163 MOORINGS

This basic category provides fixed structures for mooring vessels and includes catwalks between mooring platforms.

163 10 MOORING DOLPHIN (EA)

Mooring dolphins consist of clusters of vertical timber piles in planned patterns and spacing. The piles are bound and secured by wire rope, shearing blocks, and bolts. Dolphins are used to deflect ships and assist in their alignment as the ships approach and enter a slip. Naval installations with harbor or waterfront facility requirements for mooring of small craft and ships, up to carriers, may plan for mooring dolphins to insure the safety and protection of the vessels. The number, size, and type of dolphins is dependent upon the type of vessels involved and the complexity of the approach to the slip. For typical dolphin arrangements, see DEFINITIVE DESIGNS, NAVFAC P-272.

163 20 MOORING PLATFORM (EA)

A mooring platform is an isolated structure consisting of a timber of concrete deck supported on piling. Two or more platforms are provided in line for berthing of one or more vessels alongside. Mooring platforms provide facilities beyond those points where marginal wharves or piers cease to function effectively as service or loading areas. Mooring platforms may include catwalks between each platform structure and the wharf. A berthing camel should be used between fender piles and the moored vessel. The mooring platform is shown in general plan and detail in DEFINITIVE DESIGNS. NAVFAC P-272. See Harbor and Coastal Facilities. NAVFAC DM-26, for technical design information.

163 30 STARE PILE MOORING (EA)

A stake pile mooring consists of a stake pile driven below the surface of the firm bottom of the ocean floor. A chain attached to the stake is used to moor the vessel. The advantages of using stake piles instead of anchors for moorings are that they are fixed anchorage points and that they are comparatively cheap, if a pile driving rig is available when a number are to be driven. The disadvantages are that the mooring lines do not equalize the pulls in a spread mooring; the stake pile, because it is fixed, does not absorb shock energy as well as an anchor; and finally, approval from the authority in charge of channel dredging is necessary before driving stake piles into a bottom. When dredging is required in an area where stake piles are located, there is some hazard of damaging dredge cutters. The folding capacity, size, and other design details of stake piles can only be accurately determined by an analysis of bottom soil borings and field experiments at the site. See NAVFAC drawings listed in Table 163-30, Stake Pile Drawings, for typical details.

TABLE 163-30
Stake Pile Drawings

200,000 lb stake pile, 12-3/4" O.D. pipe (std Dwg)	660853
200,000 lb stake pile, 12 BP 53 (Std Dwg)	660857
100,000 lb stake pile, 12 BP 53 (Std Dwg)	896109