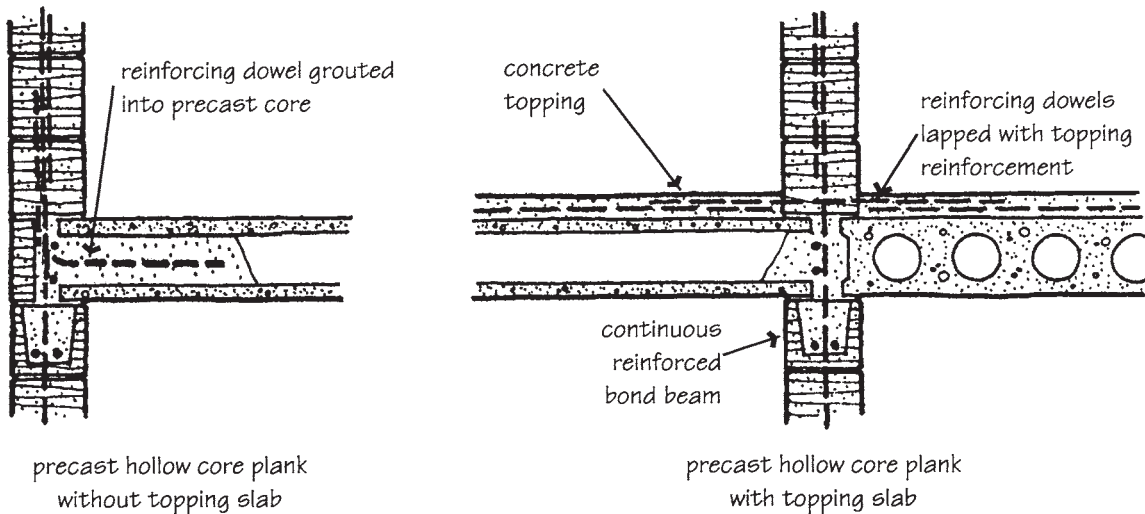


EXAMPLES OF CMU WALL CONNECTIONS TO CAST-IN-PLACE CONCRETE



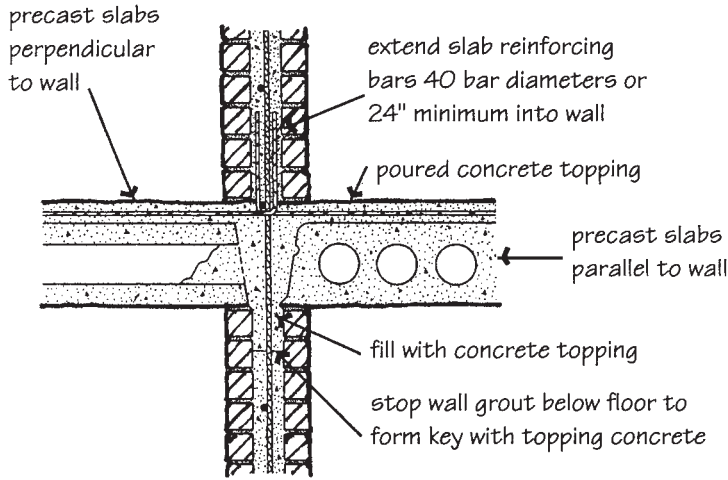
EXAMPLES OF CMU WALL CONNECTIONS TO PRECAST CONCRETE

**Figure 12-15** Connecting single-wythe masonry walls to precast and cast-in-place concrete floors and roofs. (From Schneider and Dickey, *Reinforced Masonry Design*, 2nd ed., Prentice-Hall, 1987.)

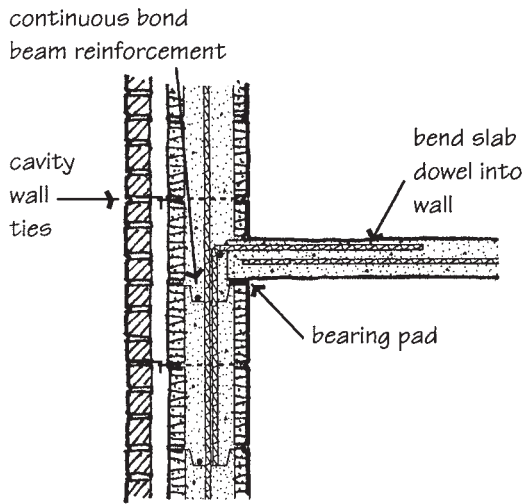
### 12.1.8 Reinforced and Unreinforced Masonry

Plain masonry contains no reinforcing steel that is designed to resist applied loads. It is very strong in compression, but weak in tension and shear. Small lateral loads and overturning moments are resisted by the mass of the wall, but if lateral loads are higher, resistance to shear and flexural stresses is limited by the bond between mortar and units and the precompression effects of vertical loading. Shearing stresses in bearing wall buildings, however, seldom control the wall type and thickness. Although flexural stresses may sometimes control the design of non-bearing and shear walls, compressive stresses generally govern in loadbearing structures.

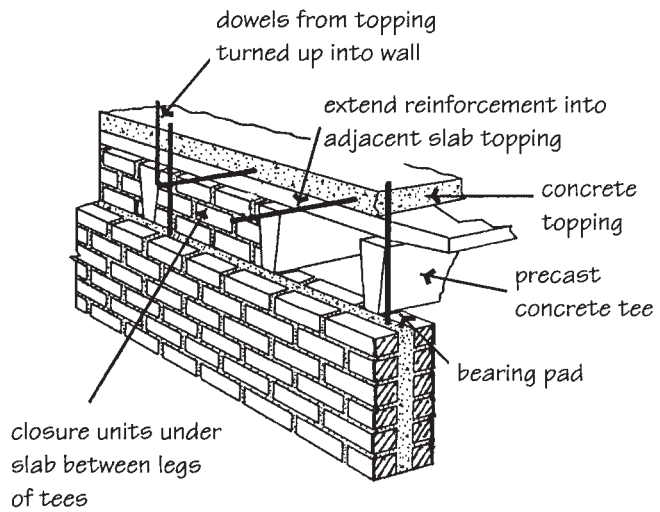
Where lateral loads are a significant factor in the design of structural masonry, flexural strength can be increased by placing steel reinforcement in mortar bed joints, bond beams, grouted cells, or cavities. The hardened mor-



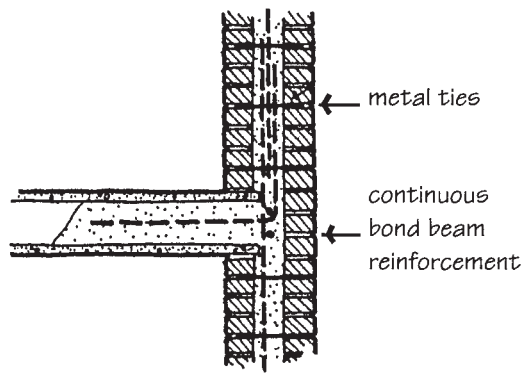
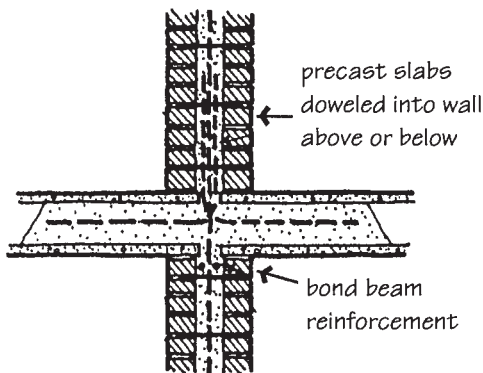
PRECAST HOLLOW SLAB FLOOR WITH TOPPING SLAB



PRECAST CONCRETE SLAB



PRECAST DOUBLE TEE



PRECAST HOLLOW SLAB FLOORS WITHOUT TOPPING SLAB

**Figure 12-16** Connecting double-wythe masonry walls to precast concrete floors and roofs. (Adapted from Amrhein, Reinforced Masonry Engineering Handbook, 5th ed., Masonry Institute of America, Los Angeles, 1992.)