FIREBLOCKING & DRAFTSTOPPING

This handout is intended only as a guide and is based partly on the 2020 Minnesota State Building Code, City of Chanhassen ordinances, and good building practices. While every attempt has been made to ensure the correctness of this handout, no guarantees are made to its accuracy or completeness. Responsibility for compliance with applicable codes and ordinances falls on the permit applicant. For questions regarding code requirements, refer to the applicable codes or contact your local Building Department.

Fireblocking

Fireblocking is intended to block the spread of fire from one *concealed* space to another. In the average home, the two areas where fireblocking is most likely going to be required are:

- At openings around wires, vents, pipes, and ducts where those items penetrate a *top or bottom* wall plate.
- At the interconnection between wall and ceiling spaces. Most likely this will happen at soffits, dropped ceilings, and concealed spaces including walls slightly spaced from an exterior wall or foundation.

There are a number of ways to comply with fireblocking requirements for wire, vent, pipe, and duct penetrations.

- There are caulks on the market for sealing the annular opening around wires, vents, pipes, and ducts. Some caulks are listed as "noncombustible," Others may also be "noncombustible" and "intumescent". Either product is acceptable. They should be installed in accordance with the manufacturer's instructions.
- Un-faced fiberglass batts may be used as fireblocking provided that the batt is at least 16 inches in height measured vertically and fills the full width of the stud space. Insulation should be packed around the penetrating opening including the opening in the top or bottom plate. If the wire, pipe, vent or duct penetrates both the top and bottom wall plate, a 16-inch bat must be placed at both the top and bottom of the cavity, or the entire cavity may be filled.

Fireblocking the interconnection of wall to ceiling spaces can be more confusing. If there is a pathway for air to move from a stud space to a joist space, the path must be fireblocked. In those cases, the use of ½" gypsum board, 2 inch nominal lumber, ¾ inch plywood or particleboard, or two thicknesses of 1 inch nominal lumber may be used. Fiberglass batts may also be used and are the most common way to fireblock soffits at exterior walls.

Fireblocking Materials (Except as provided in Section R302.11) Item 4, fireblocking shall consist of the following materials:

- Two-inch (51 mm) nominal lumber.
- Two thicknesses of 1-inch (25.4 mm) nominal lumber with broken lap joints.
- One thickness of 23/32-inch (18.3 mm) wood structural panels with joints backed by 23/32-inch (18.3 mm) wood structural panels.
- One thickness of 3/4-inch (19.1 mm) particleboard with joints backed by 3/4-inch (19.1 mm) particleboard.
- One-half-inch (12.7 mm) gypsum board.
- One-quarter inch (6.4 mm) cement-based millboard.
- Batts or blankets of mineral wool or glass fiber or other approved materials installed in such a manner as to be securely retained in place. Fireblocking should be installed and inspected as part of the framing or insulation inspection.
  - R302.11.1.2 Un-faced fiberglass batt insulation used as fireblocking shall fill the entire cross section of the wall cavity to a minimum height of 16 inches (406 mm) measured vertically. When piping, conduit or similar obstructions are encountered, the insulation shall be packed tightly around the obstruction. Other materials such as caulking or spray foams shall be non-combustible.

Fireblocking

In combustible construction, fire-blocking shall be provided to cut off all concealed draft openings, both vertical and horizontal, to form an effective fire barrier between stories, and between a top story and the roof space. Fire-blocking shall be provided in the following locations:

1. In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs, as follows:
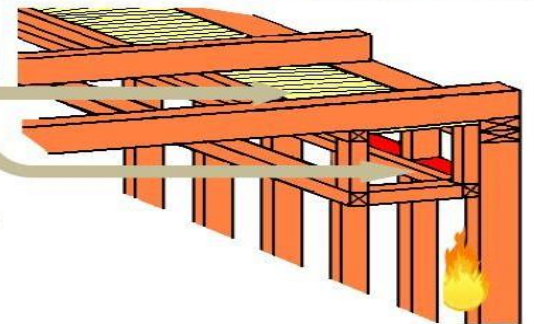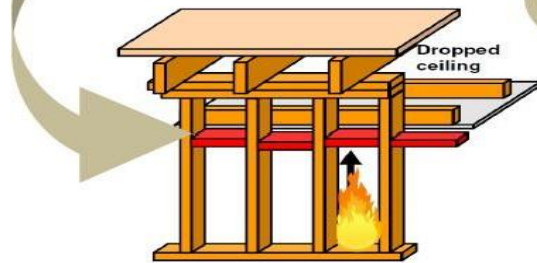   a. Vertically at the ceiling and floor levels.
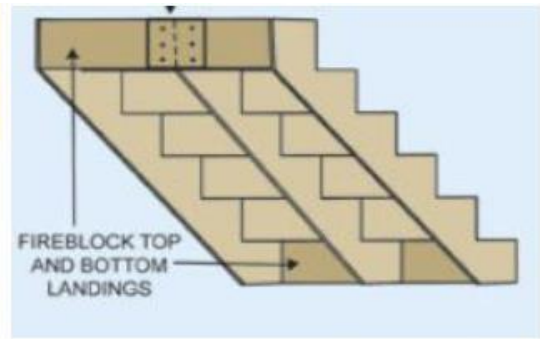   b. Horizontally at intervals not exceeding 10'.

2. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, dropped ceilings, and cove ceilings.
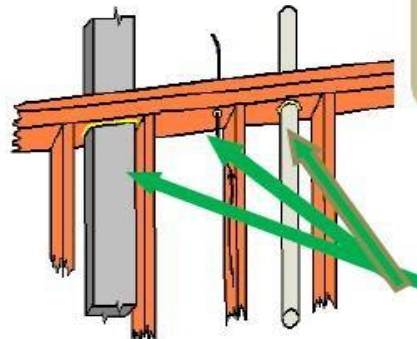
3. In concealed spaces between stair stringers at the top and the bottom of the run.
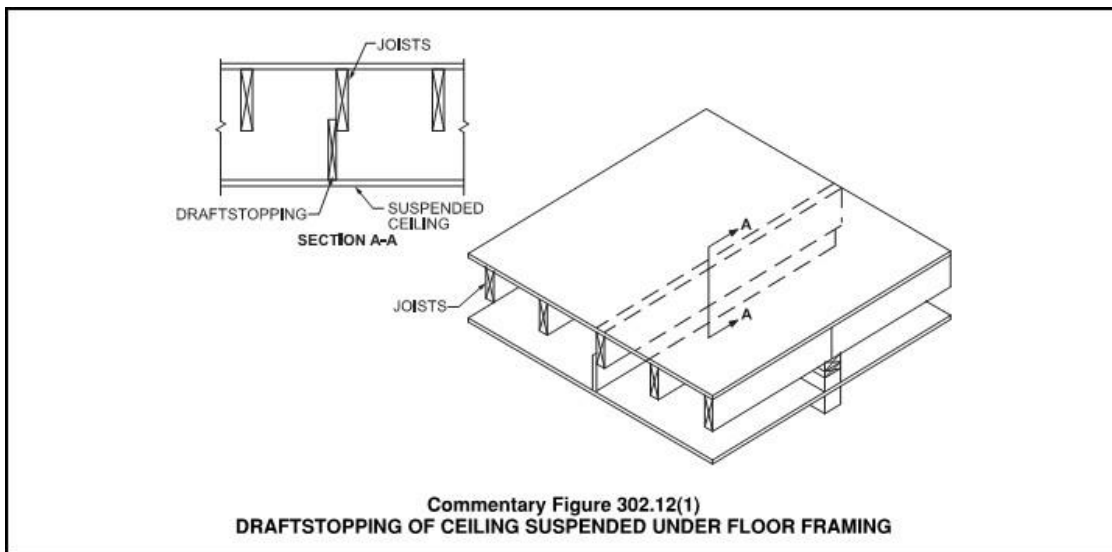
4. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion.

Draftstopping

In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draft stops shall be installed so that the area of the concealed space does not exceed 1,000 square feet.

Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor/ceiling assemblies under the following circumstances:

Commentary Figure 302.12(1)
DRAFTSTOPPING OF CEILING SUSPENDED UNDER FLOOR FRAMING

- Ceiling is suspended under the floor framing.
- Floor framing is constructed of truss-type open-web or perforated members.

Materials Draftstopping materials shall not be less than 1 /2-inch gypsum board, 3 /8-inch wood structural panels or other approved materials adequately supported. Draft stopping shall be installed parallel to the floor framing members unless otherwise approved by the building official.

The integrity of the draftstops shall be maintained and penetrations sealed.

Commentary Figure 302.12(2)
DRAFTSTOPPING OF TRUSS-TYPE FLOOR FRAMING