

City of Fort Worth, Texas Job Description

Classification Title	Engineering Technician I		
Job Code:	TC5120	Job Family:	Technical/Para-Professional
Pay Grade	506	Date Reviewed:	06/12/15
FLSA Status	Nonexempt	Date Revised:	

GENERAL SUMMARY

Performs a variety of technical duties in assigned area including research and interpretation of survey, design, mapping, and materials testing activities. Drafts plans and specifications for construction and traffic engineering projects. Provides technical assistance to professional level engineering staff and maintains engineering record.

ESSENTIAL DUTIES & RESPONSIBILITIES

The intent of this job description is to provide a representative summary of the major duties and responsibilities performed by incumbents of this job. Incumbents may be requested to perform job-related tasks other than those specifically presented in this description.

1. Performs a variety of tasks in support of assigned area including design, mapping, drafting and related areas.
2. Applies survey information and field notes to create designs and drawings for various engineering and planning projects.
3. Assists engineering staff in the preparation of engineering designs, drawings, specifications and construction project estimates.
4. Checks and assigns numbers to maps, plans and as-built drawings for accuracy; update and amend as necessary; checks plans for compliance with City standards and general construction practices.
5. Provides information to the public, contractors and consultants relative to engineering office guidelines and procedures.
6. Performs laboratory testing of soils from construction sites; concrete cylinders and beams; crushed stone; washed rock and gravel; dust; sand; and other materials.
7. Sets up, adjusts, cleans and operates various pieces of laboratory equipment and instrumentation.
8. Researches and verifies information for design and plan submittals for new development by performing field site investigations.
9. Records test results.
10. Prepares graphs and charts.
11. Conducts job site testing in the field.
12. Performs other duties as required.

13. Adheres to assigned work schedule as outlined in the Department and City attendance policies and procedures; ensures all behaviors comply with the City's Personnel Rules and Regulations.

KNOWLEDGE, SKILLS & ABILITIES

- Methods, techniques and practices in assigned area including drafting, mapping and related technical engineering functions.
- A variety of mathematical principles for application into assigned area including computation of angles, areas, and distances.
- Design and construction theory.
- Engineering design standards.
- Global Positioning System (GPS).
- Terminology, methods, practices and techniques of drafting.
- Materials, methods, and techniques of modern construction.
- A variety of materials and equipment used in assigned area including CAD systems.
- Methods and techniques of technical report writing.
- Construction plans and specifications.
- Office equipment including computers and supporting word processing and spreadsheet applications.
- City regulations and policies.
- Applicable laws, regulations, codes, department policies, governing assigned engineering duties.
- Pertinent Federal, State and local laws, codes and regulations.
- **Skill in:**
 - Making observations.
 - Operating assigned equipment.
 - Research.
 - Computer and associated software. (GIS Arc Map, Arc Editor, Arc View, Arc Map and Arc Catalog, Buzz saw).
 - Arithmetic, Geometry and Algebra.
 - Information analysis.
 - Attention to detail.
 - Time management.
 - Conflict resolution.
 - Organization.
- **Ability to:**
 - Read complex maps, plats, construction plans.
 - Communicate clearly and effectively, both orally and in writing.
 - Perform duties in assigned area including drafting, mapping and related technical engineering functions.
 - Interpret and apply state and local policies, procedures, laws, codes, and regulations.
 - As assigned, lead work of project staff.
 - Reduce, interpret, and apply field notes in the performance of drafting duties.
 - Compile rough technical data.

- Prepare statistical and narrative reports from field studies.
- Perform civil engineering design, drafting and specification work.
- Understand and interpret engineering plans and specifications.
- Prepare accurate engineering records.
- Operate a variety of materials and equipment used in assigned area including CAD systems.
- Use algebraic formulas, trigonometry tables and statistical mathematics to accomplish duties in assigned area.
- Operate office equipment including computers and supporting word processing and spreadsheet applications.
- Establish and maintain effective working relationships .

MINIMUM JOB REQUIREMENTS

High school diploma/ GED supplemented by college level course work in Math, Drafting, Engineering, Architecture or a related field and no prior experience.

OTHER REQUIREMENTS

Valid Texas Driver license.

WORKING CONDITIONS

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

Depending on assignment, positions in this class typically require touching, talking, hearing, seeing, grasping, standing, stooping, kneeling, crouching, reaching, walking and repetitive motions.

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

Light Work – Depending on assignment, positions in this class typically exert up to 20 pounds of force occasionally, up to 10 pounds of force frequently, and/or a negligible amount of force constantly having to move objects. If the use of arm and/or leg controls requires exertion of forces greater than that for the Sedentary Work category and the worker sits most of the time, the job is rated Light Work.