



City of Winter Park Fire-Rescue

Standard Operating Guideline

210.05

Title: Tactical Planning for Fires in High Rise Buildings

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Purpose: To establish a procedure that will determine the tactical considerations and responses for all personnel during all incidents involving High-Rise Structures and other specialty type structures.

Scope: This procedure is to be followed by all employees. Authority to deviate from this procedure rests with the Chief Officer in Command of the incident. These procedures are guidelines that are to be followed as much as possible, but the Incident Commander should be prepared to utilize actions and resources outside this document.

General:

A substantial time lag occurs in fires that involve the upper floors of a structure between the arrival time of the fire department and the time a hand-line is placed into operation. Fire conditions can be expected to worsen during this period.

High-rise buildings are tightly constructed. Any indication of fire or smoke through the exterior skin is a good indication of a serious fire, which could overtax the first responding units. In this case, a second alarm, or additional specialty units, should be called for promptly. Any indication of an interior working fire may also require the need for greater than even a second alarm.

Time of day has a great bearing on life hazard. Many buildings have substantial night operations that involve maintenance and security people that must be anticipated and accounted for after normal business hours.

Fires in High-Rise buildings present severe problems for command and control. The complexity of these buildings with multiple stairways, multiple elevators and larger floor areas provide problems in knowledge of unit locations and strategy that requires control through an effective Command organization and continued quality communications.

210.05.01. Initial Alarm Response

The initial response to a fire in a high-rise building shall be the following:

- Three (3) Engines
- One (1) Truck
- One (1) Rescue
- One (1) EMS Supervisor
- One(1) Battalion Chief

Special consideration must be made by the responding Battalion Chief to request additional resources on the initial alarm, based on information provided. Additional considerations should include requesting additional Engines, Rescues and Trucks depending on the type and occupancy of the structure.

210.05.02. Operation of First Arriving Units

The information gathered by the first arriving unit should be transmitted via radio to all units. This information will help to determine, to a large extent, the success of the overall operation.

First Arriving Fire Department Unit Shall:

- Establish command / Name Command using Geographic Location
- Provide a situation report and actions via radio to responding units
- Attempt to establish "LOBBY CONTROL"
- Transfer Command as required
- Properly position apparatus (aerial) for rescue or elevated stream.

The FIRST ARRIVING AERIAL UNIT should attempt to remain uncommitted to a particular location until it can be determined if a rescue or elevated stream is required. If the unit is also the FIRST ARRIVING FIRE UNIT, special consideration should still be given to the proper placement of this piece of apparatus. Normal operations such as standpipe and system responsibility should not be compromised due to a unit being equipped with an aerial device.

NOTE: Lobby Control is responsible for the control of elevator and stairway access, for the operation of alarm panels, communication systems, and H.V.A.C. systems. This Division shall maintain a log of all personnel going up to the fire area. The apparatus driver of the FIRST-IN ENGINE COMPANY shall become "LOBBY CONTROL".

First Arriving Engine Company

1. Establish "Lobby Control". The Driver/ Operator of the First Arriving Engine should establish "Lobby Control" responsibilities.
2. Locate Fire Floor and determine the best access points.
3. Ascertain the location and the extent of fire on the Fire Floor.
4. Determine the elevator bank that provides the safest access to the fire area and place the elevator cars to be used on "Fireman Service."
5. Obtain keys necessary to gain access to the Fire Floor.
6. Ensure "Lobby Control" is established. A Fire Department representative should be in charge at this level.

Equipment Carried by the First Engine Company to the Fire Floor should include:

- All personnel should be in full protective clothing including SCBA
- 1 3/4 High Rise Fire Attack Hose w/ Nozzle
- Halligan Tool
- Rope
- Flat Head Axe
- Portable Radio
- Handlight
- Firefighting crew of two (2) or three (3) with SCBA
- Keys (Those located in the Buildings Key Box - If Equipped)
- Any other equipment deemed necessary by the Officer-In-Charge of the crew.

Arrival at the Fire Floor

1. A FORWARD STAGING AREA should be established TWO FLOORS BELOW the reported Fire Floor. This will allow for proper deployment of hand-lines prior to advancement onto the Fire Floor and will afford all crews a safe area of retreat that is well below the active Fire Floor. At the officer's discretion, additional floors may be used to separate the crews from the Fire Floor. In taller buildings, or long, shorter story buildings a FORWARD STAGING AREA shall be established to bring the Incident Commander closer to the incident. This position should be staffed by the Battalion Chief after an additional Chief Officer has arrived and proper procedures for the transfer of Command have taken place.

2. Report the following to Command:
 - Correct location of the FIRE
 - Heat and smoke conditions on the Fire Floor.
 - Life hazards on the Fire Floor and initiate evacuation procedures where required.
 - Location of Fire on the particular floor and what (Quadrant) of the building it seems to be in.
3. Select the best standpipe location for the attack and establish the line.
4. Advance hose-line to attack fire and continue operation until relieved by the second arriving crew on the fire floor. Keep Command updated on your progress on containment of the fire.
5. A decision should be made to "DEFEND IN PLACE" and require occupants to remain in their rooms until they need to be removed to a safer location.

D. Second Arriving Engine Company

1. Unless otherwise directed, the second engine company should proceed to the fire floor, or floor above, and assist the first engine company as needed. This includes the movement of any extra equipment to the FORWARD STAGING AREA.
2. Provide support for the first engine company.
3. The Engineer or Driver of the second-due engine shall assume a position at the system connection or gated wye to serve as entry control for the fire floor. This is to serve as an initial forward observation point for the Incident Commander and to control the water supply to the hose streams at the connection.

Equipment Carried by the Second Due Engine to the fire floor

- All personnel in full Protective clothing including SCBA
- 1 3/4 High rise pack w/ nozzle
- All personnel are to carry ONE additional air cylinder to the forward staging area two floors below the fire.
- Halligan tool
- Rope
- Flat head axe
- Portable radio
- Handlight (s)

- Firefighting crew of three (3) minimum / with SCBA
- Any other equipment deemed necessary by the Officer-In-Charge of the crew.

E. Third Arriving Engine Company

1. Establish Water Supply to the buildings Standpipe / Sprinkler system. Only charge the system under direction of the Incident Commander. If the fire attack is being made from the ground, a water supply should be established to the Engine supporting the attack lines.
2. Report to lobby control with crew and assist first-due engine Engineer with duties of lobby control. This shall include gaining access to elevators, stairwells, communication systems and the building's HVAC system. Lobby control is a multi-functional task that should be performed by more than one individual if possible.
3. Assess the need for more equipment to be carried to the FORWARD STAGING AREA.
4. Evaluate the building's stairwells and establish a stairwell support system for later arriving units.
5. Be prepared to advance to the fire floor to initiate RIT functions.

Equipment Carried by the Third Due Engine Company to the Fire Floor

- All personnel in full protective clothing including SCBA
- 1 3/4 High rise pack w/ nozzle
- All personnel are to carry TWO additional air cylinders to the forward staging area two floors below the fire.
- Halligan tool
- Rope
- Flat head axe
- TIC (to be used by outside truck team if needed)
- Portable radio
- Handlight (s)
- Firefighting crew of three (3) minimum / with SCBA
- Any other equipment deemed necessary by the Officer-In-Charge of the crew.

F. First Arriving Truck Company

1. The first arriving truck company shall position their unit to cover at least two sides of the structure, keeping in mind the use of the aerial device for a rescue and an elevated stream. This may require the Engineer of the first-due truck to remain with the unit for positioning of the aerial device. This will be determined by the Incident Commander. If otherwise directed, the Engineer of the truck shall continue with the normally assigned duties of Outside Truck.
2. The Inside truck team shall conduct a search of the fire floor and rescue any victims. The Inside Truck team will consider the possibility of leaving occupants in their rooms (defending in place) if conditions warrant. This information shall be immediately relayed to the Incident Commander.
3. An All Clear of the fire floor by the Inside Truck shall be relayed to the Incident Commander within the four-minute benchmark. It must be noted that meeting this four-minute benchmark will be dependent on the size of the structure being search. Crews should remain cognizant of this benchmark.
4. After searching the fire floor and determining an All Clear, the Inside Truck team will move to the top floor and conduct a search. Due to the nature of high-rise fires, the fire floor, floor above, and the uppermost floor usually contain the most hazardous conditions. After completing the search of the top floor, the Inside Truck team will give an All Clear to the Incident Commander and continue to search subsequent floors below the uppermost floor.
5. The Outside Truck team shall conduct a search of the floor above the fire floor. Due to visibility issues, the Outside Truck team should consider acquiring a TIC from another engine on scene to perform a rapid search. The Outside Truck team will also adhere to the four-minute benchmark while searching the floor above the fire floor. It must be noted that meeting this four-minute benchmark will be dependent on the size of the structure being search. Crews should remain cognizant of this benchmark.
6. The Outside Truck team will report conditions on the floor above the fire floor to the Incident Commander and check for extension above the fire area.
7. After completing a search of the floor above the fire floor, the Outside Truck team will move to the upper floors and continue a search of subsequent floors with the Inside Truck team.

Equipment Carried by the First Due Truck Company:

- All personnel in full protective clothing including SCBA
- TIC
- Irons
- Search rope
- Water can
- Halligan tool
- Axe
- Portable Radio
- Handlight (s)
- One (1) spare SCBA cylinder each
- Other forcible entry tools as deemed necessary.

G. Actions of the First Arriving Rescue Crew

1. Report to FORWARD STAGING AREA with equipment
2. Initiate 2 out.
3. Assist Inside/Outside Truck teams with search of fire floor and floor above the fire floor as directed.
4. Be prepared to initiate RIT functions on the fire floor.
5. Assist second-due engine driver with entry control on the fire floor.

Equipment Carried by the First Due Rescue Crew:

- All personnel in full protective clothing including SCBA
- One (1) spare SCBA cylinder
- Halligan tool
- Axe
- Handlights
- Axe
- Portable Radio

H. First Arriving EMS Supervisor

1. Report to the Incident Commander for deployment as Safety or to evaluate the need for a Treatment / Transport Division for any occupants or fire personnel.

2. If directed to establish a Treatment / Transport Division, the EMS Supervisor shall determine the need for additional transport-capable rescues and relay that information to the Incident Commander. Additionally, a location for Rehab shall be determined while working within this Division.

210.05.03. Tasks to Consider for Additional Arriving Units

The Incident Commander should at this point recommend that additional aerial apparatus (Truck Companies) be assigned to the incident and assigned the following tasks. These may also be assigned as required to any units available to handle them.

1. Address tasks not able to be completed by first arriving companies. This should include Safety if the EMS Supervisor has been deployed to establish a Treatment / Transport Division, as well as RIT if not already in place.
2. Establish TREATMENT GROUP for victims being removed from fire building. This should be located in a safe area, away from combat activities.
3. Establish VENTILATION GROUP to assist in the control and removal of smoke and toxic gases from the building.
4. Establish STAGING DIVISION for additional units
5. Establish a Stairwell Support Group with additional units.

210.05.04. Command Considerations for Chief Officers

First Arriving Battalion Chief / Shift Commander

1. Position:
To best view as many sides of structure as possible and for best immediate advantage.
2. Objectives:
Report "On Scene" status and assume Command.
Confirm "Lobby Control".
Determine location and extent of fire.
Evaluate potential life hazards.
Need for additional alarms.

Assess initial operations.
Evaluate buildings systems H.V.A.C., Fire Pump, etc.

3. Actions:
 - Via Radio, Assume Command.
 - Via Radio, contact all operating units and obtain intelligence, reference to objectives.
 - Order the building engineer or maintenance personnel to Lobby Sector.
 - Obtain copy of building blue prints from engineer.
 - Establish DIVISIONS / GROUPS as needed: Fire Floor, Resource, Treatment, Rehab, Support, Staging, etc. as needed.

Fire Floor DIVISION

1. Position:
 - Fire Floor, or floor below, or fire floor stairwell.
2. Objectives:
 - Assess fire conditions and evaluation of needs.
 - Formulate strategy.
 - Supervise units at work.
 - Inform Command of conditions.
3. Actions:
 - Make presence known to units operating on fire floor.
 - Via Radio, advise Command of arrival on the fire floor.
 - Visit fire floor, evaluate conditions and progress
 - Via Radio, report to Command conditions, progress, and needs for additional equipment and manpower.

NOTE: Communications between units within a DIVISION OR GROUP should take place face-to-face if possible and not over the radio unless a specific radio talk-group is designated for that purpose.

Second Arriving Chief Officer, Deputy Chief / Fire Chief

The Second arriving Chief Officer *may* assume Incident Command from the Battalion Chief and designate the Battalion Chief to establish another command sector such as FIRE FLOOR DIVISION.

Incident Commander:

Position:

- Outside building at Command Post (at least 200 feet from building if possible).

Objectives:

- Assume Command; assign first arriving Chief Officer or Shift Commander to FIRE FLOOR DIVISION.
- Identify and Control the fire problem.
- Identify and control the evacuation or defend in place problem.
- Determine if progress is satisfactory.
- Request necessary resources.
- If necessary, revise existing strategy and develop contingency plans.

Actions:

- Via Radio, assume Command.
- Via Radio, contact and identify each sector's location and condition.
- Via Radio, contact each company operating alone (not assigned to a sector) and establish such unit's conditions and locations.
- Assign arriving units to deal with developing situations.
- Identify the need for additional resources and manpower to Staging DIVISION, i.e., spare air cylinders.
- Establish stairwell support to route equipment to FORWARD STAGING on the fire floor.
- Establish TREATMENT GROUP and location, if not already done.
- Establish REHAB GROUP usually TWO FLOORS BELOW fire floor.
- Establish INFORMATION GROUP to deal with public, media, etc.
- Call for Mobile Air Supply Unit (Orange County - Orlando)

210.05.05. Special Considerations

Building Systems Officer

In buildings where complex systems are a factor in operations, Command should consider appointing a Building Systems Officer to provide advice and liaison with building maintenance personnel on the operation of these systems. Some buildings provide a control station in the lobby with plans, controls and monitors for all of these functions. The Building Systems Officer would report to the Incident Commander and relieve the "Lobby Control" of this responsibility.

These systems may include, but are not limited to elevators, H.V.A.C., fixed fire protection, internal communications, etc.

Evacuation Officer:

In some situations a significant number of occupants may need to be evacuated or otherwise directed. It may be advantageous to separate this area of responsibility from the fire fighting and assign companies under an EVACUATION GROUP to accomplish this task and reduce the span of control of the Incident Commander.

1. Evacuation Policy

The evacuation routes available to occupants of high-rise buildings are normally limited to two or more stairways. The stairways are also the prime access route for fire fighting forces to make their attack.

Occupants in the immediate fire area should be evacuated as quickly as possible to the third floor below the fire, or to the outside. Further evacuation should be predicated on risk to the occupants.

A recommendation as to evacuation or "defend in place" should be made to Command by units operating on or above the fire floor. Command will have the final decision as to evacuation or defend in place. If sufficient police personnel are available at the scene they may be used to good advantage in assisting with evacuation. Police assistance may be most valuable in controlling evacuees in the lobby and preventing re-entry.

Command Officers

A Command Officer will be assigned to the firefighting level of a high-rise as quickly as possible.

As soon as the second Command Officer arrives at the scene, a Command officer should be assigned to the fire floor sector to direct the attack. As additional Command officers arrive they should be directed to Command various sectors.

One Command officer should be assigned to the Communications Center to assume the role of LOGISTICS DIVISION, to provide for protection in the remainder of the City, and make additional resources available to the fire scene.

Stairways

In structural fire fighting operations, at least one stairway should be kept clear to provide access to, or escape from, floors above the fire. This will require communicating which stairway is being used for fire fighting access and or ventilation and which is being kept clear.

Almost all stairways have vent hatches or roof access at the top to allow venting of trapped smoke. A smoke ejector or PPV introducing fresh air at the bottom will usually help to clear smoke that is trapped in the shaft and prevent smoke from entering through the doors on each floor. Avoid intentionally venting the fire into a stairway. Newer buildings with pressurized stairwells usually require fire department mechanical ventilation.

Air Handling Systems

Some air handling systems are designed for smoke removal and fresh air supply. Regardless of the type system, it should be shut down until the fire is stabilized and the method of smoke removal is decided upon.

Emergency Evacuation Signal

All Fire Department personnel shall follow the Emergency Evacuation Signal procedures outlined in SOG 700.03 of this manual. The Incident Commander shall be responsible for the initiation of the Emergency Evacuation Signal.

Stairwell Support

Command will need to provide for a continuing supply of air cylinders and other equipment to the resource sector. Personnel assigned to Stairwell Support should station themselves at every other floor, and if conditions allow, remove their turnout clothing to reduce heat stress. They should only have to travel down two flights to obtain needed equipment and carry it back up two flights, resting on the way down and stopping when they reach the level where their gear is placed.

Alarm and Communications

Some fire alarms and one or two way voice communication systems provide a method of sounding alarms or making announcements on individual floors selectively or to the entire building. These systems may prove beneficial in making announcements when Command decides to "defend in place".

Additional Air Cylinders

Units operating on the fire floor and floors above will need to have their air cylinders replaced. An immediately available supply of fresh cylinders must be placed near the fire floor. Therefore, ALL second due and greater companies entering the building shall, regardless of assigned equipment, carry with them one spare air cylinder to be left in the lobby. These air cylinders will be moved to the FORWARD STAGING AREA via Stairwell Support. Those units operating above the fire floor shall drop their extra cylinders at the FORWARD STAGING AREA on their way to their assigned tasks.

Use of House Fire Hose from Stored Hose Cabinets

In occupancies that contain fire hose cabinets that have fire fighting hose in them, it will be the policy of the department that these types of house hoses NOT BE USED BY FIRE DEPARTMENT PERSONNEL. If upon arrival at the fire floor the occupants of the building are utilizing the house hose and the fire is being contained, or extinguished, the officer in charge may make the determination to continue the use of the house hose. A second line using fire department hose should be established from another source.

Use of Rapid Intervention Teams (RIT) in High Rise Firefighting Situations

In cases where the active fire floor is located above grade, the Incident Commander should locate the Rapid Intervention Team on the floor below. It is the responsibility of the RIT to be in position, equipped and ready to perform a firefighter rescue on the fire floor should the need arise.

As with all fire situations, the RIT will remain in place until the environment in the building has been reduce to a point which is no longer Immediately Dangerous to Life and Health IDLH.

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James E. White
Chief of Department