

## **POSITION DESCRIPTION**

**Class Title: Engineering Technician**  
**Department: Secondary Roads Department**  
**Division: Engineering**  
**Date: March 19, 2013**

**Union: Yes**

**Location: Courthouse**

### **GENERAL PURPOSE**

Performs routine and complex technical engineering related work for environmental, street, bridge, drainage structures and other County projects and programs. Assists an Engineer in application of principles, methods, and techniques of civil engineering technology.

### **SUPERVISION RECEIVED:**

Works under the general guidance and direction of the County Engineer.

### **SUPERVISION EXERCISED**

None.

### **ESSENTIAL DUTIES AND RESPONSIBILITIES**

#### **Plan and Specification Preparation**

Drafts detailed dimensional drawings such as those needed for street, drainage, and other utility plans, systems and projects. Calculates dimensions, profile information, and quantities of materials.

Assists in the preparation of specifications, coordinates required advertising for bids, reviews construction bids and makes necessary recommendations based on lowest and best bids, competency of vendors and consultants, and the selection criteria.

Serves as a drafter, by making final project drawings, checking dimension of parts, materials to be used, relation of one part to another, and relation of various parts to whole structure or project; making any adjustments or changes necessary or desired; inking in lines and letters on pencil drawings as required; Drawing charts for representation of statistical data; drawing finished designs from sketches; using the latest computer assisted drafting and design(CADD) equipment and software.

Reviews project plans and specifications, confers with County Engineer concerning assistance required such as plan preparation, acceptance testing, evaluation of field conditions, design changes, and reports.

## Survey

Surveys project sites to obtain and analyze topographical details of sites.

Writes legal descriptions for dedications, annexations, local improvement districts, easements or condemnations. Including researching records, maps and other data to obtain such typical engineering data such as location of drainage areas, benchmarks, etc. and zoning district designations or special property assessments.

## Construction Inspection

Inspects construction projects to determine conformance of work to the required project specifications. Ensures all required Iowa DOT and FHWA paper work is completed in accordance with Project Agreements.

Conducts materials testing and analysis. Prepares reports detailing tests conducted and results. Drafts and calculates field notes to document quantities, alignment, grade and locations according to project plans or to document monthly and final progress estimates. Must obtain and maintain Iowa DOT certifications HMA I, PCC II and Aggregate II.

Assists in the review of private project development plans for compliance with codes, regulations, and standards, adequacy of applications for permits and compliance with approved plans.

## Miscellaneous

The Engineering Technician is expected to work with minimal supervision and is responsible for directing their own daily activities.

Performs a variety of office related functions, including preparing permits, correspondence, maps, presentation materials, brochures, reducing field notes, printing materials, answering phones, filing and responding to inquiries from contractors, developers, property owners, staff, and the general public.

Assists in the maintenance of engineering and infrastructure records and required documentation.

Reviews applications for utility permits, entrance permits, work on ROW permits.

Assists in the development of pavement management systems.

Other duties as assigned.

## **PERIPHERAL DUTIES**

Serves as a member of various employee committees.

Serves as a member of survey crew or flagging as needed.

## **DESIRED MINIMUM QUALIFICATIONS**

### **Education and Experience:**

- A. Graduation from a high school or GED, supplemented by two years of related technical or college training in drafting, Computer-Aided Drafting and Design (CADD), engineering technology, civil engineering or a closely related field; and
- B. Minimum of two years related experience; or
- C. Any equivalent combination of education and experience.

### **Necessary Knowledge, Skills and Abilities:**

- A. Some knowledge of civil engineering principles, practices and methods as applicable to a municipal setting; some knowledge of applicable County policies, laws, and regulations affecting Division activities;
- B. Considerable skill in arriving at cost estimates on complex projects; Some skill in operating the listed tools and equipment; some skill in basic drafting, surveying, and flagging.
- C. Ability to prepare, organize and maintain engineering field and office data, reports and systems; Ability to effectively communicate complex technical information, orally and in writing, to contractors, developers, property owners, employees, consultants, other governmental agency representatives, County officials and the general public.

## **SPECIAL REQUIREMENTS**

- A. Must possess a valid State driver's license or have the ability to obtain one prior to employment;
- B. Must be physically capable of moving about on construction work sites.

## **TOOLS AND EQUIPMENT USED**

Personal computer, including word processing, spreadsheet, and data base and computer-aided drafting and design software; standard drafting tools; pipe locator; engineering calculator; motor vehicle; phone; mobile radio.

## **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.

Work is performed equally in an office setting as well as outdoor work in the inspection of various construction sites or Secondary Roads Department facilities. Hand-eye coordination is necessary to operate drafting instruments,

computers and various pieces of office equipment.

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

The employee must occasionally lift and/or move up to 90 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus.

### **WORK ENVIRONMENT**

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.

While performing the duties of this job, the employee occasionally works in outside weather conditions. The employee occasionally works near moving mechanical parts and in high, precarious places and is occasionally exposed to wet and/or humid conditions, fumes or airborne particles, toxic or caustic chemicals, risk of electrical shock, and vibration. The noise level in the work environment is usually quiet to moderate.

### **SELECTION GUIDELINES**

Formal application, rating of education and experience; oral interview and reference check; job related tests may be required.

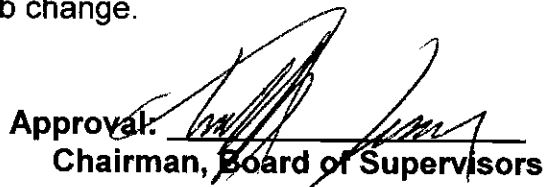
The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.

Approval:

  
County Engineer

Approval:

  
Chairman, Board of Supervisors

Effective Date:

3/19/13

Revision History: