

DESIGN CRITERIA

1. Applicable Sections: Division 26 Section 26 05 00 applies.
2. Related Sections: See Division 33 Section 33 71 01.
3. Building Electrical Primary Service: Underground; verify exact actual primary voltage with the Host Military Installation engineer. Usually 15 KV nominal class. Provide insulated copper cables with insulation type preferred by the Host Military Installation engineer. Default insulation: cross-linked polyethylene (XLP) or ethylene-propylene rubber (EPR). Edit Guide Specification 26 05 13, Medium-Voltage Cables, and 33 71 02, Underground Electrical Distribution (covers electrical and communications ducts) for the project.
4. Splices and Terminations: Molded type approved for use with cable to be installed.
5. Pad Mounted Transformer: Completely dead-front, metal enclosed compartmental transformer per ANSI Standard C57.12.26, oil-insulated, self-cooled, delta-wye or wye-wye as required by Host Installation, primary voltage to match Installation primary distribution voltage (verify with Installation engineer), with primary load-break bushings and elbows. Tested per ANSI C57.12.90. Low-loss, normal-impedance design. Provide surge protection and proper overcurrent protection on primary. Provide with full accessories, including oil drain valve and fill plug, liquid level gage, pressure-vacuum gage, dial thermometer with maximum temperature indicator, lifting lugs, provision for jacking under base. Mount on concrete pad, provide protective bollards. Install exterior transformers above grade. Do not install in recessed loading dock areas or other areas subject to flooding. Edit Guide Specification 26 12 19, Medium-Voltage Transformers, for the project.
6. Electrical metering shall consist of a voltmeter and ammeter (configured to measure line-to-line and phase-to-neutral voltage and line current) and a watt-hour meter with demand register and pulse initiator at the main switchboard unless required otherwise by Host Installation or commercial electric utility company. All facility electrical loads, including parking lot and street lighting, shall be metered by the watt-hour meter. Display the meter multiplier (if applicable) on face of each meter installed. Make provision for electronic power monitoring for the building service by the Refrigeration Monitoring and Control System (RMCS); coordinate with the RMCS supplier. The utility distribution systems are usually Government-owned. Accordingly, design to provide an additional revenue watt-hour meter of the type and at the location standard with the Host Military Installation Engineer, and incorporate design details required by the Installation Engineer in the design of primary electrical service and transformer.
7. In exceptional instances where the power is provided by a local public utility company, coordinate and make provisions for primary service, transformer, secondary service and revenue metering as required by the utility company.
8. Splices and Terminations: Use only experienced qualified installer to make.

END OF SECTION