CODE

15.2.7 and 15.2.8(a) and for slab-column joints supported on four sides by the slab, it shall be permitted to calculate the design strength of the column using an assumed concrete strength in the column joint equal to 75 percent of column concrete strength plus 35 percent of floor system concrete strength, where the value of column concrete strength shall not exceed 2.5 times the floor system concrete strength.

COMMENTARY

ments where the higher- and lower-strength concretes are to be placed.

Research (Ospina and Alexander 1998) has shown that heavily loaded slabs do not provide as much confinement as lightly loaded slabs when ratios of column concrete strength to slab concrete strength exceed approximately 2.5. Consequently, a limit is given in 15.5.1(c) on the ratio of concrete strengths assumed in design.

As an alternative to 15.5.1(a) or 15.5.1(c), 15.5.1(b) permits the use of dowel bars and confinement reinforcement to increase the effective compressive strength of concrete in the column core (Paultre and Légeron 2008; Richart et al. 1929).