Topographic Map Symbols

From the USGS http://egsc.usgs.gov/isb/pubs/booklets/symbols/

What is a Topographic Map?

A map is a representation of the Earth, or part of it. The distinctive characteristic of a topographic map is that the shape of the Earth's surface is shown by contour lines. Contours are imaginary lines that join points of equal elevation on the surface of the land above or below a reference surface, such as mean sea level. Contours make it possible to measure the height of mountains, depths of the ocean bottom, and steepness of slopes.

A topographic map shows more than contours. The map includes symbols that represent such features as streets, buildings, streams, and vegetation. These symbols are constantly refined to better relate to the features they represent, improve the appearance or readability of the map, or reduce production cost.

Consequently, within the same series, maps may have slightly different symbols for the same feature. Examples of symbols that have changed include built-up areas, roads, intermittent drainage, and some lettering styles. On one type of large-scale topographic map, called provisional, some symbols and lettering are hand drawn.

Reading Topographic Maps

Interpreting the colored lines, areas, and other symbols is the first step in using topographic maps. Features are shown as points, lines, or areas, depending on their size and extent. For example, individual houses may be shown as small black squares. For larger buildings, the actual shapes are mapped. In densely built-up areas, most individual buildings are omitted and an area tint is shown. On some maps, post offices, churches, city halls, and other landmark buildings are shown within the tinted area.

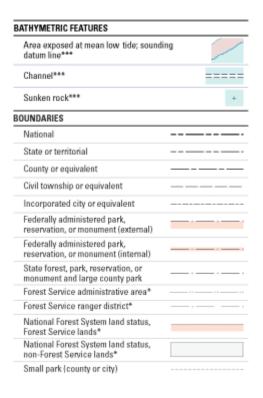
The first features usually noticed on a topographic map are the area features, such as vegetation (green), water (blue), and densely built-up areas (gray or red).

Many features are shown by lines that may be straight, curved, solid, dashed, dotted, or in any combination. The colors of the lines usually indicate similar classes of information: topographic contours (brown); lakes, streams, irrigation ditches, and other hydrographic features (blue); land grids and important roads (red); and other roads and trails, railroads, boundaries, and other cultural features (black). At one time, purple was used as a revision color to show all feature changes. Currently, purple is not used in our revision program, but purple features are still present on many existing maps.

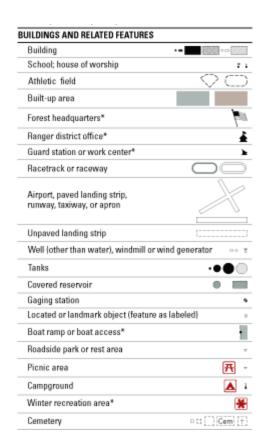
Various point symbols are used to depict features such as buildings, campgrounds, springs, water tanks, mines, survey control points, and wells. Names of places and features are shown in a color corresponding to the type of feature. Many features are identified by labels, such as "Substation" or "Golf Course."

Topographic contours are shown in brown by lines of different widths. Each contour is a line of equal elevation; therefore, contours never cross. They show the general shape of the terrain. To help the user determine elevations, index contours are wider. Elevation values are printed in several places along these lines. The narrower intermediate and supplementary contours found between the index contours help to show more details of the land surface shape. Contours that are very close together represent steep slopes. Widely spaced contours or an absence of contours means that the ground slope is relatively level. The elevation difference between adjacent contour lines, called the contour interval, is selected to best show the general shape of the terrain. A map of a relatively flat area may have a contour interval of 10 feet or less. Maps in mountainous areas may have contour intervals of 100 feet or more. The contour interval is printed in the margin of each U.S. Geological Survey (USGS) map.

Bathymetric contours are shown in blue or black, depending on their location. They show the shape and slope of the ocean bottom surface. The bathymetric contour interval may vary on each map and is explained in the map margin.







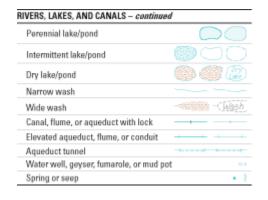
CONTROL DATA AND MONUMENTS – continued Vertical control	
Third-order or better elevation, with tablet	$_{\rm BM} \times _{\rm 5290}$
Third-order or better elevation, recoverable mark, no tablet	× 521
Bench mark coincident with found section corner	BM 5280
Spot elevation	× 762
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Formlines	
Glacial advance	E
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Neatline	39°15′ 90°37′30″
Graticule tick	- 55
Graticule intersection	+
Datum shift tick	-+-
ate plane coordinate systems	
Primary zone tick	640 000 FEET
Secondary zone tick	247 500 METERS
Tertiary zone tick	260 000 FEET
Quaternary zone tick	98 500 METERS
Quintary zone tick	320 000 FEET
niversal transverse metcator grid	
UTM grid (full grid)	173
UTM grid ticks*	269

LAND SURVEYS	
Public land survey system	
Range or Township line	
Location approximate	
Location doubtful	
Protracted	
Protracted (AK 1:63,360-scale)	
Range or Township labels	R1E T2N R3W T4S
Section line	
Location approximate	
Location doubtful	
Protracted	
Protracted (AK 1:63,360-scale)	
Section numbers	1 - 36 1 - 38
Found section corner	
Found closing corner	i_
Witness corner	+WC
Meander corner	
Weak corner*	
Other land surveys	
Range or Township line	
Section line	
Land grant, mining claim, donation land claim, or tract	
Land grant, homestead, mineral, or	
other special survey monument	
Fence or field lines	
MARINE SHORELINES	
Shoreline	
Apparent (edge of vegetation)***	
Indefinite or unsurveyed	
MINES AND CAVES	
Quarry or open pit mine	×
Gravel, sand, clay, or borrow pit	24
Mine tunnel or cave entrance	-
Mine shaft	
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Prospect	0.00001
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	DOWN Callings

Standard guage railroad, single track	
Standard guage railroad, multiple track	
Narrow guage railroad, single track	-
Narrow guage railroad, multiple track	-
Railroad siding	
Railroad in highway	
Railroad in road Railroad in light duty road*	
Railroad in light duty road*	
Railroad underpass; overpass	+
Railroad bridge; drawbridge	
Railroad tunnel	
Railroad yard	-
Railroad turntable; roundhouse	+
ERS, LAKES, AND CANALS	
Perennial stream	~~~
Perennial river	
Intermittent stream	
Intermittent river	
Disappearing stream	
Falls, small	
Falls, large	
Rapids, small	
Rapids, large	133
	1 /
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Masonry dam	1 //
	1 71
Dam with lock	-
Dam carrying road	1 /1



Marsh or swamp	
Submerged marsh or swamp	11-
Wooded marsh or swamp	1
Submerged wooded marsh or swamp	
Land subject to inundation	

Please note: Roads on Provisional-edition maps are not classified as primary, secondary, or light duty. These roads are all classified as improved roads and are symbolized the same as light duty roads. Primary highway Secondary highway Light duty road, paved* Light duty road, gravel* Light duty road, dirt* Light duty road, unspecified* Unimproved road Unimproved road* 4WD road* Trail Highway or road with median strip Highway or road under construction Highway or road underpass; overpass Highway or road tunnel Road block, berm, or barrier* Gate on road* Trailhead*

