

ENGINEERING GIS TECHNICIAN

DISTINGUISHING FEATURES OF THE CLASS: Under the direction of the City Engineer, an incumbent of this position performs a variety of tasks in support of the Engineering Department and its' projects, including maintaining and updating municipal GIS for infrastructure mapping, performing CAD drafting for engineering projects, and generally supports the functions of the department. Direct supervision is not a responsibility of this class, however, an incumbent will have responsibility for training and assisting other employees in various tasks. An incumbent works both indoors and outdoors and utilizes both manual and computerized methods and techniques to collect data and achieve established objectives. Supervision may be exercised over engineering aides as assigned. Does related work as required.

EXAMPLES OF WORK: (Illustrative only)

- Coordinates and executes the development, maintenance and operation of the City's Geographic Information System and integrates with other software to create and maintain a Citywide asset management program;
- Assists in development of plans, specifications, cost and material estimates, and contract documents for projects of varying difficulty using available tools such as CAD, GIS, Excel spreadsheets, etc., and tracks progress of projects;
- Prepares background informational reports and mapping in support of various City departments, boards and initiatives;
- Operates optical and satellite-based survey equipment to create and update various maps and other documents as needed in support of various City departments;
- Conducts field-based data collection tasks in support of various City projects and initiatives and compiles data into reports for the City Engineer (e.g. inspect hydrants, conduct surveys, measure catch basin inverts, count cars/pedestrians, conduct pavement condition assessments, etc.);
- Ensures data collected is spatially accurate, and correctly assimilated into the GIS;
- Works with end users to analyze data in creative ways in order to improve efficiency and quality of operations, maintenance and construction activities;
- Performs computer aided drafting work, in addition to developing related standards for use by Engineering staff;
- Develops CAD plans, profiles and related drawings of roads, bridges, culverts, pipelines, buildings, water & wastewater treatment facilities from surveys, computations or rough drafts;
- Coordinates and schedules projects and material needs, including liaison with consultants, contractors, vendors and other internal City departments;
- Answers questions and explain basic information to employees and the general public in relation to construction and/or other engineering projects;
- Coordinates with licensed surveyors to provide appropriate mapping to support engineering drawings;
- Researches, evaluates, and recommends implementation of technology to address specific departmental needs;
- Inspects construction projects for conformance with specifications and the correct use of materials;
- Prepares permit applications and conducts environmental review for City projects;
- Assist various City departments, including the training of employees, in the implementation of workflows to maintain accurate records of construction, maintenance and operation activities, utilizing GIS and other available technology;

- Coordinates with outside agencies to accomplish objectives;
- Works with various computer systems to perform duties (i.e. mapping systems, CAD systems, computer networks, GIS, etc.).
- Creates and maintains a variety of records and reports relative to the work;
- Performs a variety of physical activity including entering confined spaces, climbing ladders and using and carrying tools and materials such as shovels, picks and survey stakes;
- Utilizes a variety of standard office equipment;
- Operates a vehicle in the performance of duties;
- Act as liaison with the City's contracted Information Technology experts to solve problems and accomplish goals;

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES: Good knowledge of the concepts, practices and techniques related to developing, maintaining and operating a GIS; good knowledge of the practices and techniques developing and maintaining databases; good knowledge of the practices and techniques related to maintaining, testing and configuring computer hardware, software and peripheral equipment; good knowledge of the practices and techniques related to the professional planning process; working knowledge of municipal departments; skill in the use of map making equipment; ability to perform close, detailed work involving considerable visual effort and concentration; skill in operating optical and satellite-based surveying instruments and equipment; ability to operate a personal computer and utilize common office software programs including word processing, spreadsheets and databases; ability to understand and interpret complex oral instructions and/or written directions; ability to communicate effectively both orally and in writing; ability to analyze and organize data and prepare records and reports; ability to establish and maintain effective working relationships with others; physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS: Either

- a. Graduation from a regionally accredited college or university or one accredited by the New York State Board of Regents to grant degrees with a Bachelor's degree in engineering technology, construction management, geography, urban planning, or a closely related field and two years of experience in engineering project management or computer-aided drawing, or Geographic Information Systems management;
- b. Graduation from a regionally accredited college or university or one accredited by the New York State Board of Regents to grant degrees with an Associate degree in engineering technology, construction management, geography, urban planning, or a closely related field and four years of experience in engineering project management or computer-aided drawing, or Geographic Information Systems management;
- c. An equivalent combination of training and experience as defined by the limits of (a) and (b) above.

SPECIAL REQUIREMENT: Candidates must possess a valid New York State driver's license at the time of appointment, and must maintain such license for the duration of employment.

Adopted CSC: February 26, 2020

Jurisdictional Classification: Competitive