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B-3 HIGH-RISE BUILDING OPERATIONS

PURPOSE

This policy is designed to provide effective management and control of essential functions at incidents (including terrorist acts, explosions, collapse, earthquakes, etc.) occurring in multi-story buildings.

Considerations as to span-of-control, building size and occupancy, plus the many variables involved in building design and construction, combine to make each high-rise emergency operation extremely unique.

DEFINITIONS

Attack or Fire Attack: This unit is the initial investigation and firefighting team. In addition, this team's Engineers are responsible for water supply.

Attack Stairwell: This stairwell is used as the primary ascent/access point to the fire floor. This stairwell will be the primary location from which fire attack will take place.

Lobby Control: This unit functions to maintain company accountability, control all building access points, direct incoming crews to appropriate stairwell or elevator, monitor building systems until the Systems Control Unit is established, and account for and operate elevators, and liaison between the IC and building engineers. Lobby Control initially reports to IC or Logistics.

Staging: For a high-rise, the conventional concept of staging has been modified. Staging is generally two or three floors below the fire. This location places firefighters and equipment outside the IDLH environment, in a position to be immediately ready for an operational assignment.

Base: The exterior location at which the primary logistics functions are coordinated and administered, apparatus are parked, and initial stockpiling of incident equipment is assembled during a high-rise incident. Base is located a minimum of 200 feet from the building.

PROCEDURE

The primary objectives of the initial responding companies are:

1. Establish Command
2. Assure personnel safety
3. Locate and determine the extent of the emergency
4. Rescue
5. Initiate control efforts

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6. Property conservation

To accomplish these objectives, initial response personnel shall:

- Utilize the Incident Command System (ICS) format and terminology in the management of the incident. High-rise operational checklists and the Field Operations Guide (FOG) are resources to assist the IC in managing the incident.
- Provide prompt investigation of the reported incident
- Start immediate rescue and initial fire attack
- Handle any immediate support functions required to ensure the safety of building occupants and the firefighters
- Access the Knox Box for building information

At a minimum, the following core functions shall be implemented and staffed with the first alarm resources:**Initiate Fire Attack** - Attack or Fire Attack team to the fire floor. (first two engines and first truck)**Establish Lobby Control** - Inside the building. (third engine company)**Establish Staging** - Inside the building. (fourth engine company)**Establish Water Supply** - By first two engines, staffed by engineers.**INCIDENT COMMAND RESPONSIBILITIES TO KNOWN EMERGENCY/FIRE**

The first in Company or Chief Officer shall perform the following tasks:

Initial size up, evaluation, and risk assessment of the situation, including:

- If possible, view all four sides of the building to accurately identify fire conditions. Keep in mind a sealed high-rise may conceal a significant fire with little to no outward signs.
- Building height
- Occupancy type

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- Obvious conditions
- Safety concerns (falling glass/debris/collapse)
- Occupant access/exiting problems
- Actions being taken
- Any additional pertinent information
- Assume Incident Command (IC). Establish and announce location of the INCIDENT COMMAND POST (I.C.P.), which should be a minimum of 200' from the building.

Once IC has been established, if there are indications that a working incident is in progress, an immediate request for a second alarm shall be made. In addition, the IC should be prepared to call additional alarms. For example: "Heartland – Fletcher IC, requesting a second alarm followed by a third alarm. Base will be located at Center Drive and Grossmont Center Drive."

It is the responsibility of the IC to identify a location for Base. The location shall be relayed to the HCFA as soon as possible. All resources assigned in the subsequent alarms shall be directed to Base. **The first-in Engine Captain of the second alarm should be prepared to assume the assignment of Base.**

General policy in the event of multiple alarms:

- Additional responding units shall report to the BASE.
- BASE should be located a minimum of 200' from the building.

Other arriving Chief Officers should report to the Incident Command Post in full PPE, SCBA, with their 800 MHz portable radio(s), cell phone, and Field Operations Guide.

FIRE ATTACK OPERATIONS**Initial Investigation and Attack**

Members of the attack team should proceed to the alarm system annunciator panel and check for an alarm mode, i.e., TROUBLE, SMOKE, MANUAL PULL, WATER FLOW. If an alarm mode is observed, the engine company officer shall notify the Dispatch Center of the type and location of the alarm within the building.

The engine company officer shall acquire the building keys and proceed into the building.

After entering the building, the attack team will proceed to two floors below the reported fire floor. Before using, elevators shall be checked for safety. After briefly checking floors for possible a STAGING AREA, they will proceed by stairwell to the fire floor.

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After investigation, a status report will be given by radio to the IC. This status report should include the following:

- Exact location and extent of the fire
- Action being taken
- Life hazard (if any)
- Additional hose lines, equipment and personnel necessary
- Elevator safety
- Recommended STAGING location
- Any other pertinent information

The attack team will take the following tools and equipment:

- Thermal imaging camera
- Portable Radios
- Forcible entry tools
- Spanner wrenches
- Standpipe kit including 2 ½" gated wye
- Hand Lights
- 1 ½" or 1 ¾" hose pack

Stairwells

If a search of the attack stairwell is not completed or underway when crews are ready to begin fire attack, the IC shall conduct a risk/benefit analysis. The IC shall evaluate the benefit of attacking the fire and potentially exposing occupants in the attack stairwell to toxic fire gases versus keeping the stairwell door closed.

Delaying firefighting temporarily compartmentalizes the fire until a search of the attack stairwell is completed or underway. The size of the fire, time of day and occupant load will be factors that shall be considered.

Attack Hose Line Management

- Appropriate hose line selection by company officers is critical. If a small compartmentalized fire exists, the 1 ¾ high-rise hose pack with a low pressure nozzle is appropriate.

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- If a large un-compartmentalized fire is suspected, consider selecting a 2 ½" attack line equipped with a smooth bore tip, preferably 1-1/8". Deploying a 2 ½" line requires sufficient personnel to be effective. Supervisors should plan on at least 6 firefighters to deploy a single 2 ½" line.
- Reflex time shall be considered when making hose and nozzle selections.
- Make initial connections to the standpipe outlet on the floor below the fire floor.
- Back-up lines should be connected two or more floors below the fire floor.

Safety

- Consider the placement of a defensive line in center core construction to prevent fire wrap around phenomenon.
- Frequent checks of overhead spaces in the plenum (false ceilings) should be done.
- Personnel should check for or fire extension or spread.
- Opening of windows should be coordinated with the IC and fire attack.
- All personnel should operate in teams of two (2).

Water Supply

- Fire department pumping operations shall be set up the first two arriving engines (Engineers).
- In buildings equipped with a Fire Protection System (FPS) the Engineer will, if practical, spot the apparatus on a hydrant a minimum of 200' from the building and begin to lay the required number of hose lines into the Fire Department Connections (FDC). Supply lines shall be charged to the FDC.
- An immediate pump pressure of 150 PSI should be supplied to the FDC unless signage indicates an alternate pressure.

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Determine Adequate Pump Pressure

- Communication with Fire Attack Team for the status of delivery pressure.
- To supply higher pressure to upper floors, it may be necessary to insert a second pumper in series.

Hose Line Protection

- It may be necessary to protect the hose lines from the potential of falling glass.
- Personnel shall ensure that they are working in full PPE.
- If glass is already falling in the vicinity, the area should be designated an exclusion zone with no entry permitted until deemed safe.

LOBBY CONTROL

A company from the first alarm assignment, ideally the third engine will establish Lobby Control. Multiple alarm incidents will likely require a minimum of two companies to achieve all the objectives of lobby control.

Lobby Control will manage the accountability, company tags to easily and quickly identify which companies have entered the building. Personnel assigned to non-IDLH assignments inside the building will be accounted for at Lobby accountability.

Control All Elevators

- Lobby Control will control all elevators and will designate specific elevators to be used with assigned fire department operators.
- All elevator cars shall be returned to the lobby.
- If a car will not recall and cannot be accounted for it must be searched, IC or Operations shall be notified.
- If used, individual cars shall be operated in the firefighter service mode.

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Control Ingress, Egress and Ascent Locations

- Lobby Control will control all personnel entering and exiting the building.
- Determine the safest route that will protect personnel from falling glass and other items from the building.
- Direct firefighters to appropriate route of ascent.
- Assist with civilians exiting the building.
- Facilitate movement of tools and equipment aloft.
- Spare SCBA bottles and drinking water should be considered very early on in the incident.
- Equipment movement can be facilitated by utilizing elevators if deemed safe to use.
- Company's en-route to Staging should assist in the movement of required equipment.

Control Building Systems

- Built-in Fire Protection Systems
- Fire pump(s)
- HVAC/smoke management systems
- Communications and public address system
- Electrical power systems
- Locate and staff the Fire Control Room
- Gather pertinent information from all available sources; panels and system printouts, building plans, etc.

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- Issue available red phones and key sets, with priority to:
 - Stairwell search
 - Staging
 - Fire floor
 - Elevator car operator(s)
 - Personnel assigned to go to the Fire Pump Room
- Ensure stairwells are unlocked and/or keys are issued. If alarm panels are equipped with unlocking features for the stairwells ensure that the doors are unlocked.
- Consider using the building's public address system to broadcast instructions to occupants.
- In order to deliver effective announcements information regarding conditions should be obtained from ascending crews (fire attack, stairwell search).
- Direct the occupants of selected floors to the most appropriate stairwell(s) to exit the building.
- Instruct occupants on selected floors to shelter-in-place. Shelter in place is generally recommended for occupants three or more floors below the confirmed fire floor.
- Notify IC of necessary information that HCFA can then provide to occupants who call 911.

Fire Pump Operation

- If there is an indication of water flowing, send a firefighter to the fire pump room to ascertain that the building's fire pump is functioning properly.
- Valves are in correct position.
- Notify the pumping apparatus, what the system pressure is (indicated on the gauge on discharge side of fire pump).
- Prevent flooding of basement areas to avoid damaging core equipment such as fire pumps and generators.

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STAGING

Staging is the assembly point where a cache of personnel and equipment are maintained awaiting assignment within the building. A company from the first alarm, ideally the fourth engine, will be assigned Staging responsibilities by the IC. Staging reports to the IC or Operations.

The complexity of a high-rise incident requires that conventional concepts of Staging Areas be flexible. The Staging Area is generally two or three floors below the lowest fire floor as long as the atmosphere can be kept clear. Staging will assume the Initial Rapid Intervention Crew (I-RIC) and manage personnel accountability, until relieved of this responsibility. See County Operational Policy #5A and #6A.

The many complexities of these incidents may include: limited access for equipment and personnel, vertical travel distance to the fire floor, construction or layout issues of available floors. Considerations should also be made to accommodate a large scale incident and its need for expanded staging operations. Equipment shall not be stored or cached in the stairwell (storage in stairwell may restrict access/egress).

Once this position is filled and the floor for Staging is identified; a status report will be made to the IC or Operations.

Assign an Accountability Officer and report their location to the IC.

I-RIC shall ensure that a RIC bag is brought to the Staging floor. Additional RIC gear shall also be assembled. I-RIC should transition to a full RIC as soon as possible.

The responsibility of the Staging Officer is to prepare the floor for staging operations. Staging Officer shall place personnel in the stairwell to direct crews to the Staging location. Crews are not to bypass staging unless directed to do so. Floor preparation includes:

- Locating an acceptable rehab site.
- Identifying areas for an equipment cache including full and depleted SCBA cylinders.
- An area for fresh crews including RIC. See County Operational policy #6A.

The Staging Officer shall continually assess the best access for ascending companies. The Staging Officer shall also assess the need for the appropriate tools and equipment necessary to control the incident.

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BASE

The Base location shall be identified by the IC. The Officer of the first engine on the second alarm will typically assume the position of Base Manager. Base reports to the IC or operations. Base responsibilities include:

- Careful consideration should be made for the: parking, security, flow of personnel and equipment to the scene.
- Evaluate area hazards and identify optional areas, if needed.
- Assume control of personnel and resources assigned to Base.
- The early coordination of the resources and personnel is critical for the efficient function of the Base Unit. It is essential that crews responding on the second alarm or greater, report to Base.
- Units shall respond directly to Base unless specifically assigned elsewhere.
- Base unit shall establish routes into the Base parking area.
- Coordinate with Law Enforcement personnel for area and access control.
- Identify needed equipment and place in an accessible area (cache). Personnel can then transport equipment to the incident.
- Coordinate with Ground Support for the movement of equipment and resources into the fire building.
- Establish one or more safe routes to the fire building and coordinate the route with Lobby Control.
- Maintain an accurate log of apparatus, equipment, and available personnel in Base and periodically advise the IC

Parking – Engines

- Engines should park diagonally. Ideally, the engines should be backed into this position.
- Facing in a direction to permit driving directly to an assignment.
- Leaving space between units for opening of doors and compartments.
- If on a clear street, both sides of the street shall be utilized.

Parking – Trucks

- Trucks should be parked closest to the incident
- Separate from engines
- If on a clear street, direct trucks to park parallel to the curb utilizing both sides of the street.

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