

SECTION 18500

SERVICE METERS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Section includes requirements for 120/240, 100A three-wire, single-phase meter service and upgrading existing meter service to 120/240, 100A, 3-wire, single-phase meter service.
- B. Provide all interface with and in conformance to the standards of the power provider, in order to obtain the commercial metered power service at the locations shown on the Contract Drawings and as required by the Engineer.

1.02 REFERENCE STANDARDS

- A. National Fire Protection Association (NFPA):
 - 1. 70 National Electrical Code (NEC)

1.03 SUBMITTALS

- A. Submit Meter Service Drawings, indicating mounting pole, meter base, breaker box, and grounding.
- B. Submit Peak load calculation for each meter location. Submit load calculation within 90 days of Notice to Proceed.
- C. Submit letter certifying that the installation of the meter service has been approved by the local electrical inspector.

1.04 QUALITY ASSURANCE

- A. Electrical service shall conform to the provisions in NFPA 70 National Electrical Code and these Specifications.
- B. Materials and equipment furnished and installed under this Section shall conform to all applicable State and local ordinances pertaining to electrical power installations, and the National Electrical Code (NEC).

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Circuit Breakers
 - 1. Circuit breakers shall be sized by the Contractor for the projected loads. Circuit breakers for 120 Vac power shall be 2 pole rated for 240 Vac. Panels shall contain 25 percent spare circuit breaker space.

2. One double pole circuit breaker shall be provided for future use, in addition to the 25 percent space circuit breaker space, specified herein.
- B. Meter Bases: Shall meet the requirements of the power provider.
- C. Ground Rods and Ground Rod Clamps: Ground rods and ground rod clamps shall meet the requirements of Section 18450, Signal Grounding, and those of the power provider.
- D. Wood Poles: Shall meet the requirements of the power provider.
- E. Meter Pedestals and Bases: Shall meet the requirements of the power provider.

PART 3 - EXECUTION

3.01 GENERAL

- A. Make the necessary arrangements with the power provider and pay all fees in connection with having the new meter service hooked up at least one month prior to placing signal system in service.
- B. Arrange to obtain the service connection from the power provider. Pay the power provider charges for this service connection.
- C. Where the Contract Documents specify that the Owner will make arrangements with the power provider, Contractor shall be responsible for installation and coordination with the power provider.

3.02 COORDINATION

- A. Coordinate the connection and interface of new cables and equipment with the power provider in accordance with its standards.

3.03 INSTALLATION

- A. The installation of the various equipment and materials for the signal power distribution system that are specified herein shall be in accordance with the power provider requirements and the NEC.
- B. The requirements included within this Section shall cover all incidental installation work necessary to effect an integrated, tested, and operable signal power system for the Work as shown on the Contract Drawings.
- C. Arrange utility power service at all equipment shelter locations requiring such services. Connections to equipment shelters from meter may be by underground or aerial connection. Where aerial connection is used, maximum aerial length between meter and shelter shall not exceed 125 feet without the Engineer's prior acceptance.
- D. In collaboration with the Engineer, meet as necessary with LPC representatives to negotiate for the upgrade, relocation, or addition of the power provider required power services needed to complete system operation.

3.04 GROUNDING

- A. Meter service grounding shall be in accordance with Section 18450, Signal Grounding, the NEC, and the power provider requirements. If there is a conflict between the above specifications, the power provider requirements shall govern.

3.05 TESTING AND INSPECTION

- A. Simulated load tests, in accordance with approved signal power system test procedure, shall be satisfactorily completed prior to final connection of signal facilities at each equipment location.
- B. Prior to final acceptance by the Engineer, obtain inspection of the new AC power service by state and local jurisdictional authority(s), as required.

END OF SECTION