SECTION 27 32 26

EMERGENCY TELEPHONES

PART 1 – GENERAL

1.01 DESCRIPTION

A. The work covered by this section of the Specifications includes all labor necessary to perform and complete such construction, all materials and equipment incorporated or to be incorporated in such construction and all services, facilities, tools and equipment necessary or used to perform and complete such construction. The work of this section shall include, but is not limited to, the following:

1. A complete and operable emergency telephone system.

B. All install locations, product configurations, and or graphics must be approved by the Chief of Police or official representative for the CSU, Chico Police Department.

1.02 QUALITY ASSURANCE

A. Refer to Section 27 00 00 for general details.

1.03 CODES, STANDARDS, AND GUIDELINES

A. Except as modified by governing codes and by the Contract Documents, comply with the applicable provisions and recommendations in Section 27 00 00.

B. UL/CSA 60950

C. FCC Regulations 47CFR part 68

1.04 SUBMITTALS

A. Refer to Section 27 00 00 for general details.

B. Shop Drawings:

1. N/A

C. Submit Manufacturer’s Cut Sheets for the following:

1. Any products not specifically listed in the PRODUCTS section shall require a submittal of the manufacturer’s cut sheets.

D. Provide manufacturer’s warranty statement.

E. Provide all user/installation/programming manuals for all installed equipment.
1.05 IDENTIFICATION

A. All cables, protectors, handholes, conduit and other communications infrastructure are to be labeled per campus specifications.

B. Refer to Section 27 05 53 for additional details.

1.06 DEFINITIONS

A. N/A

1.07 WARRANTY

A. Refer to Section 27 00 00 for general details.
PART 2 – PRODUCTS

2.01 PRODUCT CONSISTENCY

A. Product Consistency: Any given item of equipment or material shall be the product of one manufacturer throughout the facility. Multiple manufacturers of any one item will not be permitted.

2.02 EMERGENCY TELEPHONE

A. General

1. Unit must be an easily identifiable, outdoor rated, vandal resistant communications device that is ADA compliant.

2. Faceplate shall be constructed of 12 Gauge Steel or Aluminum with a brushed finish.

3. The entire unit shall be vandal resistant and include vandal resistant screws.

4. Mounting holes shall be pre-drilled and be of a standard pattern for installation in the vendor’s entire product line.

B. Color & Signage

1. The emergency phone shall have the word “EMERGENCY” in red and a red button as a permanent part of the faceplate assembly.

2. Labeling shall include Braille, be cast metal with writing raised 3/32” for ADA compliance.

C. Communications

1. Unit shall be activated via a single button. No additional buttons or keypads shall be located or required on the faceplate of the phone instrument.

2. Unit shall include two auxiliary outputs and one auxiliary input that are opto-isolated from the telephone line to 1,000 volts. Outputs shall be activated, providing dry contact closure either automatically when the emergency phone is activated or manually by remote software. Input shall be activated by any device or switch that provides dry contact closure.

3. Provide phone line surge suppression and an analog telephone connection.

4. The speaker and microphone shall be protected from the environment and vandalism with a grill and protected from pest intrusion with a screen.

5. Speakerphone shall operate hands-free once the call is placed.

6. Unit shall operate on a standard telephone line (POTS), Centrex, or as a PBX extension.

7. Unit shall operate at phone line voltage. No other power source should be required to place an emergency call.

8. Unit shall be able to place a call to at least 2 different numbers each containing up to 18 digits.
including pauses. If the first number does not answer or is busy the call will be placed to the second line and continue alternating until the call is received or the call timer expires.

9. Unit shall be programmable from a remote telephone via keypad entry and via remote programming software.

10. All programming shall be stored in non-volatile EEPROM memory.

11. Speaker output shall be greater than 80db at 1 meter.

12. Unit shall feature a LED that shall illuminate to indicate that the call has been received.

13. Unit shall have a programmable call timer to disconnect the call.

14. Unit shall have adjustable volume controls separately for the microphone and speaker.

15. Unit shall be capable of silent monitoring.

16. Unit shall utilize tone dialing.

17. When a call is finished the Unit shall automatically shut off.

18. Unit must be able to answer a call from any other phone.

19. Two levels of programmable passwords shall be available.

20. Unit shall have varistor lighting suppressed and full wave polarity guarded.

21. Unit shall have parallel tip and ring connected to an RJ-11 connector for quick installation.

22. Unit shall have a 3.5 inch waterproof speaker. Magnet and solid aluminum voice coil area shall be protected from ferrous and non-ferrous particles by special design. Speaker shall operate at temperatures of -20°F to 140°F. Steel basket shall have a zinc dichromate finish for protection from corrosion.

23. Unit shall include gold water resistant microphone.

24. Push Button/Switch shall be a single assembly. Epoxy seals shall protect internal contacts and terminals from moisture and dust penetration. Assembly shall have a mechanical life of 1,000,000 cycles. Push button shall be made of steel or aluminum and red in color. Push Button/Switch shall operate in a temperature range of -20°F to 140°F.

25. Button shall provide tactile feedback.

26. PC Boards and Electrical Components shall be designed to operate in a temperature range of -20°F to 140°F and humidity levels up to 94% at 120°F.

27. Protective Sealing of PC boards and electrical Components: After final assembly the entire circuit board shall be conformally dipped rather than by spraying. The microprocessor chip shall be sealed in place with electrical grade silicone sealant after insertion into the circuit board.

28. The unit shall be fully functional by a single twisted pair unshielded twisted telephone pair.
29. The unit shall function requiring only the telephone line. No external power shall be required.

30. A single touch to the communications devices button shall immediately dial to predetermined phone number.

31. Upon activation of the communication devices, the following function shall immediately occur:
   a. Dial to a predetermined phone number.
   b. Activation of the associated blue strobe light.
   c. Activate the remote pre-set for the associated CCTV camera (if installed).
   d. Upon establishing connections to a predetermined phone number, the communication device shall send a signal identifying that the unit has been activated.
   e. The strobe light shall continue to flash until the call is terminated.

D. Warranty
   1. Unit shall have a minimum 5 year manufacturer’s warranty.

E. Manufacturer/Product: Talk-A-Phone Model # ETP-400R

2.03 EMERGENCY TELEPHONE PEDESTEL MOUNT

A. Unit must be a freestanding, multifunctional, easily identifiable, vandal resistant communications device that is fully ADA compliant.

B. Construction
   1. Unit must be constructed of 0.25" steel tubing with 2” radiused corners.
   2. Unit must have multi-coat rust-inhibitive coating
   3. Unit must have the capability to support an overhead camera mount and CCTV camera(s).
   4. Unit must have a recessed mounting area for the phone instrument.

C. Lighting
   1. Unit must have a 1,500,000 candlepower, strobe light utilizing ultra-bright long-lasting LEDs. Strobe shall pulse at 70 flashes per minute.
   2. Unit must have an “always on” blue beacon light utilizing ultra-bright long-lasting LEDs.
   3. Unit must have a polycarbonate refractor/housing with a prismatic pattern to increase visibility at greater distances. Refractor housing shall further be enclosed in a clear polycarbonate security enclosure.
   4. Unit must have, or have the capability to support a high power area light.
5. Unit must include a lighted faceplate for the phone instrument.

D. Color & Signage
   1. There are two acceptable colors, depending on the area of deployment; color will be specified by the campus telecommunications representative.
   2. Coating shall be a high gloss with resistance to corrosion, UV fade, and graffiti protection.
   3. Color of the unit shall be Safety Blue (11SF) in Outer Areas of Campus
   4. Color of the unit shall be Dark Bronze (86BR) in the historic core of the campus.
   5. The word "EMERGENCY" shall be emblazoned on all four sides with factory applied 3.25" high reflective white letters.

E. Power
   1. Voltage requirements: 120VAC.

F. Mounting
   1. Unit shall include anchor kit for foundation or pre-poured deck installations.

G. Warranty
   1. Unit shall have a minimum 5 year manufacturer’s warranty.

H. Manufacturer/Product: Talk-A-Phone Model # ETP-MT/R OP NA

2.04 EMERGENCY TELEPHONE WALL MOUNT

A. Unit must be a wall mounted, multifunctional, easily identifiable, vandal resistant communications device that is fully ADA compliant.

B. Construction
   1. Unit must be constructed 12 gauge stainless steel.
   2. Unit must have multi-coat rust-inhibitive coating
   3. Unit must have the capability to support an integrated camera mount and CCTV camera.
   4. Unit must have a recessed mounting area for the phone instrument.

C. Lighting
   1. Unit must have a 1,500,000 candlepower, strobe light utilizing ultra-bright long-lasting LEDs. Strobe shall pulse at 70 flashes per minute.
   2. Unit must have an "always on" blue beacon light utilizing ultra-bright long-lasting LEDs.
3. Unit must have a polycarbonate refractor/housing with a prismatic pattern to increase visibility at greater distances. Refractor housing shall further be enclosed in a clear polycarbonate security enclosure.

4. Unit must include a lighted faceplate for the phone instrument.

D. Color & Signage

1. There are two acceptable colors, depending on the area of deployment; color will be specified by the campus telecommunications representative.

2. Coating shall be a high gloss with resistance to corrosion, UV fade, and graffiti protection.

3. Color of the unit shall be Safety Blue (11SF) in Outer Areas of Campus

4. Color of the unit shall be Dark Bronze (86BR) in the historic core of the campus.

5. The word "EMERGENCY" shall be emblazoned on all four sides with factory applied 1.5" high reflective white letters.

E. Power

1. Voltage requirements: 120VAC.

F. Mounting

1. Unit shall include vandal resistant wall mounting hardware kit.

G. Warranty

1. Unit shall have a minimum 5 year manufacturer’s warranty.

H. Manufacturer/Product: Talk-A-Phone Model # ETP-WM
PART 3 – EXECUTION

3.01 GENERAL

A. Installation at minimum shall be as specified by the manufacturer.

B. Do not install emergency phones until after their installation location has been accepted by the campus telecommunications representative and the University’s Chief of Police.

C. All surface mount conduits run in support of an emergency phone installation are to be painted to match the building’s finish so as to minimize aesthetic impact.

D. Electrical circuits used to provide power to emergency phone installations are to be full time powered circuits. Electrical circuits that are activated by timer or photo cell are not acceptable.

E. All access panels for pedestal mounts shall be completely accessible with at least 3 feet of clearance for maintenance access.

F. ADA Compliance

1. Installation of the pedestal, phone instrument, foundation, and mounting hardware shall not impede ADA accessibility requirements.

G. Post Project Cleanup

1. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

2. Restore any landscape, concrete, asphalt or aesthetic elements disturbed during installation.

3.02 QUANTITIES

A. Quantities of system elements shown on the drawings are illustrative only and are meant to indicate the general configuration of the work. The Contractor is responsible for providing the correct quantities of materials to construct a system that meets the intent of these Specifications and the relevant codes.

3.03 INSTALLATION

A. Pedestal Installation

1. Installation is to include a dedicated 1¼” conduit with pull string for Telecom. This conduit is to connect directly to an in ground hand hole located within 6’ of the pedestal. The handhole is then to connect to the nearest existing telecommunications infrastructure. Refer to project drawings for specific connection location.

2. Cabling serving pedestal phones will require entrance protectors at each end. See section 27 11 13 for details.

3. Installation is to include a dedicated ¾” conduit for electrical service. This conduit is to connect directly to an in ground hand hole located within 6’ of the pedestal. The handhole is then to connect to the nearest existing electrical infrastructure. Refer to project drawings for specific connection location.
4. Electrical circuit shall be continuously enclosed in conduit for its entire run until it terminates in an outlet or junction box inside the pedestal.

5. No conduits shall enter the top or side of a pedestal mount phone enclosure. Conduits shall only enter the bottom of the enclosure.

6. The telecom handhole shall include a ½\" x 8\' ground rod to bond the pedestal, anchors, conduits and concrete reinforcing metal with a #6 AWG bare copper conductor.

7. Handholes shall not be located within the ADA path of travel for the pedestal.

8. Manufacturer/Product: Jensen Precast Product #P9 with a P9D Lid

9. Footings & Mounting
   a. Pedestals must be solidly anchored to a foundation with embedded steel ¾\" by 24\" j-bolts with 5\" of exposed thread.
   b. Foundation must be at minimum 24\" in diameter and 36\" deep.
   c. Foundation shall be finished at grade.
   d. Foundation construction shall meet all applicable state and local codes.
   e. Installation in a pre-poured deck shall utilize a purpose built through bolt kit provided from the manufacturer.
   f. Installation shall not rely on the use of drop in anchors.
   g. All steel reinforcing rods in the footing shall be bonded together with a #6 AWG bare copper wire. Leave a 3\’ stub of grounding wire next to the embedded signal conduit for attachment to planned pedestal.
   h. Follow all manufacturer’s written recommendations for installation.

B. Wall Mount Installation

1. Installation is to include a dedicated 1¼ conduit with pull string for Telecom. This conduit is to connect directly to the nearest existing telecommunications room or cable tray. Refer to project drawings for specific connection location.

2. Installation is to include a dedicated ¾” conduit for electrical service. Refer to project drawings for specific connection location.

3. No conduits shall enter the top or side of a wall mount phone enclosure. Conduits shall only enter the bottom of the enclosure.

3.04 GROUNDING & BONDING

A. Pedestal Mount Phone
1. Pedestal is to be grounded with a #6 AWG copper ground wire. Wire is to be terminated on the provided grounding stud in the tower, and terminated on the ground rod in the accompanying signal hand hole.

2. All entrance protectors located inside the tower shall be bonded to the grounding stud using a #6 AWG copper ground wire.

3. Bond all metal components of the pedestal, including the whip from the steel reinforcing in the footing, to the grounding rod.

B. Wall Mount Phone

1. Ground the metal enclosure with a #12 AWG copper grounding wire to the provided electrical ground.

C. Refer to Section 27 05 26 for additional details.

3.05 TESTING

A. Testing shall require a demonstration of a call from each device proving proper functioning of all accessories and visual notification devices. Each demonstration will be in the presence of the campus telecommunications representative & designated representative of the CSU, Chico Police Department.

3.06 ACCEPTANCE

A. Upon receipt of the Contractor’s documentation of testing, the campus representative will review/observe the installation and randomly request tests of the device as installed. Once the installation and testing has been completed and the campus telecommunications representative is satisfied that all work is in accordance with the Contract Documents, the representative will notify the Contractor and/or campus project manager in writing or via email.

B. All install locations, product configurations, and or graphics must be approved by the Chief of Police or designated representative of the CSU, Chico Police Department.

3.07 RECORD (ASBUILT) DRAWINGS

A. The Project Record Drawings shall show the types, locations, jack numbers and assigned phone numbers of installed equipment.

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