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OPEN-HEARTH FIREPLACE POLICY

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Policy Statement

Solid-fuel and gas burning fireplaces without doors present special problems because they provide no barrier between the combustion chamber and the room. These fireplaces are known as open-hearth style fireplaces and operate within a narrow band between successful venting and spillage. A small amount of room depressurization, or even the moving air currents produced by someone walking briskly in front of the opening, can be enough to cause smoke, combustion gasses and/or flame spillage into the room.

Historically, the fireplace chimney was contained within the building envelope, the envelope was leaky, and the venting system was massive and kept warm around the clock because the fireplace was the sole source of heat. Now, with requirements for much tighter building envelope construction, appropriate ventilation is more difficult to accomplish. An open fireplace consumes a large volume of room air beyond that required for combustion (referred to as excess air) in order to flow smoke and combustion gases up the chimney instead of into the room. Excess air levels are regularly between 10 and 20 times the amount needed for combustion. The envelope of a tightly constructed house resists the infiltration of this much air.

For this reason, the Town of Vail requires signed and stamped engineered drawings and specifications for all new open-hearth fireplace installations that detail proper airflow levels, including the use of tight fitting dampers, powered make-up air systems and/or complex whole-house pressure management systems.

Departments Affected

Community Development

Purpose

To establish a policy for the safe construction, installation and operation of open-hearth style fireplace systems.

Procedures

- A. All applications for permits that include the construction or installation of an open-hearth style fireplace shall include signed and stamped engineered drawings and specifications as detailed in the policy statement.

- B. If, upon plan review, it is found that an open-hearth style fireplace is included in the scope of construction and engineered drawings and specifications are not included with the submittals, the permit application shall be rejected until such information is received.
- C. Upon satisfactory review of all submitted information, including the engineered open-hearth fireplace and associated systems, a permit shall be issued.
- D. Field inspections of all items shall be performed to ensure the installation of the system(s) related to the open-hearth style fireplace is code compliant and per approved plans.