

MAJOR FUNCTIONS

This is advanced technical work in either civil engineering design and drafting or computer aided drafting design (CADD); reviewing civil engineering designs or field notes, drafts, city maps, and other documents to determine compliance with environmental codes for permitting or locating sewer or water defects; or collecting and analyzing traffic engineering data and conducting studies to formulate conclusions based on the data. Assignments are performed with considerable independence and require technical discretion and judgment. Work is performed under general supervision and is subject to review by an employee of a higher level through oral and written reports and by observation.

ESSENTIAL AND OTHER IMPORTANT JOB DUTIES**Essential Duties**

Reviews engineering construction plans or designs and drafts to determine conformance with environmental codes for permitting. Confers with engineers on design appropriateness and conducts site visits associated with permit data verification. Prepares designs for minor roadway drainage and underground utility projects. Uses microcomputers to perform computer aided drafting and design. Assists engineers in preparing and reviewing designs for major projects. Researches property ownership records. Performs complex engineering computations. Prepares project cost estimates. Participates in the drafting duties on the more complex projects. Interprets survey notes and plots to draft designs and checks cross-sections, centerlines, and grade. Prepares title, plan, profile, and detail sheets for roadway, underground utility, and small building construction on vellum or film using ink or pencil. Plots, drafts, and inks right-of-ways and easements from legal descriptions. Prepares and revises topographic maps. Prepares sketches and finished drawings for the construction of new small buildings, and repair and alteration of existing structures. Reviews engineering field sheets, notes, and city maps to determine where engineering firms have located sanitary sewer or water defects. Participates in sewer and water system design and communicates design interests of property owners. Insures that sewers and water facilities are repaired in a manner that meets city specifications. Performs related work as reviewed.

Public Works Traffic Engineering: Performs or monitors a wide range of traffic studies, including but not limited to traffic accident studies, volume studies, travel studies, delay studies, parking studies, and vehicular speed studies. Reports the results of studies and the conclusions drawn from them. Conducts manual counts as necessary. Prepares basic engineering drawings particularly related to roadways. Develops tentative designs and cost estimates for traffic operations improvements. Analyzes traffic data for the purpose of identifying actual or potential traffic problems and developing remedial treatments based on sound traffic engineering practices. Analyzes traffic accident reports with the purpose of identifying potential casual effects. Maintains traffic data, traffic work records and traffic control inventory files. Assists public with concerns and complaints about traffic problems. Answers inquiries about traffic count information. Performs other related work as required.

Other Important Duties

May maintain and update GIS system inventory. Attends training and developmental events as scheduled. May assist in planning, organizing, assigning and reviewing the work of subordinate technicians engaged in the drafting (drawing) of construction plans, maintenance of a variety of special use maps, charts, and graphics, and other pencil and ink drafting. Performs related work as required.

DESIRABLE QUALIFICATIONS

Knowledge, Abilities and Skills

Considerable knowledge of algebra, geometry, and trigonometry. Considerable knowledge of the basic principles, techniques, and terminology of water and sewer utilities and civil engineering drafting. Ability to understand, follow, and transmit complex oral and written instructions. Ability to communicate clearly and concisely both orally and in writing. Ability to prepare legal descriptions of real property, to perform complex mathematical computations and to prepare minor designs for roadway, drainage, underground utility, and small buildings (applicable to survey and design areas). Thorough knowledge of the principles, practices, techniques and instruments of civil engineering drafting. Considerable experience and skill in performing a wide variety of civil engineering drafting work using various drafting instruments and materials. Ability to read and interpret engineering plans and specifications. Ability to operate a computer and associated programs and applications. Skill in performing CADD design and drafting with microcomputer.

Minimum Training and Experience

Possession of an associates degree in civil engineering, civil engineering technology or drafting and design and three years of technical experience in the area of engineering to which the position is assigned; or an equivalent combination of training and experience.

Public Works Traffic Mobility Management: Possession of an associates degree in civil or transportation engineering, civil engineering technology, or drafting and design and three years of technical experience in traffic engineering; or an equivalent combination of training and experience.

Necessary Special Requirement

At the department director's discretion, a valid Class E State driver's license may be required.

Public Works Traffic Mobility Management: Must obtain the Florida Department of Transportation Advanced Maintenance of Traffic certification within one year of initial employment and maintain this certification as a condition of continued employment in the position.

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