

## SECTION 16050 BASIC MATERIALS AND METHODS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions apply to this Section.

#### 1.2 SUMMARY

- A. The specifications covering this work are open unless specifically indicated "No substitutes will be considered". Reference in the specifications to any article, device, product, material, fixture, form, or type of construction by name, make, or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. The Subcontractor may use any article, device, product, material, fixture, form, or type of construction that, in the judgment of the CM, expressed in writing, is equal to that specified.
- B. Electrical drawings are diagrammatic and shall not be scaled for exact sizes or locations.
- C. Maintain one set of electrical white prints on the job site, marked to show as-built conditions and installations. At job completion, give this set of drawings to the Construction Manager and obtain written acknowledgement of receipt.

#### 1.3 REFERENCES

- A. National Fire Protection (NFPA):
  - 1. NFPA 70-1999, National Electric Code (NEC).
- B. American National Standards Institute (ANSI):
  - 1. ANSI C2-97, National Electrical Safety Code.

#### 1.4 SUBMITTALS

- A. Submit shop drawings for all products specified in this section in accordance with the requirements of General and Supplementary Conditions.

### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. The materials, appliances, fixtures, and equipment shall be new and of the quality specified and shall bear the UL label when such labels are available.
- B. Metal parts of conduit, boxes, fittings, enclosures, hangers, straps, screws, etc., shall be made of corrosion resistant materials or protected by corrosion resistant materials.

### PART 3 - EXECUTION

#### 3.1 GENERAL

- A. Provide the bracing, shoring, rails, guards, and covers necessary to prevent damage or injury. Do not leave energized electrical items unnecessarily exposed or unprotected. Protect personnel from exposure to contact with electricity. Protect work and materials from damage by weather and the entrance of water or dirt. Cap conduit during installation. Avoid damage to materials and equipment in place. Satisfactorily repair or remove and replace damaged work and materials.

Deliver equipment and materials to the job site in their original, unopened, labeled containers. Store ferrous materials so as to prevent rusting. Store finished materials and equipment so as to prevent staining and discoloring.

- B. All sheathing, shoring, and cleaning necessary to keep trenches and their grades in proper condition for the work to be carried on, including the removal of water by mechanical means, shall be the Contractor's responsibility. Excavate trenches three inches below the elevation of the bottom of conduit. Then fill the trench to the proper elevation, and tamp in layers 6 inches deep until firm and even. During backfilling, the final layer of fill shall be topsoil. Backfill carefully, and restore the surface to its original condition. The backfill used may be earth up to the final topsoil layer, but in no case shall it contain large rocks, tree roots, trash, or debris. Omit topsoil under paved areas.
- C. Provide inserts, hangers, supports, braces, and anchor bolts as necessary for all work called for under this division.
- D. Megger test the feeder circuits and major equipment both phase to phase and phase to ground at 1000V DC before energizing. Insulation resistance of less than one megohm is not acceptable.
- E. Perform testing in the presence of the CM and officials of authorities having jurisdiction. Do not cover or conceal work until testing is completed and the installation has been approved. Furnish the instruments, devices, and equipment necessary for testing. Correct defects discovered during testing.
- F. At the termination of work under this division, furnish the Construction Manager with six complete bound sets of operating instructions on equipment furnished under this division.
- G. As work progresses and once it is completed, remove from the premises all dirt, debris, rubbish, and waste materials resulting from this work.
- H. Remove all tools, scaffolding, and surplus materials after completion and acceptance of the work.
- I. Turn the entire job over to the Construction Manager in a complete and satisfactory condition.
- J. The Subcontractor shall furnish a written guarantee of his work and materials for a period of one year from the date of final payment for his work, and shall repair and make good any defects occurring during this period due to defective materials or workmanship.

**END OF SECTION 16050**