

## **ENGINEERING TECHNICIAN IV**

**GRADE: 11**

### **GENERAL DESCRIPTION**

**Performs highly complex (senior-level) paraprofessional civil engineering work; Work involves preparing engineering design plans, project inspections, review of subdivision plans; interpret engineering field data and incorporate such data into design plans; Coordinates and/or supervises the development, operation and maintenance of the Department's geographical information system (GIS) inventory and geo-databases. May train others. Works under minimum supervision, with considerable latitude for the use of initiative and independent judgment.**

### **EXAMPLES OF WORK PERFORMED**

**Performs calculations and drafting for design work including but not limited to production quantity summaries, hydraulic studies, roadway design plans, utility studies, right-of-way maps, traffic control, lighting/signal plans, and other related information as requested**

**Prepares and drafts engineering plans and profiles both manually or using computerized software such as AutoCAD; draws charts on statistical data, and update/revise storm water and various maps such as base maps, beard maps, annexation maps, master atlas and address maps**

**May use Civil/Survey, Earthworks, Design, DTM, COGO, and other interactive graphic design programs**

**Assists in determining G.I.S. standards for the department, as well as any required modifications**

**Assists with collecting and/or incorporating field data using GPS; may supervise these projects as well**

**Researches and analyzes land data records to incorporate as a data source for GIS related files; creates and enhances GIS based tools; and generates map compositions and responds to special GIS requests**

**Provides information and assistance to the general public regarding subdivision regulation requirements, utilities, easements, fences, right-of-way addresses and/or flood zones**

**Meets with developers, engineers, and/or other professional organizations to discuss proposed plats or other information related to the Planning Department**

**Responsible for maintaining and tracking the status of all plats through the required processes**

**Attends and coordinates Subdivision Advisory Board meetings and provides the departments review comments and findings; prepares correspondences regarding meeting findings to provide to interested parties and/or other organizations**

**Secures as-builts from engineers or pursues enforcement measures to acquire same**

**May attend specialized design schools to maintain abreast of the latest automated design tools and technologies; performs subdivision inspection of new and established developments**

**Gathers and researches information pertaining to utilities, right-of-way, structural, architectural, mechanical information, and other areas related to the Planning Department as necessary**

**Conducts surveys and field work; inspecting, designing, and preparing maps for presentation**

**Responsible for overseeing and preparing write-up summaries on plats, etc...and presenting to the Subdivision Advisory Board and/or Commissioners' Court, as necessary.**

**Maintains records and design plans; works on the reproduction of plans**

**Writes general notes, specifications, and special provisions following generally accepted practices to ensure applicable information is included**

**May schedule, coordinate and prepare plans and documents for public hearings**

**May review others work for drafting and/or calculation errors**

**Performs other related duties as assigned**

## **GENERAL QUALIFICATION GUIDELINES**

### **Experience and Education**

**Graduation from an accredited High school or equivalent required; Associate's degree in related field is generally preferred. Minimum of five to six (5-6) years of experience in Computer Aided Drafting, surveying, subdivision design, review and planning, geographical information systems (GIS) technology, and/or related engineering work with at least two (2) years of experience in ESRI GIS software preferred. Two (2) years of experience may substitute one (1) year of education.**

### **Certificates, Licenses & Registration**

**Applicant must have a current valid Texas operator's driver's license**

**Must be able to be insured by the County's insurance carrier**

**Certification in computer aided drafting or related field required**

### **Knowledge, Skills, and Abilities**

**Proficient knowledge of surveying and engineering principles, techniques, and procedures; of mathematics; and of applicable safety requirements**

**Proficient knowledge and skill in the operation of AutoCAD software and other drafting related software/tools**

**Proficient knowledge on subdivision rules and regulations as well as preparation and review of subdivision plans**

**Ability to prepare and review engineering design plans**

**Skill in the operation and maintenance of applicable equipment including but not limited to the following: drafting printers and plotters, calculators, drafting tools, surveying and measuring instruments, and other related equipment**

**Ability to conduct inspections and prepare reports**

**Ability to read, analyze, and interpret blueprints, engineering periodicals, professional journals, technical procedures, or governmental regulations**

**Ability to write reports and business correspondence**

**Ability to effectively present information and respond to questions from groups, contractors and employees of the organization**

**Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry**

**Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations**

**Ability to solve practical problems and deal with a variety of concrete variables in situations where standardization exists**

**Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form**

**Employee may be assigned other duties in addition to those listed; duties may change according to the changing needs of the County**

## **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.

While performing the duties of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand. The employee is occasionally required to walk; sit; use hands to find, handle, or feel objects, tools or controls; reach with hands and arms; climb or balance; stoop and kneel.

The employee must occasionally lift and/or move over 25 pounds. Specific vision abilities required by this job include close vision, depth perception, and the ability to adjust focus.

## **WORK ENVIRONMENT:**

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

The noise level in the work environment is usually moderate.

## **SAFETY REQUIREMENTS:**

Maintain physical conditions appropriate to the performance of assigned duties and responsibilities which may include the following:

- sitting for extended periods of time
- standing for extended periods of time
- operating assigned equipment

Maintain mental capacity which permits:

- making sound decisions and using good judgment
- demonstrating intellectual capabilities

Effectively handle a work environment and conditions which involve:

- working closely with others
- working in a multi-task environment

Maintain effective audio-visual discrimination and perception needed for:

- making observations
- reading and writing
- operating assigned equipment
- communication with others
- required to follow the Hidalgo County Accident Prevention Plan and department's safety regulations

Eithwa A. Cortez  
Human Resources Representative

08.29.12  
Date

Approval  
 Yes  No

Norma G. Garcia  
Treasurer's Office Representative

07/26/12  
Date

Yes  No

[Signature]  
Department of Budget & Management Representative

07/26/12  
Date

Yes  No