CHAPTER 11—WALLS

CODE

11.1—Scope

11.1.1 This chapter shall apply to the design of nonprestressed and prestressed walls including (a) through (c):

(a) Cast-in-place
(b) Precast in-plant
(c) Precast on-site including tilt-up

11.1.2 Design of special structural walls shall be in accordance with Chapter 18.

11.1.3 Design of plain concrete walls shall be in accordance with Chapter 14.

11.1.4 Design of cantilever retaining walls shall be in accordance with Chapter 13.

11.1.5 Design of walls as grade beams shall be in accordance with 13.3.5.

11.1.6 Cast-in-place walls with insulating forms shall be permitted by this Code for use in one- or two-story buildings.

11.2—General

11.2.1 *Materials*

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

11.2.1.2 Design properties for steel reinforcement shall be selected to be in accordance with Chapter 20.

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

11.2.2 *Connection to other members*

11.2.2.1 For precast walls, connections shall be designed in accordance with 16.2.

11.2.2.2 Connections of walls to foundations shall satisfy 16.3.

COMMENTARY

R11.1—Scope

R11.1.1 This chapter applies generally to walls as vertical and lateral force-resisting members. Provisions for in-plane shear in ordinary structural walls, as opposed to special structural walls conforming to 18.10, are included in this chapter.

R11.1.2 Special structural walls are detailed according to the provisions of 18.10. This Code uses the term "structural wall" as being synonymous with "shear wall." While the term "shear wall" is not defined in this Code, the definition of a structural wall in Chapter 2 states "a shear wall is a structural wall."

ASCE/SEI 7 defines a structural wall as a wall that meets the definition for a bearing wall or a shear wall. A bearing wall is defined as a wall that supports vertical load beyond a certain threshold value. A shear wall is defined as a wall, bearing or nonbearing, designed to resist lateral forces acting in the plane of the wall. ASCE/SEI 7 definitions are widely accepted.

R11.1.6 Specific design recommendations for cast-in-place walls constructed with insulating concrete forms are not provided in this Code. Guidance can be found in ACI 506R and PCA 100.

R11.2—General