



DUTCH QUALITY STONE

CRAFTSMANSHIP BORN OF TRADITION

TECHNICAL SUBMITTAL PACK

SUBMITTAL PACK

WELCOME



DUTCH QUALITY
STONE

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 Eldorado Stone submittal forms and technical documents. We have also enclosed additional support materials and installation details commonly requested by architects and contractors.

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

TECHNICAL DATA SHEET WARRANTY
FREQUENTLY ASKED QUESTIONS CARE &
MAINTENANCE

INSTALLATION GUIDELINES
3-PART SPEC
ICC EVALUATION REPORT MATERIAL
SAFETY DATA SHEET

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

Sincerely,

Sales Representative
Dutch Quality Stone

SUBMITTAL PACK

F O M



DUTCH QUALITY
S T O N E

Dutch Quality Representative:

PROJECT DETAILS		DUTCH QUALITY 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:	Contact Name:	Contact Name:	Contact Name:
Contact Phone:	Contact Phone:	Contact Phone:	Contact Phone:

Project Notes:

Pre-Installation Project Team Meeting Scheduled? Y / N Date Scheduled:

.....

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

Received By: _____ Date: _____

Company: _____ Phone: _____

Dutch Quality Representative: _____ Date: _____

Email completed form to BoralStoneAnswers@Boral.com

TECHNICAL DATA

ADHERED VENEERS



DUTCH QUALITY
STONE

Dutch Quality Stone is designed to meet or exceed building code requirements. Independent testing confirms compliance with ICC-ES Acceptance Criteria 51 and ASTM C1670, standard specification for Adhered Stone Veneer and ASTM C1670 standard specification for Adhered Manufactured Stone Masonry Veneer Units. Local building codes may vary by area. Always check with your local building authorities before installing stone. Supporting test data is available upon request. For additional technical information please visit: dutchqualitystone.com.

INGREDIENTS

Light weight aggregate ASTM C33, C330 and C331
Portland cement ASTM C150, ACI 318
Mineral oxide pigments ASTM C979

CODE ACCEPTABILITY & CERTIFICATION

UL Registered
Mineral composition units
Surface burning characteristics
Flame Spread 0
Smoke Developed 0
ICC-ES ESR 1942
ASTM C1670
CE Declaration of Conformity NR #290905-5

FREEZE-THAW DURABILITY

Tested in accordance with ASTM C666 & C1364
Less than 1.5 percent weight loss at 50 cycles; passed
Less than 5 percent weight loss at 300 cycles; passed

SHEAR BOND (ADHESION)

Tested in accordance with ASTM C482
Greater than 50 psi shear bond strength



ABSORPTION

Tested in accordance with ASTM C1670

SATURATED DENSITY

Tested in accordance with ASTM C1670
Weight less than 15 lbs. per sq. ft., saturated

THERMAL RESISTANCE

Tested in accordance with ASTM C177
R value: 0.528 (ft²-F-hr)/BTU at 1.48" thickness

COMPRESSIVE STRENGTH

Testing in accordance with C192 & C39
Compressive strength is greater than 2100 psi

WEIGHT PER SQUARE FOOT

Tested in accordance with ASTM C1670
All adhered veneer profiles weigh less than 15 lbs. per square foot

WIND LOAD TESTING

Tested in accordance with ASTM E330 at 150 mph wind speed; passed

50-YEAR TRANSFERABLE EXPRESS LIMITED WARRANTY

BORAL STONE PRODUCTS / DUTCH QUALITY STONE



DUTCH QUALITY
STONE

1. Subject to the following terms, Boral Stone Products, LLC (“BSP”) warrants under this express limited warranty (“Warranty”) to the original purchaser and subsequent owners of its Dutch Quality Stone™ brand manufactured stone or brick veneer (collectively, the “Product” or the “Products”) that for fifty (50) years from the date of the sale of the Product, the Product will not blister, peel, flake, delaminate or crack excessively (each, a “Defect”) as a result of manufacturing defects when used on structures (each, a “Structure”) conforming to local building codes and installed in accordance with the National Concrete Masonry Association’s written instructions issued before and closest in time to original date of the installation of the Product in the Structure. The definition of “veneer” contained in the International Building Code is determinative for purposes of establishing what Products constitute BSP’s manufactured stone or brick veneer and are covered by this Warranty.
2. In the event of a Defect, BSP will, at its option, either: (1) pay the reasonable replacement cost of the defectively manufactured Product; (2) provide a replacement of the defective Product or a Product of a similar design; or (3) pay the reasonable cost for repair of the defective Product. This Warranty applies only to Products manufactured by BSP and does not apply to any other products or materials, including exterior walls, exterior wall envelopes, backing to which Products are secured, or water-resistive barriers.
3. This Warranty runs with the sale or transfer of the Structure into which the Products have been incorporated to subsequent owners of the Structure, but the warranty period as to such subsequent owners is limited to fifteen (15) years from the original date of sale of the Product.
4. No warranty whatsoever is made with respect to the manufacture or performance of materials or components of construction not sold or manufactured by BSP, including, but not limited to, mortar, lath, weather resistant barriers, doors, windows, sealants, flashings, roofing, copings, sheathing and framing. Further, BSP makes no warranties whatsoever with respect to aesthetics, design and engineering of the Structure into which Products are incorporated, or workmanship involved in the application of any Products warranted hereunder. The Product is not waterproof and should not be used on exterior or interior steps or risers. The Product must be incorporated into a wall assembly designed by a building professional that contains adequate mechanisms for water management. BSP has no responsibility for damage caused by moisture intrusion through the building envelope or around any of the building envelope components or by vapor transmission from the inside of the Structure to a moisture sensitive part of the wall assembly.
5. This Warranty covers only manufacturing defects in the Products. BSP’s manufacturing process has been designed to imitate the random beauty and nature of real stone. As such, stone surfaces on the Products may contain small air holes or surface anomalies. These differences add to the overall character of the Products and are not considered manufacturing defects. Changes in the appearance of Products caused by normal weathering or efflorescence, which is a natural phenomenon of all concrete products, are also not considered manufacturing defects. Normal weathering is defined as exposure to sunlight and extremes of weather and atmosphere, which will cause any colored surface to fade, chalk, or accumulate dirt or stains.

**THIS WARRANTY IS EFFECTIVE FOR SALES AFTER NOVEMBER 11, 2020 (“EFFECTIVE DATE”)
AND SUPERSEDES ALL PREVIOUSLY PUBLISHED VERSIONS OF THIS WARRANTY FOR PRODUCTS
SOLD ON OR AFTER THE EFFECTIVE DATE. LAST MODIFIED: NOVEMBER 11, 2020.**

Dutch Quality Stone, 18012 Dover Road, Mt. Eaton, Ohio 44659 | PH: 330.359.7866 FAX: 330.359.5990 877.359.7866

dutchqualitystone.com

50-YEAR TRANSFERABLE EXPRESS LIMITED WARRANTY

BORAL STONE PRODUCTS / DUTCH QUALITY STONE



DUTCH QUALITY
STONE

6. Without limiting anything else in this Warranty, BSP disclaims and assumes no liability for the following:
 - a. improper use, application or installation of Products;
 - b. use of Products as part of improperly designed or constructed assemblies or Structures or with defective adjacent materials or assemblies;
 - c. failure to follow applicable specifications, instructions and construction details;
 - d. use of any sealing or coating on the Product other than one that is silane or siloxane and based in strict compliance with sealant manufacturer's instructions;
 - e. other design or construction defects, deficiencies and failures on a Structure where Product is used;
 - f. undertaking on-site inspections or any on-site activities or making oral statements at the site;
 - g. any damage or injury whatsoever caused in whole or in part by acts of God, natural phenomenon or physical abuse, such as, but not limited to, falling objects, projectiles, fire, earthquake, floods, windstorm, hail, tornadoes, lightning, hurricanes, other abnormal weather conditions, pests, chemical fumes, foreign substances in the air, misuse, vandalism, civil disobedience, war, damage caused by remodeling or renovation;
 - h. damage resulting from moisture intrusion, mold, settlement of Structure or other Structure or wall movement;
 - i. discoloration or deterioration due to airborne contaminants, contact with any chemicals or paint, staining or oxidations;
 - j. any accumulation of water or moisture in wall assemblies;
 - k. negligence or accidents by any party or parties in maintaining the Products, including, but not limited to, use of a pressure washer or harsh or acid chemicals of any nature, including vinegar, to clean;
 - l. replacement of Product if Product is mixed with other chemicals or materials not approved by BSP in writing;
 - m. any cause beyond BSP's control; and
 - n. any workmanship, aesthetics or other damage or injury not solely and directly caused by a manufacturing defect in Products as covered under this Warranty.
7. This Warranty is exclusive, the only warranty made by BSP with respect to the Products, and is in lieu of all other warranties or remedies of any nature whatsoever to the original purchaser or subsequent owners under any theory of liability, whether in contract, tort, statutory law or otherwise, except for actual economic damages for personal physical bodily injury. All other warranties, representations or remedies with respect to the Products, whether oral, written, express or implied or imposed by law, are disclaimed by BSP and are waived by the original and subsequent purchasers, particularly the implied warranties of merchantability or fitness for a particular purpose or arising from a course of dealing, usage or trade practice, or any warranty against patent infringement or warranty for work performed in a workmanlike manner. BSP shall not be liable under any circumstances for any incidental, special, indirect or punitive damages to any party whatsoever, including but not limited to, loss of profits, damage to the Structure or its contents, and attorney's fees. This exclusion of damages includes, but is not limited to, payments of any nature made because of actual or potential liability to others, damages to any other part of the Structure to which the Products are incorporated or damage to any other property.

50-YEAR TRANSFERABLE EXPRESS LIMITED WARRANTY

BORAL STONE PRODUCTS / DUTCH QUALITY STONE



DUTCH QUALITY
STONE

8. BSP shall have no further obligation or liability of any kind, other than as stated in this Warranty, and it is further agreed and understood that the price paid for Products is consideration for the limitation of BSP's liability hereunder.
9. Warranty coverage is limited as set forth herein and does not cover labor to remove or install Products and does not cover the cost of shipping replacement Product. The remedies contained herein shall be sole and exclusive.
10. BSP's obligations under this Warranty shall only begin if the original purchaser or subsequent owner notifies BSP, in writing, within sixty (60) days of actual or constructive notice of the alleged Defect. BSP shall be allowed a reasonable period of time and authorization to remove samples of the Product, so as to perform any testing BSP deems necessary to investigate and determine the cause of the alleged Defect. The original purchaser or subsequent owner shall make temporary repairs in a timely manner to prevent further damage to the Structure, contents of the Structure, and the Products until the cause of the alleged Defect is determined and permanent repair recommendations may be made, as applicable.
11. BSP's obligation to supply replacement Product pursuant to this Warranty shall become null and void if, in the sole judgment of BSP, any of the following events shall occur: (i) if after installation of the Products there are any alterations or repairs made to the Structure that affect any component of the wall assembly of which Products are a part in any way; (ii) if the original purchaser or subsequent owner or any of their respective tenants fail to use reasonable care in maintaining the Products before and after installation; (iii) if the Products are installed in a manner that causes them to be repeatedly or continuously wet, such as if installed in the direct path of a water sprinkler, pool, jacuzzi, or similar water device; or (iv) if the Products are installed in an area that exposes them to de-icing salts or other harsh chemicals.
12. Applicability of the Magnusson-Moss Act is hereby disclaimed.
13. Any provision of this Warranty that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof or affecting the validity of enforceability of such provision in any other jurisdiction.
14. BSP's failure at any time to enforce any of the terms or conditions stated herein shall not be construed to be a waiver of such provisions.
15. This Warranty shall be interpreted under the laws of the State of New York.
16. Neither the sales personnel nor other agents of BSP are authorized to make warranties about the Products. Oral statements by BSP employees or agents do not constitute warranties, shall not be relied upon by
17. the original purchaser or subsequent owner or any third party, and are not part of the contract for sale or warranty as stated herein. No distributor, dealer or representative of BSP has the authority to change or modify this Warranty either orally or in writing in any respect. The entire and final contract is embodied in this Warranty and no other warranties are given beyond those set forth in this Warranty.

DUTCH QUALITY STONE

CERTIFICATE OF

Quality

Date:

Attn:

Project Title:

Project City, State:

Architect:

Stone Profile, Color:

General Contractor:

Masonry Contractor:

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



Sincerely,

Rick Garagliano

Director of Quality

Dutch Quality Stone

FAQS

F E UENTL ASKE UESTIONS



DUTCH QUALITY
S T O N E

WHAT ARE THE BENEFITS OF USING MANUFACTURED STONE?

Manufactured stone provides the realism of natural stone at an installed cost of a fraction of natural stone. Because Dutch Quality manufactured stone is made of lightweight material it is classified as an adhered veneer as does not require a footing or mechanical support for installation.

CAN I INSTALL DUTCH QUALITY ADHERED STONE VENEER DIRECTLY TO CEMENT BOARD?

Yes, for exterior applications use only cement board that complies with ASTM C1325. For interior installations, any ½" or 5/8" cement board product is acceptable. Always bond the stone with polymer modified mortar compliant with ANSI A118.4 or ANSI A118.15. Do not use conventional Type S mortar for bonding Dutch Quality Stone to cement board. modified mortar compliant with ANSI A118.4 or ANSI A118.15. Do not use conventional Type S mortar for bonding Dutch Quality Stone to cement board. adhered veneer as does not require a footing or mechanical support for installation.

FOR WHAT APPLICATIONS SHOULD I AVOID ADHERED MANUFACTURED STONE VENEER?

Adhered stone veneer is designed and intended as a wall covering. Using adhered stone veneer on a horizontally oriented fashion is not preferred. Do not use adhered stone veneer as a paver or a wall cap. Do not install adhered stone in a situation in which continuous or frequent exposure to water is possible such as pool or Jacuzzi copings or surrounds. Adhered stone veneer is not intended to be installed on stair risers where de-icing salts or snow shovels can damage the stone facade.

WHAT ARE THE RECOMMENDED METHODS OF BONDING DUTCH QUALITY ADHERED MANUFACTURED VENEER?

Type S mortar complying with ASTM C270 is the most common mortar used to bond adhered stone veneer. For additional strength in challenging conditions use polymer modified mortars. The polymer modified mortars provide a superior bond which exceeds the minimum bond strength by a factor of 5X or greater. Polymer modified mortars also allow for stone movement during installation without losing bond strength making it a great choice for tight dry stacked stone profiles.

Note, always back-butter the entire surface of the stone back. The thickness of the mortar should average about ½" when the stone is pressed into place on the wall. stair risers where de-icing salts or snow shovels can damage the stone facade.

FAQS

F E UENTL ASKE UESTIONS



DUTCH QUALITY
S T O N E

DO I NEED TO SEAL OR COAT THE ADHERED STONE VENEER AFTER INSTALLATION?

Applying a sealer or coating which is not capable of “breathing” will jeopardize the long-term health of the wall structure. Moisture which can collect in the wall system must be able to dry out through the wall covering. However, the application of a silane or siloxane water repellent is recommended option to prevent water absorption into the stone while rendering the color, texture and breathability of the stone veneer unaffected. For the health and safety of the application, select a water-based (rather than a solvent-based) silane or siloxane repellent. These products can be brushed, rolled or sprayed on the stone veneer.

WHY CAN'T I INSTALL THE ADHERED MANUFACTURED STONE VENEER DOWN TO GRADE LEVEL, OR BELOW?

The building code requires a clearance between the stone veneer and the grade or ground level. There are several reasons for this and most of these reasons involve protection of the wall, not the stone! Behind the stone veneer is a drainage plane which was created when the weather resistive barrier was installed. The purpose of this plane is to collect and direct any water which squeaks behind the wall façade downward and out the base of the wall. If the base of the veneer wall is at or below grade, proper drainage will be impaired. Secondly, water which pools or collects at the wall base can rise into the wall through capillary action and enter the structure. Thirdly, if the veneer is in contact with veg-etation (grass, plants, etc) growth into the wall is possible. Also, bugs and insects, including termites will find it convenient enter the wall system when the wall is in direct contact with earth. Finally, the stone is not designed to be continually wet or subject to the harsh chemicals found in soils.

CARE & MAINTENANCE



DUTCH QUALITY
STONE

Thank you for choosing Dutch Quality Stone for your project. Our products are virtually maintenance-free.

CLEANING

On occasion, washing to remove surface debris or dust may be required. For dirt, dust and other particle removal:

- You may find that gently scrubbing the stones' surface with a dry soft bristle brush is sufficient.
- Use a solution of liquid dish detergent and water. Make sure the detergent does not contain any bleach or other harsh chemicals. Gently scrub with soft bristle brush and detergent/water solution. Rinse well with clean water.

EFFLORESCENCE

When efflorescence occurs, as it does with many masonry products, it is usually the result of moisture migration through the masonry substrate. Once the moisture is on the masonry surface, it evaporates, depositing dissolved salts in the form of efflorescence. Efflorescence will disappear naturally over time as long as the source of the moisture is controlled or eliminated. If you wish to clean off efflorescence, reference the above described cleaning procedures.

- The use of acids or chemical cleaners is not recommended. Contact Customer Service at 1-877-359-7866 for any additional questions regarding the cleaning of masonry stone veneer.

WATER REPELLING / PROTECTIVE TREATMENTS

Protecting Dutch Quality Stone is not necessary, however, it is recommended in certain applications such as "above grade", where mud may splash onto the stone. A water repellent, or protective treatment, will provide added protection and usually be easier to clean if the surface becomes dirty.

- Use CRAFTSHIELD™ water repellent treatment, a penetrating, breathable, water-based Siloxane formula. This product provides extra insurance against water penetration through the stone and grout joints. CRAFTSHIELD has been tested and will not alter the color of the stone after application. Contact your local distributor to purchase CRAFTSHIELD.
- The use of any penetrating, breathable, silane- or siloxane-based water repelling agent is acceptable.

DO NOT USE WIRE BRUSHES ON DUTCH QUALITY STONE

DO NOT ATTEMPT TO CLEAN DUTCH QUALITY STONE WITH ACID CLEANERS

DO NOT CLEAN DUTCH QUALITY STONE WITH A HIGH POWER PRESSURE WASHER

INSTALLATION GUIDELINES



DUTCH QUALITY
STONE

At Dutch Quality Stone, we realize the value of a proper installation. Installing our stone the right way creates a long-lasting, attractive, safe and reliable wall system.

The NCMA (National Concrete Masonry Association) consists of a dedicated team of manufactured stone professionals, representing stone veneer companies across the nation. One of the most important projects completed by the NCMA Technical Committee is the development of a highly detailed and carefully researched installation guide. The latest version of that guide can be downloaded at www.dutchqualitystone.com/installation. These guidelines are intended to share over 40 years of knowledge and understanding regarding the proper installation of manufactured stone veneer products.



Note: It is important to recognize that Dutch Quality Stone is a veneer, a facing attached to the wall for purposes of providing ornamentation. It is not intended as a structural product or a waterproofing element. Most importantly, the real subject matter expert is your local building department and the local building code. Your local building code will supersede all other written or verbal installation guides provided by Dutch Quality Stone or the NCMA.

Installation Guide and Detailing Options for **Compliance with ASTM C1780**

For Adhered Manufactured Stone Veneer 5th Edition, 3rd Printing

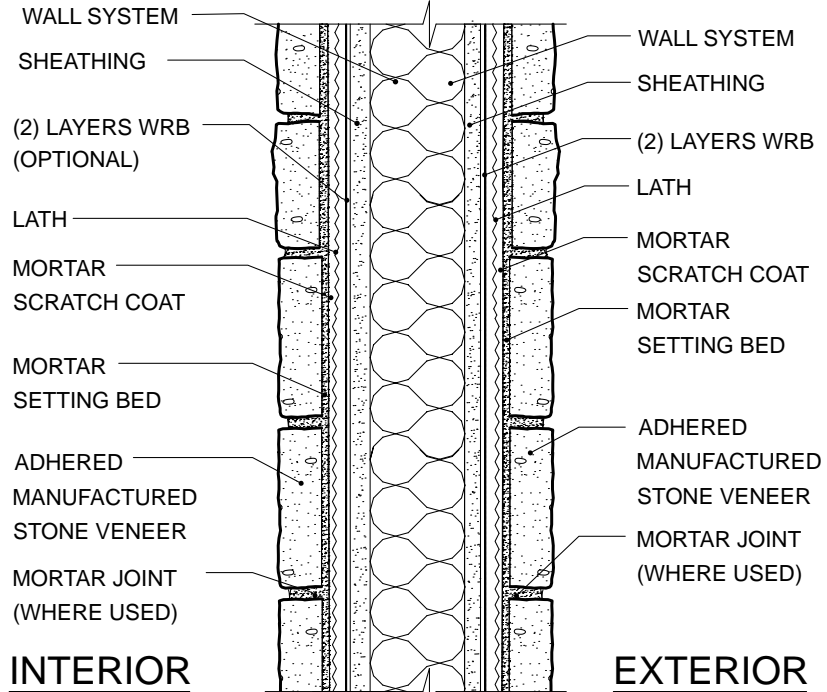
NATIONAL
CONCRETE MASONRY
ASSOCIATION



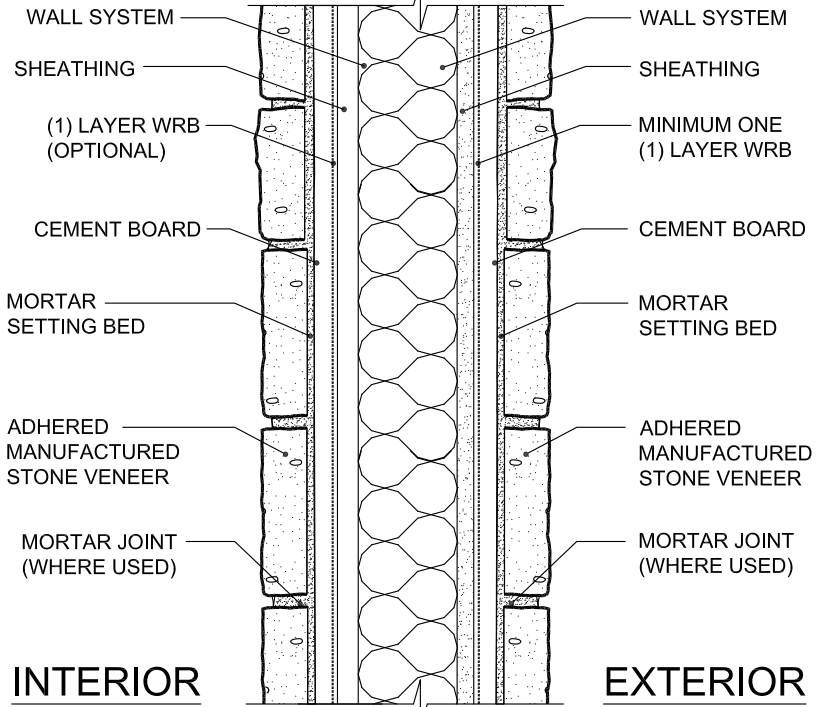
NCM MSV

Typical Frame Wall Section

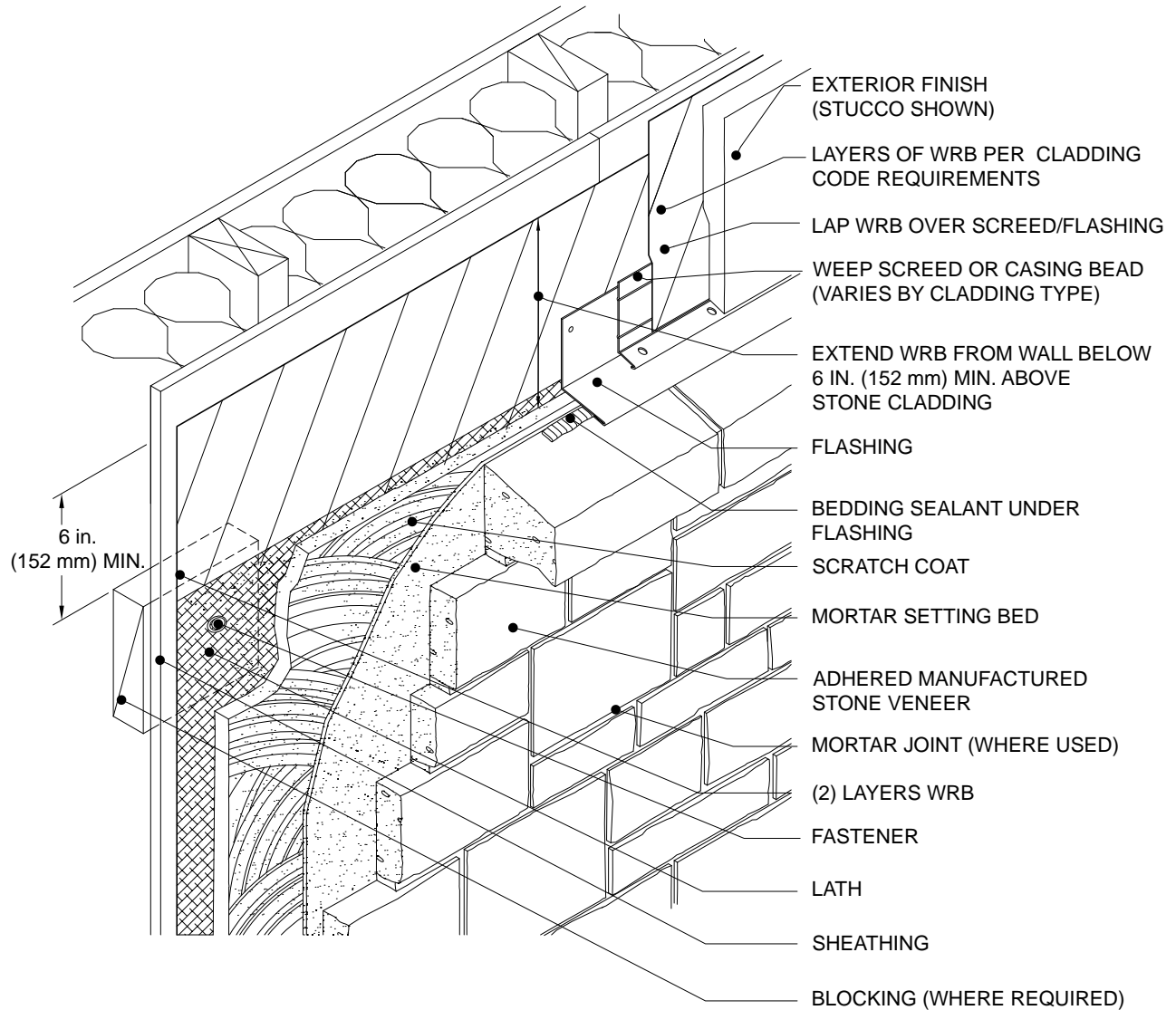
USE OF LATH AND MORTAR
SCRATCH COAT



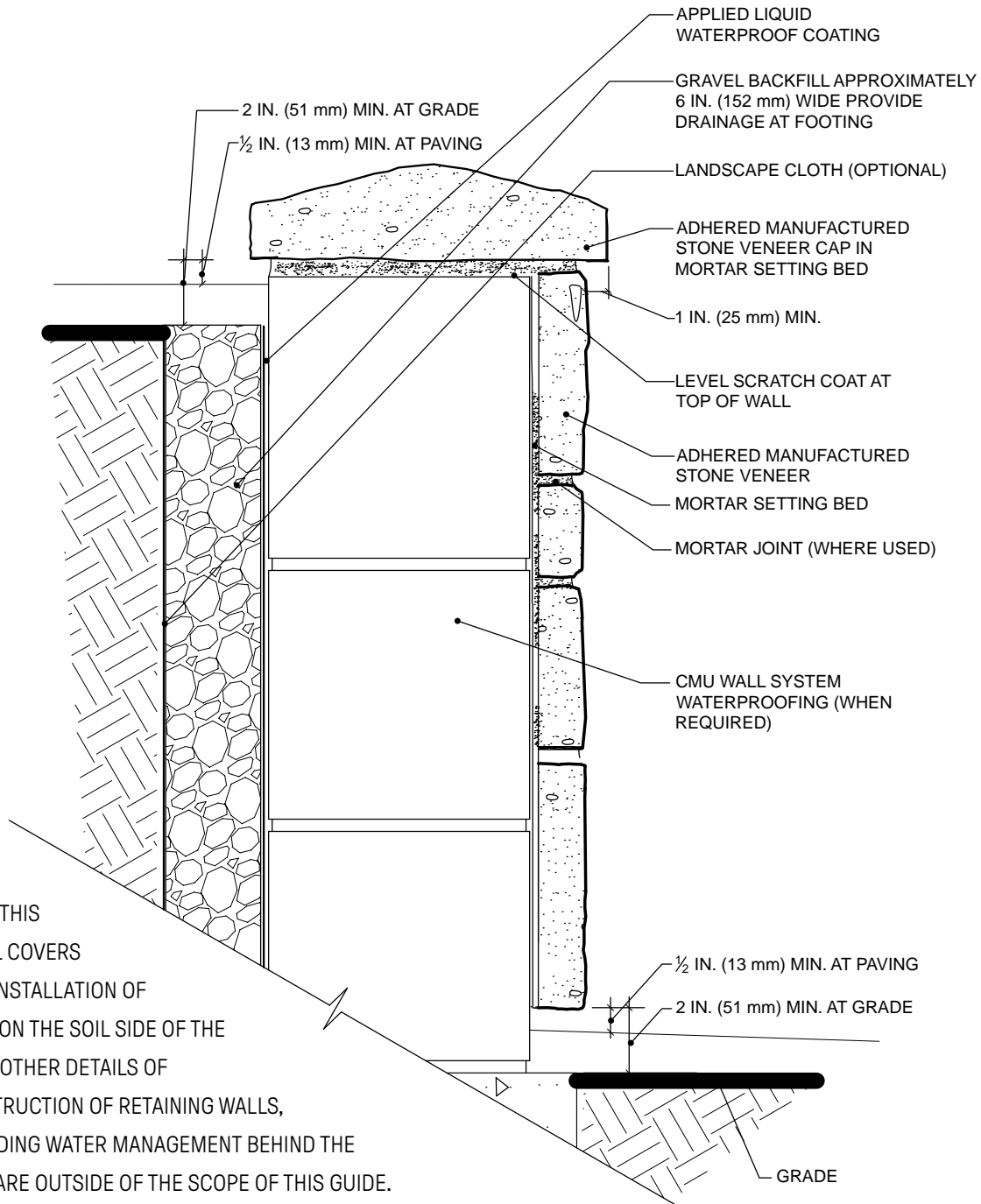
USE OF CEMENT BOARD



Wall Assembly Transition

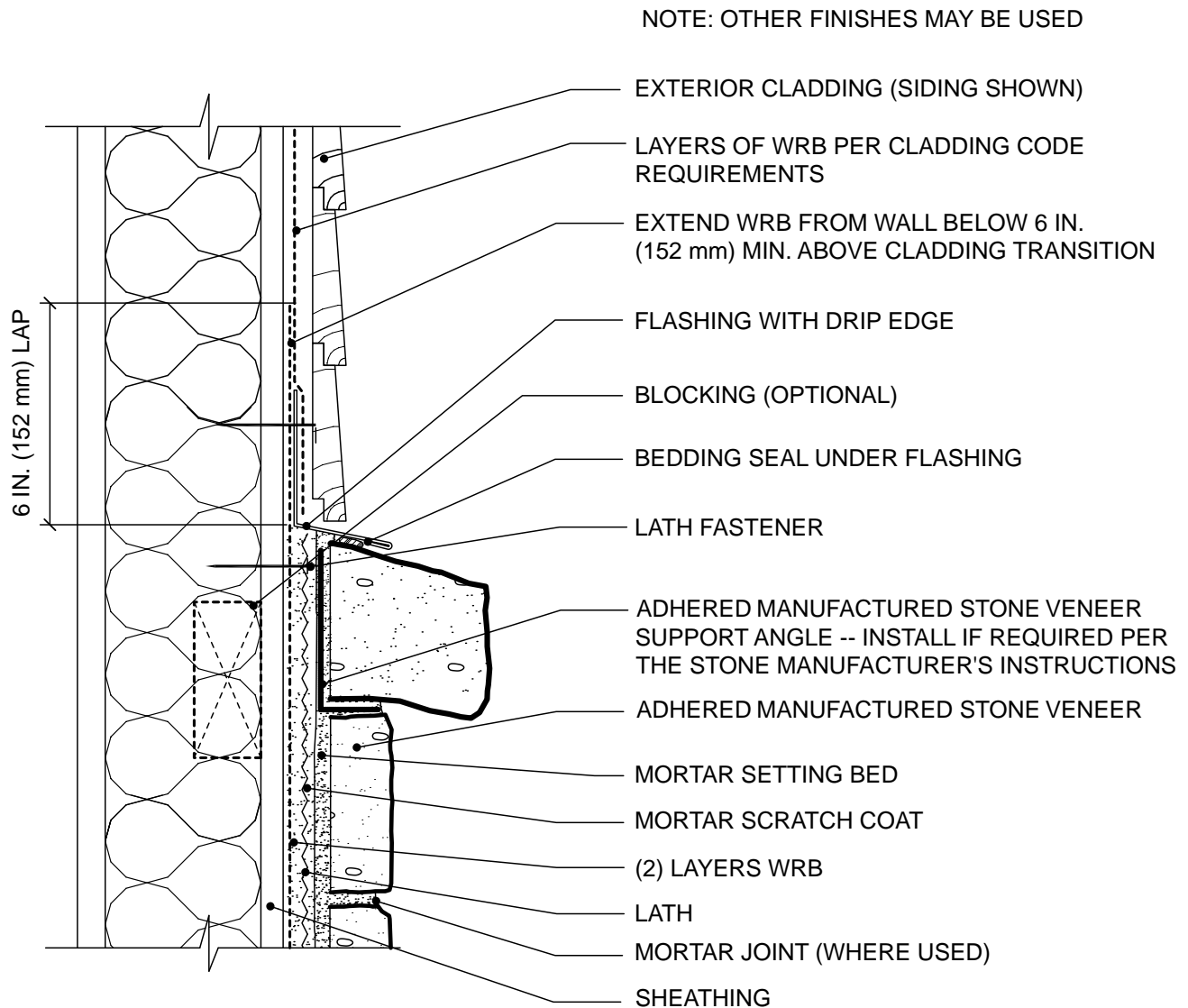


Retaining Wall (CMU)



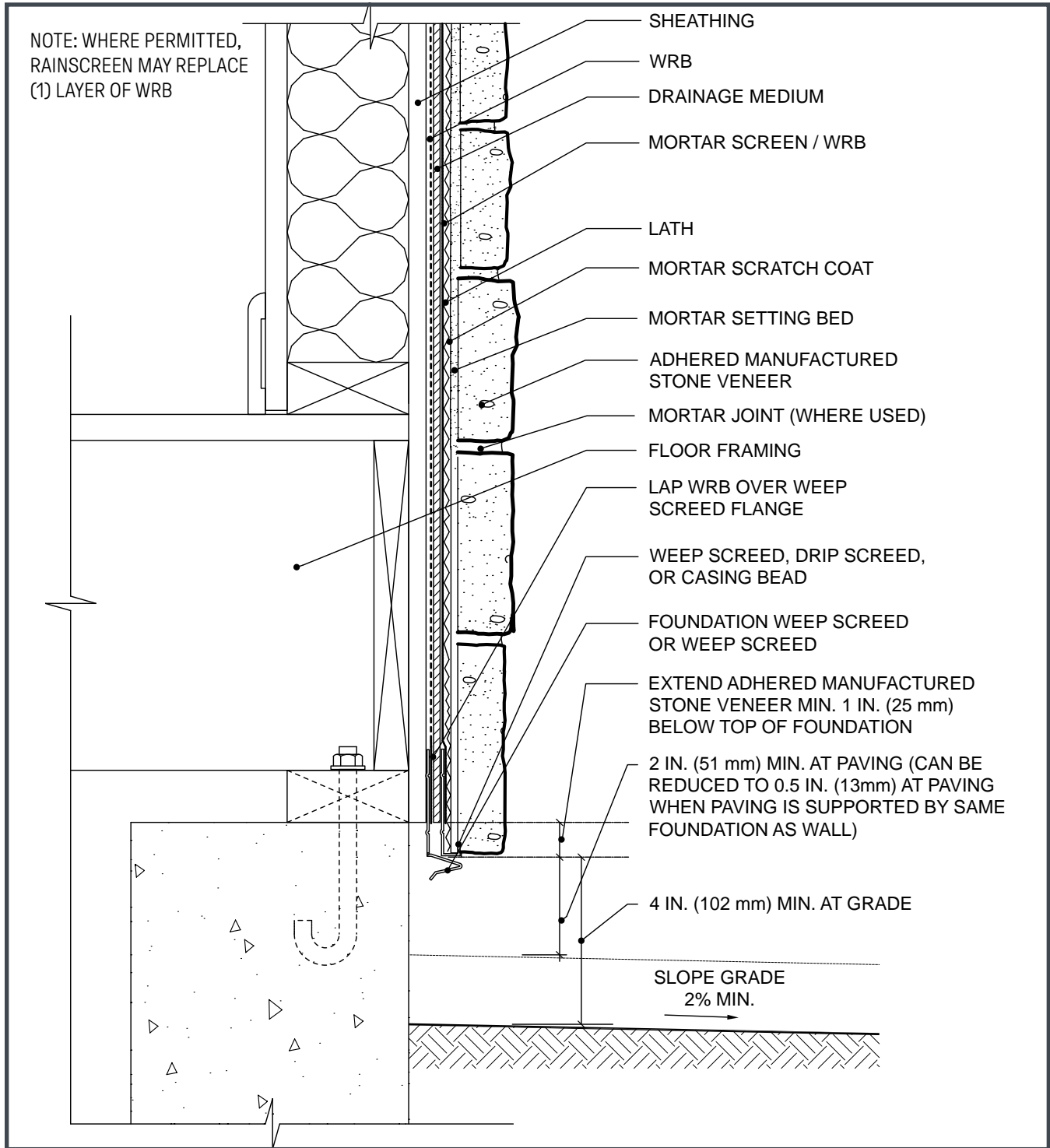
SECTION VIEW

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.

Foundation Wall Base - Rainscreen System



SECTION 04 70 00 MANUFACTURED MASONRY VENEER

GENERAL NOTES TO SPECIFIER:

THIS SPECIFICATION SECTION HAS BEEN PREPARED TO ASSIST DESIGN PROFESSIONALS IN THE PREPARATION OF PROJECT OR OFFICE MASTER SPECIFICATIONS. IT FOLLOWS GUIDELINES ESTABLISHED BY THE CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI), AND THEREFORE MAY BE USED WITH MOST MASTER SPECIFICATION SYSTEMS WITH MINOR EDITING.

EDIT CAREFULLY TO SUIT PROJECT REQUIREMENTS. MODIFY AS NECESSARY AND DELETE ITEMS THAT ARE NOT APPLICABLE. VERIFY THAT REFERENCED SECTION NUMBERS AND TITLES ARE CORRECT. (NUMBERS AND TITLES REFERENCED ARE BASED ON *MASTERFORMAT*, 2004 EDITION).

THIS SECTION ASSUMES THE PROJECT MANUAL WILL CONTAIN COMPLETE DIVISION 1 DOCUMENTS INCLUDING SECTIONS 01 25 13–PRODUCT SUBSTITUTION PROCEDURES, 01 33 00–SUBMITTAL PROCEDURES, 01 62 00–PRODUCT OPTIONS, 01 66 00–PRODUCT STORAGE AND HANDLING REQUIREMENTS, 01 74 00–CLEANING AND WASTE MANAGEMENT, 01 77 00–CLOSEOUT PROCEDURES, AND 01 78 00–CLOSEOUT SUBMITTALS. CLOSE COORDINATION WITH DIVISION 1 SECTIONS IS REQUIRED. IF THE PROJECT MANUAL DOES NOT CONTAIN THESE SECTIONS, ADDITIONAL INFORMATION SHOULD BE INCLUDED UNDER THE APPROPRIATE ARTICLES.

THIS IS A CLOSED PROPRIETARY SPECIFICATION.

NOTES TO THE SPECIFIER ARE CONTAINED IN BOXES AND SHOULD BE DELETED FROM FINAL COPY.

GREY HIGHLIGHTED GREEN TEXT AND NOTES RELATE TO LEED® PROJECTS AND CAN BE DELETED IF THE PROJECT IS NOT INTENDED TO ATTAIN LEED® CERTIFICATION. CREDIT REFERENCES REFER TO LEED® FOR NEW CONSTRUCTION, V2.2.

OPTIONAL ITEMS REQUIRING SELECTION BY THE SPECIFIER ARE ENCLOSED WITHIN BRACKETS, E.G. [35] [40] [45]. MAKE APPROPRIATE SELECTIONS AND DELETE OTHERS.

ITEMS REQUIRING ADDITIONAL INFORMATION ARE UNDERLINED BLANK SPACES, E.G. _____.

OPTIONAL PARAGRAPHS REQUIRING SELECTION OF ONE OF THE OPTIONS ARE SEPARATED BY “OR” WITHIN A BOX, E.G.

OR

BOLD FACE TEXT IDENTIFIES OPTIONAL PARAGRAPHS AND FEATURES THAT MAY BE INCLUDED OR DELETED DEPENDING ON PROJECT REQUIREMENTS. CONVERT THE BOLD FACE TEXT TO REGULAR TEXT WHEN INCLUDING THESE PARAGRAPHS OR FEATURES. WHEN DELETING A PARAGRAPH, BE CERTAIN THAT ALL SUBPARAGRAPHS ARE ALSO DELETED.

REVISE FOOTER TO SUIT PROJECT/OFFICE REQUIREMENTS.

ELECTRONIC VERSIONS OF THIS SPECIFICATION UTILIZE AUTOMATIC PARAGRAPH NUMBERING.

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Portland cement based manufactured [stone] veneer and trim.

B. Related Sections:

INCLUDE ALL DIVISION 01 SECTIONS CONTAINING LEED® REQUIREMENTS.

1. — — — — . Wall Framing.
2. — — — — . Wall Sheathing.
3. **07 60 00—Flashing and Sheet Metal.**
4. **07 92 00—Joint Sealants.**
5. **09 24 00—Portland Cement Plastering.**
6. **10 30 00—Fireplaces and Stoves.**

INCLUDE APPROPRIATE LANGUAGE BELOW IF PRODUCTS SPECIFIED IN THIS SECTION ARE TO BE BID AS ALTERNATES. OTHERWISE DELETE FOLLOWING PARAGRAPH.

C. Alternates:

1. Reference Section 01 23 00—Alternates.

1.02 REFERENCES

A. American National Standards Institute (ANSI):

1. [ANSI A118.4](#) or [ANSI A118.15](#) Specifications for Latex-Portland Cement Mortar.

B. American Society for Testing and Materials (ASTM):

1. [ASTM C 39](#) – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
2. [ASTM C 67](#) – Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
3. [ASTM C 144](#) – Standard Specification for Aggregate for Masonry Mortar.
4. [ASTM C 177](#) – Standard Test Method for Steady-State Head Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
5. [ASTM C 207](#) – Standard Specification for Hydrated Lime for Masonry Purposes.
6. [ASTM C 270](#) – Standard Specification for Mortar for Unit Masonry.
7. [ASTM C 482](#) – Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement.
8. [ASTM C 567](#) – Standard Test Method for Determining Density of Structural Lightweight Concrete.
9. [ASTM C 847](#) – Standard Specification for Metal Lath.
10. [ASTM C 979](#) – Standard Specification for Pigments for Integrally Colored Concrete.
11. [ASTM C 1032](#) – Standard Specification for Woven Wire Plaster Base.
12. [ASTM D 226](#) – Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
13. [ASTM C1063](#) – Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster
14. [ASTM C1329](#) – Standard Specification for Portland cement.
15. [ASTM C578](#) – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
16. [ASTM C1289](#) – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board

17. [ASTM E 25556/E2556M](#) – Standard Specification for Vapor Permeable Flexible Sheet Water-Resistive Barriers for Mechanical Attachment
- C. Other Standards:
1. [UBC Standard No. 14-1](#), Kraft Waterproof Building Paper
 2. [ICC AC308](#) Acceptance Criteria for Water Resistive Barriers
 3. [UU-B-790](#) Building Paper, Vegetable Based, Kraft, waterproofed, water repellant and fireproof
 4. [UL 723](#) Test for Surface Burning Characteristics for Building Materials.
- D. International Code Council (ICC):
1. ESR Report ESR-1942
- E. [LEED®: US Green Building Council's Leadership in Energy and Environmental Design Green Building Rating System™](#).
- F. Underwriter's Laboratory (UL): Building Materials Directory.

1.03 SUBMITTALS

- A. Reference Section 01 33 00–Submittal Procedures; submit following items:
1. Product Data.
 2. Samples:
 - a. Standard sample board consisting of small-scale pieces of veneer units showing full range of textures and colors.
 - b. **Full range of mortar colors.**
 3. **Verification Samples: Following initial sample selection submit “laid-up” sample board using the selected stone and mortar materials and showing the full range of colors expected in the finished Work; minimum sample size: 3 by 3 feet (1 by 1 m).**
 4. Quality Assurance/Control Submittals:
 - a. Qualifications:
 - 1) Proof of manufacturer qualifications.
 - 2) Proof of installer qualifications.
 - b. Regulatory Requirements: Evaluation reports.
 - c. Veneer manufacturer’s installation instructions.
 - d. Installation instructions for other materials.
 5. [LEED® Submittals](#):
 - a. [Credit MR 4.1, 4.2 Recycled Content: Provide percentage of recycled content \(post-consumer and pre-consumer\).](#)
 - b. [Credit MR 5.1, 5.2 Regional Materials](#):
 - 1) [Provide distance between Project site and extraction site.](#)
 - 2) [Provide distance between Project site and final manufacturing location.](#)

[MANUFACTURED MASONRY CAN ALSO CONTRIBUTE TO CREDIT EA 1 FOR OPTIMIZING ENERGY PERFORMANCE AND CREDITS ID 1.1-1.4 FOR INNOVATION IN DESIGN, HOWEVER, NO SPECIFIC SUBMITTALS ARE REQUIRED IN THIS SECTION.](#)

- B. Closeout Submittals: Reference Section 01 78 00–Closeout Submittals; submit following items:
1. Maintenance Instructions.
 2. Special Warranties.

1.04 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer Qualifications: Dutch Quality Stone.
2. Installer Qualifications: Experienced mason familiar with installation procedures and related local, state and federal codes masonry.

B. Certifications:

1. **ICC- Evaluation Service – Evaluation Service Report ESR-1942**
2. **ASTM C1670**
3. **UL – Classification listing in Building Materials Directory: R8022 Zero Flame Spread and Zero Smoke Developed.**

C. Field Sample:

COMPLETE FOLLOWING SUBPARAGRAPH TO INCLUDE DESIRED DETAILS SUCH AS CORNERS, TRIM, MORTAR JOINTS AND JOINT DETAILS ABUTTING OTHER MATERIALS.

1. Prepare [4 by 4 foot (1200 by 1200 mm)] [__ by __ foot (____ by ____ mm)] sample at a location on the structure as selected by the Architect. Use approved selection sample materials and colors. Include _____.
2. Obtain Architect's approval.
3. Protect and retain sample as a basis for approval of completed manufactured stone work. Approved sample may be incorporated into completed work.

1.05 DELIVERY, STORAGE, AND HANDLING

- ##### A. Reference Section 01 66 00–Product Storage and Handling Requirements.
- ##### B. Follow manufacturer's instructions.

1.06 PROJECT/SITE CONDITIONS

- ##### A. Environmental Requirements: When air temperature is 40 degrees F (4.5 degrees C) or below, consult local building code for Cold-Weather Construction requirements.

1.07 WARRANTY

- ##### A. Special Warranty: Manufacturer's standard warranty coverage against defects in materials when installed in accordance with manufacturer's installation instructions.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- | | |
|--------------------------------------|--|
| A. Dutch Quality Stone | Tel: (877) 359-7866 |
| 18012 Dover Road, Mt. Eaton OH 44659 | Website: www.dutchqualitystone.com |
| Mount Eaton, OH 44659 | E-Mail: orders@dutchqualitystone.com |

INSERT NAME, ADDRESS AND CONTACT INFORMATION OF LOCAL DISTRIBUTOR BELOW.
--

1. Manufacturer's Distributor:

IF PROJECT UTILIZES ONLY ONE TYPE OF STONE, INSERT THE NAME OF THE PRODUCT IN THE BLANK SPACE BELOW AND DELETE THE SECOND SELECTION. IF MORE THAN ONE TYPE OF STONE IS REQUIRED, DELETE THE FIRST SELECTION AND VERIFY THAT STONE TYPES ARE NOTED ON DRAWINGS.

B. Product: [_____ veneer] [Veneer types as shown on Drawings].

C. Substitutions: None Allowed.

2.02 MATERIALS

A. Stone Veneer:

SELECT DESIRED PROFILE FROM THE DUTCH QUALITY STONE WEBSITE [PRODUCTS](#) DROP DOWN MENU; CLICK ON "STONE VENEER" THEN CLICK ON THE APPROPRIATE REGION. INSERT PROFILE BELOW.

1. Profile: _____. Include matching corner pieces.

SELECT DESIRED STONE ACCENTS FROM THE DUTCH QUALITY STONE WEBSITE [PRODUCTS](#) DROP DOWN MENU; CLICK ON "STONE ACCENTS." INSERT DESIRED ACCENTS BELOW AND INSERT TEXTURE IF REQUIRED. VERIFY THAT DIMENSIONS, IF REQUIRED, ARE SHOWN ON THE DRAWINGS.

2. Stone Accents: _____.

a. Color: [As shown on Drawings].

b. Texture: _____.

B. Veneer Unit properties: Precast veneer units consisting of portland cement, lightweight aggregates, and mineral oxide pigments.

1. Compressive Strength: ASTM C1670, 5 sample average: greater than 2,100 psi (12.4MPa).
2. Shear Bond: ASTM C1670: 50 psi (345kPa). minimum
3. Freeze-Thaw Test: ASTM C1670: Less than 3 percent weight loss and no disintegration.
4. Thermal Resistance: ASTM C177: 0.473 at 1.387 inches thick
5. Weight per square foot: 2015, 2018 IBC and 2015, 2018 IRC, ASTM C1670, 15 pounds, saturated.

EDIT MATERIALS PER BUILDING CODE REQUIREMENTS. DELETE FROM THIS SECTION IF SPECIFIED IN OTHER SECTIONS.

C. Weather Barrier: [ASTM D226, Type 1, No. 15, non-perforated asphalt-saturated felt paper] [UBC Standard 14-1, kraft waterproof building paper] or [ICC AC-38, synthetic house wrap]

D. Reinforcing: [ASTM C847, 2.5lb/yd² (1.4kg/m²) galvanized expanded metal lath] [ASTM C 847, 3.4lb (1.8 kg/m²) galvanized 3/8" rib lath] [ASTM C1032, 17 gauge (1.3 mm) woven wire mesh] complying with code agency requirements for the type of substrate over which stone veneer is installed.

E. Mortar:

1. Cement: Portland cement complying with ASTM C1329.
2. Lime: ASTM C 207.
3. Sand: ASTM C 144, natural or manufactured sand.
4. Color Pigment: ASTM C979, mineral oxide pigments.

5. Water: Potable.
6. Pre-Packaged Latex-Portland Cement Mortar: ANSI A118.4 or ANSI A118.15.

F. Water Repellent : Water based silane or siloxane masonry repellent,

2.03 MORTAR MIXES

- A. Grouted Installation (Grout Joints, either standard or over-grout):
1. Mix cement, lime and sand in accordance with ASTM C270, Type S.
 2. Pre-Bagged, pre-mixed Type S mortar complying with ASTM C270.
 3. Polymer modified mortar complying with ANSI A118.4 or ANSI A118.15.
 - a. Add color pigment in grout joint mortar in accordance with pigment manufacturer's instructions not to exceed 10% by weight of cement.

OR

- A. Jointless/Dry-Stacked Installation:
1. Polymer modified mortar complying with ANSI A118.4 or ANSI A118.15
 2. Mortar prepared to comply with ASTM C270. Type S Mortar
 - a. Add color pigment in accordance with pigment manufacturer's instructions and in compliance with ASTM C979.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates upon which work will be installed.
- B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.
- C. Commencement of work by installer is acceptance of substrate.

3.02 PREPARATION

- A. Protection: Protect adjacent work from contact with mortar.
- B. Surface Preparation: Prepare substrate in accordance with manufacturer's installation instructions for the type of substrate being covered.

3.03 INSTALLATION

- A. Install and clean stone in accordance with manufacturer's installation instructions for Standard Installation (Grouted Joint) or Jointless/Dry-Stacked installation as specified above.
- B. Apply sealer in accordance with sealer manufacturer's installation instructions.

3.04 FIELD QUALITY CONTROL

- A. **Manufacturer's Field Services: Manufacturer's Field Service Representative shall make [one] [two] [_____] periodic site visits review of on-going installation process but is not responsible for any errors or omissions that are not observed or are previously completed.**

3.05 CLEANING

- A. Reference Section 01 74 00–Cleaning and Waste Management.
- B. Remove protective coverings from adjacent work.
- C. Cleaning Veneer Units:
 - 1. Wash with soft bristle brush and water/granulated detergent solution.
 - 2. Rinse immediately with clean water.
- D. Removing Efflorescence:
 - 1. Allow veneer to dry thoroughly.
 - 2. Scrub with soft bristle brush and clean water.
 - 3. Rinse immediately with clean water; allow to dry
 - 4. If efflorescence is still visible, contact Dutch Quality Customer Service for assistance

END OF SECTION¹

¹ This specification was prepared specifically for Dutch Quality Stone by ASC Specification Consultants. Comments or suggestions for improvement should be addressed to Dutch Quality Stone via the contact information on page one.

Revised: June 7th, 2019



Most Widely Accepted and Trusted

ICC-ES Evaluation Report

ESR-1942

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

Reissued 03/2019
This report is subject to renewal 03/2021.

DIVISION: 04 00 00—MASONRY

SECTION: 04 71 00—MANUFACTURED BRICK MASONRY

SECTION: 04 73 00—MANUFACTURED STONE MASONRY

REPORT HOLDER:

DUTCH QUALITY STONE, INC.

EVALUATION SUBJECT:

DUTCH QUALITY STONE ADHERED VENEER



"2014 Recipient of Prestigious Western States Seismic Policy Council (WSSPC) Award in Excellence"



ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



ICC-ES Evaluation Report

ESR-1942

Reissued March 2019

This report is subject to renewal March 2021.

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

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:

DUTCH QUALITY STONE, INC.

EVALUATION SUBJECT:

DUTCH QUALITY STONE ADHERED VENEER

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2015 *International Building Code*® (IBC)
- 2015 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

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

- Other codes (see Section 8.0)

Properties evaluated:

- Veneer strength and durability
- Thermal resistance

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

- 2016 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 3.0

2.0 USES

Dutch Quality Stone Adhered Veneer is used as an adhered, nonload-bearing, exterior veneer on wood-framed or light gage steel stud walls, concrete walls or masonry walls.

3.0 DESCRIPTION

The veneer is a precast concrete product made to resemble natural stone in color and in texture. The concrete is composed of cement, aggregate, water, admixtures and coloring. The veneer units are molded and cured at the plant. The average saturated weight of the installed veneer units does not exceed 15 pounds per

square foot (73.2 kg/m²). Recognized styles and accessories are as follows:

Styles	Brick-Stone, Castle Stone, Cobbled Limestone, Drystack, Fieldstone, Ledgerstone, Limestone, River Rock, Split Granite, Stackstone, Stack Ledge, Tuscan Ridge, Tuscan Veneer, Weather Ledge, Weathered Plank 4, Weathered Plank 6
Accessories	Row Locks 4x5, Row Locks 5.7, Half Brick, Full Brick, Flat Window Trim, Jack Arch Wings, Receptacle Block, Light Block, Water Hydrant, Circle Vent, Arch Top Vent, Address Block

The stone veneer has an *R*-value of 0.42 when tested in accordance with ASTM C177 at a thickness of 1.5 inches (38 mm).

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

4.0 INSTALLATION

4.1 General:

Installation of the 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. In accordance with the code, the veneer can be installed over a lath and mortar scratch coat or directly to concrete and masonry.

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

- 5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.
- 5.2 Expansion or control joints used to limit the effect of differential movement of supports are to be specified by the architect, designer or 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 stone veneer, scratch coat and setting bed, as applicable. At wall openings, the supporting members must be designed to limit deflection to $\frac{1}{600}$ 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 weight of 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 Dutch Quality Stone Adhered Veneer is 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 Report of testing in accordance with ASTM C177.

7.0 IDENTIFICATION

- 7.1 Each package of veneer is labeled or stamped with the manufacturer's name (Dutch Quality Stone), the product name, style name and the evaluation report number (ESR-1942).
- 7.2 The report holder's contact information is the following:

DUTCH QUALITY STONE, INC.
POST OFFICE BOX 308
MOUNT EATON, OHIO 44659
(877) 359-7866
www.dutchqualitystone.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 Dutch Quality Stone products addressed in Sections 2.0 through 7.0 of this report comply with, or are suitable alternatives to what is specified in, the codes listed above, and must be installed in accordance with the 2015 IBC and IRC, as described in Section 4.0.

Safety Data Sheet (SDS)

Product: Adhered Masonry Stone Veneer (AMSV)
SDS No: 010 Preparation Date: 05/31/2015
Version No.: 1.0 Revision Date: 12/07/2015

SECTION 1. IDENTIFICATION OF THE MIXTURE AND SUPPLIER

1.1 Product Identifier:

Product name: Adhered Masonry Stone Veneer
Product code: Various
Formula: Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Relevant identified uses: Interior or Exterior Wall or Surface Covering
Uses advised against: Any use other than those recommended

1.3 Details of the supplier of the safety data sheet:

Manufacturer/Supplier: Dutch QualityStone
Street Address: 1370 Grand Avenue, San Marcos, CA
Country ID/Postcode: USA/92078
Customer service telephone: 760-736-3232/ 800-925-1491

1.4 Emergency telephone number:

Emergency telephone number: 877-347-8096
Hours available: 24 hours a day / 7 days a week

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture:

Adhered Masonry Stone Veneer (AMSV) are defined by OSHA as an article (under normal conditions, no more than minute or trace amounts of a hazardous chemicals are released and the article does not pose a physical hazard or health risk to employees).

An SDS not is required for articles; however, this SDS is provided to communicate hazards associated where activities related to the Adhered Masonry Stone Veneer (cutting, grinding, crushing, drilling or breaking) may result in the release of a hazardous substance in DUST.

GHS Classification(s) for Adhered Masonry Stone Veneer according to OSHA Hazard Communication Standard (29 CFR 1910.1200) under normal handling conditions:

None

GHS Classification(s) for dust generated from cutting, grinding, crushing, drilling or breaking of Adhered Masonry Stone Veneer according to OSHA Hazard Communication Standard (29 CFR 1910.1200) under use conditions that may result in the release of hazardous substances:

Skin Corrosion/Irritation, Category 2 (H315)

Eye Damage/Irritation, Category 2 (H319)

Specific Target Organ Toxicity-Repeated Exposure (STOT-RE), Category 1 (H372)

Note: The AMSV dust classifications are based on (1) individual ingredient classifications (i.e., Silica Sand [SiO₂], pumice, expanded shale, expanded clay or expanded slate, Portland Cement, Fly Ash, etc.), (2) the final chemical composition of the AMSV (based on cement chemistry) and (3) the form of the material (dust). Further, the Specific Target Organ Toxicity-Repeated Exposure is a conservative classification based on the potential presence of respirable crystalline silica. Dutch Quality Stone has not performed analysis for the presence of respirable crystalline silica under these handling conditions.

Additional information:

For full text of GHS Hazard statements (H-statements) and associated Precautionary statements (P-statements), see below.

2.2 Label elements

The Hazard Pictograms, Signal Word and Precautionary Statements only apply to activities that may release hazardous substances from the AMSV (i.e., cutting / grinding / crushing / drilling / breaking).

No Hazard Pictograms, Signal Word or Precautionary Statements are applicable to the Adhered Masonry Stone Veneer.

Hazard Pictograms that apply to the dust generated from cutting, grinding, crushing, drilling or breaking of the Adhered Masonry Stone Veneer:



Signal Word:

Danger

Hazard Statements:

**(For AMSV Dust
Generated from
Cutting, Grinding,
Crushing, Drilling or
Breaking)**

H315: Causes skin irritation.

H319: Causes eye irritation.

H372: Causes damage to lungs through prolonged or repeated inhalation exposure.

Precautionary Statements:

**(For AMSV Dust
Generated from
Cutting, Grinding,
Crushing, Drilling or
Breaking)**

P260: Do not breathe dust.

P270: Do not eat, drink or smoke while using this product.

P271: Use only outdoors or in a well-ventilated area.

P264: Wash thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352: IF ON SKIN: Wash with plenty of water.

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314: Get medical advice/attention if you feel unwell.

P321: See the SDS for specific treatment.

P332 + P313: If skin irritation occurs, get medical advice/attention.

P337 + P313: If eye irritation persists, get medical attention.

P362 + P364: Take off contaminated clothing and wash before reuse.

P501: Dispose of generated dust in accordance with local / regional / national / international regulations.

2.3 Other hazards related to AMSV dust generated from cutting, grinding, crushing, drilling or breaking of adhered masonry stone veneer.

Listed Carcinogens: Silica dust (respirable, crystalline fraction) in the form of quartz.

IARC: Yes **NTP:** Yes **OSHA:** No **Other:** No (European Union)

Hazardous Properties: Dust generated from cutting, grinding, crushing, drilling or breaking may cause eye damage and skin irritation. May be irritating to respiratory tract. Respirable crystalline silica may cause damage to lungs upon repeated inhalation exposures.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Description of the mixture:

The product is a solid concrete block that, when subjected to cutting, grinding, crushing, drilling or breaking, may form hazardous dusts.

3.2 Hazardous Ingredients:

Name	CAS No.	Weight %	GHS Classification per OSHA Hazard Communication (29 CFR 1900.1200)
Silica dioxide (quartz)	14808-60-7	0-90%	STOT-RE, Category 1 (H372)*
Portland Cement	65597-15-1	8-15%	Skin Corrosion/Irritation, Category 2 (H315) Eye Damage/Irritation, Category 1 (H318) STOT-Single Exposure, Category 3 (H335)
Fly Ash	68131-74-8	0-4%	STOT-RE, Category 1 (H372*)
Iron Oxide Pigments	001309-37-1	0-1%	Not considered a hazardous ingredient.

* The Specific Target Organ Toxicity-Repeat Exposure (STOT-RE) is a conservative classification based on the presence/potential presence of respirable crystalline silica.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

- Inhalation:** If dust generated from cutting, grinding, crushing, drilling or breaking is inhaled, remove person to fresh air and keep comfortable for breathing. Get medical attention if respiratory symptoms persist.
- Skin contact:** If dust generated from cutting, grinding, crushing, drilling or breaking is on skin, wash with soap and water. Get medical advice/attention if irritation occurs/persists.
- Eye contact:** If dust generated from cutting, grinding, crushing, drilling or breaking is in eyes, rinse cautiously with water for several minutes. Get medical advice/attention if irritation occurs/persists.
- Ingestion:** No specific first aid measures are required.

4.2 Most important health effects related to AMSV dust generated from cutting, grinding, crushing, drilling or breaking, both acute and delayed:

- Acute effects:** Direct exposure to dust generated from cutting, grinding, crushing, drilling or breaking may cause eye damage/irritation, skin irritation and respiratory irritation. Dust can dry and irritate the skin and cause dermatitis. Can irritate eyes and skin through mechanical abrasion.
- Delayed effects:** Chronic exposure to inhaled dust generated from cutting, grinding, crushing, drilling or breaking may cause lung damage from repeated exposure. Chronic inhalation of dusts containing free crystalline silica may result in silicosis.

4.3 Indication of any immediate medical attention and special treatment needed:

Seek first aid or call a doctor if contact with dust generated from cutting, grinding, crushing, drilling or breaking with eyes occurs and irritation remains after rinsing.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing Media:

- Suitable extinguishing media:** Product is not flammable. Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media:** Not applicable; the product is not flammable.

5.2 Special hazards arising from the substance or mixture:

- Hazardous combustion products:** None known.

5.3 Advice for firefighters:

- Special protective equipment and precautions for firefighters:** As with any fire, wear self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures associated with AMSV dust generated from cutting, grinding, crushing, drilling or breaking:

For Non-Emergency Personnel:

Protective equipment: In case of exposure to dust generated from cutting, grinding, crushing, drilling or breaking, wear specified protective equipment. (See Section 8).

Emergency procedures: Avoid the creation of dust generated from cutting, grinding, crushing, drilling or breaking. Use scooping, water/flushing/misting or vacuum cleaning systems. Wet methods of cutting, grinding, crushing, drilling or breaking are the preferred method of controlling dust.

For Emergency Responders:

Protective equipment: In case of exposure to dust generated from cutting, grinding, crushing, drilling or breaking, wear specified protective equipment. In case of fire, use self-contained breathing apparatus with full face mask.

6.2 Environmental Precautions

Discard any product or dust residue in compliance with local regulations.

6.3 Methods and material for containment and cleaning up:

For containment and cleaning up: After cutting, grinding, crushing, drilling or breaking activities, use scooping, water spraying/flushing/misting or ventilated vacuum cleaning system to clean up dust generated from cutting, grinding, crushing, drilling or breaking. Use closed containers. Do not use pressurized air to clean dust.

Other information: Take measures to avoid dust formation during cutting, grinding, crushing, drilling or breaking activities.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Protective measures: Avoid contact with dust generated from cutting, grinding, crushing, drilling or breaking with skin, eyes, and clothing. Avoid breathing dust. Wash thoroughly after handling. Wet methods of cutting, grinding, crushing, drilling or breaking are the preferred method of controlling dust.

Measures to prevent fires: Not applicable; material is non-flammable.

Measures to prevent dust generation: Vacuum, scoop, or use water mist/spray/flush to remove generated dust during cutting, grinding, crushing, drilling or breaking activities. Do not use pressurized air. Wet methods of cutting, grinding, crushing, drilling or breaking are the preferred method of controlling dust.

Measures to protect the environment: Not applicable; material is not an environmental hazard.

Advice on general occupational hygiene:

Practice good housekeeping. Avoid formation of dust generated from cutting, grinding, crushing, drilling or breaking. Do not breathe dust. Use adequate exhaust ventilation, dust collection and/or water mist to maintain airborne dust concentrations below permissible exposure limits. Respirable crystalline silica dust may be in the air without a visible dust cloud. In case of insufficient ventilation, wear a NIOSH approved respirator for silica dust when using, handling, storing or disposing dust from this product. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing that has become dusty. Avoid eating, smoking, or drinking while handling the material.

7.2 Conditions for safe storage, including any incompatibilities:

Storage conditions: Minimize dust produced during loading and unloading.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters applicable to AMSV dust generated from cutting, grinding, crushing, drilling or breaking:

United States

OCCUPATIONAL EXPOSURE LIMITS FOR HAZARDOUS SUBSTANCES IN THE WORKPLACE					
SUBSTANCE		OSHA PEL TWA / STEL (mg/m ³)	NIOSH REL TWA / STEL (mg/m ³)	ACGIH TLV TWA / STEL (mg/m ³)	CAL - OSHA PEL (mg/m ³)
Calcium Oxide		5	2	2	-
Crystalline Silica	Total Quartz	$30 \div (\%SiO_2 + 2)$ (Total Quartz)	-	-	0.3
	Respirable Crystalline Silica	$10 \div (\%SiO_2 + 2)$	0.05	0.025 (α -quartz & cristobalite)	0.1
	Cristobalite	-	0.05	0.025 (α -quartz & cristobalite)	0.05 (respirable)
Particulates Not Otherwise Regulated	Total	15	15	-	10
	Respirable	5	5	-	5

8.2 Exposure controls:

8.2.1. Exposure Controls

Engineering controls:

Ventilation should be adequate to maintain the ambient workplace atmosphere below the exposure limit(s). Use general and local exhaust ventilation and dust collection systems as necessary to minimize exposure to dust generated from cutting, grinding, crushing, drilling or breaking. Wet methods of cutting, grinding, crushing, drilling or breaking are the preferred method of controlling dust.

8.2.2. Personal Protective Equipment

Respiratory protection:	Wear a NIOSH/MSHA approved particulate respirator if exposure to dust generated from cutting, grinding, crushing, drilling or breaking is unavoidable and where occupational exposure limits may be exceeded. If airborne dust exposures exceed the PEL or TLV, a self-contained breathing apparatus or airline respirator is recommended.
Eye and face protection:	If eye contact with dust generated from cutting, grinding, crushing, drilling or breaking is anticipated, wear protective glasses with side shields. Avoid contact lenses.
Hand and skin protection:	Wear gloves and protective clothing to minimize skin contact with dust generated from cutting, grinding, crushing, drilling or breaking. Wash hands with soap and water after contact with material.
Foot protection:	Wear American National Standards Institute (ANSI) approved hard-toed safety shoes when handling AMSV.

8.2.3. Environmental Exposure Controls

Instructions to prevent exposure:	No special requirements. Discard any product or dust residue in compliance with local regulations. Wet methods of cutting, grinding, crushing, drilling or breaking are the preferred method of controlling dust.
--	---

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Property	Value	Property	Value
Appearance:	Simulated Stone	Lower Explosive Limit (LEL):	Not applicable
Odor	Odorless	Vapor Pressure (Pa):	Not applicable
Odor threshold	Not applicable	Vapor Density:	Not applicable
pH (25°C):	Not available	Relative Density/Specific Gravity:	1.4 – 1.6
Melting/Freezing Point (°C):	Not applicable	Water Solubility:	Negligible
Initial Boiling Point (°C):	Not applicable	Partition Coefficient: <i>n</i>-octanol/water:	Not applicable
Boiling Range (°C):	Not applicable	Auto-ignition Temperature (°C):	Not applicable
Flash Point(°C):	Not applicable	Decomposition Temperature (°C):	Not available
Evaporation Rate:	Not applicable	Viscosity:	Not applicable
Flammability (solid, gas):	Not combustible	Explosive Properties:	Not applicable

Property	Value	Property	Value
Upper Explosive Limit (UEL):	Not applicable	Oxidizing Properties:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

10.1	Reactivity	Stable inert material
10.2	Chemical stability	Stable inert material
10.3	Possibility of hazardous reactions	None known.
10.4	Conditions to avoid	None known
10.5	Incompatible materials	None known
10.6	Hazardous decomposition products	None known

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute toxicity:	No data is available on the AMSV dust generated from cutting, grinding, crushing, drilling or breaking. No ingredients within the mixture exhibit acute toxicity.
Skin corrosion/irritation:	Contact with dust may cause skin irritation.
Serious eye damage / irritation:	Eye Irritant. Eye contact with dust generated from cutting, grinding, crushing, drilling or breaking may cause eye irritation.
Respiratory or skin sensitization:	No data is available on the AMSV dust generated from cutting, grinding, crushing, drilling or breaking. No ingredients exhibit sensitization effects.
Germ cell mutagenicity:	No data is available on the AMSV dust generated from cutting, grinding, crushing, drilling or breaking. No ingredients exhibit mutagenic effects.
Carcinogenicity:	No data is available on the AMSV dust generated from cutting, grinding, crushing, drilling or breaking. Crystalline silica (respirable) has been identified as a carcinogen by IARC and NTP.
Reproductive toxicity:	No data is available on the AMSV dust generated from cutting, grinding, crushing, drilling or breaking. No ingredients exhibit reproductive toxicity.
STOT single exposure:	No data is available on the AMSV dust generated from cutting, grinding, crushing or drilling.

Product: Adhered Masonry Stone Veneer (AMSV)

SDS No: 001

Version No.: 1.0

Preparation Date: 05/31/2015

Revision Date: 12/07/2015

STOT repeated exposure: No data is available on the repeated inhalation of AMSV dust generated from cutting, grinding, crushing, drilling or breaking. Repeated inhalation of AMSV dust generated from cutting grinding, crushing or breaking may cause lung damage if respirable crystalline silica is present. Crystalline silica (respirable) has been shown to cause silicosis after repeated exposure.

Aspiration hazard: Not applicable, the material is a not a liquid.

SECTION 12. ECOLOGICAL INFORMATION

No data available on the AMSV dust generated from cutting, grinding, crushing, drilling or breaking.

SECTION 13. DISPOSAL CONSIDERATIONS

Considered a non-hazardous waste. Follow applicable federal, state and local regulations.

SECTION 14. TRANSPORT INFORMATION

Regulatory Entity

US DOT	Shipping Name	Not regulated
	Hazard Class	Not regulated
	ID Number	Not regulated
	Packing Group	Not regulated

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations / legislation specific to the mixture:

United States Regulations

Toxic Substances Control Act (TSCA) Inventory Status	All components of this product are listed on the TSCA Inventory or are exempt from listing.	
SARA (Section 311/312)	Reactive Hazard	No
	Pressure Hazard	No
	Fire Hazard	No
	Immediate/Acute Toxicity	No
	Delayed/Chronic Toxicity	Yes – respirable crystalline silica
SARA Section 313 Information:	This product does not contain any toxic chemicals listed under 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA).	
Clean Air Act (CAA)	This product does not contain any toxic chemicals listed under the CAA at concentrations greater than 0.1%.	
	VOC Content (weight %).	0 wt. %

Product: Adhered Masonry Stone Veneer (AMSV)

SDS No: 001

Version No.: 1.0

Preparation Date: 05/31/2015

Revision Date: 12/07/2015

United States Regulations

Volatile Organic Compounds (VOCs)

Remarks:

Estimated

State Right-to-Know Status

California Prop. 65:

Crystalline Silica.

Massachusetts:

Silica, Crystalline-Quartz;
Calcium oxide; Calcium carbonate (Limestone); Portland cement; Iron oxide dust.

New Jersey

Silica, Crystalline-Quartz;
Calcium oxide; Calcium carbonate (Limestone); Cement, Portland, Chemicals; Iron oxide.

Pennsylvania:

Quartz (silica dioxide); Calcium oxide; Calcium carbonate (Limestone); Cement, Portland, Chemicals; Iron oxide.

Dispose of all waste product and containers in accordance with federal, state and local regulations.

SECTION 16. OTHER INFORMATION

16.1 Indication of changes:

Initial SDS prepared on 04-07-2015; Revised 12/07/2015

16.2 Abbreviations and acronyms:

AMSV	Adhered Masonry Stone Veneer
ANSI:	American National Standards Institute
CAA:	Clean Air Act
Cal/OSHA:	California Department of Industrial Relations - Division of Occupational Safety and Health
CAS:	Chemical Abstract Service Registry Number
CFR:	Code of Federal Regulations
CWA:	Clean Water Act
GHS:	Globally Harmonized System of Classification and Labeling
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
LEL:	Lower explosive limit
MSHA:	Mine Safety and Health Administration
NA:	Not Applicable
NIOSH:	National Institute of Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
Pa:	Pascal
PEL:	Permissible exposure limit
SARA:	Superfund Amendments and Reauthorization Act
SDS:	Safety data sheet
STEL:	Short-term exposure limit
STOT-RE:	Specific target organ toxicity-repeated exposure

Product: Adhered Masonry Stone Veneer (AMSV)

SDS No: 001

Version No.: 1.0

Preparation Date: 05/31/2015

Revision Date: 12/07/2015

STOT-SE: Specific target organ toxicity-single exposure
TLV: Threshold limit value
TSCA: Toxic Substances Control Act
TWA: Time-weighted average
UEL: Upper explosive limit
USA: United States of America
US DOT: United States of Department of Transportation
VOC: Volatile organic compound

16.3 Other hazards:

Hazardous Materials Identification System (HMIS)

Degree of hazard: 0 = low, 4 = extreme

Health: 1*

Flammability: 0

Reactivity: 0

** Dust generated from cutting, grinding, crushing, drilling or breaking activities may result in a chronic health hazard (Category 3 Health Hazard)*

Personal Protection: B

Disclaimer:

This SDS has been prepared in accordance with the Hazard Communication Rule 29 CFR 1910.1200. Information herein is based on data considered to be accurate as of date prepared. No warranty or representation, express or implied, is made as to the accuracy or completeness of this data and safety information. No responsibility can be assumed for any damage or injury resulting from abnormal use, failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

— End of Safety Data Sheet (SDS) —