

SCULTURED STONE.

A BORAL® Brand

WELCOME

COMPANY NAME:
CONTACT NAME:
PROJECT TITLE:
STREET ADDRESS:
CITY, STATE, ZIP:

We would like to congratulate you on your upcoming project which incorporates adhered concrete masonry veneer products. Enclosed in this packet are the required Cultured Stone submittal forms and technical documents. We have also enclosed additional support materials and installation details commonly requested by architects and contractors.

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

SUBMITTAL FORM BRICK INSTALLATION

TECHNICAL DATA SHEET 3-PART SPEC

50-YEAR WARRANTY ICC-ES EVALUATION REPORT

CERTIFICATE OF QUALITY SAFETY DATA SHEET

STONE INSTALLATION

As part of our commitment to service, we would like to recommend 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 Cultured 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.

Sincereley,

Sales Representative Cultured Stone

SUBMITTAL PACKET

SUBMITTAL FORM

Cultured Stone Representative:

PROJECT DETAILS	CULTURED STONE	
PROJECT NAME:	PROFILE: COLOR:	
PROJECT ADDRESS:	APPROX SQ FOOTAGE:	
CITY, STATE, ZIP:	MANUFACTURING LOCATION:	

Please fill in all known information:

OWNER	ARCHITECT	BUILDER	MASON
COMPANY NAME:	COMPANY NAME:	COMPANY NAME:	COMPANY NAME:
CITY, STATE:	CITY, STATE:	CITY, STATE:	CITY, STATE:
CONTACT NAME:	TACT NAME: CONTACT NAME:		CONTACT NAME:
CONTACT PHONE:	CONTACT PHONE:	CONTACT PHONE:	CONTACT PHONE:

PROJECT NOTES:				
Pre-Installation Project Team Meeting Scheduled?	Υ	Ν	Date Scheduled:	
Your signature below acknowledges receipt of Culture information is accurate to the best of your knowledge		ione's "S	ubmittal Packet" and the above	
Received By:			Date:	
Company:			Phone:	
Cultured Stone Representative:			Date:	

 $\label{thm:bound} \mbox{Email completed form to: } \mbox{\bf BoralStoneAnswers@Boral.com}$

TECHNICAL DATA

The **Cultured Stone**® collection of manufactured stone veneers is engineered to meet or exceed specifications for all major code approvals. Manufacturers who offer "just like" or a so-called "equivalent" to Cultured Stone manufactured stone veneer products should be asked to document claims of test results and research reports.

Complete copies of these Cultured Stone manufactured stone veneer building code evaluation reports, research reports, approvals and listings are available upon request:

- ICC-ES ESR-1364
- Tested and listed by Underwriters Laboratories, Inc.
- Texas Department of Insurance– Product Evaluation Report, EC-21

- Florida Product Approval FL15047
- HUD Materials Release No. 1316
- BMEC Authorization

Note: Local building codes may vary; always check with your local building code authority prior to installation.

Results of tests conducted by an independent testing agency confirm that the Cultured Stone collection of manufactured stone veneers conforms to or exceeds the following test requirements as specified in ICC Evaluation Service Acceptance Criteria 51 for Precast Stone Veneer:

MATERIALS

CEMENT	ASTM C 150 or ACI 318 Section 3.2.1	
SAND	ASTM C 144 or C 33	
AGGREGATE	ASTM C 33 or C 330 (except gradation), C 331	
TESTING		
SHEAR BOND TEST (ADHESION)	Tested in accordance with ASTM C 482	> 50 psi
WATER ABSORPTION	Tested in accordance with UBC 15-5	9%–22% depending on texture
FREEZE/THAW CHARACTERISTICS	Testing procedures follow those outlined in ASTM C 67	< 3% mass loss
COMPRESSIVE STRENGTH	Tested in accordance with ASTM C 39	> 1800 psi @ 28 days
UNIT WEIGHT	Density is determined in accordance with ASTM C 567	< 15 lbs. per square foot
TENSILE STRENGTH	Tested in accordance with ASTM C 190	Reported
FLEXURAL STRENGTH	Tested in accordance with ASTM C 348	Reported
THERMAL PROPERTIES	Tested in accordance with ASTM C 177-71	R-value is .620 based on a 1.75" thick sample. Average thickness may vary on different Cultured Stone veneer products, and the R-value will vary accordingly.
NONCOMBUSTIBLE	Tested and listed by Underwriters Laboratories, Inc.	Cultured Stone brand products showed zero flame spread and zero smoke development.

50-YEAR TRANSFERABLE LIMITED WARRANTY

LIMITATIONS ON THE TRANSFERABILITY OF THIS WARRANTY ARE SET FORTH HEREIN

INTRODUCTION

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

WHO IS COVERED & FOR HOW LONG

Subject to the following terms, Boral warrants its Products for fifty (50) years to the original 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 in compliance with the International Code Council Acceptance Criteria 51 ("ICC AC 51) for Precast Stone Veneer; however, Products that are accessories and Products that are not wall veneer shall not meet the weight, density and dimension parameters of ICC AC 51.

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 discoloration due to airborne stains, pollutants, algae, fungi, lichens or cyanobacteria, exposure to harmful chemicals, external heat sources (including, but not limited to, a barbecue grill, fire, or reflection from windows and doors), acts of God, or other such occurrences beyond the control of Boral;
- 3. Product or 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 discoloration 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 colored surface to oxidize, fade, or become soiled or stained over time.

Boral strives to accurately reproduce the colors of its masonry stone veneer Products in its marketing literature and sample boards. The Product colors that you see are as accurate as technology allows. Boral makes no warranty with respect to any real or perceived color 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 color selection for your home or building.

WHAT IS YOUR REMEDY

If the Products are not in conformance with our Warranty, Boral will, in its sole discretion, either (i) repair or replace the nonconforming Products at no charge to you, or (ii) refund the price paid for the Products. 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 original warranty period.

SUBMITTING A WARRANTY CLAIM

To obtain performance under this Warranty, the Purchaser(s) shall notify Boral of the claim promptly following its discovery, and shall submit with such notification proof of date of 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 1-800-255-1727. 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 1-800-255-1727.

REPLACEMENT & 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 colors, without notice to the Purchaser(s) and shall not be liable to the Purchaser(s) 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 color 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.



SCULTURED STONE. Certificate of Quality

DATE:	
ATTN	
PROJECT TITLE	
PROJECT CITY+STATE	
PRODUCT/STONE COLOR+PROFILE (1):	
PRODUCT/STONE COLOR+PROFILE (2);	
ARCHITECT:	
GENERAL CONTRACTOR:	
MASONRY CONTRACTOR:	

This document certifies that the product manufactured by Cultured Stone, for the project listed above, meets the Acceptance Criteria AC-51 for Precast Stone Veneer established by ICC Evaluation Service and as specified in the Evaluation Report No. ESR-1364.

Sincerely,

Rick Garaglian•

Rick Garagliano

Director of Quality, Cultured Stone

Installation Guide and Detailing Options for Compliance with ASTM C1780

For Adhered Manufactured Stone Veneer 5th Edition, 4th Printing



Figure 3. Wall Assembly Transition

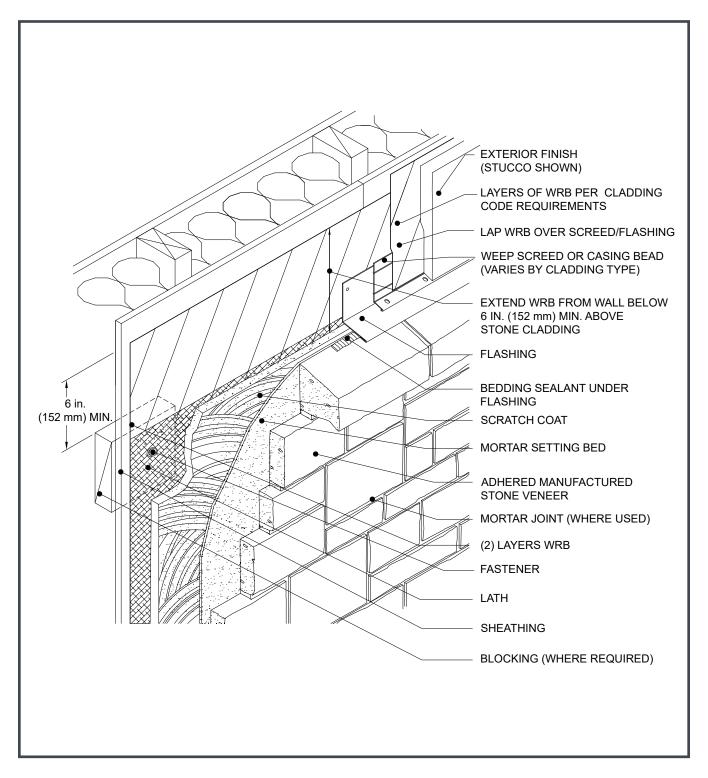


















Figure 4a. Typical Frame Wall Section

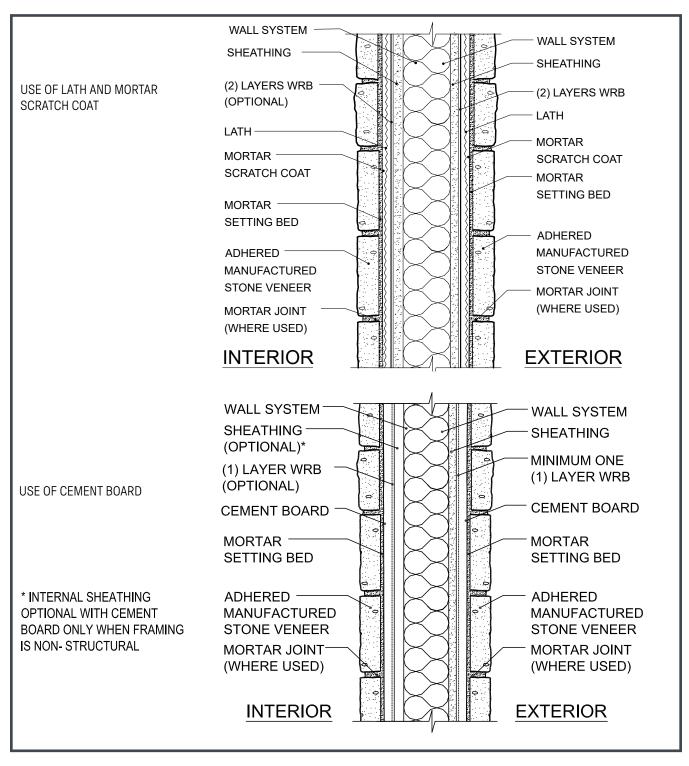
















Figure 4b. Typical Wall Frame Section with Continuous Rigid Insulation

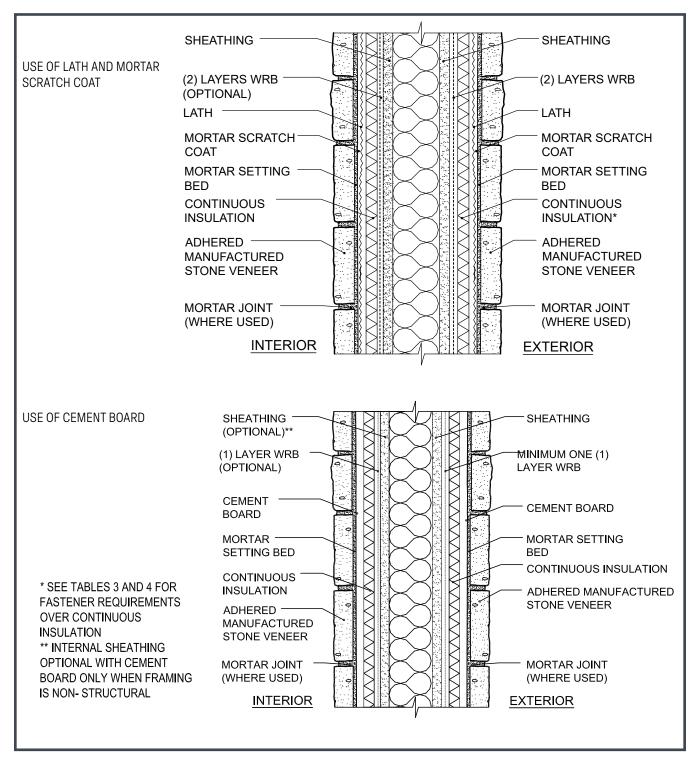


















Figure 5a. Foundation Wall Base

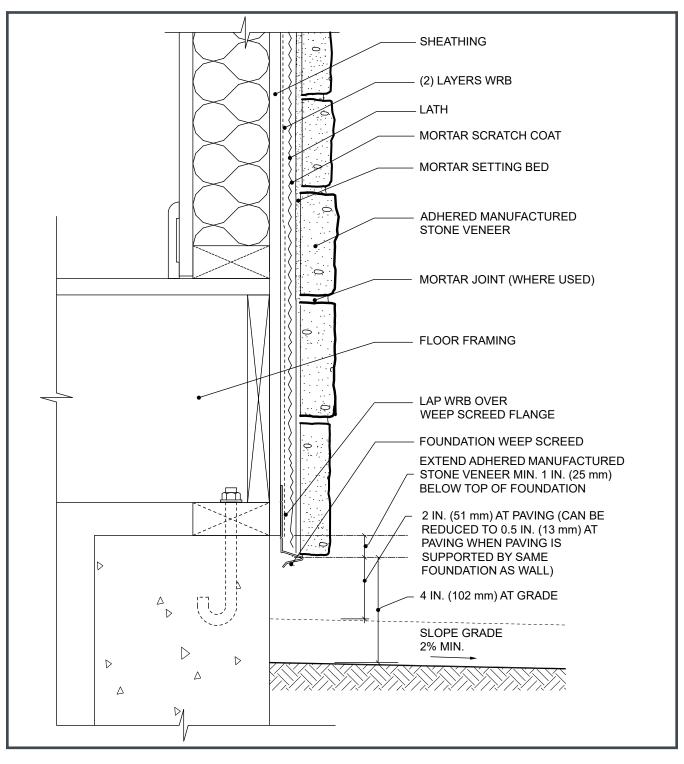
















Figure 5b. Foundation Wall Base Over Continuous Rigid Insulation

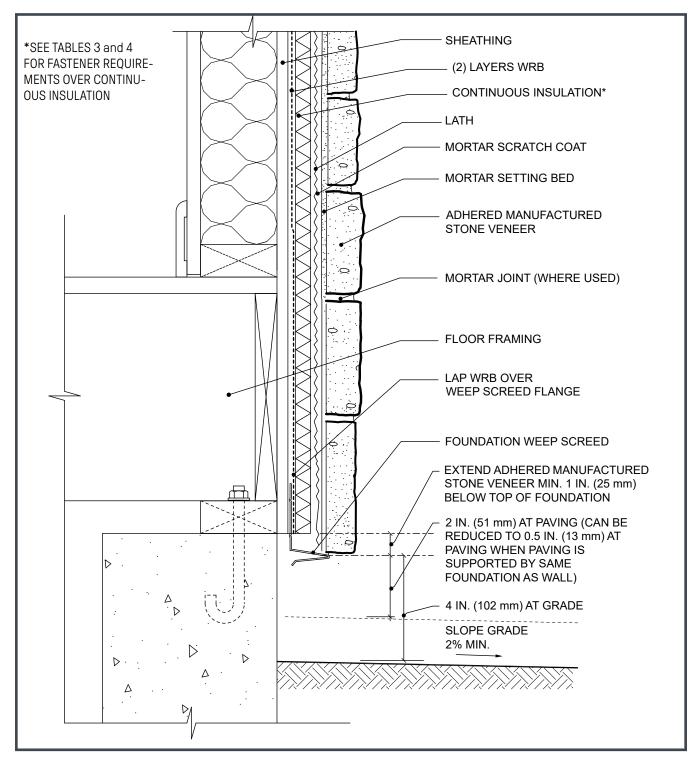


















Figure 6. Foundation Wall Base - AMSV Overlapping Foundation

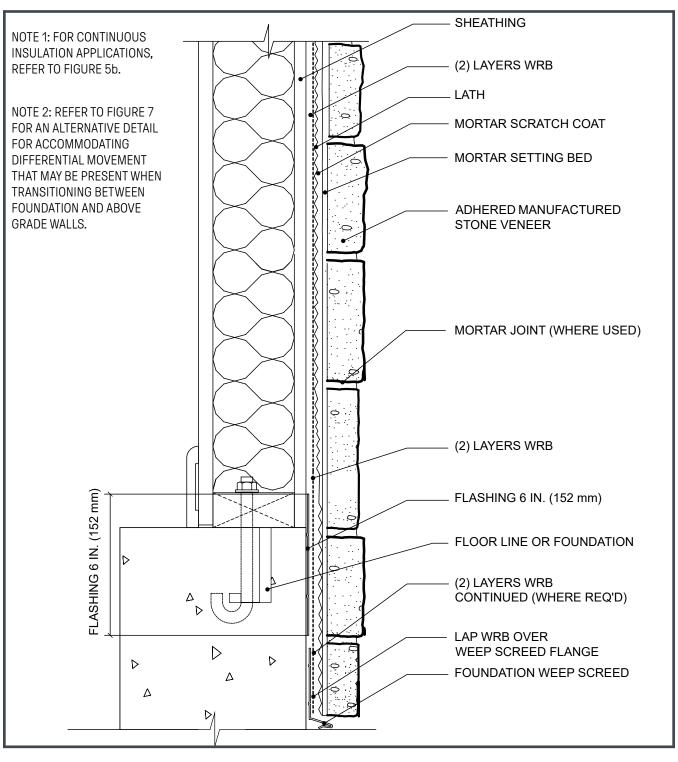
















Figure 7. Foundation Wall - Transition to AMSV Continuing Down Foundation

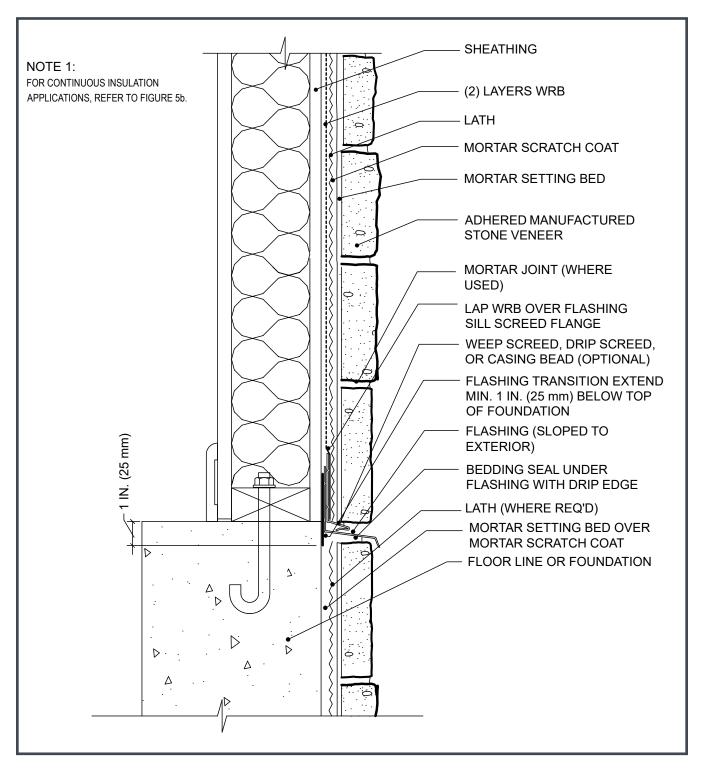










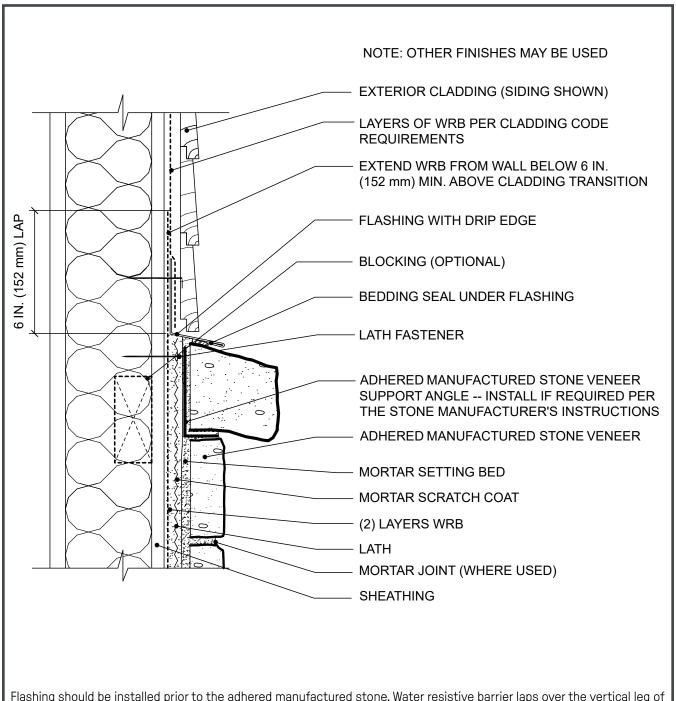








Figure 8a. Cladding Transition



Flashing should be installed prior to the adhered manufactured stone. Water resistive barrier laps over the vertical leg of flashing for positive drainage. Optional support angle shown. Verify installation requirements with adhered manufactured stone veneer manufacturer.







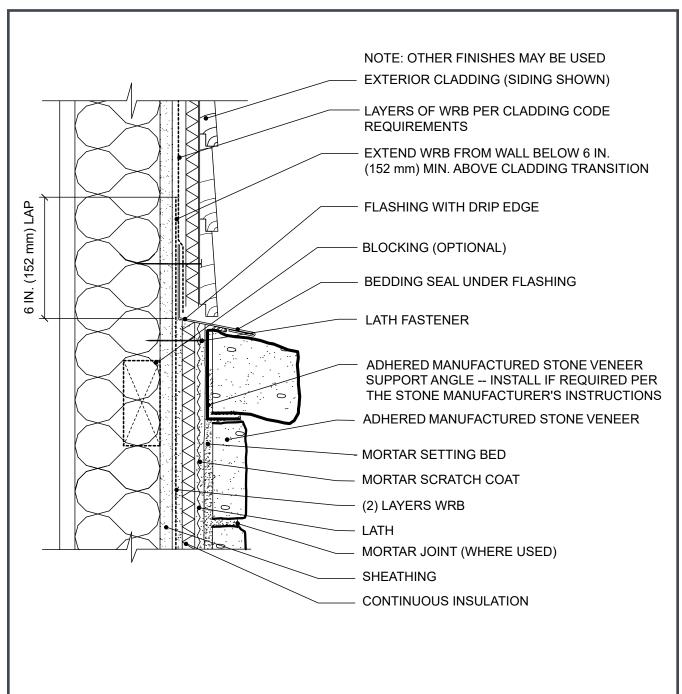








Figure 8b. Cladding Transition Over Continuous Rigid Insulation



Flashing should be installed prior to the adhered manufactured stone. Water resistive barrier laps over the vertical leg of flashing for positive drainage. Optional support angle shown. Verify installation requirements with adhered manufactured stone veneer manufacturer.









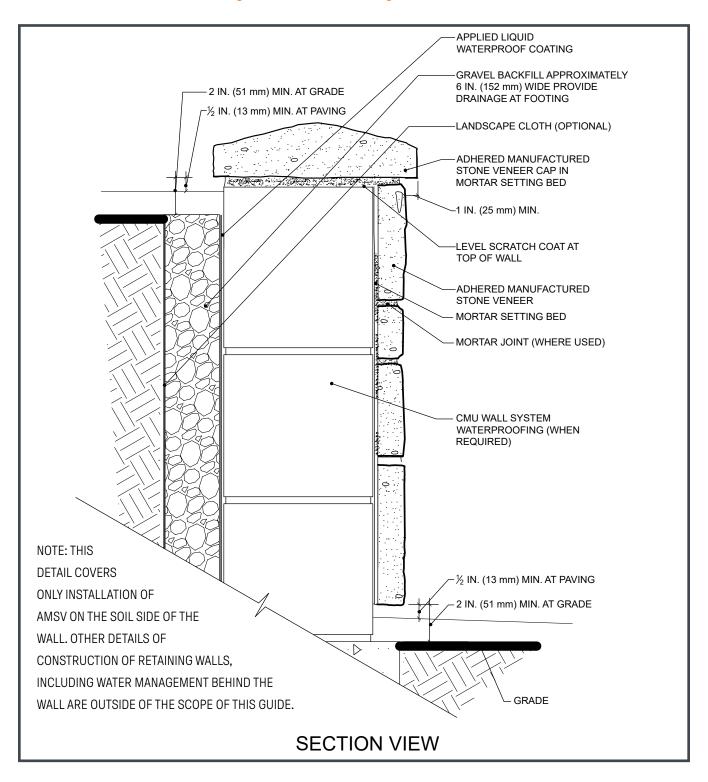








Figure 39. Retaining Wall (CMU)





















MANUFACTURED STONE VENEER

For additional information or questions on the items contained here, please contact NCMA at: (703) 713-1900

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SECTION 04 73 00 MANUFACTURED STONE VENEER

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Cultured Stone Veneer.
- B. Architectural Trim Stone.

1.2 RELATED SECTIONS

- A. Section 04 20 00 Unit Masonry.
- B. Section 06 10 00 Rough Carpentry.
- C. Section 05 40 00 Cold-Formed Metal Framing.
- D. Section 07 27 00 Air Barriers.
- E. Section 07 28 00 Underlayments.*
- F. Section 07 62 00 Sheet Metal Flashing & Trim.
- G. Section 07 90 00 Joint Protection.
- H. Section 09 24 13 Adobe Finish.
- I. Section 10 30 00 Fireplaces and Stoves.

1.3 REFERENCES

- A. ASTM C 39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- B. ASTM C 67 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
- C. ASTM C 177 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
- D. ASTM C 192 Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory.
- E. ASTM C 482 Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement.
- F. ASTM C 1670 Standard Specification for Adhered Manufactured Stone Masonry Veneer Units.
- G. ASTM C 1780 Standard Practice for Installation Methods for Adhered Manufactured Stone Masonry Veneer
- H. UL 723 Standard for Safety for Surface Burning Characteristics of Building Materials.
- I. ICC ES AC 51 Acceptance Criteria for Manufactured Stone Veneer
- J. National Concrete Masonry Association (NCMA): Installation Guide for Adhered Manufactured Stone Veneer
- K. US Department of Housing and Urban Development (HUD): Material Release Numbers 910Fs
- L. LEED: US Green Building Council's Leadership in Energy and Environmental Design Green Building Rating System.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Building Code Compliance:
 - 1. International Code Council (ICC):
 - a. ES Report: ICC ESR 1364
 - b. UBC Standard No. 14-1, Kraft Waterproof Building Paper.
 - 2. Florida Product Approval Number FL15047
 - 3. Texas Department of Insurance: Product Evaluation-EC 21
 - 4. US Department of Housing & Urban Development (HUD): MR 1316.
 - 5. Tested by Underwriters Laboratories, Inc.
- B. Average Recycled Content of 58 percent validated by 3rd party analysis.
- C. Backup Wall System and installation method for manufactured stone veneer shall meet the requirements of ASTM C 1780–Standard Practice for Installation Methods for Adhered Manufactured Stone Masonry Veneer.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation standards and methods.
- C. Shop Drawings: Submit drawings depicting proper installation and flashing techniques. Coordinate locations with those found on the Drawings.
- D. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
 - LEED v 4, Product Data for Credit MR 4: For products having recycled content documentation; indicating percentages by weight of post-consumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
 - LEED v 4, Product Data for Credit MR 4: For products having recycled content documentation; indicating percentages by weight of post-consumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
 - LEED v 4, Product Data for Credit EQ 2: For products and materials to comply with low emittance standards, provide documentation substantiating that products comply with requisite low emittance standards.
 - 4. LEED v 4, Product Data for Credit for location and distance from Project of material manufacturer and point of extraction, harvest or recovery for main raw material.
- E. Selection Samples: For each finish product specified, two complete sets of color sample representing manufacturer's full range of available colors and textures.
- F. Verification Samples: For each finish product specified, two samples, minimum size 8 inches (203 mm) square, representing actual product, color, and texture.
- G. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- H. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for cleaning and repair of components.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer who is a current member of National Concrete Masonry Association (NCMA) with a minimum of 5 years documented experience manufacturing and marketing all Manufactured Stone products of the type specified in this section.
- B. Installer Qualifications: Company with documented experience in installation of manufactured masonry of the type specified including at least five projects within a 400 mile (650km) radius of the Project.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish panel of size and location designated by Architect.
 - 2. Minimum size 3 foot by 3 foot and showing transition to adjacent materials anticipated.
 - 3. Do not proceed with remaining work until workmanship, color, texture and pattern are approved by Architect.
 - 4. Refinish mock-up area as required to produce acceptable work.

D. Pre-Installation Conference:

- 1. Contractor shall arrange a meeting not less than thirty days prior to starting stone veneer work.
- Attendance: Contractor, Architect/Owner Representative, veneer stone installer and manufacturer's representative.

1.7 DELIVERY, STORAGE & HANDLING

- A. Store and handle products in conformance with the manufacturer's requirements and recommendations.
- B. Store products off the ground on pallets in manufacturer's unopened packaging until ready for installation.
- C. Protect materials from precipitation and freezing temperatures. Product with visible frozen moisture should not be installed.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Cold weather installations: Maintain materials and ambient temperature at minimum 40 degrees F (4 degrees C) prior to, during, and 48 hours after installation.
- C. Hot weather installations: Mist water on the scratch coated surface and the backs of the masonry veneer for installations that exceed 90 degrees (32 degrees C).

1.9 WARRANTY

A. Provide manufacturers 50-year limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Cultured Stone® by Boral,® which is located at: 200 Mansell Court E. Suite 305; Roswell, GA 30076; Toll Free Tel: 800-255-1727; Email to request info: boralstoneanswers@boral.com; Web: www.culturedstone.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 Product Requirements.

2.2 MANUFACTURED STONE VENEER-GENERAL

- A. Manufactured Stone Veneer Performance Requirements: Conforming to ASTM C 1670 and as follows:
 - 1. Compressive Strength: Not less than 1800 psi (12.4 MPa) average for 5 specimens and not less than 2100 psi (14.4 MPa) for individual specimen when tested in accordance with ASTM C 39 & ASTM C 192.
 - Bond Between Manufactured Masonry Unit, Mortar and Backing: Not less than 50 psi (345 kPa) when tested in accordance with ASTM C 482 using Type S mortar.
 - Thermal Resistance: R-value of not less than 0.355 per inch (25.4 mm) of thickness when tested in accordance with ASTM C 177.
 - Freeze/Thaw: No disintegration and less than 3 percent weight loss when tested in accordance with ASTM C 67.
 - 5. Water Absorption: Tested in accordance with UBC 15-5 9-22% depending on density value.
 - 6. Unit Weight: Not more than 15 psf (73 kg/m2) saturated.
 - Surface Burning Characteristics: Not more than the following when tested in accordance with UL 723:
 - a. Flamespread: 25.
 - b. Smoke Development: 450.
 - 8. UV Stable Mineral oxide pigments.

B. Certifications:

- 1. ICC ES AC 51 Acceptance Criteria for Manufactured Stone Veneer
- 2. ICC Evaluation Service Evaluation Report ESR 1364 & ASTM C 1670.
- 3. HUD Material Release Number 1316c
- 4. UL Tested for Surface Burning Characteristics
- 5. Texas Department of Insurance Product Evaluation EC-21
- 6. Florida Product Approval Number FL15047

2.3 CULTURED STONE VENEER

- A. Cultured Stone Ancient Villa Ledgestone: Includes matching corner pieces.
 - 1. Height: Variable from 2 inches to 12 inches (50 mm to 304 mm).
 - Lengths: Variable from 5 inches to 16 inches (127 mm to 406 mm).
 - 3. Color: Chianti.
 - 4. Color: Palisades.
 - 5. Color: Sevilla.
 - Walls: Provide with Single Color and Texture throughout.
 - 7. Walls: Provide with Blended Color/Texture:

a.	Percent:	_,
	Color:	
b.	Percent:	_,
	Color:	

- B. Cultured Stone Cast-Fit: Includes matching corner pieces.
 - Dimensions: 8 inches by 16 inches or 12 inches by 24 inches (200 mm by 400 mm or 305 mm by 610 mm).
 - 2. Color: Carbon.
 - 3. Color: French Gray.
 - 4. Color: Parchment.
- C. Cultured Stone Cobblefield: Includes matching corner pieces.
 - 1. Heights: Variable from 2 inches to 8 inches (50 mm to 200 mm).
 - 2. Lengths: Variable from 4 inches to 20 inches (100 mm to 500 mm).
 - 3. Color: Chardonnay.
 - 4. Color: Desert Blend.
 - 5. Color: Echo Ridge.
 - 6. Color: Gray.
 - 7. Color: San Francisco.
 - 8. Color: Texas Cream.
 - Walls: Provide with Single Color and Texture throughout.
 - Walls: Provide with Blended Color / Texture:

a.	Percent:	_,
	Color:	
b.	Percent:	_,
	Color:	

- D. Cultured Stone Coral Stone: Includes matching corner pieces.
 - 1. Pattern: Random Ashlar or Repeating.
 - Stone sizes: Variable sizes in increments of 4 inches from 4 inches by 4 inches to 12 inches by 16 inches (100 mm from 100 mm by 100 mm to 204 mm to 304 mm).
 - 3. Corner sizes: 4 inch, 8 inch and 12 inch heights with 4 inch and 8 inch lengths.
 - 4. Average thickness: 1 1/8 inches and sized for a 1/2 inches (12.5 mm) mortar joint.
 - 5. Color: Fossil Reef.
 - Walls: Provide with Single Color and Texture throughout.
 - 7. Walls: Provide with Blended Color/Texture:

a.	Percent:	,	
	Color:		
b.	Percent:	,	
	Color:		

- E. Cultured Stone Country Ledgestone: Includes matching corner pieces.
 - 1. Heights: Variable from 11/2 inches to 6 1/2 inches (38 mm to 162 mm).
 - 2. Lengths: Variable from 4 3/4 inches to 22 inches (120 mm to 560 mm).
 - 3. Color: Ashfall.
 - 4. Color: Aspen.
 - 5. Color: Black Rundle.
 - 6. Color: Bucks County.
 - 7. Color: Caramel.
 - 8. Color: Chardonnay.
 - 9. Color: Echo Ridge.
 - 10. Color: Eucalyptus.
 - 11. Color: Grand Mesa.
 - 12. Color: Gunnison
 - 13. Color: Hudson Bay.
 - 14. Color: Mojave.
 - 15. Color: Red Rock.
 - 16. Color: Sevilla.
 - 17. Color: Skyline.
 - 18. Color: Umber Creek.
 - 19. Color: Wheaton.
 - 20. Color: White Oak.
 - 21. Color: Wolf Creek.
 - 22. Walls: Provide with Single Color and Texture throughout.
 - 23. Walls: Provide with Blended Color/Texture:

a.	Percent:	,
	Color:	
b.	Percent:	
	Color:	

F.		Itured Brick Veneer Handmade Brick: cludes matching corner pieces.	l.	-	ultured Stone Dressed Fieldstone: cludes matching corner pieces.
		Height: Variable from 2 3/4 inches (70 mm)		1.	Sizes: Variable from 2 1/2 inches to
		Lengths: Variable from 8 3/16 inches			22 inches (63 mm to 560 mm).
		(208 mm)		2.	Color: Aspen.
	3.	Color: Carbon.		3.	Color: Bucks County.
	4.	Color: Canvas.		4.	Color: Chardonnay.
	5.	Color: Moroccan Sand.		5.	Color: Echo Ridge.
	6.	Color: Titanium.		6.	Color: Sevilla.
	7.	Walls: Provide with Single Color and		7.	Color: Wolf Creek.
		Texture throughout. Walls: Provide with Blended Color/Texture:		8.	Walls: Provide with Single Color and Texture throughout.
	Ö.			9.	Walls: Provide with Blended Color/Texture:
		a. Percent:, Color:			a. Percent:,
					Color:
		b. Percent:,			
		Color:			b. Percent:,
G.		Itured Brick Veneer Used Brick:			Color:
	Includes matching corner pieces. 1. Height: Variable from 2 1/2 inches		J.		ultured Stone Drystack Ledgestone Panel: cludes matching corner pieces.
		(63 mm).		1.	Heights: 6 inches (152 mm).
	2. Lengths: Variable from 8 inches (200 mm).			2.	Lengths: Variable from 20 inches to 24 inches (508 mm to 610 mm).
		Color: Antique Red.		3.	Color: Melrose
		Color: High Desert.		4.	Color: High Plains
	5.	Walls: Provide with Single Color and Texture throughout.		5.	Color: Rubicon
	6	Walls: Provide with Blended Color/Texture:		6.	Walls: Provide with Single Color and
	0.				Texture throughout.
		a. Percent:,		7.	Walls: Provide with Blended Color/Texture:
		Color:			a. Percent:,
		b. Percent:,			Color:
		Color:			b. Percent:,
H.		Itured Stone Del Mare Ledgestone:			Color:
	 Includes matching corner pieces. Height: Variable from 1 inch to 9 1/4 inches (25 mm to 235 mm). 		K.	Сι	ultured Stone European Castle Stone:
				Ind	cludes matching corner pieces.
	2	Lengths: Variable from 4 1/2 inches to		1.	Heights: Variable from 2 inches to
	_	16 inches (114 mm to 406 mm).			12 inches (50 mm to 300 mm).
	3.			2.	Lengths: Variable from 2 inches to
	4.	Color: Burnt Ochre.		2	16 inches (50 mm to 400 mm).
	5.	Color: Palermo.			Color: Chardenney
	6.	Walls: Provide with Single Color and			Color: Chardonnay.
		Texture throughout.		Э.	Walls: Provide with Single Color and Texture throughout.
	7.	Walls: Provide with Blended Color/Texture:		6.	Walls: Provide with Blended Color/Texture:
		a. Percent:,			a. Percent:,
		Color:			Color:
		b. Percent:,			b. Percent:,
		Color:			Color:

2. Lengths: Variable from 4 inches to 16 inches (100 mm to 400 mm).

3. Color: Chardonnay.4. Color: Echo Ridge.

L. (Cultured Stone Hewn Stone:	6. Color: Tudor.
I	Includes matching corner pieces.	7. Walls: Provide with Single Color and
	1. Size: Provide sizes required to match	Texture throughout.
	customized pattern selected by the	8. Walls: Provide with Blended Color/Texture:
	Architect from the following.	a. Percent:,
	a. 3 inch by 8 inch	Color:
	b. 3 inch by 14 inch	b. Percent:,
	c. 5 inch by 14 inch	
	d. 5 inch by 22 inch	Color:
	e. 8 inch by 22 inch	O. Cultured Stone Pro-Fit Ledgestone:
	2. Corner sizes: 3 inch and 7 inch heights	Includes matching corner pieces.
	with 3 inch and 8 inch lengths.	 Heights: 4 inches (102 mm) Lengths: Variable from 8 inches to
	3. Average thickness: 1 1/2 inches (38 mm).	20 inches (200 mm to 500 mm).
	4. Color: Arctic.	3. Color: Gray.
	5. Color: Foundation.	4. Color: Mojave.
	6. Color: Span.	5. Color: Platinum.
	7. Color: Talus.	6. Color: Shale.
	Walls: Provide with Single Color and Texture throughout.	7. Color: Southwest.
	9. Walls: Provide with Blended Color/Texture:	Walls: Provide with Single Color and
		Texture throughout.
	a. Percent:,	9. Walls: Provide with Blended Color/Texture:
	Color:	a. Percent:,
	b. Percent:,	Color:
	Color:	b. Percent:,
	Cultured Stone Limestone:	
	Includes matching corner pieces.	Color:
	 Heights: Variable from 1 1/4 inches to 6 inches (30 mm to 150 mm). 	 P. Cultured Stone Pro-Fit Alpine Ledgestone: Includes matching corner pieces.
:	2. Lengths: Variable from 4 inches to	1. Height: 4 inches (102 mm).
	16 3/4 inches (100 mm to 420 mm).	2. Lengths: Variable from 8 inches to 20
;	3. Color: Bucks County.	inches (200 mm to 500 mm).
	4. Color: Chardonnay.	3. Color: Black Mountain.
	5. Color: Golden Buckeye,	4. Color: Black Rundle.
(6. Color: Suede.	5. Color: Chardonnay.
	7. Walls: Provide with Single Color and	6. Color: Dark Ridge.
	Texture throughout.	7. Color: Echo Ridge.
	8. Walls: Provide with Blended Color/Texture:	8. Color: Pheasant.
	a. Percent:,	9. Color: Summit Peak.
	Color:	10. Color: Umber Creek.
	b. Percent:,	11. Color: Winterhaven.
	Color:	12. Walls: Provide with Single Color and
N. (Cultured Stone Old Country Fieldstone:	Texture throughout.
I	Includes matching corner pieces.	13. Walls: Provide with Blended Color/Texture:
	1. Heights: Variable from 1 1/2 inches to	a. Percent:,
	10 inches (38 mm to 250 mm).	Color:

b. Percent:_____,

Color:______.

5. Walls: Provide with Single Color and Texture throughout.

6. Walls: Provide with Blended Color/

Texture:

	ultured Stone Pro-Fit Modera Ledgestone: cludes matching corner pieces.		a.	Percent:
	Heights: 4 inches (101.6 mm)		L	Color:
	Lengths: Variable from 8 inches to 20		D.	Percent:,
۷.	inches (203 mm to 500 mm).			Color:
3.	Corner Returns: 4 inches, or 8 inches, or 12 inches			ed Stone Sculpted Ashlar: Includes corner pieces.
4.	Thickness: Variable from 1/2 inch to 1 3/4 inches	1.		eights: 2 1/4 inches to 7.3/4 inches 7.15 mm to 192.28 mm)
5.	Color: Carbon.	2.		engths: Variable from 5 1/2 inches to 20 2 inches (140 mm to 521 mm).
6.	Color: Intaglio.	3.	Co	orner Returns: 4 inches, or 7 inches, or
7.	Color: Vellum.			inches
8.	Walls: Provide with Single Color and	4.	Th	nickness: Variable from 1 inch to 2 inches
	Texture throughout.	5.	Co	olor: Echo Ridge.
9.	Walls: Provide with Blended Color/Texture:	6.	Co	olor: Ferrous.
	a. Percent:,	7.	Сс	olor: Grouse.
	Color:	8.	Сс	olor: Silver Shore.
	b. Percent:,	9.	W	alls: Provide with Single Color and
	Color:		Te	exture throughout.
	ltured Stone Pro-Fit Terrain Ledgestone:	10.	W	alls: Provide with Blended Color/Texture:
Includ	des matching corner pieces.		a.	Percent:
1.	Heights: 4 inches (101.6 mm)			Color:
2.	Lengths: Variable from 8 inches to 20 inches (203 mm to 500 mm).		b.	Percent:,
3	Corner Returns: 4 inches, or 8 inches, or			Color:
0.	12 inches	U. Cu	ltur	red Stone Southern Ledgestone:
4.	Thickness: Variable from 1/2 inch to 1 3/4	Includ	les	matching corner pieces.
	inches	1.		eights: Variable from 1/2 inch to 6 inches
5.	Color: Arcadia.			3 mm to 150 mm).
6.	Color: Arctic.	2.		engths: Variable from 4 inches to inches (100 mm to 500 mm).
	Color: Ethos.	3		plor: Aspen.
	Color: Trek.			olor: Bucks County.
9.	Walls: Provide with Single Color and			olor: Chardonnay.
4.0	Texture throughout.			•
10.	Walls: Provide with Blended Color/Texture:			olor: Echo Ridge.
	a. Percent:,			olor: Fog.
	Color:			olor: Gray.
	b. Percent:,			plor: Rustic.
	Color:			blor: Wolf Creek.
	Itured Stone River Rock: Includes ning corner pieces.	11.		alls: Provide with Single Color and exture throughout.
1.	Sizes: Variable from 2 inches to 14 inches	12.	W	alls: Provide with Blended Color/Texture:
	(50 mm to 350 mm).		a.	Percent:,
2.	Color: Earth Blend.			Color:
3.	Color: Lake Tahoe.		b.	Percent:,
4.	Color: Lakeshore.			Color:

- V. Cultured Stone Stream Stone: Includes matching corner pieces.
 - Sizes: Variable from 2 inches to 12 inches (50 mm to 300 mm).
 - Skimmer Stones: Smaller fill stones, average 2 1/2 inches (63 mm) tall by 3 1/2 inches to 8 inches (89 mm to 200 mm).
 - 3. Color: Spring.
 - 4. Color: Summer.
 - Walls: Provide with Single Color and Texture throughout.
 - 6. Walls: Provide with Blended Color/Texture:

a.	Percent:	,
	Color:	
b.	Percent:	,
	Color:	

- W. Cultured Stone Southern Ledgestone: Includes matching corner pieces.
 - Heights: Variable from 1/2 inch to 6 inches (13 mm to 150 mm).
 - 2. Lengths: Variable from 4 inches to 20 inches (100 mm to 500 mm).
 - 3. Color: Aspen.
 - 4. Color: Bucks County.
 - 5. Color: Chardonnay.
 - 6. Color: Echo Ridge.
 - 7. Color: Fog.
 - 8. Color: Gray.
 - 9. Color: Rustic.
 - 10. Color: Wolf Creek.
 - 11. Walls: Provide with Single Color and Texture throughout.
 - 12. Walls: Provide with Blended Color/Texture:

a.	Percent:	_,	
	Color:		
b.	Percent:	_,	
	Color:		

- X. Cultured Stone Textured Cast-Fit Includes matching corner pieces.
 - 1. Heights: 11 5/8 inches (304 mm).
 - 2. Lengths: 23 5/8 inches (609 mm)
 - 3. Color: Stanhope.
 - 4. Walls: Provide with Single Color and Texture throughout.
 - 5. Walls: Provide with Blended Color/Texture:

a.	Percent:	_,
	Color:	
b.	Percent:	_,
	Color:	

2.4 ARCHITECTURAL TRIM STONES

A. Pier Capstones:

- 1. Surface Texture: Flagstone.
- Nominal Size: 24 inches by 24 inches (610 mm by 610 mm).
- Nominal Size: 32 inches by 32 inches (813 mm by 813 mm).
- 4. Color: Champagne.
- 5. Color: Gray.
- 6. Color: Nightfall.
- 7. Color: Sable.
- 8. Color: Taupe.

B. Flat Wall Capstones:

- Nominal Size: 10 inches by 20 inches (254 mm by 508 mm).
- 2. Nominal Size: 12 inches by 20 inches (305 mm by 508 mm).
- 3. Color: Champagne.
- 4. Color: Gray.
- 5. Color: Nightfall.
- 6. Color: Sable.
- 7. Color: Taupe.

C. Capstones/Peaked Flagstone Texture:

- Nominal Size: 12 inches by 20 inches (305 mm by 508)
- 2. Nominal Size: 16 inches by 20 inches (404 mm by 508)
- 3. Color: Champagne.
- 4. Color: Gray.
- 5. Color: Nightfall.
- 6. Color: Sable.
- 7. Color: Taupe.

D. Hearthstones:

- Nominal Size: 19 inches by 20 inches (483 mm by 508 mm).
- 2. Color: Blond.
- 3. Color: Chardonnay.
- 4. Color: Cream.
- 5. Color: Marsh.
- 6. Color: Gray.
- 7. Color: Nightfall.
- 8. Color: Sable.

E. Trimstones:

 Nominal Size: 6 inches by 8 inches by 1 7/8 inches (152 mm by 203 mm by 48 mm).

- 2. Color: Champagne.
- 3. Color: Gray.
- 4. Color: Nightfall.
- 5. Color: Sable.
- 6. Color: Taupe.

F. Keystones:

- Nominal Size: 8 1/2 inches by 10 inches by 1 7/8 inches (216 mm by 254 mm by 48 mm).
- 2. Color: Champagne.
- 3. Color: Gray.
- 4. Color: Nightfall.
- 5. Color: Sable.
- 6. Color: Taupe.

G. Tuscan Lintels:

- Nominal Size: 22 inches by 6 inches by 2 5/8 inches (559 mm by 152 mm by 67 mm).
- 2. Color: Champagne.
- 3. Color: Gray.
- 4. Color: Nightfall.
- 5. Color: Sable.
- 6. Color: Taupe.

H. Watertable/Sill Rock Face Texture:

- Nominal Size: 2 inches front, 2 1/2 inches back, by 3 inches by 18 inches (51 mm front, 64 mm back by 76 mm by 455 mm).
- 2. Color: Champagne.
- 3. Color: Gray.
- 4. Color: Nightfall.
- 5. Color: Sable.
- 6. Color: Taupe.
- 7. Provide sloped top surface & drip edge.

I. Watertable/Sill Cast-Fit Texture:

- Nominal Size: 2 1/2 inches by 20 inches (63 mm by 500 mm).
- 2. Color: Carbon
- 3. Color: French Gray
- 4. Color: Intaglio
- 5. Color: Vellum
- 6. Color: Parchment

J. Light Fixture Stones:

- Nominal Size: 8 inches by 10 inches by 1 7/8 inches (203 mm by 254 mm by 47 mm).
- Nominal Size: 9 1/2 inches by 15 inches by 1 7/8 inches (242 mm by 381 mm by 47 mm).
- 3. Nominal Size: As shown on Contract Drawings.
- 4. Color: Gray.
- 5. Color: Nightfall.
- 6. Color: Sable.
- 7. Color: Taupe.
- Provide 4 inch by 1 1/2 inch (102 mm by 38 mm) UL approved metal octagon extension box.

K. Receptacle Stones:

- Single Receptacle Nominal Size: 6 inches by 8 inches by 1 7/8 inches (152 mm by 203 mm by 48mm)
- 2. Color: Gray.
- 3. Color: Nightfall.
- 4. Color: Sable.
- 5. Color: Taupe.
- Electrical Box: 4 inch by 1 1/2 inch
 (102 mm by 38 mm) UL approved metal
 octagon extension box supplied by others.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared in conformance with ASTM C 1780 for the backup wall system indicated on the Drawings.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install manufactured stone masonry veneer in accordance with NCMA Installation Guide for Adhered Manufactured Stone Veneer, ASTM C 1780 and applicable Codes.
- C. Install/Apply Related Materials in accordance with type of substrate and manufactured stone veneer manufacture's installation instructions.
- D. General:
 - 1. Walls: Provide with Single Color and Texture throughout.
 - 2. Walls: Provide with Blended Color / Texture specified.
 - 3. Special Shapes: Color to match stones specified.
 - a. Provide Stones manufactured specifically for installation at corners where located on the Drawings.
 - b. Install Quoins on corners as indicated on the Drawings.
 - 4. Mortar Joints
 - a. Style:
 - 1) Tight Fit joints.
 - 2) Standard 1/2 inch tooled
 - 3) Wide joint
 - 4) Wide Overgrout
 - b. Strike all grout joints flush.
 - c. Tool all grout joints.
 - d. Overgrout all grout joints.
 - 5. Stone Direction:
 - a. Random placement
 - b. Horizontal placement
 - c. Vertical placement
 - 6. Windows, Doors & Wall Openings:
 - a. Butt field stones to wall opening.
 - b. Install specified trim stones where located on the Contract Drawings.
 - 7. Sills: Install Sills where located on the Drawings.
 - 8. Caps: Install Capstones where located on the Drawings.
- E. Seal all joints at wall openings and penetrations with a sealant approved for use with masonry products.
- F. Flashing: Coordinate with Flashings specified in Section 07 62 00 Sheet Metal Flashing and Trim.
- G. Rainscreen: Coordinate with Rainscreens specified in Section 07 27 00 Air Barriers.

3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: Provide periodic site visits as requested by Architect. Report any discrepancies to the Contractor with copies to the Architect within 24 hours of each visit.

3.5 CLEANING

A. Clean manufactured masonry in accordance with manufacturer's installation instructions

3.6 PROTECTION

- A. Protect finished work from rain and work on either side of the wall during and for 48 hours following installation.
- B. Protect installed products until completion of project.
- C. Clean prior to project closeout.
- D. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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ICC-ES Evaluation Report

ESR-1364

Reissued October 2020

This report is subject to renewal October 2021.

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A Subsidiary of the International Code Council®

DIVISION: 04 00 00—MASONRY

Section: 04 71 00—Manufactured Brick Masonry Section: 04 73 00—Manufactured Stone Masonry

REPORT HOLDER:

BORAL STONE PRODUCTS, LLC

EVALUATION SUBJECT:

CULTURED STONE®. **CULTURED** BRICK® AND PROSTONE®

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2015 International Building Code® (IBC)
- 2015 International Residential Code® (IRC)
- Other Codes (see Section 8.0)

Properties evaluated:

- Interior finish and trim classification
- Thermal resistance
- Veneer strength and durability

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

- 2019 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

Cultured Stone®, Cultured Brick® and ProStone® are used as adhered, non-load-bearing exterior veneer or as an interior finish and trim on wood or light gage steel stud framing, concrete or masonry walls.

3.0 DESCRIPTION

Cultured Stone®, Cultured Brick® and ProStone® are precast concrete products made to resemble natural stone or brick. The stone veneer is made from cement, aggregate, water, admixtures and mineral oxide colors. The average saturated veneer weight does not exceed 15 pounds per square foot (73.2 kg/m²). See Table 1 for recognized styles.

The stone veneer has a Class A (Class I) finish rating in accordance with IBC Section 803.1.1, and complies with the flame-spread and smoke-development requirements of IRC Section R302.9. Additionally, the stone veneer has an R-value of 0.355 when tested at a thickness of 1.0 inch (25.4 mm) in accordance with ASTM C177.

The attributes of the stone veneer have been verified as conforming to the requirements of (i) 2016 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 Section 602.1.6 for termiteresistant 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 projectspecific 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 quidance.

4.0 INSTALLATION

4.1 General:

Installation of the stone veneer must comply with this report, the manufacturer's published installation instructions, and the applicable code. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. The stone veneer is installed over a lath and mortar scratch coat, or applied directly to concrete or masonry, as described in Sections 4.2 and 4.3 of this report, respectively.

4.2 Installation over a Lath and Mortar Scratch Coat **Over Framed Walls:**

The scratch coat must be installed over a water-resistive barrier complying with IBC Section 1405.10.1.1 or IRC Section R703.12.3, as applicable. Also, flashing must be installed as required by IBC Section 1405.10.1.2 or IRC Sections R703.4 and R703.12.2, as applicable, including a foundation weep screed installed at the bottom of the stone veneer. The foundation weep screed must comply with, and be installed in accordance with, the requirements for flashing at foundation shown in IBC Section 1405.10.1.2.1 or IRC Section R703.12.2, as applicable. The veneer must be installed with the clearances required by IBC Section 1405.10.1.3 or IRC Section R703.12.1, as applicable.

Lathing must comply with IBC Section 2510 (referenced from IBC Section 1405.10.1.4.1) or IRC Section R703.7.1 (referenced from IRC Section R703.12). The scratch



coat must be applied in accordance with IBC Section 1405.10.1.4.2, and the veneer units must be adhered to the scratch coat in accordance with IBC Section 1405.10.1.4.3. The mortar used to adhere the veneer units to the scratch coat must comply with IBC Section 2103.2.4.

4.3 Installation over Concrete and Masonry:

Installation over concrete and masonry must comply with IBC Section 1405.10.1.5. When adhering the veneer units directly to the concrete or masonry, the supporting surfaces must be prepared in accordance with IBC Section 2510.7, and the veneer units must be adhered to the supporting surface as described in Section 4.2. When adhering the veneer units to a lath and mortar scratch coat, the lathing and scratch coat preparation must comply with Section 4.2.

5.0 CONDITIONS OF USE

The Cultured Stone[®], Cultured Brick[®] and ProStone[®] veneers described in this report comply with, or are suitable alternatives 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 a conflict between the manufacturer's published installation instructions and this report, the most severe requirements govern.
- 5.2 Expansion or control joints used to limit the effect of differential movement of supports must be specified by the architect, designer or stone veneer manufacturer, in that order. Consideration must also be given to movement caused by temperature change, shrinkage, creep and deflection.
- 5.3 In jurisdictions adopting the IBC, the supporting wall framing must be designed to support the installed weight of the veneer system, including veneer, setting bed and scratch coat, as applicable. At wall openings, the supporting members must be designed to limit deflection to 1/600 of the span of the supporting members.
- 5.4 In jurisdictions adopting the IRC, where the seismic provisions of Section R301.2.2 apply, the average weight of the wall supporting the precast stone veneer, including the veneer system, must be determined. When this weight exceeds the applicable limits of IRC Section R301.2.2.2.1, an engineered design of the wall construction must be performed in accordance with IRC Section R301.1.3.
- **5.5** Cultured Stone[®], Cultured Brick[®] and ProStone[®] are manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Precast Stone Veneer (AC51), dated January 2016.
- **6.2** Reports of testing in accordance with ASTM C177.
- **6.3** Reports of testing in accordance with ASTM E84.

7.0 IDENTIFICATION

7.1 The Cultured Stone[®] described in this report is identified by the initials "C.S.V." cast into the side of each piece of stone.

The packaging of the Cultured Stone[®], Cultured Brick[®] and ProStone[®] products includes a stamp bearing the manufacturer's name, the product name, the manufacturing plant location, the product code and the evaluation report number (ESR-1364).

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

BORAL STONE PRODUCTS, LLC 200 MANSELL COURT EAST, SUITE 3 ROSWELL, GEORGIA 30076 (770) 645-4500 www.culturedstone.com

8.0 OTHER CODES

8.1 Evaluation Scope:

In addition to the codes referenced in Section 1.0, the products described in this report were evaluated for compliance with the following codes:

- 2012, 2009 and 2006 International Building Code® (IBC)
- 2012, 2009 and 2006 International Residential Code[®] (IRC)

The Cultured Stone[®], Cultured Brick[®] and ProStone[®] products described in this report comply with, or are suitable alternatives to what is specified in, the codes listed above, subject to the provisions of Sections 8.2 through 8.7.

8.2 Uses:

See Section 2.0.

8.3 Description:

See the first paragraph of Section 3.0 and the following: The precast veneer has a Class A finish rating in accordance with 2012 and 2009 IBC Section 8.3.1.1 (2006 IBC Section 803.1) and complies with the flame-spread and smoke-development requirements of 2012 and 2009 IRC Section R302.9 (2006 IRC Section R315). The stone veneer has an *R*-value of 0.355 when tested in accordance with ASTM C177 at an average thickness of 1.0 inches (25.4 mm).

8.4 Installation:

Cultured Stone[®], Cultured Brick[®] and ProStone[®] must be installed in accordance with the 2015 IBC and IRC, as described in Section 4.0.

8.5 Conditions of Use:

See Section 5.0.

8.6 Evidence Submitted:

See Section 6.0.

8.7 Identification:

See Section 7.0.

TABLE 1—RECOGNIZED STYLES

PRODUCT NAME	PATTERNS			
Cultured Stone®	Ancient Villa Ledgestone, Cast-Fit 12x24, Cast-Fit 8 x16, Cobblefield, Coral Stone, Country Ledgestone, Del Mare Ledgestone, Dressed Fieldstone, Drystack Ledgestone, European Castle Stone, Hewn Stone 308, Hewn Stone 314, Hewn Stone 514, Hewn Stone 522, Hewn Stone 822, Limestone, Old Country Fieldstone, Pro-Fit Alpine Ledgestone, Pro-Fit Ledgestone, Pro-Fit Modera Ledgestone, Pro-Fit Terrain Ledgestone, River Rock, Rockface, Southern Ledgestone, Split Face, Stream Stone			
Cultured Brick®	Handmade Brick, Used Brick			
ProStone ®	Aged Ledgestone, Carolina Collection Ledgestone, Easy Fit Savannah Ledgestone, Field Rubble, Fieldstone, Ledgestone, River Rock, Rough Ledge, Tuscan Cobble			



ICC-ES Evaluation Report

ESR-1364 CBC and CRC Supplement

Reissued October 2020

This report is subject to renewal October 2021.

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DIVISION: 04 00 00—MASONRY

Section: 04 71 00—Manufactured Brick Masonry Section: 04 73 00—Manufactured Stone Masonry

REPORT HOLDER:

BORAL STONE PRODUCTS, LLC

EVALUATION SUBJECT:

CULTURED STONE®, CULTURED BRICK® AND PROSTONE®

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Cultured Stone®, Cultured Brick® and ProStone® products, described in ICC-ES evaluation report ESR-1364, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2016 California Building Code® (CBC)
- 2016 California Residential Code® (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Cultured Stone®, Cultured Brick® and ProStone® products described in Sections 2.0 through 7.0 of the evaluation report ESR-1364, comply with CBC Sections 803.1.1, 1404.4, and 2101.2.1, provided the design and installation are in accordance with the 2015 *International Building Code*® (IBC) provisions noted in the report and the additional requirements of CBC Sections 1405.1.1, 1405.3 and 1411, as applicable.

2.2 CRC:

The Cultured Stone®, Cultured Brick® and ProStone® products described in Sections 2.0 through 7.0 of the evaluation report ESR-1364, comply with the flame spread and smoke developed requirements of CRC Section R302.9 and with CRC Section R703, provided the design and installation are in accordance with the 2015 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Sections R301.1.3 and R702.7.

This supplement expires concurrently with the evaluation report, reissued October 2020.



Safety Data Sheet

Revision Date: 6/1/2015 Version 1.0 Date of Issue: 6/1/2015 Supersedes Date: 12/08/2014



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

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):

Hazard Statements

(GHS-US):

- Warning
- 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.

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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.

,	Duadinat		
	Product	0///	ol :(: .: /ous.us)
Ingredient	Identifier (CAS	% (w/w)	Classification (GHS-US)
	No.)		
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, H350STOT 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

<u>Note</u>: 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.

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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.

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8.1 Exposure Limits

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

Ingredient OSHA PFI (1) ACGIH-TI V(2) Oth

Ingredient	OSHA PEL ⁽¹⁾	ACGIH-TLV ⁽²⁾	Other ⁽³⁾⁽⁴⁾
Pumice	15 mg/m³ (total dust); 5 mg/m³ (respirable fraction)	10 mg/m ³ (total dust); 3 mg/m ³ (respirable fraction)	
Expanded clay	15 mg/m³ (total dust); 5 mg/m³ (respirable fraction)	10 mg/m ³ (total dust); 3 mg/m ³ (respirable fraction)	
Portland cement	15 mg/m³ (total dust); 5 mg/m³ (respirable fraction)	1 mg/m³ (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 ÷ % SiO ₂ +2 (total dust); 10 mg/m ³ ÷ % SiO ₂ +2 (respirable fraction)	0.025 mg/m ³ (respirable fraction)	NIOSH REL – 0.05 mg/m³ (respirable fraction)
Slag	Not established	Not established	
Iron oxide	Fume: 10 mg/m³ (total dust); Particulate: 15 mg/m³ (total dust); 5 mg/m³ (respirable fraction)	5 mg/m ³ (respirable dust)	NIOSH REL – 5 mg/m ³ (total dust)

Notes:

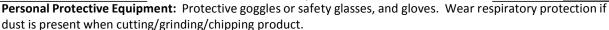
- (1) OSHA PEL (Permissible Exposure Level at 29 CFR 1910.1000)
- (2) ACGIH-TLV (American Conference of Governmental Industrial Hygienists-Threshold Limit
- NIOSH REL (National Institute for Occupational Safety & Health Recommended Exposure
- (4) Canadian Provincial and other nation control parameters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

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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.

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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)]

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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