

JUNIOR ENGINEER (CIVIL)

DISTINGUISHING FEATURES OF THE CLASS: Under supervision, incumbents perform entry-level civil engineering and complex technical work. Incumbents conduct inspections, prepare simple designs, calculate data, prepare cost estimates and prepare project updates and daily work records. Incumbents may be assigned regularly to any type of civil engineering work, i.e. buildings, roads, parks, sewers, structures, etc., for regular assignment or training. Incumbents may work independently on less complex and routine projects and under direct supervision on more difficult tasks. As the incumbents skill and knowledge increases, less direction is received. Each level engineer, in this title series, takes part in the production of details, plans, specifications, etc. The difference between the Junior Engineer and Assistant Engineer is in the length of experience, judgment and independent action required. Advancement depends on the attainment of higher level skills and on the regular assignment to jobs requiring those skills. Supervision is not a responsibility, however guidance and direction may be given to a small number of non-professional employees. Does related work as required.

EXAMPLES OF WORK: (Illustrative Only)

Measures and obtains design data for projects, computes and checks cost estimates and attends pre-construction and progress meetings;

Studies and fully understands written specifications, contract drawings and shop drawings in order to assess work being performed;

Calculates and reviews areas, numbers and items specified a contract to ensure limits are met; audits and approves paperwork necessary for contractor payments; correctly assigns a value to additional items not in contract;

Oversees and inspects construction and maintenance work on buildings, facilities and sewers which include utilities, equipment and controls;

Undertakes field inspections to examine the workmanship and quality of materials used on construction projects to assure conformance to contract specifications and standard engineering applications;

Prepares written correspondence for supervisory approval pertaining to non-compliance on behalf of contractor(s);

Writes progress reports and keeps accurate daily records of work performed, hours worked, and transactions relating to construction project status;

Recommends to higher authority the need for additional work and for modification to project based upon discussion with contractors;

Does routine drafting and tracing of structures, buildings and facilities;

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

REQUIRED KNOWLEDGE, SKILLS, ABILITIES AND ATTRIBUTES: Good knowledge of surveying; good knowledge of the principles of highway engineering and soil mechanics; good knowledge of the methods and equipment used in construction; good knowledge of computer assisted design, CAD; familiarity with the design and analysis of structures; skill in topographical mapping and drafting; ability to use computer applications such as spreadsheets, word processing, e-mail and database software; ability to prepare and interpret specifications and contract estimates; ability to perform mathematical computations applied to engineering problems; ability to get along well with others; accuracy; reliability; resourcefulness; good judgment; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: Either (a) Bachelor's Degree* in Civil Engineering; or (b) a Bachelors Degree* in Civil Technology and one year of engineering experience.

*SPECIAL NOTE: Education beyond the secondary 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.