



Standard Practice for Symbols and Markings for Use With Land Search Maps¹

This standard is issued under the fixed designation F 1846; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the symbols and markings to be used with land search maps to show resources, search coverage, status, and results.

1.2 Operational usage of these symbols and markings, the resources they represent, and maps are not included in this practice.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *Incident Command System Publications:*
Field Operations Guide ICS-420²

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *base map, n*—the master map or chart of the search area, normally maintained at the incident base or command post.

3.2 *base overlay, n*—the map overlay on which are placed the symbols and markings shown in Fig. 1 when it is desired to not mark on the base map.

3.3 *map overlay, n*—a transparent sheet placed over the base map on which markings and symbols are made. Overlays are used for symbols subject to change, to prevent marking the base map, or to avoid cluttering the base map.

4. Significance and Use

4.1 The base map and overlays are used in managing a search by graphically tracking progress, resource allocation, and results. Standard symbols and markings allow a person to

visually scan the map to obtain the status of the search without the need for a briefing or reading search documents.

4.2 Overlays are used for symbols which are likely to change during the search, that will cover other symbols or base map features, to prevent marking the base map, and to avoid too many markings at one time.

4.3 The symbols and colors have been chosen to be compatible with the symbols defined in Incident Command System Field Operations Guide ICS-420. This compatibility is either exact (for example, incident command post) or functional (for example, search area boundaries).

5. Procedure

5.1 Symbols and markings for use on the base map or base overlay shall be made in accordance with Fig. 1 and Table 1.

TABLE 1 Resource Colors

NOTE 1—Search crew are resources whose assignment will be carried out on foot. Search patrols' assignments are carried out by some other means, such as by vehicle, horseback, boat, and so forth.

Resource	Color
Search crew	Green
Search dog crew	Brown
Search patrol	Red
Helicopter	Blue
Fixed wing aircraft	Orange

5.2 Symbols and markings for use on overlays shall be made in accordance with Fig. 2 and Table 1.

5.3 Where words or letters are associated with a symbol, they shall be legible and as close to the symbol as possible. Size and placement may vary depending on map scale, the need for adjacent map features to remain visible and the writing instrument being used.

5.4 Locating marks shall be made on overlays so that they can be removed from the base map and reinstalled later with the proper alignment.

5.4.1 The base overlay shall have locating marks but should remain fixed with the base map throughout the search.















6. Keywords

6.1 management; maps; markings; search; symbols

¹ This practice is under the jurisdiction of ASTM Committee F32 on Search and Rescue and is the direct responsibility of Subcommittee F32.02 on Management and Operations.

Current edition approved Nov. 1, 2003. Published November 2003. Originally published in 1998. Last previous edition approved in 1998 as F 1846 – 98.




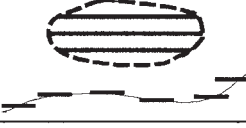

² Available from Fire Protection Publications, Oklahoma State University, Stillwater, Oklahoma, 74078.

SYMBOL	PURPOSE	COLOR
Date Time  (see note below)	Point Last Seen (PLS) or Last Known Position (LKP) Indicate date and time adjacent to symbol as shown	Red
Date Time  (see note below)	Clue or evidence Indicate date and time found adjacent to symbol as shown	Red
Date Time  (see note below)	SARSAT hit (satellite ELT signal) Indicate time and date of signal report adjacent to symbol as shown	Red
Date Time  (see note below)	NTAP (radar hit) Indicate time and date of radar data adjacent to symbol as shown. If NTAP is also LKP, use LKP symbol with N next to it.	Red
	Planned search area boundary	Red
 @	Medical station or crew Identify with station or crew designator adjacent to symbol as shown. Symbol may be drawn as solid cross.	Red
 DF-@	DF location Indicate crew designator adjacent to DF as shown. Bearing line originates from this point. Bearing as reported, including true (T) or magnetic (M) is recorded along bearing line.	Color based on resource. See Table 1.
	Incident Command Post	Blue
 (see note below)	Incident Base If collocated with CP, use CP symbol	Blue
 (see note below)	Helibase	Blue
 H-@	Helispot Identify with designator adjacent to symbol as shown.	Blue
	Fixed confinement line Use to indicate string lines, signs, fences, etc. which have been marked specifically for the search.	Black
	Segment boundary Identify with segment designator near center.	Black
	Travel barriers Existing natural or man-made barriers, use confinement symbol for search specific barriers.	Black

NOTE 1—Letter may be written next to circle rather than in it for clarity.

NOTE 2—@ - replace with designator number, letter, name, and so forth.

FIG. 1 Map Symbols and Markings for Base Map or Base Overlay

SYMBOL	PURPOSE	COLOR
	First search coverage Diagonal lines across segment, trail, road, etc. as shown. (Feature being searched is on base map.) See note 2 below.	Color is based on resource. See Table 1.
	Second search coverage Diagonal lines across segment, trail, road, etc. as shown. Do not remove first coverage lines. See note 2 below.	
	Third search coverage Vertical lines across segment, trail, road etc. as shown. Do not remove first and second coverage lines. See note 2 below.	
	Fourth search coverage Horizontal lines across segment, trail, road, etc. as shown. Do not remove first, second and third coverage lines. See note 2 below.	
(see note 1 below) 	Radio relay Indicate relay designator adjacent to symbol as shown.	Black
Resource type - @ Date Time	Resource designator Indicate resource type (search crew, dog crew, etc.) and designator near assignment (segment, trail, etc.). Date and time are initially those of assignment. At completion of the assignment, the date and time shall be changed to those of completion.	Black

NOTE 1—Letter may be written next to circle rather than in it for clarity.

NOTE 2—The search coverage symbols are used to indicate the extent of actual coverage. If the task was not completed as assigned, then the symbols shall cover only those areas actually searched. Additional segment boundary lines shall be added to define the limits of the actual coverage.

NOTE 3—@ - replace with designator number, letter, name, and so forth.

FIG. 2 Map Symbols and Markings for Base Map or Base Overlay

ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org).