Florida Conference of Seventh-day Adventists
Florida Conference Brigade, Medical Cadet Corps
351 S State Rd 434, Altamonte Springs, FL 32714

Light Search and Rescue Part 1

The MCC can assist the first responders is some light search and rescue operations. The area for them to search is assigned by the leader of the response. The main goal here is survivor accountability, meaning that the cadet looks for survivors but does not try to relocate or take action to extricate them. This is a process of finding people that are sheltering in place and create a communication to the leading agency, and marking where people are. For example, this may include information that people are here without electricity. They can also let people know where the shelter is available for them to use. There are two basic processes:

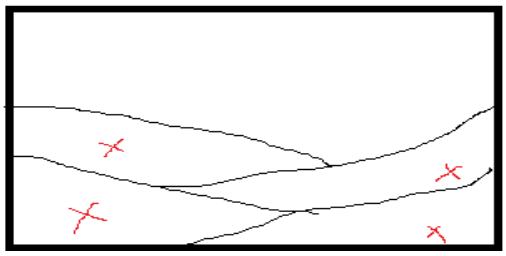
- Employing search techniques based on the environment assessment
- Locating survivors

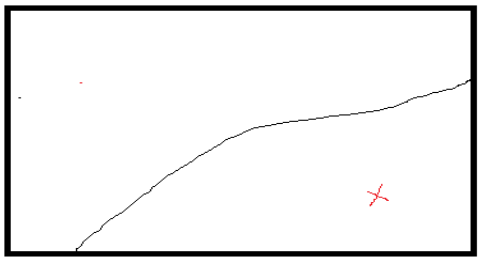
Interior Search Operations: VOIDS

This is the most common process of light search techniques. The first step in locating survivors in a structure is to conduct an assessment of the damage of the structure. This predicts if there are possible areas of entrapment or voids. When a structure collapses, it does so in several patterns, leaving spaces inside layers which are called voids.

There are several types of voids.

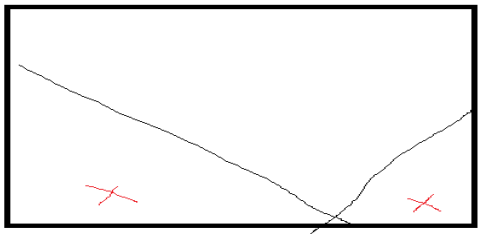
This is a "pancake void". Multiple layers are collapsed onto each other creating several spaces within the debris field.





This is an example of a Lean-to void, when the structure has collapsed onto one of its sides. There is usually one central space

This is the idea of a "V" void. It has a couple spaces created by the walls collapsing.



There are also individual voids, spaces into which a survivor may have crawled for protection. Examples of individual voids include:

- Inside bathtubs
- Underneath desks
- Inside cabinets
- Under or next to beds
- Inside closets
- Cabinets for smaller children

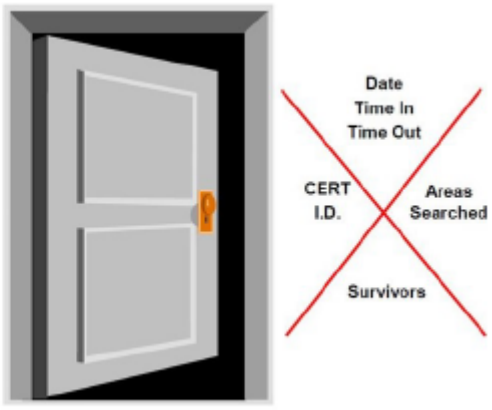
Asking a bystander or someone who is familiar with the building may give information about potential locations of survivors. Finding out approximately how many people live or work in the building, the layout of the building, and if anyone has come out is very useful. However, bystander information is not always accurate; it can be useful for planning how to set up the search patterns. **Important note: attempting to rescue a person from a structural void without proper equipment may result in completing the collapse and harming the trapped person and the rescuer.**

Interior Search: Markings

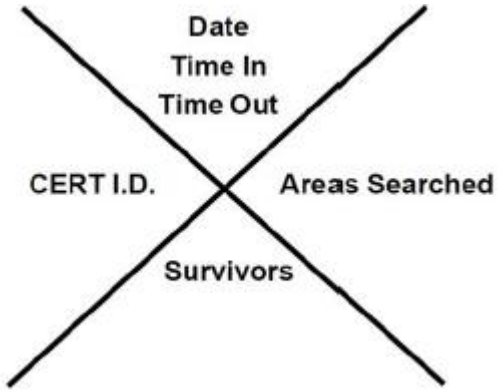
This is the same system for marking a building that experienced search and rescue personnel use. It has the advantages of indicating the rescuer location, locates survivors quickly, and prevents duplication of effort.

After entering a search area, make a slash mark next to the door that they are entering. Do not mark the door or the hinge side that the door swings. Make a single slash and write the group ID at the 9 o'clock position. Then write the date and "time in" at the 12 o'clock position. After exiting, make a slash mark to complete an "X", and write the "time out" under the "time in".

- Upon entering search area:
  - Make a slash
  - Enter info
- Upon leaving search area:
  - Complete 'X'
  - Enter info

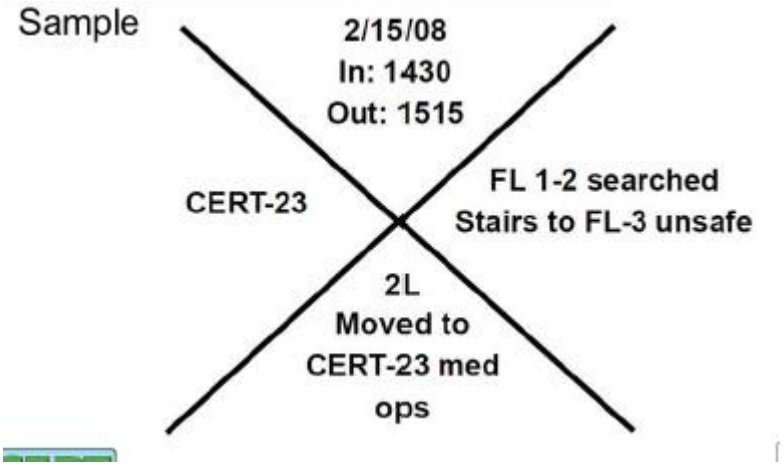


So, taking a closer look, the top quadrant has the times of entry and exit. The left quadrant has the team ID given by the coordinating leader. The right quadrant lists the areas searched and any specific details about hazards.



The lower quadrant lists information about any survivors. "L" is for living survivors and "D" represents the dead. The search marking on the front of the structure or building should contain the total number of survivors, while the markings inside the structure will include survivor totals for a specific area only. **Indicate where survivors taken**.

Review the sample below to understand the markings noted in each quadrant. The markings will be made with chalk or lumber crayons.



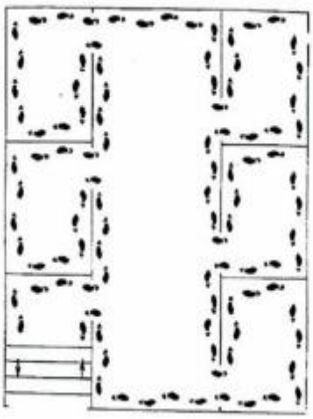
Search Methodology

Always search in groups of at least two. Stay with your body within arm's reach at all times. This way you can push or pull one another out of harm's way, or assist in the event of a slip and fall. If the area is dark it helps to maintain physical contact throughout the search.

When entering a space or room, call out to survivors. Something like, "If anyone can hear my voice, come here." Ask about survivors, if someone is trapped, then tell them to "stay put" or "go outside to wait". Keep your directions simple. Speak in short sentences. They may be in shock, so look directly at the survivors when talking to them.

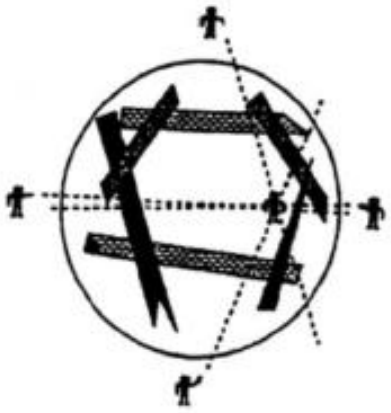
Use a systematic search pattern. Ensure that all areas of the building are covered. Every interior space has six sides, including the ceiling and floor. Look for hazards on all sides.

- Bottom-up/top-down for a multi-story building
- Right wall/left wall for a single floor
- Stop frequently to listen



If there is a response or noise and it is not evident where coming from , then triangulation can allow locatlization. This is best done using 3 rescuers. Guided by the sounds, form a triangle around the area , directing flashlights into the are that could eliminate shadows that hide survivors.

- Triangulation allows rescuers to view a location from several perspectives



Remember to keep a record of survivors removed and if someone is still trapped or dead. This information needs to return to emergency services personnel when they reach this scene.

Exterior Search

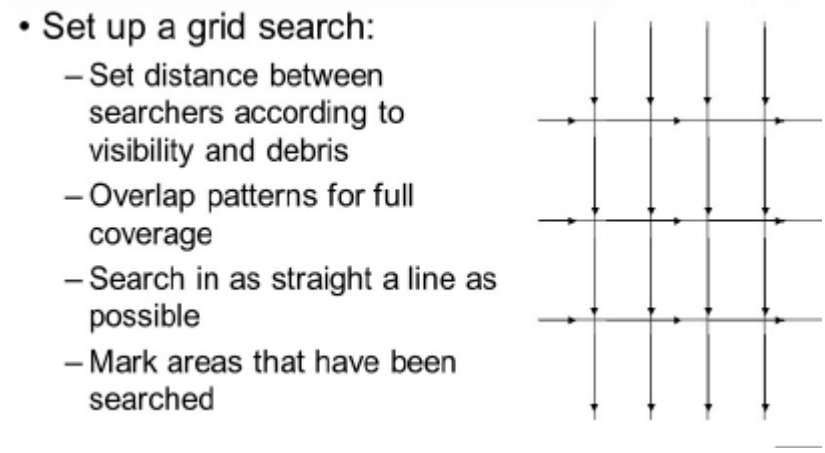
In addition to searching inside a structure, you may be needed to search open areas outside. This requires that the work is methodical and follows the standard procedures used by professional search and rescue responders. Sign in at the central staging area, where a briefing on what they are looking for, the areas they will search, the pattern of search, and what to do with found people or evidence.

Exterior search patterns include grid, line, quadrant or zone, and spiral. Typically, a grid pattern is used in large open areas or small areas when a hands and knees search is conducted.

View the search area as a grid with the searchers positioned at one side.

The distance between searchers is based on visibility and debris.

Maintain line of sight and voice contact with searchers on either side.



Start at one line and proceed as straight as possible across the entire search area. Each searcher checks their assigned area carefully. Records of the search area will need to be kept.

Exercise

1. Make a debris field in a room using chairs, tables , etc.to perform an interior search. Try to have the room dark, and use flashlights for the searchers. Position a “survivor” in a corner or center of some covering debris.
2. Practice Triangulation in a dark room with a hidden survivor. Use muffled sounds made inside a box to mimic trapped sounds.
3. Practice marking on the wall by the door the search markings on an “X”. Check that each group understands the information needed for the markings and marks in the appropriate quadrant.
4. Practice an exterior search using a grid in a large area, try using small marbles or other objects to hide in the squares of the grids. Have the members divide their area into a grid and start the search, handing in a record of objects found when completed. FAST is not as good as MOST CORRECT FINDINGS.

Light Search and Rescue Part 1

For course certification, the form must be filled out.

Member Name (Print) _____ Instructor Name (Print) _____

Member Position Number _____ Instructor Position Number _____

Member FEMA SID _____ Instructor FEMA SID_____

Date of Instruction _____

_____ Draw the three types of voids: Pancake, V, Lean-to

_____ Know the markings put at the search site.

_____ Define the method for doing an Interior search methodology.

_____ Define the methods used for exterior searches.

_____ Complete the Clinical Exercises.

With a complete sheet of initials, the instructor's signature signifies certification of completion for the Light Search and Rescue Part 1 course.

Instructor Signature _____