

SECTION 26 27 01

ELECTRICAL SERVICE ENTRANCE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. The Conditions of the Contract and applicable requirements of Divisions 0 and 1 and Section 26 00 01, "Electrical General Provisions", govern this Section.

1.02 DESCRIPTION OF WORK:

- A. General: The electrical service shall be at 480/277 volts, 3-phase, 4-wire, 60 Hz, and shall be obtained from Centerpoint Energy (CPN) hereafter called "The Power Company".
- B. Power Company Data: Obtain from The Power Company all required information and installation standards to furnish a complete electrical service installation and make all arrangements required to obtain electrical service.
- C. Responsibilities: Division 26 shall be responsible for determining which equipment and labor is by The Power Company, which is by Division 26, and shall be responsible for any charges by The Power Company for service installation. Make all arrangements necessary to obtain electrical service from The Power Company. Obtain all necessary standards and detail drawings from The Power Company before construction of service equipment is commenced. The Power Company service data as shown is accurate as determined on the date of Specification issue and shall be verified as specified hereinabove. All materials, construction, and methods of installation of service equipment shall comply with The Power Company requirements, including, but not limited to: Primary conduits and ductbanks, transformer pads/provisions, concrete equipment pads, metering conduit, grounding system, and instrument transformer cabinets. Service equipment shall be grounded per the National Electrical Code (NEC) and as indicated on the Drawings and in the Specifications.
- D. Utility Service Equipment: Service for the building will be available from a pad mounted transformer by The Power Company. Service metering shall be installed [n the transformer secondary compartment.

1.03 SUBMITTALS:

- A. Shop Drawings submittals shall include, but not be limited to, the following:
 - 1. Dimensioned drawing showing exact provisions for service.
 - 2. Additional information as required in Section 26 00 01, "Electrical General Provisions".

PART 2 - PRODUCTS

2.01 GENERAL:

- A. Service Data: The Power Company service data is accurate as determined on the date of Specification issue and shall be verified as described in Paragraph 1.02, hereinabove.

2.02 PRIMARY SERVICE:

- A. General: Division 26 shall provide primary service ductbank and manholes as shown and as specified in Section 26 05 33, "Electrical Raceways", and Section 26 05 34, "Electrical Boxes".

- B. Power Company: The Power Company shall provide primary cables, splices, terminations, and primary overhead service lines.
- C. Approval: The Power Company shall approve the underground primary conduit installation prior to concrete encasement.

2.03 TRANSFORMERS AND SWITCHGEAR:

- A. General: Division 26 shall provide all necessary provisions for service as required by The Power Company, including, but not limited to, grounding rods, grounding conductors, and sleeves.
- B. Power Company: The Power Company shall provide **pad mounted** transformers, primary switchgear, protective relaying and connections to the customer service cables.

2.04 SECONDARY SERVICE CABLE:

- A. General: Division 26 shall provide secondary service cables as shown for connection to the service transformer.

2.05 METERING EQUIPMENT AND PROVISIONS:

- A. General: Division 26 shall provide metering conduits and metering provisions as shown and as directed by The Power Company.
- B. Service Metering: At connections to the City electrical grid, the Power Company shall provide metering equipment, metering cans and interconnecting wiring. At connections to the UH Cougar Substation, _____ shall provide metering equipment, metering cans and interconnecting wiring.
- C. A sub-meter **[is] [is not]** required for this job. Provide
 - i) E-Mon Class 5000 Smart Meter w/Dual Protocol Communications featuring 4-line display (kWH, KWH/Demand with peak time and date, power factor per Phase, kW real-time load, and amps and volts per phase). On Board Set Up Options shall include IP Address, meter date/time ID codes for E27 and BACnet.
 - ii) E-Mon Green Class Meter with CO₂ and Carbon Footprint Data featuring direct-read two-line LCD display showing kWH, current load, peak Demand in kW and peak date and time; to-date energy cost based on user-entered cost per kWH and projected hourly cost based on metered load; and display of total carbon (CO₂) emissions in pounds (lbs.) and hourly emissions based on metered load.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Standards: The complete installation of the service entrance provisions shall comply with the standards and requirements of The Power Company and with requirements of other Sections of this Division.
- B. Correction: Any failure to meet these standards and requirements shall be corrected to the satisfaction of The Power Company without any additional cost to the Owner.

END OF SECTION