALF OF BAY WINDOW ANGLE

NOTE: CUTTING MITER FROM A SINGLE PANEL TO USE ON EITHER SIDE OF THE JOINT PROVIDES THE BEST APPEARANCE AND MINIMIZES EXPOSED CUT EDGES
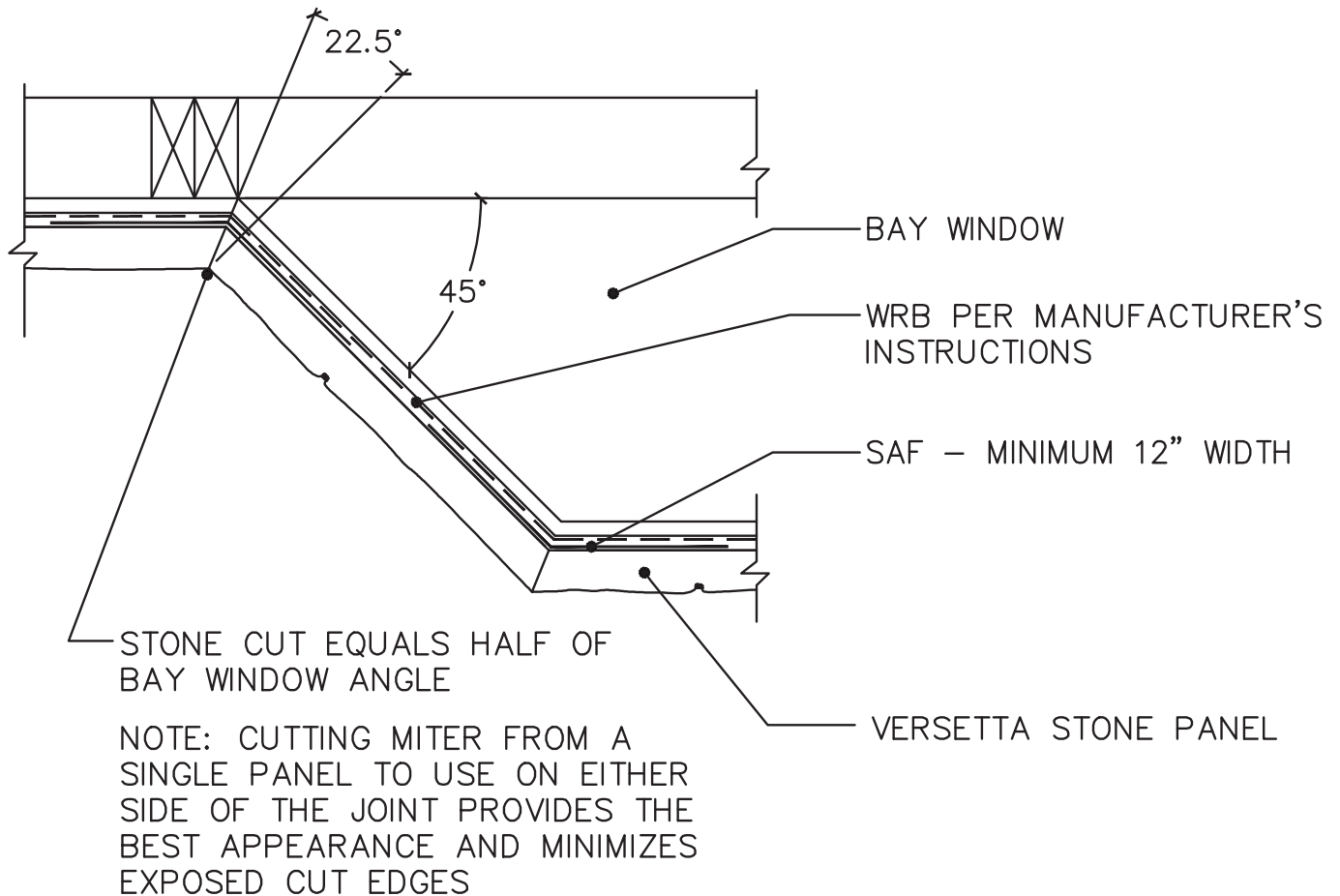
1-X
1.20

BAY WINDOW MITER DETAIL

ICC-ES Evaluation Report

ICC-ES | (800) 423-6587 | (562) 699-0543 | www.icc-es.org

Most Widely Accepted and Trusted

ESR-2859

Reissued 02/2019
This report is subject to renewal 02/2020.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 44 53—GLASS-FIBER-REINFORCED CEMENTITIOUS PANELS

REPORT HOLDER:

BORAL STONE PRODUCTS, LLC

EVALUATION SUBJECT:

VERSETTA STONE™

![ICC Evaluation Service logo]

ICC-ES Evaluation Report

Most Widely Accepted and Trusted

ESR-2859

Reissued February 2019
This report is subject to renewal February 2020.

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 44 53—Glass-Fiber-Reinforced Cementitious Panels

REPORT HOLDER:

BORAL STONE PRODUCTS, LLC

EVALUATION SUBJECT:

VERSETTA STONE™

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)

- 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)

- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Weather resistance

- Transverse loading

1.2 Evaluation to the following green code(s) and/or standards:

- 2016 California Green Building Standards Code (CALGreen), Title 24, Part 11

- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 3.0

2.0 USES

Versetta Stone™ is used as a nonstructural exterior wall covering for installation over wood-based structural panel sheathing applied to wood framing capable of supporting the imposed loads, including but not limited to positive and negative transverse wind loads.

3.0 DESCRIPTION

Versetta Stone panels are precast, glass-fiber-reinforced cement panels made of proprietary components, portland cement and glass fibers. The Versetta Stone panels have a 0.0217-inch-thick (0.55 mm), minimum G90 galvanized

steel nailing flange embedded in, and molded along the top edge of the panels; and a simulated stone veneer surface. The panels measure a nominal 36 inches long by 9.5 inches high (including nailing hem) by approximately 1.8 inches thick (914 by 241 by 46 mm), and have a weight of approximately 17 pounds (91 N) per panel. The installed panels have an 8-by-36-inch (203 mm by 914 mm) exposure, resulting in an installed weight of approximately 8.5 psf (0.38 kPa).

The attributes of the stone veneer have been verified as conforming to the provisions of (i) CALGreen Section A4.405.1.3 for prefinished building materials and Section A5.406.1.2 for reduced maintenance; (ii) ICC 700-2015 and ICC 700-2012 Sections 602.1.6 and 11.602.1.6 for termite-resistant materials and Sections 601.7, 11.601.7, and 12.1(A).601.7 for site-applied finishing materials; and (iii) ICC 700-2008 Section 602.8 for termite-resistant materials and Section 601.7 for site-applied finishing materials. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The allowable negative (outward) wind pressure of 20.4 psf (1.0 kPa) must exceed the design pressure determined in accordance with IBC Chapter 16 or IRC Section R301.2.1, as applicable.

4.2 Installation:

The panels must be installed over solid wood-based sheathing (plywood or OSB) covered with a water-resistive barrier as required by IBC Section 1404.2 and IRC Section R703.2, as applicable. The sheathing must be minimum $^7/_{16}$-inch-thick (11 mm) OSB Struct I rated sheathing complying with U.S. DOC PS-2 as Exposure 1, or $^1/_2$-inch-thick (13 mm) plywood Struct I rated sheathing complying with U.S. DOC PS-1 as Exterior Grade, and provide a span rating complying with the applicable code. The sheathing must be attached, in accordance with the applicable code, to wood wall framing having a minimum specific gravity of 0.42 and spaced a maximum of 16 inches (406 mm) on center. The Boral Stone starter strip must be installed at the base of the wall to provide a means of drainage. The nailing flange of the starter strip must be behind the water-resistive barrier, and must be fastened at 6 inches (152 mm) on center with hot-dipped galvanized roofing nails, having a minimum

$^3/_8$-inch-diameter (9.5 mm) head and a 0.125-inch-diameter (3.2 mm) shank. Each panel must be attached using two fasteners installed through the sheathing and into framing; and two additional fasteners installed into the sheathing. The fasteners must be hot-dipped galvanized roofing nails, with a minimum $^3/_8$-inch-diameter (9.5 mm) head and a 0.125-inch-diameter (3.2 mm) shank. Fasteners installed into framing must have sufficient length to penetrate the framing 1 inch (25.4 mm); fasteners installed only into sheathing must have a sufficient length to protrude $^1/_2$ inch (12.7 mm) through the back of the sheathing. Vertical panel joints must be staggered between adjacent rows. See Figures 1 through 3 for details. Installation and flashing details at windows, doors, material transitions, penetrations and terminations must be in accordance with the manufacturer's published installation instructions and the applicable code.

5.0 CONDITIONS OF USE

The Versetta Stone described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of conflict between the manufacturer's published instructions and this report, this report governs.

5.2 The panels are limited to use on exterior walls of buildings of Type V-B construction, and to construction permitted by the IRC.

5.3 The panels must be installed only on exterior walls with wood framing and solid wood-based structural panel sheathing capable of supporting the imposed loads, including but not limited to positive and negative transverse wind loads. The sheathing must be covered with a water-resistive barrier, as required by the applicable code.

5.4 In jurisdictions adopting the IRC, where seismic provisions of IRC Section R301.2.2 apply, the average weight of the wall supporting the siding, including the weight of the siding, must be determined. When this weight exceeds the applicable limits of IRC Section R301.2.2.1, an engineered

design of the wall construction must be performed in accordance with IRC Section R301.1.3.

5.5 The exterior walls must be braced to resist racking loads with approved materials in accordance with the applicable code.

5.6 The panels are manufactured in Chester, South Carolina and Napa, California, under a quality control program with inspections by ICC Evaluation Service, LLC.

6.0 EVIDENCE SUBMITTED

6.1 Reports of testing of the physical and mechanical properties of the panels in accordance with ASTM C1186, including Supplementary Type A requirements.

6.2 Reports of nailing hem bond strength testing before and after conditioning.

6.3 Reports of water drainage testing in accordance with the ICC-ES Acceptance for EIFS Clad Drainage Wall Assemblies (AC235), dated January 2015.

6.4 Reports of negative transverse wind load testing in accordance with ASTM D5206, Procedure B.

6.5 Quality documentation in accordance with the ICC-ES Acceptance Criteria for Quality Documentation (AC10).

7.0 IDENTIFICATION

7.1 The Versetta Stone described in this report is identified with the Boral Stone, LLC, name; the product name; and the evaluation report number (ESR-2859).

7.2 The report holder's contact information is the following:

BORAL STONE PRODUCTS, LLC
200 MANSELL COURT EAST, SUITE 310
ROSWELL, GEORGIA 30076
(419) 318-5345
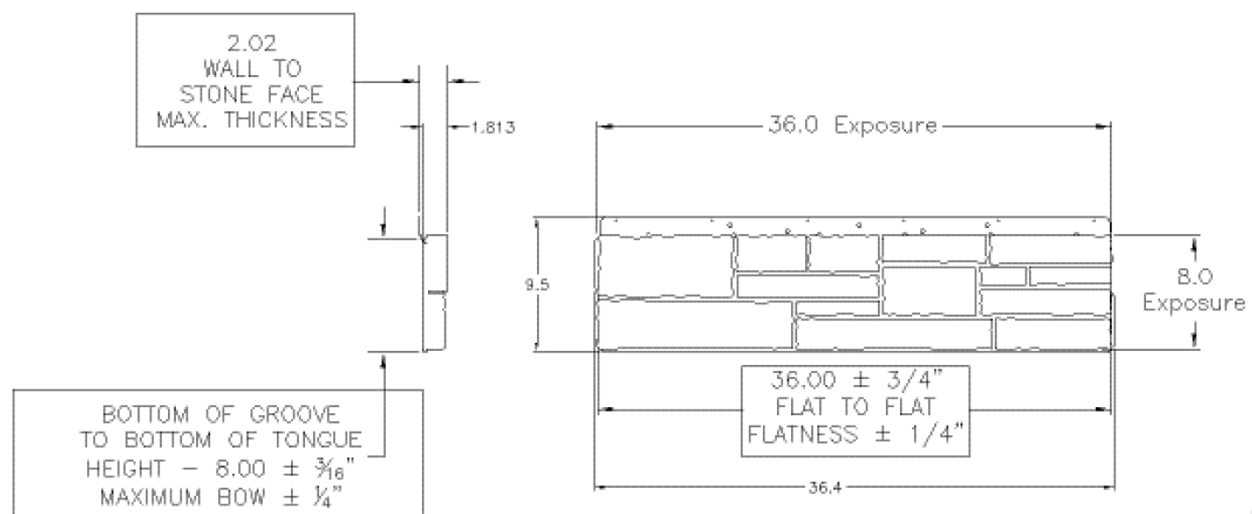**www.versettastone.com**
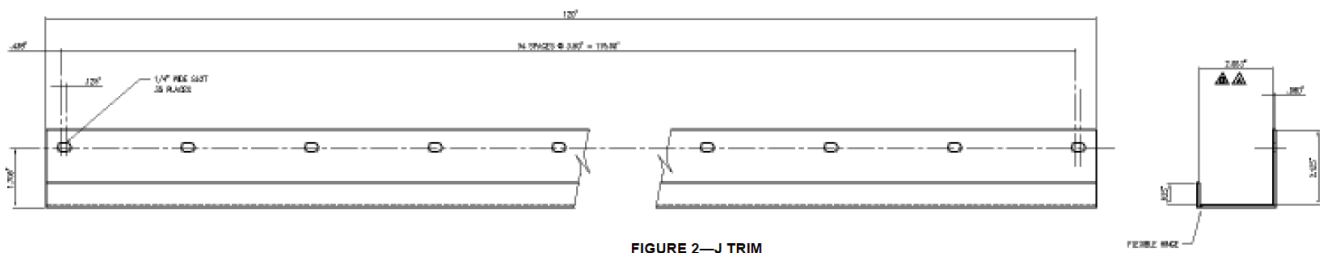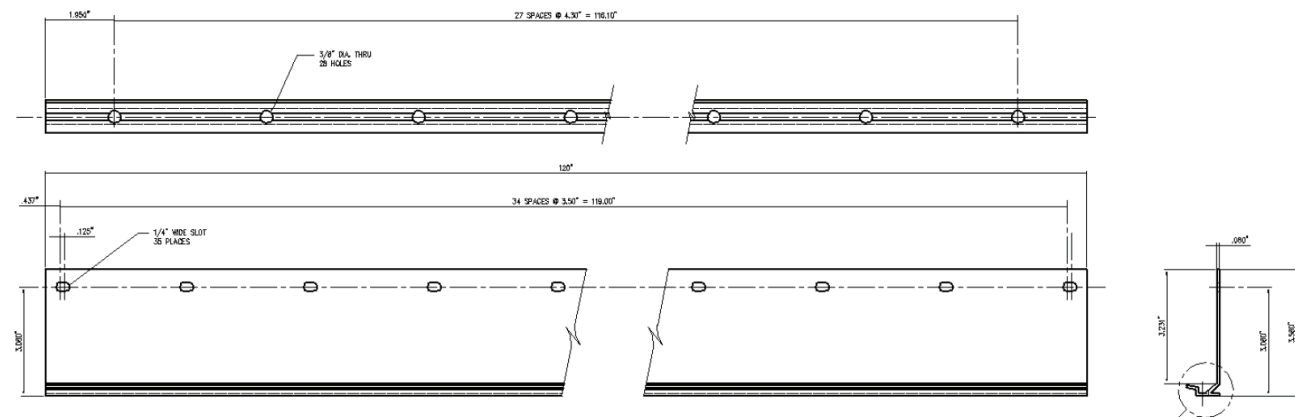**www.culturedstone.com**

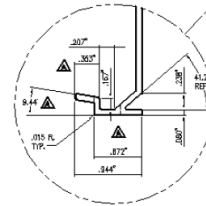**FIGURE 1—FLAT PANEL (8 inches)**

FIGURE 2—J TRIM

FIGURE 3—STARTER STRIP

SECTION 1: IDENTIFICATION

1.1 Product Identifier

Product Name: Adhered Manufactured Stone Masonry Veneer Units

1.2 Intended Use of the Product

Building Material (includes all types and colors)

1.3 Name, Address, and Telephone Number of the Responsible Party

Company
BORAL STONE PRODUCTS LLC
200 Mansell Court East, Suite 305
Roswell, GA 30076
United States
(770) 645-4500
www.boralna.com/stone

1.4 Emergency Telephone Number

(770) 645-4529

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the Substance or Mixture

This product is an article as defined in the OSHA Hazard Communication Standard [29 CFR 1910.1200(c)] and is exempt from regulatory requirements when handled as a manufactured item. This SDS contains additional health hazard information related to dust generation during construction.

Classification (GHS-US)
Eye Irritation 2B
Respiratory Irritation STOT Single Exposure 3
Respiratory Illness STOT Repeated Exposure 2
Carcinogen 1A

2.2 Label Elements

GHS-US Labeling Hazard Pictograms (GHS-US)

Signal Word (GHS-US):
- Warning

Hazard Statements (GHS-US):
- May cause eye irritation (H320)
- May cause respiratory irritation (H335)
- May cause cancer (H350)
- May cause damage to respiratory system through prolonged or repeated exposure (H372)

Precautionary Statements (GHS-US):
- Do not handle until all safety precautions have been read and understood (P202)
- Avoid breathing dust; in case of inadequate ventilation, wear respiratory protection (P264) (P284)
- Cut/grind/chip product in a well-ventilated area or use a wet saw (P271)
- Wear protective gloves, protective clothing, and eye protection (P280)
- IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing (P304) (P340)
- IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing until pain or irritation subsides. (P305) (P351) (P338)
- If symptoms persist: Get medical advice/attention (P308) (P313)

2.3 Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4 Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Description of Product

Concrete matrix article.

3.2 Mixture

Substances and hazard classification based on dust composition.

Ingredient	Product Identifier (CAS No.)	% (w/w)	Classification (GHS-US)
Pumice	1332-09-8	40 – 70	• Respiratory Irritation, STOT 3, H335 • Eye Irritation 2B, H320
Expanded clay	68334-37-2	40 - 70	•
Portland cement (cured)	65997-15-1	14 -30	• Respiratory Irritation, STOT 3, H335 • Eye Irritation 2B, H320
Quartz	14808-60-7	10 - 25	• Carc. 1A, H350 • STOT Respiratory 2, H372
Slag (ferrous metal blast furnace)	65996-69-2	2 - 7	• Respiratory Irritation, STOT 3, H335 • Eye Irritation 2B, H320
Iron oxide	1309-37-1	1.5	• Not classified

Note: This product contains additional not classified substances at low concentrations that do not contribute to the hazards of this product.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. Any person who is experiencing symptoms of injury or illness should be moved to a comfortable area with fresh air, and the label or SDS of this product reviewed.

Inhalation: If symptoms of dust exposure (respiratory irritation) occur, move the person to fresh air. Provide drinking water, if conscious, to flush mouth and irrigate upper respiratory tract. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

Eye Contact: If injury is due to a projectile, seek immediate medical attention. If the person's symptom is eye irritation due to dust exposure, careful flushing with clean water should continue for at least 15 minutes. If contact lenses are present, they should be removed after flushing. Flushing should continue until irritation subsides. Medical attention should be obtained if irritation persists.

Skin: Injuries to skin due to abrasion, laceration, or crushing should be treated by flushing with clean water, followed by first aid (application of disinfectant and bandage). If the injury is more extensive or irritation and pain persists, medical attention should be sought.

4.2 Most Important Symptoms and Effects—Both Acute and Delayed

General: The most important symptoms and effects from exposure to this product's dust is respiratory irritation and respiratory system chronic illness if significant exposures occur repeatedly.

Inhalation: The immediate acute response to dust inhalation is respiratory system irritation. Upon repeated high levels of dust exposure, crystalline silica content of the dust may cause delayed or chronic respiratory illnesses, including silicosis and cancer.

Eye Contact: Exposures of the eyes to particles and dust may result in irritation, pain, redness, and blurred vision, which is usually temporary.

Skin Contact: Other than abrasion and irritation, skin contact does not cause delayed or chronic symptoms.

4.3 Indication of Immediate Medical Attention and Special Treatment

Any time symptoms of eye irritation or respiratory irritation persist, medical attention should be obtained.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire. Finished product is not combustible.

5.2 Special Hazards Arising from the Substance or Mixture

Fire Hazard: Not combustible.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions are not expected to occur under normal conditions.

5.3 Advice for Firefighters

Not applicable.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

General Measures: Do not breathe dust. Do not get in eyes, on skin, or on clothing.

6.1.1.   For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2.   For Emergency Personnel

Protective Equipment: Equip clean-up crew with proper protection.

Emergency Procedures: Ventilate area if dust is generated.

6.2 Environmental Precautions

Reuse product as appropriate to avoid disposal.

6.3 Methods and Material for Containment and Clean-Up

Containment: Contain and collect as any solid. Avoid actions that cause dust to become airborne. Do not breathe dust, and do not allow large quantities of dust to contact skin.

6.4 Reference to Other Sections

See Section 8. Exposure Controls and Personal Protection. For further information, refer to Section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Additional Hazards when Processed: Cutting, crushing, or grinding crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression and Personal Protective Equipment (PPE) described in Section 8.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking, and again when leaving work.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Not applicable.

7.3 Specific End-Use(s)

Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Limits

The following exposure limits are based on a time-weighted full-shift exposure, unless otherwise noted.

Ingredient	OSHA PEL[1]	ACGIH-TLV[2]	Other[3][4]
Pumice	15 mg/m^3 (total dust); 5 mg/m^3 (respirable fraction)	10 mg/m^3 (total dust); 3 mg/m^3 (respirable fraction)	
Expanded clay	15 mg/m^3 (total dust); 5 mg/m^3 (respirable fraction)	10 mg/m^3 (total dust); 3 mg/m^3 (respirable fraction)	
Portland cement	15 mg/m^3 (total dust); 5 mg/m^3 (respirable fraction)	1 mg/m^3 (respirable fraction containing no asbestos and < 1% crystalline silica)	NIOSH REL – 10 mg/m^3 (total dust); 5 mg/m^3 (respirable fraction)
Quartz	30 mg/m^3 $\div$ % SiO$_2$ +2 (total dust); 10 mg/m^3 $\div$ % SiO$_2$ +2 (respirable fraction)	0.025 mg/m^3 (respirable fraction)	NIOSH REL – 0.05 mg/m^3 (respirable fraction)
Slag	Not established	Not established	
Iron oxide	<u>Fume</u>: 10 mg/m^3 (total dust); <u>Particulate</u>: 15 mg/m^3 (total dust); 5 mg/m^3 (respirable fraction)	5 mg/m^3 (respirable dust)	NIOSH REL – 5 mg/m^3 (total dust)

Notes:

(1) OSHA PEL (Permissible Exposure Level at 29 CFR 1910.1000)
(2) ACGIH-TLV (American Conference of Governmental Industrial Hygienists-Threshold Limit Values 2015)
(3) NIOSH REL (National Institute for Occupational Safety & Health Recommended Exposure Limit)
(4) Canadian Provincial and other nation control parameters are listed on the Supplement

8.2 Exposure Controls

Appropriate Engineering Controls: Power equipment should be equipped with wet dust suppression or dust collection devices if cutting/grinding/chipping product. Emergency eyewash equipment should be available in the immediate vicinity of any potential exposure. Use local exhaust or general dilution ventilation, or other suppression methods to maintain dust levels below exposure limits.

Adhered Manufactured Stone Masonry Veneer Units
Safety Data Sheet
Revision Date: 6/1/2015   Date of Issue: 6/1/2015   Supersedes Date: 12/08/2014   Version 1.0

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Personal Protective Equipment: Protective goggles or safety glasses, and gloves. Wear respiratory protection if dust is present when cutting/grinding/chipping product.

Hand Protection: Protective gloves as appropriate to prevent abrasion and hand injuries.
Eye and/or Face Protection: Approved safety glasses, goggles, and/or face-shield.
Skin and Body Protection: Appropriate work clothing and footwear should be worn.
Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties
Physical State: Solid.
Appearance: Solid. Stones come in a wide range of colors.
Odor: Essentially odorless.
Odor Threshold: Not available.
pH: Not available.
Evaporation Rate: Not available.
Melting Point: Not available.
Freezing Point: Not available.
Boiling Point: Not available.
Flashpoint: Not available.
Auto-Ignition Temperature: Not available.
Decomposition Temperature: Not available.
Flammability (solid, gas): Not available.
Lower Flammable Limit: Not available.
Upper Flammable Limit: Not available.
Vapor Pressure: Not available.
Relative Vapor Density at 20° C: Not available.
Relative Density: Not available.
Specific Gravity: 2.6
Solubility: Negligible in water.
Partition Coefficient—N-Octanol/Water: Not available.
Viscosity: Not available.
Explosion Data—Sensitivity to Mechanical Impact: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data—Sensitivity to Static Discharge: Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

10.1   Reactivity
Hazardous reactions are not expected to occur under normal conditions.
10.2   Chemical Stability
Stable.
10.3   Possibility of Hazardous Reactions
Not applicable.
10.4   Conditions to Avoid
Not applicable.
10.5   Incompatible Materials
Not applicable.

10.6   Hazardous Decomposition Products

Not applicable.

SECTION 11: TOXCOLOGICAL INFORMATION

11.1   Likely Routes of Exposure

Skin Contact: Product is abrasive and may irritate unprotected skin.

Eye Contact: When product is shaped or cut, chips or dust may enter unprotected eyes and cause injury or irritation.

Inhalation: When product is shaped or cut, respirable dust may be generated that, when inhaled, can cause respiratory system irritation. Prolonged or repeated inhalation exposure may cause chronic illness.

Ingestion: Not expected to be an exposure route of concern.

11.2   Symptoms Related to Physical, Chemical, and Toxicological Characteristics

Immediate Effects: Irritation of skin, eyes, and respiratory tract due to abrasion or dust inhalation will produce immediate discomfort, and first aid provided.

Delayed and Chronic Effects: Inhalation of dust on a prolonged or repeated basis may result in chronic lung disease or silicosis, and may also result in lung cancer, in particular among tobacco smokers.

11.3   Numerical Measures of Toxicity

The acute and chronic effects of exposure to this product's dust have not been quantified.

11.4   Carcinogenicity

The ingredient quartz, also known as crystalline silica, has been determined to be carcinogenic by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP).

SECTION 12: ECOLOGICAL INFORMATION

12.1   Toxicity

No additional information available.

12.2   Persistence and Degradability

Not available.

12.3   Bioaccumulative Potential

Not available.

12.4   Mobility in Soil

Not available.

12.5   Other Adverse Effects

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1   Waste Treatment Methods

Waste Disposal Recommendations: Scrap material should be re-used or recycled. Waste is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) (40 CFR 261). Dispose of waste material in accordance with all local, regional, national, provincial, territorial, and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1   In Accordance with DOT

Not regulated for transport

14.2   In Accordance with IMDG

Not regulated for transport

14.3   In Accordance with IATA

Not regulated for transport

14.4   In Accordance with TDG

Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1   U.S. Federal Regulations

Stone

Exempt article [40 CFR 370.13(b)]

SARA Section 313 Emission Reporting

This product may contain constituents listed under SARA (Title III) Section 313, but not in amounts requiring supplier notification under 40 CFR Part 372, Subpart C.

TSCA Inventory

All constituents are included in the Toxic Substances Control Act Chemical Inventory [40 CFR 720].

15.2   U.S. State Regulations

State Right-to-Know Laws

This product, as an article, is exempt from hazardous substance inventory reporting under the Massachusetts, New Jersey, and Pennsylvania right-to-know laws.

California Proposition 65—Warning Required

WARNING: This product contains crystalline silica and other chemicals known to the State of California to cause cancer, birth defects, and other reproductive harm.

15.3   Canadian Regulations

DSL

All ingredients are listed or exempt from inclusion on the Canadian Domestic Substances List (DSL).
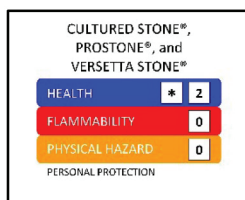
WHMIS

Class D, Division 2, Subdivision A – Material causing other toxic effects. Very Toxic—Chronic.

This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all of the information required by the CPR.

15.4   Other: HMIS and NFPA

HMIS:

NFPA:

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Party Responsible for Preparation of this Document

BORAL STONE PRODUCTS LLC

(707) 256-4249

Limitations

The information and recommendations set forth herein are based on data we have in our possession, and we have reason to believe is accurate. It is, however, the user's responsibility to determine the safety, toxicity, or suitability for his/her own use of the herein described product. Because the actions by others is beyond our control, Boral Stone Products LLC. makes no warranty expressed or implied regarding accuracy of the data or the results to be obtained from the use thereof.

NA GHS SDS