



Urban Search & Rescue TASK FORCE MARKING SYSTEMS

(Adopted from FEMA US&R Field Operations Guide)

It is imperative that the information derived from a coordinated building triage be consolidated by the task force supervisory personnel to be used to identify operational priorities, and assist with their overall assessment of the event.

The FEMA US&R Task Force Marking System is identified and divided into two sections:

- Structure/Hazards Evaluation Marking
- Search Assessment Marking.

The Structure/Hazards Evaluation and Search Assessment marking procedures are designed to identify specific information pertinent to each affected building. Each component can be completed independent of the other, although normally the Structure/Hazards Evaluation would be completed first. Symbols will be conspicuously made with spray paint of International Orange color to permanently identify and mark safe entrances to a structure. The Search Assessment findings would be similarly denoted with the same orange spray paint. The two marking systems use differing formats to distinguish between the two as outlined in their respective sections.

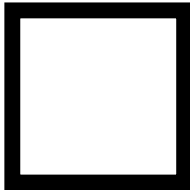
It is expected that the task force Structures and Hazardous Materials Specialists on the search and reconnaissance team address the Structure/Hazards Evaluation marking while the balance of the team addresses the Search Assessment marking. The Structure/Hazard Evaluation Form will be used to record critical information regarding building type, framing, occupancy, victim location, hazards, search and rescue access, etc., for each structure. The appropriate structure/hazard mark will then be recorded on the form and on the building.

A. STRUCTURE/HAZARDS EVALUATION MARKING

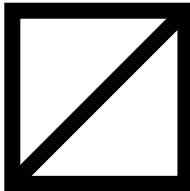
The Structures Specialist and other task force members as appropriate, will outline a 2' X 2' square box at any entrance accessible for entry into a compromised structure. Aerosol cans of spray paint, International Orange color, will be used for this marking. It is important that an effort is made to mark all normal entry points to a building under evaluation to ensure that task force personnel can identify that it has been evaluated.

Specific markings will be clearly made inside the box to indicate the condition of the structure and any hazards at the time of this assessment. Normally the square box marking would be made immediately adjacent to the entry point identified as safe. An arrow will be placed next to the box indicating the direction of the safe entrance if the Structure/Hazards Evaluation marking must be made somewhat remote from the safe entrance.

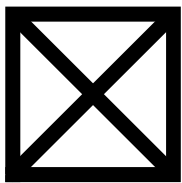
The depictions of the various markings are as follows:



Structure is accessible and safe for search and rescue operations. Damage is minor with little danger of further collapse.



Structure is significantly damaged. Some areas are relatively safe, but other areas may need shoring, bracing, or removal of falling and collapse hazards. The structure may be completely pancaked.



Structure is not safe for search and rescue operations and may be subject to sudden additional collapse. Remote search operations may proceed at significant risk. If rescue operations are undertaken, safe haven areas and rapid evacuation routes should be created.



Arrow located next to a marking box indicates the direction to the safe entrance to the structure, should the marking box need to be made remote from the indicated entrance.

HM

Indicates that a Hazardous Material (Haz Mat) condition exists in or adjacent to the structure. Personnel may be in jeopardy. Consideration for operations should be made in conjunction with the Hazardous Materials Specialist. Type of hazard may also be noted.

The following information; TIME, DATE, and SPECIALIST ID, will also be noted outside the box at the upper right-hand side. This information will be made with pieces of carpenter's chalk or lumber crayon. An optional method may be to apply duct tape to the exterior of the structure and the detailed information written on the tape with a grease pencil or black magic marker.

B. TASK FORCE MARKING SYSTEMS

All task force personnel must be aware of other Structure/Hazards Evaluation markings made on the interior of the building. As each subsequent assessment is

performed throughout the course of the mission, a new TIME, DATE, and SPECIALIST ID entry will be made (with carpenter's chalk or lumber crayon) below the previous entry, or a completely new marking box made if the original information is now incorrect.

The following illustration shows the various components of the Structure/Hazards Evaluation marking system:

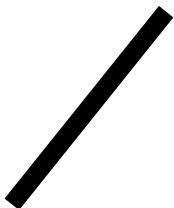


The depiction above indicates that a safe point of entry exists above the marking (possibly a window, or upper floor, etc.). The single slash across the box indicates the structure may require some shoring or bracing before continuing operations. The assessment was made on July 15, 1991 at 1:10 PM. There is an apparent indication of natural gas in the structure. This evaluation was made by the #1 task force out of the state of Oregon. It should be understood that this building would not be entered until the Haz Mat (natural gas) had been mitigated. When performed, the marking should be altered by placing a line through the "HM", and adding the time and task force who performed the mitigation. An entirely new mark could also be added when the mitigation is done, or after any change in conditions such as an aftershock.

Marking boxes would also be placed in each of the specific areas within the structure (i.e., rooms, hallways, stairwells, etc.) to indicate conditions in separate parts of the building.

C. SEARCH ASSESSMENT MARKING

A separate and distinct marking system is necessary to denote information relating to the victim location determinations in the areas searched. This separate Search Assessment marking system is designed to be used in conjunction with the Structure/Hazards Evaluation marking system. The Canine Search Specialists, Technical Search Specialists, and/or Search Team Manager (or any other task force member performing the search function) will draw an "X" that is 2' X 2' in size with International Orange color spray paint. This X will be constructed in two operations - one slash drawn upon entry into the structure (or room, hallway, etc.) and a second crossing slash drawn upon exit.



Single slash drawn upon entry to a structure or area indicates search operations are currently in progress.



Crossing slash personnel exit from the structure or area.

Distinct markings will be made inside the four quadrants of the X to clearly denote the search status and findings at the time of this assessment. The marks will be made with carpenter chalk or lumber crayon. The following illustrations define the Search Assessment marks:



LEFT QUADRANT - FEMA US&R task force identifier

**7/15/91
1400 hr**



TOP QUADRANT - Time and date that the task force personnel left the structure.



RIGHT QUADRANT - Personal hazards.



BOTTOM QUADRANT - Number of live and dead victims still inside the structure. ["0" = no victims]

Search personnel shall use International Orange-colored spray paint to mark the exact location of a victim alert. In addition, surveyors tape may be used as a flag to denote the appropriate area, in conjunction with the spray paint marking.

As with the Structure/Hazards Evaluation, it is important that markings are made specific to each area of entry or separate part of the building. If an area is searched and no victims are found, it must be noted with an X. It is also important that situation updates be noted as they are available, to reduce needless duplication of search efforts. Previous search markings would be crossed out and a new marking would be placed next to it with the most recent information.

A victim location mark will be placed near each victim within each confined space at this time. This will better define the specific location and condition of each victim.

Personnel using the marking system will be inundated with additional information relative to the incident. This information needs to be acknowledged and appropriately disseminated — in most cases this information would not be noted on the structure marking.

Generally, the Search Team Manager will be in a position to pass additional information received on to the appropriate element - rescue, command, medical, technical, etc.

NOTE: It is important to clearly identify each separate structure within an area when important information is being disseminated to other operational entities. The primary method of identification should be the existing street name and building number, if known. Obviously, such identification is not always possible due to site conditions. In these situations, it is important that the task force supervisory personnel establish a workable identification method for each specific structure.

D. VICTIM LOCATION MARKING SYSTEM

During the search function it is necessary to identify the location of potential and known victims.

The amount and type of debris in the area may completely cover or obstruct the location of any victims.

The victim location marks are made by the search team or others aiding the search and rescue operation whenever a known or potential victim is located and not immediately removed.

The victim location marking symbols should be made with orange spray paint or orange crayon.

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