

CITY OF CEDAR RAPIDS POSITION PROFILE	JOB CODE #/TITLE: NB323 Geospatial Data Specialist II
POSITION #/TITLE: 1700 Geospatial Data Specialist II	Adopted: 12-15
	Revised:

POSITION DESCRIPTION

Dept: Public Works	Manager Level: Non-Manager
Salary Plan/Description: NBU/Non-Bargaining Unit	Salary Grade: 10
Reports To Position #/Job Code #/JC Title: 1039/NB149/Sewer Superintendent	Dotted-line Reports To Position #/Job Code #/JC Title:
FLSA Status: Exempt	City Overtime Status (Employee Type): Non-Exempt (Exception Hourly)
Physical Demand Rating: Medium	Work Environment: Uncontrolled
Pre-employment Testing: Drug and health screening after contingent offer.	Position Testing: Strength and agility, typing
Personal Protective Equipment: Hard hat, safety glasses, safety-toe shoes	

General Statement of Duties

Surveys and maps the City's utility systems in support of the infrastructure management programs using Global Positioning System (GPS), Geographic Information System (GIS), and Computer Assisted Drafting (CAD) technology and software; provides related work direction to department staff; performs intermediate-level technical support of infrastructure management programs; performs related work as required.

Distinguishing Features of the Class

Considerable leeway is granted for the exercise of independent judgment and initiative. Work direction is provided to department staff on data collection and mapping practices and procedures. This class is distinguished from the class of Geospatial Data Specialist I by the performance of intermediate-level technical infrastructure management program support, by a broader scope of responsibilities, including work order generation and asset management, modeling and routing systems, the analysis of complex geographic data, and by additional training and experience.

Examples of Essential Work (Illustrative Only)

Provides customer service to City employees and the general public;
Plans, develops and performs infrastructure assessments of the collection systems;
Plans and develops the pipe evaluation / televising inspection program of the collection systems;
Assists in the development and maintenance of GIS applications for infrastructure management programs;
Performs modeling and analysis;
Obtains field data to enhance the results and to verify archival records;
Digitizes, maintains, and analyzes geographic data;
Updates, verifies, and maintains GIS database layers and tables;
Researches and compiles utility infrastructure and related data from hard copy maps, engineering drawings, and database tables for entry into GIS;
Creates customized mapping solutions for departmental staff and field personnel;

Develops macros to manipulate and utilize GIS data;
Develops, analyzes, quality-assures, and maintains existing or proposed geometric networks;
Provides technical support to departmental staff in the development of infrastructure management programs;
Plans and executes utility system mapping, Global Positioning System (GPS) data, and assists with on-going maintenance of utility asset inventory records;
Directs and performs field location and verifies proper identification of utility infrastructure;
Utilizes GPS equipment and software to collect, record, and download field data to the GIS;
Provides support for field personnel regarding the locations of utility infrastructure features;
Performs or coordinates update, maintenance, and repair of GIS, GPS, and related hardware and software;
Operates various engineering survey instruments for determination of precise location of utility features;
Maintains survey equipment and performs regular calibration to ensure accuracy of results;
May train departmental staff in the operation of support equipment;
Generates and produces a wide variety of maps, reports, and other cartographic products;
Uses GIS software analysis tools to run queries, generate reports, and customize maps as needed;
Operates and maintains various GIS-related hardware including plotters, scanners, digitizers, and Windows-based workstations/PCs;
Recommends and implements efficiencies and enhancements;
Acts as the alternate for the Geospatial Data Specialist III on plans, coordination and supervision of the infrastructure location program;
Attends meetings, conferences, and workshops;
Performs all work duties and activities in accordance with City policies, procedures, and safety practices;
Attends work regularly at the designated place and time;
Supports continuous process improvement initiatives;
Performs related work as required.

Required Knowledge and Abilities

Thorough knowledge of computer software applications for GIS and CAD mapping, drafting and engineering design, including GPS applications;
Some knowledge of software, hardware and computer operating systems and utilities used as the tools of infrastructure program development;
Ability to operate a personal computer using program applications appropriate to assigned duties and responsibilities, including word processing, spreadsheet and database applications, as well as specialized software used for GPS/GIS activities;
Some knowledge of methods, practices, techniques, materials, and supplies used in urban planning and infrastructure management development, and maintenance;
Ability to coordinate the work of others;
Ability to train, assign, motivate, lead, and evaluate the work of others;
Ability to operate and instruct personnel in the operation of engineering survey equipment, GPS equipment, and field computers;
Some knowledge of engineering principles, practices and techniques;
Ability to read and interpret engineering plans, specifications, construction documents, maps, plats and legal descriptions;
Some knowledge of underground utility construction methods and materials;
Ability to read and interpret applicable federal, state and local laws, regulations and standards governing water distribution system construction, operation and maintenance;
Some knowledge of safety regulations, protocols, principles, practices and procedures;

Ability to properly wear and use personal protective equipment without undue impairment of senses or mobility;
Ability to work outdoors, year-round, in uncontrolled environments;
Good knowledge of local geography;
Ability to recognize departmental needs and design automated data systems
Ability to communicate effectively and maintain working relationships with engineers, contractors, utility representatives, other City employees, supervisory personnel, and the public, both orally and in writing, using both technical and non-technical language;
Ability to prepare accurate and reliable reports containing findings, recommendations and conclusions on computer operations and software applications;
Ability to work cooperatively and to maintain effective working relationships to accomplish job responsibilities;
Ability to quickly learn and put to use new skills and knowledge brought about by rapidly changing information and/or technology;
Ingenuity and inventiveness in the performance of assigned tasks.

Acceptable Experience and Training

Graduation from an accredited college or university with a Bachelor's Degree in Geographic Information Systems (GIS) or a related field such as Geography, Planning, Natural Resources, or Computer Science with an emphasis in GIS coursework or training; or
Graduation from an accredited college or university with an Associate's Degree in Geographic Information Systems (GIS) and two years of experience with geographic information systems mapping and database management using ESRI ArcGIS software or its equivalent; or
Any equivalent combination of experience and training which provides the knowledge and abilities necessary to perform the work.

Required Special Qualifications

Valid Iowa Driver's License.
Ability to obtain a Geographic Information System Professional Certification within 4 years.

Essential Physical Abilities

Requires the following, with or without reasonable accommodation:
Sufficient clarity of speech and hearing, which permits the employee to communicate effectively;
Sufficient vision and manual dexterity, which permits the employee to operate hand and power tools, clean and repair sewer collection systems and operate hydraulic cleaning equipment and controls;
Sufficient vision, which permits the employee to observe a wide variety of engineering and construction projects on site and review a variety of written materials;
Sufficient manual dexterity, which permits the employee to operate a vehicle and computerized equipment;
Sufficient agility, acuteness of senses, and presence of mind to safely navigate construction sites, high traffic areas on foot, and to function safely in an uncontrolled environment;
Ability to properly wear and use personal protective equipment without undue impairment of senses or mobility;
Ability to work outdoors year-around, in uncontrolled environment.