



City of Irving Job Description

Senior Engineering Analyst

FLSA Status:	EXEMPT	Job Department:	Capital Improvement Program (CIP)
Job Code:	K361	Reports To (Job Title):	Engineering Manager

PURPOSE

To provide Geographic Information Systems (GIS) services to the Engineering Department, which includes creating queries and exhibits, coordinating outside services for GIS data, surveying and other special projects. To support senior staff with design, technical documentation and project management of public works projects.

ESSENTIAL DUTIES AND RESPONSIBILITIES

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily.*

- Prepare GIS data reports and other presentations, which includes running spatial queries, performing geographic transformations, assessing the need for updated GIS source information, and shooting and editing video.
- Program Engineering Department applications to utilize GIS data.
- Perform research to verify utilities information on proposed projects.
- Prepare cost estimates, specifications, and requests for proposal for engineering projects and services.
- Administer specialty engineering service projects unique to department.
- Assist with projects designed to inform the public, which includes scheduling meetings and conducting surveys.
- Update department web page, which includes providing current data and design information.
- Assist in updating computer software and maintaining hardware functionality for unit.
- Work with others to resolve complaints and claims, which includes determining limits of right-of-way and easements.
- Prepare articles for City publications.
- Update and support document imaging system, which includes assessing the department's printing and output needs.
- Prepare, under the direction of a professional licensed engineer, designs, project contracts, and drawings for a variety of capital improvement projects including water, wastewater, paving, and drainage plans.
- Assist in the operation of site investigation of proposed public works under the technical supervision of the city Surveyors.
- Manage the construction phase of capital improvement projects, including review of monthly estimates, and writing and negotiating change orders with the Engineering Inspectors' assistance.
- Conduct pre-bidders' meetings to provide answers about construction sequencing, working day assessment, construction safety, and allowable construction materials.
- Train and direct several employees in research, drafting, and design.
- Provide primary assistance and supervision to Engineering Technicians, as well as surveyors, on technical software.

- Hire and place eight (8) high school interns and manage two of them throughout the school year.
- Perform related duties as assigned.

OTHER DUTIES AND RESPONSIBILITIES

- Represent department at external meetings.
- Assist in the preparation of year-end infrastructure reports.

SUPERVISORY RESPONSIBILITIES

Organizational Supervision - Applies to full personnel management responsibilities including selection, discipline, grievances and formal performance evaluations for a position's direct reports plus all employees reporting up through subordinates, which will include approximately 2 employees.

Functional and Technical Supervision - Regular responsibility for giving direction and guidance to employees as a lead worker, project manager or internal advisor. As an ongoing part of the position, the employee can expect to supervise approximately 1-4 employees.

FINANCIAL / BUDGETARY RESPONSIBILITY

Orders \$300 monthly printing supplies. Helps develop proposals/budgets for special project as requested.

QUALIFICATIONS:

The requirements listed below are representative of the knowledge, skill, and/or ability required.*

EDUCATION

- Equivalent to a Bachelor of Science degree from an accredited college or university with major course work in a closely related field.

EXPERIENCE

- Four (4) years of related experience, with at least one (1) year of project lead experience.

CERTIFICATES, LICENSES, REGISTRATIONS

- Appropriate, valid, state-issued driver's license.

KNOWLEDGE OF

- Design: Design techniques, principles, tools, and instruments involved in the production and use of precision technical plans, blueprints, drawings, and models.
- Construction Principles: Materials, methods, and the appropriate tools to construct municipal infrastructure projects.

- Computers and Electronics: Computer hardware and software including applications and programming, especially CAD and other technical design related programs.
- Contract Administration: Regulations and principles for developing specifications, bidding projects, and approving invoices for payment.
- Customer Service: Principles and processes for providing customer and personal services including a desire to help customers regardless of their circumstance.

SKILLS AND ABILITIES IN

- Active Learning: Working with new material or information to grasp its implications.
- Functional Supervision: Motivating, developing, and directing people as they work.
- Direction and Instructional Comprehension: Interpreting a variety of instructions furnished in written, oral, diagram, or schedule form.
- Oral Comprehension: Listening to and understanding information and ideas presented through spoken words and sentences.
- Self-Management: Working independently and without supervision.

GUIDANCE RECEIVED

General Standards

A range of professional standards and methods guide completion of assignments and decisions made. Adherence to policy, City procedures and general supervisory direction is expected. Position incumbents are responsible for making recommendations about changes to methods, procedures and policies and helping to implement changes.

CONTACTS

Internally, this position interacts with other departments such as City Attorney's Office, City Manager's Office, City Secretary's Office, Financial Services, Police (including the Office of Emergency Management), Fire, Code Enforcement, Inspections, and Planning & Community Development. Externally, this position interacts with outside agencies such as engineering consultants, developers, realtors, NCTOG, aerial photography vendors, engineering supply companies, and engineering services vendors.

EQUIPMENT AND PROPERTY

This position utilizes a personal computer, survey equipment, large format plotters, scientific calculators and automobile.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job.*

The employee is constantly required to sit. Frequently, s/he is required to listen, stand, and talk. Occasionally, s/he is required to carry, vehicle, lift up to 10 pounds, and walk.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job.*

The noise level in the work environment usually is moderate.

* Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Note: A class specification is a general listing of duties, responsibilities, knowledge, skills, and abilities required of an incumbent assigned to a particular class of work. There may be one or multiple positions assigned to a single classification; therefore, the class specification lists those work attributes that are common to every incumbent in the class.