SECTION 27 52 41
MISCELLANEOUS MEDICAL SYSTEMS

SPEC WRITER NOTE: Delete between //____//
if not applicable to project. Also delete
any other item or paragraph not applicable
in the section and renumber the
paragraphs.

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies the furnishing, complete installation and
connection of the miscellaneous medical equipment and systems as
described herein:

1.2 RELATED WORK

A. Section 28 13 00, ACCESS CONTROL: Low-voltage electric locks and
monitoring system.
B. Section 27 05 11, REQUIREMENTS FOR COMMUNICATIONS INSTALLATIONS: General
electrical requirements and items that is common to more than one
section of Division 26.
C. Section 26 05 21, LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
(600 VOLTS AND BELOW): Cables and wiring.
D. Section 27 05 26, GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS:
Requirements for personal safety and to provide a low impedance path for
possible ground fault currents.

1.3 SUBMITTALS

A. Submit in accordance with Section 26 05 11, REQUIREMENTS FOR ELECTRICAL
INSTALLATIONS.
B. Shop Drawings:
   1. Sufficient information, clearly presented, shall be included to
determine compliance with drawings and specifications.
   2. Include electrical ratings, dimensions, weights, mounting details,
front view, side view, equipment and device arrangement, branch
circuit overcurrent protection, wiring diagrams, materials, and
connection diagrams.
C. Manuals: Two weeks prior to final inspection, submit four copies of the
following to the Resident Engineer:
   1. Complete maintenance, operating and testing manuals including wiring
diagrams, technical data sheets and information for ordering
replacement parts:
      a. Include complete "As Installed" diagrams, which indicate all items
         of equipment and their interconnecting wiring.
b. Include complete diagrams of the internal wiring for each of the items of equipment, including "As Installed" revisions of the diagrams.

c. The wiring diagrams shall identify the terminals to facilitate installation, maintenance, operation and testing.

D. Certifications: Two weeks prior to the final inspection, submit four copies of the following to the Resident Engineer:
1. Certification by the contractor that the equipment conforms to the requirements of the drawings and specifications, and has been properly installed, adjusted and tested.

1.4 APPLICABLE PUBLICATIONS

A. Publications listed below (including amendments, addenda, revisions, supplements and errata) form a part of this specification to the extent referenced. Publications are referenced in the text by the basic designation only.

B. National Fire Protection Association (NFPA):
   70-05 ................. National Electrical Code (NEC)
   99-05 ................. Health Care Facilities
   101-03 ............... Life Safety Code

C. Institute of Electrical and Electronic Engineers (IEEE):
   A-78 (Book) ........... Recommended Practice for Electrical Systems in Health Care Facilities

PART 2 - PRODUCTS

SPEC WRITER NOTE: Coordinate Article 2.1 with Nurse Call Spec. Edit out the functions, which are already listed in the Nurse Call Spec.

2.1 PSYCHIATRIC (MENTAL HEALTH) SECURITY UNIT DOOR SIGNAL SYSTEMS

A. Components:
   1. Pilot light, a chime, two pushbuttons, electric lock and auxiliaries for each barrier door to each Psychiatric Security Unit.
      a. Pilot light shall have a stainless steel back plate with a red, 24v, 100 ma miniature bayonet base lamp and 120-24 volts transformer.
      b. Chime shall be provided with a 10-volt ampere, 120-24 volt transformer.
      c. Security unit shall operate on 120-volt and shall contain all lock-in relays. Unit shall be fail-safe.
      d. Push button shall be rated for 10 amperes, 600 volts, and heavy-duty type with stainless steel cover plate.
e. Electric lock shall be furnished per specification Section 28 13
00, ACCESS CONTROL.

2. A chime and one pushbutton at the nurses' station for the respective
Psychiatric Security Unit.


B. Operation:

1. Depressing the pushbutton at the door shall energize the associated
chime and pilot light(s) and seal both in the energized position.

2. Depressing the associated pushbutton at the nurses' station shall de-
energize the chime and pilot light(s), release them from their
sealed-in position and unlock the door.

3. Coordinate the door release operation with electric locks specified
in specification Section 28 13 00, ACCESS CONTROL.

C. Signs: Provide a suitable and durable sign under each chime and each
pilot light, which reads "Barrier Door", with size of lettering not less
than 15 mm (1/2 inch) high.

2.2 NARCOTICS STORAGE SIGNAL SYSTEMS

A. Components:

1. Red pilot light for each narcotic vault door and each narcotic
cabinet door. Refer to Article 2.1 for specifications.

2. Pilot lights locations as shown on the drawings.

B. Operation:

1. Door switches, incorporated in the vault and cabinet doors by their
manufacturers, shall control the pilot lights.

2. Each pilot light shall be energized only while its associated door is
open.

C. Signs: Provide a suitable and durable sign under each pilot light, which
reads "Narcotics Door", with size of lettering not less than 15 mm (1/2
inch) high.

2.3 ELAPSED TIME INDICATORS

A. 0-60 minute range, ±3 percent instrument accuracy.

B. 300 mm (12 inch) dial, flush or semi-flushed mounted.

C. Minute hand and sweep-second hand.

D. Black on white, large digits at 5-minute intervals and individual second
markings to assure accurate readability.

E. Rugged completely enclosed synchronous motor for quiet and trouble-free
operation.

F. Shock-resistant and dust-proof metal enclosure.
G. Automatic and manual operation, with controls on the front of the panel and terminals inside the cabinet for connecting remote equipment, which actuates the automatic operation.

H. A reset switch shall be mounted on the front panel. The switch shall reset the indicator to zero within five seconds after its momentary activation.

I. Power supply - 120 volts, 60 Hz.

//J. A solid-state clock with equivalent operational readability, electronic, digital type, and medical elapsed time indicators will be considered for approval. Minimum LED display shall be 65 mm (2 1/2 inch) high. //

PART 3 - EXECUTION

3.1 INSTALLATION

A. Installation shall be in accordance with NFPA, NEC, and as shown on the drawings.

B. All wiring shall be installed in conduit.

3.2 STARTUP AND TESTING

A. At the final inspection in the presence of the VA representative, demonstrate that the miscellaneous medical systems operate properly in all respects:

1. Test and adjust all controls and safeties. Replace or repair all malfunctioning controls, safeties, and equipment as soon as possible to avoid any delay in the use of the equipment.

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