



## City of Irving Job Description

### Senior Civil Engineer

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<b>FLSA Status:</b>	EXEMPT	<b>Job Department:</b>	Capital Improvement Program (CIP) or Water Utilities
<b>Job Code:</b>	K171	<b>Reports To (Job Title):</b>	City Engineer or Utilities Engineering Manager

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#### PURPOSE

To perform professional engineering work in the design, investigation, and construction of public works and related projects. To perform a variety of technical tasks relative to assigned area of responsibility.

#### ESSENTIAL DUTIES AND RESPONSIBILITIES

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

##### **If assigned to Private Development:**

- Coordinate developer and contractor requirements to connect to the City's utility systems, including water, sanitary sewer, and storm drainage.
- Review and manage capital improvement projects, including plat applications, subdivision plans, building permit applications, and water/sewer connections, to meet City regulations.
- Review, approve, and process final construction plans for subdivision developments, three-way contracts, and water/sewer connection permits.
- Issue the letter of acceptance for meters and taps and releases the application for building permits.
- Support development by answering questions, meeting with walk-in customers, attending predevelopment meetings, researching archived plans, and visiting project sites.
- Process Storm Water Pollution Prevention Plans, earthwork permits, and fireline service agreements for private development projects.
- Review and approve easements and abandonments by separate instrument.
- Perform related duties as assigned.

##### **If assigned to Floodplain or Capital Improvement Projects:**

- Serve in the role of a design engineer, project manager, and construction manager for CIP projects.
- Prepare and design project contracts and drawings for a variety of capital improvement projects including water, wastewater, paving, and drainage plans.
- Provide project management for and review CIP projects designed by engineering design firms.
- Manage the construction phase of capital improvement projects, including review of monthly estimates and writing and negotiating change orders with assistance Engineering Inspectors.
- Conduct pre-bidders' meetings to provide answers about construction sequencing, working day assessment, construction safety, and allowable construction materials.
- Supervise, instruct, and train engineering staff during the design of various projects.
- Assist the general public and private contractors with questions and comments.
- Review, recommend and make field changes to plans.
- Use GIS system to retrieve utility and property information.

- Prepare contract specifications for the CIP Department.
- Organize and conduct meetings with various agencies, contractors, and clients.
- Identify needs for additional right-of-way or easements for projects.
- Manage multiple aspects of the construction process, including citizen inquiries, the relocation of utilities, investigating problems in the field, and negotiating prices with engineers and contractors for additional services.
- Perform related duties as assigned.

**If assigned to Floodplain:**

- Coordinate developments in the floodplain for both City projects and private development.
- Administer the City’s Master Drainage Plan by formulating long range goals adhering to and coordinating with FEMA-regulated floodplain mitigation to reduce localized flooding.
- Negotiate and coordinate with the United States Army Corps of Engineers concerning levee requirements, 404 and 408 permits associated with jurisdictional waters on Public Works, Parks, and Landfill projects.
- Negotiate and coordinate with the Texas Commission on Environmental Quality concerning the City’s MS4 permit.
- Train and coordinate city staff in multiple departments on MS4 permit reporting.
- Perform related duties as assigned.

**OTHER DUTIES AND RESPONSIBILITIES**

- *If assigned to Private Development:* Visit project sites to gather information not in GIS system.
- *If assigned to Capital Improvement Projects:* Review and make changes to the City’s standard construction specifications
- *If assigned to Floodplain:* Provide information to citizen requests and investigates reported drainage problems.

**SUPERVISORY RESPONSIBILITIES**

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 20 employees.

**FINANCIAL / BUDGETARY RESPONSIBILITY**

Responsible for estimating proposed construction costs. Reviews monthly construction pay estimates. If assigned to Floodplain: develop and administer the municipal drainage utility budget of \$5.2 million annually.

## **QUALIFICATIONS:**

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

### **EDUCATION**

- Bachelor's degree (B.S.) from accredited four year college or university in Civil Engineering.

### **EXPERIENCE**

- Six (6) years of civil engineering experience. Three (3) years as a professional engineer.

### **CERTIFICATES, LICENSES, REGISTRATIONS**

- Appropriate valid Texas driver's license.
- Certificate of Registration as a Professional Engineer.
- Additionally, if assigned to floodplain, must be a Certified Floodplain Manager.

### **KNOWLEDGE OF**

- Design: Advanced/complex design techniques, principles of surveying, tools, and instruments involved in the production and use of precision technical plans, blueprints, drawings, and models. General understanding of project budgeting.
- Building and Construction: Materials, methods, laws and the appropriate tools to construct objects, utility systems, structures, and buildings.
- Computers and Electronics: Computer hardware and software including applications and programming, especially CAD and other technical design related programs.
- Regulations: Federal, state, and municipal restrictions, laws, and ordinances that govern the planning and ongoing management of a project.
- Construction Contract Management: The principles involved in managing projects such as: bidding, Requests For Information, shop drawings, negotiating change orders with contractors and document field changes.

### **SKILLS AND ABILITIES IN**

- System Analysis (with Problem-Solving Focus): Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- System Evaluation: Identifying measures or indicators of system performance and the actions needed to improve or correct performance relative to the goals of the system.
- System Perception: Discerning when important changes have occurred or likely will in a system.
- Management of Material Resources: Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
- Interactive Presentation: Effectively presenting information and responding to questions in writing or orally to various groups ranging from directors, to managers, to technical and non-technical staff to the general public.
- Analysis and Complex Problem-Solving: Applying advanced mathematical concepts, analyze very complex problems, identify alternate solutions, project consequences of proposed actions and implement recommendations in support of goals.

## **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**

Frequently interacts with departments such as Water Utilities, Traffic, Parks & Recreation, Police, Fire, Code Enforcement, Building Inspections, Real Estate Services, and Information Technology. Often will interact with outside agencies such as Dallas County, DART, TxDOT, flood control districts, Trinity Railway Express, franchise utilities, engineering firms, adjacent cities, neighborhood and homeowners' associations, and residents

## **EQUIPMENT AND PROPERTY**

Personal computer, plotters, fax, printers, calculators, cell device, digital camera 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 constantly is required to listen, see, stand, and/or talk. Frequently, s/he is required to drive a vehicle, sit, and/or walk. Occasionally, s/he is required to carry and/or lift up to 10 pounds. S/he rarely is required to balance, pull, push, and/or reach.

## **WORK ENVIRONMENT**

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

The employee occasionally is exposed to a dirty environment, extreme temperatures or weather conditions, and/or noise. This job requires the employee to make decisions directly affecting to the safety of others. The noise level in the work environment is usually 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.