

FM 21-31

DEPARTMENT OF THE ARMY FIELD MANUAL

TOPOGRAPHIC SYMBOLS

This copy is a reprint which includes
current pages from Change 1.

HEADQUARTERS, DEPARTMENT OF THE ARMY
APRIL 1961

CHANGE }
No. 1 }

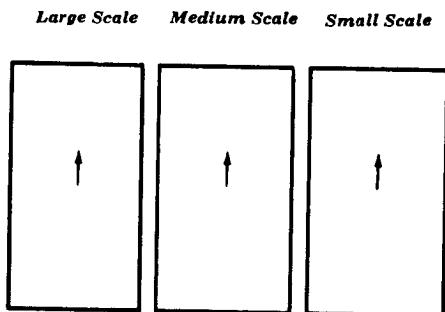
HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 31 December 1968

TOPOGRAPHIC SYMBOLS

FM 21-31, 19 June 1961, is changed as follows:

Page 7. Figure 7.1 is added after figure 7.

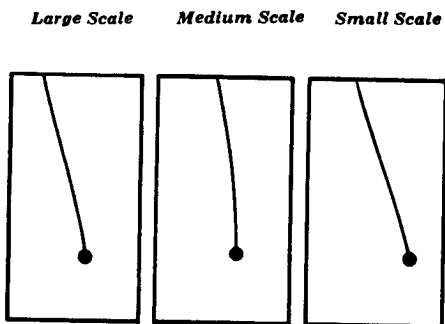
Figure 7.1. Direction of Flow. Shown only when direction of flow of stream or canal is not apparent.



Page 9. Figure 13, the title is changed to read "Dissipating Stream."

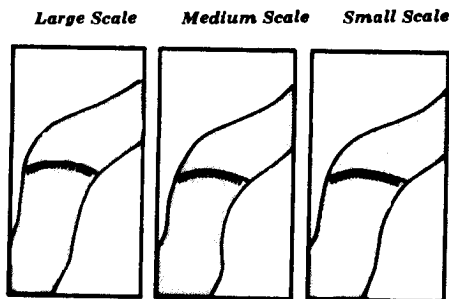
Page 9. Figure 13.1 is added after figure 13.

Figure 13.1. Disappearing Stream.



Page 9. Figure 15 is superseded as follows:

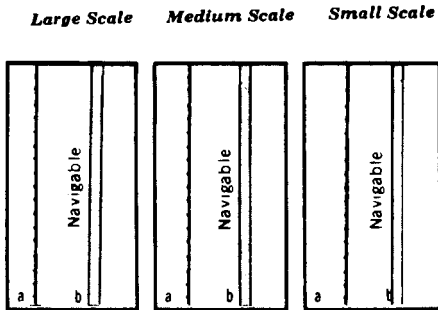
Figure 15. Large Falls.



Page 10. Figure 18 is superseded as follows:

Figure 18. Navigable Canal, In Operation.

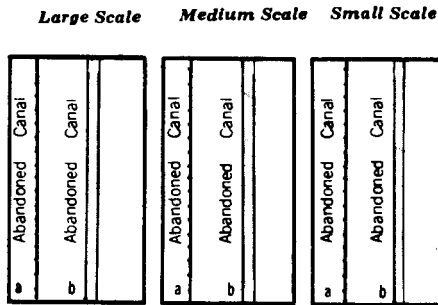
(a) Narrow. (b) Wide.



Page 10. Figure 19 is superseded as follows:

Figure 19. Abandoned Canal, Containing Water.

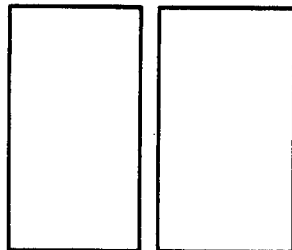
(a) Narrow. (b) Wide.



Page 24. Figure 70.1 is added after figure 70.

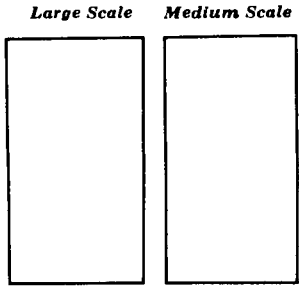
Figure 70.1. Limits of Ice, Sea Ice, Pack Ice.

Medium Scale Small Scale



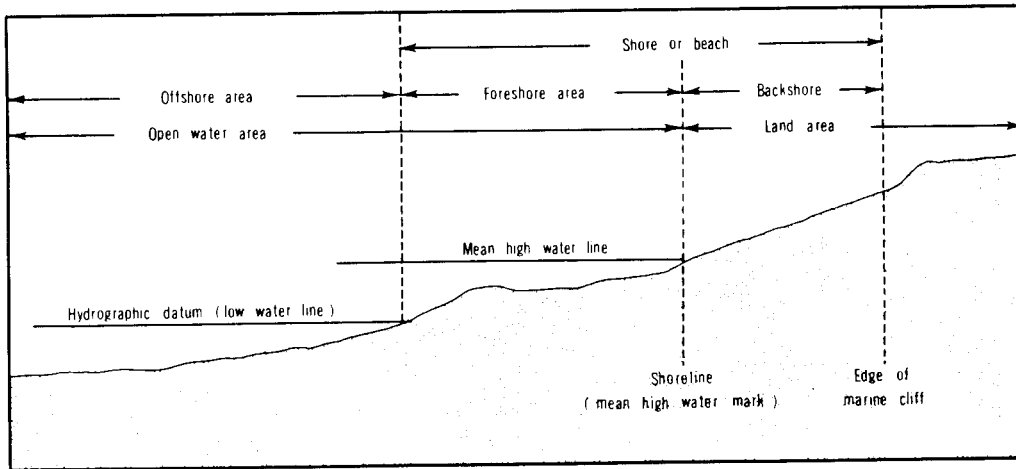
Page 27. Figure 75.1 is added after figure 75.

Figure 75.1. Scattered Trees.



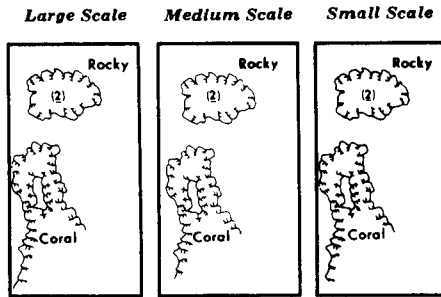
Page 29. Figure 82 is superseded as follows:

Figure 82. Definition of Coastal Terms.



Page 30. Figure 84 is superseded as follows:

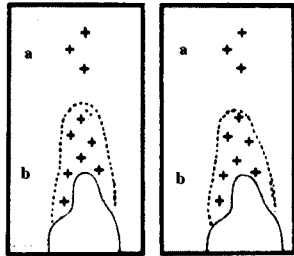
Figure 84. Reef or Ledge. Labeling indicates whether the reef is of rock or coral. The extent of uncovering of reefs at hydrographic datum is shown by labeling.



Page 30. Figure 84.1 is added after figure 84.

Figure 84.1. Submerged Reef or Ledge.

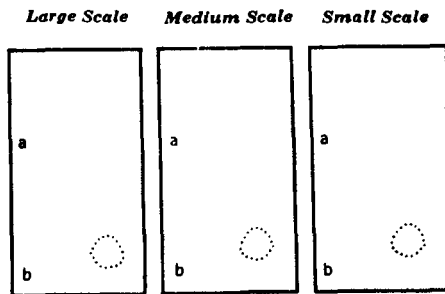
(a) Small area. (b) Large area.



Page 30. Figure 86 is superseded as follows:

Figure 86. Bare Rock, Exposed at Mean High Water.

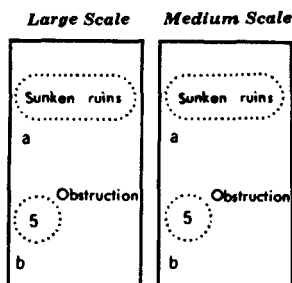
(a) Bare rocks. (b) Bare rocks, dangerous to navigation.



Page 31. Figure 89 is superseded as follows:

Figure 89. Sunken Danger, Other Than a Rock or a Wreck.

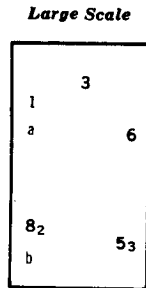
(a) Identified danger, depth unknown. (b) Unidentified danger, depth known.



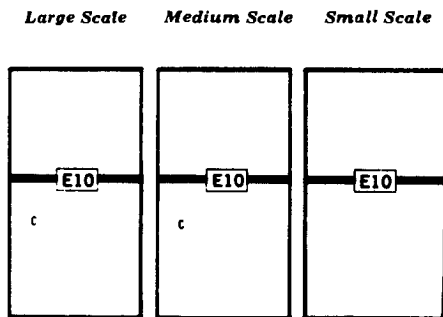
Page 32. Figure 91 is superseded as follows:

Figure 91. Soundings. A sounding is the measured depth of water at the hydrographic datum. The unit of measure may be fathoms, feet, meters, or fathoms and feet in combination, as indicated in the legend.

(a) Soundings. (b) Soundings in fathoms with fractional values in feet.



Page 44. Figure 124, the symbol "(c) International," is added to the legend line and illustration as follows:



Page 86. Paragraphs 23.1 and 23.2 and figures 243 through 332 are added as follows:

23.1. Joint Operations Graphics

a. Purpose and Scope. Joint Operations Graphics are produced in both ground and air versions. The ground version is designated as Series 1501; the air version is designated as Series 1501 AIR. Both versions are designed to provide common base graphics for use in combined operations by the ground and air forces of allied nations. The topographic information is identical on both the ground and air versions.

b. Unit of Vertical Measure. On the ground version, elevation and contour values are shown in meters. These values are converted to foot units on the air version.

c. Aeronautical Information. Both versions contain identical information regarding aerodromes and obstructions to pilotage. The air version contains additional information concerning aids to air navigation.

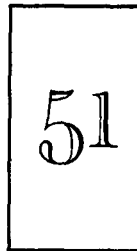
d. Shaded Relief. Both versions contain an identical representation of shading, to provide a rapid recognition of slope and landforms. The shading also serves as a means of correlating contours and elevations, with emphasis on the more significant terrain features.

e. Elevation Tints. Both versions contain a representative system of color tints which depict areas of the same elevation range. A key box on each version indicates the elevation ranges and their corresponding color tints.

j. Symbols. The following approved symbols for Joint Operations Graphics are in addition to, or different from, the standard medium-scale symbols shown in figures 1 through 242:

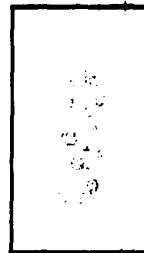
(1) *Elevations*. The following symbol is in addition to the elevation symbols shown in figures 227 through 233:

Figure 243. Highest Known Terrain Elevations. The highest known terrain elevations are shown within each 15-minute square as an aid to air navigation. The larger digit represents thousands of feet; the smaller digit represents hundreds of feet.



(2) *Vegetation*. The following symbol is different from the medium-scale symbol shown in figure 74:

Figure 244. Woods-Brushwood; Forest.



(3) *Roads in foreign areas.* The following figures show the approved symbols for roads in foreign areas:

Figure 245. Hard Surface, All-Weather Road, Two or More Lanes Wide. (a) Principal route. (b) Secondary route.

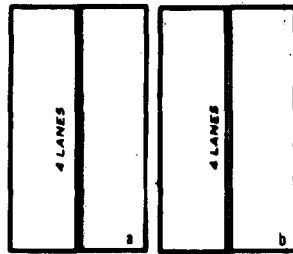


Figure 246. Hard Surface, All-Weather Road, One Lane Wide. (a) Principal route. (b) Secondary route.

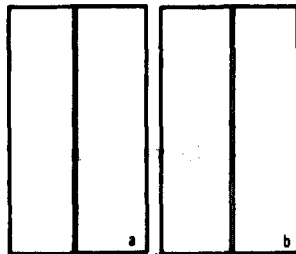


Figure 247. Loose or Light Surface, All-Weather Road, Two or More Lanes Wide. (a) Principal route. (b) Secondary route.

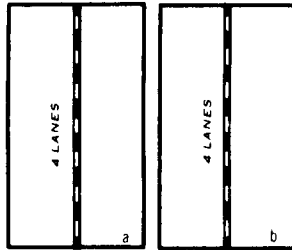


Figure 248. Loose or Light Surface, All-Weather Road, One Lane Wide. (a) Principal route. (b) Secondary route.

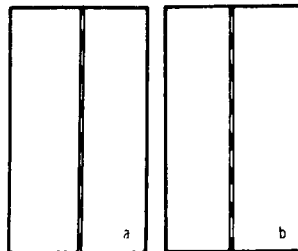


Figure 249. Loose Surface, Fair or Dry Weather Road. (a) Principal route. (b) Secondary route.

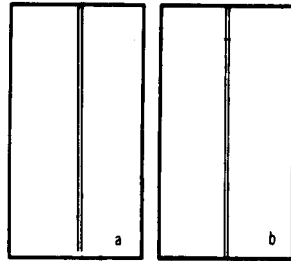


Figure 250. Cart Track. (a) Principal route. (b) Secondary route.

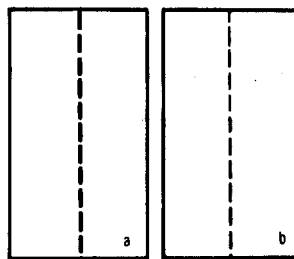


Figure 251. Footpath, Trail. (a) Principal route. (b) Secondary route.

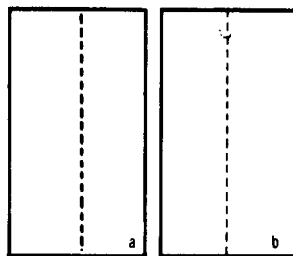


Figure 252. Road Interchange, Access, Cloverleaf.

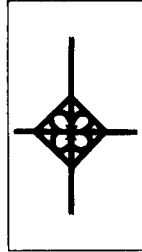


Figure 253. Dual Highway.

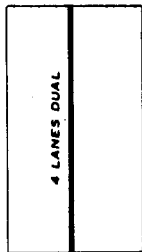
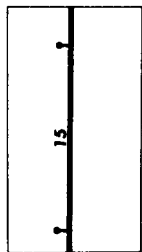


Figure 254. Distance Along Roads. Distances between selected populated places, road intersections, and road and railroad intersections are shown.



(4) *Populated places and landmark features.* The following figures show the approved symbols for populated places and landmark features which are different from, or in addition to, the symbols shown in figures 179 through 222:

Figure 255. Large Developed Areas. The outlined area generally shows that portion of a developed or urban area which comprises a dense concentration of structures. The limits of the outlined area have no relationship to political or administrative boundaries.



Figure 256. Native Settlement (Kampung or Kampong).

