

ENGINEERING SPECIALIST 1

Job Code	Pay Grade
16792	CL17

Nature of Work

This is responsible technical engineering work in the preparation and review of plans, designs, and specifications and/or in the coordination of utilities, traffic studies, traffic management systems operations, environmental assessment and clean-up or permitting efforts within departmental projects. Employees in this class apply civil engineering skills and knowledge to public works projects involving design, specifications, coordination, construction, operation and maintenance. Positions require the exercise of independence in the performance of technical projects and may involve the supervision of personnel in the office or field. Employees occupying this classification who receive their Professional Engineering certifications are eligible for additional earnings. If the additional earnings are accepted, the employee will be expected to perform as an Engineer of Record, signing and sealing documents, etc., if the assigned work requires such professional endorsement. The position reports to a manager, supervisor or designee.

Minimum Qualification Requirements

- 5 years experience in the use of AutoCAD systems including 3 years experience in engineering design, or
- 5 years related experience in transportation, electronics or computer systems operations, or
- Graduation from an accredited college or university with major course work in civil engineering with a basic understanding of the use of CAD systems; or
- An equivalent combination of education, training and/or experience.

Appointing Authority May Also Require

- Florida Driver's License or Florida Commercial Driver's License and endorsement, if any.
- Assignment to work a variety of work schedules including compulsory work periods in special, emergency, and/or disaster situations.
- Specialized certifications related to engineering studies or traffic signal operations and maintenance.
- Candidate to possess prior job tenure and experience from within the same unit or assignments in the same line of work.
- Candidate to demonstrate more advanced proficiency, competency, and satisfactory completion of regularly assigned work in an independent manner. Appointing Authority retains discretion to employ an incumbent at this level or advance the incumbent non-competitively or competitively, after a candidate meets the minimum qualifications to an in-line career ladder position (such as, to a nonsupervisory technical or nonsupervisory specialist position in the same unit assigned in the same line-of-work) within the same organization or department.
- Other highly desirable knowledge, skills, abilities, and credentials relevant to a position.

Illustrative Tasks (These are examples and are not all inclusive.)

- Plans and designs roadway sections or intersections, makes preliminary layouts of proposed highway improvements with the aid of reconnaissance and aerial photographs, establishes grade lines in accordance with requirements of drainage design, existing topography and earth work economy, prepares summaries of required materials and labor and prepares total cost estimates.
- Investigates bridge sites, estimates costs of improvements, makes preliminary and final designs, writes specifications, supervises drafting and layout of plans, makes strength ratings of structures and studies construction and design methods.
- Participates in design preparation related to residential or commercial projects and assists in planning and managing public works projects.
- Develops or reviews consultant traffic signal timing plans and signal base controller times that may include recommendation for signal modifications and field implementation.
- Operates an advanced traffic control systems including database management, scheduling, failure evaluation, and repair response functions.
- Provides in-house design for transportation system improvements

ENGINEERING SPECIALIST 1 (continued)

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Illustrative Tasks (continued)

- Supervises technical personnel and checks for accuracy in computations.
- May supervise survey crews, coordinate land development plans and act as a liaison on large building or projects.
- May review and coordinate utilities, environmental assessment and clean-up or environmental permitting efforts.
- Inspects traffic signal and traffic control system contracts, assigned construction projects, consults with contractors and other parties to ensure county standards/objectives are met.
- May perform information processing related duties including using available statistical packages or programs, encoding data, data entry and retrieval, and routine information terminal operations and programming/reprogramming.
- Performs related work as assigned or required.

Knowledge, Skills, and Abilities

- Knowledge of technical practices of civil engineering and investigation design and construction of public works and utilities facilities.
- Knowledge of the various types of environmental contamination and the relative impact on proposed public works projects.
- Knowledge of computerized Traffic Signal analysis software for capacity analysis and signal timing plan development.
- Knowledge of the principles, techniques, standard operating procedures, materials, tools and equipment used in the automated transportation management system (ATMS), traffic studies, and analysis.
- Knowledge of environmental and construction permits and local, state and federal agencies relationships to public works type projects.
- Knowledge of computerized Traffic Signal analysis software for capacity analysis and signal timing plan development.
- Skill in use of engineering instruments and equipment and ability to learn computer applications to engineering design, drafting, mapping and plans.
- Ability to make engineering related mathematical computations and design moderately difficult engineering projects.
- Ability to supervise moderately difficult engineering or survey projects in field or office and adhere to plans and specifications.
- Ability to secure compliance by private contractors with contracts and specifications governing projects in a tactful, firm and impartial manner.

For official use only

Revised	EEOC Code	Overtime Code
9/15	Technicians	Classified/Excluded