



## **New Double Deck Piers at Norfolk**

New double-deck piers are being built at Naval Station Norfolk where most of the piers were built just after World War II, but the oldest was built in the 1920's.

The new design, by the Naval Facilities Engineering Command, will make life easier for Sailors and maintenance personnel and will provide better mooring for ships during heavy weather. The design won an Outstanding Achievement Award from the Engineers Club of Hampton Roads in 2001.

The concrete piers are 1,500 feet long and 93 feet wide. The lower deck is made of pre-cast pieces that fit together like building blocks. The upper deck is cast-in-place concrete. Each pier costs between \$35 and \$40 million, depending on the amount of dredging and demolition needed, and takes about two years to build. Pier 6 was completed in November 2001 and Pier 2 will be completed early in 2002. Pier 7 is being designed for construction contract award in Fiscal Year 2002.

The first deck is enclosed with a nine-foot ceiling to allow trucks to service telephone lines, fiber optic cables, electric cables, and fuel, water and sewage connections. On current piers, these are under the piers where they are exposed to the elements and can only be accessed by boat at low tide.

The second deck will be 21 feet above water level and open. It will be used by ship's crews and visitors, and by vehicles bringing supplies and equipment to the ships. The taller piers will provide more secure mooring in high winds.