

**Civil Engineer (Environmental) (Rhinelander, WI Duty Location):**

- Analyzes various civil engineering problems through the utilization of automated procedures. Utilizes various forms of computer hardware and software in order to accomplish assigned tasks such as making, evaluating, and documenting design decisions and producing contract documents. Develops cost estimates for assigned contracts. Develops technical specifications for materials and/or construction details to be employed. Updates and maintains various databases.
- Completes field survey and site investigations to obtain first-hand data on existing facilities, primarily water and wastewater systems. Develops plans and drawings, and preparation of studies and analyses for various design submittals. Works with associated engineering and other specialists during the design phase to assist in integrating design features on projects.
- Conducts field inspections and performs duties of the Contracting Officer's Representative (COR) for construction contracts during construction to determine if construction-in-progress adheres to design criteria, to obtain data to improve future designs and to determine maintenance and operation requirements.
- Develops and prepares competitive bidding cost estimates for construction and maintenance projects performed under contract. Prepares contract specifications and statement of work for construction and maintenance projects throughout the forest. Work includes the preparation of Engineer's Estimates to evaluate reasonableness of the bid.
- Maintains unit activities in compliance with the Clean Air Act, Clean Water Act, and with State Environmental statutes and regulations as implemented by local agencies.
- Manages the hazardous material operations and program on the Forest. Coordinates hazardous material response activities on the forest. Maintains copies of all hazardous material manifests from the forest. Reviews manifests and coordinates payment of fees. Collects and provides information concerning the use and release of hazardous materials to the appropriate state and local authorities.
- Participates in the forest Environmental Compliance Audits. Prepares corrective action plans, implementation and documentation. Prepares and updates water sampling plans and operation and maintenance plans for Forest water systems. Coordinates routine water quality testing with district personnel assistance. Maintains test result history for all water systems, including systems under permit. Updates and maintains the forest spill plan.
- Manages the operations and maintenance of all forest water and wastewater systems. Coordinates with district personnel to manage systems in accordance with codes and regulations. Ensures all forest water and wastewater systems are in compliance with all federal, state, and local regulations, including special-use permitted systems.

NOTE: Must become certified or be certified and maintain certification as a contracting officer representative and engineering representative.

**Civil Engineer (Project Manager) (Rhinelander, WI Duty Location):**

## Chequamegon-Nicolet National Forest Engineering Job Descriptions

- Develops and modifies civil engineering plans and specifications for new construction or to improve utility, quality, appropriateness, and appearance of construction. Prepares original designs and preliminary and final layouts, which require professional engineering skills including all phases of high-volume road design, small bridges, retaining walls, major drainage structures, erosion control features, large culverts, buildings, towers, small dams and reservoirs, and recreation sites, or other comparable structures. Evaluates design objectives, identifies economic and efficient procedures. Develops designs and coordinates with other engineers and consultants to ensure that all technical areas of designs and projects meet the requirements of the forest. Prepares special design specifications, cost estimates, and complete design package.
- Evaluates design objectives, identifies economic and efficient procedures. Develops design, coordinating with other engineers to ensure that all technical areas are covered. Prepares or supervises preparation of special design specifications, cost estimates, and complete design package.
- Responsible for providing geotechnical expertise (i.e., soil and subsurface information and evaluations) to transportation planners, construction engineers, and design engineers. Uses aerial photographs, topographic and geological maps, knowledge of soil mechanics, and on-the-ground reconnaissance to assist transportation planner in analysis of existing routes for suitability of various road or trail management alternatives. Provides input on the feasibility of layout of transportation plans and reviews adequacy of road locations as needed.
- Prepares or reviews Environmental Analysis, Environmental Impact Statements, and special reports with regard to new or improved engineering construction. Provides input into the interdisciplinary planning process for natural resource development activities involving engineering projects.
- Serves as Engineering Representative (ER) or Contracting Officer's Representative (COR) providing technical advice, recommendations and suitable alternatives to the Contracting Officer and Forest Officials and may provide complete oversight of construction projects. Participates in pre-construction meetings to resolve construction problems that may be of unusual difficulty and complexity. Confers with contractor's representatives about improvement or adoption of construction practices and procedures. Oversees the development project plans and specifications prior to contract advertisement to ensure compliance with environmental requirements, determine practicability from a construction standpoint, whether physical obstructions or other construction difficulties have been considered or if materials specified are readily available. Authorizes changes that do not modify the designer's intent and do not result in contract time or cost changes. Works closely with the Contracting Officer in obtaining authorization for changes to the requirements of the contract. Investigates need for and prepares engineering data for change orders, considering conditions at work site, field measurements and computations, and local prices. Maintains current quantity computations, records of work performed, and prepares monthly progress payments. Informs contractor of requirements concerning construction scheduling,

safety and sanitary measures, progress reporting, wage and hour laws observance, labor relations, and payroll records.

**Civil Engineering Technician (Transportation) (Park Falls or Laona, WI Duty Locations):**

- Using engineering project survey notes, data and specifications, makes designs and layouts of roads, trails, bridges, drainage structures, and other systems of moderate complexity. Makes and/or recommends revised or alternate designs to eliminate or reduce engineering problem areas without undue sacrifice of standards, economy, or esthetics. Checks requirements, such as proper form, size, weight, structure, performance, and other pertinent technical data. Performs computations and makes layouts, as required.
- Ascertains that all information needed for a project is provided in accordance with appropriate design and drafting standards. Recommends changes to correct errors or nonconformance with established design practices and standards. Develops and recommends modification of design details to facilitate the project. Performs final detailed review of drawings and exercises judgment in selecting best of all possible design layouts. Searches for information and precedent designs, develops design approaches, and determines feasibility.
- Conducts a wide range of non-standard surveys and data collection activities to provide data for civil engineering project designs. Makes field surveys and collects field data required for engineering plans for design and construction on Forest administrative sites. Makes recommendations for solutions to routine construction project problems that can be resolved by calculations typical to civil engineering projects. Engages in factual, technical information exchanges with coworkers who are performing related work. Does conditions surveys and records data to maintain and update databases. Prepares engineering data reports and recommends priorities, which are used in the formulation of cost estimates and bills of materials.
- Administers construction and maintenance contracts to ensure compliance with the terms and conditions of the contract. Projects are of moderate complexity and can usually be completed in a year or less. Monitors and controls a major segment of projects, such as roads, bridges, parking facilities, trails, drainage structures, erosion control features, retaining walls, buildings, towers, equipment shops and yards, small dams and reservoirs, and recreation sites. Issues start and stop work orders to the contractor. Assures compliance by the contractor with the provisions, plans, and specifications of the contract, accepting or rejecting quality and acceptability of equipment used, manner of performance and rate of work progress, interpretation of plans and specifications, and acceptable fulfillment of the technical phases of the contract.
- Oversees the development of project plans and specifications prior to contract advertisement to ensure compliance with environmental requirements. Oversees detailed site survey and stake setting. Refers points of disagreement to the Contracting Officer. Makes minor changes requiring contract amendments and modifications

involving adjustments in the contract price or time and recommends final acceptance of the completed project. Maintain records of all the administration of the contract. Is familiar with the technical aspects of assembling the contract documents.

**Civil Engineering Technician (Transportation Planner) (Laona, WI Duty Location):**

- Develops, maintains, and oversees a comprehensive road management program, including developing sign plans, performing road hazard and travel analysis, preparing and approving road use permits, identifying and implementing road closures and decommissioning of routes, and preparing and administering road maintenance contracts.
- Completes and reports annual road condition surveys and road accident reports and bi-annual updates of the road use rules for forest level planning, develops relationships to maximize county coop maintenance of forest roads under the Forest Road Agreement(s) and determines the need for commercial users' commensurate share for road maintenance to facilitate safety and adequately maintained roads.
- Coordinates transportation input for timber sale transportation planning, road maintenance appraisals and road construction and reconstruction projects.
- Serves as the team leader for all forest level comprehensive travel analysis processes, overseeing the development of proposed actions and alternatives and coordinating interdisciplinary team member input. Participates in the review and approval of the analysis of impacts of proposed and alternative actions on transportation facilities and evaluates actions with respect to National Environmental Policy Act (NEPA) regulations, the Agency directive system, and other applicable state and federal law. Specifically, reviews Project Design Features and Mitigations and prepares Transportation Specialist Reports for final acceptance.
- Employs geographic information systems (GIS) and INFRA roads database to provide data for project analysis and respond to information requests from other specialists on ID teams. Assists in keeping these databases current with existing projects and changes to the transportation system.

**Maintenance Mechanic (Facilities) (Park Falls or Laona, WI Duty Locations):**

- The maintenance mechanic performs a variety of tasks involved in the upkeep of all buildings, grounds and related structures, fixtures, and utilities on the Forest. The duties are performed within the following trades: carpenter, electrical equipment repair, plumber, and heating, ventilation, and air conditioning (HVAC).
- Carpentry duties include planning and completing projects from initial layout to final installation. Constructs and/or repairs such items as warehouses, garages, residences, roofs, etc. Remodels building interiors and installs campground tables, barriers, bridges, etc. Installs doors, builds staircases, etc. Builds forms and pours concrete.
- Electrician duties include troubleshooting all electrical problems that occur. Replace circuit breakers, light fixtures, add additional receptacles and switches. Rewires old

buildings when doing remodels to bring wiring up to code. Repairs electric water heater elements, plan and sketch wiring diagrams for new circuits. Runs thin wall conduit, rigid conduit, PVC, and romex wiring.

- Plumbing duties include, repairing waterlines, installing toilets and lavatory fixtures, re-plumbs lines as needed. Installs electric and propane water heaters, replaces and repairs sewer lines, snakes sewer lines, and installs water meters.
- HVAC duties include repairing or replacing evaporative coolers, repairs to refrigerated cooling and heating units, installing thermostats for HVAC units, installing electric wall heaters and installing restroom ventilation fans.
- Performs other duties as assigned.

**Engineering Equipment Operator (Park Falls or Laona, WI Duty Locations):**

- The position is established on a Forest unit to support of road systems and other program areas. Incumbent operates and maintains engineering equipment.
- Operates one or more heavy gasoline or diesel powered wheeled or crawler type engineering and construction equipment to excavate, backfill, grade or level earth to rough specifications on such projects as roads, ditches, or construction sites.
- Moves earth and rock, piles brush, pulls planting equipment, etc., on mountains with steep slopes, graded curves and shoulders, rocky or soft ground, hilly forests, and other surfaces with similar rough features.
- Ensures equipment is maintained in good working condition. Performs inspections, preventive maintenance, minor repairs and adjustments, and maintains proper records. Reports major mechanical repairs to supervisor. May perform fine grading with closer instruction and supervision.
- NOTE: The incumbent is required to operate Government vehicles that meet the definition of a Commercial Motor Vehicle (CMV) under 49 CFR 382.107, which requires the operator to possess a valid Commercial Driver's License (CDL). A CMV is defined as follows: "Commercial motor vehicle means a motor vehicle or combination of motor vehicles used in commerce to transport passengers or property if the vehicle: (1) Has a gross combination weight rating of 11,794 or more kilograms (26,001 or more pounds) inclusive of a towed unit with a gross vehicle weight rating of more than 4,536 kilograms (10,000 pounds); or (2) Has a gross vehicle weight rating of 11,794 or more kilograms (26,001 or more pounds); or (3) Is designed to transport 16 or more passengers, including the driver; or (4) Is of any size and is used in the transportation of materials found to be hazardous for the purposes of the Hazardous Materials Transportation Act (49 U.S.C. 5103(b)) and which require the motor vehicle to be placarded under the Hazardous Materials Regulations (49 CFR part 172, subpart F)."
- Based on this duty the incumbent is subject to random drug testing and will be placed in the applicant testing pool.