



June 2008

GEOGRAPHIC INFORMATION SYSTEMS TECHNICIAN

DEFINITION

Under general supervision, updates and maintains the Geographic Information Systems (GIS) and Global Positioning System (GPS) programs; participates in the functions necessary to maintain and use GIS databases and applications; performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Senior Project Engineer. Exercises no direct supervision of staff.

CLASS CHARACTERISTICS

This the entry-level class in the Geographic Information Systems (GIS) series responsible for maintaining the Public Works Department's data layers of the GIS program within general policy and procedural guidelines. Responsibilities include maintaining and updating the GIS in a timely manner, and performing a wide variety of tasks in the activities and services of GIS. This class is distinguished from the Information Technology Technician by the performance of duties related specifically to the GIS. This class is further distinguished from the GIS Coordinator by the performance of more routine tasks and duties assigned to the positions within the series.

EXAMPLES OF ESSENTIAL FUNCTIONS (Illustrative Only)

Management reserves the rights to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations where appropriate so that qualified employees can perform the essential functions of the job.

- Maintains and updates Geographic Information System (GIS) data on streets, wastewater, storm drainage, and water systems as found in the City.
- Develops and maintains a variety of maps and tabular data from a variety of sources; explains technical information to non-technical system users, including assisting them in accessing and interpreting GIS information.
- Designs, publishes, and maintains various maps using GIS.
- Acts as point of contact for the day-to-day operations of the GIS program; troubleshoots system problems; isolates the cause of system failures.
- Responds to and resolves software users' inquiries and complaints and escalates problems or issues to GIS Coordinator as needed.
- Collects infrastructure data using Global Positioning System (GPS) equipment and software; imports GPS data into existing database using GIS and GPS software.
- Coordinates with the Information Technology Department to troubleshoot and resolve system problems, make system modifications, and install new and additional software as required.
- Coordinates with the CMMS technical support staff to facilitate data exchange between the software systems.
- Trains users on the operation of the Enterprise GIS applications.

- Provides computer software and hardware support for the departmental staff.
- Serves as a member or leader of intra- and inter-departmental application development teams.
- Maintains accurate records and files related to the GIS function.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Technology, hardware, and software and current applications related to GIS systems, including database management and mapping and desktop publishing systems.
- Applicable technical terminology, applications, features, and services.
- General principles and techniques of cartography, map design, and GIS.
- Applicable Federal, State, and local laws, codes, and regulations.
- Research techniques, methods, and procedures.
- Modern office practices, methods, and computer equipment.
- Record keeping principles and procedures.
- Computer applications related to the work, including GIS, AutoCAD, and GPS programs.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service to public and City staff, in person and over the telephone.

Ability to:

- Assess user needs and recommend appropriate hardware, software, and systems to meet these needs.
- Perform mapping database maintenance and other GIS technician-level tasks.
- Develop informational materials and train users in GIS applications.
- Accurately evaluate and prioritize software requests.
- Collect accurate data and present information in a cartographic and tabular format.
- Prepare and maintain accurate and complete records.
- Respond to requests and inquiries from end-users.
- Understand and follow oral and written instructions.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment including computer equipment and specialized software applications programs.
- Comprehend and use English effectively including producing all forms of communication in a clear, concise, and understandable manner to intended audiences.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience, which would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to the completion of the twelfth (12th) grade and two (2) years of experience providing technical support of geographic information systems. Experience and/or specialized training in the ArcGIS program is preferred.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid Driver's License by time of appointment.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; to operate a motor vehicle and to visit various City and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification although some field work and standing in work areas and walking between work areas is required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

ENVIRONMENTAL ELEMENTS

Employees primarily work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Occasionally, employees work in the field and may be exposed to cold and hot temperatures, inclement weather conditions, and road hazards. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.