

**DIVISION 26 – ELECTRICAL
SECTION 26 00 00
BASIC ELECTRICAL REQUIREMENTS**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Basic Electrical Requirements specifically applicable to Division 26 Sections, in addition to the “Special Notice to Contractors Summary Form “ , the “Form of Proposal”; the “Form of Bid Bond”; “Division 1 - General” of the “Contract Specifications”; the “Contract Drawings” and all Amendments and Addenda thereto; all of which govern the Work of this Section..
- B. Refer to each section to confirm additional requirements that is part of Contract.

1.2 SUMMARY

- A. Unless otherwise shown on the Contract Drawings, or unless otherwise specified on other Sections of these Specifications, the general requirements specified in this Section are applicable to all electrical work of this Contract. Additional requirements applicable to individual Sections of these Specifications are specified in those Sections, or are shown on the Contract Drawings.

1.3 QUALITY ASSURANCE

- A. Any entity performing Work shall have had experience on at least two projects involving quantities and complexities at least equal to those required under this Division or the applicable Section thereof.
- B. All workmen performing under this Division shall be skilled workers of the electrical trade involved. Where specialty work, such as splicing or welding are required, submit proof of training, experience, and work history for each workman, for review by the Engineer. Only approved workmen shall perform specialty work.
- C. All electrical work shall be performed under the supervision of an electrical contractor or sub-contractor, licensed in the state (and the city as required) in which the work is to be performed. **Submit a copy of the qualifying license for review by the Engineer.**
- D. All calculations required by this and other various Sections of these Specifications, or as shown on the Contract Drawings, shall be certified and sealed by a Professional Engineer licensed in the state in which the work is to be performed, and shall be submitted to the Engineer for review.
- E. Various Sections of these Specifications contain the requirement for the specific material or equipment to be furnished with an experience statement "satisfactorily used for purposes similar to those intended herein" or words of similar intent and statement that specifies the required experience time. These statements shall mean that the manufacturer of the material or
- F. equipment being furnished for the work specified in this Contract shall have manufactured similar material or equipment to that specified, for at least the time specified.
- G. In various Sections of this Division there is a statement, which refers to the length of required experience which must be satisfied.
- H. Polyvinyl Chloride (PVC): PVC conduits, PVC insulated power wiring, or items containing PVC shall not be installed in any indoor area. PVC insulated wiring for communications systems, remote control, signaling, and power-limited circuits shall be furnished and installed in accordance with NFPA 70.
- I. Asbestos

1. Asbestos or items containing asbestos shall not be furnished or installed.

J. Conformance Labels

1. All electrical materials and equipment for which there is a nationally recognized standard shall bear the conformance labeling of the third-party inspection authority, such as Underwriters Laboratories Inc., Factory Mutual, ETL, or approved equal. Where the phrase "where there are established UL standards shall bear the UL label", or words of similar intent appear in other Sections, the instructions for the conformance label above shall apply.

J. General : Comply with the latest editions of the following standards:

1. NEC, National Electrical Code (NFPA No. 70).
2. NFPA No. 101, Life Safety Code.
3. ANSI C2, National Electrical Safety Code.
4. ANSI C73, dimensions of Attachment Plugs and Receptacles.
5. NECA, standards for installation.
6. NEMA, standards for materials and products.
7. UL, Underwriters Laboratories.
8. Energy Conservation Construction Code.
9. New York State Uniform Fire Prevention and Building Code.
10. OSHA, Occupational Safety and Health Act.
11. ICEA, Insulated Cable Engineers Association.
12. ASTM, American Society for Testing Materials.
13. ETL, Electrical Testing Laboratories.
14. EPA, Environmental Protection Agency.
15. ADA, Americans with Disabilities Act.
16. NYCBC, New York City Building Code.
17. NYCEC, New York City Electrical Code 2011
18. All NYC Local Laws

K. Symbols: Refer to the drawings for definition of symbols used to show electrical work.

1.4 SCOPE OF WORK

The work will include but not be limited to following:

A. Demolition -

1. Disconnect and remove light fixtures as indicated on electrical demolition plan.
2. Disconnect and Remove existing receptacles, switches, wiring, raceway, and lighting fixtures as indicated on the Contract Drawings.
3. Disconnect and removed existing electrical connections to mechanical equipment that is scheduled for removal. See Mechanical drawings.
4. Modification and removal of existing equipment, raceways, and related branch circuits in the wall to be demolished.
5. Termination of all unused branch circuits in raceways.

6. Removed materials shall be removed from the premises and legally disposed of by the Contractor. Adhere to Waste Management requirements and other requirements shown on drawings.
- B. Installation: Furnish and install the following:
- a. All work shown on Contract drawings and specifications.
 - b. Install new light fixtures and exit lights as indicated on new floor plan.
 - c. Installation of new electrical equipment and coordination with the Utility Company, as necessary.
 - d. Installation of electrical panels, switches, disconnects and necessary supports.
 - e. Installation of branch circuits, junction boxes, receptacles, and accessories.
 - f. Provide lighting fixture switches, general purpose, GFI, appliance and air conditioner receptacles as indicated on the electrical drawings.
 - g. General purpose and appliance branch circuits and feeds.
 - h. Power and Connections to all mechanical equipment, including but not limited to, fans, motors, HVACs, motor controls, HVAC controls and other equipment that is part of this Contract. See Mechanical drawings
 - i. Fire Alarm devices and equipment including all filings.
 - j. Miscellaneous equipment support for electrical equipment.
 - k. All necessary filings, permits, certificates, agency approvals and related work.
 - l. Unless otherwise specified, remove all existing items being replaced or not required.
 - m. Each bidder must visit the site and meter room and inform him/herself as to the nature and extent of the work to be done. No extra compensation will be allowed to the Contractor because of his/her failure to inform him/herself fully as to the conditions and to include in his/her bid all items of labor and material required for a complete and finished installation.
 - n. Raceways and installation components.
 1. Wire and cable.
 2. Panelboards lighting and distribution.
 3. Overcurrent protection (fuses/circuit breakers).
 4. Safety and disconnect switches.
 5. Installation of motor controllers
 6. Power wiring to all dampers.
 7. Control equipment per Mechanical design
 8. Power, control, and alarm wiring systems.
 9. Grounding system.
 10. Lighting fixtures.
 11. Wiring devices.
 12. Testing.
 13. Cutting associated with electrical work.
 14. Prime painting, where required for electrical equipment and installation.

1.05 WORK SEQUENCE

- A. Install work in stages to accommodate Owner's occupancy requirements during the construction period coordinate electrical schedule and operations with Owner.

1.06 ALTERNATES

- A. See Division 1

1.07 REFERENCES

- A. The following is a listing of publications referenced in this Section:
 1. American Society of Testing and Materials (ASTM)
 2. Occupational Safety and Health Administration (OSHA)
 3. New York City Electrical Code.
 4. National Electrical Code.

1.08 SUBMITTALS

- A. Submit under provisions of General Requirement.
 - 1. Proposed Products List: Include Products specified in the Electrical Sections Division 26.
- C. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal.
- D. Mark dimensions and values in units to match those specified.

1.09 REGULATORY REQUIREMENTS

- A. Standards publications of technical organizations and regulatory agencies are referenced in other Sections, and unless stricter requirements are indicated, materials and equipment so specified shall be manufactured, tested, and installed to conform, as a minimum to the requirements of such reference standards and publications.
- B. Conform to applicable sections of New York City Building Code for installation of systems.
- C. Electrical: Conform to New York City Electrical Code for installation of electrical equipment.
- D. Drawings and Specifications:
 - a. It is the intention of these Specifications that as a minimum requirement, all electric work shall be done in strict accordance with the rules of the DOB Electrical Inspection Unit and National Electrical Code. Where the requirement of the Drawings and Specifications exceed the requirements of the Electrical Code, the requirements of the Drawings and Specifications shall be binding upon the contractor.
- E. Should the DOB Electrical Inspection Unit issue a violation, the Contractor shall correct the Work and eliminate the violation as part of its Contract obligation.
- F. Obtain permits, and request inspections from authority having jurisdiction.
- G. The Contractor is required, at his/her own cost and expense, to obtain all necessary permits from the municipal or other public authorities. The Contractor shall then give all notices required by law, municipal ordinance, the rules and regulations of the various Municipal Bureaus or Departments and as a part of the Contract, and all Municipal Ordinances or Regulations that may be applicable to this Work, together with all orders of the following:
 - a. Department of Buildings
 - b. DOB Electrical Inspection Unit
 - c. Advisory Board
- H. Each item of equipment furnished by the contractor shall be essentially the standard product of the manufacturer. All material and equipment shall be of the best quality normally used in good commercial practice and shall be the product of specified or other reputable manufacturers. Each major component shall bear a nameplate giving the name and address of the manufacturer and the catalog number or designation located in an easily visible location.

1.10 DEVELOPMENT/SITE CONDITIONS

- A. The Contractor shall be held to have examined the site and to have compared it with the Drawings and Specifications, and to have satisfied him/herself of the conditions existing at the site, as relating to the actual conditions of the site at the time estimating the work, the storage and handling of materials, and all other matters as may be incidental to the Work under the Contract, before the delivery of his/her proposal, and no allowance will subsequently be made to the Contractor by reason of any error on his/her part, due to his/her neglect to comply with the requirements of this clause.
- B. Install Work in locations shown on Drawings, unless prevented by Development conditions.

- C. All work shown on the Electrical drawings shall be coordinated with all other work that is part of this Contract.
- D. Prepare drawings showing proposed rearrangement of Work to meet Development conditions, including changes to Work specified in other Sections. Obtain permission of Owner before proceeding.

1.11 DELIVERY, STORAGE, AND HANDLING

- A. Deliver material in manufacture's original unopened protective packaging.
- B. Store materials in original packaging in a manner to prevent soiling, physical damage, wetting or corrosion prior to installation.
- C. Handle in a manner to prevent damage to finished surfaces.
- D. Where possible maintain protective coverings until installation is complete and remove such covers as part of final clean-up.
- E. Touch up any damage to finishes to match adjacent surfaces to the satisfaction of the Engineer.

1.12 TESTS

- A. The Contractor shall make all tests (including insulation resistance test using a megger) required to furnish complete data which is necessary and sufficient to prove that equipment, or component part thereof (including wiring), meets the requirements of the Specifications, and the New York City Electrical Code.
- B. Such tests shall be made before, during and/or after installation of the equipment. NYCHA shall be present to witness and sign off on tests.
- C. The Contractor shall furnish all apparatus, meters, conductors, and equipment required for such tests; shall make all connections necessary; shall dismantle any piece of equipment where such is necessary for making tests; and in other ways render all assistance necessary. After satisfactory test results have been obtained the Contractor shall remove the testing equipment and restore the site and equipment to proper operating, conditions.
- D. All defects found on such tests shall be immediately corrected. Defective parts or parts found to be not in accordance with the Specifications shall be immediately replaced with proper parts all to the satisfaction of the Owner.

1.13 IDENTIFICATION (See Section 26 05 53)

- A. All parts of equipment, such as panel boards, safety switches, motor starters, circuit breakers, conduits, wires, contactors, and similar items shall be identified by name, function or controls.
- B. All device plates other than lighting switch plates, telephone and 120 volt, single phase, 15 or 20 ampere receptacles, shall have black or white (as directed) silk-screened lettering Helvetica Medium type face (or other type face as directed by the Engineer) designating:
 - a. System
 - b. Voltage (where applicable)
 - c. Number of phases (where applicable)
 - d. Current rating (where applicable)
 - e. Frequency (where applicable)
- C. Before placing orders for nameplates or silk-screened device plates, submit a typewritten list to the Engineer for review.

- D. The outside of the covers of all junction or pull boxes located above hung ceilings and the inside of the covers of all junction or pull boxes exposed shall be labeled with an indelible marker indicating the operating voltage and the system contained therein.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION

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