

The Surveying Profession

1. What do you think about the profession of a surveyor?

2. Do you know what tasks a surveyor performs in his work?

Land or boundary surveying is classified as a learned profession because the modern practitioner needs a wide background of technical training and experience and must exercise a considerable amount of independent judgement. Registered (licensed) professional surveyors must have a thorough knowledge of mathematics - particularly geometry and trigonometry with some calculus; a solid understanding of surveying theory, instruments and methods in the areas of geodesy, photogrammetry, remote sensing, cartography and computers; some competence in economics (including office management, geography, geology, astronomy and dendrology; and a familiarity with laws pertaining to land and boundaries. They should be knowledgeable in field operation and computations and able to do neat drafting. Above all, they are governed by a professional code of ethics, and are expected to charge reasonable fees for their work.

The personal qualifications of surveyors are as important as their technical ability in dealing with the public. They must be patient and tactful with clients and their sometimes hostile neighbours. Few people are aware of the painstaking research of old records before field work is started. Diligent, time-consuming effort may be needed to locate corners on nearby tracts for checking purposes as well as to find corners for the property in question.

Permission to trespass on private property or to cut obstructing tree branches and shrubbery must be obtained through a proper approach. Such privileges are not conveyed by a surveying license or by employment in a state highway department (but a court order can be secured if a landowner objects to necessary surveys).

To qualify for registration as either a professional Land Surveyor (LS) or an Engineer (PE) in the USA it is necessary to have an appropriate college degree. In addition, candidates take a Surveyor-in-Training (SIT) or Engineer-in-Training (EIT) test, acquire two or more years of additional practical experience, and then must pass a two-day written examination.

Future Challenges in Surveying

Surveying has experienced a revolution in the way data are stored, retrieved and shared. This is due in large part to developments in computer technology. The demands on surveyors will be very different in a few years from what they are now.

The geodetic control network must be maintained and supplemented to meet requirements of high-order future surveys. New topographic maps with larger scales, and digital map products, are necessary for better planning and design. Existing maps of our rapidly expanding urban areas need revision and updating to reflect changes, and more and better map products are needed in our older cities to support urban renewal programs and infrastructure maintenance and modernisation.

Long-range planning and assessment of environmental impacts of proposed construction projects call for maps and other data. Land Information Systems and Geographic Information Systems that contain a variety of land-related data such as ownership, location, acreage, soil types, land uses and natural resources must be designed, developed and maintained. Cadastral surveys of the yet unsurveyed public lands are essential. Monuments set many years ago by the original surveyors have to be recovered and remonumented for preservation of property boundaries. Appropriate surveys with very demanding accuracies are necessary to position drilling rigs as mineral and oil explorations press farther offshore. And in the space program, the desire for maps of neighbouring planets will continue.

Exam

Read the above text carefully and try to summarize it by highlighting the key words. (Min 200 and Max: 300 words)

Handwriting with Family name, Surname , specialty