

Chapter 5

FLOOD LOADS

5.1 GENERAL

The provisions of this section apply to buildings and other structures located in areas prone to flooding as defined on a flood hazard map.

5.2 DEFINITIONS

The following definitions apply to the provisions of this chapter:

APPROVED: Acceptable to the authority having jurisdiction.

BASE FLOOD: The flood having a 1 percent chance of being equaled or exceeded in any given year.

BASE FLOOD ELEVATION (BFE): The elevation of flooding, including wave height, having a 1 percent chance of being equaled or exceeded in any given year.

BREAKAWAY WALL: Any type of wall subject to flooding that is not required to provide structural support to a building or other structure and that is designed and constructed such that, under base flood or lesser flood conditions, it will collapse in such a way that: (1) it allows the free passage of floodwaters, and (2) it does not damage the structure or supporting foundation system.

COASTAL A-ZONE: An area within a special flood hazard area, landward of a V-Zone or landward of an open coast without mapped V-Zones. To be classified as a Coastal A-Zone, the principal source of flooding must be astronomical tides, storm surges, seiches, or tsunamis, not riverine flooding, and the potential for breaking wave heights greater than or equal to 1.5 ft (0.46 m) must exist during the base flood.

COASTAL HIGH HAZARD AREA (V-ZONE): An area within a Special Flood Hazard Area, extending from offshore to the inland limit of a primary frontal dune along an open coast, and any other area that is subject to high-velocity wave action from storms or seismic sources. This area is designated on Flood Insurance Rate Maps (FIRMs) as V, VE, VO, or V1-30.

DESIGN FLOOD: The greater of the following two flood events: (1) the Base Flood, affecting those areas identified as Special Flood Hazard Areas on the

community's FIRM; or (2) the flood corresponding to the area designated as a Flood Hazard Area on a community's Flood Hazard Map or otherwise legally designated.

DESIGN FLOOD ELEVATION (DFE): The elevation of the design flood, including wave height, relative to the datum specified on a community's flood hazard map.

FLOOD HAZARD AREA: The area subject to flooding during the design flood.

FLOOD HAZARD MAP: The map delineating Flood Hazard Areas adopted by the authority having jurisdiction.

FLOOD INSURANCE RATE MAP (FIRM): An official map of a community on which the Federal Insurance and Mitigation Administration has delineated both special flood hazard areas and the risk premium zones applicable to the community.

SPECIAL FLOOD HAZARD AREA (AREA OF SPECIAL FLOOD HAZARD): The land in the floodplain subject to a 1 percent or greater chance of flooding in any given year. These areas are delineated on a community's FIRM as A-Zones (A, AE, A1-30, A99, AR, AO, or AH) or V-Zones (V, VE, VO, or V1-30).

5.3 DESIGN REQUIREMENTS

5.3.1 Design Loads

Structural systems of buildings or other structures shall be designed, constructed, connected, and anchored to resist flotation, collapse, and permanent lateral displacement due to action of flood loads associated with the design flood (see Section 5.3.3) and other loads in accordance with the load combinations of Chapter 2.

5.3.2 Erosion and Scour

The effects of erosion and scour shall be included in the calculation of loads on buildings and other structures in flood hazard areas.

5.3.3 Loads on Breakaway Walls

Walls and partitions required by ASCE/SEI 24 to break away, including their connections to the structure, shall be designed for the largest of the