O'HAGIN'S, INC.
America's Leading Attic Ventilation Company

FAX TRANSMITTAL

To: DAVID NAUS, EXECUTIVE DIRECTOR	Date: 11.13.09
Company: CA. BUILDING STANDARDS COMM.	From: GREG DANIELS
Fax Number: 916-263-0959	Total pages including cover: 6

Subject: PUBLIC COMMENT RE: CBC PROPOSED CHANGES

☐ Urgent ☐ Reply ASAP ☐ For Processing ☒ For Review ☐ For Your Information

Comments:

PLEASE FIND THE FOLLOWING CORRESPONDENCE.

THANK YOU,

G.D.

Signed: _____

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November 13, 2009

California Building Standards Commission
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833
Attention: David Walls, Executive Director
Via Facsimile: (916) 263-0959

RE: Public Comment Regarding Proposed Change to existing CBC Ch. 7A §704A.2.1 (Proposed as Ch. 7A §706A.2)

Dear Mr. Walls:

The following submission is respectfully made pursuant to the provisions for public comment regarding the proposed revisions to the California Building Code, Chapter 7A, Wildland Urban Interface, by the Office of the State Fire Marshal for the State of California (hereinafter "OSFM").

O'Hagin's, Inc. is a California manufacturer of attic ventilation products and a member of the Fire Vent Safety Association. Established in 1991, O'Hagin's, Inc. is an industry leader in attic ventilation technology and national testing standards for such products. O'Hagin's, Inc. remains committed to the continued development of products that offer increased fire safety for residential construction in California and takes great pride in the ability to work over the past couple of years with the OSFM for the State of California regarding both code development and fire performance product testing. We remain very grateful to Chief Hoover and the other dedicated fire officials from the OSFM for their collaborative efforts in this regard.

Introduction

The current proposed revisions by the OSFM substantially weaken the requirements for flame and ember resistance of attic ventilation products **other than eave and soffit vents** that are commonly used to ventilate the interior attic space of residential structures as required by Chapters 12 and 15 of the current California Building Code. Indeed, numerous jurisdictions prohibit the use of under-eave and/or soffit ventilation. As such, the use of alternative methods for attic ventilation (e.g., "thru" roof – or, off-ridge type – vents, ridge vents, gable-end vents) may be the only available method of meeting the code-required ventilation mandates in such jurisdictions.

The current CBC Chapter 7A contains a performance requirement that all "thru" roof – or, off-ridge type – vents, ridge vents, gable-end vents "*shall resist the intrusion of flame and embers into the attic area of the structure.*" However, the proposed revisions by the OSFM remove the requirement that such thru roof, ridge and/or gable end type attic vent products "shall resist the intrusion of flame and embers into the attic area of the structure." This proposed code language substantially weakens the current code with respect to protection from structural damage due to flame and ember intrusion through the numerous highly susceptible ventilation openings in today's residential structures.

Should the California Building Standards Commission adopt the weakened code language in this very important area of residential construction as proposed by the OSFM?

The Proposal From The OSFM Eliminates the Requirement For Flame and Ember Resistant Vents for All Installations Other Than Under-Eave and Soffit Type Vents

The current proposed revisions by the OSFM eliminate the requirement for flame and ember resistant vents for all installations other than under-eave and soffit type vents. With regard to such thru roof, ridge and/or gable-end type attic vent products the new proposed code change by the OSFM merely requires that such vents:

1. [Have] openings therein [that are] a minimum of 1/16th inch (1.6mm) and shall not exceed 1/8th inch (3.2mm);
2. The materials used shall be noncombustible; and,
3. The materials used shall be corrosion resistant. (CBC §706A.2, in pertinent part, as proposed).

More specifically, the current California Building Code §704A.2.1 states, as follows:

> **704A.2.1 General.** When required by Chapter 15, roof and attic vents *shall resist the intrusion of flame and embers into the attic area of the structure*, or shall be protected by corrosion-resistant, noncombustible wire mesh with 1/4-inch (6mm) openings or its equivalent. (CBC §704A.2.1, emphasis added).

As such, the current code contains a performance standard (i.e., vents "shall resist the intrusion of flame and embers into the attic area of the structure") as well as a prescriptive alternative (i.e., corrosion-resistant, noncombustible, ¼ inch wire mesh).

However, the current proposed revision by the OSFM to the equivalent code section, California Building Code §706A.2 (as proposed) states, as follows:

> **706A.2 Requirements.** Ventilation openings for enclosed attic spaces, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation openings shall be fully covered with metal wire mesh, vents, or other materials that meet the following requirements:
>
> 1. The size of openings therein shall be a minimum of 1/16th inch (1.6 mm) and shall not exceed 1/8th inch (3.2mm).
> 2. The material used in the construction of the vent shall be of noncombustible material.
> 3. The material used in the construction of the vent shall be corrosion resistant. (CBC §706A.2 proposed).

Thus, the current specific "performance requirement" for attic ventilation products that are governed by this CBC section, as proposed, has been removed.

Therefore, under the proposed revisions by the OSFM, vents that meet the aforementioned three requirements can be used to ventilate the interior attic space of a residential structure **without any requirement that they "*shall resist the intrusion of flame and embers into the attic area of the structure.*"**

The New Code Language Proposed by the OSFM Negates The Last Five (5) Years of Research and Development in This Area of Residential Construction

1. The need for protection after the devastation of the 2003 California wildfires.

After 2003's destructive wildfires, promising new codes were implemented to help fortify structures from the catastrophic effects of wildfires in the Wildland Urban Interface (WUI). With many stakeholders at the table, The Blue Ribbon Commission recommended more stringent building standards in WUI areas. California's aforementioned Chapter 7A building standards were implemented in the spirit of that effort to protect the public.

2. New and innovative attic ventilation technology meets the need for flame and ember protection for residential structures in California.

The attic ventilation industry was quick to respond to the new code requirements for "flame and ember resistance" of attic vents. Indeed, several manufacturers contributed

design ideas and input at the code committee level as well as assistance in the test development process. O'Hagin's, Inc. remains committed to that process.

3. National testing standards for such products are currently being developed through ASTM.

National testing standards have been developed and proposed to ASTM. Currently, these items are in the submission and approval process. Ultimately, a uniform national testing standard will be available to quantify the performance requirements of ventilation products that make claims of flame and ember resistance.

First, a two-part test to quantify the resistance to flame impingement and ember intrusion was developed for eave, soffit, gable-end and foundation type vents. These are so-called "one dimensional" vents. The term "one-dimensional" refers to the fact that, as installed, the majority of these vent products are "flush" with the exterior of the structure.

Second, a test standard was developed to evaluate roof field and ridge vent response to wind blown flame and burning ember exposure. This test standard was developed to test vents that are not suitable to "one-dimensional" testing for flame and ember intrusion. For example, some vents are installed in the roof deck within the field of roofing materials (e.g., clay/concrete tile or composition shingles). To be effective in preventing ignition from flames and/or burning embers, these vents must be tested under conditions similar to those as installed. This second test standard evaluates the performance of the vent as installed within the surrounding roofing material (e.g., there may be "gaps" between a vent, as installed, and the surrounding roofing material that could, potentially, allow for the intrusion of flames and/or embers underneath the roofing material or into the interior attic space resulting in ignition). This test standard was developed with input from the OSFM.

The two aforementioned test standards are currently in process at ASTM. However, they are on different timelines. The first two-part test has been in process for a number of years. The second test has been in process for approximately six (6) months.

The preliminary work regarding these proposed test standards has predominantly been conducted with the input of many scientific and other experts on testing standards development as well as related scientific principles. Furthermore, the preliminary testing has been completed at nationally accredited testing laboratories. Therefore, the results of these tests, though not part of a current ASTM standard, should be deemed reliable.

4. The proposed code change by the OSFM may have a deleterious effect on these developments from the past five (5) years.

Without any requirement that attic ventilation products "*resist the intrusion of flame and embers into the attic area of the structure*," the importance of these innovative products as well as the testing standards that are currently being developed and going through the approval process will be marginalized. These innovations and test standard developments require tremendous investments in both time and money. Without any requirement for these items, there will be a disincentive to innovate or invest in such technology and/or testing standards.

Conclusion

The current proposed revisions from the OSFM will weaken the code requirements for resistance to flame and ember intrusion of attic ventilation products that are currently code required for residential construction. Additionally, the proposed changes may have a "chilling" effect on the tremendous progress and innovation in this relatively new area of attic ventilation design and technology. Moreover, the proposed changes could result in a situation where homes built under the new code would have fewer protections than homes built under the current code. This result would be a tremendous step backwards for the State of California.

Therefore, we respectfully request that the OSFM rescind their proposed revisions to current CBC §704A.2.1 (as set forth in proposed CBC §706A.2) and leave the current code language of CBC §704A.2.1 in effect (though renumbered as required). This will support the continued innovation and standards development in this area of construction and provide the greatest chance for success in protecting the people of the State of California from structural damage due to flame and ember intrusion from wildfire. This will serve to further bolster the national reputation of the State of California as a leader in code development and building standards in the area of WUI code development.

Respectfully Submitted,

Gregory S. Daniels
President

Cc: Kevin Reinertson, Acting Division Chief, Code Development & Analysis
State Fire Marshall's Office, *Via Facsimile*: (916) 445-8459