

TECHNICAL SPECIFICATIONS  
FOR  
ELECTRICAL EQUIPMENT, WIRING AND INSTALLATION

1. Description

- (a) This Specification covers the necessary labor, materials, supervision, tools and services required for the installation of a complete and operable electrical system as shown on the Plans.
- (b) The work shall include complete installation of the electrical service and testing of all equipment and wiring at the completion of the work and making any minor connection changes or adjustments necessary for the proper functioning of the system. The system shall be properly adjusted and in working order at the time of final acceptance.
- (c) Where cutting of existing asphalt or concrete is required for the installation of electrical conduit, it shall be done in a neat and workmanlike manner and repaired in accordance with the City of Knoxville Utility Maintenance and Improvement Policy.

2. Materials

- (a) All materials shall conform to the latest issue of all applicable standards as established by NEMA, ASA, IEFEE, ASTM, IPCEA, National Fire Underwriters, and Underwriters Laboratories, Inc., and shall bear the manufacturer's name, trade name, and brand.
- (b) All work shall be installed and completed in accordance with the latest rules and regulations of the NEC, NESC, and all State and local codes and ordinances and such work not so installed shall be removed and reinstalled at the Contractor's expense. Only experienced electrical workers shall be employed on the electrical installation.
- (c) Material and installation of all:
  - 1) Rigid metal conduit systems or raceways shall conform to the most recent edition of the NEC, Article 346, including supplemental updates.
  - 2) Rigid non-metallic conduit systems or raceways shall conform to the most recent edition of the NEC, Article 347, including supplemental updates.
- (d) All branch circuits in conduit shall be no smaller than 3/4 inch.
- (e) 100 AMP box, rain type, installation on a pedestal - 24 circuits.
- (f) All 110-volt circuits shall be on 15 or 20 AMP breakers.

- (g) All 220-volt circuits shall be double pole breakers - 40 AMP.
- (h) All wire shall be T.H.W. or equal.
- (i) All work shall conform to the 1993 National Electrical Code (NEC); State of Tennessee, Division of Fire Prevention, Electrical Section, Chapter 0780-2-1; Knoxville City Ordinance No. 0-191-95; and all other applicable state and local codes.

3. Permits and Inspection

All permits required by local ordinances shall be obtained and paid for by the Contractor and after completion of the work, the Engineer shall be furnished a certificate of final inspection and approval from the electrical inspection department of local authority having jurisdiction.

4. Basis of Payment

All electrical work will be paid for at the Contract Unit Price for furnishing and installing all electrical improvements including all wiring, outlets, meters, boxes, and related work as shown in the Bid Schedule, which price shall be full compensation for all labor and materials necessary to complete the work as shown in the Plans and outlined in these Specifications.