



Clark County Department of Building & Fire Prevention

Building Division – Inspection Services

Field Inspection Guideline

SUBJECT: Repair of Fire Assemblies	FIG-B-021	
Effective Date: January 05, 2011	Revised: February 20, 2015	Approved By: BAT
Code Chapter: 2012 IBC Section 714	Page 1 of 2	

Scope

Fire-resistance assemblies constructed of gypsum panel assemblies used for wall, shaft, or ceiling repairs shall restore the original fire-resistive structural integrity of the assembly. Repairs shall be approved assemblies.

Examples of some approved repairs are found in the Gypsum Association Document GA-225-08, and Georgia-Pacific sketch #21(see attachment – sketch no. 1). All replacement or patching gypsum panels must be equivalent to the original material of equal thickness and number of layers..

Repair of Fire-Resistance-Rated Gypsum Assemblies

1. Single-layer, 1-hour, fire-resistance-rated wall or ceiling assembly.

- 1.1. Membrane or through-penetrations up to 6-inches in any dimension and NOT EXCEEDING 36-square-inches in total area may be patched by the attachment of a flush patch secured in place by attaching to a section of runner track/backing secured to the wall assembly on each side of the patch area. All joints are to be taped.
- 1.2. Membrane or through-penetrations NOT GREATER THAN 12-inches in any dimension and NOT EXCEEDING 144-square-inches in total area may be repaired by fastening runner track/backing to the inside of all edges of the hole, then attaching the patch along all sides. Fasteners are to be spaced a maximum of 8-inches apart, and all joints are to be taped.
- 1.3. Membrane or through-penetrations GREATER THAN 12-inches in any dimension and EXCEEDING 144-square-inches in total area shall be cut back to the framing members, adding horizontal runner track/backing to the inside edge of the hole and the patch attached to the framing members. Fasteners are to be spaced a maximum of 8-inches apart and all joints are to be taped.
- 1.4. A patch layer may be applied directly over the first layer cover the hole/damage in the first layer. The patch shall be attached to the framing members, with fasteners spaced a maximum of 8-inches apart.
- 1.5. When applying a second layer directly over the first layer, this patch maybe split down the middle to go around pipes and conduits but both halves shall be secured to the framing members on each side and the penetrations shall be sealed per listed penetration requirements. The patch shall be attached to the framing members with fasteners to be spaced a maximum of 8-inches apart

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2. Multiple-Layer, fire-resistance-rated wall or ceiling assembly.

- 2.1. Multiple-layer assemblies require the joints between the layers to be staggered. Repair of these assemblies requires that the face layer of gypsum board be removed beyond the base layer joints to retain the staggered joint specification. Therefore, the base layer shall be repaired by methods 1.1 thru 1.5. The face layer of gypsum board is to be removed to the adjacent framing members. The patches shall be attached to the framing members, fasteners are to be spaced a maximum of 8-inches apart, and all joints are to be taped.
- 2.2. Membrane or through-penetrations GREATER THAN 12-inches in any dimension and EXCEEDING 144-square-inches in total area require the base layer cut back the nearest framing member with the patch being attached to the framing. The top layer shall be cut back to the second nearest framing member. Framing in the area to be repaired shall be replaced and inspected without increasing the original framing spacing. Fasteners are to be spaced a maximum of 8-inches on center, all joints are to be taped.

NOTE: Repairs detailed by a registered design professional and approved by plans examination shall supersede these required repairs.

3. Required Inspections

- 3.1. Whenever wall or ceiling framing members are repaired or replaced, a Framing Inspection (2244) is required.
- 3.2. Whenever a single-layer fire-resistance-rated gypsum board assembly is repaired, an Interior lath/Drywall Inspection (2259) is required.
- 3.3. Whenever a multi-layer fire-resistance-rated gypsum board assembly is repaired, a layer-by-layer inspection is required.

Revision History:

Reference #	Title	Effective Date	Revised	Reviewed
FIG-B-021	Repair of Fire Assemblies	January 05, 2011		June 06, 2013
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