



Civil Engineering Technician

Location: Frenchtown or Hackettstown NRCS Service Center

Classification: Full-time (40 hours/week)

The North Jersey Resource Conservation and Development Council (North Jersey RC&D) is a nonprofit organization seeking to hire a civil engineering technician to work as a partner employee with the Natural Resources Conservation Service (NRCS). The partner employee would be housed in an NRCS Service Center and directed by the NRCS District Conservationist.

The Civil Engineering Technician position will design engineering practices, prepare engineering drawings, compute quantities, and assist field office personnel in the application of engineering practices. NRCS and North Jersey RC&D have a shared and complimentary mission to assist land users to conserve their soil, water, and related natural resources.

The position will be located in either the Frenchtown or Hackettstown NRCS Service Center. Duty station placement will be dependent upon the candidate selected for the position and the work needs of the respective service centers. The selected candidate will be required to work in both service areas, spending at least 1 day a week in the office other than their duty station. The duty station may be subject to change depending on workload.

Responsibilities:

Technical Assistance (40%)

- Provides engineering technical assistance for preliminary site investigations and conservation planning. Defines site limitations, design data, criteria, and applicable laws or regulations. Develops alternative solutions for solving complex resource management concerns in the areas of erosion control, water management, agricultural waste management, and water quality.
- Provides quality control services including layout, material testing, and construction checks in order to ensure adherence to technical standards. Explains construction details to service center personnel, landowners, and contractors.
- Prepared designs are reviewed and approved by NRCS for compliance with NRCS technical standards, accuracy of information, completeness, and feasibility of construction.
- Provides technical guidance and direction to service center and district staff in the planning, design, and construction of engineering practices with supervision.

Surveys and Site Investigations (20%)

- Assists with engineering design surveys, construction layout, and construction checks. Defines type of survey and detail and accuracy required to meet design and construction needs.

- Based on field evaluations, determines the type, scope, and intensity of field investigations and surveys needed.

Design (20%)

- Assists with collection of field data and assures adequacy of collected data. Sees that procedures and products conform to current Service policy and standards. Prepares site specific engineering designs, drawings, and specifications.
- Performs drafting and other graphical work on a computer-aided drafting system. Maintains state-of-the-art knowledge in the use, application, and management of computer hardware and software applicable to available computer-aided drafting (CAD) systems. As necessary, trains others in the use of the system. Maintains the system equipment and the supplies for the system with supervision.
- Documents layout and construction in conservation assistance notes or job diary. Documents completed work to higher graded supervisor or similar authority for certification and approval.
- Computes quantities associated with projects designed in the field office. Exercises judgment in selecting and applying standard methods of computation for quantities such as concrete, earth fill, and excavation. Checks quantity computations made by others for accuracy and completeness.
- From rough sketches provided by engineers, or other field office personnel, develops standard drawings for area use for a variety of conservation practices. Employee independently determines the layout of the standard drawings and details needed to adequately construct the practices. Standard drawings are developed on the CAD system.

Training (10%)

- Supports engineering training needs for various field office personnel. Helps to provide engineering instruction in the use of the National Engineering Manual, the Engineering Field Handbook, Agricultural Waste Manual Field Handbook, State Technical Guide, and various technical releases and handbooks. Supports training in surveying and engineering equipment usage. Participates in training program for students and new technicians assigned to the duty station
- Provides informal training and assists with formal training of field office personnel, district personnel, and others in the private sector in the technical aspects of soil and water conservation.

Engineering Quality Control (10%)

- Coordinates with engineering specialists in performing NRCS quality reviews of conservation practices. Checks engineering work of field office personnel with supervision.

Other

- Performs duties in a manner supportive of civil rights policy without regard to political affiliation, race, color, religion, sex, marital status, age, handicap, or national origin. Supports

and participates in the broad spectrum of safety and health program activities. Complies with all appropriate safety and health rules and regulations in the performance of assigned tasks.

Qualifications:

- Knowledge of survey techniques, including use of electronic survey equipment, in order to independently gather field data, perform layout, verify construction of conservation practices and systems, and resolve difficult but well-precedented issues.
- Knowledge of construction techniques, contracting procedures, and NRCS quality assurance policy in order to read plans and understand construction and material specifications.
- Knowledge of construction safety policy and requirements in order to perform installation, testing, and maintenance duties.
- Knowledge of NRCS engineering technical standards, methods, and procedures related to the investigation, design, and construction of conservation engineering practices in order to implement conservation practices.
- Knowledge of NRCS policy and procedures related to the planning of conservation practices in order to assist in the development of conservation plans.
- Knowledge of engineering-related computer systems, e.g. CAD systems and others, in order to prepare designs for conservation practices.
- Ability to apply the fundamentals of mathematics, science, and engineering in order to design solutions to resource problems.
- Ability to prepare concise construction drawings, including the use of computer assisted drafting techniques, in order to facilitate the construction of conservation practices.
- Ability to work effectively with co-workers, contractors, partners, and landowners in order to provide for the efficient installation of conservation measures.
- Thorough knowledge of the grammatical usage of the English language.
- Ability to carry out work as directed.
- Ability to pass a Federal Background check and Employment Eligibility Verification
- Must possess a valid New Jersey driver's license.

Education: Associate Degree in Agriculture, Engineering, Natural Resource sciences or related field

Recommended: Graduate of an accredited college with a **Bachelor Degree** in Agriculture, Engineering, Natural Resource sciences or related field. Bachelor's degree should include at least 24 semester hours in any combination of courses such as engineering, engineering or industrial technology, construction, physics, drafting, surveying, physical science or mathematics. 6hrs of drafting is recommended.

Physical Demands:

Regular physical exertion in an outdoor setting is required. Walking long distances over rough terrain under a variety of weather conditions is to be expected. Sitting at a desk or drafting table for long periods of time is occasionally required. Driving to work assignments may take up to three hours one way.

Work Environment:

Work is often performed out-of-doors with regular exposure to heavy equipment, noise, adverse weather, and rough terrain. Protective equipment is necessary on construction sites. Exposure to farm animals, insects, and poisonous plants and snakes can be expected. Environment can vary from agricultural fields to the urban setting. Office work is performed in an NRCS Service Center

Terms of Employment:

- Full-time position (40 hrs/wk), North Jersey RC&D benefits package available;
- Pay based on qualifications and experience;
- Position funded for one-year, subsequent funding anticipated for future years.

How to Apply:

Interested applicants are encouraged to submit a resume and cover letter **by April 27th** outlining your interest, along with a list of references by email to ltessieri@northjerseyrcd.org:

Laura Tessieri, Associate Director
North Jersey RC&D

We strongly encourage all qualified professionals to apply. The North Jersey RC&D is an Equal Opportunity Employer and does not discriminate on the basis of sex, race, age, national origin, ethnic background, disability or any other characteristic protected by law.

The North Jersey RC&D is a nonprofit organization initiated in 1962 to help people care for and protect their natural resources to improve an area's economy, environment and living standards. We work within Hunterdon, Warren, Morris, Somerset, Sussex and Union counties. Our mission is to work towards the sustainable use and protection of natural and human resources through innovation, education and partnerships. Visit us on the web: www.northjerseyrcd.org