Concerns regarding NFPA 5000

by **Mark S. Graham**

A new model building code, *Building Construction and Safety Code™ NFPA 5000*, has been published by the National Fire Protection Association (NFPA) and now is available for adoption and enforcement by code jurisdictions. ("NFPA 5000: a new model building code," page 36, provides an overview of NFPA 5000 and its roofing-related provisions.)

NRCA is seriously concerned about NFPA 5000, specifically regarding the manner in which it was developed by NFPA, some of its provisions, and how those provisions will affect the roofing industry and building owners who have roof systems that need to comply with the code.

A consensus?

NFPA is touting NFPA 5000 as the first model building code developed through a full, open consensus-based process accredited by the American National Standards Institute (ANSI).

Being a member of NFPA since 1996, when I first heard NFPA was developing a consensus-based building code, I welcomed the opportunity to not only provide input but also vote on the code's final outcome.

As it turns out, NFPA 5000's roofing-related provisions were developed largely by NFPA's Technical Committee on Structures and Construction, which did not consist of a single roofing industry representative. Committee members admitted they only had limited expertise with roofing.

Furthermore, NFPA did not seek assistance from roofing industry professionals, and when input was provided by the roofing industry, it was largely ignored.

Insurance

It is clear the insurance industry played a large role in developing NFPA 5000's roofing-related provisions. Representatives from FM Global and State Farm Insurance Cos., Bloomington, Ill., significantly contributed to the code. Both companies' representatives were outspoken critics of most input from roofing professionals. As a result, NFPA 5000 takes much more of a "loss-mitigation" (reduced insurance payouts) approach than the other model building codes, which clearly take a life-safety approach in their code requirements.

For example, NFPA 5000 significantly limits the number of buildings on which aggregate can be used as roof system surfacing. NFPA indicated this approach was chosen to improve roof assemblies' performances and minimize the potential of windborne debris damaging adjacent buildings.

This position clearly is not technically justified, and when I raised this concern during an NFPA hearing, a representative from FM responded that a large problem with using aggregate on roof assemblies is that roofing contractors do not install it properly—it is not fully-adhered. This was an interesting response from FM particularly because I am not aware of FM recommending full adhesion of aggregate surfacing anywhere in its published approvals or other recommendations.

Similarly, NFPA 5000 requires roof assemblies be tested for their impact resistances when used on buildings in hail-prone regions as defined by the code. Although NRCA generally supports the concept of impact-resistant roof assemblies, the requirement is far from being justified in the context of a building code.

When I and others from the roofing industry raised concerns regarding the hail test methods and map defining hail-prone regions, FM and State Farm Insurance indicated the information contained in the code was the best available. This is interesting particularly because State Farm Insurance had proposed including different hail-testing and classification criteria and a significantly different map defining hail-prone regions in the *International Residential Code*. Also, the hail-prone region map FM publishes in its recommendations is significantly different from what it advocates in NFPA 5000.

Closing thoughts

NRCA is not the only organization that has serious concerns about NFPA 5000. Other industry organizations, including the National Association of Home Builders, also have expressed concerns with NFPA 5000.

NRCA will continue to closely monitor developments related to NFPA 5000 and work with NFPA, its code-development committees, insurance industry representatives and other interested parties to improve the code. I hope NFPA and those involved in the NFPA process will work cooperatively with NRCA in this undertaking.

Also, I encourage roofing material manufacturers to closely review NFPA 5000's roofing-related provisions. In some instances, NFPA 5000 includes requirements not contained in most other building codes. I hope manufacturers will help improve NFPA 5000 by participating in the NFPA process.

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