



CIVIL ENGINEERING TECHNICIAN I

JOB DESCRIPTION

Department: Public Works	Division: Engineering
Work Location: Urbana Public Works Department	Percent Time: 100%
Job Type: Civil Service	FLSA Status: Non-exempt
Reports To: City Engineer	Union: Non-Union

JOB SUMMARY

Under the direction of the City Engineer, the Civil Engineering Technician performs various engineering tasks and duties as assigned. This position is involved in the planning and implementation of municipal infrastructure improvement projects and maintenance programs; managing the City's regulatory programs; maintaining the City's compliance with state and federal regulations; conducting field investigations and inspections; collecting field data utilizing surveying techniques and instruments; monitoring construction work; and assessing the condition of infrastructure.

Defining Characteristics

This is the entry level of the Civil Engineering Technician classifications. This level is distinguished from the Civil Engineering Technician II, III and IV levels by the performance of basic and routine tasks and duties assigned to positions within the class. Since this level is typically used as a training level, employees may have limited or no work experience. The incumbent performs beginning-level technical work and is expected to perform routine tasks under the immediate supervision of engineers and higher-level technicians who review the incumbent's work procedures and results. Assignments require the application of basic technical knowledge and skills, acquired through a formal training program, to various public works projects.

ESSENTIAL FUNCTIONS

- Perform a range of engineering related tasks requiring independent analysis and formulations of solutions to problems
- Perform measurements and calculations accurately

- Assist with planning and implementation of capital improvement projects and maintenance programs
- Assist with managing the City's regulatory programs, such as Utility / Right-of-Way Permits, Erosion Control Permits, and Development Review
- Assist with maintaining the City's compliance with state and federal regulations, such as National Bridge Inspections Standards (NBIS), National Pollutant Discharge Elimination System (NPDES) Permits, and others that may be identified in the future
- Assist with maintaining and updating data for the City's infrastructure assets
- Collect field data, such as existing topographical data, utilizing surveying techniques and instruments
- Monitor construction of contract work to ensure work is performed in compliance with contract plans and specifications and required quality is obtained
- Assist with design and development of construction plans, specifications, and contract documents
- Prepare exhibits, graphics, and special illustrations and attends public information meetings in conjunction with various City projects
- Coordinate contract work on concurrent projects with other departments and agencies; assists with the preparation of news releases, letters, and any other communication tools distributed to property owners, residents and necessary public or private agencies to effectively and efficiently communicate with impacted parties on any project
- Provide technical support to various City departments
- Works effectively and cooperatively with others
- Handle requests for information, service or complaints over the phone, via electronic or regular mail and in person, or makes referrals to appropriate staff on behalf of the City of Urbana
- Ensure that the City vehicle and other equipment to which he/she is assigned is maintained in clean, proper running condition; reporting to supervisor or other appropriate person when vehicle or other equipment is in need of repair
- Perform other activities as assigned.

This job description reflects the general concept and intent of the classification and should not be construed as a detailed statement of all of the job requirements that may be inherent in the position.

JOB REQUIREMENTS

Education & Experience

Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

- Associate's degree in Civil Engineering Technology or related field from an accredited post-secondary program

- Previous internship or cooperative education experience in municipal, county, state, or federal engineering, or engineering consulting is preferred

Preferred Attributes

- Familiarity with ArcGIS
- Familiarity with Granite XP sewer televising software

Knowledge of

- Standard practices, procedures, materials, tools, and equipment used in the maintenance, repair, rehabilitation and construction of municipal infrastructure projects
- Engineering drafting techniques and tools
- Field survey instruments and techniques
- Mathematics through trigonometry
- Microsoft Office applications, including Word, Excel, Access, PowerPoint and Outlook
- AutoCAD or Microstation

Ability to

- Assist with and learn to operate equipment, such as a theodolite, level, metal detector, computer, scientific calculator, plotter and mobile radio
- Layout construction projects, including sewers, new pavements, and sidewalks
- Obtain concrete samples to measure for air entrainment and slump and cylinder testing; inspect manholes; drill cores; measure quantities; and calculate construction quantities and costs
- Make quick and intelligent field judgments required during construction inspection
- Read figures quickly and accurately and make mathematical calculations
- Learn and adhere to City policies and procedures
- Communicate effectively with the public and co-workers
- Follow oral and written instructions
- Work effectively and cooperatively with others
- Stand for long periods of time while inspecting construction projects
- Refer questions and problems to higher levels

Licenses, Certifications, and Memberships Required

- Must possess a valid Illinois driver's license or have the ability to obtain one within fifteen (15) days of employment and have the ability to operate a motor vehicle.

Supplemental Information

Supervision received

- Works under the direction of the City Engineer; establishes procedures for attaining specific goals and objectives and is assigned responsibility for establishing the methods to attain them. Generally in charge of an area of work, but does not have the authority for approving policy.

Level and complexity of supervision exercised

- This position is not responsible for supervising any staff positions.

Security Level

- Level MVR: essential functions require frequent use of City vehicles

Physical Demands and Working Conditions

- Physical Demands: ability to lift and carry fifty (50) pounds; sit, stand and/or walk for extended periods and ability to walk on uneven terrain at construction sites and other surfaces; manual dexterity and eye-hand coordination needed to use a variety of office equipment such as computers, telephones, calculators, copiers, and topographic surveying equipment. Position requires visual acuity sufficient to read computer screens and printed documents and visually inspect work in progress and hearing in the normal audio range with or without correction.
- Working Conditions: Work generally occurs in both an office and field environment. A typical work schedule: Monday - Friday, 7:00 a.m. - 4:00 p.m. with flexibility depending upon the needs of the department. May be required to work in excess of 40 hours a week and/or work irregular hours, particularly during construction projects or emergency situations. Job requires outside work in all weather conditions, winter and summer as well as inside office work. Work occurs around traffic, in and around heavy equipment in construction zones, and around potentially hazardous fumes and caustic compounds. Incumbents may be subjected to dusts, fumes, extreme temperatures, inadequate lighting, and intense noises.

Job Dimensions

- General guidelines for work exist, but employee is increasingly responsible for determining the approach for performing the work.
- At the entry level, employee performs technical or trades-based work that requires a solid understanding of basic algebra and statistics at the para-professional level. Work complexity and independence increase relative to demonstrated proficiency and expertise. At advanced levels, employee performs work that encompasses advanced technical, scientific, legal, or mathematical concepts. Work directly contributes to the implementation of specific policies, programs, or initiatives of the organization.

The physical demands and work environment described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.

Class Specification History

New classification added: 02/10/2016.

General revision: 05/25/2022

For HR/Finance Use

Title Code	Pay Grade
	236
EEO Category	
3-Technician	