

SENIOR ENGINEER (ELECTRICAL)

DISTINGUISHING FEATURES OF THE CLASS: Under general supervision, incumbents function as fully competent, licensed Professional Engineers in all conventional aspects of the area of assignment. Incumbents independently perform assignments with instructions as to the general results expected. The Senior Engineer plans and conducts work requiring judgment in the evaluation, selection, adaptation and modification of standard techniques, procedures and criteria. The incumbent serves as project leader in design work or as resident engineer on a construction job concerned primarily with planning, inspection or testing of all electrical installations. On a project basis, an incumbent reviews and inspects the work of engineers, construction coordinators, draftsman, technicians and others who perform specific assignments. This level differs from the Associate Engineer in that the Associate is responsible for supervision of a unit. This level differs from the Assistant Engineer in the complexity of design assignments, the responsibility for performing compliance functions or overseeing assigned code-compliant designs, supervision of technical staff, and in the requirement of a license to practice as a Professional Engineer. Does related work as required.

EXAMPLES OF WORK: (Illustrative Only)

Prepares designs, budget estimates and specifications for engineering projects, using judgment and engineering standards;

Reviews and consults on plans, specifications and estimates for electrical installations;

Prepares electrical design details;

Prepares plans, cost estimates and specifications for electrical facets of heating, air conditioning, and electrical elevator installations in buildings;

Prepares and provides review and oversight in the preparation of design documents prepared by others including plans, specifications, cost estimates, etc.;

Supervises non-professional employees in the preparation, planning and estimating of engineering projects, reviewing their work to ensure it meets needs and adheres to standards;

Develops and provides oversight and review in the development of design details developed by others;

Evaluates problems and complaints and resolves problems concerning County facilities with corrective action;

Makes field inspections of electrical installations for conformance to specifications and makes final inspections and capacity tests;

Performs and provides review and oversight in the performance of technical analyses for code-compliant designs performed by others;

Surveys existing buildings to ascertain feasibility of proposed innovations;

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

Computes and compares estimates of payments to contractors both partial and final, and prepares progress reports;

Prepares technical reports and recommendations;

Confers with supervisors concerning project progress and recommends changes and modifications in design, specification, estimates, etc., based on field investigations to solve problems in a timely manner;

May seal and sign plans, working drawings and specifications as a licensed Professional Engineer as defined in Article 145 of the New York State Education Law;

Represents the County and Department of Public Works on various boards and agencies and at various meetings and hearings, depending on expertise;

Prepares progress reports on projects;

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: Thorough knowledge of the principles and practices of electrical engineering; thorough knowledge of the engineering problems involved in the design, utilization and installation of electrical equipment; thorough knowledge of the practices of specification writing; thorough knowledge of construction estimates, including relative cost of materials related to useful life; good knowledge of the legal principles of and practices of contract preparation; good knowledge of computer assisted design, CAD; familiarity with the design and analysis of structures; skill in complex engineering computations; ability to lay out and supervise the work of professional and sub-professional engineers; ability to get along well with others and to deal effectively with contractors; accuracy; reliability; resourcefulness; sound professional judgment; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: Possession of a valid license to practice as a Professional Engineer in New York State and either: (a) a Bachelor's Degree* in Electrical Engineering and three years of experience in Electrical Engineering; or (b) a Master's Degree* in Electrical Engineering and two years of experience as described in (a).

SPECIAL REQUIREMENT: (1) Possess and maintain a license to practice as a Professional Engineer in New York State. (2) Possess and maintain a valid license to operate a motor vehicle in the State of New York.

*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.

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J.C.: Competitive
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Job Class Code: C0943
Job Group: XIII