27 32 26 Emergency Telephones
(Revision date: 2/15/12)

1.0 Purpose

A. These guidelines provide requirements for designers to incorporate into bid documents. They are part of the University Wiring Standard (UWS), version 3.0.

2.0 General Requirements

A. Area of rescue telephones. Areas of rescue assistance are locations on upper floors of campus buildings designated for emergencies. They are meant to provide safe locations for individuals incapable of using exit stairs to await rescue by emergency services personnel. Each is typically equipped with its own emergency telephone. These units operate as ring-down telephones, contacting the NC State Campus Police call center when activated.

B. Blue light telephones. NC State employs the use of a system of exterior emergency telephones (blue light telephones) across the campus. These telephones are located in outdoor common areas, and are used as emergency call stations to the NC State Campus Police call center. Telephones are mounted in either in freestanding stanchions or in smaller, wall mounted units. In general, units are only to be installed at the request of NC State Campus Police.

3.0 Materials and Standards

A. Materials. The materials used for this system are to be manufacturer and part number specific with no substitutions, unless specified as accepting “or equal.” See Section 27 06 00 Schedules for Communications Systems for a list of materials acceptable for use in NC State University projects.

B. Construction details. Detail drawings describing blue light emergency telephone installation are available for download and modification by designers at the NCSU ComTech website.

C. Standards. All work shall be in accordance with the latest edition of all applicable campus, State, and Federal regulations and codes, and with manufacturer recommendations.

D. Area of rescue telephone installation. The telephone unit should be installed to meet all ADA height and accessibility requirements. A ¾” conduit should be installed from the bottom of the telephone unit to the nearest telecommunications wireway. The contractor should install one four pair, Category 3 UTP cable from the BDF to the telephone unit. This cable should be installed unterminated with 5 feet of cable coiled up inside the telephone unit and 50 feet of cable coiled and neatly attached to the wall of the BDF. This cable should be tagged on both ends clearly as “rescue telephone # 1, # 2 …”

E. Area of rescue telephone service. ComTech will order dial tone from AT&T for all rescue assistance telephones. ComTech will also terminate both ends of the cables described above. The station end will be terminated on the appropriate terminals within the telephone unit. At the BDF end the cables will be terminated on the special use lines 66 block. The contractor should notify Comtech (via NCSU Construction Management) at least 30 days prior to needing the dial tones installed to coordinate service connection.

F. Blue light telephone installation. The top beacon and the front panel light of each unit require 120V AC power from a circuit available 24 hours/day (not on solar activated sensor). The telephone itself is powered via the telephone line (DC). Each unit requires dial tone delivered via telephone cable. This cable is run from the BDF in the nearest campus building. Installation should be as follows:

1. Freestanding stanchion mounting. A concrete pier is required to support the stanchion, and should be mounted onto a suitable concrete base. The pier should be constructed using a site-built reinforcement cage constructed using #4 steel rebar and an 18" wide sonotube as a concrete form. 3000 PSI concrete should be used. The pier must be able to support a 225 lb. structure, 9 ½' tall. A Gai-Tronics Installation Hardware Kit should be used to mount the stanchion to the pier per manufacturer specifications. Two PVC conduits should be installed up through the pier and stubbed out from base of unit for future tie-in. The conduits shall be one ¾" conduit (power) and one 1 ½" conduit (telephone).

2. Wall Mounted Stanchion Mounting. The mounting assembly should be installed onto a wall or other flat surface capable of supporting at least 50 pounds (concrete or masonry) using 3/8" bolts. Mount such that bottom of unit is between 35" and 41" AFF to meet ADA height requirements.

3. Telephone Service Conduit. One 1 ½" PVC conduit should run from the base stub out of the freestanding stanchion unit back to BDF room of the nearest campus building. This conduit does not need to be concrete encased, but should be provided with 24" minimum earth cover. Wall mount stanchions should be provisioned with one 1" conduit from each unit back to the building BDF. For multiple units on a site, each blue light telephone should have its own conduit home run back to the BDF. Units should not be connected in series.

4. Grounding. Units should be grounded per NEC requirements. A #10 grounding stud connection is provided in freestanding stanchions inside the rear access panel and at the base of the wall mounted stanchions for grounding.

5. Service. It will be the responsibility of the contractor to install the blue light telephone stanchion, telephone unit, all electrical connections, the telephone cable conduit, and the telephone cable. The contractor is to install an extra 10 feet of telephone cable at the stanchion end, leaving it unterminated and coiled up in the stanchion unit. At the BDF end, the contractor is to terminate one pair of the cable on a properly grounded, wall mounted lightning protector. The protector cover should be labeled as "blue light telephone #1, #2 …" ComTech will terminate the telephone cable at the stanchion end, and connect it to the telephone unit. Provision of dial tone and programming of the telephone will be completed by ComTech.

End of Section