

**2109.2.4.7.2 Wood tie beams.** Wood tie beams shall be solid or built up of lumber having a nominal thickness of not less than 1 inch (25 mm), and shall have a depth of not less than 6 inches (152 mm) and a width of not less than 10 inches (254 mm). Joints in wood tie beams shall be spliced not less than 6 inches (152 mm). Splices shall not be allowed within 12 inches (305 mm) of an opening. Wood used in tie beams shall be *approved* naturally decay-resistant or preservative-treated wood.

**2109.2.4.8 Exterior finish.** Exterior walls constructed of unstabilized adobe units shall have their exterior surface covered with not fewer than two coats of Portland cement plaster having a minimum thickness of  $\frac{3}{4}$  inch (19.1 mm) and conforming to ASTM C926. Lathing shall comply with ASTM C1063. Fasteners shall be spaced at 16 inches (406 mm) on center maximum. Exposed wood surfaces shall be treated with an *approved* wood preservative or other protective coating prior to lath application.

**2109.2.4.9 Lintels.** Lintels shall be considered to be structural members and shall be designed in accordance with the applicable provisions of Chapter 16.

## SECTION 2110 GLASS UNIT MASONRY

**2110.1 General.** Glass unit masonry construction shall comply with Chapter 13 of TMS 402 and this section.

**2110.1.1 Limitations.** Solid or hollow *approved* glass block shall not be used in fire walls, party walls, fire barriers, fire partitions or smoke barriers, or for load-bearing construction. Such blocks shall be erected with mortar and reinforcement in metal channel-type frames, structural frames, masonry or concrete recesses, embedded panel anchors as provided for both exterior and interior walls or other *approved* joint materials. Wood strip framing shall not be used in walls required to have a fire-resistance rating by other provisions of this code.

### Exceptions:

1. Glass-block assemblies having a fire protection rating of not less than  $\frac{3}{4}$  hour shall be permitted as opening protectives in accordance with Section 716 in fire barriers, fire partitions and smoke barriers that have a required fire-resistance rating of 1 hour or less and do not enclose exit stairways and ramps or exit passageways.
2. Glass-block assemblies as permitted in Section 404.6, Exception 2.

## SECTION 2111 MASONRY FIREPLACES

**2111.1 General.** The construction of masonry fireplaces, consisting of concrete or masonry, shall be in accordance with this section.

**2111.2 Fireplace drawings.** The construction documents shall describe in sufficient detail the location, size and con-

struction of masonry fireplaces. The thickness and characteristics of materials and the clearances from walls, partitions and ceilings shall be indicated.

**2111.3 Footings and foundations.** Footings for masonry fireplaces and their chimneys shall be constructed of concrete or solid masonry not less than 12 inches (305 mm) thick and shall extend not less than 6 inches (153 mm) beyond the face of the fireplace or foundation wall on all sides. Footings shall be founded on natural undisturbed earth or engineered fill below frost depth. In areas not subjected to freezing, footings shall be not less than 12 inches (305 mm) below finished grade.

**2111.3.1 Ash dump cleanout.** Cleanout openings, located within foundation walls below fireboxes, where provided, shall be equipped with ferrous metal or masonry doors and frames constructed to remain tightly closed, except when in use. Cleanouts shall be accessible and located so that ash removal will not create a hazard to combustible materials.

**2111.4 Seismic reinforcement.** In structures assigned to *Seismic Design Category A* or *B*, seismic reinforcement is not required. In structures assigned to *Seismic Design Category C* or *D*, masonry fireplaces shall be reinforced and anchored in accordance with Sections 2111.4.1, 2111.4.2 and 2111.5. In structures assigned to *Seismic Design Category E* or *F*, masonry fireplaces shall be reinforced in accordance with the requirements of Sections 2101 through 2108.

**2111.4.1 Vertical reinforcing.** For fireplaces with chimneys up to 40 inches (1016 mm) wide, four No. 4 continuous vertical bars, anchored in the foundation, shall be placed in the concrete between wythes of solid masonry or within the cells of hollow unit masonry and grouted in accordance with Section 2103.3. For fireplaces with chimneys greater than 40 inches (1016 mm) wide, two additional No. 4 vertical bars shall be provided for each additional 40 inches (1016 mm) in width or fraction thereof.

**2111.4.2 Horizontal reinforcing.** Vertical reinforcement shall be placed enclosed within  $\frac{1}{4}$ -inch (6.4 mm) ties or other reinforcing of equivalent net cross-sectional area, spaced not to exceed 18 inches (457 mm) on center in concrete; or placed in the bed joints of unit masonry at not less than every 18 inches (457 mm) of vertical height. Two such ties shall be provided at each bend in the vertical bars.

**2111.5 Seismic anchorage.** Masonry fireplaces and foundations shall be anchored at each floor, ceiling or roof line more than 6 feet (1829 mm) above grade with two  $\frac{3}{16}$ -inch by 1-inch (4.8 mm by 25 mm) straps embedded not less than 12 inches (305 mm) into the chimney. Straps shall be hooked around the outer bars and extend 6 inches (152 mm) beyond the bend. Each strap shall be fastened to not fewer than four floor joists with two  $\frac{1}{2}$ -inch (12.7 mm) bolts.

**Exception:** Seismic anchorage is not required for the following:

1. In structures assigned to *Seismic Design Category A* or *B*.