

FIREPLACES

GENERAL

Fireplaces, woodburning stoves, barbecues, and smoke chambers and chimneys for fireplaces and woodburning stoves shall be of solid masonry or reinforced concrete or other approved materials and shall conform to requirements of this code.

CONSTRUCTION

Structural walls of fireplaces shall be at least eight (8) inches thick. Where a lining of low duty refractory brick (ASTM C64) or the equivalent, at least two (2) inches thick laid in fire clay mortar (ASTM C105, medium duty) or the equivalent, or other approved lining is provided, the thickness of back and sides including the lining, shall be not less than eight (8) inches. Where such lining is not provided, the thickness of back and side shall be not less than twelve (12) inches. The firebox shall be twenty (20) inches in depth and will be permitted to be open on all sides, provided all fireplace openings are located entirely within one room. All fireplaces shall be constructed in accordance with chapter 10 of the 2006/IRC. See attached requirements for masonry fireplaces and chimneys. (Table R1001.1 and Figure R1001.1 and the 2006 IRC)

LINING

The lining shall extend from the throat of the fireplace to a point at least four (4) inches above the top of the enclosed masonry walls.

CLEARANCES

- A. **Distance:** The distance between fireplace and combustibles shall be at least four (4) inches, and such combustibles shall not be placed within six (6) inches of the fireplace opening. Wood facings or trim normally placed around the fireplace opening may be permitted when conforming to the requirements of this section, but such facing or trim shall be furred out from the fireplace wall at least four (4) inches and attached to noncombustible furring strips. The edges of such facings or trim shall be covered with a strip of noncombustible material. Where the walls of the fireplace are twelve (12) inches thick, the facings or trim may be directly attached to the fireplace.
- B. **Metal Hoods:** Metal hoods used as part of a fireplace or barbecue shall be at least eighteen (18) inches from combustible material unless approved for reduced clearances.

METAL

Metal hoods used as a part of a fireplace or barbecue shall be at least No. 18 B&S Gage (0.0403) sheet copper, No. 18 galvanized steel gage (0.052 inches) galvanized steel, or other equivalent corrosion resistant ferrous metal with all seams and connections of smokeproof unsoldered construction. The hoods shall be sloped at an angle of 45 degrees (0.79 rad) or less from the vertical, and shall extend horizontally at least six (6) inches beyond the limits of the firebox.

METAL HEAT CIRCULATORS

Approved metal heat circulators may be installed in fireplaces, provided the thickness of the fireplace walls is not reduced.

FIREPLACE HEATERS

All fireplace heaters shall be U.L. approved and installed per manufacturer's specifications.

SMOKE CHAMBER

All walls, including back walls, shall be at least eight (8) inches in thickness.

LINTEL

Masonry over the fireplace opening shall be supported by a noncombustible lintel.

HEARTH

Every fireplace shall be constructed with a hearth of brick, stone, tile or other noncombustible material. For fireplaces with an opening of less than six (6) square feet, the hearth shall extend not less than sixteen (16) inches in front and not less than eight (8) inches on each side of the fireplace opening. For fireplaces with an opening of six (6) square feet or more, the hearth shall extend not less than twenty (20) inches in front and not less than twelve (12) inches on each side of the fireplace opening. Such hearths shall be supported on trimmer arches of brick, stone, tile, or concrete not less than four (4) inches thick or other equally strong fire resistance rated materials. All combustible forms or centering shall be removed after completion of the supporting construction.

FIRESTOPPING

To prevent the free passage of flame and products of combustion through concealed spaces or openings in the event of fire, provision shall be made to provide effective firestops as specified below.

- A. **Materials:** All firestopping shall consist of approved noncombustible materials securely fastened in place. Firestops of two thicknesses one (1) inch lumber with broken lap joint, or one thickness of three-quarter (3/4) inch plywood, or of two (2) inch lumber installed with tight joints, shall be permitted in open spaces of wood framing.
- B. **Firestopping Required:** Firestopping is required at ceiling and floor openings around vents, pipes, ducts, chimneys, and fireplaces at ceiling and floor levels, with noncombustible materials.

FRESH AIR INTAKE

An approved fresh air intake shall be provided for both masonry and factory built fireplaces.

FOUNDATION FOR MASONRY

Masonry fireplaces shall be supported on foundations with footings excavated to forty-two (42) inches.

CHIMNEY CHASE

Will be insulation with an unfaced insulation of minimum R-13.

SCREENS

Screens or other approved protection devices shall be provided for all fireplace openings.

CHIMNEY HEIGHT

Any chimney that extends through the roof must have a decorative housing of approved material. The minimum height of any Class A chimney from hearth to top of chimney shall be a minimum of twelve (12) feet. The height of any Class A chimney shall be a minimum of two (2) feet above the existing roofline; provided, however, that an exterior wall chimney height shall measure not less than ten (10) feet horizontally to the roof. A chase and cap are required. All saddles required on fireplaces. No flashing of any type.

OTHER TYPE FIREPLACES

Other fireplaces not conforming to the requirements of this code shall be subject to approval by the Building Director prior to installation. Imitation fireplaces shall not be used for the burning of gas, solid, or liquid fuel. Approved factory built fireplaces may be installed and shall conform to the applicable portions of this code. Factory built fireplaces shall bear the label of an approved testing or inspection agency.

WOODBURNING STOVES

Woodburning stoves which have been tested in accordance with UL 1482 shall be approved for use. The approval of other woodburning stoves shall be based on approved research and testing reports submitted to the Building Director, demonstrating the performance of the unit and the installation conditions necessary to insure safe and adequate performance. Woodburning stoves shall be installed in accordance with required clearances from combustible materials and in accordance with applicable provisions of this code.

BUILDING PERMIT REQUIRED

No building or structure shall be erected, constructed, built, enlarged, replaced, repaired, altered, or moved, nor shall any repair or maintenance work be done which affects the structural, fire protection, or health protection qualities of a building without first having obtained a building permit.

Building permits expire one year from the date of the permit. However, if work has not started within six months of the date of the permit, the permit is void.

BUILDING PERMIT FEE

The building permit fee for a fireplace shall be based on the cost of the project. Refer to BBC 9-3-5.

BUILDING PERMIT APPLICATION

1. Provide a completed permit application;
2. Provide a plat of survey showing the location of the chase or house plans with location;
3. Provide a complete fireplace detail with the following: size of fireplace, size of hearth, its depth and how it is supported, size of flue, how the cap is installed, how the chimney is counter flashed into the roof, and exterior air intake.
4. Provide the tax index number.

INSPECTIONS REQUIRED

The Building Inspector shall inspect all buildings and structures that are being erected, constructed, built, enlarged, repaired, altered, or moved. Inspections shall be requested in writing or by telephone to the Building Department before 3:30 pm for an inspection the following day. Pre-pour, framing, insulation, and final inspections are required.

CONTRACTOR LICENSE REQUIRED

It shall be unlawful to engage in business in the Village of Bartlett as a building contractor without first having obtained a building contractor license.

A homeowner is not required to be licensed as a subcontractor or general contractor to construct, demolish, rehabilitate, alter, or repair his or her own home.

LICENSED CONTRACTOR

All names of licensed subcontractors and general contractors are on file, listed alphabetically, in the Building Department and the Village Clerk's Office.

CHIMNEYS AND FIREPLACES

TABLE R1001.1
SUMMARY OF REQUIREMENTS FOR MASONRY FIREPLACES AND CHIMNEYS

ITEM	LETTER ^a	REQUIREMENTS
Hearth slab thickness	A	4"
Hearth extension (each side of opening)	B	8" fireplace opening < 6 square foot. 12" fireplace opening ≥ 6 square foot.
Hearth extension (front of opening)	C	16" fireplace opening < 6 square foot. 20" fireplace opening ≥ 6 square foot.
Hearth slab reinforcing	D	Reinforced to carry its own weight and all imposed loads.
Thickness of wall of firebox	E	10" solid brick or 8" where a firebrick lining is used. Joints in firebrick 1/4" maximum.
Distance from top of opening to throat	F	8"
Smoke chamber wall thickness Unlined walls	G	6" 8"
Chimney Vertical reinforcing ^b	H	Four No. 4 full-length bars for chimney up to 40" wide. Add two No. 4 bars for each additional 40" or fraction of width or each additional flue.
Horizontal reinforcing	J	1/4" ties at 18" and two ties at each bend in vertical steel.
Bond beams	K	No specified requirements.
Fireplace lintel	L	Noncombustible material.
Chimney walls with flue lining	M	Solid masonry units or hollow masonry units grouted solid with at least 4 inch nominal thickness.
Distances between adjacent flues	—	See Section R1003.13.
Effective flue area (based on area of fireplace opening)	P	See Section R1003.15.
Clearances: Combustible material Mantel and trim Above roof	R	See Sections R1001.11 and R1003.18. See Section R1001.11, Exception 4. 3' at roofline and 2' at 10'.
Anchorage ^b Strap Number Embedment into chimney Fasten to Bolts	S	3/16" × 1" Two 12" hooked around outer bar with 6" extension. 4 joists Two 1/2" diameter.
Footings Thickness Width	T	12" min. 6" each side of fireplace wall.

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 square foot = 0.0929m².

NOTE: This table provides a summary of major requirements for the construction of masonry chimneys and fireplaces. Letter references are to Figure R1001.1, which shows examples of typical construction. This table does not cover all requirements, nor does it cover all aspects of the indicated requirements. For the actual mandatory requirements of the code, see the indicated section of text.

a. The letters refer to Figure R1001.1.

b. Not required in Seismic Design Category A, B or C.

