

THE WATER WORKS AND SEWER BOARD OF THE CITY OF GADSDEN, ALABAMA CLASSIFICATION SPECIFICATION

Position Title: Geographic Information
System (G.I.S.) Technician

Department: Administration

Date: July, 2014

Reports to: General Manager

PURPOSE OF CLASSIFICATION

The purpose of this classification is to perform technical duties associated with the development and maintenance of digital records, drawings, and maps related to the Gadsden Water Works and Sewer Board Geographical Information System (GIS), and provide support as needed for Engineering and Surveying activities.

Under general supervision, the GIS Technician plans, organizes, coordinates and participates in the development and implementation of the geographic information system (GIS); directs and participates in the long-term development and enhancement of GIS information technology for water and sewer mapping; performs GIS modeling duties; provides expertise, support, assistance and guidance to staff personnel; and performs related duties as assigned.

ESSENTIAL FUNCTIONS

The following duties are normal for this position. These are not to be construed as exclusive or all-inclusive. Other duties may be required and assigned.

Works closely with internal and external users to identify GIS requirements, technical issues and training needs; analyzes current departmental processes and recommends best practice solutions; constructs information technology definitions based on identified needs of the organization.

Performs complex cadastral and GIS data maintenance, manipulation, analysis, extraction and generation assignments; performs data research, investigation and verification; creates and maintains digital and/or hard copy files of water and sewer problems for department use; codes and digitizes maps and geographical feature data into various layers; archives projects and asset data; performs record keeping and inventory; documents and files data sources and map files for future reference; responds to requests from the public for mapping data; responds to emergency mapping and information requests.

Prepares, plans, produces, maintains and updates a variety of water and sewer maps, drawings, plans and other graphic representations displaying layers and attribute data from databases, using cartographic techniques to represent spatial data; develops and maintains data layers, using GIS tools, CAD tools and relational databases; performs detailed spatial analysis including notifications, buffering, and zone consolidation; manipulates images for electronic mapping; enters attribute data pertaining to specific features into a relational database.

Integrates new software programs compatible with the GIS software for improved methods of asset management and development of databases; implements new programs and interfaces to ensure accuracy and efficiency.

Has knowledge of the following:

1. GIS concepts and analytical techniques, including computerized mapping and digital data conversion, manipulation and analysis.
2. GIS database administration and management principles, methods and techniques, including quality control methods and practices.
3. Knowledge of GIS software tools and applications including but not limited to ArcGIS, ArcIMS, ArcSDE, AutoCAD suite, MS Visio and applications of MS Office Suite.
4. Principles and practices of GIS analysis and design.
5. Hardware and software applications development methods, tools and utilities applicable to the GIS system.
6. Methods, procedures and techniques for the preparation, review for accuracy and updating of lease plats and legal descriptions.
7. Contract administration methods and techniques.
8. Basic principles and practices of land surveying.

Has the ability to perform the following:

1. Plan, organize, integrate, monitor, and maintain a comprehensive GIS and its related applications to meet mapping and customer service objectives, including developing long-range GIS system goals.
2. Understand, analyze and define user requirements and recommend cost effective systems solutions.
3. Analyze complex problems, evaluate alternatives and make sound independent decisions within established guidelines.
4. Train others in the use of GIS applications.
5. Provide customer service for water and sewer service availability.
6. Organize, plan and complete projects efficiently.
7. Work collaboratively and effectively with project teams for the development of water and sewer projects.
8. Communicate effectively, orally and in writing.
9. Establish and maintain effective working relationships with those encountered in the course of work.
10. Execute basic land surveying principles and procedures.

MINIMUM REQUIREMENTS

Graduation from a four-year college or university with a major in GIS, computer science or a closely related field and three years of progressively responsible experience in the design and development of GIS systems and applications, or any equivalent combination of education and experience necessary to appropriately perform the functions of this job. Must possess a current valid Alabama driver's license.

MINIMUM REQUIREMENTS TO PERFORM ESSENTIAL JOB FUNCTIONS

PHYSICAL REQUIREMENTS: Must be able to operate a variety of automated office equipment including a computer, printer, copy machine, plotter, facsimile machine, calculator, telephone and GPS surveying equipment. Physical demand requirements are considered light work.

DATA COMPREHENSION: Requires the ability to compare and or judge the readily observable functional, structural, or compositional characteristics (whether similar to or divergent from obvious standards) of data, people, or things which may include forms, reports, maps, legal descriptions, specifications, reference materials, and operation manuals.

INTERPERSONAL COMMUNICATION: Requires the ability to speak with and/or signal people to convey or exchange civil engineering and technical GIS information, including giving assignments and/or directions to co-workers or assistants as well as communicating with the general public.

LANGUAGE ABILITY: Requires ability to read a variety of civil engineering and technical documentation, directions, instructions, and methods and procedures. Requires the ability to write job related documentation and reports with proper format, punctuation, spelling and grammar. Requires the ability to communicate with poise, voice control, and confidence using proper English.

INTELLIGENCE: Requires the ability to learn and understand civil engineering and technical principles and techniques; to understand departmental policies and procedures; to make independent judgments in absence of supervision; and to acquire and be able to expound on knowledge of topics related to primary occupation.

VERBAL APTITUDE: Requires the ability to record and deliver information, to explain procedures, and to follow verbal and written instructions.

NUMERICAL APTITUDE: Requires the ability to add and subtract totals; multiply and divide totals; determine percentages; determine time and weight; interpret statistical data; utilize mathematical formulas; and perform statistical calculations.

FORM/SPATIAL APTITUDE: Requires the ability to visually inspect items for proper length, width, and shape using job related equipment which may include basic surveying equipment.

MOTOR COORDINATION: Requires the ability to coordinate hands and eyes in using automated office equipment and drafting equipment.

MANUAL DEXTERITY: Requires the ability to handle a variety of items, automated office equipment and drafting equipment, control knobs, switches, etc. Must have the ability to use one hand for twisting motion or turning motion while coordinating other hand with different activities. Must have average levels of eye/hand/foot coordination.

COLOR DIFFERENTIATION: Requires the ability to discern color.

INTERPERSONAL TEMPERAMENT: Requires the ability to deal with and relate to people beyond giving and receiving instructions. Must be able to adapt to and perform under moderate stress when confronted with an emergency.

PHYSICAL COMMUNICATION: May require the ability to talk, express, or exchange ideas by means of spoken words and/or hear and perceive nature of sounds by ear.