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Stucco Requirements Under the 5th Edition Florida Building Code, Residential

Many questions have arisen concerning the requirements for the application of stucco to wood frame and masonry exterior walls as contained in the 5th Edition of the *Florida Building Code, Residential* Volume. While the 5th Edition code still references ASTM C 926, *Standard Specification for Application of Portland Cement-Based Plaster,* the code now contains new requirements specifying minimum curing times between the stucco coat applications. These new requirements appear to conflict with those contained in the referenced standard.

It is appropriate to review the requirements as contained in the current (2010) edition of the *Florida Building Code, Residential* Volume under Section R703, as follows:

Section R703: Exterior Covering:

R703.6 Exterior plaster.

R703.6.1. *Exterior use of Portland cement plaster shall comply with the application requirements of ASTM C 926.*

R703.6.2. *Installation of exterior lathing and framing shall comply with the application requirements of ASTM C 1063.*

R703.6.2.1 Weep screeds. *Reserved.*

R703.6.3. *Where cement plaster (stucco) is to be applied to lath over frame construction, measures shall be taken to prevent bonding between the cement plaster and the water-resistive barrier. A bond break shall be provided between the water-resistive barrier and the cement plaster (stucco) consisting of one of the following:*

1. *Two layers of an approved water-resistant barrier material; or*
2. *One layer of an approved water-resistant barrier over an approved plastic house wrap; or*
3. *Other approved methods or materials applied in accordance with the manufacturer's installation instructions.*

Section R703.6 of the 5th Edition *Florida Building Code, Residential* Volume has been revised extensively. Note the following new / revised sections now contained in Section R703.6:

- R703.6 Exterior Plaster – section revised.
- R703.6.1 Lath – section added.
- R703.6.2 Plaster – section added.
- R703.6.2.1 Weep Screeds – section added.
- R703.6.3 Water Resistive Barriers – section added.
- R703.6.4 Application – section added.
- R703.6.5 Curing – section added.

An area of concern is the minimum curing time required between coats per new sections R703.6.4, Application and R703.6.5, Curing, as follows:

5th Edition Florida Building Code, Residential Volume:
R703.6.4 Application. *Each coat shall be kept in a moist condition for at least 48 hours prior to application of the next coat. Exception: Applications installed in accordance with ASTM C 926.*

R703.6.5 Curing. *The finish coat for two-coat cement plaster shall not be applied sooner than seven days after application of the first coat. For three-coat cement plaster, the second coat shall not be applied sooner than 48 hours after application of the first coat. The finish coat for three coat cement plaster shall not be applied sooner than seven days after application of the second coat.*

Note that while Section R703.6.4 provides an exception for applications installed per ASTM C 926, Section R703.6.5 **does not**.

Next, consider the following taken from ***ASTM C 926 – 11a Standard Specification for Application of Portland Cement-Based Plaster:***

7. Application
7.1.9 Each coat shall be permitted to set before the next coat is applied. (See X1.4.2.)
7.1.10 Plaster coats that have become dry shall be evenly dampened with water prior to applying subsequent coats to obtain uniform suction. There shall be no visible water on the surface when plaster is applied.

8. Curing and Time Between Coats
8.1 Provide sufficient moisture in the plaster mix or by moist or fog curing to permit continuous hydration of the cementitious materials. The most effective procedure for curing and time between coats will depend on climatic and job conditions. (See X1.4.2.)
8.2 Sufficient time between coats shall be allowed to permit each coat to cure or develop enough rigidity to resist cracking or other physical damage when the next coat is applied. (See X1.4.2.)

Note the references to Section **X1.4.2**, which states that curing times vary with climatic conditions and the type of plaster base, as follows:

X1.4.2 ***Time Between Coats and Curing for Portland Cement-Based Plaster:***
X1.4.2.1 *The timing between coats will vary with climatic conditions and types of plaster base. Temperature and relative humidity extend or reduce the time between consecutive operations. Cold or wet weather lengthens and hot or dry weather shortens the time period. Moderate changes in temperature and relative humidity can be overcome by providing additional heating materials during cold weather and by reducing the absorption of the base by pre-wetting during hot or dry weather.*
X1.4.2.2 *In order to provide more intimate contact and bond between coats and to reduce rapid water loss, the second coat should be applied as soon as the first coat is sufficiently rigid to resist cracking, the pressures of the second coat application, and the leveling process.*
X1.4.2.3 *The amount of water and the timing for curing portland cement plaster will vary with the climatic conditions, the type of base, and use or nonuse of water-retentive admixtures.*
X1.4.2.4 *Some moisture must be retained in or added back to freshly applied portland cement-based plaster. If the relative humidity is relatively high (above 75 %), the frequency for rewetting a surface may be reduced. If it is hot, dry, and windy, the frequency of rewetting must be increased.*
X1.4.2.5 *Consider the physical characteristics of the structure as well as the previously mentioned conditions when selecting the method of curing. The method can be one or a combination of the following:*

(1) Moist curing is accomplished by applying a fine fog spray of water as frequently as required, generally twice daily in the morning and evening. Care must be exercised to avoid erosion damage to portland cement-based plaster surfaces.

Except for severe drying conditions, the wetting of finish coat should be avoided, that is, wet the base coat prior to application of the finish coat.

(2) Plastic film, when taped or weighted down around the perimeter of the plastered area, can provide a vapor barrier to retain the moisture between the membrane and plaster. Care must be exercised in placing the film: if too soon, the film may damage surface texture; if too late, the moisture may have already escaped.

(3) Canvas, cloth, or sheet material barriers can be erected to deflect sunlight and wind, both of which will reduce the rate of evaporation. If the humidity is very low, this option alone may not provide adequate protection.

So the question is, “What do you do”? The majority of building code officials are aware of this issue and most agree that it is acceptable to continue to utilize the provisions contained in ASTM C 926 as the standard is more specific in detailing the requirements.

In order to resolve this issue on a statewide basis, a **Declaratory Statement** from the *Florida Building Commission* will be necessary. Until such time, it is suggested that builders resolve the issue locally with the applicable authority having jurisdiction.

Respectfully Submitted,

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