

# Civil Engineer, GS-0810-11

**Position Number:** A9235

**Introductory Statement:** This position is located on a Forest Service unit. This position will work in a team to accomplish field work, data management and analysis, report writing and administration of current oil and gas developments on the Forest.

## **Transportation System Planning 40%**

Develops an integrated transportation system plan for the Forest using geographic information systems, aerial photographs, topographic and geologic maps, on the ground reconnaissance, and a working knowledge of engineering geology and soil mechanics. Conducts economic analysis of road management alternatives considering the costs of operations and maintenance, replacement, reconstruction, or closure, along with resource costs and benefits.

Prepares transportation system project plans including overall project scheduling, major engineering requirements, and specifics related to project budgetary estimates. Reviews plans and specifications to determine practicability within the scope of the environmental analysis.

Develops and updates the Forest Capital Investment Program for roads and bridges. Reviews project proposals and makes recommendations on funding using program direction criteria. Monitors completed projects to insure compliance with funded objectives.

Provides input into the interdisciplinary planning process for resource activities involving the transportation system. Serves as a member of ID Teams. Prepares transportation engineering specialist's reports for environmental analyses.

## **Civil Engineering Problem Resolution 30%**

Identifies and investigates complex problems and conflicts in assigned area of transportation system planning and management involving project requirements, objectives, interfaces, or schedules. Develops and outlines approaches and plans for resolution of problems compatible with assigned area of responsibility and project objectives.

## **Civil Engineering Advice and Guidance 30%**

Provides technical advice and consultation on conventional projects with complex features in the area of transportation system planning. Provides engineering expertise to the Forest's Access and Travel Management process. Reviews annual travel management plans with each sub-unit for completeness and adequacy and conformance with overall transportation system management objectives.

**OTHER SIGNIFICANT FACTS:**

Bargaining Unit Status: Eligible.

Performs other duties as assigned.

Performs wildfire suppression support as directed within training and physical capabilities.

#### **Factor 1- 7 Knowledge Required by the Position**

Knowledge of a wide range of general civil engineering principles and methods applicable to varied and complex transportation planning problems, projects, or studies that may include diverse civil engineering or other conditions; and varying civil engineering processes.

Knowledge of laws, regulations, and policies that affect transportation system management, and an understanding of how transportation system interrelate with land use goals; and familiarity with the fisheries, wildlife, soils, waterwhed, recreation, timber, and minerals programs and the effects of the transportation system on these programs.

Skill sufficient to modify standard practices, adapt precedents, and make significant departures from existing approaches and techniques.

#### **Factor 2- 4 Supervisory Controls**

The supervisor establishes overall objectives and resources available. The supervisor and engineer jointly develop projects, priorities and deadlines. The engineer independently plans and carries out assignments, interprets policy, coordinates work with others, resolves most of the conflicts that arise, and keeps the supervisor informed of far-reaching implications. Completed work is reviewed from an overall standpoint in terms of feasibility, and effectiveness in meeting requirements.

#### **Factor 3- 3 Guidelines**

The engineer evaluates, interprets, selects, and applies guidelines to specific cases and requirements; and adapts and modifies existing guides in applying established methods and practices to new situations or in relating new assignments to precedent ones.

#### **Factor 4- 4 Complexity**

The engineer plans and coordinates various transportation system planning projects and studies, and makes recommendations/decisions regarding a range of multifaceted problems. Precedents must be applied to new work situations and guidelines adapted to reconcile conflicting demands.

#### **Factor 5- 3 Scope and Effect**

The purpose of the work is to apply established engineering techniques to investigate and analyze various conventional problems and questions or to investigate and analyze discrete aspects of more complex problems in transportation system planning and management. Work products contribute materially to the effectiveness of completed projects.

#### **Factor 6- 3 Personal Contacts**

Personal contacts include a wide range of professional and administrative personnel throughout the agency, at other federal agencies, in state and local government, private industry, academia, environmental advocacy groups, and in some cases the media and elected officials.

**Factor 7- 3 Purpose of Contacts**

The purpose of contacts is to influence or negotiate with others who may be skeptical or uncooperative or whose interests differ from those of the program represented. Issues to be resolved are sensitive or controversial. Contacts are also undertaken to plan, coordinate, or advise on work efforts or resolve operating problems in dealings with others who are working toward mutual goals.

**Factor 8- 1 Physical Demands**

The work is primarily sedentary except for activities such as field surveys or construction site inspections. Fieldwork may involve a considerable amount of physical activity including walking, climbing, bending, and stooping.

**Factor 9- 1 Work Environment**

Work is usually performed in an office setting, although there may be occasional exposure to the outdoors and conditions in buildings or other structures under construction, renovation, or restoration.