I. Application of Acceptable Interior Finish Materials

Chapter 8 of the Building Code regulates the application of interior finish materials in order to limit flame spread. In combustible construction (Types III and V), finish material may be applied to dropped or furred ceilings with several limitations.

A. Wood hangers and runners of minimum two-inch nominal material, or a combination of wood and noncombustible material, may be suspended from a nonfire-rated floor or roof system.

B. When dropped below the ceiling of a fire-resistive floor-ceiling or roof-ceiling assembly, wood hangers and runners must be fire-retardant-treated and have a minimum two-inch nominal width and thickness.

C. Figure 1 illustrates the application of the requirements of Sections 803 and 804 of the Building Code. It is a cross-section of a portion of a fire-resistive roof-ceiling or floor-ceiling assembly over any room or area in any occupancy group. The type of construction may be either III, One-hour or V, One-hour.

D. Figure 2 illustrates the case where a fire-resistive ceiling membrane may be omitted from the underside of 2x joists by applying the fire-resistive membrane to wood hangers and runners suspended from the joists. In this case, the hangers and runners need not be fire-retardant-treated wood. The membrane material applied vertically shall have the same fire-resistive rating as that for the ceiling.

II. Penetration Limitations

No penetrations of fire-resistive ceiling membranes are allowed except as provided in Section 710.2. See Building Newsletter 7-1 for a discussion on penetrations of fire-resistive ceiling membranes.

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**Figure 1**: Application of ceiling finish materials below a rated assembly in combustible construction.

- Fire-resistive floor-ceiling or roof-ceiling assembly
- 2x joists spaced as required for the approved fire resistive rating.
- Fire resistive ceiling membrane.
- Hangers and runners must be noncombustible, or of fire-retardant-treated wood per Section 703.2. (See definition of "fire-retardant-treated" in Section 207.)
- Depth of furred space may vary depending on requirements for air ducts and/or other equipment, minimum ceiling height, and other considerations.

Section 803 Item #2 requires the ceiling finish to have a Class I flame-spread classification rating unless protected on both sides by an automatic sprinkler system, or unless it will be attached to a noncombustible backing or to properly installed furring strips per Section 803, Item 1, in which case Class II material is permitted. The installation of the controlled interior finish must comply with the most restrictive of Section 803, Item 2, Section 804, or Table No. 8-B of the Building Code.
**Figure 1** Application of controlled interior ceiling finish materials that are part of a rated assembly in combustible construction.

- Fire-resistive floor-ceiling or roof-ceiling assembly.
- 2x joists.
- 2x4 wood hangers and runners spaced as required for the approved fire resistive assembly.
- Fire-resistive membrane

If the depth of the dropped ceiling is greater than 24" provide rated wall construction on the sides of the chase.