

**Chester**  
**Building Official**  
**Code Enforcement**

Thom Roy  
84 Chester Street  
Chester, N.H. 03036  
(603) 887-5552  
(603) 887-4404 (Fax)  
chesterbi@gsinet.net



Chimneys, Brick Wall Shields, and Fireplaces

Masonry chimney construction is part of the prescriptive requirements of the building codes and as such must comply with certain provisions of the code; factory built chimneys rely on their listings and labeling for approvals.

This informational sheet is applicable to residential use only. These standards are considered minimum standards for safe construction.

All masonry chimneys are to be supported on foundations of solid masonry or concrete at least 12 inches thick and at least 6 inches beyond each side of the exterior dimensions of the chimney. Footings are to be located below the frost-line (48" minimum). It is suggested that you carry the footing at the same depth as that of the foundation.

Height termination (above roof line) is to be at least 2 feet higher than any portion of a building within 10 feet, but not less than 3 feet above the highest point where the chimney passes through the roof.

Masonry chimneys are to have a liner; generally these are clay flue liners but may be other units listed for use within masonry chimneys.

When multiple flues are located in the same chimney, masonry wythes of at least 4 inches are to be built between the flues.

Chimney flues are not to be smaller than the area of the connector to be attached to the flue.

Cleanouts are to be provided within 6 inches of the base of each flue and at least 6" below the lowest chimney inlet. The cleanout is to be provided with a non-combustible cover and is to be at least 6 inches high. Cleanouts openings are to be properly framed and are to remain tightly closed and secured when not in use. The lower edge of the cleanout is to be located a minimum of 16 inches above the grade or floor and must be below the lowest chimney cleanout. Cleanout openings are not to be obstructed and are to have a clear projection of at least 18 inches in front of the opening.

While reinforcement is not required by the code for Seismic Design Category A, B< and/or C it is suggested that a minimum of ¼ inch horizontal ties are located not more than 18" apart and continuous vertical reinforcing with four No. 4 bars be provided. Additional reinforcing is required for chimneys in excess of 40". Anchorage with 3/16 by 1" straps is standard practice

Chimneys with a width greater than 30 inches are to have crickets constructed per requirements of code; dependent upon the slope of the roof and the actual width of the chimney.

.

Exterior clearance:

1" minimum air space clearance to combustible material – as measured from outer edge of masonry, **and** a minimum of 12" clearance to any combustible trim – measured from inside of flue liner to outside edge of masonry.

Interior Clearance:

2" minimum air space clearance to combustible material – as measured from outer edge of masonry.

Fire-blocking is required between all floors and ceilings that a chimney passes through.

Chimneys are not to change in size or shape within 6 inches above or below where the chimney passes through floor, ceiling, or roof sections.

Brick Wall Shielding:

Brick wall construction for use as a shielded non-combustible surface shall maintain the minimum 1-inch air clearance to combustibles behind the entire wall area.

Wall shields – including brick – must be spaced out 1" from the combustibles – at least 50% of the bottom 1" must be open to provide proper air flow behind the shield

Hearth Extensions:

Generally a minimum floor protector measurement of 34" wide by 40" deep will provide adequate extensions; however this dimension may need to be larger dependent on the specific product or appliance selected - check before you build.

All floor protectors must extend at least 16" from the front and at least 6" on the sides (minimum may not work in all cases as actual requirement would be determined in part by the specific product or appliance clearance requirements plus the actual stove size – check before you build

Floor protector are to be "completely non-combustible" and many hearths made of brick or tile are actually considered combustible if a shield of proper material is not placed between the brick and the wood floor. Heat easily passes quickly through brick and the proper shielding is required to prevent heat from passing through to the wood.

Be aware of placement of combustible products around and adjacent to the hearth or stove area – drapes, furniture, etc. Minimum clearances of 36" apply and sometimes may be up to 48 inches.

### Fireplace Hearth and Firebox

Hearths shall have a minimum slab of 4 inches and have proper re-enforcing to hold the slab/hearth. For fireplace openings less than 6 sq. ft the extension must be a minimum of 16 inches to the front and 8 inches to the sides. For fireplace openings greater than 6 sq. ft the extension must be a minimum of 20 inches to the front and 12 inches to the sides. The firebox depth must be a minimum of 20 inches deep. No combustibles are allowed within 6 inches of the opening. An additional 1" clearance for each 1/8 of projection within 6 inches to 12 inches of the opening – example 3/4" molding projection would require 6 additional inches of clearance

The firebox (except for Rumford Style) must have a minimum clearance of 2 inches front and sides with minimum clearance of 4 inches from back faces of masonry – and combustible material a minimum of 12" from the firebox and clay flue linings. The firebox wall thickness must be a minimum 8 inches, with no more than 1/4" max spacing within the firebrick (includes firebrick lining of at least 2"); without a lining of firebrick - minimum depth 10" for back and side walls

The fireplace smoke chamber damper must be located at least a minimum of 8" above the lintel (opening) and is not to be not inclined more than 45 degrees when factory prefabricated chambers and not inclined more than 30 degrees when formed by corbelled masonry. The throat opening must be a minimum of 4 inches in depth. The height from the fireplace throat to the beginning of the flue liner cannot be more than the inside width of the fireplace opening. The smoke chamber height cannot be greater than width of fireplace opening.

The fireplace area must maintain the following clearances.

- (1) 4 inch clearances to back face of fireplace to any combustible material
- (2) 2 inch minimum clearance to beams, joists, studs, and other combustible material
- (3) 1 inch clearance air space to combustible sheathing
- (4) Masonry touching/abutting combustible material – min. 12 inches from flue lining.