

CODE

COMMENTARY

14.2—General**14.2.1 Materials**

14.2.1.1 Design properties for concrete shall be selected to be in accordance with **Chapter 19**.

14.2.1.2 Steel reinforcement, if required, shall be selected to be in accordance with **Chapter 20**.

14.2.1.3 Materials, design, and detailing requirements for embedments in concrete shall be in accordance with **20.6**.

14.2.2 Connection to other members

14.2.2.1 Tension shall not be transmitted through outside edges, construction joints, contraction joints, or isolation joints of an individual plain concrete element.

14.2.2.2 Walls shall be braced against lateral translation.

14.2.3 Precast

14.2.3.1 Design of precast members shall consider all loading conditions from initial fabrication to completion of the structure, including form removal, storage, transportation, and erection.

14.2.3.2 Precast members shall be connected to transfer lateral forces into a structural system capable of resisting such forces.

14.3—Design limits**14.3.1 Bearing walls**

14.3.1.1 Minimum bearing wall thickness shall be in accordance with Table 14.3.1.1.

its structural integrity, the Code does not permit use of plain concrete for columns. It does allow its use for pedestals limited to a ratio of unsupported height to least lateral dimension of 3 or less (refer to 14.1.3(d) and 14.3.3).

R14.2—General**R14.2.2 Connection to other members**

R14.2.2.2 Provisions for plain concrete walls are applicable only for walls laterally supported in such a manner as to prohibit relative lateral displacement at top and bottom of individual wall elements. The Code does not cover walls without horizontal support to prohibit relative displacement at top and bottom of wall elements. Such laterally unsupported walls are to be designed as reinforced concrete members in accordance with the Code.

R14.2.3 Precast

Precast structural plain concrete members are considered subject to all limitations and provisions for cast-in-place concrete contained in this chapter.

The approach to contraction or isolation joints is expected to be somewhat different than for cast-in-place concrete because the major portion of shrinkage in precast members occurs prior to erection. To ensure stability, precast members should be connected to other members. The connection should transfer no tension.

R14.3—Design limits**R14.3.1 Bearing walls**

Plain concrete walls are commonly used for basement wall construction for residential and light commercial buildings located in areas of low seismic risk. Although the Code imposes no absolute maximum height limitation on the use of plain concrete walls, experience with use of plain concrete in relatively minor structures should not be extrapolated to using plain concrete walls in multistory construction and other major structures where differential settlement, wind,