Where can I get a generic detail that shows a three coat portland cement plaster wall assembly with a one-hour fire rating? —via e-mail

My understanding is that there are no “generic” fire-rated assemblies containing portland cement plaster, or any other building material. Several testing laboratories annually publish volumes of ever increasing mass containing details of fire-rated assemblies of almost every imaginable combination. Consequently searching out a specific assembly composed of exactly the desired components has become an afternoon project for any given combination of components. The model codes each have sections on fire rated construction. Some are more specific than others regarding the fire resistance of various building components. For instance, table 719 in the International Building Code shows several combinations that include 7/8 inches of portland cement plaster and have at least a one-hour fire rating. Hopefully one can use his powers of persuasion to make the case that if it’s good enough for the IBC in those situations, it’ll work elsewhere.

I’ve been told that in the “Good Ol’ Days,” there were only a handful of such details, and if your design was basically consistent with one of them, you were good to go—that assemblies covered with 7/8 inches of three coat portland cement plaster were generally regarded to have a one-hour fire resistance. In the library of the Foundation of the Wall and Ceiling Industry, I found a book from 1964, Fire Resistance Ratings of Beam, and Truss Protections, Ceiling Constructions, Column Protections, Floor and Ceiling Constructions, Roof Constructions, Walls and Partitions. This book lists, among other things, a handful of not-so-specific assemblies using either 3/4 inches or 7/8 inches of portland cement plaster (and considerably more with gypsum plaster) that earned a one-hour fire rating.

In 1991, the Foundation published the Single Source Document: Fire Rated-Portland Cement-Based Plaster Assemblies, which is still available from the AWCI Bookstore. The manual contains 28 pages of various fire-rated assemblies with ratings ranging from 25 minutes to four hours. The manual’s introduction points out: “A historical review of the literature suggests that the testing of assemblies constructed with fire resistive portland cement-based plaster for an hourly fire resistance rating has been fragmentary and sporadic. One of the earliest available publications (circa 1921) contains fire test reports of building columns of cast iron and rolled or fabricated steel components, protected by portland cement-based plaster. Other early publications (circa 1941 and 1942) contain valuable information and fire ratings for wood and metal-framed partitions and for building constructions protected with portland cement-based plaster.”

So, when forced to produce documentation for the fire resistance of a specific assembly using portland cement plaster, I recommend approaching a manufacturer of the one building components used for either a test report using portland cement plaster, or an evaluation report with the required information.

We have gypsum board walls that have had carpeting glued to them. In removing the carpeting, the paper has pulled off of the drywall. Do you know of a product that can be applied over the drywall to repair it and can you recommend a member contractor to apply it? —via e-mail

Depending upon the severity of the damage, the wall may be more easily sealed and skim coated or another layer of gypsum board may be applied directly over the existing surface and finished. You can find contractors in your area by using the contractor database on our Web site at http://www.awci.org/cgi-bin/awci-contractors. Obviously, I would be playing favorites if I were to single one out.

About the Author
Lee G. Jones is AWCI’s director of technical services. E-mail your questions to jones@awci.org.