

**DESIGN CRITERIA**

1. Related Sections: Section 26 05 00 applies.
2. Wire Size: Use AWG and KCMil sizes, except for international projects requiring metric design.
3. Low Voltage Conductors (Secondary): Copper. Rated 600-volt, 140 deg F or higher for No. 10 and No. 12 and 167 deg F or higher for No. 8 and larger. No. 8 conductors and larger shall be stranded; conductors smaller than No. 8 shall be solid. Aluminum shall be permitted for feeders only.
4. Medium Voltage Conductors (Primary): Single conductor shielded copper with cross-linked polyethylene (XLP) or ethylene-propylene rubber (EPR) insulation. [Verify insulation and shielding requirements with installation and edit specification accordingly.] Provide a 133 percent insulation level for primary conductors, based on the actual primary voltage available at the site. Most military installations have primary systems of 12470 to 13800 volts line-to-line; verify with utility source.
5. Power and Lighting Branch Circuits: No. 12 AWG minimum for interior; No. #10 AWG minimum for exterior. Medium voltage primary: #2 AWG minimum or larger size required for load demand ampacity or compatibility with the existing primary system conductors and overcurrent protection.
6. Pull cables using approved methods and in a manner complying with workmanship standards set forth by applicable trade and contractor associations. Do not exceed pulling force or bending radius limitations of the selected cables.
7. Refer to Section 27 15 00 for telecommunications and data wiring requirements.
8. Indicate wire sizes and insulation types for circuits shown on Drawings. Identify unusual circuit parameters that are not readily apparent, such as adjustments made to accommodate voltage drop, high ambient temperatures, or nonlinear loads. Require contractors to submit proposed deviations of insulation type or wire size for approval, including all related changes of ampacity, conduit size or overcurrent protection, etc.

**END OF SECTION**