



Design Standard Medium Voltage Cables

Purpose:

This design standard has the purpose of creating a consistent application of medium voltage cables throughout the South San Francisco Unified School District thereby achieving a standard of maintenance, reliability and quality throughout all renovation and new building projects.

Design Standard:

Medium voltage cables include the following but not limited to:

- Cables.
- Terminations.

All medium voltage cables to meet the following requirements based on Code requirements and industry standard of care:

- Regulatory Requirements:
 - i) UL 1072.
 - ii) NEMA-WC7.
 - iii) ICEA Standards S-68-516 and CS6-79.

All cables to meet the following requirements based on code requirements and industry standard of care:

- Type MV-90, 133 percent insulation, single uncoated annealed copper conductor with Class B stranding, with strippable extruded conductor shielding around the conductors.
- Conductor screen consists of an extruded layer of semiconducting compound with a volume resistivity not exceeding 50,000 ohms-cm at 90C and a minimum average thickness of 22 mils.
- Provide flexible thermosetting dielectric based insulation on an ethylene-propylene elastomer (APPEAR).
- Provide insulation screen with an extruded semi-conduction compound with a volume resistivity not exceeding 50,000 ohms-cm at 90C.
- Provide extruded insulation screen shielded with a nonmagnetic 5 mil thick copper tape.
- The overall jacket is polyvinyl chloride, 80 mils thick.
- Cable has continuous factory printed identification on the outer jacket for the full length of the cable.



South San Francisco Unified School District



Section 26 05 13

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Approved Manufacturers:

- Cable:
 - i) General Electric
 - ii) General Cable
 - iii) Okonite
- Terminations and Splices:
 - i) 3M
 - ii) Thomas & Betts/ Elastimold
 - iii) Cable Manufacturer

Substitutes Allowed:

Yes, if performance and quality equivalency can be evidenced.

Associated Design Standards

- 26 00 00 Design Standard Basic Electrical Requirements

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