

## **JUNIOR ENGINEER**

**DISTINGUISHING FEATURES OF THE CLASS:** The incumbent in this position performs technical field or office engineering work. Work activities are performed in accordance with instructions from or plans prepared by an engineering superior. Some independence is allowed for the completion of assignments. Advice and assistance is available from professional superiors. Work may include the supervision of subordinate staff in field or office work. The incumbent is evaluated and reviewed by a technical superior through discussion or analysis of work performed or reports prepared.

### **TYPICAL WORK ACTIVITIES:** (Illustrative Only)

- Serves as a field survey crew party chief;
- Supervises work, takes notes, makes sketches of work performed, and makes contact with the general public;
- Assumes responsibility for work results and progress of field survey party;
- Performs supervisory or high level technical drafting work such as that involved in detailing engineering drawings;
- Supervises and participates in preparation of public works plans such as those for water systems, sewage, street, or bridge construction;
- Prepares general and special purpose maps;
- Checks contract drawings;
- Computes quantities of waste, fill, construction material or other items;
- Investigates complaints such as bad sidewalks and street depressions;
- Prepares preliminary design for subdivision;
- Inspects contract work in a specialized engineering field such as street and sewer improvements;
- Performs preliminary and final estimates on engineering projects;
- Receives records, charts and statistical information of a technical engineering nature;
- Analyzes data as it comes from the field and checks the work of engineering aides;
- Conducts, computes and certifies land surveys of property as required;
- Enters and retrieves information in an automated information system;
- Performs related work as required.

### **FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:**

- Good knowledge of the principles, techniques and practices of surveying;
- Good knowledge of personal computers and office equipment;

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- Good knowledge of the principles, practices and instruments used in engineering drafting;
- Good knowledge of engineering principles and practices;
- Working knowledge of mathematics through trigonometry and its application to field surveying and engineering computation;
- Working knowledge of construction specifications, plans, estimates, codes, rules and regulations relating to public works construction by contract;
- Working knowledge of surveys and computation of areas and all computations necessary for a complete land survey;
- Skill in the use of engineering instruments and equipment;
- Ability to engage in continuous field work requiring physical stamina;
- Ability to perform moderately difficult technical computations to make estimates and tests and compile simple engineering data and statistics;
- Ability to make difficult and technical engineering drawings;
- Ability to establish and maintain effective working relationships with other engineering and surveying personnel, contractors and the general public;
- Tact and courtesy
- Integrity and good judgment
- Physical condition commensurate with the demands of the position.

**MINIMUM QUALIFICATIONS:**

- (A) Graduation from a college or university whose engineering curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET) with a Bachelor's Degree or higher level degree in Engineering; **OR**
- (B) Graduation from a college or university whose engineering curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET) with a Bachelor's Degree in Engineering Technology and two (2) years of paid fulltime experience in sub-professional engineering work; **OR**
- (C) Any equivalent combination of education, training and experience as defined by the New York State Education Department, Office of the Professions, to apply for licensure as a Professional Engineer in New York State.

Revised: 4/19/78  
8/22/79  
3/16/88