

**CLASS SPECIFICATION**  
**Geographic Information Systems Technician**

**GENERAL PURPOSE**

Under general supervision, performs routine to moderately difficult technical duties in the operation and use of the City's Geographic Information System (GIS); maintains and updates layers of the GIS; collects, interprets, verifies and processes GPS data; prepares digital and hard copy maps; and performs related duties as assigned.

**DISTINGUISHING CHARACTERISTICS**

Geographic Information Systems Technician is responsible for performing routine to moderately difficult technical GIS mapping, maintenance and administration duties. Incumbents data enter and maintain GIS layers and prepare and produce maps and other graphic representations.

Geographic Information Systems Technician is distinguished from Geographic Information Systems Specialist in that incumbents in the latter class are responsible for performing more complex and difficult mapping and analysis duties requiring a more thorough understanding of GIS techniques, processes and procedures and the greater exercise of problem-solving skills.

**ESSENTIAL DUTIES AND RESPONSIBILITIES**

The duties listed below 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 this class.

1. Performs routine to moderately difficult GIS data maintenance, manipulation, analysis, extraction and generation assignments; performs GPS data collection, interpretation, field verification, processing and maintenance duties; organizes and stores GIS data in geodatabases and arranges for access by other users.
2. Prepares, designs, updates and produces a variety of hard copy and digital maps, atlases and other graphic representations displaying GIS data layers, using cartographic techniques to represent spatial data; develops and maintains shapefiles and data layers using GIS and cadastral tools and databases; incorporates maps, charts, spreadsheet data and text into reports.
3. Designs, creates, plans, maintains and updates maps, drawings, plans, spreadsheets, data files and documentation for a wide variety of purposes.
4. Assists in resolving and troubleshooting GIS-related problems and requests; prepares training materials and provides GIS software training to end users.

**OTHER DUTIES**

1. Attends a variety of staff meetings, training and conferences as required.

## **QUALIFICATIONS**

### **Knowledge of:**

1. Geographic information system concepts, practices and techniques, including computer mapping and attribute data conversion, transfer, manipulation and analysis.
2. GIS software, tools and applications.
3. Relational database concepts, methods and practices.
4. Terminology, methods and techniques used in engineering maps and records.
5. Data gathering and research skills.
6. Use of word processing, spreadsheet and database software.
7. Operating system fundamentals and procedures for the use of computer systems and related equipment.
8. Algebra, geometry and trigonometry as applied to engineering and mapping formulas.
9. City policies and departmental work procedures and quality standards.

### **Ability to:**

1. Utilize a variety of GIS software, computer-aided drafting, graphics and other applications to carry out assigned responsibilities.
2. Perform engineering computations and computer analyses.
3. Independently perform difficult and responsible GIS assignments with initiative and creativity.
4. Interpret maps, graphs, satellite and aerial images.
5. Recognize and resolve discrepancies in attribute data.
6. Prepare accurate GIS cartographic products.
7. Communicate clearly and effectively, both orally and in writing.
8. Establish and maintain effective working relationships with City management, staff and others encountered in the course of work.

### **Education, Training and Experience:**

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from high school or G.E.D. equivalent, supplemented by course work in architectural, civil and mechanical engineering drafting and geographical information systems; and two years of progressively responsible experience in the use and operations of GIS systems and applications; or an equivalent combination of training and experience.

**Licenses; Certificates; Special Requirements:**

A valid California driver's license and the ability to maintain insurability under the City's vehicle insurance policy.

**PHYSICAL AND MENTAL DEMANDS**

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

**Physical Demands**

While performing the duties of this job, the employee is regularly required to sit; talk or hear, both in person and by telephone; use hands repetitively to finger, handle and feel computers and standard business equipment; and reach with hands and arms. The employee is frequently required to stand and walk; stoop, kneel, crouch and crawl; and climb and balance in high precarious places.

Specific vision abilities required by this job include close vision and the ability to adjust focus.

**Mental Demands**

While performing the duties of this class, the incumbent is regularly required to use written and oral communication skills; read and interpret data, information and documents; analyze and solve problems; use math/mathematical reasoning; perform highly detailed work under changing, intensive deadlines, on multiple concurrent tasks; work with constant interruptions; and interact with City management, staff and others encountered in the course of work.

**WORK ENVIRONMENT**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The employee works under typical office conditions, and the noise level is generally quiet.