

**CITY OF GLENDALE**

**TITLE:** Senior Engineering Technician    **CLASS CODE:** 739

**REPORTS TO:** Engineering and Design                      **GRADE:** 23  
Supervisor or Property Manager

**DEPARTMENT:** Engineering                                      **FLSA:** N

**JOB SPECIFICATION DATE:** September 25, 2006    kad

**JOB SUMMARY:**

Performs engineering design and drafting, mapping and records, or land surveying work and provides lead supervision to Engineering Technicians.

**ESSENTIAL FUNCTIONS:**

**Design**

1. Provides lead supervision and technical support, to engineering technicians with the research, preparation, and layout of construction drawings, as-builts, mapping, charts and graphs.
2. Checks work of engineering technicians for accuracy and conformance to engineering practices.
3. Designs utilizing AutoCad and manages in-house or consultant engineering projects.
4. Prepares cost estimates and quantity take-offs for engineering projects.
5. Reviews development plans, preliminary and final engineering project plans and specifications.
6. Researches and prepares project specifications and bid schedules.
7. Develops and maintains a variety of basic GIS applications, spatial data layers and databases, and assists in the maintenance of a citywide GIS system.
8. Performs basic GIS data analysis and queries, and performs mapping and data conversion for use in GIS applications.

**Survey (Party Chief)**

7. Leads and performs property, right of way, topographic, construction, and horizontal and vertical control network surveys.
8. Directs the operations of a survey crew, including the use of survey equipment.
9. Prepares and/or verifies mathematical calculations related to surveying.
10. Writes legal descriptions for the acquisition of property.
11. Maintains field notes, data collection records, and the system for the distribution and storage of the information.
12. Researches existing survey records and property deeds.

## **Mapping and Records**

13. Provides lead supervision and technical support, to engineering technicians with the research, preparation, and layout of quarter section utility maps, street light maps, district maps, and the storage and maintenance of as-built drawings.
14. Assigns work to engineering technicians and reviews work for accuracy and conformance to city standards.
15. Maintains and updates street maps, utility maps, and quarter section maps both manually and using computer aided drafting programs and digital engineering systems.
16. Participates in the production, review, storage, maintenance, and retrieval of as-built drawings and city maps.
17. Answers inquiries regarding utility locations, as-built drawings, flood zones, aerial photos, right of way and property lines, legal descriptions, quarter section maps, benchmarks, tax id numbers, parcel numbers and general City map information.
18. Prepares legal descriptions and maps for right-of-way issues.
19. Assists citizens and contractors with the preparation of elevation certificates.
20. Participates in preparing the operating budget for the section.
21. Serves as property manager in her/his absence.
22. Researches and determines locations of flood zones and prepares related correspondence to public and private agencies; prepares elevation certificates.
23. Provides technical and general engineering information to utility agencies and the public.

## **SECONDARY FUNCTIONS:**

24. Performs other related duties as assigned.

## **KNOWLEDGE, SKILLS, ABILITIES:**

### **Design/Mapping and Records**

#### **Knowledge of:**

Civil engineering principles and practices relative to area of assignment.  
Computer aided design and desktop publishing systems.  
Basic supervisory practices.  
Basic understanding of Geographic Information Systems.

#### **Ability to:**

Develop and maintain basic GIS applications, perform GIS data analysis, and perform mapping and data conversion for GIS applications, after appropriately provided training.  
Prepare difficult or complex engineering drawings using the methods, techniques, and instruments of drafting.  
Prepare design calculations for water, sewer, and storm drainage systems.  
Prepare legal descriptions.  
Prepare cost estimates for civil engineering projects.  
Operate computer spreadsheets and word processors to prepare technical reports.  
Communicate effectively verbally and in writing.  
Establish and maintain effective working relationships with City staff and the public.  
Develops projects, determines time and materials to meet project deadlines independently and under minimal supervision.

Read and interpret county assessor maps, ownership lists, and other engineering maps and drawings.

## **Survey**

### **Knowledge of:**

Civil engineering principles and practices relative to area of assignment.  
Computer aided drafting and desktop publishing systems.  
Advanced survey principles and practices and the standards and guidelines governing land surveying.  
Algebra, geometry, and trigonometry as applied to survey computations.  
Basic supervisory practices.

### **Ability to:**

Read and interpret construction drawings.  
Provide lead supervision to survey crews, operate survey equipment, conduct surveys, develop and maintain field notes.  
Perform construction staking for City engineering projects and as-built projects.  
Maintain horizontal and vertical control of City reference points.  
Maintain cooperative communications with the public.  
Communicate effectively verbally and in writing.  
Establish and maintain effective working relationships with city staff and the public.

## **WORKING CONDITIONS:**

### **Design/Mapping and Records:**

Primarily an office setting.

### **Survey:**

Primarily a field setting often in heavy traffic areas and construction zones.

## **MINIMUM QUALIFICATIONS:**

Associate's Degree in Engineering, Land Surveying, computer aided drafting or a related field relative to area of assignment and four years of engineering design or land surveying experience and one year of supervisory experience.

Registration as a Professional Land Surveyor in the State of Arizona is preferred for a Survey Party Chief.

Any equivalent combination of training and experience, which provides the required knowledge, skills, and abilities, is qualifying.

## **SPECIAL REQUIREMENTS:**

Valid Arizona Driver's license.