

## TECHNICAL ANALYST TRAINEE

### **Nature of Work**

Performs professional work at the full performance level providing a variety of engineering services or creative works, the adequate performance of which requires engineering education, training and experience in the application of special knowledge of the mathematical, physical and engineering sciences to such services to creative work as consultation, investigation, evaluation, planning and design of engineering works and systems; planning the use of land and water; teaching of advanced engineering subjects, engineering surveys and studies; review of construction projects for the purpose of assuring compliance with drawings and specifications any of which embraces such services or work, either public or private, in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects and industrial or consumer products or equipment of a mechanical, electrical hydraulic, pneumatic or thermal nature, insofar as they involve safeguarding life, health or property, and including such other professional services as may be necessary to the planning, progress and completion of any engineering services.

### **Distinguishing Characteristics**

Applies engineering techniques, procedures, and criteria within rules, regulations and operating procedures of the specialty area of assigned. May specialize in a particular area of emphasis within the area of assignment. Work is performed with more independence as proficiency is demonstrated.

### **Examples of Work**

Performs data analysis to determine or establish performance standards/limits.

Coordinates construction projects with utility companies.

Conducts interim and final inspections of construction projects to determine compliance with applicable laws, regulations, and specifications.

Prepares and reviews plans and/or contracts for projects; calculates material quantities needed for construction projects; recommends alternative construction methods.

Writes reports detailing recommendations, conclusions, and findings from inspections and reviews.

Plots cross sections and topography, computes grade lines and earthwork, draws typical sections, and figures drainage.

Performs studies concerning traffic volumes, turning movements, and accident history at intersections; redesigns existing features and makes recommendations for improving areas having high traffic accident frequencies.

May attend meetings or public hearings to observe or attest to the findings of environmental impact.

8230

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**Knowledge, Skills and Abilities**

Knowledge of the agency's policies and practices.

Knowledge of state and federal laws pertaining to agency jurisdiction.

Knowledge of equipment and other instruments used in various types of engineering.

Knowledge of fundamentals of various types of engineering.

Ability to apply engineering principles in solving engineering problems.

Ability to communicate effectively, both orally and in writing.

**Minimum Qualifications**

**Training:** Bachelor's degree from a regionally accredited college or university with a major in Engineering; OR, Bachelor's degree from an ABET accredited college or university with a major in Civil, Electrical, Electrical Design, Mechanical or Mining Engineering Technology.

**AREAS OF ASSIGNMENT:**

Agricultural Engineering

Architectural Engineering

Chemical Engineering

Civil Engineering

Civil Engineering Technology

Electrical Design Engineering Technology

Electrical Engineering

Electrical Engineering Technology

Environmental Engineering

Geologic Engineering

Industrial Engineering

Mechanical Engineering

Mechanical Technology Engineering

Mining Engineering

Mining Technology Engineering

Petroleum Engineering

Photogrammetric Engineering

Public Health Engineering

Rehabilitation Engineering

Sanitary Engineering

Structural Engineering

Established: 03/20/2008

Effective: 05/01/2008