

### SENIOR ENGINEERING TECHNICIAN

**DEFINITION:** Under general supervision, performs journey level technical engineering work of a non-routine nature; resolves operational problems not covered by engineering problems which had not been previously encountered; serves as survey party leader; performs related work as assigned.

**ESSENTIAL FUNCTIONS:** This list is ILLUSTRATIVE ONLY and is not a comprehensive listing of all functions and tasks performed by incumbents of this class.

#### **TASKS:**

Serves as survey party leader; conducts topographical, route, leveling, construction, as-built, differential, traverse and trigonometric surveys; instructs rod person on proper surveying methods; locates boundary and section corners; checks surveys; records field measurements and sketches; computes survey data; prepares plats; conducts and provides on-the-job training to new and or temporary employees.

Reduces survey notes, drafts out survey notes on drafting table or computer and finalizes drawing; instructs and oversees other technicians or student workers in drafting assignments; assigns and reviews work that involves calculating distances, volumes and area from profiles; plans, designs and prepares maps, charts and other illustrative materials; establishes elevations, final and profile grades; researches, assembles and records data; inventories drafting and surveying equipment; upgrades computer software and equipment.

Oversees field construction activities to ensure work is within design specifications; performs grade checks, staking, cut and fill calculations and on site design modifications; conducts field evaluations, investigation and research; evaluates projects for repairs, rehabilitation or construction; prepares, maintains and updates project folders; compiles status reports; draws construction plans and elevations routes survey design as necessary; prepares design with notes and drawings; visits site and performs construction stake outs; prepares material specifications and cost estimates.

#### **KNOWLEDGE, SKILLS AND OTHER CHARACTERISTICS:**

Knowledge of Geographical Information System (GIS) and Global Positioning System (GPS) methods and practices.

Knowledge of engineering plans, maps and specifications.

Knowledge of computer hardware, software and peripherals related to area of assignment.

Knowledge of surveying and mapping methods and practices.

Knowledge of computer aided drafting and design practices and methods.

Knowledge of recordkeeping and file maintenance practices.

Skill in utilizing verbal and written communication for development of reports and legal documents.

Skill in utilizing computer software to develop designs, drafting, maps and reports.

Skill in utilizing customer service techniques when responding to inquiries and complaints.

Skill in researching, analyzing and interpreting technical information and drawing valid conclusions.

Skill in prioritizing, scheduling, assigning and reviewing work.

Skill in developing specifications and projecting cost estimates.

Skill in establishing and maintaining effective working relationships.

**PHYSICAL REQUIREMENTS AND WORK ENVIRONMENT:** Work requires carrying up to 85 pounds of equipment when hiking several miles to sites for mapping and GPS surveys with exposure to all types of adverse weather conditions.

**SENIOR ENGINEERING TECHNICIAN**

**MINIMUM QUALIFICATIONS:**

- A high school diploma or GED; and two (2) years engineering technician work experience.

**PREFERRED QUALIFICATIONS:**

- An Associate's degree in Engineering or related field.
- Training in Surveying or AutoCAD application.

**SPECIAL REQUIREMENTS:**

- Possess a valid state driver's license.

**Supplemental Requirements:**

Incumbent must obtain a valid Navajo Nation Vehicle Operator's Permit within 90 days of date of hire.

Depending upon the needs of the Nation, some incumbents of the class may be required to demonstrate fluency in both the Navajo and English languages as a condition of employment.