

Rules of Contour Lines

A contour line connects points of equal elevation.

Contour lines are endless lines. They either close upon themselves within the limits of the map or at some point outside the map area.

Contour lines never branch or fork.

Contour lines never cross one another, except in the case of an overhanging cliff, a relatively rare occurrence on standard topographic maps. In most cases, cliffs do not show enough overhang to catch the contour. Generally, a cliff is indicated by the piling of contours so that they resemble one thick line.

Closely spaced contour lines represent steep slopes; widely spaced contour lines represent gentle slopes.

The particular spacing of contour lines along a slope will indicate the exact type of slope. Every fifth contour line is represented by a heavier line and is marked to indicate its elevation. For example if the contour interval is 20 feet, the 100, 200, 300, etc. lines would be darker. They would also be marked with their corresponding elevation number (100, 200, 300, etc.) periodically along the line. These lines are known as index contours.

The inside of a closed contour represents the direction of increasing elevation, except in the special case of hachure marks.

Depressions in the Earth's surface (such as sinkholes in limestone topography, kettles in glacial areas, or blow-outs in arid regions) are shown by closed contours which have tick marks on the inside. These tick marks are called hachure marks by the USGS. (United States Geological Survey).

When crossing a valley, contours lines form a V or a U shape that points upstream.

Perfectly horizontal surfaces cannot be shown by contour lines.

Vertical surfaces, such as cliffs, cannot be shown directly by contour lines, but may be represented by running all the contour lines together.

The altitude represented by all contour lines is measured from mean sea level, unless a different datum plane is specified on the map.

Contour lines are shown generally as solid lines. Supplementary lines, drawn at less than the regular contour interval, are found on some maps and are most often shown as dashed lines.