

ASSISTANT ENGINEER

DISTINGUISHING FEATURES OF THE CLASS: This is an entry level engineering position requiring the performance of professional level duties to complete various engineering projects. The incumbent works under the general supervision of a higher level engineer, either in the field or in the office. General instructions are given for assignments such as engineering design, specification writing, inspections, surveys, right of way mapping and purchasing. This position differs from that of Engineer I in that duties assigned are more limited and less flexibility is allowed in choosing work methodology and material. This position differs from that of Engineering Technician in that assignments are more complex and require the application of engineering theory. Does related work as required.

TYPICAL WORK ACTIVITIES:

Assists a higher level engineer with the following:

Designs roads, bridges, parts of buildings, structural, architectural, heating, ventilating, air conditioning, plumbing and electrical systems for buildings and related facilities;

Inspects construction work for conformance with plans and specifications, as well as inspects physical and operational condition of existing roads, culverts, bridges and buildings;

Writes job specifications for projects of varying difficulty with guidelines from standard specifications, codes and regulations;

Develops plans, cost estimates and contract documents for projects of varying difficulty;

Prepares estimates of quantities of materials and progress of work for contractor payments;

Prepares and maintains records and project data;

Utilizes computer applications relating to CAD(for plan development and design), word processing, spreadsheet applications and data base management;

Prepares drawings of roads, bridges, buildings and other structures from computations or rough drafts;

Develops CAD plans and profiles of roads and bridges;

Develops CAD plans, sections, elevations and schematics for architectural, structural, electrical, heating, ventilating, air conditioning and plumbing systems for buildings and related facilities;

Coordinates projects, including liaison with contractors and vendors, schedules projects, determines space needs, equipment layout, traffic flow patterns and material needs;

Conducts quality tests of materials used in construction;

Conducts surveys to establish or re-establish property lines, to

map developed areas and to run location lines for roads, bridges and other facilities;
Records data, prepares records and maintains files necessary for the Engineering Division;
Processes necessary paperwork for construction contracts such as minority business requirements, insurance coverage, wage rate documents, claims, releases and payment records;
Investigates traffic conditions and prepares informational reports and recommendations;
Participates in establishment of Right of Way by developing property maps.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:

Good knowledge of the principles of engineering theory;
Good knowledge of procedures and practice of engineering including design and specification writing, hand and CAD drafting, inspections and surveys;
Good knowledge of the terminology, tools and materials used in the construction of roads, bridges and buildings;
Working knowledge of applicable codes, laws, rules, regulations and procedures governing engineering design and construction;
Ability to prepare plans, designs, specifications, right of way maps and narrative reports;
Ability to establish cooperative relationships with contractors, consultants, vendors, co-workers and other staff;
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 a Bachelor's Degree in civil engineering, mechanical engineering, electrical engineering, architectural engineering or a closely related field; OR
- B) 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 a closely related field, and either:
 - 1) Two years experience involving structural design, or heating/ventilating/air conditioning system operation or

design, or power distribution system design; or

- 2) Two years experience involving the design of, the surveying for, or the inspection of highways, bridges, and/or buildings; OR
- C) Graduation from high school or possession of an equivalency diploma and four years experience as defined above; OR
- D) An equivalent combination of training and experience as defined by the limits of A), B) and C) above.

NOTE: Degrees in the following fields are not acceptable: Chemical Engineering, Industrial Engineering, Public Health Engineering or Computer Technology.

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COMPETITIVE