

Construction Codes and Licensing – Building Plan Review

PLAN REVIEW POLICY

PR-01 Smoke Resistant Construction, December 2023

2020 Minnesota State Building Code

Background

The building code makes specific references to “construction capable of resisting the passage of smoke,” IBC Section 509.4.2. However, no definitive criterion has been provided to evaluate construction for compliance with these provisions for this section. As a result, a policy is needed to ensure consistent enforcement.

Policy

The following is considered meeting the requirements of IBC Section 509.4.2 – “Incidental Use” Protection, Construction capable of resisting the passage of smoke:

1. For penetrations of walls and for the termination of a wall to the floor or deck above, if the space around the penetrating items or the joint between the wall and the floor or deck above does not exceed 1½ inches, then the space is permitted to be filled with mineral wool, fire-safing, or similar approved material. For annular spaces or joints in excess of 1½ inches, an approved smoke sealant shall be used or the annular space or joint shall be reduced to not more than 1 ½ inch by approved wall materials and the annular space filled with mineral wool, fire-safing, or similar approved materials.
2. Walls are permitted to terminate at the underside of a monolithic or suspended ceiling system where all the following conditions are met: a) The ceiling system forms a continuous membrane. b) A smoke-tight joint is provided between the top of the smoke partition and the bottom of the suspended ceiling. c) Where the space above the ceiling is used as a plenum, return grilles from the hazardous area into the plenums are not permitted.
3. Air transfer openings shall not be permitted in the walls unless protected with an approved smoke damper. Smoke dampers are not required at penetrations by a ducted HVAC system.
4. Smoke-gasketing is not required so long as the door is relatively tight fitting.

Note: To be used in accordance with “Plan Review Policy General Use, Document”