A professional surveyor has many options...

"It's exciting to see construction projects progress from the initial surveys of the raw land to a finished construction project."

Matt Riegner
Transportation Survey Technician
PennDOT, Williamsport, PA

"I'm always being challenged to apply surveying principles, technology, and creative thinking to my specialty of surveying in underground heavy construction—particularly tunnels and rapid transit."

Don Falken, LS, CST IV
Capital Projects Management
Washington Metropolitan Area Transit Authority
Washington, D.C.

"Surveyors wear several hats at any given time. Construction, engineering, civil, and surveyors measure distances between points on a piece of property for which the original survey could date back hundreds of years. Geodesists determine the size and shape of the Earth and the precise location of points on its surface. Geological surveyors map the shape, contour, and texture of the land under water. Geologists and geophysicists study the Earth's surface within a centimeter. This is very exciting and has a huge impact on how businesses, governments, and landowners manage the land."

David R. Doyle, Chief Geodetic Surveyor (Retired)
National Geodetic Survey, Silver Spring, MD

"Surveyors have several hats at any given time. We may have to be historians, detectives, and mathematicians. We also need knowledge of geology, forestry, hydrology, and botany on a project. Every project is different and you will learn something new on a daily basis."

Eric Hearn, PLS
Project Manager
Stantec, Riverdale, NV

"Geodesy has undergone a tremendous change in the past 10–15 years with the development of GPS. We can now pinpoint the location of something on the Earth's surface within a centimeter. This is very exciting and has a huge impact on how businesses, governments, and landowners manage the land."

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Photogrammetrist and Remote Sensing Analyst

These specialists gather information about a site without actually coming in contact with it. Aerial photography and satellite imagery are examples of data collected. The surveyors are good for land inaccessible by foot or large areas that need to be surveyed quickly. For example, a photogrammetrist may be hired to track the movement of a bridge in a large body of water after an environmental accident.

Forensic Surveyor and Expert Witness Specialist

Federal, state, and local laws play a large part in surveyors' careers. A licensed surveyor can clarify and resolve legal disputes or prepare plans of an industrial accident. Surveyors who build reputations as expert witnesses are in high demand. Being an expert witness requires extensive knowledge about a particular area of surveying and many years of experience.

Topographic/Hydrographic Surveyor

Topographic surveyors measure and map the shape, contour, and location of land features such as valleys, mountaintops, and man-made objects on the surface of the land and below bodies of water. Underwater topographic surveying is known as hydrography. This type of surveying is important when determining erosion, guiding dredging projects, exploring for oil and natural gas, and marking underwater hazards. Hydrographic surveyors use specialized equipment to gather data and draw maps for many clients, including the shipping industry, government researchers, oil companies, and utility networks.
Surveyors can be assured of...

**Jobs**
Job opportunities are plentiful, exciting, and varied. Technology advancements in recent years will keep the demand for surveyors high. In fact, the Bureau of Labor Statistics in the U.S. Department of Labor predicts a 10 to 20 percent increase in the number of jobs.

**Options**
Surveyors have a number of paths from which to choose. They can be CEOs of firms, expert witnesses in court, business owners, researchers, computer specialists, mapmakers, and even crime and accident investigators. They work outdoors and indoors, in mountainous terrain and the city.

**Professionalism**
Licensing and continuing education play a large part in the professionalism found in surveying. Because most surveys become legal documents, all states require that licensed surveyors review and verify the data and resulting maps. Survey technicians can pursue four levels of certification, often leading to increased responsibility and salary advancement.

**Technology**
Today’s surveyors use cutting-edge technology to collect and analyze data. High precision GPS equipment, 3D laser scanning systems, robotic total stations, and intricate geographic information systems challenge surveyors to apply increasingly complex technology to measure and map our world.

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### How to Become a Surveyor

In general, people who like surveying also like math—primarily geometry and trigonometry. The field attracts people with geology, forestry, history, and astronomy backgrounds, too. Accredited college programs throughout the country—sometimes called geomatics engineering—offer two-year and four-year degrees. Visit our Web site, www.nспор.com, to see a list of accredited surveying education programs.

Getting a license is important to advancing in a surveying career. Every state requires a licensed surveyor to verify and sign each finished survey. States set their own laws, requirements, and procedures for surveyors to obtain their license. After their education, surveyors must obtain work experience under the supervision of a licensed surveyor. Then surveyors can take an exam for the state in which they will work. Many surveyors pursue a license in multiple states, especially when they work for large firms.

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**Surveying is a profession—not a trade.**
Rita Lerner, PLS
City Surveyor, retired
Las Vegas, Nevada

“Where I finish college, I know I won’t say, can’t find a job? Instead I’ll say, where would I like to work? The job opportunities are definitely available.”

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**Surveyors of the future will do well. Technology constantly advances in our field. Even though I’ve been a surveyor for many years, I learn something new every day.**
M. Greg Johnson, PE, PLS
Land Engineering Supervisor
Georgia Power Company, Atlanta, Georgia

“I tell people that the only way they can get to know what it’s like is to spend a summer working on a crew and asking questions. You don’t have to have a degree or experience to help on a crew for a summer job. It will give you a chance to see what surveying is all about.”

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**“If you enjoy the challenges of new technologies and performing different tasks, then this career is for you.”**
Jeff Warner, US. President
Jeff Warner Land Surveying Inc.
Manassas, Virginia

**“My first surveying class in college opened a whole world to me. I like surveying because every problem has a resolution. You just have to know how to find it.”**
Kelly L. Miller
Purdue University
West Lafayette, Indiana

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**Professional Surveying**
A career without boundaries

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