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Product Evaluation

EC125 | 0921

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: EC-125

Effective Date: September 1, 2021
Re-evaluation Date: July 2025

Product Name: Manufactured Concrete Masonry Stone Veneer

Manufacturer: Lone Star Stone, Inc.
1073 FM 1713
P.O. Box 2125
Whitney, TX 76692
(817) 243-2238

General Description:
This evaluation report is for concrete masonry stone veneer. The concrete masonry stone veneer is precast to resemble natural stone. The stone veneer is used as a non-loadbearing, nonstructural, exterior wall covering. The veneer is of various thickness ranging from 1" to 1-5/8".

Limitations:
Design Pressure: +63.8 psf / -85.5 psf

Wall Bracing: The masonry stone veneer is not to be used to resist lateral loads (must not be used as wall bracing or as a shearwall).

Installation:

General Installation Requirements:

The stone veneer must be installed in accordance with the manufacturer's installation instructions, *Installation Guide for Adhered Concrete Masonry Veneer* published by the Masonry Veneer Manufacturers Association (MVMA), and this product evaluation report. Where differences occur between the installation instructions and this evaluation report, this evaluation report must be followed.

All fasteners used must be corrosion resistant as required by the IRC and the IBC.

Wall Framing: Wall framing must be capable of resisting the design loads specified. Wall framing members must be minimum nominal 2x4 Southern Yellow Pine dimension lumber. Space the wall framing members a maximum of 16" on center.

Wall Sheathing: The exterior surface of the wall framing must be sheathed with wood structural panels (minimum nominal 15/32" plywood). The sheathing must be secured to the wall framing to resist the required wind loads.

Wall Bracing: Wall bracing must be installed as required for the structure.

Water-Resistive Barrier: Install one layer of Tyvek House Wrap. Secure to the wall sheathing with 1" long cap nails at approximately 12" on center. Install a second layer of Grade D building paper laid horizontally. The paper is secured with 1" long cap nails at approximately 16" on center.

Metal Lath: 2.5 lb/sq yd self-furring galvanized, expanded diamond mesh metal lath. Install over the water-resistive barrier. Install with 2" overlaps on the horizontal seam. The lath is secured to the wall studs through the wall sheathing with 6d common wire nails. The fasteners are spaced a maximum of 6" on center along each wall stud. Nails must be long enough to penetrate a minimum of 1" into the wall studs.

Stone Install: A weep screed comprised of 26-gauge galvanized sheet metal with a vertical attachment flange 3-1/2" tall is secured to the base of each wall. Additionally, standard 1/2" expanded flange casing beads constructed of 26-gauge galvanized sheet metal is installed at the vertical edges and top of the wall.

Type N or Type S mortar for the scratch coat is mixed with a low-speed jiffy-style paddle mixer in accordance with manufacturer's recommended procedures. Add water in accordance with the manufacturer's recommendations to achieve the desired consistency.

The scratch coat mortar is applied to metal lath to a thickness ranging from 1/2" to 5/8" thickness, fully encapsulating the metal lath. After a period ranging from 45 to 70 minutes from the application of the mortar scratch coat, the surface was scored (scratched) horizontally with a scarifying tool.

Scratch coat mortar is cured overnight by covering the full height of the wall with a sheet consisting of burlap laminated to plastic (Burlene®). The burlap is periodically moistened with a fine mist of water.

After a curing period of approximately 48 hours, the burlap/plastic sheeting is removed, and installation of the precast concrete veneer is initiated. Layout of the units is random and utilized the complete range of the various sizes of the masonry veneer.

Masonry units are set on a temporary starting board at the bottom of each wall and placed in a modular manner to produce bed joints every 10". Nominal width of head and bed joints is 3/8".

Type S mortar for placement of masonry units is mixed in the same manner as for the scratch coat material.

The backs of all masonry units are initially blown free of any surface dust and then moistened by a brush dipped in water. Mortar is buttered onto the back face of the unit and then pressed firmly into position on the wall to assure a full bond. Excessive mortar that occasionally extruded through the joints is removed.

After complete layup of the masonry units on the wall, the mortar is allowed to firm up for a period ranging from 2 to 3 hours before grouting of the joints. Grouting is accomplished by use of a grout bag filled with the same mortar used for the scratch coat and adhering of the units. The mortar in the joints is allowed to achieve a 'thumbprint hard' consistency before raking and tooling of the joints; typically, this occurs between 20 and 40 minutes after grouting.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.