ARTICLE 555

Marinas, Boatyards, Floating Buildings, and Commercial and Noncommercial Docking Facilities

Part I. General

555.1 Scope. This article covers the installation of wiring and equipment in the areas comprising fixed or floating piers, wharves, docks, floating buildings, and other areas in marinas, boatyards, boat basins, boathouses, yacht clubs, boat condominiums, docking facilities associated with one-family dwellings, two-family dwellings, multifamily dwellings, and residential condominiums; any multiple docking facility or similar occupancies; and facilities that are used, or intended for use, for the purpose of repair, berthing, launching, storage, or fueling of small craft and the moorage of floating buildings.

Informational Note No. 1: See NFPA 303-2016, *Fire Protection Standard for Marinas and Boatyards*, for additional information.

Informational Note No. 2: Where boats, floating buildings, docks, and similar structures are connected to an electrical source or a supply of electricity, hazardous voltages and currents may create serious safety concerns.

Informational Note No. 3: Text that is followed by a reference in brackets has been extracted from NFPA 303-2016, *Fire Protection Standard for Marinas and Boatyards*, and NFPA 307-2016, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves*. Only editorial changes were made to the extracted text to make it consistent with this *Code*.

The requirements of Article 555 apply to public and private docking, storage, repair, and fueling facilities for small craft. It also applies to floating buildings. The term *small craft* is not defined in the *NEC*®. Based on the scope of NFPA 303, *Fire Protection Standard for Marinas and Boatyards*, the term *small craft* includes recreational and commercial boats, yachts, and other craft that do not exceed 300 gross tons. For facilities that serve larger craft and ships, see NFPA 307, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves*. Requirements for floating buildings, including floating dwelling units, which previously were contained in Article 553 until the 2020 NEC, are covered in Article 555.

This article also applies to docking facilities associated with one-family dwellings, two-family dwellings, and multifamily dwellings.

555.3 Electrical Datum Plane Distances.

(A) Floating Piers. The electrical datum plane for floating piers and boat landing stages that is (1) installed to permit rise and fall response to water level and without lateral movement, and (2) that are so equipped that piers and landing stages can rise to the datum plane established for 555.3(B) or (C), shall be a horizontal plane 762 mm (30 in.) above the water level at the floating pier or boat landing stage and a minimum of 305 mm (12 in.) above the level of the deck.

(B) Areas Subject to Tidal Fluctuations. In land areas subject to tidal fluctuation, the electrical datum plane shall be a horizontal plane that is 606 mm (2 ft) above the highest tide level for the area occurring under normal circumstances, based on the highest high tide.

(C) Areas Not Subject to Tidal Fluctuations. In land areas not subject to tidal fluctuation, the electrical datum plane shall be a horizontal plane that is 606 mm (2 ft) above the highest water level for the area occurring under normal circumstances.

Throughout Article 555, the physical location of electrical equipment is referenced to the electrical datum plane, which is used as a horizontal benchmark on land and on floating piers. The definition of the term *electrical datum plane* encompasses areas subject to tidal movement and areas in which the water level is affected only by conditions such as climate (rain or snowfall) or by human intervention (the opening or closing of dams and floodgates). In either case, the term covers the normal highest water level, such as astronomical high tides. The term does not cover extremes due to natural or manmade disasters.

See also

Article 100 for the definition of *electrical datum plane*

555.4 Location of Service Equipment. The service equipment for a floating building, dock, or marina shall be located on land no closer than 1.5 m (5 ft) horizontally from and adjacent to the structure served, but not on or in the structure itself or any other floating structure. Service equipment shall be elevated a minimum of 300 mm (12 in.) above the electrical datum plane.

This requirement ensures that supply conductors to a floating building, dock, or pier can be disconnected in an emergency, such as during a storm, when the floating structure has to be moved quickly. Service equipment is not permitted to be installed on the floating building and any other floating structure, such as a pier, and is now subject to horizontal clearances from these structures. Additionally, minimum elevation requirements above the electrical datum plane provide clearances above normally experienced high-water levels, as covered by the definition of *electrical datum plane* in Article 100. This requirement applies only to equipment that is covered by the definition of *service equipment*. A minimum elevation requirement above docks and piers for other electrical equipment, not meeting the definition of *service equipment*, is covered by the requirements of 555.30(A).

555.5 Maximum Voltage. Pier power distribution systems shall not exceed 250 volts phase to phase. Pier power distribution systems, where qualified personnel service the equipment under engineering supervision, shall be permitted to exceed 250 volts but these systems shall not exceed 600 volts.

Δ **555.6 Load Calculations for Service and Feeder Conductors.** General lighting and other loads shall be calculated in accordance with Part III of Article 220, and, in addition, the demand factors set forth in 220.120 shall be permitted for each service and/or