

## **CIVIL ENGINEER I**

### CODES/PAY RANGE

Class Code: 2105

EEO Code: B

Pay Range: 214

### MAJOR FUNCTION

Technical engineering work in the preparation of plans, designs, and specification for public works projects, as an Engineer-in-Training.

### ILLUSTRATIVE DUTIES

(NOTE: These are intended only as illustrations of the various types of work performed. The omission of specific duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.)

Acts as Engineer-in-Training under professional direction.

Helps plan and design urban and rural roadway sections, intersections, and grade separations in accordance with design standards established by national, State officials and County specifications.

Makes preliminary layouts of proposed highway improvements with the aid of reconnaissance and aerial photographs.

Establishes grade lines in accordance with the requirements of the drainage design, existing topography, and earthwork economy.

Prepares summaries of quantities of material and labor required for proposed road improvements. Prepares total cost estimates.

Acts as subordinate bridge engineer under professional direction. Investigates proposed bridge sites. Estimates cost of proposed structure of improvement. Makes preliminary design and, after approval by superior, makes final design. Writes specifications. Supervises drafting and layout of plans. Makes strength ratings of existing or proposed structures.

Studies new construction and design methods for possible application to County work.

Performs related work as required.

## **Civil Engineer I continued)**

### **KNOWLEDGE, ABILITIES AND SKILLS**

Knowledge of the principles and practices of civil engineering. Knowledge of the investigation, design, and construction of public works facilities.

Ability to make engineering and related mathematical computations. Ability to design moderately difficult engineering projects. Ability to secure compliance by private contractors with the contract and specifications governing public works projects in a tactful, firm, and impartial manner.

Skill in use of engineering instruments and equipment.

### **MINIMUM QUALIFICATIONS**

Bachelor's degree in Civil Engineering; or, registration as a Florida Professional Engineer (PE).

A comparable amount of education, training, or experience may be substituted for the minimum experience.

### **ADA REQUIREMENTS**

Physical Demands: Sedentary work. Ability to see, talk; finger dexterity. Limited requirement to traverse undeveloped/uneven terrain and construction sites.

Mental Demands: Ability to read and comprehend scientific and technical literature, manuals, procedures; legal instruments, documents; mechanical drawings, blueprints and layouts; memos, instructions, manuals. Ability to write business letters, evaluations, specifications, proposals, summaries. Ability to speak clearly and concisely relating information, details and procedures to layman; conversant in theory and practices of discipline. Ability to perform advanced mathematical functions (geometry, trigonometry.) Ability to analyze data and develop conclusions.

Environmental Demands: Inside work.

Revised 10/94