AAMA ANALYSIS

Working Toward a Solution

AAMA Seeks to Accommodate Component Issue

BY DEAN LEWIS

It's always a challenge to develop policy or write standards to hit just that right mix of both regulation of performance levels and accommodation of practical reality. Such is the case in many venues, from the esoteric world of mortgage-backed securities to the more mundane, but thankfully more familiar, sphere of exterior side-hinged door (SHD) performance.

The Regulatory Side

The regulatory goal: ensure the performance of SHDs from the standpoint of structural strength, resistance to air leakage and water penetration and durability of hardware and components. AAMA/WDMA/CSA 101/I.S.2/A440-08, NAFS — *North American Fenestration Standard/Specification for Windows, Doors and Skylights*—and its immediate 2005 predecessor—were crafted to do just that. These are the first door and window standards to establish performance specifications for SHDs, referencing separate AAMA standards for operating cycle performance, vertical load resistance, hardware load and water penetration resistance and forced-entry resistance.

Although 101/I.S.2/A440 is referenced by the I-codes, the section on SHDs is exempted from the code requirement due to one not-so-small problem.

The Problem

The reality is the common practice of component substitution—routine for jobbers, distributors and door pre-hangers who must satisfy their individual customers—can change the performance of the overall door assembly from that of the unit tested in the lab. If the 101/I.S.2/A440 requirements were enforced literally, each complete SHD configuration or variant thereof—with any and every substitution of components—would have to be tested, certified and labeled separately for compliance with the standard, an obviously impractical approach.

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Solving the Problem

We are working toward solving the dilemma of certifying door performance to meet the needs of code authorities while preserving the range of choice for builders and homeowners—all without creating an unnecessary and excessive hardship for the pre-hangers.

The emerging solution is a component-based program, rather than one based on testing the complete door system. Under a component-based approach, the base exterior SHD system would be tested to the air-water-structural requirements per 101/I.S.2/A440. Substitution would be permitted from an array of components that had been tested and rated for structural performance per the specific test requirements cited in the standard. The governing rating then is either that of the complete door assembly or its weakest component, whichever is lowest. This would allow for a variety of configurations without compromising the structural integrity of the door product.

In essence, it would mirror the "waiver of retest" option available in the AAMA Certification Program, in which testing (or when appropriate) an engineering evaluation of minor design changes and substitutions of components that meet the underlying component standards is permitted on a case-by-case basis, without requiring retest of the entire finished product.

Industry forums held in conjunction with AAMA Door Component Certification Task Group meetings during 2008 have yielded substantial progress on guidelines to be used to develop procedural guides for a workable rating and certification system. The forums have addressed a number of component-related issues, including weatherstrip and seals, glass, frames, astragals, fasteners, glass assemblies and door frames. Testing methodology is being developed. ▮

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