

## FLOATING DOCKS

Floating docks are a common component of a boat landing facility. Boarding floats will rise and fall over the range of water levels, providing a constant freeboard on one or more of the floats. The S.C. DNR most frequently specifies aluminum construction, with wooden or steel piles, located adjacent to or between launching ramps to aid in boarding, and adjoining a concrete abutment on the landward side. General guidelines are provided herein for aluminum boarding floats only. The designer is expected to require the manufacturer to provide detailed shop drawings of floats designed in accordance with the standards set forth herein and other applicable codes. Piles for securing the boarding floats are to be either wood, concrete or steel. Pile diameter, spacing, and embedment depth are dependent on lateral forces of wind and water, while flotation is to be determined based on freeboard required under vertical loading. The design loadings and required freeboard are shown graphically on sheet FD-2. The manufacturer should be required to provide a design for each boarding float which meets or exceeds the standards presented herein. The normal vertical live load of 20 psi should be increased to at least 40 psi and as much as 60 psi for "event" piers and similar floating docks subject to large numbers of people at a single time.

An array of suggested minimum embedment depths for sand, clay, and soft and hard rock at a broad range of current velocities and various spacings is provided on Sheets FD-3, 4, 5, and 6. As with piles for fixed piers, the designer assumes full responsibility for determining the site soil conditions and making adjustments for materials not fitting into these soil categories, as well as determining the design water velocity for the site.