

ELECTRICAL ENGINEERING DRAFTING TECHNICIAN, 7532
SENIOR ELECTRICAL ENGINEERING DRAFTING TECHNICIAN, 7209

Summary of Duties : Performs responsible subprofessional engineering work consisting of drafting and tracing in the preparation of electrical and communications design drawing, wiring diagrams, plans, and charts relating to the construction, operation, and maintenance of a wide variety of electrical installations and facilities; or supervises drafting employees in such work and personally does the drafting on the more difficult projects; and does related work.

Distinguishing Features : The work of an Electrical Engineering Drafting Technician is at the subprofessional level. Incumbents of this class receive assignments in the form of brief written or oral instructions, designers' sketches, and marked drawings. An employee in this class may do engineering drafting in other disciplines but only by using principles common to all fields of engineering drawing. Although Electrical Engineering Drafting Technicians exercise some independent judgment in arranging layouts having several parts, and are expected to be accurate, their work is carefully reviewed by checkers for conformance with departmental standards, completeness, and correctness.

A Senior Electrical Engineering Drafting Technician supervises and checks the work of drafting personnel. The ability to instruct subordinates and to coordinate their work for the best utilization of skills and resources is essential to this class. An employee in this class also may personally perform the more difficult or complex electrical engineering drafting.

These classes are both distinguished from the class of Electrical Engineering Assistant in that the latter have limited design responsibilities and participate directly in the preparation of plans, specifications, and estimates for electric equipment and related facilities.

Examples of Duties : Electrical Engineering Drafting Technician : Prepares and revises detail, working, and final design drawings relating to the construction and installation of electric and electronic equipment and wiring for pumping and water treatment plants, receiving, distributing, and generating plants, telecommunication facilities and similar installations; prepares and revises detail, working and design drawings for the manufacture and assembly of printed circuit boards, for installations of fixed and mobile communication equipment and interface circuits; assigns numbers to parts and prepares parts lists; makes simpler computations relating to capacities, sizes, clearances, missing dimensions, and similar factors and enters the data on drawings; prepares details of mountings, frames, guards, and other accessories; prepares drawings of

conduit layouts; prepares wiring diagrams, showing transformer sizes, conduit locations, and mountings; prepares isometric, orthographic, and elevation drawings; prepares diagrams, graphs, and charts;

Prepares maps, drawings and layouts of telecommunication systems and telephone circuits; may visit stations, communications installations, and other facilities to make field studies and sketches and take measurements of equipment; may prepare and maintain drawings and records of underground and inside cable installations and their usage; may check the work of other drafting personnel; and may be assigned to other duties for training purposes or to meet technological changes or emergencies.

Senior Electrical Engineering Drafting Technician : Assigns, coordinates, and reviews the work of a small group of drafting technicians; analyzes and explains to drafting technicians engineering instructions, field notes, sketches, documents, and drafting principles and techniques; reviews drawings for correctness, completeness, and neatness; instructs drafting technicians in drafting techniques, standards and procedures and sources of pertinent information; reviews computations of drafting technicians for accuracy; checks electrical, mechanical, and structural drawings for drawing conformance; checks City, State and national codes and manufacturers' catalogs to determine correct representation on drawings; checks circuits, connecting equipment, and accessories as to proper connection and suggests corrections where necessary; confers with engineers to secure data, interpretation, and clarification of facts, decisions on views, elevations, and profiles desired, clearer scaling, and employment of applicable lines; compares and checks finished design drawings with sketches, instructions, requirements, and standards;

Assists in the revision of drafting standards and procedures; develops and prepares difficult and complex drawings, including determining the proper scale for drawings, preparing isometric and orthographic projections, cross sections, elevation drawings, and material and parts lists, and detailing electrical equipment; may make field trips to observe conditions pertaining to particular assignments; and may be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications :

Senior Electrical Engineering Drafting Technician	Electrical Engineering Drafting Technician
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Knowledges :

The principles, techniques and nomenclature of electrical engineering drafting including projective drawing;	Working	Good
National standards and symbols used in electrical drafting;	Working	Good
Plane trigonometry;	Good	Good
Sources of engineering information;	Working	Good
Physics and the principles of electrical engineering involved in drafting problems;	General	Working
Safety principles and practices;		Good
City personnel rules, policies and procedures;		General
Laws and regulations related to equal employment opportunity and affirmative action;		Working
Memoranda of Understanding as they relate to subordinate personnel;		General

Abilities :

Use drafting instruments, planimeters, calculators, and slide rules;	X	X
Use logarithmic, trigonometric, and curve data tables;	X	X
Prepare machine or free hand lettering;	X	X
Produce complete and professionally acceptable electrical engineering and wiring diagrams;	X	X
Follow written and oral instructions;	X	X

	Senior Electrical Engineering Drafting Technician	Electrical Engineering Drafting Technician
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Abilities (Cont) :

Give clear and concise oral and written instructions;

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Supervise a small group of drafting personnel;

X

Completion of 12 semester units in drafting and 6 semester units in mathematics at a recognized college, trade school or technical school or two years of engineering drafting experience, one year of which was in electrical engineering drafting is required for Electrical Engineering Drafting Technician.

Three years of experience as an Electrical Engineering Drafting Technician or in a class at least at that level performing electrical engineering drafting is required for Senior Electrical Engineering Drafting Technician.

Physical Requirements : Both classes : Strength to perform average lifting of less than 5 pounds and occasionally over 15 pounds; good hearing and speaking ability; and good eyesight.

Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of the positions in these classes. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the limitations.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any individual position shall be.