

SECTION 16010 ELECTRICAL GENERAL REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work Included:
 - 1. Section 16050 – Basic Materials and Methods
 - 2. Section 16400 – Service and Distribution
 - 3. Section 16500 - Lighting
 - 4. Section 16600 – Street Lighting
 - 5. Section 16700 – Communications

1.2 REFERENCES AND STANDARDS

- A. Published specifications, standards, tests, or recommended methods of trade, industry or governmental organizations apply to work of this section where cited by abbreviations noted below:
 - 1. Underwriters Laboratories, Inc. (UL)
 - 2. American Society for Testing Materials (ASTM)

1.3 QUALITY ASSURANCE

- A. Refer to Section 01450 – Quality Control
- B. Requirements of Regulatory Agencies and Standards.
 - 1. All electrical materials and equipment shall bear label of the Underwriters; Laboratories, shall be listed by them in their list of electrical fittings, and shall be approved by them for the purpose for which they are used, unless the materials and equipment are a type which Underwriters' Laboratories do not list nor provide label service
- C. Drawings:
 - 1. All scaled and figured dimensions are approximate. Before proceeding with any work, carefully check and verify all dimensions and sizes.
 - 2. So far as possible the work has been indicated on the Drawings in such position as to suit and accommodate other work, but the work as indicated is largely diagrammatic and is shown primarily for clarity. Contractor is responsible for the correct placing of work and the proper location and connection of work in relation to other work. Branch circuit and signal system "home runs" are generally indicated by arrow. Continue all circuits to respective panel or terminal as if routing was shown in its entirety.

When apparatus and equipment have been indicated on the Drawings, dimensions have been taken from typical equipment of the class indicated. Carefully check the Drawings to see that the equipment will fit into the spaces provided.

3. Verify equipment dimensions and the correct locations of this equipment before proceeding with the roughing-in of connections.

1.4 SUBMITTALS:

- A. Refer to Submittals Section 01334 – Shop Drawings, Product Data and Samples.
- B. Make submittals of the following, in the order listed.
 1. Manufacturer's Data.
 2. Shop Drawings.
- C. Manufacturer's Data:
 1. Submit a complete list of material and equipment, including manufacturer's name.
 2. In addition, submit complete catalog information such as construction, capacity, types, photometrics, size, finishes, and mounting methods.
 3. Reference all listings to paragraphs to which they are applicable and submit in brochure form.
 4. For any material specified as ASTM, Federal Specifications, or trade standards, furnish the manufacturer's or vendor's certification that the material furnished for the work does in fact equal or exceed such specifications.
- D. Shop Drawings:
 1. Submit details on Auto Cad.
 2. Refer to individual sections for listing of material requiring shop Drawings.

1.5 RECORD DRAWINGS

- A. Refer to Project Record Documents Section 01789 – Project Record Documents.
- B. Include on As-Built Drawings:
 1. Position of all concealed or buried service conduits accurately dimensioned.
 2. Changes or of type and location of equipment.

1.6 OPERATING AND MAINTENANCE DATA

Reference Section 01830 – Operation and Maintenance

- A. General: Submit to the Agency's Representative prior to acceptance of the installation, complete and at one time. Partial or separate data will not be accepted. Data shall consist of the following minimum submissions.
 1. Manufacturer's Literature: Manufacturer's instruction for operation and maintenance of all major items such as communication and signal systems, and engine-generator set.
 2. Written Instructions: Typewritten instructions for operation and maintenance of those systems composed of Operation Instructions and Maintenance Instructions.
 - a. Operation Instructions: A brief description of the system indicating proper setting of controls.
 - b. Maintenance Instructions: A list of each item of equipment requiring inspection of lubrication describing the performance of such maintenance and the month of the year when each item of equipment should be inspected or serviced.

- B. Verbal Instructions: Upon completion of the Work and at a time designated by the Agency's Representative, provide a competent representative from each supplier of the aforementioned major items of equipment to provide training and instruct the Agency's Representative in the operation and maintenance of the equipment supplied.
- C. Binders: Three complete permanent sets of the above data with index in loose ring binders with permanent covers and permanent identification.

1.7 DEFINITIONS

- A. "Wiring": Raceway, fittings, wire, boxes and related items.
- B. "Concealed": Embedded in or below construction, installed in furred spaces, within partitions, above suspended ceilings, in trenches, in crawl spaces or in enclosures.
- C. "Exposed" Not installed underground or "concealed" as defined above.

1.8 MEASUREMENT AND PAYMENT

- A. **Payment for Bid item 47 "Relocation of Existing Lighting Parking Lot 8" is on a unit cost basis and includes all labor, equipment, materials for the relocation of the existing parking lot lighting fixtures, removal of existing foundations, conductors and pull boxes, abandon of existing conduits, installation of new foundations, conduits, conductors, pull boxes as shown in the bid documents, specifications and these special provisions, and no additional compensation shall be provided there for.**
- B. **Payment for Bid item 48 "Remove and Salvage Existing Lighting" is on a lump sum basis and includes all labor, equipment, materials for the removal of existing lighting fixtures, abandon of existing conduits, removal of existing conductors, foundations and pull boxes as shown in the bid documents, specifications and these special provisions, and no additional compensation shall be provided there for. Salvage location is as directed by the District.**
- C. **Payment for Bid item 49 "Service Pedestal and Electrical Installation to Point of Service" is on a lump sum basis and includes all labor, equipment, materials for the installation of new service pedestal, foundation, conduits, conductors and pull boxes as shown in the bid documents, specifications and special provisions, and no additional compensation shall be provided there for.**
- D. **Payment for Bid item 50 "New Lighting Transit Center, including Shelters" is on a lump sum basis and includes all labor, equipment, materials for the installation of new transit center lighting fixtures, bus shelter lighting fixtures, foundations, conduits, conductors, pull boxes as shown in the bid documents, specifications and these special provisions, and no additional compensation shall be provided there for.**
- E. **Payment for Bid item 51 "Relocate Blue Light Phone" is on a lump sum basis and includes all labor, equipment, materials for the relocation of existing blue light phone, removal of existing foundation, installation of new foundation, conduits, conductors and pull boxes as shown in the bid documents, specifications and these special provisions, and no additional compensation shall be provided there for.**