

LAND SURVEYING TERMS WITH DEFINITIONS

Acres – An area of land equal to equal to 43,560 square feet (4047 square meters).

Baseline - A line between two points on the earth's surface and the direction and distance between them. In the U.S. Public land surveying system, a surveyed east-west (i.e. latitudinal) reference line, often hundreds of miles in length, from which tiers of townships are surveyed to the north and south. There are approximately two dozen baselines in the lower 48 states.

Benchmark - A point of reference by which something can be measured. A post or other permanent mark established at a known elevation that is used as the basis for measuring the elevation of other topographical points.

Boundary - a line that marks the limits of an area; a dividing line.

Chain - A unit of length used in the subdivision of land. The chain was a convenient length for land measurement because 10 square chains = 1 acre. Chains are no longer used today.

Compass - a device for determining directions by means of a magnetic needle or group of needles turning freely on a pivot and pointing to the magnetic north.

Corner - The beginning or end point of any survey line. The term corner does not imply the property was in any way square.

Flag - A bright plastic ribbon tied to a lath stake. Used to mark points along a survey line.

Geodesy - Geodesy is the science of accurately measuring and understanding the Earth's geometric shape, orientation in space, and gravity field.

Geodetic - A survey of a large land area in which corrections are made for the curvature of the earth's surface.

Geography – The scientific field that is devoted to the study of the Earth's landforms, oceans, environment and ecosystems, as well as the interactions between the human society and their environment.

GIS - Geographic Information System, is a framework for gathering, managing, and analyzing data. Rooted in the science of geography, GIS analyzes spatial location and organizes layers of information into visualizations using maps and 3D scenes.

GPS - Global Positioning System, is a global navigation satellite system that uses at least 24 satellites, a receiver and algorithms to provide location, velocity and time synchronization for air, sea and land travel.

Ground - The surface of a planet (such as the earth or Mars).

Hydrography - The science of surveying and charting bodies of water, such as seas, lakes, and rivers.

Intersection - A point at which two or more things intersect, especially roads.

Land - The part of the earth's surface that is not covered by water, as opposed to the sea or the air.



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Map - A drawing of a particular area such as a city, a country, or a continent, showing its main features as they would appear if you looked at them from above.

Measure - To discover the exact size or amount of something.

Metes - A method of describing land by measure of length (metes) of the boundary lines (bounds). i.e. the direction and distance of a property line.

Monument - A permanently placed survey marker such as a stone shaft sunk into the ground.

Plat - A drawing of a parcel of land. More specifically, the drawing created by the surveyor that shows the field work, with bearings, distances, etc.

Point - An exact position or location on a plane surface.

Pole – A bar made of wood or metal and normally held vertical, upon which different instruments can be mounted: a prism, a GPS device, etc. It may be manufactured with a predetermined length (e.g., 2 meters) or may be graduated for different heights or stages.

Rodman - A surveyor's assistant who holds the leveling rod.

Surveyor – A precision measurement makers and can be legal arbiters of where boundary lines fall. A land surveyor has a range of expertise from mathematics to the law to high tech equipment and software.

Tangent - A line that touches a circle at exactly one point and which makes a right angle with the circle's radius. For example, a circle that fills a square has four tangent points and the square's sides are tangent lines. An arc (curve) in a survey is part of a larger circle.

Tie - A survey line that connects a point to other surveyed lines.

Topography - A detailed map of the surface features of land. It includes the mountains, hills, creeks, and other bumps and lumps on a particular part of the earth.

Transit – An instrument used by a land surveyor to measure both horizontal and vertical angles.

