

SENIOR ENGINEER (CONSTRUCTION)

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. An incumbent serves as project leader in design work or as a resident engineer on major construction jobs. The incumbent independently performs assignments with instructions as to general results expected and plans and performs work requiring judgment in the evaluation, selection, adaptation and modification of standard techniques, procedures and criteria. Senior Engineers give direction to and review the daily work of sub-professional engineers, construction coordinators, drafters, technicians and others who perform specific assignments. This level differs from the Associate Engineer in that the Associate is responsible for the supervision of a unit, delegating project assignments, and providing oversight for all code-compliant designs. 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)

Reviews, plans, schedules, and conducts or coordinates detailed phases of the engineering work of major construction projects;

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

Participates in the resolution of, or resolves complex professional problems (i.e. conflicting design requirements, unsuitability of conventional materials, difficult coordination requirements, etc.);

Prepares plans, estimates, and specifications for construction projects, describing location and specifying particular materials to be utilized to satisfactorily and economically perform the function desired;

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

Coordinates and monitors the work and operations of contractors and sub-contractors through analyses of data and reports, field inspections, etc;

Insures adherence by contractors, sub-contractors, and departmental personnel to approved and authorized specifications and drawings;

Directs, plans and supervises the work of engineers, construction coordinators and technicians, as required by assignments;

Analyzes, reviews and makes recommendations on contract change orders;

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

Reviews the computation and estimates of payment to contractors, both partial and final, and incorporates same into progress reports;

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

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;

Makes field inspections of major construction projects;

Prepares statistical and progress reports for various projects;

Uses computer applications or other automated systems such as spreadsheets, word processing, calendar, e-mail and database software.

May perform other incidental tasks, as needed.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND ATTRIBUTES:

Thorough knowledge of the principles and practices of civil engineering as they are applied to the functional area of construction; thorough knowledge of building and structure construction practices; thorough knowledge of the practices of specification writing; good knowledge of the engineering problems involved in the design, construction and analysis of buildings and structures; good knowledge of construction estimates, including relative cost of materials related to useful life; good knowledge of the legal principles of contract preparation; good knowledge of computer assisted design, CAD; ability to perform complex engineering computations; ability to plan, lay-out and direct the work of others; ability to delegate work; ability to work effectively and cooperatively with related agencies, firms, contractors and other departmental and County personnel; ability to effectively use computer applications such as spreadsheets, word processing, e-mail and database software in performing work assignments; sound professional judgment; accuracy; resourcefulness; reliability; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: Possession of a license to practice as a Professional Engineer in New York State and either: (a) a Bachelor's Degree* in Civil, Mechanical or Electrical Engineering, and three years of field and office experience in engineering, one year of which must have been in the design of projects and one year of which must have been in construction administration; or (b) a Bachelor's Degree* in either Civil, Electrical or Mechanical Engineering Technology and four years of field and office experience in engineering including the specialized experience described in (a); or (c).

SUBSTITUTION: Satisfactory completion of a Master's Degree* in Civil, Mechanical, or Electrical Engineering may be substituted for one year of the experience described above.

SPECIAL REQUIREMENT: Possess and maintain a valid license to operate a motor vehicle in New York State.

*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: C1920
Job Group: XIII