

SNOHOMISH COUNTY JOB DESCRIPTION

ENGINEERING TECHNICIAN V - DESIGN

Spec No. 3266

BASIC FUNCTION

To perform advanced senior level technical computer aided drafting and design (CADD) in support of public project designs.

STATEMENT OF ESSENTIAL JOB DUTIES

1. Operates CADD station to perform senior level drafting and technical calculations for design reports, right-of-way plans, construction plans for road, bridge, and other public works projects.
2. Employs CADD software to calculate and prepare design details, graphics, quantity estimates and engineering report exhibits.
3. Operates CADD software to create three dimensional surface models from survey data sets and to use this information to set vertical and horizontal alignments as well as calculating cross-sections, roadway templates, and calculating quantities for road and bridge projects.
4. Develops and maintains complex CADD databases including quality assurance of surface models, template and other engineering design data; coordinates this data with other consulting engineers and other agencies via electronic file transfers.
5. Researches records to create base maps, establishes property ownerships, interprets legal descriptions, and recovers documents requested by legal interrogatories.
6. Utilizes Digital Orthographic Photos to establish topographic design maps and overlays onto the Construction Plans and Geographic Information (GIS) layers.
7. Coordinates with GIS staff to establish and builds the Counties GIS system by using and operating ARC VIEW (or equivalent software).
8. Develops spreadsheets and data base files for calculation and manipulation of engineering data.
9. Maintains and checks plans and designs for compliance with County adopted standards, policies, and procedures.

STATEMENT OF OTHER JOB DUTIES

10. Assists engineers with storm water designs and calculations such as calculating runoff areas, setting line and grade for piping systems, layout of detention ponds and vaults, and basic pipe sizing calculations.
11. Assists construction inspection and survey crews with miscellaneous fieldwork.

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MINIMUM QUALIFICATIONS

Graduation from a two (2) year accredited program in civil engineering or construction engineering technology and three (3) years of experience in civil or construction engineering; OR, a four (4) year degree in civil or construction engineering and one (1) year of related experience; OR, any equivalent combination of education and experience which provides the knowledge and abilities necessary to perform the work. Must pass job related tests.

PREFERRED QUALIFICATIONS

Use of AutoCAD drafting and design software is preferred.

SPECIAL REQUIREMENTS

A valid Washington State Driver's License is required for employment.

KNOWLEDGE AND ABILITIES

Knowledge of:

- computer aided drafting and design software;
- geometry, algebra, and trigonometry;
- engineering principles and practices including basic hydraulics;
- reading and interpreting engineering plans, specifications, and standards;
- creating clear concise graphic displays and exhibits for meetings and reports;
- computer data and file management;
- electronic data transfers via the internet and/or the County's network;
- compliance with County, State, and Federal design standards.

Ability to:

- communicate effectively with engineers, contractors, developers, and the general public;
- research and gather facts to present options;
- adapt to changing priorities and technology;
- learn new computer software and revisions to software;
- prepare clear and concise written reports;
- work independently or in a team environment;
- treat others with tact, diplomacy, and respect.

SUPERVISION

Employees report to a supervisor or engineering lead as assigned. Employee serves as a lead worker for lower level technicians and is responsible for coordinating their work. Work is

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reviewed in progress or upon completion for accuracy and adherence to division engineering standards.

WORKING CONDITIONS

Work is performed in the office at a computerized drafting and design work station. Work is done typically sitting at a desk or table and requires repeated hand, wrist, and finger movement to operate the CADD station. Occasional lifting of plan sets is required. Occasional field trips to project and or construction sites are required.

The distinction between this classification and the Engineering Technician IV-Design is that employees of this classification perform advanced senior level technical drafting and design.

Snohomish County is an Equal Employment Opportunity (EEO) employer.
Accommodations for individuals with disabilities are provided upon request.

[EEO policy and ADA notice](#)

Class Established: August 1999
Revised: February 2017
EEO Category: 3 - Technicians
Pay Grade: 239 - Classified Pay Plan
Workers Comp: 1501 Hazardous