

CITY OF KENT
POSITION DESCRIPTION

Position Inventory Number: _____

Classification Specification: Engineering Technician III

Salary Range: NR 35

Position Description: Engineering Technician III

Incumbent: _____

Location: Public Works – Engineering/Design

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GENERAL PURPOSE:

Under the direction of the Engineering Supervisor, or designee, design and prepare project plans for streets, sanitary and storm sewers, water mains, and other municipal works projects.

Work is characterized by complex and difficult technical engineering duties involved in the preparation of designs, costs estimates, and construction plans for Public Works improvement projects; analyze system requirements; and prepare appropriate drawings and designs in support of the supervisors and engineers. The distinguishing characteristics of this classification includes its higher level of responsibility and involvement in all phases of technical engineering design and layout of large-scale projects from the preliminary conceptualization of a project to the final design of various civil, municipal projects such as sidewalks, water lines, streets, storm lines, etc. The incumbent prepares letters, cost estimates, and reports independently, and also provides technical information and assistance to the public and city personnel.

Work is performed under limited supervision. The supervisor and/or other engineers set the overall objectives and resources available. The incumbent and supervisor work together to develop the deadlines, projects, and work to be completed. The incumbent is responsible for the work, plans and carries out the assignment, resolves most conflicts that arise, coordinates work with others, and interprets policies on own initiative in terms of established objectives. The incumbent keeps the supervisor informed of progress, potentially controversial matters, or far reaching implications. Work is reviewed in terms of feasibility, compatibility with other work, or effectiveness of results.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

Perform a variety of technical engineering design, drafting, and layout activities to assist in the preparation of plans for projects such as street improvements, traffic channelization and signalization, sanitary sewers, water mains, storm sewers, flood control, erosion and sedimentation control, and public rights-of-way and easements using computer aided design and drafting (CADD) programs, aerial imagery, and GIS data.

Prepare computations for materials quantities and cost estimates for assigned projects using

available computer programs.

Compute excavation, embankment, and other quantities for the construction of projects; establish the appropriate grade and alignment of roadways and utilities.

Assign, review, and assess drafting, cost estimations, and other related work delegated to other engineering technicians, interns, and temporary employees.

Assure that project designs are in compliance with city, county, state, and federal specifications and standards governing construction projects.

Research records such as tract and parcel, property line, land ownership, right-of-way, and easements.

Prepare calculations and right-of-way drawings involved in the acquisition of public rights-of-way.

Evaluate existing engineering drawings, maps, field locations, and other pertinent data to determine appropriate materials and information required for design and construction.

Work with survey parties; calculate and verify results of field surveys; and interpret information from survey field notes, aerial photographs, and maps.

Communicate and coordinate work with City personnel, other agencies, consultants, franchise utilities, contractors, and the public to facilitate work processes and exchange of information.

Prepare graphics and materials for various public presentations using aerial imagery, digital images, GIS data, and CADD files.

Finalize Public Works construction projects or "AS-Built" from construction inspector's notes and survey field verifications.

Provide support for projects during all phases of construction. Work with the construction inspector, franchise utility companies, and survey crews to ensure the accurate construction of the project.

Become familiar with, follow, and actively support the vision, mission, values, and behavior statements of the department and the City.

PERIPHERAL DUTIES:

Perform other duties as assigned.

KNOWLEDGE, SKILLS, AND ABILITIES:

KNOWLEDGE OF:

- Modern civil engineering design, engineering, and construction of Public Works Projects utilizing a personal computer
- Principles and practices of drafting, surveying, and civil engineering
- Principles of algebra, geometry, and trigonometry

- Modern office practices, procedures, and equipment
- Effective telephone techniques and etiquette
- Methods, equipment, and materials used in civil engineering and drafting
- Applicable laws, codes, regulations, policies, and procedures
- Engineering research, analysis, and problem solving methods
- City organization, operations, policies, and objectives
- Preparation of construction drawings and specifications
- WSDOT Standard specifications, Standard plans, and Design Manual
- AASHTO geometric design of highways and streets and Roadside design guide
- King County surface water design manual
- FHWA Manual of uniform traffic control devices

SKILLED IN:

- Effective interpersonal relations using tact, patience, and courtesy
- Effective oral and written communications
- Working from blueprints, engineering drawings, and specifications
- Reading, interpreting, applying, and explaining laws, codes, regulations, policies, and procedures
- Performing accurate engineering and mathematical computations and drawings

ABILITY TO:

- Maintain records and write reports of work progress or inspection findings
- Understand and follow oral and written directions
- Establish and maintain cooperative and effective working relationships with others
- Plan and organize work to meet schedules and timelines
- Design Public Works projects in accordance with budget limitations and established safety standards
- Design streets, storm and sanitary sewers, water mains, and other municipal engineering projects
- Work independently with little direction

EDUCATION AND EXPERIENCE REQUIRED:

Education: Graduation from high school supplemented by two (2) years college-level course work in engineering, surveying, mathematics, design, and/or drafting; and

Experience: Six (6) years of experience utilizing current computer-aided design and drafting (CADD) equipment in a municipal engineering environment.

Or: In place of the above requirements, the incumbent may possess any combination of relevant education and experience that would demonstrate the individual's knowledge, skill, and ability to perform the essential duties listed above.

LICENSES AND OTHER REQUIREMENTS:

- Valid Washington driver's license, or the ability to obtain within thirty (30) days of employment
- Must successfully pass the City's pre-employment driver's records check, successfully complete the City's Defensive Driving Course, and maintain an excellent driving record
- Two-year technical degree in current CADD preferred

MACHINES, TOOLS, AND EQUIPMENT USED:

Typical business office machinery and equipment including, but not limited to, personal computer, multiline phone, fax, copy machine, and calculator.

Engineering related equipment including computer-aided design and drafting (CADD) equipment and software, Autocad Map, Autodesk Land Development Desktop, Autodesk Civil 3d, Autoturn, digital Camera Software, Arcview GIS, transit, hand level, and other tools associated with the field.

The incumbent may be required to operate a City vehicle to travel to and from construction sites to inspect and survey projects.

PHYSICAL DEMANDS:

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

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, or feel; talk; and hear. The employee frequently is required to sit for extended periods of time; and reach with hands and arms. The employee is occasionally required to type on a keyboard; stand; walk; climb or balance; and stoop, kneel, crouch, or crawl. The employee must occasionally lift and/or move up to 30 pounds.

Specific vision abilities required by this job include close, distance, color, and peripheral vision; depth perception; and the ability to adjust focus.

WORKING CONDITIONS:

Work is performed in an Engineering office environment. The incumbent may be subject to frequent interruptions by walk-in employees, telephones calls, and/or interoffice activities. The incumbent is subject to driving to conduct inspections and survey of project sites and major local projects. The employee may be exposed to individuals who are irate or hostile. The noise level in the work environment is usually moderate.

SIGNATURES:

Incumbent's Signature Date

Supervisor's Signature Date

Approval:

Department Director/Designee Date

Employee Services Director/Designee Date

** Note: This document will be reviewed and updated annually at the time of the employee's performance appraisal; when this position becomes vacant; or, if the duties of this position are changed significantly.

Revised: 08/01/07; 11/16/07