

8220
HIGHWAY ENGINEER TRAINEE

Nature of Work

This is beginning level training work to develop proficiency in the use of knowledge, skills and abilities in highway/civil engineering. Employees in this class participate in an on-the-job training program under the supervision of Highway Engineers. Assignments are varied and designed to develop the employee's ability to apply knowledge and skills in the civil engineering field for the solution of practical problems and to develop solutions which conform to departmental policies, rules and regulations as well as professional standards. Work is closely reviewed throughout the assignment for completeness and technical accuracy. Performs related work as required.

Examples of Work

Performs data analysis to determine the posted load limits for bridges.
Coordinates construction project activities with utility companies.
Determines horizontal and vertical highway alignments.
Prepares drainage computations.
Performs field inspection of traffic problems.
Performs field inspection of construction projects.
Prepares preliminary cost estimates for highway projects.
Makes detailed design computations for roadways and bridges.
Performs field checks at highway construction project sites.
Performs design and drafting as required.

Knowledge, Skills and Abilities

Knowledge of algebra, plane and solid geometry, and plane trigonometry.
Knowledge of the principles of civil engineering utilized to develop drawings and specifications for components of highway projects.
Knowledge of the principles of plane and route surveying.
Knowledge of calculus.
Knowledge of the principles of hydraulics and hydrology used in the determination of backwater curves, runoff and anticipated flow.
Ability to read and interpret inspection and testing reports, engineering drawings and specifications, and topographic and other maps.
Ability to prepare technical reports of field investigation.
Ability to read and interpret federal, state and local codes, regulations and standards applicable to the design or construction of highway projects.
Ability to communicate effectively, both orally and in writing.
Ability to establish and maintain effective working relationships.

Minimum Qualifications

Training: Bachelor's degree in Civil, Electrical, Mechanical, Industrial or Environmental Engineering from a regionally ABET accredited college or university.
Preference in making appointments may be given to individuals with training directly related to the type of position to be filled. Training areas include Construction, Maintenance, Planning, Design, Soils, Structures and Traffic.

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HIGHWAY ENGINEER TRAINEE (cont'd)

Minimum Qualifications (cont'd)

Substitution: A Bachelor's degree in Civil, Electrical, Mechanical, Industrial, Petroleum, Mining or Environmental Engineering Technology from a regionally ABET accredited college or university or a Bachelor's degree in Civil, Electrical, Mechanical, Industrial, Petroleum, Mining or Environmental Engineering from a non-ABET accredited college or university may be substituted for the required training if the applicant has also passed the Fundamentals of Engineering Examination administered by the West Virginia Board of Registration for Professional Engineers, or an equivalent examination administered by another state's engineer registration organization. At the appointing agency's discretion, competitive candidates may receive probationary appointment pending official verification of the qualifying degree. The qualifying degree must be verified before the employee may be certified as permanent.

Established: 03/20/2008

Revised: 10/30/2008; 10/03/2011; 07/16/2015; 12/15/2017

Effective: 12/15/2017