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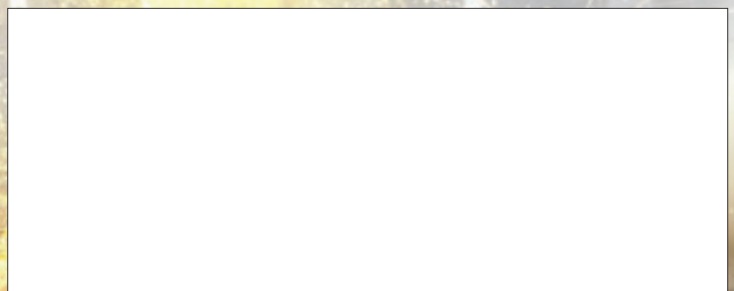
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Stone Veneer Siding

**The Problems and the Impact
on the Relocation Industry**

David B. Russ, CRP, and Cliff Kapson

Stone veneer has become an increasingly popular exterior cladding for housing over the past 10 to 15 years, due mainly to its aesthetically pleasing appearance. While stone veneer siding has been around for a long time, issues associated with this type of exterior cladding have become evident only within the last few years. These problems can present complications for relocation professionals because of the impact they may have on home value and marketing time.

There are many types of stone veneer—sometimes referred to as manufactured stone veneer (MSV), adhered concrete masonry veneer (ACMV), or cultured stone. The determining factor is not necessarily what type of stone is installed but the fact that it is used as a veneer.

The American Concrete Institute defines adhered veneer as “masonry veneer secured to and supported by the backing/substrate—which is usually plywood or oriented strand board (OSB) sheathing—through adhesion.” Anchored veneer is defined as “masonry veneer secured to and supported laterally by the backing through anchors and supported vertically by the foundation or other structural elements” (see photos on page 110).

Stone veneer can be natural or manufactured. Natural stone, such as fieldstone, is collected or quarried. Manufactured stone is made to replicate the look of natural stone. Both natural and manufactured stones are typically cut to a thickness of 1 to 2 inches and are then adhesively fastened or anchored to the exterior wall of a commercial or residential building.

RESULTS OF IMPROPER INSTALLATION

When properly installed, stone veneer creates a drainable system in which any moisture that gets behind the veneer will drain from behind the cladding. In many cases it has been discovered that stone veneer was installed as a barrier system or not installed correctly, so that it traps moisture. Moisture intrusion behind the cladding can lead to fungal growth, rotting of the wood in the house framing, and subsequent deterioration of the cladding itself.

In most cases, it is visible evidence of moisture intrusion into the interior of the home that leads to the discovery of stone veneer-related issues.

Unfortunately, by the time the moisture has become evident in the interior, damage has usually occurred within the structure, including the substrate and wall framing. Investigation of the reason for the moisture intrusion has generally revealed that the cladding was installed improperly.

It is no secret that some builders and/or subcontractors take shortcuts during the installation of various components during house construction, and this is one of them. Many times these shortcuts are in direct conflict with the manufacturer’s installation instructions and/or general best practices for installing exterior claddings similar to those associated with exterior insulation and finish systems (EIFS).

These installation issues often include improper or missing flashing, improper or missing sealant around doors and windows and dissimilar materials, improper termination of the cladding to soft (landscaping) and hard (concrete, asphalt, patio blocks, etc.) grades, missing weep screed (drainage flashing vent at the bottom of an exterior wall) for proper drainage behind the cladding, and lack of proper maintenance.

THE INSPECTION PROCESS

A visual evaluation by a specialist can determine whether there are any obvious installation defects. If defects in installation or signs of moisture penetration are noted, a further evaluation, including moisture probing, is recommended.

Moisture probing requires drilling a hole through the mortar in areas where moisture is typically found, where there is visible evidence such as staining, and/or where there are signs of improper or missing installation components. These holes are typically 3/16 to 1/8 inch in diameter. A moisture meter probe is inserted into them to detect the level of moisture behind the veneer.

Elevated moisture readings can be an indication of damage to the underlying substrate and framing. When drilling the holes for the probe, the technician may also detect soft wood on the drill bit, which further substantiates that the underlying substrate and framing have been affected.

Based on the technician’s findings, corrective actions can be taken, including removal of some of the veneer to further investigate for substrate/



Center: Typical stone veneer; clockwise from upper left: moisture damage behind veneer; moisture probe after removal of veneer; moisture probe at veneer mortar; moisture probe and damage at grade (Photos courtesy of Cliff Kapson)

framing damage. Retrofitting the cladding to comply with the installation requirements of the manufacturer and/or industry standards related to the installation of stone veneer may also be recommended.

Certain credentials and certifications should be considered in the selection of an inspector. A qualified inspector should be a member of and/or certified by an organization such as:

- The Exterior Design Institute (EDI)
- The Building Envelope Science Institute
- Association of the Wall and Ceiling Institute (AWCI)
- Institute of Roofing, Building Envelope, and Waterproofing Professionals
- Sealant, Waterproofing, and Restoration Institute

In addition to these certifications and memberships, a qualified technician should also have experience with the application and inspection of this type of cladding. It may be difficult to find qualified technicians in certain areas of the U.S., requiring a broader search outside the immediate vicinity of the

property. Finding a technician with the proper background and training is imperative in order to obtain an evaluation that is comprehensive enough to determine the next course of action, whether it involves minor maintenance or more invasive investigation and retrofitting of the system.

IMPACT ON RELOCATION

When developing protocols for the evaluation of stone veneer siding, relocation professionals should consider many factors, including possible damage to underlying components that cannot be seen, as well as the impact on marketing the property for sale. The cost associated with repairs can run from very minor in relation to needed general maintenance to thousands of dollars, in the case where the cladding has to be removed and subsequent substrate and/or framing damage needs repair or replacement.

As the general public becomes more aware of the problems associated with stone veneer, a

home's value and/or marketing time could be greatly impacted, as was the case with EIFS. With this in mind, it would be prudent to have a professional evaluate the cladding in order to address any issues and relieve any concerns from prospective purchasers. *M*

David B. Russ, CRP, is vice president of GlobeSpec National Residential and Environmental Inspections. He can be reached at +1 800 231 1301 or by email at dbruss@globespec.com. Cliff Kapson is president of Cliff Kapson Consulting, Ltd. He can be reached at +1 888 304 3437 or by email at info@cliffkapsonconsulting.com.

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