

**PHOENIX REGIONAL
STANDARD OPERATING PROCEDURES**

HIGH-RISE PLANS

M.P. 202.11

1/13-R

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The purpose of this document is to identify key strategic and tactical objectives in Phoenix Fire Department operations in High-rise buildings. These include initial and ongoing building size-up, appropriate use of the PFD risk management profile, assessment of occupant location and removal, and effective sectorization within the incident structure. In the City of Phoenix, a high-rise building is defined as 6 elevator stops or greater or 75 feet in height or greater.

The actions and priorities in this procedure are further covered in depth in the Phoenix Fire Department High-rise Manual.

- **High-rise Building Size-up**

- Exterior view
 - Often hide fire and smoke due to building being well sealed and large internal capacity for smoke
 - Estimate potential for falling debris and/or major structural collapse
 - Guide responding companies around these hazards
- Interior view
 - Building personnel accounts
 - Is building being evacuated?
 - Alarm indications
 - Stairwell assessment
 - Number of stairwells?
 - Conditions within?
 - How are they labeled?
 - Have the elevators been recalled?
- What resources are responding?
 - Additional alarms needed based on observations?

- **Risk Management Assessment**

- Is the building occupied?
 - Commercial or Residential?
- What caused this incident?
 - Accidental fire
 - Intentional
 - Unknown?
- How has this affected building integrity?
 - Is the building going to allow fire and/or rescue operations
 - Will PFD inaction cause the building to collapse into other buildings?
- Fire location?
 - What floor?

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- **Tactical objectives**

- Rescue

- Secure and maintain viable evacuation and fire attack stairwells
- The PFD will never use elevators as a means of rescue in smoke or fire conditions
- Each must be declared to Command or AHQ prior to making way to the fire floor
 - Evacuation stairwell = stairwell dedicated to the removal of occupants from the building
 - Fire attack stairwell = stairwell dedicated to the fire attack operations ideally with roof access with no evacuation traffic to impede the fire attack operations
- Attempt to diminish smoke conditions
- Identify stair access to roof
- Rescue of immediately threatened occupants
 - Protect in place?
 - Remove to safe location?
 - Removal from the building?
- Establish evacuation plan for remainder of building
 - Remove fire from the victims or victims from the fire?
 - Remove/guide occupants to lower floors or out of building all together
 - Is protection in place a safe option?

- Fire attack

- Assess fire and smoke conditions
 - Size of the fire
 - Resources in position to make an attack
 - Overall elapsed time for set up prior to fire attack
- Provide water supply via standpipe system
 - Built in fire pump or pumped by apparatus?
- Stop the production of heat and smoke
- Manage the spread of heat and smoke throughout the building
 - Use of building systems
 - Sprinklers
 - Standpipes
 - Fire pump
 - HVAC
 - Use of PFD equipment
 - PFD vent truck
 - Portable fans carried on apparatus
 - Natural ventilation

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- Property conservation
 - Often involve high value occupancies
 - Extensive damage not usually contained to 1 floor
- **Deployment**
 - First arriving Phoenix Fire Department Engine or Ladder Company
 - Assume Command
 - PFD Rescue should not take command if first arriving
 - First arriving Engine Company
 - Spot apparatus as close to interior access as possible
 - Proceed directly to the building lobby and gain access to the Fire Control Room or building alarm panel if a dedicated control room does not exist
 - Establish Building Systems Sector with 1 member from the initial Engine Company
 - Crew should initiate a lobby level size up
 - First arriving Ladder Company
 - Spot in position to utilize aerial device for rescue or defensive firefight if necessary
 - Proceed directly to the building lobby
 - Captain should proceed to the Fire Control Room or alarm panel and meet with first arriving Engine Company Captain
 - Crew should begin elevator assessment for possible use
 - Second arriving Engine
 - Company should establish water connection to building standpipe system
 - Engineer should remain with the pumper
 - Captain should proceed to the Fire Control Room or alarm panel to meet with first arriving Engine Company and Ladder Company Captains
 - All additional operational resources
 - After a declaration of a “working fire”, once on scene, all 1st and 2nd Alarm companies should proceed directly to the building and report to Lobby Sector
 - Purpose of this is to decrease transit time once assignment is made
 - Lobby Sector will be operating on the Staging radio channel as per the standard Phoenix Fire Department staging procedures (See Lobby Sector, Phoenix Fire Department High-rise Firefighting Manual)
 - Lobby Sector, Staging Sector and Command will coordinate arriving companies for accountability until assigned to a tactical position in the building

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- **Sectorization**

- Sector priorities
 - Building systems
 - Manage distribution of building keys, fire phones and floor maps
 - May be turned over to Lobby Sector once established
 - Provide direct communications (via radio or red fire phones) to fire attack companies regarding alarm and building information
 - Necessary for managing all building systems including personnel to access all remote building systems
 - Fire pump
 - Ventilation and pressurization systems
 - Emergency generators
 - Elevator operator reports to Building Systems Sector
 - Needs to coordinate communications regarding effectiveness of ventilation systems between Ventilation Sector as well as Fire Floor Sector
 - Fire floor
 - Key for managing company work cycles in stairwells and on fire floors
 - Will create “on-deck” staging area for companies in a “clean” environment
 - Communicate with all sectors to establish effective support for fire attack
 - Stairwell teams – Fire Attack Stairwell team/Evacuation Stairwell Team
 - Dedicated crews to directly manage stairwells and the occupants moving in them
 - Not involved with fire attack
 - Ventilation
 - Manage built in ventilation and pressurization systems
 - Assess the effectiveness of above systems
 - Manage PFD ventilation equipment and effectiveness
 - Communicate with Fire Floor and Building Systems regarding effectiveness of ventilation systems

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- Lobby
 - Works directly with Staging Sector on the staging radio channel to direct fire companies in Lobby Sector to tactical assignments
 - All companies on first 2 alarms should proceed directly to Lobby. Limit staging from outside of building. Need resources immediately available from lobby.
 - Crew accountability tracked based on assignment
 - All crews ultimately should be tracked by Command
 - Create lobby staging area for crews
 - Manage lobby level elevator access
 - Assist with safe egress of evacuating occupants
 - Work with PD to prevent re-entry of evacuated occupants
- Resource
 - Establish equipment pool in building
 - Needs to be well below the “on-deck” floor
 - Decrease likelihood of becoming contaminated with smoke
- Treatment/Transportation
 - May be remote from building
 - Triage is key
 - Large volume of resources may be needed
- Battalion Chief assignment priorities
 - Depend on conditions and actions in the building
 - Fire Floor
 - Building Systems
 - Ventilation
 - Lobby
- Incident may quickly become larger than sectors can support
 - Identify trigger points that should automatically lead to expansion of the incident organization
 - Branches may be needed?
 - Fire
 - Medical
- PD Liaison
 - Coordinate all PD functions within our operations
 - C958/TLO

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- **Rescue Profile**

- Most severely threatened
- Largest number
- Escape routes or methods of removal
- Protect in place
- Use of PD in Lobby sector
- Each building is directed by fire code to have an evacuation plan including a meeting place outside, away from the building

- **Treatment needs**

- Location of treatment area
 - Away from building and fire operations
- Resources needed for treatment and extrication if required
 - Utilize PD to secure corridor

- **Fire attack**

- Crew accountability
- Stairwell teams
 - Immediate deployment to stairwell
 - Provide C.A.N. report from stairwell
 - Assist in establishing operational/tactical priorities
 - Access roof to establish viable exit if necessary
 - Rescue immediately endangered occupants
 - Not involved in fire attack
- Use of elevators
 - Determine if conditions exist that prohibit elevator use
 - Determine when elevators can be used safely
 - Elevators must be prepped for use under fire conditions
 - Roof hatch opened
 - Appropriate tools present including telescoping ladder
- Hose line deployment
 - Small diameter hand lines
 - Fire attack (offensive type activity)
 - Back up line with 2.5"
 - Larger diameter hand line or master streams
 - Prevent fire extension floor to floor (defensive type activity)

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- Coordination of support activities
 - Building system ventilation and pressurization
 - FD equipment ventilation (vent truck)
 - Utility Truck for support of built in Air Standpipe System (if equipped)
 - Provide air cart to “on-deck” location for Fire Floor Sector
- Crew staging and logistical supply
 - Air
 - Extra bottles
 - Air cart/Utility trucks
 - Manpower
- **Unique High-rise Safety Considerations**
 - The standard BC/FIT Sector/Safety officer will operate in key tactical positions
 - Provide for management of accountability, air management and work cycles in a standard manner
 - All operations in high-rise buildings must be tied to areas of safe refuge
 - Clean environment for changing SCBA bottles
 - Air Management
 - All crews entering building must bring a minimum of 1 spare SCBA bottle
 - 1 spare per crewmember initially
 - Due to nature of the building, firefighter can't just step outside to change their SCBA bottle
 - When using stairs to ascend, crews must collectively check their air supply every 5 floors, managed by the captain
 - Areas of “clean” atmosphere must be identified for retreat
 - These conditions may change rapidly
 - Atmospheric monitoring may be necessary
 - CO monitoring in stairwells
 - Invisible dangerous gases
 - Stack affect
 - Unique atmospheric conditions during summer and winter months
 - Building security systems
 - Electronic locking mechanisms in stairwells and on floors
 - Possibly trapping occupants or firefighters
 - Fire on first floor or in lobby
 - Cuts off the natural escape routes for occupants
 - Inhibits the use of Fire Control Room and building systems
 - Fire attack may need to come right off Engine companies on street level

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- **Specialty Considerations**

- Communication
 - Phoenix Fire Department testing has stated that most difficult areas to communicate to and from will be fire control room and elevators
 - Use of mobile radios in fire control room and fire floor sector
- Haz Mat
- TRT
- Air operations
 - Recon
 - Victim removal
 - Deliver firefighters to roof with equipment