



Coffee Break Training - Fire Protection Series

Inspection Techniques: Unprotected Attic Storage

No. FP-2010-5 February 2, 2010

Learning Objective: The student shall be able to identify the fire code requirements for attic, under-floor, or concealed space storage.

Large open attic spaces generally occur as the result of an architectural decision to have a tall roof line on a building.

Often, these spaces are unheated, have limited ventilation, marginal access, and no fire protection because they are not meant to be occupied spaces. The structural supports may be there solely to support the roof and ceiling elements, and may not be capable of handling additional loads.

Almost as often, however, this unused space provides the building tenant a simple solution to storage problems. Whether the storage occurs in the attic of a multi-family dwelling, the weather-resistant crawl space of an office occupancy, or in some other concealed space, there is a potential for combustible storage to add to a building's fire load and weaken its structural integrity.

Inspectors who find this unauthorized storage should refer to their fire codes for guidance. The model fire codes provide several options to enhance the fire safety for this storage arrangement:

- Attics, under-floor and concealed spaces used for combustible storage should be protected on the storage side as required for one-hour construction. Generally, this can be accomplished by a layer of 5/8-inch (15.8 mm) fire-rated gypsum wallboard with sealed joints. Openings that provide access to the storage should be protected by doors or access panels that are non-combustible of 1- 3/4-inch (44.5 mm) solid wood equipped with self-closing devices.
- As an alternative to the construction separation, the area may be provided with an approved automatic sprinkler system.
- National Fire Protection Association (NFPA) 1, *Uniform Fire Code*, Chapter 10 references the storage room requirements of NFPA 101 *Life Safety Code*® Chapter, 8.

If you suspect a building's structural elements are not capable of supporting the loads – regardless of the fire protection that is provided – you should obtain guidance from the local building code official regarding structural integrity.

For additional information, refer to the *International Fire Code*®, Chapter 3, NFPA 1, *Uniform Fire Code*, Chapter 10 or NFPA 101 *Life Safety Code*® Chapter, 8.



Attic storage like these boxes is prohibited by the fire codes except in specific cases.

