



Three Story Building (Manuel Broussard/Lillie Long, FEMA)

Location:

You have been dispatched to a reported fire at 2234 Industrial Drive.

Construction and Layout:

The fire building is a three-story office building with a Type II, center-core construction. The building was built in 2014. There are two elevators in this building. The interior of the building consists of masonry walls, ceilings, and floors. The doors are steel. They are set in steel frames, which are set in the masonry hall wall. All HVAC units are on the C-side of the building.

Auxiliary Appliances:

There are two enclosed stairwells with standpipes located in each stairwell. Both stairwells service all the floors and are pressurized. There are fire department connections on the C-side of the building. The system is inter-connected, but there have been issues in the past with the exterior fire department connection. The building has automatic sprinklers installed.

There are maintenance personnel on site around the clock. The alarm panel and annunciator are located at the first floor desk in a vestibule. There is a communication station that allows communication with all floors in the building. The alarms are activated. The building is segregated into a 3-zone system where each zone serves the three floors.

Water Supply:

The water supply is satisfactory. Preplanning indicates that the flow requirement for this structure is in accordance with code requirements utilizing the Insurance Services Office (ISO) formula.

Exposures:

There are no direct exposures.

Time and Weather:

The time is 1100 hours. The temperature is 84° F. The winds are calm at 5 mph from the south. It is clear with 35% humidity.

Arrival Conditions:

Upon arrival, no fire is evident although light smoke can be seen escaping from the attic window. The window appears to be open as well as along the eaves on the A-Side and D-Side. The maintenance man meets you at the front door and states that the sprinkler system has been activated in Zone 3 and the building is currently being evacuated. Since it is a new building, the building evacuation plan has not been established and it is unknown how many occupants are still in the building. There are numerous people in the parking lot as well people coming out of the building's front entrance.

Response:

You are first to arrive on the scene and will be in command as the battalion chief. The responding fire units are three engines, one ladder company, and a rescue company. The staffing is as follows:

- an officer and three firefighters on each engine,
 - an officer and three firefighters on the ladder,
 - an officer and three firefighters on the rescue, and
- an Advanced Life Support Ambulance on standby.
1. Define the fire flow for this occupancy and why it is critical for a successful outcome of this incident. In addition, how would water supply be established and utilized during the incident? **75 words**
 2. Understanding the reasons why water is the primary extinguishing agent in the fire service, would there be other extinguishing agents you can employ for a fire at this occupancy? Explain. **75 words**
 3. A good preincident plan will assist responding firefighters with decision making plans and the establishment of strategy and tactics. As you view the preincident plan while en route to this incident, what information on this building should be available to you and what information do you deem most important in the establishment of your initial actions? **75 words**
 4. Given the established incident priorities, what would be your primary consideration during this incident and how would you accomplish it given the information within the scenario. How would information acquired during the preincident planning assist in the decision-making process and establishment of incident priorities. **75 words**
 5. You are getting reports from the interior that the light smoke showing is not indicative of the amount of fire on the third floor. The sprinkler system has activated but flow is not adequate enough to overcome the fire spread due to the excessive fire condition. What are your actions given the built-in fire protection that is required for this occupancy type? **75 words**



Figure 10.F11 Building on Fire (Michael Gala, Jones & Bartlett, 2015)

Location:

You have been dispatched to a reported fire at 334 Beale Street.

Construction:

The building on fire, which is the three-story brick multifamily occupancy, is part of row houses consisting of two-story, wood-frame, multifamily residential occupancy, 50 ft. by 65 ft. The building was constructed in early 1900s. The front, sides, and rear are brick masonry exterior. The roofing material is tar and asphalt shingle. A single, open stairwell provides access to the second floor where there are three bedrooms. The attic is unfinished and has no windows. There is a rear door that leads into the kitchen.

Exposures:

Exposures B and D are similar multifamily residential dwellings. They have brick exterior and are connected to the fire building contiguously. There is a large backyard with a privacy fence accessible through a gate on the D-side of the house. Inside the back yard is a common area with a large entertainment area.

Time and Weather:

The time is 1700 hours. The temperature is 56° F. There are mild winds at 10 mph from the north. It is clear with a 10% chance of precipitation.

Arrival Conditions:

Heavy fire is evident and venting from the first floor A-Side of the structure. The fire appears to have already flashed over in that room. It has also begun to be spreading toward the second floor and roof. The fire has not yet spread to the B-Side or D-Side exposure. There is a young victim seen in the second floor window on the A-Side of the fire building in the D-Side Exposure. There is smoke coming from the window and smoke evident from the roof area. No other occupants are visible.

Response:

You are first to arrive on the scene and will be in command as the battalion chief. The response is three engines and one ladder company. Staffing is an officer and three firefighters on the engines, an officer and three firefighters responding on the ladder company. You also have an advanced life support ambulance on standby.

1. Given the construction type of this occupancy, what would be the most significant factor to consider in the spread of heat for this fire? **75 WORDS**

2. How would the tactical objectives change if the multifamily house in the scenario was of balloon-frame construction? **75 WORDS**

3. With regards to the time of day as well as your arrival conditions, what would be your most significant concern? **75 WORDS**

4. What would be your primary means of removing the victim? **75 WORDS**

5. You are the incident commander and the first to arrive on scene. How would you transmit your preliminary size-up report? What would be your initial assignment of resources given the arrival conditions? **75 WORDS**



Multi-Family Dwelling Fire (Lt. Rob Gandee, Jones & Bartlett, 2015)

Location:

You have been dispatched to a reported working structure fire at 2251 Airport Way.

Construction:

The fire building is an extended-stay building consisting of a three story, wood frame, multi-family occupancy, 150 ft. by 65 ft. The building was built in 2005. The front, sides, and rear of the building have brick veneer siding. The roofing material is asphalt shingle. There are three stairwells throughout the building. The two stairwells, one on the B-Side and the other on the D-Side are enclosed, while the remaining stairwell, on the center of the structure, is open. There is also one elevator in the center of the building. There is a fire department connection by the front door that supplies the sprinkler system and there are standpipes located in the B-Side and D-Side stairwells. There are doors on all sides of the structure. The rear door that leads into the building is enclosed within a fence by the pool and entertainment area.

Exposures:

There are no exterior exposures to this building.

Time and Weather:

The time is 0600 hours. The temperature is 36° F. There are light winds of 5 mph from the east. It is clear with a 0% chance of precipitation.

Arrival Conditions:

Heavy fire is evident and venting from the second floor, C-Side of the structure. The fire appears to have already flashed over in that room and is well involved at this time throughout the roof of the C-Side. The fire has also begun to spread horizontally and seems to be spreading towards the D-Side of the structure. The fire has not yet spread to the A-Side of the building; however, it is apparent that there is more than

one room involved and the attic is fully involved.

Upon arrival, the manager advises that the building was booked to capacity and that he is the only one working and is unsure of how many occupants are still left in the building. He further advises you that the sprinkler system was shut down by the manager's authority two days prior for system maintenance.

Response:

You are first to arrive on the scene and will be in command as the battalion chief. The response is three engines and one ladder company. Staffing is an officer and three firefighters on each engine. An officer and three firefighters are responding on the ladder company. You also have an Advanced Life Support Ambulance on standby.

1. How would you address all of the functions that must be completed for an incident of this magnitude? After assigning all initial units, explain what tasks they must complete and identify additional resources necessary to address the fire involvement of this occupancy? **75 WORDS**
2. Explain the priority of tasks that must be completed for this incident given the scenario with arrival conditions and considering the fire spread as explained within this scenario. **75 WORDS**
3. You are the incident commander and the first to arrive on the scene. List the strategic goals and tactical objectives applicable to this multi-family dwelling fire. **75 WORDS**

4. Given the construction type of this occupancy, what would be the most significant factor to consider in the spread of heat at this fire? **75 WORDS**

5. With regards to the time of day as well as your arrival conditions, identify your concerns in the establishment of strategy and tactics? **75 WORDS**



Commercial Buildings, Strip-center Structure (Dobresum/Shutterstock, Jones & Bartlett, 2015)

Location:

You have been dispatched to a reported structure fire at 2311 Market Street (building with green awnings, third from right).

Construction:

The fire building is part of a commercial strip mall consisting of a two-story, wood frame, 40 ft. by 95 ft. The building was built in 2005. The construction type is wood frame with stucco on the second floor walls. The first floor is brick veneer (below) with sandstone/rock veneer (above) on the first floor. The roofing material is tar and asphalt shingle. There is a single stairwell on the interior left side as well as an exterior stairway access on the C-Side of each occupancy. The second floor is utilized as multi-family dwelling.

The stores range from inexpensive retail to bakery. There are no particular hazards with any one occupancy within this structure.

Exposures:

Exposures B and D are similar occupancies with multifamily residential dwellings. Note: The exposures in this scenario are B1, B2, etc., and D1, D2, etc. The building is built as one unit and has brick exterior and are connected to the fire building contiguously. There is an alley behind the structure with individual parking spaces assigned to each resident.

There are no exposures to consider within this structure except the ones connected as part of the original structure.

Time and Weather:

The time is 0900 hours. The temperature is 76° F. There are heavy winds of 26 mph from the east with gusts to 45 mph. It is clear, with a 0% chance of precipitation.

Water Supply:

Water supply is adequate for the forecasted fire load in the area.

Arrival Conditions:

Upon arrival, there is heavy fire from the store front located in the direct middle of the strip mall. It appears to be contained within that business, however, it appears to already have reached flashover and extending to the second floor. The fire has not yet spread to the B-Side or D-Side exposure.

There are numerous customers and bystanders present but you are unclear if any of the bystanders are from the stores. As you are completing your size-up, you notice heavy black smoke in the storefront as well as the second floor of exposure D1.

Response:

You are first to arrive on the scene and will be in command as the battalion chief. The response is three engines, one ladder company, and one rescue company. Staffing is an officer and three firefighters on each engine. An officer and three firefighters are responding on the ladder. An officer and three firefighters are responding on the rescue company. You also have an Advanced Life Support Ambulance on standby.

1. What would be the methods of fire attack that could be employed given the fire scenario? Explain the advantages and disadvantages of each as well as which method you would employ to suppress this commercial fire given the conditions. **75 WORDS**
2. Suppose the ladder officer indicates there are multiple victims on the second floor of exposure D1. What is the first action you order for them to take and how does this change your overall strategy and tactics for the incident? Suppose that one of the victims is identified as an off-duty firefighter who was attempting a rescue. **75 WORDS**
3. What are your strategic goals and tactical objectives at this commercial fire incident? What is your initial assignment of resources to address each of these? **75 WORDS**
4. You are the incident commander and the first to arrive on scene. What are your considerations during your initial size-up for this commercial structure fire? What are your primary considerations? Explain. **75 WORDS**
5. Suppose the D1 exposure becomes fully involved. How would you assign this to be controlled, and what other actions would be necessary to address the involvement of this occupancy as well as the primary commercial fire building? **75 WORDS**



Office Building Industrial Complex (Craig Maciuba, 2015, Jones & Bartlett)

Location:

You are responding to a wildland fire threatening a commercial structure. You have been dispatched to 5900 Industrial Boulevard, which is a rural industrial area surrounded by dense forestry and high fuel load.

Construction:

The main building is a four-story office building as part of an industrial complex. The building was built in 2005. The building is a Type II with center core construction. All HVAC are located on the roof of the structure. There are multiple stairwells in the building including one alongside the elevators in the middle of the building. The stairwells comply with current code and have standpipes located in each. All stairwells have access to the roof of the building. There are no special hazards identified with this building and it consists of several different companies utilizing the building as its office complex. The building is at capacity in regards to occupants.

Exposures:

There are numerous buildings within the complex since this area is very dense with buildings of similar types and use. There is a six-story cold storage warehouse located on the B-Side and is separated by the street. The C-Side exposure has an office building of similar type and use, as well as in size. This building is actually connected by walkways from the second and sixth floors. The D-Side exposure is also separated by a street and is a 14-story office building.

Time and Weather:

The time is 1300 hours. The temperature is 96° F. There are heavy winds at 36 mph from the north. It is

partly cloudy with a 100% chance of severe thunderstorms in the afternoon.

Water Supply:

Water supply is adequate for the industrial complex, however, there is a private water line installed and maintained by the developers.

Arrival Conditions:

Upon arrival there is an active and well-developed wildland fire moving through dense trees and heavy brush surrounding the industrial complex. There is light smoke showing from the A-Side and B-Side of the structure. The smoke appears to be coming from the main building fourth floor. The building is currently being evacuated. There are office staff personnel gathering around in the street on the A-Side of the structure. When you arrive, building maintenance personnel state that the water supply to the fire protection systems have been shut off due to maintenance on the system which has been under repair. The system is out of service.

Response:

You are first to arrive on the scene will be in command as the battalion chief. The response is four engines, one ladder company, and one rescue company. In addition, there are three brush units from the automatic aid department responding. Staffing is an officer and three firefighters on each of the engines. An officer and three firefighters on the ladder company. An officer and three firefighters are on the rescue company. An officer and a firefighter are respond on each of the brush units. You also have an Advanced Life Support Ambulance on standby.

1. What are your strategic goals and tactical objectives at this incident? What is your initial assignment of resources to address each of these strategic goals and tactical objectives? **75 words**
2. What would be the most significant factor to consider in the spread of the wildland fire? How would you address this given the resources allocated to this incident? What would you do to address this issue? **75 words**
3. The maintenance crew reports that the hydrant system from the industrial complex has collapsed, limiting the amount of water flow available for both the structure and the wildland fire. How does this affect your overall strategic goals and tactical objectives as the fire continues to spread throughout the upper floors and is progressing throughout the dense forestry and underbrush? Suppose that one of the victims is identified as an off duty firefighter who was attempting rescue. **75 words**
4. You are the incident commander and the first to arrive on scene. What are your considerations for apparatus placement during this incident? What are your reasons for placement given the wildland urban interface (WUI) and size of the threatened structure, as well as the conditions upon arrival? Explain **75 words**
5. The fire continues to spread throughout the surrounding areas of the industrial complex and it is compromising other exposures. How does this change your mode of operation? Please explain. Also, identify and explain the assignment or re-assignment of personnel to address the increase in fire size and intensity to include the evacuation of the industrial complex as well as firefighting personnel. Explain the communication requirements in the event of any change in operational mode. **75 words**