

SENIOR ENGINEER (CONSTRUCTION)

DISTINGUISHING FEATURES OF THE CLASS: Under general supervision, incumbents function as fully competent 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 and 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 administrative supervision of a unit. It differs from the Assistant Engineer level in the greater responsibility, complexity of assignments, supervision of technical staff, and in the requirement of a license to practice as a Professional Engineer. (Factors determining complexity include dollar value of contract, location, phasing, project coordination requirements, time constraints, variety of design criteria, and project sensitivity.) Does related work as required.

EXAMPLES OF WORK: (Illustrative Only)

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

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

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;

Recommends the approval of contractors, sub-contractors and vendors based upon review of prior performance and other data;

Interprets drawings and specifications to contractors;

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

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;

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

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.

REQUIRED 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: Either: (a) a Bachelor's Degree* in Engineering, either civil, mechanical or electrical, and six years of field and office experience in engineering, one of which must have been in the design of projects and one of which must have been in construction administration; or (b) a Bachelor's Degree* in either civil, electrical or mechanical technology and seven years of field and office experience in engineering including the specialized experience described in (a); or (c) a Master's Degree* in Engineering, either civil, mechanical, or electrical and five years of experience as described in (a), including the specialized experience; or (d) a satisfactory equivalent combination of the foregoing training and experience as defined by the limits of (a) and (b).

SPECIAL REQUIREMENT: Possession of a Professional Engineer's License issued by 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.

NOTE: Unless otherwise noted, only experience gained after attaining the minimum education level indicated in the minimum qualifications will be considered in evaluating experience.

West. Co.
J.C.: Competitive
DBB7

Job Class Code: C1920
Job Group: XIII

Comment:
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For departments: