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May 12, 2026

California Building Standards Commission
2525 Natomas Park Drive, Suite 120
Sacramento, CA 95833

Attn: Mr. Stoyan Bumbalov
Executive Director

Re: SFM 04/25 2025 California Wildland-Urban Interface Code, Title 24, Part 7, Sub-Item 4-12

Dear Mr. Bumbalov:

Thank you for the opportunity to provide comments on the proposed amendments to Section 504.10.1, Vent Testing, included in the 45-Day Express Terms under Sub-Item 4-12. I encourage the Commission to consider the issue raised below regarding the proposed revision found in Sub-Item 4-12 Section 504.10.1 Vent Testing in the 45-Day Express Terms, which is shown below.

SUB-ITEM 4-12
Section 504.10.1 Vent testing

504.10.1 ~~Performance requirements~~ ***Vent testing.*** Ventilation openings shall be fully covered with ~~*Wildfire Flame and Ember Resistant vents approved and*~~ listed ~~*by the California State Fire Marshal, or*~~ *WUI* vents tested in accordance with ASTM E2886, to demonstrate compliance with all the following requirements:

1. There shall be no flaming ignition of the cotton material during the Ember Intrusion Test *of ASTM E2886*.

2. The Flame Intrusion Tests of ASTM E2886 shall be conducted in both the horizontal and vertical orientations.

~~*2.*~~*3.* There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.

4. The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).

The Express Terms propose a new Item 2, which will require that vents tested to ASTM E2886 to be subjected to both vertical and horizontal testing configurations. This new requirement for dual-orientation testing is totally logical if the vent could be installed in either a vertical or horizontal orientation. However, dual-orientation testing will be required even when the manufacturer's instructions and warranty information specifically limit the vent installation to only a vertical or horizontal orientation.

The current language in the CWUIC requires only one testing orientation—such orientation is based on the intended installation of the product. This dual-orientation testing requirement is an arbitrary revision creating a significant change without substantiation.

Vent manufacturers design their products for specific installation orientations, i.e. vertical or horizontal, and in some cases both. Many factors are involved in the design of vents, and they must meet multiple performance criteria, including flame resistance, ember resistance, resistance to wind-driven rain, environmental exposure and airflow performance. Many vents are designed to be installed in only one orientation; and that orientation is the manner in which they are currently tested, and the manner in which they should be tested. Requiring these products to perform identically when inverted or installed contrary to their design would not necessarily enhance safety. Requiring a vent designed exclusively for one orientation to pass testing in the opposing orientation forces manufacturers to design for conditions their product will never encounter.

There has been no testing or research to justify the requirement for dual-orientation testing. Requiring this dual-orientation testing does not necessarily mean the vent is more effective. This requirement for dual-orientation testing simply provides the appearance of increased rigor, but the result has not been demonstrated to improve safety. It will, however, increase construction costs, limit design innovation, and create conflicts with established technical consensus because it is contrary to the ASTM E2886 test standard.

The ASTM E05 committee has considered including dual-orientation testing in ASTM E2886 within the past year. After extensive deliberation, the ASTM E05 committee explicitly voted **not** to revise ASTM E2886 and **not** to require dual-orientation testing. The committee rejected the concept because of the lack of data that dual-orientation testing is justified or will increase fire safety. The ASTM E05.14 subcommittee is working on revising the standard and the testing process. These future revisions will be based on actual testing and examination of data, not an arbitrary requirement for dual-orientation testing.

Dual-orientation testing will increase the construction costs. Available data indicates this could increase costs by approximately $30 per vent, resulting in an added cost of roughly $480 to $720 per home, depending on vent count. These additional costs are being introduced without any demonstrated improvement in safety.

Item 5 of the Nine Point Criteria states

> "(5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards."

The "overall benefit" of dual-orientation testing has not been demonstrated at all. When the documentation is available, then it may make sense to revise the requirements. However, until then there is no justification for this increase in cost. The dual-orientation testing has not been demonstrated to improve safety, but we can predict that it will increase construction costs.

It is respectfully recommended that Section 504.10.1 be revised to require testing in either the vertical or horizontal orientation, based on the manufacturer's intended installation by disapproving the proposed Item 2 as follows:

> **504.10.1 ~~Performance requirements~~** ***Vent testing.*** Ventilation openings shall be fully covered with ~~*Wildfire Flame and Ember Resistant vents approved and*~~ listed ~~*by the California State Fire Marshal, or*~~ *WUI* vents tested in accordance with ASTM E2886, to demonstrate compliance with all the following requirements:
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> 1. There shall be no flaming ignition of the cotton material during the Ember Intrusion Test *of ASTM E2886*.

~~*2. The Flame Intrusion Tests of ASTM E2886 shall be conducted in both the horizontal and vertical orientations.*~~

~~*2.*~~ ~~*3.*~~ *2.* There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.

~~*4.*~~ *3.* The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).

The suggested revisions are highlighted in yellow with double-underline for new item numbering.

If you should have any questions, please contact me at (661) 431-5897.

Sincerely,

Kevin H. Scott
President