

ENGINEERING TECHNICIAN

DISTINGUISHING FEATURES OF THE CLASS: This position involves performance of elementary level technical work including inspections, surveying, drafting and design of engineering projects. The work is performed under the direct supervision of a higher level Engineer. This class differs from the position of Assistant Engineer in that assignments include details as to methodology and are routine in nature. Engineering Technicians use a narrower range of engineering techniques requiring limited use of engineering theory. Does related work as required.

TYPICAL WORK ACTIVITIES:

Uses computerized and mechanical equipment for drafting;
Operates survey equipment such as electronic distance meter, level, theodolite, or transit for survey;
Takes notes pertaining to survey measurements;
Performs and checks calculations in connection with the reduction and plotting of field survey notes;
Inspects existing facility equipment such as lighting, power systems, HVAC systems and plumbing systems;
Prepares reports of construction inspections for higher level engineers for review in both tabular and narrative form;
Assists in bridge and culvert inspections;
Participates in preliminary design of basic structures such as parts of buildings, bridges, roads, heating or electrical facilities of limited difficulty;
Prepares drawings of bridges, buildings and other structures from computations or rough drafts;
Conducts quality tests of materials used in construction;
Records data, prepares records and maintains files necessary for the Engineering Division;
May investigate traffic conditions and prepare informational reports and recommendations;
May prepare construction progress payments by evaluating construction for degree of completeness;
May assist in the establishment of Right of Way by developing property maps and participating in negotiations.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:

Good knowledge of algebra, geometry and trigonometry;
Good knowledge of the procedures and instruments involved in surveying;
Good knowledge of the procedures and instruments used in drafting, including CAD Systems and AUTOCAD software;
Ability to use computer software such as spreadsheets, data base managers
Good knowledge of the principles and procedures of engineering inspections;

Working knowledge of the principles and practice of electrical and HVAC technology;
Working knowledge of the terminology and materials used in the construction and maintenance of roads, bridges, buildings and related structures;
Working knowledge of the procedures and instruments used in engineering design;
Working knowledge of the use and care of engineering instruments;
Ability to use computer software such as spreadsheets, database managers, word processing and CAD software;
Ability to use mathematical tables;
Ability to perform trigonometric calculations;
Ability to read engineering maps, blueprints and sketches;
Ability to understand written and oral instructions and specifications;
Ability to write narrative reports;
Mechanical aptitude;
Accuracy;
Physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS:

- A) Graduation from a regionally accredited or New York State registered college or university with an Associate's Degree in civil engineering, mechanical engineering, electrical engineering, architectural engineering or engineering technology; OR
- B) Graduation from high school or possession of an equivalency diploma, including completion of courses in algebra, geometry and trigonometry and two years of experience involving one or more of the following:
- Structural design; or
 - HVAC/plumbing system design and operation; or
 - Power distribution system design; or
 - Design of highways, bridges and/or buildings; or
 - Computerized drafting; or
 - Surveying; or
 - Construction inspection of highways, bridges and/or buildings; OR
- C) An equivalent combination of training and experience as defined between the limits of A) and B) above.

R342 05/23/01

COMPETITIVE