



In-Station Training

TM 23-27 Apartment Fire



Author

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Purpose

Fire behavior and building construction are at the center of strategic and tactical decision-making in structural firefighting. IC's must not only be able to recognize what is happening in the moment but also be able to project what is likely to happen as the incident progresses. Similarly, water supply for firefighting operations should be based on potential changes in fire conditions.

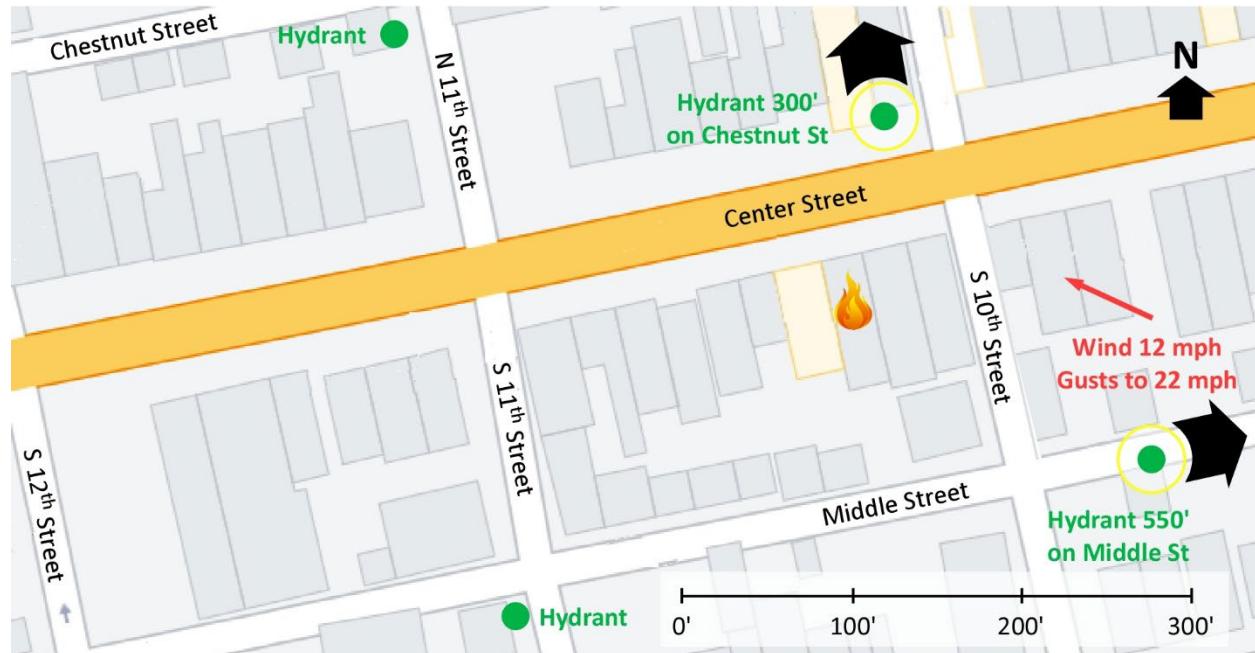
Learning Outcomes

Firefighters and officers perform an effective size-up; select an appropriate strategy, and implement tactics based on the strategic decision-making model.

Conducting the Drill

This incident involved a fire at 1010 Center Street in Ashland, Pennsylvania on June 3rd, 2023, at 20:20 (Skook News, 2023; WNEP Web Staff, 2023; & Sylvester, 2023). Review the map and photos (Figures 1-4) to gain an understanding of the area and building involved.

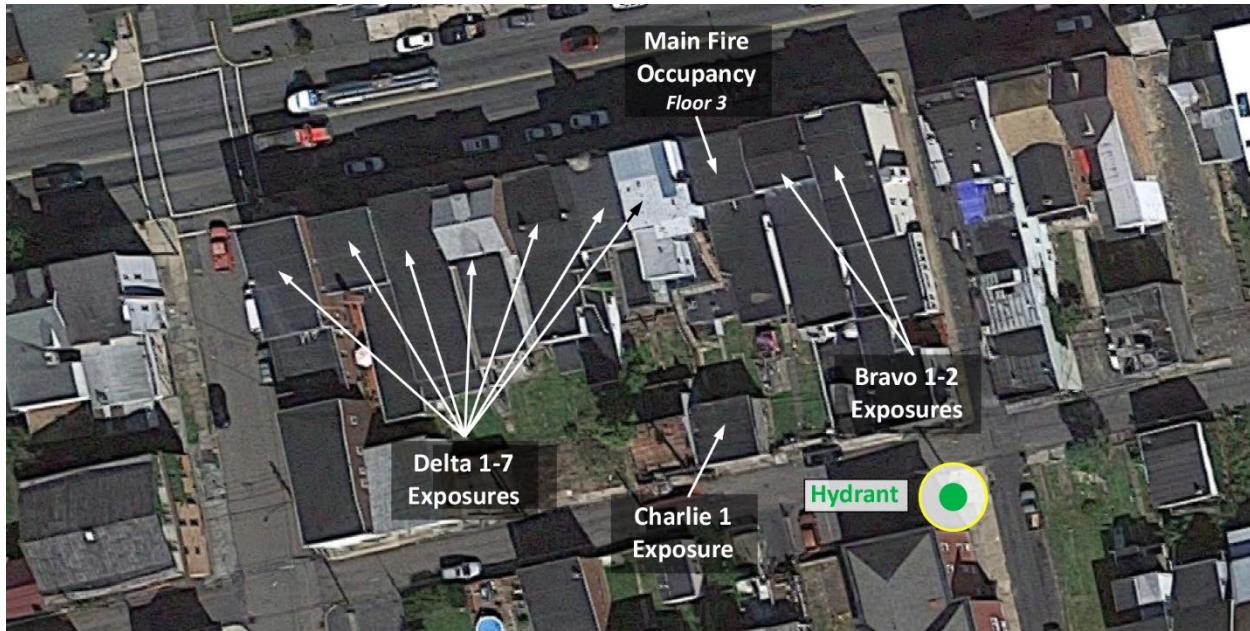
Figure 1. Map of the Incident Area



Note: Adapted from Google. (2023a). [map, 1010 Center Street, Ashland, PA]. <https://bit.ly/3WRn5Hi>.

The closest hydrant is located to the south southeast of the incident location on Middle Street at S 10th Street. Several other hydrants are in the area as illustrated in Figure 1.

Figure 2. Aerial View



Note: Adapted from Google. (2023b). [aerial view, 1010 Center Street, Ashland, PA].
<https://bit.ly/42M2xRR>.

Figure 3. Alpha/Bravo Corner



Note: Adapted from Google. (2018a). [street view, 1010 Center Street, Ashland, PA].
<https://bit.ly/42O7XMe>.

Figure 4. Alpha/Delta Corner



Note: Adapted from Google. (2018b). [street view, 1010 Center Street, Ashland, PA].

<https://bit.ly/3qTDrU0>.

No view of Side Charlie is available. However, from the aerial photo (Figure 2) it appears that there is access to the fire building from Side Charlie.

You have been dispatched to 1010 Center Street for a apartment fire at 20:20. You are the company officer or AIC of the first arriving engine and have your company's typical staffing. The temperature is 72° F with wind from the east southeast at 12 mph with gusts to 22 mph.

1. What critical factors would you consider when dispatched and during response and what conversations would you have with your crew while responding?

While responding you hear a command officer, another engine and advanced life support ambulance with typical staffing for your agency go enroute. Dispatch provides an update reporting smoke from the building. The second engine and ALS ambulance will arrive approximately five minutes after you followed by the command officer. All other units dispatched on the first alarm will arrive after the command officer. You arrive from the west on Center Street.

Watch the first 00:30 [incident video](#) (Skook News, 2023) and examine Figure 5 illustrating conditions on arrival.

Figure 5. Conditions on Arrival



Note: Adapted from Skook News. (2023). Pre-arrival: working structure fire in Ashland [video].
<https://bit.ly/3NKt0e7>.

2. State your initial radio report (IRR) exactly as you would transmit it to dispatch.

3. What specific actions would you take (as the company officer) immediately upon arrival and exiting the apparatus and what task orders you would give your crew?

Bystanders do not have any information regarding the possibility of occupants. The only access to Side Charlie is via South 10th Street, or South 11th Street to Middle Street.

4. Would you change the action you are taking or modify the assignments given to your crew? If so, what task orders would you provide?

5. State your update report exactly as you would transmit it to dispatch.
6. State the tactical assignment you would give the next arriving engine exactly as you would transmit it.
7. Based on the anticipated effectiveness of your tactical operations, state your conditions, actions, and needs (CAN) report that you would provide to the first arriving command officer as part of command transfer to IC #2?

Watch the [incident video](#) (Skook News) from 00:30 to 01:55 (note that there is a transition in the video, with some incident operations occurring between the first and second segment shown in the video clip).

8. If you did not get a look at Side Charlie, did you identify the need to do so in your CAN report to IC #2? How could this need be addressed?
9. The first arriving company elected to stretch an attack line through an interior stairwell to the third floor. What factors may have influenced the effectiveness of this tactical option?
10. What tactical options for exterior water application prior to stretching a line up the interior stairway may have been effective? What would be the advantages and disadvantages of each of the options you have identified?

11. Between 01:19 and 01:55 additional resources arrive and operations on Side Alpha appear to focus entirely on the Main Fire Occupancy. Did you identify the need to address the exposures in your CAN report to IC #2. What priority would you place on Bravo 1 and Delta 1 Exposures (Floor 3)?

Watch the remainder of the [incident video](#) (Skook News). At 01:56, the incident video shifts to Side Charlie.

12. How did the arrangement and configuration of the fire building and its exposures impact incident operations?

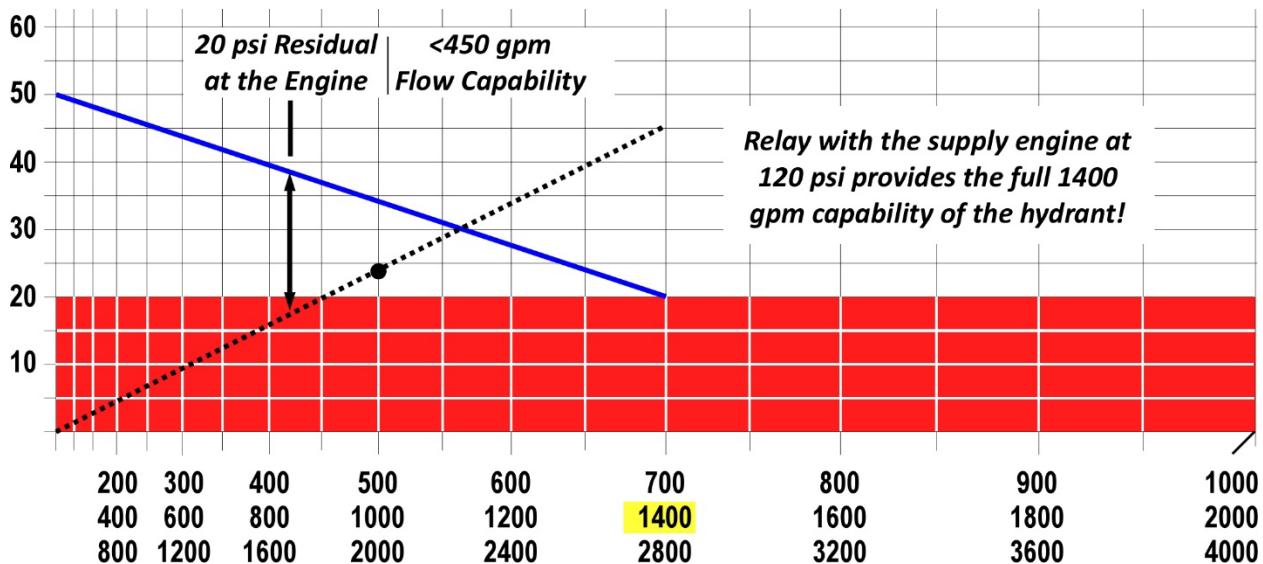
Additional Learning: When working in a hydranted area there are several options for establishing a water supply. If there is a hydrant before the fire building in the direction of travel an engine company can perform a forward lay or a dry forward lay. With the forward lay a firefighter remains at the hydrant to make connections and charge the supply line. In a dry forward lay, the hose is simply laid from the hydrant to the fire without leaving a firefighter at the hydrant, leaving connection, and changing the line to a later arriving resource. The reverse lay provides another option. In a reverse lay, the engine lays a supply line from the fire to the hydrant. Depending on the road or driveway configuration, these options can be combined with one engine performing a dry forward lay and a second company picking up that supply line and performing a reverse lay to complete the supply line between the fire and the hydrant.

Given the location of the hydrants in this incident, what water supply tactics did you use? No water supply tactic is most appropriate in all circumstances. Watch the video [Benefits of the Reverse Lay](#) (Hinkle, 2017) and discuss where you might use this water supply tactical option.

Consider the following situation. The distance between the fire and the closest hydrant is 300' (as in the incident in this 10-Minute Training). The static pressure at that hydrant is 50 psi and the flow capability from the hydrant is 1400 gpm at a residual pressure of 20 psi. You are using a 5" supply line which has a friction loss of 8 psi/100' at 1000 gpm.

Figure 6 illustrates that using a forward lay provides a flow capability on the fireground of less than 450 gpm. However, an engine placed on the hydrant (either by using a reverse lay or having the supply engine take over the hydrant and pump an existing supply line) will allow delivery of the full 1400 gpm capability of the hydrant.

Figure 6. Hydrant and Supply Line Capability and Limitations



Note: Adapted from East County Fire and Rescue (ECFR). (2023). *Apparatus operator job aid* [log graph]. Camas, WA: Author.

References

East County Fire and Rescue (ECFR). (2023). *Apparatus operator job aid* [log graph]. Camas, WA: Author.

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