

**Tempe Fire Department Policies and Procedures**  
**Search and Rescue**  
**207.03**  
**Rev ~~3-1-89~~ 10-07-09**

**SEARCH**

**Primary**

A primary search will be completed on all structures or portion of a structure that fire conditions will allow. If the structure is well-involved then Command will notify Alarm that a primary search cannot be completed.

Information from occupants who escaped may be helpful as to location of victims and where the search should start, but a primary search will be conducted even if the information is "everyone is out."

A primary search is a rapid search to give any victims the best shot at survival. When the search is completed an "all clear" will be reported to Command. Radio designation should specify either primary or secondary.

There are some basic procedures that should be used in any search. These are:

- . Search in teams, not alone.
- . Each member has full gear, SCBA, PAL (armed), portable radio, hand light, rubber door locks, 30' 50' of personal life line (Kevlar), chalk or crayon, and a tool (axe or closet pike pole) to be used for probing for victims and possible escape.
- . Team members use and follow a plan.
- . Size-up windows and doors for escape before entering the building.
- . If heavy smoke and heat are encountered, sound the floor in front of you to make sure it is still there.
- . Ladder upper floors for egress, hose lines, etc.
- . Listen. This can tell you of victim location (gasps, moans, crying), changing fire conditions, changing structure conditions.
- . If possible, start with fire-threatened areas and work away from the fire.
- . If a victim is found and removed the search must resume at the place where the victim was found.
- . Horizontally ventilate as you go, without promoting fire spread. When fire is encountered without a line the room should stay sealed.
- . If fire is encountered in a room, close the door to contain it and do not vent unless a hose line is in place.
- . Mark areas searched by turning over a mattress, putting a chair in the doorway, marking the door, etc.
- . Check places that people would hide; under beds, closets, bathtubs, showers, behind furniture, etc.
- . The nozzle person ~~man~~ is responsible for search of the fire area. This should be a quick

visual search before water is applied and thermal balance is lost, reducing visibility completely.

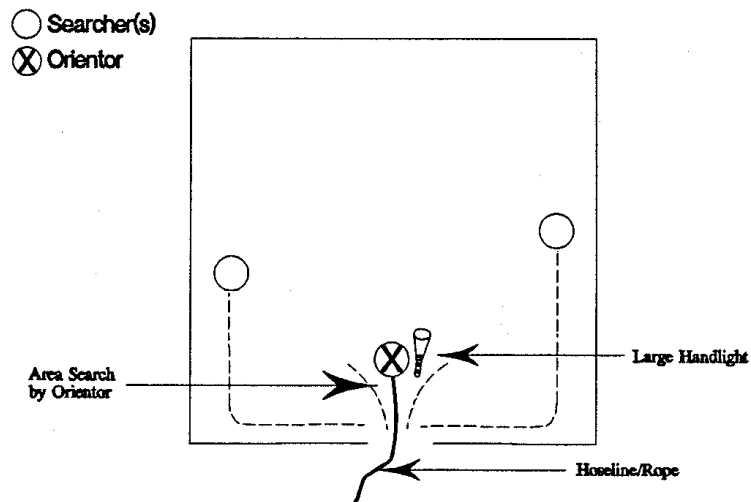
## Techniques

### **Standard Residence (2000 sq. ft. and below)**

- . Keep one shoulder (right or left) toward the wall and make all required turns in the same direction. This will bring you back to your starting point of the room or area. If you start with a two or three-person team, you may be searching several rooms by yourself until you meet the other member(s). If you have a buddy, then one stays next to the wall and the other to his/her side toward the center of the room. Keep in contact.
- . Sweep the center of the room with your tool. Sweep under beds with your leg.
- . Just about every room will have a window for venting or escape. If venting, remove the screen and curtains. If the window must be broken, then clean the glass from the sill with your tool to prevent injury if someone goes through the window.
- . If conditions deteriorate and a window is not close, an interior wall made of sheetrock can be breached using your tool to escape to another room. Windows and doors can also be forced with an axe or pike pole.

### **Larger Rooms and Structures**

- . Vertical ventilation will probably have to be complete before search efforts can be effective.
- . Use at least three a person men on a team. Five is better so that each searcher has a buddy. One man becomes the orientor and stays with a hose line or rope near the entrance and always knows the way out. The orientor He maintains communication with the searchers. The searchers go opposite directions at the doorway until they meet, then straight to the orientor. The orientor has a portable radio and a large hand light to use as a beacon for the searchers. If victims are a victim is found, they are he is taken directly to the orientor and out. Help is called for if needed. The search is resumed at the point where the victim was found.
- . Consider the use of lifelines for odd-shaped rooms/areas.
- . The searchers are dependent on the orientor. The orientor has If he had to leave his position, he will take the searchers must leave as well with him.
- . If searchers cannot contact the orientor with voice, portable, or light, they should turn on their PAL briefly. The orientor then will answer with his/her PASS PAL. If the searcher beeps again, the orientor will turn his PAL on and give the searcher a sound beacon to head for. If the searcher needs help, he can turn his/her PASS PAL to on and the orientor can get help. A continuous sounding PAL always means someone needs help.



**Figure 1**  
*Orientor Search*

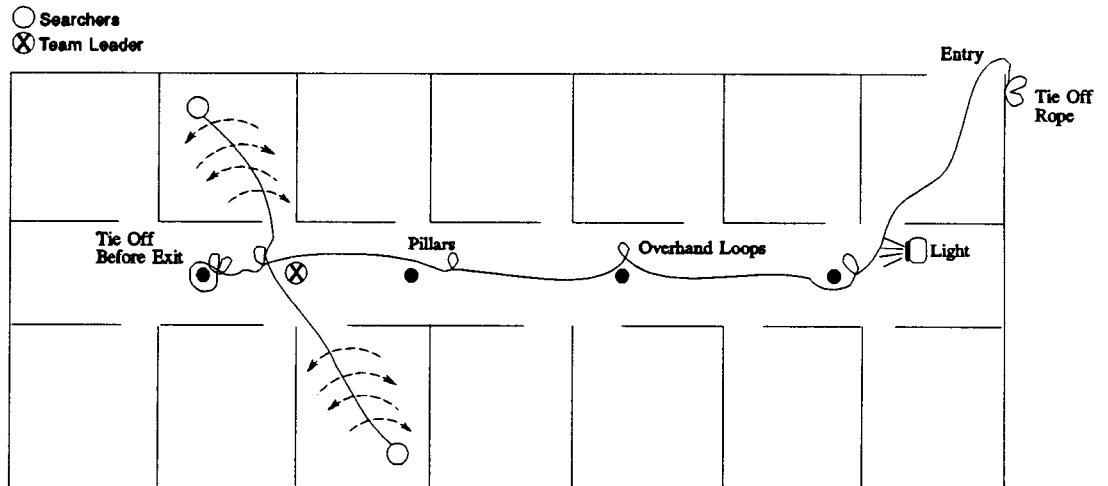
- . This technique is repeated for each room/area.

**Large Office Cubicles or Complex Areas**

- . Vertical ventilation may again have to be complete before search efforts can be effective.
- . Two search teams are formed consisting of a team leader and searchers. One team searches and the other is for back-up, relief, and to bring out victims.
- . Teams assemble and go over plan and equipment. Each member has: full gear, SCBA, PAL, portable radio, rubber door stops, tool, 50' life line (Kevlar), and handlight. Each team leader has a 125' 150' rescue rope in a bag, portable radio, and a large hand light.
- . Entry team leader ties off the 125' rope near the entrance and places the large handlight inside the entrance a few feet, turned on, facing in (a large portable light from a ladder company is better). This is for a beacon leading out. The team leader enters the area about 20' letting the rope feed out of the bag. He then ties an overhand loop in the rope and goes a few feet more and pulls the rope tight. The team leader will keep oriented to walls and windows and the way out, keep track of time, watch fire and structure conditions, keep track of victims, and coordinate the search.
- . Searchers hook into the loop and start a sweeping search in opposite directions using their lifelines. They keep doing sweeping arcs until they have reached the wall or the end of their line.
- . Victims found are brought back to the reference rope and loop. The team leader will call the back-up team by radio to come in and get them at the loop number.
- . After the area around the first loop has been searched, the team leader will advance another 20' and tie another loop in the rope. The searchers then hook in and repeat the pattern. This process is repeated until the end of the rope is reached, the area is searched, or conditions require that the search be terminated.
- . When the entry team comes out for air and relief, they come out together. The team leader will tie off the rope to an object that is stable, get his team together, and exit

down the rope toward the light. He will then inform the back-up team how many loops in they have searched. Now the entry team becomes the back-up team and the back-up team resumes the search past the last loop.

- The team leader must keep tension on the rope and tie it off around hazards and obstacles to avoid leading his men into them. When exiting, the rope must be tied off with tension to give a reference path to follow out.



**Figure 2**  
*Team Search*

- Review of OATH rope signals:

- 1 pull - OK
- 2 pulls - Advance line
- 3 pulls - Take up slack
- 4 pulls - Help

- The PASS PAL can also be used as mentioned earlier when voice, portable, light, or line contact is lost. A continuous sounding PASS PAL always means someone needs help.

### Hotels and Large Apartments

- Whenever search teams are at a floor above the fire, a hose line and back-up should be in service with the team.
- Ventilation is necessary. Horizontal may not be sufficient. If a stairwell is used for this purpose, make sure everyone at the scene knows which one is used so as not to use it for rescue or firefighting.
- The search must be fast. If no keys, force ~~bash~~ the doors.
- ~~Carry a crayon or chalk and put an X on doors searched in primary. A circle around the X would signify a secondary search.~~
- Keep teams together, in contact.
- Place a large handlight at the stairwell used for rescue, shining down the hall. Tell the people evacuating to crawl to the light.

- . Primary search has to be rapid for endangered areas. Fire conditions will dictate if a primary is possible.

### **Secondary**

After a primary search is completed and a primary all clear has been given command, a secondary search is implemented by another team. This will insure that the exact areas of the search by the first team are not searched in repeat fashion. The secondary search is later into the incident and is a thorough search of slower pace. Usually in larger fire situations where a lot of heat and smoke are involved any victims found will be bodies. Even though this search is initiated after fire control and ventilation are complete, the possibility of finding live victims that were missed on the primary is still possible. A "secondary all clear" is given Command on completion and relayed to Alarm.

### **RESCUE**

It is standard operating procedure to extend a primary search in all involved and exposed occupancies which can be entered. Command must structure initial operations around the completion of the primary search. "Primary Search" means companies have quickly gone through all affected areas and verified the removal and/or safety of all occupants.

Time is the critical factor in the primary search process. Successful primary search operations must necessarily be extended quickly, and during initial fire stages.

The rescue functions that follow lengthy fire control activities will be regarded tactically as presenting a secondary search. "Secondary Search" means that companies thoroughly search the interior of the fire area after initial fire control and ventilation activities have been completed. Secondary search should preferably be completed by different companies than those involved in primary search activities. Thoroughness, rather than time, is the critical factor in secondary search.

The completion of the primary search is reported utilizing the standard radio reporting term "ALL CLEAR." It is the responsibility of Command to coordinate primary search assignments, secure completion reports from interior companies, and to transmit the "ALL CLEAR" report to Alarm. Alarm will record the time of this report from Command.

The stage of the fire becomes a critical factor that affects the rescue approach developed by Command. The following items outline the basic Command approach to fire stages:

- . In nothing showing situations, or in very minor cases that clearly pose no life hazard, Command must structure a rapid interior search and report "ALL CLEAR." (The interior search for victims will also verify no fire.)
- . In smoke showing and working fire situations, fire control efforts must be extended simultaneously with rescue operations in order to gain entry and control interior access to complete primary search. In such cases, Command and operating companies must be aware the operation is in a rescue mode until primary search is complete, regardless of the fire control required. In working fire situations, primary search must be followed by a secondary search.
- . In cases of fully involved buildings or sections of buildings, immediate entry and primary search activities become impossible, and survival of occupants is improbable. Command must initially report fully involved conditions, and that a primary search will be delayed. As quickly as fire control is achieved, Command must structure what is in effect a secondary search for victims.

Command and operating companies cannot depend upon reports from spectators to determine status of victims. Control forces should utilize reports as to the location, number, and conditions of victims as supporting primary search efforts, and must extend and complete a primary search wherever entry is possible.

Command must consider the following factors in developing a basic rescue size-up:

1. Number, location, and conditions of victims.
2. Effect the fire has on the victims.
3. Capability of the control forces to enter the building, remove/protect victims, and control fire.

Command must make the basic rescue decision:

Do we remove victims from fire?  
or  
Do we remove the fire from the victims?

In some cases, occupants are safer in their rooms than moving through contaminated hallways and interior areas. Such movement may also impede interior firefighting.

Command must realistically evaluate the manpower required to actually remove victims and then treat them. In cases involving multiple victims, Command must call for the timely response of adequate resource, and quickly develop an organization that will both stabilize the fire and provide for the removal and treatment of the occupants.

Rescue efforts should be extended in the following order:

1. Most severely threatened.
2. The largest number (groups).
3. The remainder of the fire area.
4. The exposed areas.

Command must make specific primary search assignments to companies to cover specific areas of large-complex occupancies and maintain on-going control of such companies until the entire area is searched. When primary search companies encounter and remove victims, Command must assign other companies to continue to cover the interior positions vacated by those companies.

All initial attack efforts must be directed toward supporting rescue efforts, and hose lines must be placed in a manner to control interior access, confine the fire, and protect avenues of escape. Hose line placement becomes a critical factor in these cases, and Command, and all operating companies, must realize that the operation is in a rescue mode. It may be necessary to operate in a manner that writes-off the structure in order to buy rescue time.

Normal means of interior access (stairs, halls, interior public areas, etc.) should be utilized to remove victims whenever possible. Secondary means of rescue (platforms, ladders, fire escapes, helicopters, gravity/nets, etc.) must be utilized in their order of effectiveness.

Command must structure treatment of victims after removal. Multiple victims should be removed to one location for more effective treatment. Command should coordinate and utilize paramedic capability wherever available, and assign treatment companies, as required, to an exterior Medical Sector.

Once the primary search has been completed and an "ALL CLEAR" transmitted, Command must maintain control of access to the fire area; beware of occupants (and others) re-entering the building.

The most urgent reason for calling additional alarms is for the purpose of covering life safety - Command must develop a realistic (and pessimistic) rescue size-up as early as possible.

The term "Search & Rescue" should be used when structuring a primary search over the radio; "ALL CLEAR" should be used only as a completion report.