

POSITION: Engineering Technician
OFFICE/DEPARTMENT: Public Works
REPORTS TO: Engineering Services Manager/Section Manager
UNION STATUS: Represented by Local 367-C
SALARY GRADE: 10
DATE LAST REVISED: June 2001

1.0 PRIMARY FUNCTION AND PURPOSE

Performs moderately complex tasks in assisting those of higher classifications to perform engineering services activities.

2.0 ORGANIZATIONAL RELATIONSHIPS

2.1 Supervision received

Persons in this position are expected to perform the essential duties and responsibilities defined in Section 3.0 under the supervision of the Engineering Services Manager.

2.2 Supervision exercised

May serve as lead worker over other personnel as assigned.

3.0 ESSENTIAL DUTIES AND RESPONSIBILITIES

Gathers and analyzes data for design and control of construction and maintenance projects. Conducts materials testing and inspections of construction projects.

Assists in the preparation and/or evaluation of boundary descriptions for real properties of County interest.

Assists in conducting title research and field surveys to determine the rights-of-way possessed by the County.

May act as lead person in survey crews conducting land, map making and construction surveys with complex instruments and tools.

May examine new lot development, including subdivisions, short and long plats, for conformance with subdivision regulations, road standards, surfacewater standards or other technical engineering standards.

May serve as inspector at crushing plants, asphalt plants and concrete plants to assure quality control of materials; writes and receives documentation for quantities.

Performs inspections and provides various other types of assistance involved in the planning and completion of public works projects.

Selects and clears sites for survey equipment and clears lines for traversing and leveling.

Operates surveying equipment and distance measuring equipment. Records field notes, performs routine field note computations, assists with other calculations involving trigonometry and geometry. Performs data collection.

Sets construction lines and grades for County projects.

Undergoes training in office duties; reduces field notes, calculates elevations, computes coordinates, plots cross sections, computes embankment and excavation quantities, with shrink and swell factors.

Gathers field data and performs traffic counts using information obtained to update road log and pavement management system.

Supports engineering and public works design functions. Example tasks include preparing contour and topographic maps, plans, profiles, cross sections, mass diagrams and other data; computing grades, curves, areas, material and quantities; checking and reviewing work of other drafters and technicians as necessary; assisting in performance of minor structural design.

Prepares environmental reports and required permits for public agencies, in accordance with SEPA and NEPA guidelines for County projects

Assists in the preparation of preliminary engineering reports, specifications, contract documents, cost estimates and material take offs for public works related projects in compliance with federal, state and county requirements; utilizes modern computer equipment and applicable computer-related software.

Assists in the review of plans and specifications for construction projects; prepares notes for construction staking.

Assists in monitoring and inspecting the work of contractors to ensure project adherence to plans and specifications and any applicable rules and regulations. Inspects in-progress contracts, conducts materials tests, oversees field testing and performs final inspections. Understands and implements Federal and State regulations for federally funded projects. Confronts contractors about noncompliance when necessary.

Operates modern engineering and surveying equipment, calculators, computers and software.

Operates County vehicles, serves as flagger and/or pilot car driver.

Loads and unloads equipment, cleans and maintains surveying equipment.

Keeps daily logs and searches records for data and information needed for current or proposed engineering services tasks.

Conducts and/or assist in "SWIBS" inspections.

Other related duties as assigned.

4.0 PERIPHERAL DUTIES

Fills in for minor building inspector duties as needed, schedules work activities of lower level technicians and performs related duties as assigned.

May be called upon to perform engineering inspection of subdivisions and other plat roads, drainage, etc. during design and construction to assure their conformance to County rules and regulations.

Provides backup for related positions.

Attends related seminars and workshops.

5.0 EDUCATION AND EXPERIENCE

Associate's degree (A.S.) in engineering (civil, agricultural, geotechnical, environmental, mechanical, forestry or a closely related field) from accredited two-year college; **OR** a high school diploma or equivalent with demonstrated equivalent combination of post-secondary education and/or experience which provides the applicant with attributes defined in Section 6.0.

6.0 NECESSARY KNOWLEDGE, SKILLS AND ABILITIES

Some Knowledge of civil engineering practices and principles which apply to public works construction methods, maintenance requirements and safety principles; and the rules and state laws related to engineering, surveying and the Uniform Building Code.

Working knowledge of the concepts of civil engineering, drafting, geometry and trigonometry.

Physical Ability to carry instruments and equipment over all types of terrain and use surveying equipment.

Ability to satisfactorily perform each of the essential duties and responsibilities identified in Section 3.0; work odd hours in all types of weather conditions; use all equipment necessary to perform the required tasks and satisfactorily complete tasks in a timely and efficient manner.

Ability to read and write the English language; effectively communicate in both oral and written forms; follow oral and written instructions; and effectively meet and deal with the public.

Must possess a valid driver's license. Flagger and first aid certifications must be obtained during probation and maintained thereafter.

7.0 BEHAVIORAL STANDARDS

Positively represents the County, demonstrating honest and ethical behavior. Is respectful and courteous to the public, county leadership and other employees. Demonstrates good work habits.

8.0 WORKING ENVIRONMENT/PHYSICAL REQUIREMENTS

Physical Requirements: The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job in an office and outdoor environment.

While performing the duties of this job, the employee is frequently required to walk, sit, talk and hear; use hands to finger, handle or operate objects, tools or equipment; and reach with hands and arms. The employee must frequently lift and/or move up to 25 pounds, and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and the ability to adjust focus. Hand-eye coordination is necessary to operate drafting instruments, computers and various pieces of office equipment.

Work Environment: The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job in an office and outdoor environment.

When working in the outdoor environment the employee may be exposed to varying weather conditions, undeveloped terrain, and animals. The noise level in the work environment is low in the office environment and low to moderately noisy in the outdoor environment.

Standard equipment used in this position includes, but is not limited to, personal computer, printer, typewriter, calculator, photocopier, facsimile machine, theodolite, level, electronic distance meter, scanner and camera.

Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions of this position.

9.0 SELECTION PROCESS

The selection process will include a formal application and evaluation of education and experience, and may also include an oral interview, background and/or reference checks and job- related tests.

The duties set forth in this position description are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

This job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.