



CIVIL ENGINEER 2

Department: Multiple
Job Class #: 904400
Pay Range: Engineer/ Technical 11

FLSA: Non-exempt
Represented: Yes

Classification descriptions are intended to present a descriptive list of the range of duties performed by employees in this class and are not intended to reflect all duties performed within the job.

GENERAL FUNCTION

This is advanced work in civil engineering. An employee in this class is responsible for a variety of complex engineering duties associated with the planning, location, design, construction, operation, structural, maintenance or reviewing of engineering projects. Incumbents independently perform difficult tasks and lead lower level employees in the performance of related but less complex duties. Work is assigned with general instructions and objectives by an administrative supervisor or Civil Engineer of a higher classification who provides assistance when difficult or unusual problems are encountered. Work is reviewed for compliance with established policies or standards and evaluated on the basis of reports, discussion and results obtained. Incumbents have broad-based knowledge of engineering principles and practices and can be rotated to different jobs with a minimal amount of training.

Planning and Public Works: Employees working as a Civil Engineer 2 with an emphasis on structures are responsible for performing engineering analysis of structural design, interpreting and applying codes and regulations and reviewing and evaluating proposals for new materials. Employees working as a Civil Engineer 2 with an emphasis in plan review are responsible for assuring that consulting engineer prepared plans for subdivisions, commercial and industrial developments, and grading projects meet County Standards.

SERIES CONCEPT: This position is distinguished from the Civil Engineer 1 class by the performance of specialized higher level of work and the leadworker role of the Civil Engineer 2. The Civil Engineer 3 class is both supervisory and technical in nature and has greater responsibility for the performance of a major departmental program or section.

ESSENTIAL FUNCTIONS

Develops, administers, designs, and inspects capital improvement projects, which may include structures, culverts, retaining walls, traffic control devices, sanitary or storm sewer structures, water quality enhancement facilities, or other appurtenances.

Studies, analyzes, and prepares engineering-related reports as required by state, federal and local authorities. Presents findings orally or in writing to county staff, officials, or other agencies.

Reviews and analyzes residential and commercial structures, including truss shop drawings, and verifies structural integrity for natural disasters.

Check all required structural members to assure compliance with State, Federal and County laws.

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Reviews and recommends changes to consulting engineer prepared plans to meet County standards for roads, storm-water quantity and quality and erosion control.

Prepares and submits recommended mitigation to the Pierce County Environmental Official in the areas of traffic, slope stability and storm-water runoff.

Reviews projects for compliance with the Landslide Critical Areas ordinance.

Prepares and reviews comprehensive engineering plans and cost estimates.

Plans, coordinates and manages development of systems for the County including administration of contracts and agreements with consultants.

Calculates and verifies pay quantities for proper payment for contracted services; reviews calculations and accuracy of submittals.

Serves as field engineer or project manager in charge of various construction projects.

Plans, assigns and assists technician and lower-level engineers in construction project inspection and administration.

Prepares supporting documentation, submits project prospectuses and makes application to outside agencies for funding and grants.

Reviews development projects for compliance with County ordinances, state and federal statutes and regulations, and adopted standards and county policy.

Provides input for preliminary budget information for personnel and capital outlay needs.

Communicates with staff and the general public regarding departmental policies and procedures. Provides technical advice regarding engineering-related problems or projects to the public and the builders.

Coordinates specific capital improvement project planning efforts on behalf of the County and interfaces with other agencies or municipalities. Coordinates with other sections, community groups, or elected officials regarding current and future needs and requirements.

Provides public testimony to hearing examiners, boards, commissions, elected officials and the public on projects or cases being reviewed by the department.

Coordinates scheduling, financing, timing and other project requirements with applicable funding agencies.

Develops and maintains scheduling charts and works with others to determine critical tasks; coordinates tasks being done by other divisions to facilitate completion of projects.

Assists in value engineering work for applicable projects.

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Prepares final bid packages; schedules and advertises projects for bid; prepares responses to requests for information; prepares necessary addendums during bidding process; prepares change orders and pay estimates.

Reviews complex structural information and plans requiring knowledge of structural engineering principles; perform engineering analysis of structural designs and related features of construction plans.

Researches and resolves issues and questions from the public and design professionals related to building structures.

Develops training for engineering issues in relation to building codes.

Drafts and submits change orders and pay estimates for County construction projects.

OTHER JOB FUNCTIONS

Prepares requests for proposals for consultant services and administers consultant selection process; coordinates and directs the work of outside consultants.

Monitors the cost and schedule of projects throughout all project phases; tracks construction fund budget.

Updates standard specifications and general special provisions (GSPs); develops new GSPs as required; maintains standard bid item table.

Coordinates all contract compliance requirements with applicable county, state and federal agencies.

Develops and administers Utility Local Improvement District/Road Improvement District formation.

Reviews sanitary sewer, building and pretreatment requirements for commercial developments.

Prepares and administers Basin Plan Amendments and participates in the development of water quality standards.

Drafts new or revises existing ordinances which involve engineering development issues.

Identifies existing roadway system needs relating to sight distance, roadside obstacles, roadway delineation, road alignment, and other potential improvements.

Prepares signal timing plans for isolated signals and arterial signal systems.

Prepares the County's Transportation Improvement Program and Ferry Program and all necessary documentation to supplement the adoption of the programs.

Prepares, updates and revises the County's priority array system.

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Utilizes computer programs to develop solutions to engineering problems or administrative tasks. Plans, assigns and assists personnel in the completion of engineering projects or tasks.

Performs other related duties as assigned.

KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of higher level mathematics, including trigonometry, geometry, algebra and calculus, and its application to surveying and engineering computations. Knowledge of physics, statics, dynamics and other civil engineering standards and practices.

Working knowledge of the principles, practices, literature and trends in the field of civil engineering. Knowledge of applicable state, federal and local rules, regulations, and guidelines. Knowledge of supervisory principles and techniques. Knowledge of budget analysis and preparation.

Ability to plan, coordinate and monitor the work of others.

Ability to adapt engineering information, codes, statutes and standards to the planning, review, design, and construction of capital improvement projects. Ability to perform engineering calculations and to prepare engineering reports. Ability to prepare, interpret and use plans, maps, specifications and reports to manage a project.

Ability to collect and analyze technical information and to develop logical solutions or alternatives to problems, both immediate and long-term.

Ability to use a personal computer and computer-aided design systems and to develop new applications of existing programs to complete a job function.

Ability to establish and maintain effective working relationships with a wide variety of groups and individuals. Ability to direct and review the work of subordinates.

Ability to effectively communicate orally and in writing regarding complex engineering problems and technical data. Ability to speak to public groups and to communicate with individuals under stressful conditions.

Ability to work outdoors under all types of weather conditions. Ability to bend, stoop, work at heights, and walk on uneven terrain. However, this may vary according to assignment or section.

Ability to physically perform the essential job functions.

Ability to meet the travel requirements of the position.

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RECRUITING REQUIREMENTS

Three years of progressively responsible experience related to the position AND either a four-year degree in a closely related field or substituting for the degree be registered as an EIT or an additional 4 years of directly related work which demonstrate the ability to perform the essential functions.

Planning and Public Works, Civil Engineer - Structural: Three years of progressively responsible experience related to the position and either a four-year degree with major course work in structural engineering or substituting for the degree the I.C.C. Plans Examiner certification. A Professional Engineer's license is desirable.

Special Note: All Civil Engineer positions require satisfactory physical condition as evidenced by a County-approved physical examination may be required prior to appointment to the position.