



Coffee Break Training - Fire Protection Series

Inspection Techniques: Fire-Resistive Construction Repairs

No. FP-2012-2 January 10, 2012

Learning Objective: The student shall be able to specify minimum fire-resistive construction requirements needed to maintain gypsum wallboard assemblies.

Many residential-type occupancies employ garbage, linen, or (as pictured) laundry chutes that enable housekeeping staff to easily send rubbish or laundry materials to a terminal room where they can be processed.

The model building codes typically require that these conveyances be treated as vertical shafts, and have minimum fire-resistive construction requirements of 1 or 2 hours depending upon the height of the building in which they are located. In today's example, the fire-resistive integrity of this 1-hour-rated shaft has been compromised, evidently to provide access to the plumbing utilities. These openings create a serious vulnerability to the shaft's structural integrity, and perhaps the entire building, if a fire occurred in or entered the shaft and ignited the combustible framing.



The openings in this fire-resistive-rated shaft should be repaired to control fire spread. *Photo courtesy R. Wayne Powell, Marriott Corporation.*

Inspectors should generally be aware of any compromises to fire-resistive construction or assemblies. (See Coffee Break Training 2006-19 for a general discussion for protecting fire-resistive construction.) The model fire codes require that fire-resistance ratings be maintained to the same level as required by the building code under which the building was constructed.

When gypsum wallboard assemblies, like those pictured, are damaged, the wallboard should be replaced or repaired to the required level of fire resistance using a listed repair system or materials and methods equivalent to the original construction. A two-page step-by-step guide on repairing fire-rated gypsum wallboard assemblies can be obtained by a free download from the Gypsum Association at www.gypsum.org/pdf/225-08.pdf

For additional information, refer to *International Fire Code*[®], Chapter 7 or *NFPA 1, Uniform Fire Code*[™], Chapter 12.



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