

POLICIES AND PROCEDURES

STANDARD OPERATING PROCEDURES

High Rise Operations

SECTION III, 10.0 – 10.10

February 26, 2014

Approved by R. Dale Horne – Fire Chief

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10.0 OBJECTIVE

This plan is intended to adapt **AFD** Standard Operating Guidelines and systems to a fire in a structure equipped with a standpipe system (high rise structures).

- ◆ High-rise fires present some particular problems in firefighting operations. Most of these are related to the difficulties of access, the complexities of construction, and the number of occupants in these structures. Because of these considerations, any situation in a high-rise structure is more complicated than the same situation occurring in a low-rise environment.

10.1 DEFINITION

For **AFD** applications, a high-rise structure will be considered any building of four or more stories in height and equipped with a standpipe system.

- ◆ The life safety aspects of a fire in a high-rise structure are always a primary concern for Command.
- ◆ The strategic plan must include an evaluation of the conditions in each area of the structure and the tenability or need for evacuation. Large numbers of occupants may be involved in these decisions. It shall be the policy of **AFD** to evacuate all buildings where a fire alarm has been received when safe to do so. Otherwise, depending on fire conditions and occupancy a “defend-in-place” strategy will be employed.
 - ⇒ Depending on weather conditions, building occupants may be evacuated to Level 1 if safer to do so than being evacuated to the outside.
- ◆ Evacuating occupants must be coordinated with the fire control strategy. With the limited number of personnel on **AFD** first responses, an aggressive coordinated attack on the fire will prove to be the most effective tactical option in the majority of high-rise fire situations.

10.2 IMMEDIATE PRIORITIES

- ◆ The construction of most high-rise buildings effectively shields the interior from the outside. Even with “nothing showing”, an assumption of a concealed fire should be made by command.
- ◆ The initial arriving units should be concerned with:
 1. Establishing incident command and accountability.
 2. Access preplan information.
 3. Identifying the fire floor.

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4. Key access. Utilize Knox Box if building is equipped.
5. Providing an attack on the fire floor with as many personnel as possible.
6. Providing for the life safety of persons in immediate danger. NOTE: If the fire emergency warrants occupant evacuation, Central should be directed to notify Anderson County EPMD to manage evacuees.
7. Providing water supply for the initial attack.
8. Making a size-up of conditions on the fire floor, the floor above, and ventilation needs.

10.3 ESTABLISH Command

- ◆ Upon arrival the officer taking command will set up the command post on the exterior of the building, no closer than 100' from the structure in Division A unless preplan indicates otherwise. Due to the urgency of getting a crew and officer to the fire floor, the first arriving officer may elect to take command in the "Fast Attack" mode and proceed to the fire floor. In this situation, the first arriving officer must announce his/her actions, and the next arriving officer must be ready to take command and establish exterior command post.

10.4 APPARATUS RESPONSE AND POSITIONING

- ◆ The initial assignment to a report of a fire in a high-rise building will be three engines, and one truck. As much of the structure that is available for aerial placement for rescue/ extinguishments operations should be kept available for aerial placement. Engines and other support vehicles should park no closer than 100' from structures to minimize risks from falling glass and debris from the structure.
- ◆ It is expected that a confirmed working fire inside a high-rise structure will require a minimum of 30 firefighters for simultaneous fire attack and rescue operations and to allow for REHAB and STAGING. IC should initiate the necessary mutual aid and recall of off duty personnel as needed as quickly as possible. Two County stations and T-28 would be a normal mutual aid first request.

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10.5 INITIAL ATTACK

- ◆ The initial attack crew will utilize the stairs, **personnel will not use elevators** during initial search or firefighting operations, until it is determined there is no fire, or the fire is under control and the area declared safe. This includes all box alarms received from high rises. The only exception will be alarms from occupancies with trained staff that will investigate fire alarms before AFD arrival. In that case, personnel may use elevators if the trained staff indicates there is no fire condition found.
- ◆ As soon as the fire floor is reached and identified, the officer or crew leader will give Command a report of conditions on the fire floor, immediate needs, and confirmation of the fire floor number. Command should then establish the fire floor as a Division (4th floor = Division 4).
- ◆ The first engine company will be the primary attack team and first truck company will be the primary rescue team. The initial Attack Team will go upstairs with SCBA, hose pack, and handlight. The rescue Team will carry a 100' lifeline, forcible entry tools, and handlight. Other equipment will be pooled close to attack stairwell until a Forward Staging area established.
- ◆ The initial attack crew will utilize the standpipe connection one floor below the fire. The optimal connection is a 2 ½" (or 3") line from the standpipe, water thief with a minimum of 200' of 1 ¾" hose unless the building preplan indicates otherwise. Attack should consider a high volume straight stream attack to minimize steam production until exterior ventilation from the fire floor area has been established.
- ◆ The second due engine will normally be responsible for standpipe / sprinkler connection. Supply will be via two 3" lines to the connection with an initial PDP of 150psi with water flowing plus 5psi for each floor of elevation. Again, placement should be a minimum of 100' from the structure.
- ◆ Positive pressure ventilation should be incorporated in stairwells used for fire attack and rescue. The need for pressurizing stairwells used by building occupants should be balanced with smoke conditions in the stairwell and crowd management considerations. (NOTE: The Calhoun's stairwells are automatically pressurized when fire alarm system activates.)
- ◆ All stairwell doors except the fire attack door(s) need to remain shut. The attack door must be chocked open. This will allow the PPV air flow to be at the back of the attack team and minimize the spread of smoke to other floors.

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- ◆ Firefighters entering the corridor from the stairwell should remove the ceiling tiles inside the hallway, if applicable, before advancing. This may allow you to see if fire is in the plenum area. A backup hoseline should also be in place.

10.6 COMMAND PRIORITIES

- ◆ Once the initial attack crews have started up to the fire floor, Command must be concerned with the following:
 - ◆ Provide an early water supply for the attack.
 - ◆ Assign team(s) to check the floor above the fire floor. Command must get a report on conditions above the fire as quickly as possible, indicating fire extension possibility, smoke conditions, need for evacuation and resource requirements.
 - ◆ Make sure mutual aid (two county stations and L-28) are dispatched for a working fire. Establish Level II Staging with Staging Officer.
 - ◆ Establish ventilation. Early positive pressure ventilation of the attack stairwell is an **absolute priority**. Additional stairwells may also require PPV.
 - ⇒ If fire control is accomplished before exterior ventilation, consider opening windows in or closest to fire area and using hydraulic (hose streams directed out of the window) for ventilation.
 - ◆ Establish a safety zone around the building for at least 100 feet. All firefighters and civilians are to be kept out of this area except when personnel enter and exit the building.
 - ◆ The major elements which need to be considered in most working high rise situations are:
 - ⇒ Level II Staging
 - ⇒ Firefighter accountability
 - ⇒ Fire Floor (Attack) Division
 - ⇒ Floor Above (Level # ** Division)
 - ⇒ Forward Staging (1-2 levels below fire floor)
 - ⇒ Evacuation (Should be function of truck companies, but give priority and assign resources as needed)
 - ⇒ In addition to these elements, many or all of the Team/division functions associated with standard operations may be required.

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⇒ NOTE: Use of geographic radio designations is essential for IC to track location of firefighters operating inside the building.)

10.7 FORWARD STAGING

- ◆ The purpose of Forward Staging is to have a designated area to pool and quickly deploy personnel and equipment in proximity to the fire floor. It is also established to manage and control the flow of personnel and equipment to the upper portions of the building. Forward Staging will also provide previously assigned personnel an area for rehabilitation, equipment exchange, and first aid.
- ◆ Firefighters must not enter building empty handed. Extra SCBA tanks, forcible entry tools, high-rise hose with nozzles, etc. should be taken to Forward Staging.
- ◆ Forward Staging reports to Command in the initial phases of an incident. If, and when, Operations is staffed, then Forward Staging reports to the Operations Chief.
- ◆ Normally, Forward Staging is located two floors below the fire to minimize the time-distance factor. The location may be altered due to incident conditions.
- ◆ Functions of Forward Staging

⇒ As a minimum, the following will be performed by Forward Staging during a high rise incident:

- Verify location of Forward Staging with Command / Operations.
- Maintain a complete and accurate record of resource status for personnel accountability.
- Forward Staging personnel must control stairwell access, and prevent arriving crews from bypassing Forward Staging.
- ◆ REHAB (at Forward Staging) should be staffed with Paramedics or medically qualified personnel to clear firefighters for return to service.
- ◆ **DON'T COME TO FORWARD STAGING EMPTY-HANDED.**

10.8 OPERATIONS

- ◆ **FIRE FLOOR**
- ◆ Teams assigned to the fire floor are primarily concerned with search and rescue, fire attack and ventilation. Frequent updating of Command is essential.

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- ◆ **FLOOR ABOVE**
- ◆ Teams on the floors above will determine the life safety of occupants and evacuate if necessary. They will check for fire extension in the upward direction. Updating of Command is essential.
- ◆ **FLOOR BELOW**
- ◆ The floor below must be checked for any possibility of fire extension and for property conservation needs. Salvage is usually the most significant activity. Updating of Command is essential.

10.9 THE RELIEF CYCLE

- ◆ The objective of the relief cycle is to maintain a constant application of water on the fire. It is based on the use of three crews for each hand line placed in service. One crew on the line, one crew at the stair shaft landing, and one crew at the forward staging area.
- ◆ The crew at the stair landing moves into position on the hoseline soon enough to ensure that the crew being relieved has enough air remaining to exit the floor safely and return to forward staging. The stairway crew is also the RAT for the Attack Team working on the fire floor.
- ◆ The crew being relieved returns to forward staging to change air cylinders and take a brief rest. Firefighters should be cleared by REHAB before returning to service.
- ◆ The third crew in the relief cycle that has been in forward staging moves up to the stair landing and becomes the RAT.
- ◆ They then relieve the crew on the hoseline at the appropriate time.
- ◆ The fire floor division supervisor should coordinate the movements of crews during the cycle.
- ◆ NOTE: A Rapid Access Team (RAT) should be standing by to back up handlines operating on the fire floor.

10.10 POINTS TO REMEMBER

- ◆ Any working high rise fire will quickly use up available personnel. Command **MUST** call for help early. Both mutual aid and general recall as needed.
- ◆ A fast aggressive attack may be in order before conditions deteriorate. Putting the fire out may be the best way to protect the occupants.

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- ◆ Staff the ICS structure early. Even with limited manpower, the structure needs to be in place so that personnel may be added as they arrive.
- ◆ Positive pressurize the attack stair early, before smoke contaminates this area.
- ◆ If you go up the stairs -- carry equipment.
- ◆ **DO NOT USE ELEVATORS** Until proven safe

