



POSTING FALLOUT SHELTER SIGNS



**DEFENSE CIVIL PREPAREDNESS AGENCY
DEPARTMENT OF DEFENSE**

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DEFENSE CIVIL PREPAREDNESS AGENCY

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NOTE TO USERS OF THE DCPA 1-19A

This publication supersedes the following publications
keyed to the Federal Civil Defense Guide

FG-C-8.1
Handbook of Instructions for Posting Fallout Shelter Signs
June 1964

and

FG-C-8.1A
Requesting and Using Fallout Shelter Signs
January 1970

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POSTING FALLOUT SHELTER SIGNS

A. INTRODUCTION

A written authorization (or license) must be obtained before shelter signs are posted, well in advance of DCPA financially assisted on-site contract marking and demarking (non-DCPA assisted marking and demarking authorization will accord with State/local laws, policies or regulations). No signs will be posted without the express consent of the owner and/or manager. The sign-posting supervisor should be prepared to answer questions relative to the fallout shelter program. The building owner and/or manager must be advised that the shelter may be stocked with shelter supplies, should there be a nuclear war emergency.

B. SIGN POSTING RESPONSIBILITY

Civil Defense authorities will arrange for posting all signs and obtain the permission of the building owner/manager to post the signs. In all cases, posting should be in accordance with these instructions. Federal, including military installations, may post their own shelter signs after coordinating with local civil defense officials, providing the posted shelter is for public use.

C. SIGN POSTING PREPARATIONS

1. A sign-posting crew should generally consist of two men, one of whom should be designated as supervisor.

a. The supervisor should be able to talk persuasively of the shelter licensing and marking program, be tactful, and use good judgment in selecting exact spots for signs.

b. Both crewmembers should be thoroughly familiar with all of the methods of fastening signs.

2. The crew must be provided with adequate transportation, tools, and equipment.

3. The crew supervisor should receive specific posting assignments based upon contacts made with facility owner/managers by the State or local civil preparedness officials. It is preferable the contact be made the day before, by telephone.

4. The crew supervisor should study the shelter description sketches, when available, before leaving the office to insure he understands them. If shelter sketches are not available, the marking crew shall install only outside signs near the public access entries into the building.

5. The supervisor should urge the facility owner/manager or his representative to assist him in selecting exact sign locations. This will prevent possible objections to a location after the sign is installed.

6. Reports of facilities that are posted must be submitted periodically to the appropriate Regional office by the local civil preparedness office. The crew supervisor should be informed of these reporting requirements before he begins posting. As posting is accomplished, records should be kept for this purpose.

D. STANDARD FALLOUT SHELTER SIGNS AND OVERLAYS

1. Exterior Signs

Exterior sign, Type I, size 14"x20", aluminum, 0.025" thick with partially reflectorized surface and overlays. Used to mark facility entrances.

2. Interior Signs

Adhesive-backed paper signs, Type II, with various descriptive annotations as illustrated on Attachment 1 will be used to mark interior shelter space. Local civil preparedness officials should obtain a stock of all paper signs to take care of any marking required during Increased Readiness periods in preparation of a potential nuclear emergency.

E. SOURCE OF STANDARD SIGNS

Civil Defense Offices may obtain metal and paper shelter signs without charge from appropriate DCPA Regional Offices.

F. SUGGESTED LIST OF TOOLS AND EQUIPMENT

1. Four-foot stepladder of sturdy construction.

2. Flashlight.

3. 10' tape measure.

4. 3/4" aluminum drive screws or 7/8" aluminum general purpose shingle nails to be used on wood surfaces.

5. 3/4" No. 8 sheet metal screws of 18-8 stainless steel for use on metal siding. Non-metallic washers are required where galvanic action may occur.

6. 1"x3/16" nylon tap-in fasteners and 1"x1/4" aluminum drive screws or equivalent for use on masonry, stone, stucco, plaster, and fiberboard. Drive pins with manual setting tool may be used; non-metallic washers should be used where galvanic action may occur.

7. Electric drill and two 25" extensions and cordless self-powered drill with 3/16" carbide spiral masonry bits for drilling holes in masonry type surfaces.

8. Double-faced tape or adhesive bonding agent for use on fine architectural surfaces such as polished stone, ceramics, stainless steel, etc., where drilling holes or driving mechanical fasteners is not feasible. A suggested tape which has proved satisfactory is "Y-9063", manufactured by Minnesota Mining & Manufacturing Co.

G. INSTRUCTIONS FOR POSTING FALLOUT SHELTER SIGNS

1. Placement

Signs to identify a facility containing a shelter or specific area within a facility shall be posted in a minimum number consistent with actual need and shall be placed to provide:

- (1) Good visibility to the public.
- (2) Minimum opportunity for vandalism.
- (3) Well-marked route(s) from the entrance(s) to the shelter area(s).
- (4) Identification of the actual shelter area(s). This requirement is applicable only when shelter sketches are available.

2. Number and Location

a. One exterior sign shall be posted at each principal entrance to a facility which provides an acceptable access route to a shelter therein.

b. Interior signs will be placed only where essential to guide people to the shelter areas located in the facilities and to mark each immediate shelter area when shelter sketches are available. Normally, only one sign shall be posted inside any one shelter area, except where the limits of a shelter area cannot be indicated by the use of a single centrally placed sign.

c. At entrances, the preferred location is over the doorway.

3. Posting Height

Exterior signs shall be posted with the lower edge 8 feet above the

ground. Interior signs shall be posted with the lower edge a minimum of 7 feet above the floor. When clearance does not allow posting at these heights, post as high as practicable in positions least subject to vandalism.

4. Workmanship

- a. Framing of signs is not recommended.
- b. Signs must be properly aligned on the wall surface.
- c. Sign faces must be free of any foreign material such as pieces of tape, etc.
- d. The wall area around the signs will be cleaned of any smudge marks.
- e. No litter of any kind should be left on the premises after completion of sign posting.

H. METHODS FOR ATTACHING SIGNS

1. Mechanical Fasteners

Use mechanical fasteners (nails, pins, or screws) wherever permissible.

2. Wood Surfaces

- a. Use 3/4" aluminum drive screws.
- b. Use 7/8" aluminum general purpose shingle nails.

3. Metal Siding and Wall Sheathing

Use 3/4" No. 8 sheet metal screws of 18-8 stainless steel with non-metallic washers, wherever galvanic action may occur.

4. Masonry, Stone, Stucco, Plaster, Concrete and Fiberboard

Use 1"x3/16" nylon tap-in fasteners behind the sign with 1"x1/4" aluminum drive screws or equivalent. Drive pins, with non-metallic washers where galvanic action is likely, may be used in concrete. (NOTE: Drive pins are difficult to remove.) (See Figure 1. on following page.)

5. Polished Stone, Ceramics, Stainless Steel

For fine architectural surfaces where drilling holes for mechanical

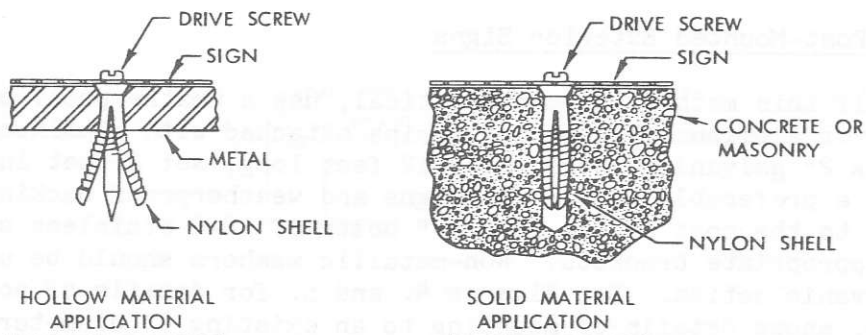


Figure 1.—Nylon tap-in fasteners.

fasteners is objectionable, use double-faced tape or an adhesive bonding agent:

(1) Tape: Thoroughly clean both sign and building surfaces with appropriate solvents before applying tape; otherwise, the signs may come off. For best results when using tape, the temperature should be a minimum of 50°F. for smooth surfaces and 70°F. for brick or concrete-type surfaces. If the temperature is below this minimum, other methods of attachment must be used. Tape should not be used where signs might fall on a passer-by.

(a) Use of Y-9063: On exterior signs, use five strips 1"x4" placed vertically at the four corners and center. On interior signs use four strips 1"x4" placed vertically at the four corners. (See Figure 2.)

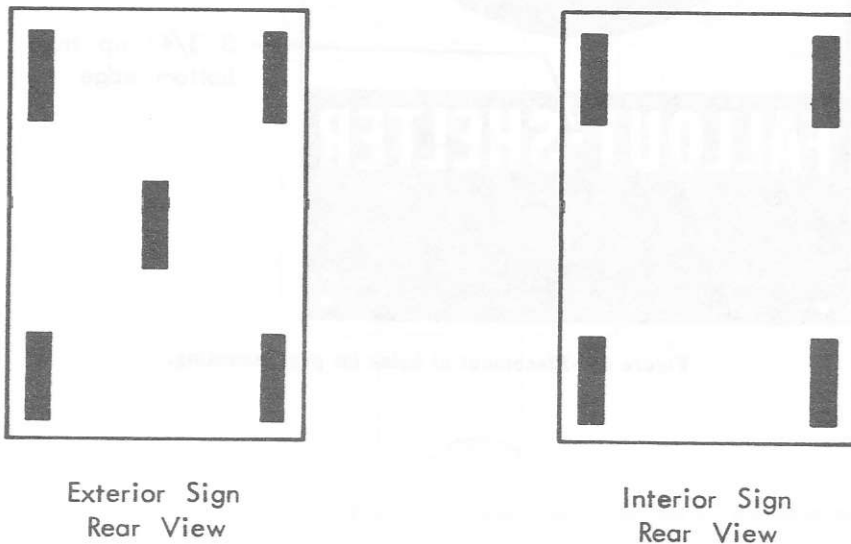


Figure 2.—Placement of 1'' x 4'' strips of tape (Y-9063).

6. Post-Mounted Exterior Signs

If this method is more practical, use a weatherproof backing material or aluminum reinforcing strips attached with aluminum screws or bolts. A 2" galvanized steel pipe 12 feet long, set 2 feet in a concrete base, is a preferable post. The signs and weatherproof backing shall be attached to the post by use of 5/16" bolts of 18-8 stainless steel or by use of appropriate brackets. Non-metallic washers should be used to prevent galvanic action. See Figures 4. and 5. for details of post-mounting. Figure 6. shows details of mounting to an existing 4" diameter pole or larger. (See Figures 5. and 6. on following page)

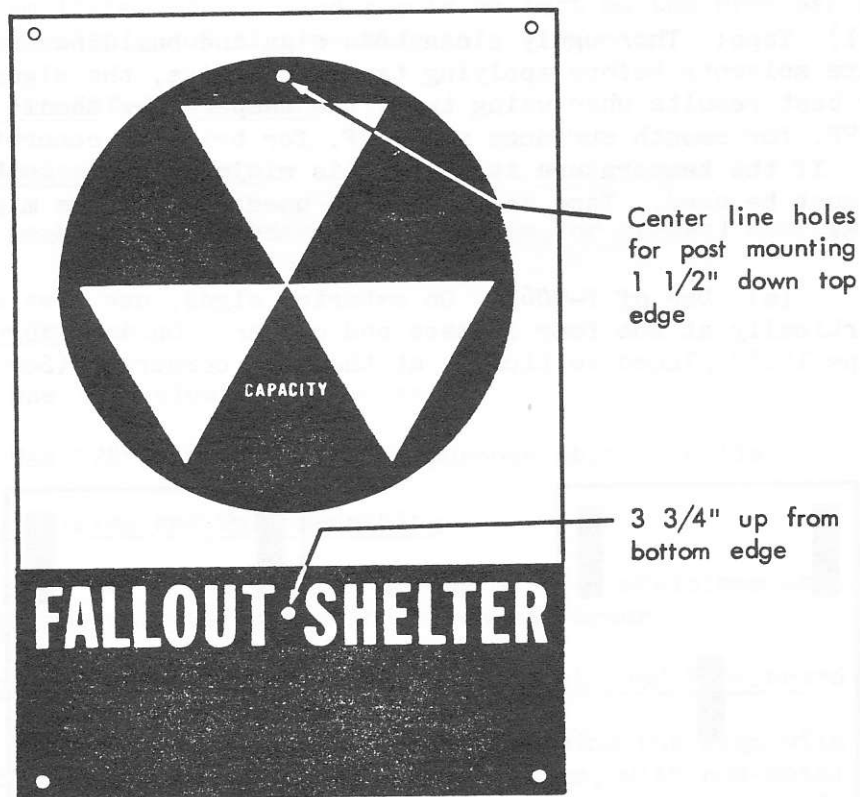


Figure 4.—Placement of holes for post mounting.

I. CLEANING INSTRUCTIONS FOR SIGNS

1. Materials

a. Any soft bristle commercial scrub brush such as those used for household cleaning of painted walls or for washing windows. An equivalent Government item is "Nail and Hand Scrubbing Brush", Stock No. 7920-00-619-9162, at 24 cents each.

b. Any detergent such as "Duz", "Rinso", "Boraxo", "Mr. Clean", etc., or an alkaline soap powder free from caustic alkali. Equivalent Government items are "Detergent, Painted Surface", 25 pound container at \$3.00, Stock No. 7930-634-1362, or 1 gallon can at \$1.25, Stock No. 7930-530-8067; also "Soap Scrubbing, Alkaline", 1 pound package at 9 cents, Stock No. 7930-231-2998.

2. Cleaning

a. Using warm water, prepare a water-soap solution according to the manufacturer's directions on the package. If the bristles of the brush are hard, they may be softened by soaking in hot water. Clean the sign by scrubbing in a circular motion with the soap solution followed by rinsing with clear water. (NOTE: The use of trade names herein does not constitute endorsement of these products by the Department of Defense.)

J. RECOMMENDED TECHNIQUE FOR SIGN REMOVAL

1. Policy

Signs will be removed only when authorized by the owner. Provided the building is a serviceable shelter, every effort should be made to convince owners to allow the signs to remain in place even though a license may have been cancelled and stock removed.

2. Removal of Signs

Remove signs with extreme care. The facility owner or manager must be advised beforehand of the problems of restoring the wall finish. Every effort will be made to remove the signs with the least amount of scars and marks. We will not attempt to cover all cases, but a few typical examples are presented:

a. Masonry including brick, concrete block, and tile.

(1) The usual method of fastening signs to masonry finishes is by the use of drive pins, or metal and plastic expansion fasteners, placed in the mortar joints. The drive pins have heads that must be ground off to remove the signs because they are made of hardened steel and cannot be cut off with ordinary tools. Pulling pins by pinch bars, claw hammers, pliers, etc., is not recommended because the masonry may crumble.

(2) If one or more of the pins have been driven into the face of the brick, block, or tiles, cut the head off as above and remove the sign. Further driving of pins into brick, stone or tiles is not recommended. After the sign is removed, see if the pin can be pulled out. Caution - use a wood block as a cushion (heel) under the bar or hammer so that the wall will not be damaged during pulling. A waterproof nonshrinking patch compound may be used to fill the exposed holes. If pin does not come out with a gentle pull, don't force it. Cut off the pin as close to the face of the wall as possible and advise the owner/manager that further attempts at removal are not recommended because of possible damage to the wall.

b. Polished Surfaces including metal, stone and glass.

(1) The usual method of fastening signs to these surfaces is by the use of adhesives or adhesive tapes. These materials were chosen for fasteners because they resist water and ordinary solvents. The metal sign will have to be pried off the wall. Extreme care must be taken, including the use of a wood cushion (heel) under the prying tool, to prevent damage to the wall surface. Once the sign is off, remove the adhesive materials with solvent, and non-metallic nonabrasive tools. Great care and patience are required to prevent damage to the wall surface. Finally, wash with soap and water in accordance with the "Cleaning Instructions" to restore the wall to its natural luster.

(2) Solvents prescribed by the tape and cement manufacturers should be carried in the sign remover's tool kit. Since the exact kind of tape or mastic cannot be readily determined by inspection, a trial-and-error method can be used to find the proper solvent. Some adhesives will have stained deposits of the adhesive in the pores. In either case, bleaching is not recommended because of possible further discoloration.

(3) Many of the solvents required to loosen the sign-posting adhesives are strong enough to damage many surface finishes, especially paint. Some solvents will be combustible and reasonable fire prevention practices must be followed to eliminate fire hazards. Damage from spillage or dropping of solvents, paints, patching compounds, etc., can be prevented by careful use of drop cloths.

c. Plaster

Signs are fastened to plaster surfaces by all the methods and materials listed above for masonry and polished surfaces.

(1) Removal methods given above for pins should be followed. Patching holes in plaster can be accomplished by the use of a good quality nonshrinking compound in tubes, available in colors to match existing walls.

(2) Removal of signs attached by tape or adhesive to plaster walls will likely result in spalling the plaster when the signs are pulled off. Again, extreme care must be taken if prying is required to remove the sign. The repair of damaged plaster and restoration of the color will require at least two separate operations, perhaps 24 hours apart. This patch material may require several hours drying time before painting can be done. If a second trip is required to complete the repair or painting, be sure to notify the facility owner/manager so that he understands the delay.

d. Post and Sidewalk.

The problem here will be that of removing the post or standard rather than the sign. In these cases, permission from the city engineer's office may be required prior to any removal action. In some instances, city engineers may wish to remove the signs and leave the standards in place. If removal of posts and signs is required, the sidewalk or curb must be repaired so that no obstructions to pedestrians or holes that could collect water will remain. Generally, it is recommended to cut the standard off flush with the sidewalk and fill the hole with a rich mix grout.

3. Tools and Equipment

Sign removal crews should be equipped with the ladders, drop cloths, small tools, and patching and finishing materials needed before commencing sign removal. The interruption of a sign removal or wall repair job to go back to the shop to get missing tools or supplies would probably be regarded as discourteous and thoughtless and might generate some ill will toward the civil defense program. Ladders and tools should be in first-class working condition. Mechanics engaged in sign removal must be skilled and safety-minded to reduce the possibility of accidental damage to walk and other building parts.

4. Cleanup

After removal of signs and repair of the surfaces, a careful clean-up of the affected premises will be accomplished and the owner/manager notified that the removal is complete.

5. Owner's Acceptance

As a matter of courtesy, the owner should be asked if the sign removal work is completed satisfactorily.

K. ADHESIVE SHELTER SIGNS

Adhesive signs may be used in public fallout shelters in lieu of Type II

interior metal signs under certain conditions. The adhesive signs are intended primarily for interior marking, although in the event of a declared emergency, they could be used for both interior and exterior marking of all available shelters. Initial stocks of adhesive signs are available at DCPA Regional offices. These stocks will be used first; and in the event stocks become unusable because of deterioration, they will be replaced by requisitioning new stocks. The adhesive signs should be stored in a cool, dry place; and should be stored on edge to prolong the life of the adhesive.

L. POSTING ADHESIVE SIGNS

1. Preparation of Surface

a. The adhesive signs can usually be applied directly to any clean, smooth, nonporous, unwaxed surface. They should not be applied to uneven surfaces, because adhesion will be poor. When use of such surfaces cannot be avoided, a rigid backing should be used, or metal signs substituted.

b. Proper preparation of surface to be used is essential to assure high-quality, long-lasting signs. If surface to be used for application of adhesive signs is acceptable (see discussion of surfaces below), it should be prepared as follows (surface preparation should immediately precede sign application):

(1) Wipe with a solvent, such as toluol, xylol, cyclohexanone, or naphtha to free surface of oil, grease, and film deposits. (Often these deposits may not be apparent.)

(2) Wash with a mild detergent.

(3) Rinse thoroughly with clear water, and dry.

c. Unpainted metal surfaces - Degrease and etch the surface by scrubbing with medium to fine steel wool (cleaning pads) and ordinary household abrasive cleaner. Rinse with clear water. Dry the surface. Apply the adhesive sign.

d. Concrete and masonry surfaces - When adhesive signs are applied directly to concrete or masonry surfaces, the rough or porous surface or leaching may cause adhesive failure. Painting a relatively smooth surface will promote adhesion, providing the paint does not expand or contract significantly because of varying humidity and temperature.

e. Wood products surfaces - Most wood products are subject to some degree of moisture penetration, even when prepared or treated for outdoor exposure. Therefore, adhesive signs should not be applied directly to unpainted wood products. Oil-treated surfaces are unsatisfactory because the oil may bleed (even through a paint coating). If used as a rigid backing, all surfaces - including the back and edges - must be sealed and painted with high-quality exterior enamel.

f. Painted surfaces - For good sign adhesion, painted surfaces should be nonporous and smooth. In surface preparation, avoid oil primers and oil base paints, which may bleed, and paints or coatings that tend to chalk or migrate, resulting in a poor surface for adhesion. Enamel and latex base paints are satisfactory. Wood surfaces must be adequately sealed prior to finish coat. Do not apply adhesive signs to freshly painted surfaces. Allow at least one week at temperatures above 60°F., or equivalent, for evaporation of volatile materials before applying the signs.

2. Application

a. Temperature - For best results, apply adhesive signs at temperatures above 60°F. Insofar as feasible, application should be made to shaded or relatively cool surfaces, to minimize stretching of the vinyl film due to continued exposure to sun or heat.

b. Tools - Application should be made with a small hard-rubber hand roller.

c. Caution - Be careful to avoid transfer of oil or dirt from the fingers to the edges of the adhesive when posting adhesive signs. If such transfer occurs, the corners and edges of the sign may eventually peel. No other adhesive, such as glue or paste, should be used in applying these pressure-sensitive signs.

d. Posting - Using a small, hard-rubber hand roller (2½" to 3" long and 1" to 1½" in diameter is a good size), and, starting with top portion, roll entire surface of sign firmly from center line outward. If bubbles occur, prick them with a pin and press down bubble area. These areas can be located by firmly rubbing fingers over face of the applied sign. Finally, roll entire surface of sign again.

OCD Federal Guides C-8.1, Handbook of Instructions for Posting Fallout Shelter Signs, June 1964 and C-8.1A, Requesting and Using Fallout Shelter Signs, January 1970, are hereby superseded.

Attachment 1

Adhesive-Backed Paper Signs

ADHESIVE-BACKED PAPER SIGNS (7"x10")



(1)



(4)



(5)



(2)



(6)



(7)



(3)



(8)



(9)

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