

FLSA STATUS	Non-Exempt	CIVIL SERVICE	Yes
UNION	Public Works	TELECOMMUTE ELIGIBLE	No
DEPARTMENT	Engineering	DEPARTMENT NUMBER	260
REPORTS TO (TITLE)	Engineering Supervisor	JOB FAMILY	Public Works
PAY GRADE	Tech I, II, III	DATE OF LAST REVIEW	June 2024

NATURE OF WORK
<p>This level within the Public Works family and the Civil Engineering series performs related work for environmental, water, sewer, street, and other public works projects and programs. The Tech will perform project inspection related to the construction of sanitary sewer, storm sewer, water main, and paving to meet standards set by Iowa DOT and Iowa SUDAS (Statewide Urban Design and Specification). Duties also includes computer work, gathering data, and performing mathematical calculations to support the creation of design and as built drawings.</p> <p>May be called in during nights and weekend to attend to emergent conditions.</p>

DUTIES / RESPONSIBILITIES <i>(These are the highlighted responsibilities of the position. An employee in this position may also be required to perform other related duties as assigned.)</i>	
1.	Oversees companies and contractors in the right-of-way (ROW); inspects driveways, sidewalks, utility patches, and plumbing connections for compliance with specifications; prepares moving permits for oversized loads; Locates sewer lines for contractors using the ArcGIS map, paper maps, and record drawings; Patrols levees during flood events;
2.	Performs engineering observations on construction projects involving storm sewer, sanitary sewer, water main, pavement, sidewalks, driveway, excavation, and other work contracted by the City of Ottumwa. Utilizes a comprehensive working knowledge of SUDAS and DOT specifications and construction procedures to ensure adherence to plans and specifications; performs quality assurance / quality control (QA / QC) tests on concrete; monitors jobsite for compliance with OSHA and City safety regulations.
3.	Calculates and verifies dimensions, areas, volumes, profile grades, etc. for new and ongoing work; estimates quantities of work for change orders, and quantities to complete; tracks and documents quantities of installed materials on construction projects; uses data to prepare monthly and final pay apps; compiles field notes and data from projects to complete project books for department records.
4.	Performs surveying work using appropriate instrumentation.; checks finished grades of streets, sewers, subgrade/subbase, etc. for compliance with design drawings; shoots in installed infrastructure for inclusion on GIS mapping; uses GPS or ArcGIS map to locate control points for field surveys. Imports survey data into CAD software;
5.	Researches records, maps, and other data to obtain typical engineering data such as location of sewer stubs, water mains, hydrants, etc. and zoning district designations or special property assessments; assists in utility plan reviews; updates files;

**DUTIES / RESPONSIBILITIES** *(These are the highlighted responsibilities of the position. An employee in this position may also be required to perform other related duties as assigned.)*

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| 7. | Compiles field data (reducing field notes, plotting profiles and cross sections) for street, sewer, and other in-house projects into the appropriate design (establishing and computing grades, preparing grade sheets, computing cut-fill quantities) and transferring onto paper or computer media. |
| 8. | Makes decisions under supervisor oversight about project details such as compliance, acceptance testing, and evaluations of field conditions.   |

**FUNCTIONAL SPECIFIC RESPONSIBILITIES MIGHT INCLUDE:**

Engineering Tech I - This position inspects, documents, and tracks use of the ROW; performs control testing of concrete materials; assists in surveying operations, field measurements; and project inspection; locates sewer lines, including on call emergencies after hours; and can perform engineering observation on projects with oversight from supervisor or an Engineering Tech II.

Engineering Tech II – In addition to the responsibilities of the Engineering Tech I, this position independently performs engineering observation on construction projects with little to no oversight; compiles jobsite data; and performs surveying work to gather field data and as built information for construction projects.

Engineering Tech III - In addition to the responsibilities of the Engineering Tech II, this position creates plans in AutoCAD Civil 3D including but not limited to establishing alignment lines for sewer mains, water mains, streets, pavement, etc; creates as-builts drawings; estimate bid quantities, and bring project plans and specs to completion.

**SUPERVISORY RESPONSIBILITIES**

Does not officially supervise other employees.

**TRAINING/EDUCATION AND EXPERIENCE REQUIREMENTS**

High School diploma or G.E.D. equivalent required

Tech II – one (1) year of construction experience preferred

Tech III – Associate Degree in Computer Aided Design preferred

OR

An equivalent combination of education/training and experiences which provide the required knowledge, skills, and abilities.

**LICENSING / SPECIAL REQUIREMENTS**

Valid driver's license

Certifications to inspect/document field quantities;

Tech I - Iowa DOT Portland Cement Concrete I (PCC1) Certification and Hot Mix Asphalt (HMA1) Certification

- Required within 12 months of hire

Tech II - Iowa DOT PCC2 Certification and Iowa DOT Aggregates Certification

- Required within 12 months of hire

**SKILL / ABILITIES REQUIREMENTS**

- Knowledge of machines and tools, including their designs, uses, repair, and maintenance;
- Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads;
- Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions;
- Quality control analysis to conduct tests and inspections of products, services, and/or processes;
- Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar;
- Knowledge of arithmetic, algebra, geometry, and their applications;
- Maintain records and prepare reports;
- Active learning;
- Reading comprehension;
- Judgement and decision making;
- Requires frequent use of Microsoft Office Suite (Word, Excel, Outlook);
- Uses computers and related software applications;
- Communication, interpersonal skills as applied to interaction with coworkers, supervisor, the general public, etc. sufficient to exchange or convey information and to give and receive work direction.

**PHYSICAL REQUIREMENTS**

Positions in this class typically require: standing, walking, talking, hearing, and seeing.

Medium Work: Exerting up to 50 pounds of force occasionally. And/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

**WORKING ENVIRONMENT / CONDITIONS**

The working environment / conditions for this position may include:

- Hazardous physical conditions (mechanical parts, electrical currents, vibration, etc.)
- Atmospheric Conditions (fumes, odors, dusts, gases, poor ventilation, etc.)
- Hazardous Materials (chemicals, blood, other body fluids, etc.)
- Driving / Travel

**CLASSIFICATION HISTORY**

DATE	COMMENT
August, 2023	Draft prepared by CHM
May 2024	Update per departmental feedback by BC

EEOC
<i>The City of Ottumwa is an Equal Opportunity Employer. In compliance with applicable state and federal law, the City will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the City.</i>

ACKNOWLEDGEMENT	
I have read the job description and can perform the essential functions of the job either with or without a reasonable accommodation.	
Date	Signature

**NOTE**

The above position description is intended to represent only the key areas of responsibilities; specific position assignments will vary depending on the business needs of the department.