

JUNIOR CIVIL ENGINEER

DISTINGUISHING FEATURES OF THE CLASS: This position involves beginning-level engineering work with employees performing routine civil engineering tasks. Junior Civil Engineers apply the basic principles of physics, mathematics, mechanics, and materials to engineering problems. The work involves the use of micro-computers in solving engineering problems, and support to higher-ranking engineers, with the use of a computer-aided drafting system. Instructions are received from a higher-ranking engineer, who supervises the work closely. Supervision may be exercised over technical aides and other subordinate personnel to whom specific assignments are made, and whose work is usually checked both in process and upon completion. The incumbent works under the general supervision of a higher-ranking engineer. Does related work as required.

TYPICAL WORK ACTIVITIES: (Illustrative Only)

Serves as chief of survey party;
Performs quality tests of construction materials;
Instructs subordinates in use and application of survey instruments;
Makes field computations as part of route, topographic or land surveys;
Acts as assistant to project inspector on minor or routine construction projects;
Prepares construction plans and specifications with continuous input from higher ranking engineers;
Drafts preliminary road plans and profiles;
Computes estimated quantities of materials for proposed projects;
Verifies applications for payment from contractors;
Performs engineering office work consistent with other work activities;
Conducts right-of-way and accident surveys.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:

Working knowledge of basic engineering principles and practices, including hydraulics, structural design, highway design, material applications, transportation engineering and surveying; ability to operate a micro-computer in making engineering computations and using a computer-aided drafting system; ability to express engineering concepts in drawings; ability to follow specific and detailed instructions without continuous supervision; ability to do field work; accuracy; initiative; alertness.

MINIMUM QUALIFICATIONS: Either:

- (A) Graduation from a regionally accredited or New York State registered college or university with an Associate's Degree in civil engineering technology or engineering technology; **OR**
- (B) Graduation from a regionally accredited or New York State registered college or university with an Associate's Degree in engineering design technology, engineering drafting technology, engineering management, construction management, engineering science or a closely related field AND one (1) year of experience involving routine engineering work; **OR**
- (C) An equivalent combination of training and experience, as defined by the limits of (A) and (B) above.

NOTE: Routine engineering work is defined to mean work involving: assisting engineers by inspecting portions of construction projects, assisting in performance of laboratory or soils analysis and construction material testing, drafting, or land and route surveying.