

## **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 tasks and projects. The incumbent works under the general supervision of a higher level engineer, either in the field and/or in the office. General instructions are given for assignments such as engineering design, Auto/CAD design/drafting, specification writing, and inspections. 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. Does related work as required.

### **TYPICAL WORK ACTIVITIES:**

#### Able to perform independently:

Performs traffic counts and updates County data base, investigates traffic conditions including accident reports, and prepares background informational reports in support of large infrastructure projects;

Prepares and maintains records and project data, maintains files necessary for the Engineering Division, and assists with the transfer of Division paper records into electronic format;

Provides right-of-way research for the public and private survey firms, as well as records research for other County Departments;

Performs limited surveys in support of various County departments to locate right-of-way, property corners, and to run location lines for roads, bridges and other facilities;

Completes watershed inspections, including field work and documentation of findings in report format with a table of maintenance tasks for follow-up;

Flood damage inspections and documentation of roads, culverts, bridges and facilities;

Locates and documents structures and facilities using mobile GPS equipment.

#### Assists a higher level Engineer with the following:

Project administration including compiling specifications and front end documents, preparing resolution requests and backup, completing board of acquisitions and contracts paperwork and documentation, preparation of road closure notices and public notification completion of public meeting notifications, negotiation of property releases, preparation of permit applications, research background information, etc;

Designs for roads, culverts, parts of bridges, parts of facilities, structural, architectural, mechanical and electrical systems for buildings and related facilities;

Inspects construction work for conformance with contract provisions, plans and specifications;

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

Develops plans, costs estimates and contract documents for projects of varying difficulty using available tools such as AutoCAD Excel spreadsheets, etc.;

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

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

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

Develops CAD plans and profiles of roads, culverts and bridges;

Develops CAD plans, sections, elevations and schematics for architectural, structural, mechanical and electrical systems for buildings and related facilities;

Coordinates and schedules projects and material needs, including liaison with consultants, contractors, vendors and other internal County departments;

Processes necessary paperwork for construction contracts such as minority business requirements, insurance coverage, wage rate documents, claims, releases, payment records, and project close-out paperwork.

**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;

Good verbal and written communication skills, in private and public situations;

Good organizational skills;

Good knowledge of basic computer applications such as Word, Excel, Access, and Power Point;

Working knowledge of applicable codes, laws, rules, regulations and procedures governing engineering design and construction;

Ability to prepare plans (using AutoCAD software), designs, specifications, right of way maps and narrative reports;

Ability to establish cooperative relationships with contractors, consultants, vendors, co-workers and other staff;

Ability to work independently;

Good organizational skills;

Accuracy and attention to detail.

**MINIMUM QUALIFICATIONS:**

- A) Graduation from a New York State registered or regionally ABET accredited college or university with a Bachelor's Degree in engineering or engineering technology (\*specialties as described below; OR
- B) Graduation from a New York State registered or regionally ABET accredited college or university with an Associate's Degree in engineering or engineering technology (\*specialties as described below; AND one (1) year experience performing either:
  - 1.) Engineering design and drafting of highways, bridges, culverts, and/or facilities, using AutoCAD software; or
  - 2.) Field inspection of highways, culverts, bridges, and/or facilities. OR
- C) An equivalent combination of training and experience as defined by the limits of A) and B) above.

\* Acceptable areas of engineering education include Civil Engineering, Structural Engineering, Environmental Engineering, Mechanical Engineering, Architectural Engineering, or a closely related field. Degrees in the following fields are not acceptable: Chemical Engineering, Industrial Engineering, Public Health Engineering or Computer Technology

SPECIAL REQUIREMENTS AT TIME OF APPOINTMENT:

- 1) Possession of the appropriate level of Motor Vehicle Operator's License.

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COMPETITIVE