

## ASSISTANT ENGINEER (ELECTRICAL)

DISTINGUISHING FEATURES OF THE CLASS: Under general supervision, incumbents of this class perform electrical engineering work by preparing preliminary and final engineering designs and plans. This is the full-performance level of the Engineering series where incumbents use independent judgment in performing work on projects of considerable size or several smaller projects. Work is performed in accordance with the National Electric Code, the National Fire Protection Code and the New York State Uniform Building Code. Work involves coordinating activities with other sections of the department as necessary; preparing and implementing project timelines; preparing reports and keeping detailed records relating to work completed. Other responsibilities include collaborating with municipal agencies as needed; dealing with contract personnel to ensure project objectives are met, and ensuring that projects and their various components meet appropriate regulatory requirements. While each level in the engineering series participates in producing details, plans, specifications etc.; this level differs from the higher level Senior Engineer in that incumbents at the senior level are responsible for a broader scope of work, greater complexity of design assignments, directing and reviewing the work of lower-level engineering staff, and the requirement to possess a Professional Engineer's license. While supervision is not a responsibility of this class, incumbents provide guidance to lower level engineering and support staff. Does related work as required.

### EXAMPLES OF WORK: (Illustrative Only)

Develops specifications, budget estimates and design criteria for repair, modification, or replacement of electrical equipment and systems for the competitive bidding process;

Prepares and assists in the preparation of design documents including plans, specifications, cost estimates, etc.;

Recommends new technology and integrates into existing electrical systems for energy-efficient lighting and engines, and for state-of-the-art protection devices, regulators and controllers;

Confers with design consultants, utilities, contractors, and manufacturers to review County requirements;

Reviews and evaluates proposals of electrical bidders and consultants to ensure adherence to trade standards, and recommends acceptance or modifications of proposals;

Troubleshoots electrical systems, including power distribution from 120 volts to 15,000 volts;

Assists in managing and coordinating unit workflow work with the other engineering sections of the department;

Designs plans and specifications for contract bid documents, reviews and approves shop drawings and coordinates work with the construction section;

Develops and assists in the development of design details;

Inspects and evaluates electrical systems for all county facilities;

Reviews the work of technical employees in the preparation, planning and estimating of electrical engineering projects, ensuring that work performed meets needs and adheres to standards;

EXAMPLES OF WORK: (Illustrative Only) (Cont'd.)

Performs and assists in the performance of technical analyses for code-compliant designs;

Uses computer applications or other automated systems such as spreadsheets, word processing, calendar, e-mail and database software in performing work assignments;

May perform other incidental tasks, as needed;

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND ATTRIBUTES: Good knowledge of the principles and practices of electrical engineering; good knowledge of the practices of specification writing; good knowledge of construction estimating; good knowledge of computer assisted design, CAD; knowledge of the National Electric Code, knowledge of New York Uniform Building Code, New York State Energy Code, New York State Hospital Code and the National Fire Prevention Code; knowledge of design and analysis of electrical layouts; skill in complex engineering computations; ability to lay out and oversee the work of sub-professional engineers; ability to get along well with others and to deal effectively with contractors; ability to read, write, speak, understand and communicate in English sufficiently to perform the essential tasks of the position; ability to use computer applications such as spreadsheets, word processing, calendar, e-mail and database software; accuracy; reliability; resourcefulness; sound professional judgment; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: A Bachelor's Degree\* in Electrical Engineering or a closely related field and two years of experience in electrical engineering, one year of which the primary function of the position was in the design of electrical engineering projects.

SUBSTITUTION: Successful completion of a Master's Degree\* in Electrical Engineering may substitute for one year of the general experience. Possession of a license to practice as a Professional Engineer in New York State may be substituted for all of the required experience.

SPECIAL REQUIREMENTS: (1) Possess and maintain a valid license to operate a motor vehicle in the State of New York. (2) Depending on work assignment, must meet standards of OSHA regulation 1910.134 Respiratory Protection, and will be required to meet Federal, State and local standards with respect to health and safety.

\*SPECIAL NOTE: Education beyond the secondary level must be from an institution recognized or accredited by the Board of Regents of the New York State Education Department as a post-secondary, degree-granting institution.