

Title: Engineering Tech IV – Water
PG: 56
Status: Civil Service
Position Reports to: Designated Supervisor
Department: Various

Class Code: 303015
Date: 09/08

GENERAL DESCRIPTION OF CLASS:

This is highly skilled technical work in various phases of water utility system design and application. An employee in this classification may have overall responsibility for a project or portions of a project. Considerable latitude may be exercised in completion of projects within industry standards and established guidelines. Work may include all aspects of design except theoretical considerations. Work is performed with considerable independence within established guidelines and practices. Assignment and review of work activities are performed by engineers or other designated supervisors. Work may involve supervision of lower level employees.

ESSENTIAL FUNCTIONS:

1. Proposes and evaluates new designs and construction methods.
2. Maintains current, comparative cost data on designs, methods, projects and equipment; and when required, will assist in evaluation of vendor proposals.
3. Performs construction liaison, orders miscellaneous materials and equipment, expedites deliveries and verifies that record drawings are maintained during construction.
4. Assists in the preparation and monitoring of the section and/or division budget.
5. Develops and maintains schedules for major projects and effects improvements in schedules.
6. Plans and designs complex water or wastewater services within established guidelines. **(Engineering).**
7. Runs computer programs associated with work assignments.
8. Performs detailed engineering designs under the general guidance of an engineer. **(Engineering).**
9. Prepare detailed cost estimates with minimal supervision.
10. Ability to perform drafting of large complex designs using either AutoCAD or Microstation with proficiency in Microstation. **(Engineering).**
11. Prepare bid specifications and contract documents under the guidance of an engineer or manager.
12. Assembles and compiles technical data on many different forms or in special format for use and analysis internally and for submittal to government agencies.
13. Enters engineering data and mathematical data statistics into processing devices using exacting procedures as designated, and runs programs or executes complex procedures to obtain the necessary optimal output in proper format.
14. Directs and or supervises the work of lower level employees as required to complete projects.
15. Develops and administers complex / minor technical construction projects.
16. Operates various computer aided engineering design programs or tools and produces work orders and support GIS drawings for utility construction projects.
17. Assists in preparing forecasts, studies, technical reports, legal descriptions, memorandums, letters, and related items.
18. Develops and produces presentation graphics materials for project design.
19. Maintains and develops an efficient filing and records system for projects from initiation to project close out.
20. Prepares complex forecasts, studies, technical reports, legal descriptions, memorandums, letters, and related items.
21. 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.
22. May assist in operation and testing of power plant equipment, performance of pollution controls testing, survey work, and non-destructive testing programs.
23. May have to assume Manager of Water Distribution job duties during his/her absence. **(Water Distribution).**

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ADDITIONAL RESPONSIBILITIES:

1. Performs all other work as required.

KNOWLEDGE, SKILLS & ABILITIES:

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.

General:

1. Knowledge of and familiarity with personal computers, computer input/output terminals, microfiche machines, calculators, and other technical data-processing devices.
2. Extensive knowledge of practices, procedures, standards and methods used in office and field engineering work in conjunction with utility or water system design or application.
3. Extensive knowledge of the materials and equipment used in utility system construction, operation, and maintenance.
4. Knowledge of basic engineering theory.
5. Knowledge of mathematics and statistics.
6. Thorough knowledge of computer-aided engineering drafting, spreadsheets, word processing and other computer programs.
7. Considerable knowledge of applicable technical and safety codes.
8. 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.
9. 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.
10. Ability to assist other professionals in various complex statistical and/or other types of utility-related analysis.
11. Ability to perform engineering calculations required in performing daily duties.
12. Ability to understand and extract pertinent information from technical data or reports.
13. Ability to demonstrate advanced research skills.
14. Ability to use portable measuring meters and equipment.
15. Ability to perform survey work and perform engineering and surveying calculations
(Engineering)
16. Ability to read and interpret plans, specifications, and engineering drawings, and prepare reports.
17. Ability to develop and maintain an effective filing system.
18. Ability to understand, follow, and transmit complex oral and written instructions.
19. Ability to perform difficult technical computations, make estimates, compile statistical and other types of data.
20. Ability to establish and maintain effective working relationships with co-workers, other City employees, and the general public.
21. Ability to direct the work activities of subordinate technicians or students as required.
22. Ability to perform some manual labor.
23. Ability and the willingness to demonstrate proper supervisory skills
24. Ability to evaluate junior personnel performance and provide guidance where needed
25. Ability to develop and interpret as-built drawings

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26. Ability to balance multiple tasks simultaneously
27. Ability to communicate clearly and effectively with fellow employees and the general public by means of oral and written communications.
28. Ability to carry out assignments independently and with minimum supervision.

Additional Knowledge Skills and Abilities:

1. Thorough knowledge of materials used in water resource systems.
2. Ability to coordinate all steps required of developers to obtain and clear permits. **(Engineering)**.
3. Ability to operate GPS/GIS inventory equipment.
4. Ability to design water line extensions in compliance with city, county and state specifications. **(Engineering)**.
5. Ability to supervise technicians of a lower classification.
6. Ability to review plans and communicate effectively with developers. **(Engineering)**.

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 one hundred and twenty (120) hours of accredited college courses in a degree seeking program, including courses in mathematics, statistics and/or business. If applicant does not have one hundred and twenty (120) hours of accredited college courses in a degree seeking program, they should have at least have ninety (90) 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 Engineering Division requires that a class in calculus and a class in surveying must be taken during the five (5) year period if not previously taken.
2. Six (6) years of related experience in CADD and field technical work. **(Engineering)**.
3. An equivalent combination of education and experience which is directly related to the foregoing specific requirements may be substituted.
4. Completion of City University Level one (1) or completion within twelve (12) months.

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SPECIAL REQUIREMENTS:

1. Must possess and maintain a valid state of Florida driver's license.
2. Must be able to attend meetings at locations other than primary work location.
3. 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.
4. Must maintain a valid home telephone number.
5. May be required to pass and maintain qualification for:
 - a. Respiratory Protection Physical
 - b. Pulmonary Function
 - c. Qualitative and Quantitative Fit Test(s)