Are direct applied exterior finish systems still used? If so, where?

—E-mail

Several manufacturers report that direct-applied exterior finish systems are still widely used in areas with milder climates, such as Hawaii, Southern California and Florida. DEFS seem better suited for such locations for a number of reasons. These are systems that use essentially the same components that are found in exterior insulation and finish systems, only without the insulating board. There are several variations on the theme, but basically there is a substrate (glass mat gypsum board, cement board, plywood, OSB and polyisocyanurate board, among others), a base coat (usually, but not necessarily cementitious), fiberglass mesh (which may be applied to the entire surface or just over the substrate joints), and an acrylic finish coat.

The insulating board in EIFS serves several purposes, which DEFS do without. First, the EPS board in barrier EIFS obviously offers some insulating properties, which DEFS cannot. Without this layer of insulation, the substrate is prone to greater expansion and contraction due to temperature changes. According to some, the wood-type substrates tend to be the worst offenders. EPS board is attached and then rasped, which ostensibly provides a uniformly smooth surface for the lamina (successive coats of material applied). Direct-applied systems, as the name suggests, are applied directly over the substrate; if there are surface irregularities on the substrate—which often has the joints taped and treated first—the nominally quarter-inch thick DEFS may not entirely hide those irregularities. EIFS insulating board provides a cushion between the substrate and the lamina that buffers some of the movement in the structure, somewhat reducing the cracking of the finish, which again is more likely in DEFS.

To recap, DEFS still enjoy healthy use in areas with mild climatic variations where the temperature changes are not so broad as to result in excessive substrate movement that could damage the finish.

Are the fibers and modifiers necessary in one-coat stucco? And how does one coat of stucco possibly replace conventional three-coat stucco?

—E-mail

According to several manufacturers’ product literature and the National One Coat Stucco Association, one-coat stucco is almost half the thickness of conventional three-coat stucco, and consequently needs the fibers and modifiers to achieve the strength necessary to serve as a cladding. It may sound like you get three for the price of one, but “one coat” means that the first two coats of a conventional three coat stucco are combined into the thickness of one, roughly 3/8-inch.

This base layer may be finished with a variety of things, including more stucco, an acrylic finish or an elastomeric coating to name a few. And though one of the selling points of the one-coat is that you achieve what is comparable to the two base coats with half the material in half the time, the folks in the three-coat camp argue that that might be stretching things a bit because it still takes even a skilled plaster two passes to get the material to the desired thickness.

The other big difference is that one-coat stucco must be applied over a substrate of some kind (see the list in the previous discussion, and add various masonry surfaces as well), it cannot be applied to open frame construction. However, the proponents of this system assert that when properly applied, one coat stucco provides a very durable cladding that can be used on multi-level structures.

About the Author
Lee G. Jones is AWCI’s director of technical services. Send your questions to him in care of AWCI’s Construction Dimensions, or send your e-mail question to jones@awci.org.