

## **217 MAINTENANCE - ELECTRONICS AND COMMUNICATION EQUIPMENT**

This basic category includes facilities and shops for maintenance and repair of radio and radar equipment, antennas, radiation aids, sonar equipment, transmission and reception equipment, and guided bombs.

### **217 10 ELECTRONICS/COMMUNICATIONS MAINTENANCE SHOP (SF)**

Electronics maintenance shops at Naval and Marine Corps activities provide facilities for maintenance and repair of nonairborne equipment (see Category Code 211 45, Avionics Shop (Non-NARF) for airborne equipment repair facilities). Criteria for facilities of this type are currently under development.

### **217 20 COLLIMATION TOWER (EA)**

Collimation facilities are required at shipyards for electronic and optical alignment of fire control and radar equipment aboard ships. This facility consists of a steel tower approximately 125 to 150 feet in height and a small instrument building at the lower base.

### **217 30 FIELD MAINTENANCE SHOP (COMMUNICATIONS/ELECTRONICS) (SF)**

This field maintenance shop provides specialized work areas for performing 3rd and 4th echelon maintenance on all items of communications/electronics equipment authorized repaired by the Service Battalion of the Marine Division and the Force Service Regiment. The shop space includes administrative and training areas as well as storage space for tools, parts, and maintenance float equipment. For other field maintenance functions, see Category Codes 214-53, 215-60 and 218-80.

See Definitive Designs, NAVFAC P-272, Part 4, for appropriate space allocations.

### **217 40 ANTENNA TEST RANGE (EA)**

This facility is for testing electronic equipment and communication antennas after completion of maintenance, repair and overhaul work. This range has to be individually planned. Standard planning factors are not available.

### **217 50 SENSOR ACCURACY CHECK SITE (SACS) (EA)**

The primary purpose of this facility is to measure the performance of shipboard sensors in an in-port environment on completion of overhaul or during normal port upkeep of Navy ships. This facility can be planned for only when authorized by the Commander, Naval Sea Systems Command. The SACS is a unique test and evaluation facility which provides an independent, real-time measure of gyrocompass, sonar, echo sounder and sonar communications set performance and accuracy. The SACS design permits sensor

evaluations under test conditions especially favorable to the ship: (1) the ship is tested in port with all normal dockside facilities available; (2) measurements are external to the ship so that "at sea" performance is determined ; (3) data are analyzed in real-time providing immediate identification of sensor deficiencies and verification of corrective actions; and (4) all major sonar parameters are measured in a single comprehensive test.

The major components of this facility are:

1. Control Center: The building in which test points on the ship's sensors are monitored, and control is maintained over all SACS equipment. The building contains signal generating, receiving and processing devices and automatic data acquisition and analysis equipment.

2. Pile Mounted Transducers: Transducers mounted to the 31 pilings of the SACS array. The transducers are spaced at 10 degree intervals and are used for sonar range and bearing error measurements.

3. Moveable Carriage with Transducer: A calibrated directional transducer that can be moved vertically and in azimuth; it is used for receiver and transmitter performance measurements.

4. Ship's Transducer Location System (STLS): A system of three transducers used to continuously monitor the position of the ship's sonar transducer to an uncertainty of less than one inch.

5. Automatic Ship's Head Measuring System (ASHMS): A system of specially configured TV cameras that is used to provide ship's heading to an accuracy of better than 0.01 degree.

6. Mooring System: A system of five hydraulic winches from which wire ropes are extended to the ship in order to maintain the ship's sonar transducer near the center of the SACS array.

7. Inport Services: The ship is provided 800 amps, 440 volts, steam, fresh water, telephone connections and generous parking space.

8. Echo Sounder Test Array: An array of four transducers placed on the bottom of the bay directly below the ship's fathometer.

A minimum depth of 50 feet MLLW is required at the site of the subject facility due to the variety of vessels that can be expected to be serviced.

**217 77 ELECTRONICS - SPARES AND STORAGE (READY ISSUE/SHOP STORES/  
MISCELLANEOUS) (SF)**