



MASONRY ADVISORY COUNCIL

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The 10 Major Items of a Real Masonry Fireplace

This is not an all inclusive list of all requirements to meet Building Codes, but is a primer on major items to help avoid problems

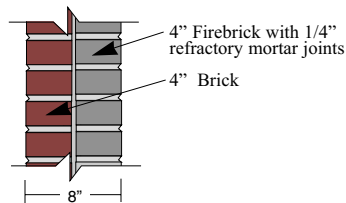
1. THE BASICS

Is the fireplace even drawn on the drawings? Or is there just an arrow calling out a "fireplace"? You should at least have the following on the drawings:

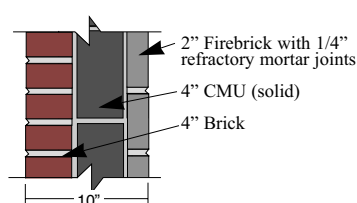
- The size of the fireplace
- The fireplace opening dimensions
- A cross section and a cut shown
- Size of the hearth, it's depth and how it is supported
- Size of the flue
- How is the cap installed?
- How is the chimney counterflashed into the roof?
- Show cricket or saddle, if required

2. THICKNESS AND CONSTRUCTION OF FIREBOX WALL (FOR FIRESAFETY)

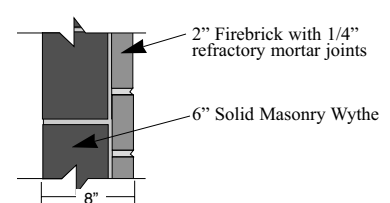
MOST ECONOMICAL



MOST COMMON



ALTERNATE



3. DAMPER CLEARANCE

The metal damper is required to be a minimum of 8" above the top of the fireplace opening. I suggest, to minimize possible excessive smoking, to place the damper an additional 4 inches high for a total of 12" above the fireplace opening.

4. CHIMNEY CLEARANCES

Any portions of a masonry chimney located in the interior of the building or within the exterior wall of the building shall have a minimum air space clearance to combustibles of 2 inches. Chimneys located entirely outside the exterior walls of the building, including chimneys that pass through the soffit or cornice, shall have a minimum air space clearance of 1 inch. The air space shall not be filled, except to provide fire blocking.

5. FLUE LINERS

Fireplace Chimneys with clay flue liners must be enclosed with 4" of solid masonry. If multiple fireplaces are vented in a common masonry flue stack, each flue should be supported and separated by 4" of masonry from top to bottom, between the flues vertically.(maximum slope of flue is no greater than 30 degrees from vertical.)

6. HEARTH INFORMATION

Hearth extension (from the front of fireplace opening)

- 16" if fireplace opening is less than 6 square feet
- 20" if fireplace opening is greater than 6 square feet

Hearth extension (from each side of opening)

- 8" if fireplace opening is less than 6 square feet
- 12" if fireplace opening is greater than 6 square feet

7. FLUE SIZE

I prefer a slightly oversized flue instead of an undersized flue (for initial startup reasons). You can always damper down the flue opening - but you cannot draw more air once the damper is open 100%. Here are some of the most common fireplace opening / flue sizes:

OPENING	AREA	FLUE SIZE
• 21" x 28"	4.07 ft ²	7 1/2" x 11 1/2" flue
• 28" x 32"	6.22 ft ²	11 1/2" x 11 1/2" flue
• 30" x 42"	8.75 ft ²	13" x 13" flue
• 30" x 48"	10 ft ²	13" x 17 1/2" flue

Note - for a corner fireplace where the flue is offset at an angle (max. 30 deg. from vertical) to get the flue to the outside, use the next largest flue size

8. ENERGY EFFICIENCY

- Use outside air for combustion kits built into the hearth with the outside air vents just inside the front of the fireplace. (if air kit is a retrofit or an afterthought, put a circular pipe vent into the back or side wall of the fireplace)
- Use sealed, glass fireplace doors.

9. FOR CONVENIENCE

Install a log lighter, unless you were an Eagle Scout. You'll have more fires and enjoy your fireplace more. Also, install an ash caddy dump into your hearth for ease of ash removal.

10. INSTALL A SPARK ARRESTOR FOR YOUR CHIMNEY

The major reason in the midwest is to prevent rain from going down your flue and possibly causing a damp smell - but a good metal chimney cap also prevents Rocky Raccoon or a grey squirrel from taking up residence with other associated problems.