

## SECTION 16622

## DUCT CABLE

## PART 1 DESCRIPTION

- A. Furnish and install duct cable consisting of a complete assembly of conductors enclosed in a high-density polyethylene duct.

## PART 2 MATERIALS

- A. Provide new materials that comply with the details shown on the plans, with conductors that meet the material requirements of Item 16620, "Electrical Conductors." Furnish duct cable from new materials that comply with the following requirements.
- B. Provide duct cable from manufacturers prequalified in accordance with Item 16000.
- C. Furnish duct that is clearly and durably marked at maximum 10 ft. intervals with the material designation including nominal size of the duct and either the name or the trademark of the manufacturer. Mark the duct at 2 ft. intervals with sequential numbers indicating length of cable, in feet, on reel, with zero mark at the inner end.
- D. Assemblies exhibiting evidence of conductors pulled into the duct after the duct is manufactured are not acceptable. Duct cable testing less than 50 megohms insulation resistance at 1,000 volts while still on the reel is not acceptable.
- E. Ensure that the complete assembly is packaged on reels having sufficient diameter to prevent permanent set or damage to the duct cable. Ensure that each reel is clearly and durably marked to show the voltage rating, type of insulation, number of conductors, conductor size, length, duct size, and either the name or the trademark of the manufacturer.
- F. Before installation, furnish written certification that all duct cable complies with the requirements of this Item and as shown on the plans.

## PART 3 CONSTRUCTION

- A. Install duct cable by open trench methods in accordance with the NEC, except at locations where installing duct cable in conduit. Backfill the trench in accordance with Item 02226, "Excavation and Backfill for Structures," except for measurement and payment. When removal of existing pavement or concrete surface is allowed, backfill with material equal in composition and density to the surrounding area and replace removed surfacing, such as asphalt pavement or concrete riprap, with like material to equivalent condition or as shown on plans.

- B. Splicing the duct is not allowed. Make all connections in ground boxes or pole bases. Form bends with large radii to provide free movement of conductors. After installation, demonstrate that the conductors can move freely. Duct cable that has been kinked or in which the conductors cannot move freely is not acceptable. Splice conductors and test insulation in accordance with Item 16620, "Electrical Conductors," except for measurement and payment.

PART 4 MEASUREMENT

- A. This Item will be measured by the foot of duct cable.
- B. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal. Additional measurements or calculations will be made if adjustments of quantities are required.

PART 5 PAYMENT

- A. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Duct Cable" of the types and sizes specified. This price is full compensation for furnishing and installing all duct cable; pulling through conduit; excavating and backfilling the trenches; replacing riprap, pavement structure, topsoil, sod, or other surface; testing insulation resistance; and equipment, labor, tools, and incidentals.

END OF SECTION