



Cultured Stone® by Boral®

MANUFACTURER'S INSTALLATION INSTRUCTIONS - METHODS TO COMPLY WITH ASTM C1780

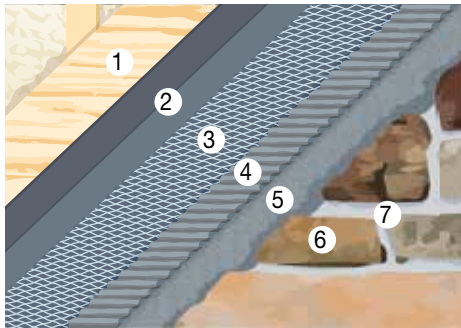
Cultured Stone® and Cultured Brick® Product Installation Instructions are available separately from your Dealer and can also be found at www.culturedstone.com.

Building code requirements vary from area to area. Check with local authorities for building code requirements in your area. Carefully read all Installation Instructions before proceeding with your Cultured Stone® products application. Observe safety precautions. Cultured Stone® products are covered by a 50-Year Limited Warranty when installed in accordance with the manufacturer's Installation Instructions. See complete warranty on our website at www.culturedstone.com.

STEP ONE: DETERMINE BACK-UP WALL AND SURFACE PREPARATION REQUIREMENTS

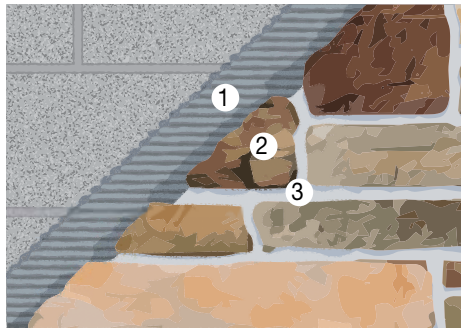
TYPICAL BACK-UP SYSTEMS INCLUDE:

Wood frame:



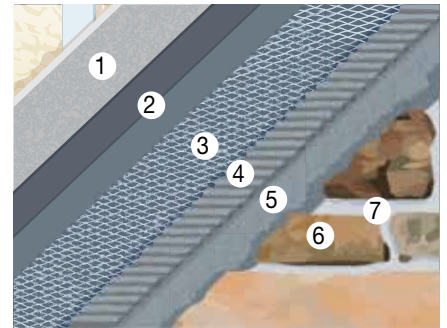
In sequence: (1) sheathing, (2) two layers of water resistive barrier (WRB), (3) galvanized metal lath, (4) scratch coat, (5) mortar setting bed (6) Cultured Stone® manufactured stone veneer, (7) mortar joint.

Unit Masonry or Concrete:



In sequence: (1) mortar applied directly to untreated, unpainted masonry, concrete or stucco, (2) Cultured Stone® manufactured stone veneer, (3) mortar joint.

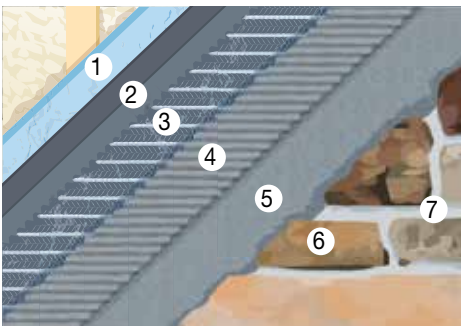
Metal Frame:



In sequence: (1) sheathing, (2) two layers of water resistive barrier (WRB), (3) galvanized metal lath, (4) scratch coat, (5) mortar setting bed (6) Cultured Stone® manufactured stone veneer, (7) mortar joint.

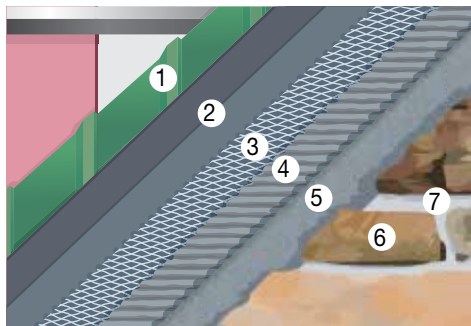
Note: Painted, sealed, dirty, smooth surfaces or walls with residual form release agents will require additional preparation to address these conditions.

Rigid Foam Insulation:



In sequence: (1) rigid foam insulation, (2) two layers of water resistive barrier (WRB) (3) galvanized metal lath (Ribbed Lath shown), (4) scratch coat, (5) mortar setting bed, (6) Cultured Stone® manufactured stone veneer, (7) mortar joint.

Metal Buildings:



In sequence: (1) metal building siding RIB, (2) two layers of water resistive barrier (WRB), (3) galvanized metal lath, (4) scratch coat, (5) mortar setting bed, (6) Cultured Stone® manufactured stone veneer, (7) mortar joint

See special Technical Evaluation Report regarding installation over continuous insulation for more information.

TABLE 1

WALL SYSTEM/BACK UP		PREPARATION REQUIREMENTS					Notes
		Cleaning	2 Layers WRB	Lath	Scratch Coat	Roughen/Texture	
Wood Frame 16" oc	Sheathing		√	√	√	N/A	
	Plywood		√	√	√	N/A	
	OSB		√	√	√	N/A	
	Cement Board		√	√	√	N/A	
	Wallboard		√	√	√	N/A	
	1/2" Foam Board		√*	√	√	N/A	
Metal frame 16" oc	Sheathing		√	√	√	N/A	
	Exterior Gypsum		√	√	√	N/A	
	OSB		√	√	√	N/A	
	Plywood		√	√	√	N/A	
	1/2" Foam Board		√*	√	√	N/A	
Unit Masonry (Brick or Block)		√**	optional	optional	optional	Site Evaluation	Engineer Review recommended for existing unit masonry
Poured Concrete		√**	optional	optional	optional	√	See ASTM C1780 for roughness evaluation
Open Stud Construction			√	√	√	N/A	48 hour scratch coat cure. Use paper backed lath. 3.4 lb rib lath
Metal Building			√	√	√	N/A	48 hour scratch coat cure. Use paper backed lath. 3.4 lb rib lath
SPECIAL CONDITIONS							
Interior Installation		√**	1 layer	√	optional		Application direct to cement board is available in addition to standard wall preparation however Polymer modified mortar is required
Continuous Insulation			√*	√	√	N/A	See TER for lath fastener selection available for framed or masonry applications.
Stucco		√**	√	√	√		Engineer review recommended if going over existing stucco

Note: Optional surface preparation utilizing a rainscreen may be added. See “General Information” section for more information.

*Some foam products may qualify as WRB. See foam manufacturer instructions.

**Cleaning can be as simple as rinsing dust off the surface with clear water or as involved as bead blasting. You are removing form release agents, dirt, paint, sealers or anything that may inhibit bond. This process may also be the method to roughen the surface to create bond ready texture. See ASTM C1780 for more information.

STEP TWO: WALL SURFACE PREPARATION

Exterior Applications

Make sure that the application of Cultured Stone® products and the structure they are being applied to incorporate good building practices. Corrosion-resistant flashing shall be installed at all wall penetrations. Flashing type and locations shall be in accordance with the requirements of the applicable building code. On exterior applications, the incorrect installation or absence of flashing, cant strips, gutters and downspouts may result in diversion of water run-off onto finished surface areas. Masonry and other building products subjected to these conditions may develop staining and, when combined with severe freeze-thaw conditions, may eventually cause damage. The application of Cultured Stone® products under these conditions is not recommended.

Flashing

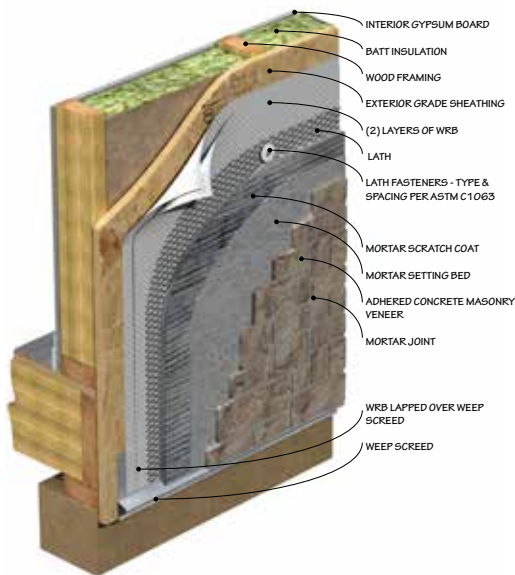
1. To maintain the weather-resistance of the exterior wall on which stone products are installed, corrosion-resistant Flashing/Weepscreed and a means of drainage shall be installed at all penetrations and terminations of the stone cladding. Flashing type and locations shall be in accordance with the requirements of the applicable building code.
2. For additional recommendations regarding flashing, refer to the following trade associations, standards, organizations and resources:
 - a. Masonry Veneer Manufacturers Association (MVMA) installation guide for adhered concrete masonry veneer, available at www.masonryveneer.org
 - b. Architect or engineer
 - c. ASTM E 2112
 - d. Asphalt Roofing Manufacturers Association (ARMA)
 - e. Brick Institute of America (BIA)
 - f. The American Plywood Association (APA)
 - g. Local building department

Clearance

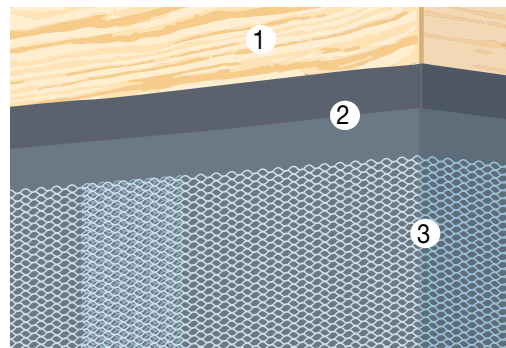
Maintain 4" clearance between Cultured Stone® and grade or 2" clearance above a paved surface. Most building codes require the use of a weepscreed in framed applications. In framed applications this distance is measured from the "beak" of the weep screed. When a weep screed is not required, application over masonry as an example, a 2" x 4" leveling/ledger board may be used as a temporary level straight edge to start your installation. See MVMA Installation Guide for some conditions that allow for a reduction in clearance requirements.

Water Resistive Barrier (WRB) Installation

Where a WRB is required, it shall be installed as two separate layers, in shingle fashion. Fasteners, fastening schedule, vertical and horizontal lap requirements shall follow the manufacturer's installation instructions. The WRB layers must be continuous through inside and outside corners, typically extending 16" to the next framing member. See "Material Selection" section for more specific WRB material requirements. Example for building paper: 2" horizontal lap, 6" vertical lap.



Corner Preparation:



Water resistive barrier and lath must continuously wrap a minimum of 16" at outside and inside corners and fasten at a framing member. (1) wall substrate, (2) two layers of water resistive barrier, (3) metal lath.

Lath Installation

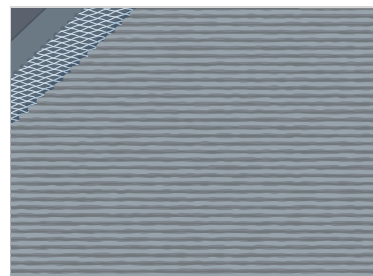
Where lath is required, it shall be installed in accordance with ASTM C1063. Typically this will require corrosion resistant fasteners every 6" on center vertically, and 16" on center horizontally, fastened to framing. If an alternative lath is used, install it in accordance with the manufacturer's installation instructions and evaluation report. See "Material Selection" section for more specific lath requirements.

NOTE: Fasteners installed between framing should be limited as they may extend into the wall's insulation cavity.

Scratch Coat

Using a trowel or spray application, install mortar scratch coat of minimum thickness of 1/2" up to 3/4". Use sufficient material and pressure to fully engage and encapsulate the lath. No lath material should be visible after scratch coat installation.

NOTE: Proper encapsulation and scratch coat thickness are key aspects to lath corrosion resistance and physical performance characteristics.



STEP THREE: MATERIAL SELECTION

Water Resistive Barrier (WRB) - select a material meeting one or more of the following standards:

- ASTM D226 Type 1 No.15 Asphalt Felt, intended for wall application
- ASTM E2556/E2556M
- ICC ES AC-38. Current Evaluation Report, by an ANSI accredited evaluation service, showing compliance to ICC ES Acceptance Criteria #38

Lath – select a material meeting one or more of the following standards:

- ASTM C847, minimum 2.5 lb/yard expanded metal lath
- ASTM C847, minimum 3.4 lb/yard, 3/8" rib, expanded metal lath
- ASTM C1032, minimum 18 gauge, woven wire mesh
- ASTM C933, welded wire lath
- Non-Metallic Lath, with a current evaluation report, by an ANSI accredited evaluation service, confirming alternative to one of the above lath products.

All lath products must be self-furred, or use furring fasteners, to provide 1/4" clearance between lath and substrate, for the purposes of mortar embedment encapsulating lath.

Lath Fasteners – select fasteners that meet the requirements of the following standard:

- ASTM C1063
1. Galvanized nails, staples, concrete nails. Penetration depth into wood framing is 3/4" minimum.
 2. Corrosion-resistant, self-drilling, self-tapping pancake-head screw with 7/16" head, of 1-1/4" length or suitable to obtain 3/8" penetration beyond inside surface of metal. (Used for installing to metal surfaces such as metal studs or metal building siding.)

Applications over continuous insulation, refer to Technical Evaluation Reports 1312-02 or 1302-01 available at www.culturedstone.com

Mortar – select a material meeting one or more of the following standards:

- ASTM C270 Type N or Type S
- ASTM C1714 Type N or Type S
- ANSI A118.1 or A118.4

Mortar Admixtures: Comply with ASTM C1384

Bonding Agents: Comply with ASTM C1059 or C932

Coloring Pigment: Comply with ASTM C979

All mortar, additives, bonding agents and pigments must be stored, mixed and used in strict accordance with the manufacturer's instructions and appropriate standards referenced above.

NOTE: Under mixing, over mixing, tempering and open times of mortar can impact bond. Follow mortar manufacturer's instructions.

STEP FOUR: ESTIMATING THE STONE REQUIRED

Determine the amount of Cultured Stone® products needed by measuring the area to be covered. Measure the length times the height to arrive at the gross square footage of flat stone needed. Subtract square footage for window, door and other openings. Measure the linear feet of outside corners to determine the amount of corner pieces needed. One linear foot of corner pieces covers approximately 3/4 of a square foot of flat area. Subtract the flat area covered by the linear feet of corner pieces from the square footage of flat stone required. You may wish to obtain some extra stone to allow for cutting and trimming, or tighter joints. In addition, be sure to verify whether the texture chosen is sold based on coverage with a 1/2" mortar joint or tight-fitted. Most texture coverages are listed for a 1/2" joint, the exceptions being Drystack LedgeStone, European Castle Stone, Pro-Fit® LedgeStone and Pro-Fit® Alpine LedgeStone.

FORMULA:

Length x Height = Wall Area

Window Width x Window Height = Window Area

Lineal Feet of Corners Required x .75 = Wall Area Covered by Corners


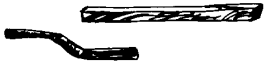




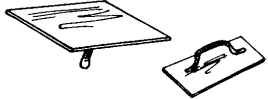

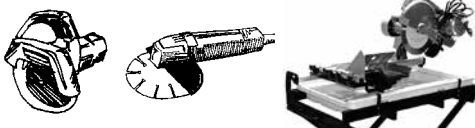




Wall Area – Window Area – Wall Area Covered by Corners = Square Ft. Flats Required

TOOLS REQUIRED

Choose the tools required for your installation:

- Safety Glasses and other personal protective equipment
- Staple Gun or Hammer
- Wheelbarrow & Hoe
- Hock & Trowel
- Mason's Trowel
- Margin Trowel
- Masonry, Circular, Table, Wet Saw or Grinder with Carborundum or Diamond Blade
- Wide-Mouth Nippers or Hatchet
- Dust Mask(1)
- Level
- Metal Jointing Tool or Wood Stick
- Grout Bag
- Whisk Broom

⁽¹⁾ **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. A properly fitted NIOSH approved N-95 series disposable particulate filtering facepiece 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.

Tools Required		
 Staple Gun/Hammer (Applying water-resistive barrier and/or metal lath)	 Metal Jointing Tool/Wood Stick (Finishing joints)	
 Mason's Trowel (Applying mortar)	 Margin Trowel (Applying masonry adhesive)	 Grout Bag
 Wheelbarrow and Hoe (Mixing mortar)	 Hock and Trowel	
	 Level	
 Masonry, Circular, Table, Wet Cut Saw or Grinder with Carborundum or Diamond Blade		 Whisk Broom (Cleaning finished work)
 Wide-Mouth Nippers/Hatchet (Trimming stone)	 Dust Mask⁽¹⁾	 Safety Glasses⁽¹⁾

STEP FIVE: APPLICATION OF CULTURED STONE® UNITS

Prepare Your Work Area

Spread Cultured Stone® wall veneer out at the job site so you have a good variety of sizes, shapes and colors to choose from. Plan for some variety and contrast in the overall design. Use small stones next to large ones, heavy-textured pieces next to smooth, thick stones next to thinner ones. Mixing Cultured Stone® wall veneer from different boxes during application will allow you to achieve a desirable balance of stones on your finished project.

NOTES: Level and Plumb Joint Lines

When applying Cobblefield® manufactured stone veneer, European Castle Stone, Limestone, Rockface, Coral or Ledgestone, endeavor to maintain level and plumb joint lines. Also, long rectangular pieces will look most natural if applied horizontally.

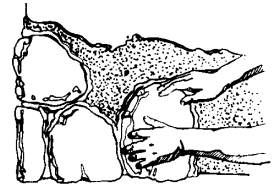
Install Corner Pieces First

If your application requires corner pieces, apply these first. Notice that the corner pieces have a long and a short leg. Alternate these in opposite directions (Fig. 1).

Figure 1
Apply corners—
alternating long
and short legs
in the opposite
directions.



Figure 2
Apply flat pieces.



Install Flat Pieces

After the corner pieces are in place, flat pieces are applied working toward the wall center (Fig. 2).

Starting Point

Apply mortar and stone working from the bottom up, or most stones can also be applied from the top down. Working from the top down may help avoid splashing previously applied stone with dripping mortar. Ledgestone types should be installed from the bottom up.

Joint Width

In order to obtain the most natural look, joints should be as narrow as possible. The average should not exceed 1/2" in width. An attractive look can also be achieved by fitting stones tightly together if desired. If using tight fit/drystack method, figure in additional stone material. It is important to make sure scratch coat/backing has been covered completely by the setting bed of mortar. This will conceal the scratch coat/backing and prevent pockets from forming behind stones that could trap water.

Setting Units

Units shall be installed using **Method A** or **Method B** or a combination of both to achieve setting bed with complete coverage of the back of the unit and full contact between the mortar setting bed, unit and prepared backing surface.

Method A – Back butter the unit, using sufficient mortar and pressure to fill texture and voids in the back of unit. While 1/2" to 3/4" setting bed mortar is wet, press and work the unit onto the prepared backing with enough pressure to force mortar to squeeze out around the entire perimeter of the unit.

Method B – The mortar setting bed shall be installed by trowel application 1/2" to 3/4" thick directly to the prepared surface. Plus back butter the unit using sufficient mortar and pressure to fill texture on and voids in the back of the unit. While the setting bed on the prepared backing surface is plastic, press and work the unit into the setting bed with enough pressure to force mortar to squeeze out around the entire perimeter of the unit. Limit mortar setting bed open time and work only an area that can be covered before the mortar skins over. Time and area will depend on mortar and weather conditions.

NOTE: In tight fit applications, before placing next unit, compact or remove the squeezed out mortar to allow adjoining unit to butt tightly. There shall be mortar between the units but the joint will be less than 3/8".



Cutting and Trimming

Stones can be cut and shaped for fit. Use wide-mouth nippers or a hatchet (Fig. 3 and 4). (Refer to page 5 – “Tools Required.”) Some broken stones may be found in the box. These also may be used in filling gaps between large stones. For best finished appearance, coat cut or broken edges with mortar. If possible, position cut edges up when they are above eye level, down when below eye level. Placing a cut edge next to a thick/larger stone will also help conceal the cut. **SAFETY GLASSES AND A DUST MASK⁽¹⁾ SHOULD ALWAYS BE WORN WHEN CUTTING ANY CULTURED STONE[®] PRODUCTS.**

Figure 3
Trim with wide-mouth nippers.

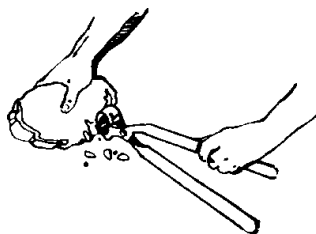
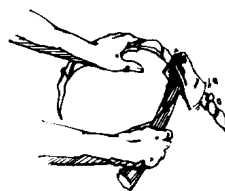


Figure 4
Trim with a hatchet.



MORTAR

Weather Conditions

If stone is being applied in hot or dry weather, the back of each piece should be moistened with a fine spray of water or a wet brush to adequately prevent excessive absorption of moisture from the mortar. If being installed over concrete, masonry or scratch coat substrate, the substrate surface area should also be dampened before applying mortar. Surfaces should appear damp but free of surface water. Applications should be protected from temperatures below 40°F as mortar will not cure properly under such conditions. See ASTM C1780 for Hot and Cold Weather Requirements.

ADDITIONAL INSTRUCTIONS FOR PRO-FIT[®] LEDGESTONE, PRO-FIT[®] ALPINE LEDGESTONE AND EUROPEAN CASTLE STONE

Fit the Joints Tightly

Install all these products with tight-fitted joints. Generally, components should be placed butting each other and aligned for level and plumb. When installing, the backs of all these components must be wet*. They should be noticeably damp, but free from surface water. Mortar may be tinted to match the color of the stone you are installing to help conceal the joint lines. If while setting a stone, a previously installed stone is disturbed, that stone must be removed, cleaned and re-installed.

*If using a polymer modified mortar, follow mortar manufacturer's recommendations regarding wetting of stone and scratch coat.

Starting Point

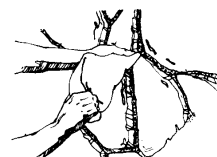
Products are applied starting from the bottom and working up. Start each ProFit[®] LedgeStone course level and continue horizontally completing each course before starting the next. European Castle Stone is done in a similar sequence to achieve a random ashlar pattern. If required, cut the appropriate size component to fit at the end or top of the finish area. Frequently check the installation for level and alignment.

STEP SIX: GROUTING AND FINISHING JOINTS

A. Grouting Joints

When additional mortar is required, use a grout bag to fill in joints completely (Fig. 5). Care must be taken to avoid smearing mortar on surface of stone. Accidental smears or mortar droppings should be removed only after mortar has become crumbly using a whisk broom or dry bristle brush. Never use a wet brush or wire brush.

Figure 5
Grout joints.



B. Finishing Joints

When the mortar joints have become firm or “thumb-print” dry (setting time will vary depending on wall surface and climatic conditions), they should be pointed up with a wood stick or metal jointing tool. Rake out excess mortar, compact and seal edges around stones (Fig. 6). Careful attention to proper and even jointing will result in a professional looking finish.

Figure 6
Finishing the job.



C. Cleaning Finished Job

At the end of the work day, or when mortar is sufficiently set up, the finished job should be broomed or brushed to remove loose mortar and to clean the face of the stone. **A wet brush or sponge should never be used to treat the mortar joints** as this will cause staining that will be difficult, or impossible, to remove. **Do not use acid or acid-based products.**

Mortar Color

Tinting mortar complements the color of the stone being installed. EXAMPLE: Use tan mortar with earth-tone stones. This will greatly enhance the appearance of the finished installation. Regular mortars can be tinted to complement your Cultured Stone® product using iron oxide pigments available from your dealer.

GENERAL INFORMATION

Cleaning

Dirt, etc., may be removed by using a strong solution of granulated soap or detergent and water with a bristle brush. Do not use a wire brush as it will cause damage to the surface. Rinse immediately with fresh water. Do not attempt to clean using acid or acid-containing products, power-washing, sandblasting or wire-brush cleaning.

Enhanced Bond

Pre-Blended Polymer modified mortars, bonding agents/enhancers may provide greater bond strength. Enhanced bond strength capability may be desired for: tight fit applications, tilt up construction or where code jurisdictions require higher bond strength. These products must be compatible with manufactured stone and used in strict accordance with manufacturer's instructions. These products may also have specific requirements regarding: hot or cold weather, exposure to rain/water while curing or water used to dampen the stone units prior to installation.

Salt and De-Icing Chemicals

Because all concrete and masonry are vulnerable to damage by salt, Cultured Stone® products are not warranted against damage incurred from salt or other chemicals used to remove snow or ice. Do not use de-icing chemicals on areas immediately adjacent to a Cultured Stone® manufactured stone veneer application.

Scuffing

Scuffing occurs on all natural stone. Occasionally some scuffing will occur on the surface of Cultured Stone® products. This can enhance the natural appearance of your Cultured Stone® manufactured stone veneer installation. Some scuff marks can be removed by cleaning as described above.

Efflorescence

Efflorescence is a water-soluble salt that is deposited on the surface of stucco, concrete, brick and other masonry products by the evaporation of water from the wall. On rare occasions efflorescence will occur on Cultured Stone® products. To remove efflorescence, allow the stone to dry thoroughly, then scrub vigorously with a stiff bristle brush and clean water. Rinse thoroughly—do not use a wire brush. For more difficult efflorescence problems, scrub thoroughly with a solution of 1 part white household vinegar to 5 parts water. Rinse thoroughly.

Sealers

Sealers are not necessary on Cultured Stone® products. However, some customers use sealers to help prevent staining in applications prone to smoke, soot, dirt or water splashing. If you choose to use a sealer, make sure it is a silane-based, breathable sealer. Take note that sealers may darken the color of the stone. A sealer may also slow the natural movement of moisture out of the stone and increase the possibility of efflorescence and/or spalling. For information regarding actual performance or application of sealers, contact the manufacturer of the sealer directly.

Rainscreen Statement

Some building codes require a rainscreen behind cladding materials, including manufactured stone veneer. If you are installing manufactured stone/brick veneer in one of these jurisdictions, or are concerned about extreme weather conditions, it is recommended that you choose a rainscreen system that can achieve the following:

- The system should create a space with a minimum depth of 3/16" (5 mm) and maximum depth of 3/4" (19 mm).
- The materials should be corrosion and rot resistant.
- Unless otherwise designed to manage moisture vapor with ventilation, the system should be vapor open.
- If rainscreen space is created with a material other than solid strapping/ furring attached directly to framing, the following must be considered. Lath fasteners must be capable of supporting the weight of the finished wall cladding system considering the unsupported/cantilevered portion of fastener that is equal to the thickness of the rainscreen materials.

Overhead Application

Overhead, horizontal or sloped applications are not included in our building code evaluation reports or acceptances. These applications often require special approval/inspections by local building code inspectors. Contact your architect or engineer for assistance designing these installations.

Installation Over Thick Foam

Installation over foam board thicker than 1/2" may require special fasteners. Consult your architect or engineer for assistance designing a thick foam installation. Please see special technical evaluation reports for installation over continuous insulation for more information available at: <http://www.boralamerica.com/stone/Resources/technical-information/installation-guides>.

Use of Cultured Stone® Below Water Levels

Cultured Stone® veneer is a lightweight concrete material and will not deteriorate from exposure to fresh liquid water. The use of Cultured Stone® veneer below water level, in which the water is chlorinated, treated with chemicals or dirty will likely cause discoloration as it would on any concrete, natural stone or other materials. Pool chemicals which contain acid, such as muriatic acid, may cause damage to Cultured Stone® products, which would not be covered by the Cultured Stone® 50-year Limited Warranty. Cultured Stone® veneer, concrete and many natural stone materials are subject to potential damage from adverse freeze thaw conditions. For that reason, water should be drained below susceptible materials prior to freezing temperatures. Pressure and abrasion from constant fast flowing water may cause some surface deterioration as it would on other concrete materials. The surfaces of concrete and many other materials may be affected by exposure to extensive salt-water conditions. Cultured Stone® veneer should not be considered a waterproof material.

Capping Off the Exposed Top of Exterior Walls or at Cladding Termination or Transitions

To achieve a finished architectural look on horizontal or sloping top areas of exterior walls, piers, retaining walls or other surfaces, Cultured Stone® Capstones or a poured-in-place concrete cap must be used to provide adequate run-off protection to the wall areas. Caps should extend approximately 1"– 2" beyond the finished stone surface. Sill Stones, Flashings or Band Boards provide overhang at cladding terminations or transitions.

NOTE: Cultured Stone® corner pieces, flat pieces, or hearthstones should not be used to cap walls.

Retaining Walls. All retaining walls must be waterproofed at the fill side. Wall construction should incorporate proper use of granular backfill and provisions for good drainage. A continuous longitudinal drain along the back of the wall set in drain rock is recommended.

Chimney Cap

All chimney chases must be capped with a one-piece cap that extends 1"– 2" beyond the finished stone surface to prevent water from entering the wall system. Chimney or chase construction should incorporate proper flashing.

INSTALLING FINISHING TOUCHES

HEARTHSTONE INSTALLATION INSTRUCTIONS

NOTE: Hearthstones are not recommended or warranted for exterior use or as a surface area subject to foot traffic. Consult surface preparation Table 1 for requirements prior to installing Hearthstone.

A. Place Mortar

Place mortar 3/4" deep in 3-inch wide strips 1 inch apart on prepared surface (Fig. 7).

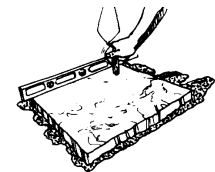
Figure 7
Place mortar
for Hearthstone
installation.



B. Install Hearthstones

Place the first Hearthstone onto the mortar bed and level (Fig. 8). Place adjacent Hearthstones, aligning and leveling with the first piece.

Figure 8
Place
Hearthstone.



If joints need additional mortar, fill joints using a grout bag. Tool and finish joints following previous instructions under "Grouting and Finishing Joints." Ensure Hearthstones are set in a complete bed of mortar.

NOTES: Hearthstone Installation

Cultured Stone® manufactured stone veneer and hearth products are made from non-combustible materials. Mortar joints must not exceed 1/2" in width and the mortar must be even with the top of the hearth surface.

Raised Hearth

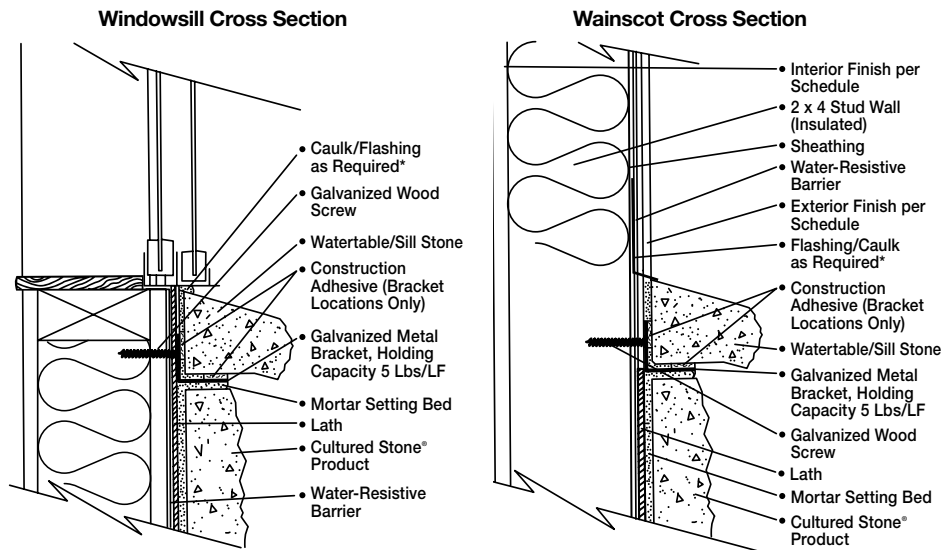
Do not cantilever or extend Hearthstones more than 1-1/2" beyond direct support. When grouting the extended portion of a cantilevered Hearthstone, bring the grout to the front edge. Push a long galvanized nail horizontally into the grout to add support, then cover the nail with mortar.

Sealing Fireplaces/Hearths

If desired, sealing the Cultured Stone® facing or hearth of a fireplace installation will assist in the removal of smoke and soot stains should they occur. See **Sealers** in "General Information" section for more information.

Watertable/Sill Installations

Watertables/sills provide a transition piece between a stone wainscot and other exterior finishes and for water runoff. They can also be used as a windowsill. Install using galvanized metal support brackets (Simpson Strong Tie A-21 or other galvanized right angle bracket with holding capacity minimum 5 lbs./LF) fastened with galvanized nails or screws penetrating studs 1" at a minimum of 16" on center. Two brackets per sill is preferred if blocking is present. Use construction adhesive to bond stone at bracket locations. Caulk and flash as required at Watertable/Sill locations using an approved corrosion-resistant flashing that extends to the surface of exterior wall finish and is installed to prevent water from re-entering the exterior wall envelope.



*Failure to properly caulk/flash as described in these installation directions may result in water damage to the structure.

CULTURED STONE® ELECTRICAL BOX STONES INSTALLATION INSTRUCTIONS



1 Attach UL-listed extension box to pre-wired and mounted electrical box.



2 Apply mortar to back of Electrical Box Stone or prepared substrate.



3 Center Electrical Box Stone over the extension box. Level and plumb. Use removable shims if required.



4 Complete placement of Cultured Stone® veneer or other exterior material around Electrical Box Stone.

- Electrical Box Stones must be installed in accordance with Cultured Stone® Installation Instructions.
- Extension box, light fixture or receptacle plate must be attached in accordance with manufacturer's instructions and local building codes.

TUSCAN LINTEL INSTALLATION INSTRUCTIONS

Method One

On installations where the top of the opening provides no support for the bottom edge of the Tuscan Lintel: Install metal support brackets as per Cultured Stone® Installation Instructions for Watertables/Sills. Then install Lintel stones in a full setting bed of mortar in accordance with Cultured Stone® Installation Instructions.

Method Two

On installations where the bottom edge of the Tuscan Lintel will be supported by a window or door frame's molding or profile: Install lintel stones in a full setting bed of mortar in accordance with Cultured Stone® Installation Instructions. Make sure you do not cause deflection to window with weight of Lintel. If there is any question, use method one.

ADDITIONAL INSTRUCTIONS FOR INSTALLING CAST-FIT®

The Cast-Fit® product has been designed for the best appearance and performance when installed with a 3/8" mortar joint. Starting with a level line for your first course, maintain level and plumb courses as you proceed up the wall. Starting with thicker stones to set face plane, use mortar setting bed thickness to even face plane of thinner stones and accommodate variations in substrate surface. Application of a uniform and true scratch coat will also accommodate variations in the substrate surface. It is recommended that 3/8" dowel pins or shims be used to maintain a uniform head and bed joint space during installation. The mortar joint should be tooled to a concave shape, just below the surface of the stone. To obtain the coverage stated on packaging and literature this mortar joint spacing must be maintained.

If you choose to install Cast-Fit® in a tight-fit or mortar-less joint application you must achieve complete mortar setting bed coverage and full perimeter squeeze out. To achieve this, with stones of this size, it may be necessary to use a mortar application method in which mortar is troweled onto the scratch coat and back buttered on the stone.

For full Installation Instructions for Cast-Fit® see Pub CF-Install-2012 at www.culturedstone.com.

CULTURED STONE® 50-YEAR LIMITED WARRANTY

For complete details of our Cultured Stone® 50-year limited warranty please visit our website at www.culturedstone.com.

CODE COMPLIANCE EVALUATION AND LISTINGS

ICC-ES ESR-1364. Tested or listed by Underwriters Laboratories, Inc., HUD Materials Release

No.1316, Texas Dept. of Insurance Product Evaluation EC-21.

Florida Product Approval: FL-15047



ICC-Evaluation
Service ESR-1364



Underwriters
Laboratories



Home Innovation
NGBS GREEN CERTIFIED™



✓ Recycled content
Minimum of 54 percent recycled content on all
Cultured Stone® veneer products.



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