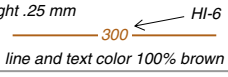
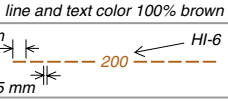
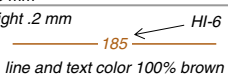
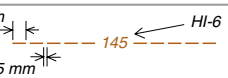
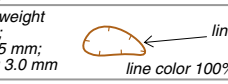
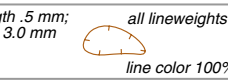
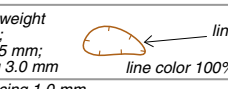
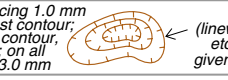
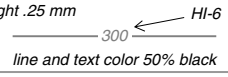
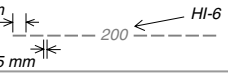
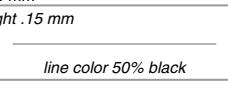
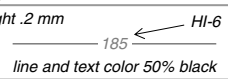
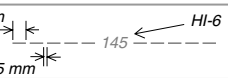
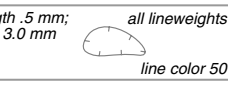
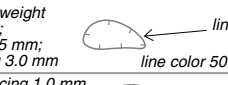
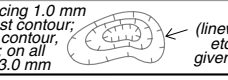
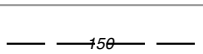
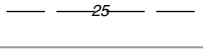
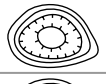
30—TOPOGRAPHIC AND HYDROGRAPHIC FEATURES

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS*	NOTES ON USAGE*
30.1—Topographic, bathymetric, and glacier contours				
30.1.1	Index topographic contour (1st option)			On most maps, every fourth or fifth contour is an index contour. Usually only index and supplementary contours are labeled. Negative values must be preceded by a minus (–) sign.
30.1.2	Index topographic contour (1st option)—Approximate or indefinite			
30.1.3	Intermediate topographic contour (1st option)			
30.1.4	Intermediate topographic contour (1st option)—Approximate or indefinite			
30.1.5	Supplementary topographic contour (1st option)			
30.1.6	Supplementary topographic contour (1st option)—Approximate or indefinite			
30.1.7	Index topographic depression contour (1st option)			Hachures are added to indicate closed areas of low values.
30.1.8	Intermediate topographic depression contour (1st option)			
30.1.9	Supplementary topographic depression contour (1st option)			
30.1.10	Topographic depression contours (1st option)—Showing tick spacing of adjacent contours			
30.1.11	Index topographic contour (2nd option)			On most maps, every fourth or fifth contour is an index contour. Usually only index and supplementary contours are labeled. Negative values must be preceded by a minus (–) sign.
30.1.12	Index topographic contour (2nd option)—Approximate or indefinite			
30.1.13	Intermediate topographic contour (2nd option)			
30.1.14	Intermediate topographic contour (2nd option)—Approximate or indefinite			
30.1.15	Supplementary topographic contour (2nd option)			
30.1.16	Supplementary topographic contour (2nd option)—Approximate or indefinite			
30.1.17	Index topographic depression contour (2nd option)			Hachures are added to indicate closed areas of low values.
30.1.18	Intermediate topographic depression contour (2nd option)			
30.1.19	Supplementary topographic depression contour (2nd option)			
30.1.20	Topographic depression contours (2nd option)—Showing tick spacing of adjacent contours			

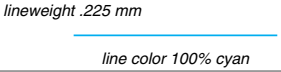
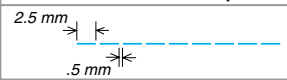
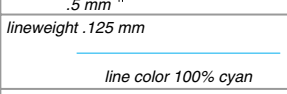
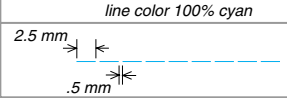
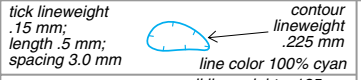
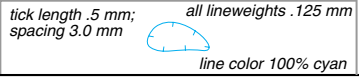
For more information, see general guidelines on pages A-i to A-v.

30—TOPOGRAPHIC AND HYDROGRAPHIC FEATURES (continued)

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS*	NOTES ON USAGE*
30.1—Topographic, bathymetric, and glacier contours (continued)				
30.1.21	Index primary bathymetric contour		lineweight .275 mm; HI-6; 250	On most maps, every fourth or fifth contour is an index contour. Do not break contours for contour values. Bathymetric contour values are always given in "below sea-level" units, so they are not preceded by a minus (–) sign.
30.1.22	Index primary bathymetric contour—Approximate		5.0 mm; 1.5 mm; HI-6; 150	
30.1.23	Primary bathymetric contour		lineweight .175 mm; HI-6; 50	
30.1.24	Primary bathymetric contour—Approximate		5.0 mm; 1.5 mm; HI-6; 25	
30.1.25	Supplementary bathymetric contour		lineweight .2 mm; HI-6 (100% black); 12; line color 40% black	
30.1.26	Supplementary bathymetric contour—Approximate		5.0 mm; 1.5 mm; HI-6 (100% black); 8	
30.1.27	Index bathymetric contour		lineweight .25 mm; HI-6 (100% black); 20; line color 100% cyan	
30.1.28	Index bathymetric contour—Approximate		5.0 mm; 1.5 mm; HI-6 (100% black); 10	
30.1.29	Intermediate bathymetric contour		lineweight .15 mm; HI-6 (100% black); 2; line color 100% cyan	
30.1.30	Intermediate bathymetric contour—Approximate		5.0 mm; 1.5 mm; HI-6 (100% black); 1	
30.1.31	Index primary bathymetric depression contour		tick lineweight .175 mm; length .375 mm (spacing varies); contour lineweight .275 mm	Hachures are added to the lowest contour(s) to indicate a closed area of low values (depression) and also an area of higher value (rise) inside a depression.
30.1.32	Index primary bathymetric rise contour (inside depression)			
30.1.33	Primary bathymetric depression contour		tick length .375 mm (spacing varies); all lineweights .175 mm	
30.1.34	Primary bathymetric rise contour (inside depression)			
30.1.35	Supplementary bathymetric depression contour		tick lineweight .175 mm; length .375 mm (spacing varies); contour lineweight .2 mm; line color 40% black	
30.1.36	Supplementary bathymetric rise contour (inside depression)			
30.1.37	Index bathymetric depression contour		tick lineweight .175 mm; length .375 mm (spacing varies); contour lineweight .25 mm; line color 100% cyan	
30.1.38	Index bathymetric rise contour (inside depression)			
30.1.39	Intermediate bathymetric depression contour		tick length .375 mm (spacing varies); all lineweights .15 mm; line color 100% cyan	
30.1.40	Intermediate bathymetric rise contour (inside depression)			
30.1.41	Bathymetric rise contour (inside depression)—Showing hachure spacing for closed contours less than 12.7 mm in circumference		tick spacing 1.0 mm; show ticks on lowest two contours only	
30.1.42	Bathymetric depression contours—Showing hachure spacing for closed contours less than 12.7 mm in circumference		tick spacing 1.0 mm; show ticks on lowest contour only	
30.1.43	Bathymetric depression or rise contours—Showing hachure spacing for closed contours between 12.7 mm and 76.2 mm in circumference		tick spacing 2.0 mm	
30.1.44	Bathymetric depression or rise contours—Showing hachure spacing for closed contours more than 76.2 mm in circumference		tick spacing 2.5 mm	

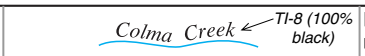
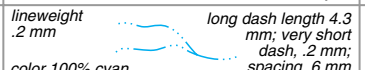
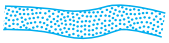
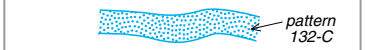
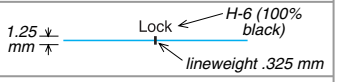
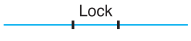
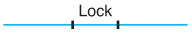
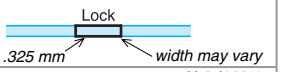
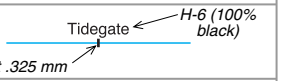
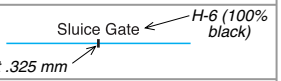
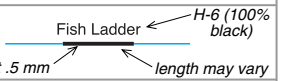
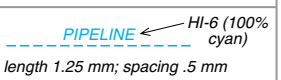
*For more information, see general guidelines on pages A-i to A-v.

30—TOPOGRAPHIC AND HYDROGRAPHIC FEATURES (continued)

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS*	NOTES ON USAGE
30.1—Topographic, bathymetric, and glacier contours (continued)				
30.1.45	Index contour on glacier or permanent snowfield			On most maps, every fourth or fifth contour is an index contour.
30.1.46	Index contour on glacier or permanent snowfield—Approximate or indefinite			
30.1.47	Intermediate contour on glacier or permanent snowfield			
30.1.48	Intermediate contour on glacier or permanent snowfield—Approximate or indefinite			
30.1.49	Index depression contour on glacier or permanent snowfield			Hachures are added to indicate closed areas of low values.
30.1.50	Intermediate depression contour on glacier or permanent snowfield—Approximate or indefinite			

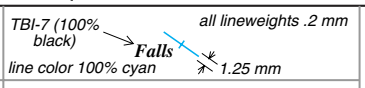
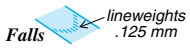
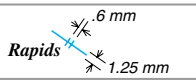
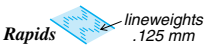
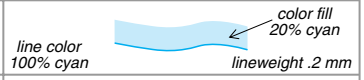
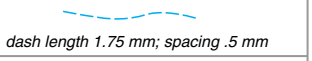
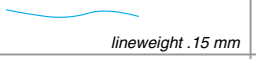
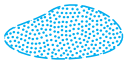
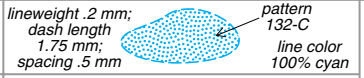
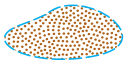
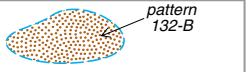
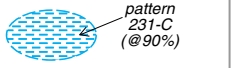
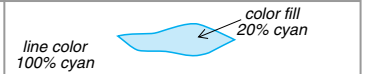
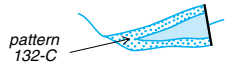
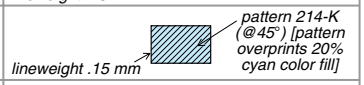
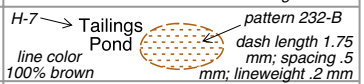
For more information, see general guidelines on pages A-i to A-v.

30—TOPOGRAPHIC AND HYDROGRAPHIC FEATURES (continued)

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS*	NOTES ON USAGE*
	30.2—Drainage features			
30.2.1	Perennial river, stream, or creek (single-line drainage)			Letter size and spacing may be increased along longer features.
30.2.2	Intermittent river, stream, creek, or wash (single-line drainage)			
30.2.3	Perennial river, stream, or creek (double-line drainage)			Letter size and spacing may be increased along wider features.
30.2.4	River mileage marker			
30.2.5	Intermittent river, stream, creek, or wash (double-line drainage)			
30.2.6	Braided river, stream, or creek			
30.2.7	Canal or ditch (single-line drainage)			
30.2.8	Canal or ditch (double-line drainage)			
30.2.9	Canal lock (single-line drainage) (1st option)			
30.2.10	Canal lock (single-line drainage) (2nd option)			
30.2.11	Canal lock (double-line drainage)			
30.2.12	Floodgate			
30.2.13	Tidegate			
30.2.14	Sluice gate			
30.2.15	Fish ladder			
30.2.16	Aqueduct (single-line drainage)			
30.2.17	Aqueduct (double-line drainage)			
30.2.18	Underground or underwater aqueduct			
30.2.19	Aboveground water pipeline			
30.2.20	Underground or submerged water pipeline			
30.2.21	Elevated water pipeline			
30.2.22	Flume			
30.2.23	Siphon			
30.2.24	Penstock			

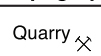
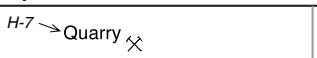
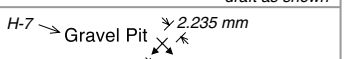
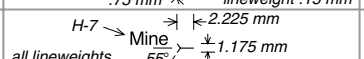
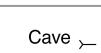
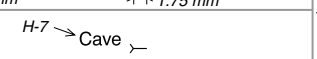
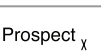
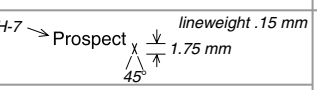
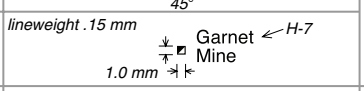
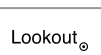
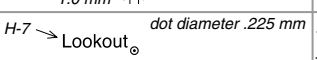
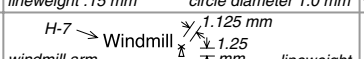
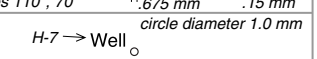
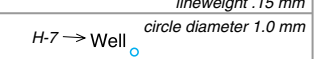
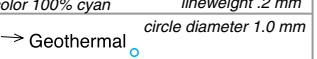
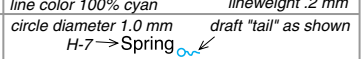
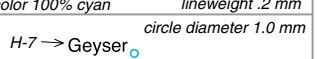
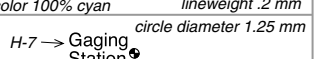
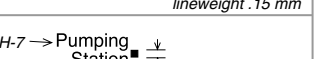
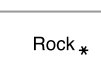
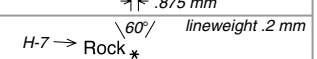
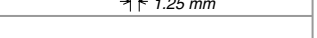
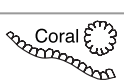
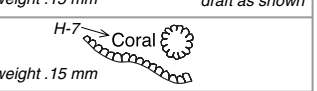
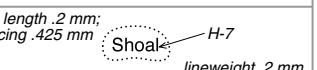
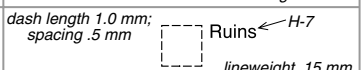
*For more information, see general guidelines on pages A-i to A-v.

30—TOPOGRAPHIC AND HYDROGRAPHIC FEATURES (continued)

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS*	NOTES ON USAGE*
	30.2—Drainage features (continued)			
30.2.25	Falls (single-line drainage)			
30.2.26	Falls (double-line drainage)			
30.2.27	Rapids (single-line drainage)			
30.2.28	Rapids (double-line drainage)			
30.2.29	Shoreline—Showing open water			
30.2.30	Indefinite or unsurveyed shoreline			
30.2.31	Approximate mean low water line			
30.2.32	Perennial lake or pond—Showing name			Letter size and spacing may be increased within larger features.
30.2.33	Intermittent lake or pond			
30.2.34	Dry lake or pond			
30.2.35	Land subject to inundation			
30.2.36	Reservoir with natural shoreline			
30.2.37	Dammed reservoir			
30.2.38	Area to be submerged behind dam			
30.2.39	Reservoir (uncovered) with man-made shoreline			
30.2.40	Covered water storage reservoir			
30.2.41	Salt flat			
30.2.42	Carolina bay			
30.2.43	Tailings pond			
30.2.44	Outline of glacier or permanent snowfield			
30.2.45	Outline of glacier or permanent snowfield—Form lines show glacial trend			
30.2.46	Marsh, wetland, swamp, or bog			
30.2.47	Mangrove area			
30.2.48	Rice field			

*For more information, see general guidelines on pages A-i to A-v.

30—TOPOGRAPHIC AND HYDROGRAPHIC FEATURES (continued)

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS*	NOTES ON USAGE*
30.3—Miscellaneous topographic and hydrographic features				
30.3.1	Open pit mine or quarry, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.2	Gravel, sand, clay, or borrow pit, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.3	Adit or mine tunnel entrance, as shown on topographic maps or on general-purpose or smaller scale maps			Rotate symbol so that long line points in direction of cave or mine entrance.
30.3.4	Cave entrance, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.5	Prospect, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.6	Mine shaft, as shown on topographic maps or on general-purpose or smaller scale maps—Showing name			
30.3.7	Landmark object, as shown on topographic maps or on general-purpose or smaller scale maps			Add label for type of object (as is shown for example of "lookout").
30.3.8	Windmill, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.9	Oil or gas well, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.10	Water well, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.11	Geothermal well, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.12	Spring, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.13	Geyser, fumarole, mud pot, or thermal spring, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.14	Gaging station, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.15	Pumping station, as shown on topographic maps or on general-purpose or smaller scale maps			
30.3.16	Rock			
30.3.17	Exposed wreck			
30.3.18	Coral reef			
30.3.19	Shoal			
30.3.20	Ruins			
30.3.21	Power transmission line			
30.3.22	Telephone line			
30.3.23	Underground gas or oil pipeline			
30.3.24	Aboveground gas or oil pipeline			

*For more information, see general guidelines on pages A-i to A-v.