



## California State Fire Marshal Information Bulletin 13-007

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### RESIDENTIAL FIRE SPRINKLERS AND ENERGY REGULATIONS

This information bulletin has been developed to provide important basic assistance and information to contractors, fire sprinkler installers, code officials, and energy providers.

Over the last several months the Office of the State Fire Marshal (OSFM), California Energy Commission (CEC), California Building Industry Association (CBIA), the residential fire sprinkler industry (installers and manufactures), fire protection engineers, energy consultants, and code and standards organizations have met to discuss and address an advancing issue concerning air barrier and paths of air leakages associated with the installation of residential fire sprinklers, specifically concealed head installations. These discussions focused on the need to provide best practices information to meet proper installation of the life safety system and current energy regulations related to air infiltration. Also, the group recognized the need to continue discussions and work collaboratively together to address advancing technology in sprinkler design that would provide for a more limited air flow need for sprinkler activation.

Best practices outcomes of these meetings are as follows:

1. Residential fire sprinklers when installed correctly do not significantly contribute to an air infiltration and should not be targeted as a problem to meet state energy conservation requirements.
2. It is critical that fire sprinkler installers and those providing insulation work closely together to ensure that insulation installed does not adversely affect the operation of the sprinkler by blocking the airflow opening around a concealed sprinkler.
3. Fire sprinklers and their cover plates shall not be sealed or altered in any way.
4. Fire sprinklers shall be installed in accordance with the manufactures' listing criteria and adopted codes and standards.
5. It is important that air infiltration concerns be addressed in the early stages of construction.
6. Fire sprinkler system designers have more sprinkler options than the use of a concealed type. These options should be explored during the bidding stage.



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7. The Office of the State Fire Marshal and the California Energy Commission will work collaboratively on proposed code language that provides recognition of fire safety while meeting future energy conservation targets. An example of this would be to recognize the language approved for the national model energy code relating to air infiltration and fire sprinkler penetrations and insulation practices for fire sprinkler systems.

The installation of the residential fire sprinkler system shall be installed in accordance with California Building Standard and manufacturer's listing requirements. Modification of the sprinkler, protective cover plates or other system components is prohibited unless permitted by the components' listing. The intent of Section 110.7 of the California Energy Code (Mandatory Requirements to Limit Air Leakage) was not to interfere with the proper operation of a life safety system such as a residential fire sprinkler system and any modification to the system outside of the listing of the devices would not be permitted under the California Building Standards.

Again, it is important to recognize that properly installed required residential fire sprinklers do not add a significant increase in infiltration.

The following links provide additional resources relating to fire sprinkler installation:

- California Fire Sprinkler Coalition  
<http://osfm.fire.ca.gov/codedevelopment/CaliforniaHomeFireSprinkler.php>
- Residential 13-D Installations, Statistics, Components and Construction  
<http://osfm.fire.ca.gov/codedevelopment/pdf/califfiresprinklercoalition/OSFMCEC10142013.zip>

For additionally information please visit our website at [www.osfm.fire.ca.gov](http://www.osfm.fire.ca.gov)