ENGINEERING TECHNICIAN/COMPUTER SUPPORT

DISTINGUISHING FEATURES OF THE CLASS: This position involves the performance of both technical engineering duties such as surveying and transcribing field survey notes into cross sections and profiles and computer support, such as software installation, analysis, trouble shooting and maintenance of engineering-based software. The difficulty of assignments gradually increases as proficiency in the position is acquired. The individual is required to operate field and office equipment such as computer aided drafting systems, surveying equipment, materials testing equipment, motor vehicle, all other engineering or scientific equipment required for performing engineering work as well as research and evaluate industry trends for software, hardware, and associated ancillary equipment and/or instruments and makes recommendations for new equipment and associated other items. The incumbent may be in charge of project assignments or may be engaged in some special phase of engineering investigation. Work is performed under the general supervision of the Engineering Supervisor. Supervision may be exercised over subordinate sub-professional employees.

TYPICAL WORK ACTIVITIES:

Determines, creates and implement the programs necessary to convert manual operations to computer applications and designs screen formats, file setup, layering and output reports;

Establishes written instructions, policies and procedures relating to computer applications;

Trains and assists staff on the use of new and existing hardware and software or recommends the appropriate agency/consultant to provide the training;

Maintains, evaluates and recommends equipment and software service agreements;

Performs all drafting either manually or using computer aided design systems (CAD) as directed;

Drafts plans from survey notes;

Prepares and traces plans and profiles for constructions projects;

Prepares quantity estimates for construction projects;

Prepares specifications;

Prepares application for grants, permits and approvals from various agencies;

Makes engineering computations such as cut and fill estimates;

Checks the computations of engineering aides;

Inspects construction projects in the field for compliance with project specifications and/or plans, including quantity and quality of materials used;

Traces maps and plans;

Performs technical analysis of soil materials;

May act as chief of survey parties;

Supervises subordinate engineering aides and laborers and coordinates work assignments for correcting any unacceptable conditions of operations;

Plots cross sections, profiles, base lines, and topography;

Performs geo-technical field testing procedures;

Performs engineering computations;

May inspect the daily operation of the Airport including weather observation, security, maintenance, snow removal, other airport matters and prepare reports documenting the operations;

May prepare and maintain all airport documents required for compliance with FAA requirements;

May supervise the training of airport personnel for Crash-Fire-Rescue operations;

Carries out the policies and procedures for airport operation;

Prepares written reports summarizing all work performed;

Performs various clerical duties including preparation of invoices, purchase orders, and other administrative documents;

Performs all work for researching and preparation of studies, budgets and reports, prepare tables and figures utilizing computer aided word processing software and spreadsheets.

FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES, AND PERSONAL CHARACTERISTICS: Good knowledge of the principles and practices of computer equipment and software technology; Good knowledge of the modern practices of computer programing; Good knowledge of field or civil engineering and survey work; good knowledge of drafting, surveying and mathematics; good knowledge of computer aided design drafting and other computer skills; good knowledge of methods and materials used in the construction and maintenance of roads, bridges, buildings, and other infrastructure projects; good knowledge of drafting, surveying, and mathematics including algebra, geometry, trigonometry, and computations; good knowledge of land surveying principles and practices; manual skill and mechanical aptitude; ability to understand and interpret engineering plans and descriptive specifications; ability to interpret maps; ability to understand and follow oral and written directions; willingness to learn; accuracy; and dependability.

MINIMUM QUALIFICATIONS: Either:

(A) Possession of a Bachelor's Degree from a regionally accredited college or university or one accredited by the New York State Board of Regents to grant degrees in civil engineering or a related field including courses in drafting and computer aided design systems and at least

six (6) credit hours in computer applications, including programming and other software applications; or

(B) Possession of an Associate's degree in civil engineering, computer science or a related field including or supplemented by courses in drafting, and three years of technical engineering experience which included drafting, computer aided design systems and the use of other computer software for engineering applications; or

(C) Five years of experience in acceptable engineering work as described in (B) above; or

(D) An equivalent combination of training and experience as described in (A), (B) and (C) above.

Civil engineering is a branch of engineering dealing with design and construction of highways, bridges, waterworks, harbors, or other infrastructure projects. Candidates must demonstrate why a degree is related to civil engineering. Candidates must also show that course work included or was supplemented by courses in drafting and computer aided design systems.

Technical engineering experience is experience that involves planning, designing, and implementing projects on roads, bridges, buildings water or waste water projects, or other infrastructure projects. Technical engineering must demonstrate evidence related to knowledge of mathematical sciences and experience in working from plans or drawings, taking measurements and calculations, interpreting graphs or tables, and interpreting technical instructions or dimensional drawings. In addition to showing technical engineering experience, candidates must demonstrate drafting experience including plotting and drawing maps, plans, specifications, architectural drawings, or similar documents including computer aided design systems.

NOTE: Your degree or credits must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education/U.S. Secretary of Education. If your degree or credits were awarded by an educational institution outside of the United States and its territories, you must provide independent verification of equivalency. A list of acceptable companies who provide this service can be found on the Internet at: https://www.cs.ny.gov/jobseeker/degrees.cfm. You must pay the required evaluation fee.

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Jurisdictional Class: Competitive
Public Hearing: N/A
NYS Civil Service Commission Approval: N/A

Replaced spec in Classplan Book on 5/4/04
Revised and Replaced in Classplan: 2/2/2023
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