

Title: Engineering Tech III – Water
PG: 51
Status: Civil Service
Position Reports to: Designated Supervisor
Department: Various

Class Code: 302915
Date: 09/08

GENERAL DESCRIPTION OF CLASS:

The work involves performing and/or assisting engineers and other professionals in a wide variety of complex engineering, statistical and mathematical tasks. Work also involves the use of computer input/output terminals, microcomputers, calculators, survey equipment and other technical devices. Work may involve mentoring of lower-level employees. Work is performed according to general instructions from a supervisor and is sometimes checked for quality, accuracy and completeness.

ESSENTIAL FUNCTIONS:

The following examples do not necessarily identify duties performed by any single incumbent. The following is intended to be descriptive of the responsibilities of the classification.

1. Assembles and compiles technical data on many different forms or in special format for use and analysis internally and for submittal to government agencies.
2. Enters engineering and mathematical data into processing devices using exacting procedures as designated, and runs programs or executes complex procedures to obtain the necessary optimal output in proper format.
3. Directs the work of lower level employees as required to complete projects.
4. Develops and administers moderately complex technical construction projects.
5. Operates various computer aided engineering design programs or tools and produces work orders and support GIS drawings for utility construction projects.
6. Performs detailed engineering designs under the guidance of an engineer. **(Engineering)**.
7. Prepares detailed cost estimates.
8. Ability to perform drafting for complex designs using either AutoCAD or Microstation with proficiency in Microstation. **(Engineering)**.
9. Develops and produces presentation graphics materials for project design.
10. Maintains an efficient filing and records system for projects from initiation to project close out.
11. Assists in preparing complex forecasts, studies, technical reports, legal descriptions, memorandums, letters, and related items.
12. Calculates statistical averages, cumulative and rolling averages, statistical trends, rates of change, percentages, conductor sag, pulling or stringing tensions, etc., and tabulates, plots, and formats the results.
13. May assist in operation and testing of water utilities equipment, performance of pollution controls testing, survey work, and other testing programs.
14. Coordinate the work of lower level staff.

ADDITIONAL RESPONSIBILITIES:

1. May assist in operation and testing of water utilities equipment, performance of pollution controls testing, survey work, and other testing programs.
2. Performs all work as required.

KNOWLEDGE, SKILLS & ABILITIES:

1. Knowledge of and complete familiarity with computer input/output terminals, calculators, and other technical data processing devices.
2. Knowledge of word processing, computer aided design (CAD), spreadsheet, database, GIS and presentation software.
3. Knowledge of mathematics and statistics.

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4. Knowledge of engineering theory, practices, standards, national safety codes, and methods used in office and field engineering for design and construction of water utilities facilities.
5. Knowledge of Lakeland's water utilities service territory, underground and plant construction standards, the Subdivision and Commercial Development Policy, Department of Environmental Regulation, US EPA, and American Water Works Association rules and procedures, Ten State Standards for both water and wastewater, and the Customer Service Information System.
6. Knowledge of basic budgetary procedures and practices.
7. Knowledge of business law principles.
8. Knowledge of the Polk County Property System including easement/legal description terminology.
9. Skill in performing a wide variety of tasks using various data handling machines and devices.
10. Ability to establish and maintain effective working relationships with co-workers, developers, other City employees and the general public.
11. Ability to assist in administration of contracts including review plans, write clear and concise legal and technical descriptions, correspondence, reports and specifications of a minor nature.
12. Ability to research property ownership and encumbrances.
13. Ability to coordinate activities in relation to other utilities' and customers' need.
14. Ability to procure goods and services from various vendors.
15. Ability to use various portable measuring meters, survey equipment and perform engineering and surveying calculations.
16. Ability to perform surveying (**Engineering**).
17. Ability to maintain accurate records, files, and reports.
18. Ability to understand, follow, and transmit complex oral and written instructions.
19. Ability to develop, implement, and administer technical projects including creating highly complex engineering drawings, work order documents, performing difficult technical computations, make estimates, cost evaluations, and to compile statistical data without supervisory input.

WORKING ENVIRONMENT/CONDITIONS:

Requires some manual labor work that involves walking or standing some of the time, exerting up to 50 pounds of force on a recurring basis, routine keyboard operations, operation of City vehicles. Work may include fieldwork as required at various job sites as well as to perform job duties in an office, water or wastewater plant, pump stations and pump houses, manholes and vaults, and outside environment exposed to the elements and traffic.

The job risks exposure to extreme noise levels, dusts, pollen, bright/dim light, extreme cold and or heat, wet or humid conditions, fumes, noxious odors, chemicals, sewage, confined spaces and heights.

The job requires normal visual acuity, and field of vision, hearing, speaking, color perception, sense of smell, depth perception, and texture perception.

QUALIFICATIONS (EDUCATION, TRAINING, AND EXPERIENCE):

1. Successful completion of ninety (90) hours of accredited college courses in a degree seeking program, including courses in mathematics, statistics and/or business. If applicant does not have ninety (90) hours of accredited college courses in a degree seeking program, they should have at least have sixty (60) hours of accredited college course work complete and the additional thirty (30) hours of accredited college course work will need to be completed within the first five (5) years of employment. Employee will need to complete at least six (6) hours of college course work each year until they have met this requirement. Employment with the

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Engineering Division requires that a class in analytical geometry and a class in surveying must be taken during the five year period if not previously taken.

2. Four (4) years of related experience in CADD and field technical work. **(Engineering)**.
3. An equivalent combination of education and experience that is directly related to the foregoing specific requirements may be substituted.

SPECIAL REQUIREMENTS:

1. Must possess a valid state of Florida driver's license.
2. Must maintain a valid home telephone number.
3. May be required to attend meetings at locations other than primary work location.
4. May be required to pass and maintain quality for:
 - a. Respiratory Protection Physical.
 - b. Pulmonary Function.
 - c. Qualitative and Quantitative Fit Test(s).
5. May be required to work overtime, or alternate hours, as necessary for the efficient operation of the department. Position may be designated as Mission Critical by Department Director.