

GIS TECHNICIAN I
GIS TECHNICIAN II

DEFINITION

To perform a variety of technical office and field work duties related to the creation and maintenance of maps, tables, graphs and other geographic source data with the use of enterprise GIS, permitting, and asset management systems; and to provide technical support and queried data to department staff, other City departments, outside agencies, consultants, contractors, developers and the public.

DISTINGUISHING CHARACTERISTICS

GIS Technician I – This is the entry level class in the GIS Technician series. Positions in this class typically have little or no directly related work experience and work under immediate supervision while learning job tasks. The GIS Technician I class is distinguished from the II level by the performance of less than the full range of duties assigned to the II level. Incumbents work under immediate supervision while learning job tasks, progressing to general supervision as procedures and processes of assigned area of responsibility are learned.

GIS Technician II – This is the journey level class in the GIS Technician series and is distinguished from the I level by the ability to perform the full range of duties assigned with only occasional instruction or assistance as unusual or unique situations arise. Positions in this class are flexibly staffed and are normally filled by advancement from the I level.

SUPERVISION RECEIVED AND EXERCISED

GIS Technician I

Receives immediate supervision from assigned supervisory management or personnel.

GIS Technician II

Receives general supervision from assigned supervisory management or personnel.

EXAMPLES OF ESSENTIAL DUTIES – Duties may include, but are not limited to, the following:

Produce maps, tables and graphs for internal and external use; determines and executes the appropriate sequence of data processing tasks; uses established GIS and permitting systems to query data and produce documents.

Use Global Positioning System (GPS) equipment to acquire and record GIS positional and attribute data.

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Update and maintain GIS databases according to department's policies and procedures; assist in cleaning up data and making corrections in response to changes and additional data sets integrated into GIS.

Provide a variety of ad hoc queried data to City departments and outside agencies; produce and provide maps, drawings, color graphics, charts and graphs.

Perform editing tasks such as constructing new features and editing attributes in a GIS; perform spatial operations with GIS tools to analyze and query data.

Provide technical support related to software troubleshooting and recommend process improvements.

Perform quality control checks to integrity of GIS data and applications; review and resolve conflicts in data; evaluate currency, usefulness, and completeness of data.

Participate in planning special GIS mapping projects to assist with a variety of analysis and operational issues.

Provide assistance to departments, outside agencies and general public in obtaining information; research and compile materials and maps; produce digital copies of City data as requested; maintain maps and records.

Build and maintain positive working relationships with co-workers, other City employees, and the public using principles of good customer service.

Perform related duties as assigned.

MINIMUM QUALIFICATIONS

GIS Technician I

Knowledge of:

Principles and practices of cartography and engineering drafting including map projections and scales.

Basic techniques used in Geographic Information Systems (GIS), including techniques for graphical representation, data input, geodatabases, and quality assurance control.

Modern office procedures, methods and computer equipment.

Geographic Information System (GIS), Computer-Assisted Design (CAD), AutoCAD, ESRI-based ArcGIS suite of software, automated mapping applications, and other relevant software, programs and databases and their uses.

Equipment and procedures used in digital map production, GIS mapping, and surveying.

Principles of algebra, geometry, trigonometry statistics, and their applications

English usage, spelling and grammar

Principles and practices of good customer service.

Principles and practices of work safety.

Ability to:

Learn to perform a variety of technical duties in support of the City's GIS application and production of reports, maps, and graphics, including field work involving data collection, quality assurance and control, data loading and editing, and analysis.

On a continuous basis, know and understand all aspects of the job. Intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information; observe drafting and mapping activities and problem solve when appropriate; understand, interpret and explain Department policies and procedures; adapt to new and complex computer software.

On a continuous basis, sit at computer station or drafting table; intermittently stand at counter for long periods of time; twist and reach office equipment; write and use keyboard to communicate through written means; use keyboard to operate design and mapping computer software; and regularly lift weight of 10 pounds or less.

Learn to research sources of geographic data and collect, interpret and integrate cartographic data from different sources to prepare maps and reports.

Make simple engineering computations.

Learn to interpret maps; prepare maps, accurately delineating feature locations and boundaries.

Work independently and as a cooperative, contributing member of a team.

Learn to organize and manage multiple priorities and perform a variety of work assignments.

Learn to use tools and equipment commonly used for GIS, including GPS, CAD software and other computer applications related to GIS work.

Communicate effectively and concisely in writing and speaking.

Establish and maintain effective working relationships with those contacted in the course of work.

Experience and Training

Experience:

No experience required.

Training:

An Associate's degree or 60 semester units of college level course work including 18 units in a major field of study and 21 units in general education, preferably with course work in geography, geographic information systems, computer aided drafting, global positioning systems, computer science, engineering or related field. Two years of related work experience can substitute for an Associate's Degree.

License or Certificate

Possession of a valid California driver's license by date of appointment.

GIS Technician II

In addition to the qualifications for the GIS Technician I:

Knowledge of:

Terminology, methods, principles, practices and techniques used in GIS and computer operating systems.

Computer aided design and mapping tools and programs.

Cartographic design principles and practices used to produce high quality maps.

Principles and practices of Geographic Information Systems.

Policies and procedures of the assigned department.

Ability to:

Independently research sources of geographic spatial and tabular data for GIS usage, through the Internet and other sources, and collect, interpret, convert and integrate data from different sources to prepare maps.

Independently interpret maps; prepare maps accurately delineating feature locations and boundaries.

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Competently use relevant software, programs, and computer applications; import and export data; and use other data management tools.

Assist in the design of geodatabases associated with the GIS base mapping and subsequent map layers.

Research sources of geographic data and collect, interpret and integrate cartographic data from different sources.

Perform technical GIS work involving quality assurance and control, data loading, editing and analysis.

Design and develop sequence-processing tasks and perform spatial analysis.

Experience and Training

Experience:

Two years of technical GIS experience similar to a GIS Technician I with the City of Roseville.

Training:

An Associate's degree or 60 semester units of college level course work including 18 units in a major field of study and 21 units in general education, preferably with course work in geography, geographic information systems, computer aided drafting, global positioning systems, computer science, engineering or related field. Two years of related work experience can substitute for an Associate's Degree.

License or Certificate

Possession of a valid California driver's license by date of appointment.

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