

## CODE

## COMMENTARY

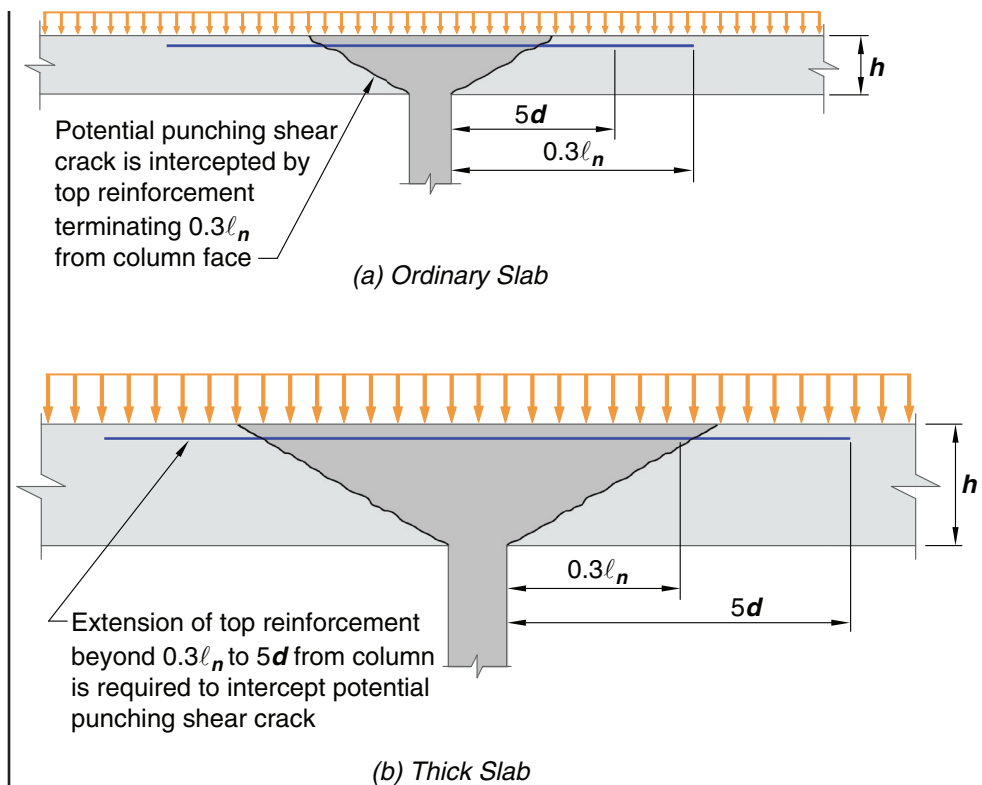


Fig. R8.7.4.1.3—Punching shear cracks in ordinary and thick slabs.

#### 8.7.4.2 Structural integrity

**8.7.4.2.1** All bottom deformed bars or deformed wires within the column strip, in each direction, shall be continuous or spliced using mechanical or welded splices in accordance with 25.5.7 or Class B tension lap splices in accordance with 25.5.2. Splices shall be located in accordance with Fig. 8.7.4.1.3.

**8.7.4.2.2** At least two of the column strip bottom bars or wires in each direction shall pass within the region bounded by the longitudinal reinforcement of the column and shall be anchored at exterior supports.

#### R8.7.4.2 Structural integrity

**R8.7.4.2.1 and R8.7.4.2.2** The continuous column strip bottom reinforcement provides the slab some residual ability to span to the adjacent supports should a single support be damaged. The two continuous column strip bottom bars or wires through the column may be termed “integrity reinforcement,” and are provided to give the slab some residual strength following a single punching shear failure at a single support (Mitchell and Cook 1984). Joint ACI-ASCE Committee 352 (ACI 352.1R) provides further guidance on the design of integrity reinforcement in slab-column connections. Similar provisions for slabs with unbonded tendons are provided in 8.7.5.6.

#### 8.7.5 Flexural reinforcement in prestressed slabs

**8.7.5.1** External tendons shall be attached to the slab in a manner that maintains the specified eccentricity between the tendons and the concrete centroid through the full range of anticipated member deflections.

**8.7.5.2** If bonded deformed longitudinal reinforcement is required to satisfy flexural strength or for tensile stress conditions in accordance with Eq. (8.6.2.3(b)), the detailing requirements of 7.7.3 shall be satisfied.

#### R8.7.5 Flexural reinforcement in prestressed slabs

**R8.7.5.2** Bonded reinforcement should be adequately anchored to develop the required strength to resist factored loads. The requirements of 7.7.3 are intended to provide adequate anchorage for tensile or compressive forces developed in bonded reinforcement by flexure under factored