



# In-Station Training

## TM 25-08a Residential Fire



### Author

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### Purpose

The challenges presented by a residential fire are multiplied when companies arrive to find extension from the main fire occupancy to one or more occupied exposures.

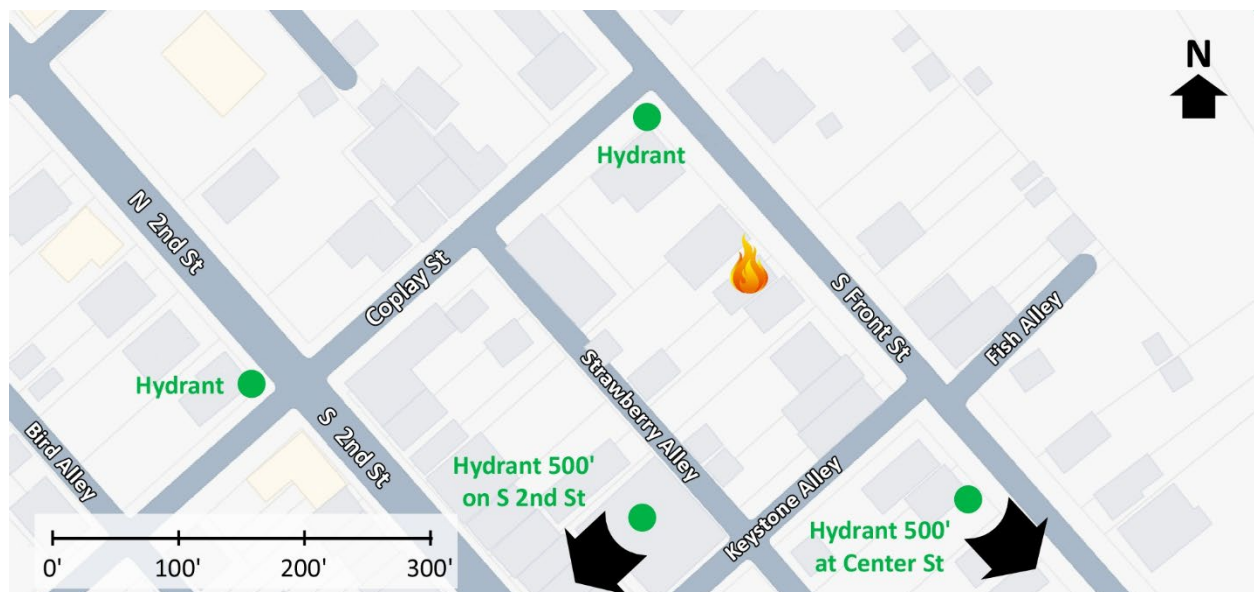
### Learning Outcomes

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

### Conducting the Drill

This incident involved a residential fire at 16 South Front Street, Coplay Borough, Pennsylvania on Saturday, December 14, 2024, at 07:52 (Newsworking, 2024 & Lehigh Valley Fire Scene, 2024). Review the map and photos (Figures 1-6) to gain an understanding of the area and building involved.

Figure 1. Map of the Incident Area



Note: Adapted from Google. (2024a). [Map, 16 South Front Street, Coplay Borough, PA]. <https://bit.ly/3BMt2ij>.

Figure 2. Aerial View



Note: Adapted from Google. (2024b). [Aerial view 16 South Front Street, Coplay Borough, PA]. <https://bit.ly/4j71Yva>.

The closest hydrant is at the intersection of Coplay Street and South Front Street with additional hydrants in the area as illustrated in Figure 1.

Figure 3. Alpha/Bravo Corner



Note: Adapted from Google. (2024c). [Street view 16 South Front Street, Coplay Borough, PA]. <https://bit.ly/4gGYyxK>.

Figure 4. Side Alpha



Note: Adapted from Google. (2024d). [Street view 16 South Front Street, Coplay Borough, PA].  
<https://bit.ly/4fM3gch>.

Figure 5. Alpha/Delta Corner



Note: Adapted from Google. (2024e). [Street view 16 South Front Street, Coplay Borough, PA].  
<https://bit.ly/3W1QIWX>.

Figure 6. Side Charlie



Note: Adapted from Google. (2024f). [3d aerial view 16 South Front Street, Coplay Borough, PA]. <https://bit.ly/4fKLMNd>. & Redfin. (2017). 16 S Front St, Coplay Borough, PA 18037-1240. <https://bit.ly/4gXVZH6>.

The temperature is currently 13° F with no appreciable wind from the north (Weather Underground, 2024). It is Saturday, December 14<sup>th</sup>, and you have been dispatched along with three engines, a ladder company, and a medic unit, at 07:52 to 16 South Front Street for a residential fire. The engines and ladder have four-person staffing<sup>1</sup>. You are responding to this incident as the first arriving command officer.



Time starts now! Answer the first eight questions within the next 10 minutes. After answering question 1, decide and put your answers in the form of communication you would have with the companies assigned to this incident. Save discussion for after answering the first eight questions.

1. What critical factors would you consider when dispatched and during response?

<sup>1</sup> If your first alarm deployment is different, use your own resource assignment and staffing with the first and second arriving resources typical for your agency (e.g., two engines vs. engine and ladder).

You hear three engines, a ladder company, and a medic unit go en route. You will arrive from the southeast on South Front Street shortly after the first engine. The ladder company will arrive from the same direction three minutes after you arrive. The remaining engines and medic unit will arrive several minutes after the ladder company.

Engine 1 arrives and provides the following initial radio report.

*On-scene of a small, two-story house with a working fire on Floor 1. Stretching an attack line through Side Alpha for fire control and primary search, continue the assignment, Engine 1 is Front Command.*

Examine Figure 7 illustrating conditions on your approach.

Figure 7. Conditions on Approach



Note: Adapted from Newsworking. (2024). *Firefighters Stretching in on a 2-alarm house fire in Pennsylvania (Early Video)*. <https://bit.ly/3DDfhDg>.

Front Command provides the following follow-up report:

*No 360 due to access, no basement, extension to the Bravo 1, a similar house, repositioning the attack line to Bravo for fire control, continuing offensive, give me a second alarm, Level 2 staging at North 2<sup>nd</sup> and Coplay Streets, Engine 1 is accountability on Side Delta.*

Watch the incident video from 01:02 to 01:30

2. What actions will you take prior to contacting IC #1 (Engine 1) to begin command transfer?
  
3. State your command transfer communication after IC #1 acknowledges your radio contact (exactly as you would transmit it).

Following your confirmation of the location and assignment of Engine 1 and request for a conditions, actions, and needs (CAN) report, IC #1 provides the following CAN:

*Engine 1 has a line stretched for a quick hit on Bravo and will be stretching through Side Alpha for fire control and primary search in the main fire occupancy, need companies for primary search and check for extension on Floor 2 of the main fire occupancy and Bravo 1.*

4. State the communication you would have with IC #1 and dispatch to complete the command transfer (exactly as you would transmit it).
  
5. What action would you take based on the CAN from Engine 1 (IC #1)? State the communications you would have with the operating companies exactly as you would transmit them.
  
6. Ladder 1 arrives and reports that they are Level 1 at Keystone Alley. State the tactical assignment you would give them exactly as you would transmit it.
  
7. Engine 2 arrives and reports that they are Level 1 on a hydrant at South Front and Coplay Streets. State the tactical assignment you would give Engine 2 exactly as you would transmit them.

8. Engine 3 arrives and reports that they are Level 1 on a hydrant at South Front and Center Streets. State the tactical assignments you would give Engine 3 exactly as you would transmit them.



Reflect on your strategic decision-making and responses to questions one through eight before answering the next six questions. Give some thought to what cues, patterns, or anomalies (differences from conditions that you would anticipate) inform your answers.

9. What was the problem?
10. What was getting in the way of achieving your tactical priorities?
11. Was there anything in this incident that could have hurt or killed you (right now)?
12. Was it reasonable to believe that the Main Fire Occupancy was occupied?
13. Was there searchable space?
14. If you believed it was reasonable that the building was occupied and there was searchable space, what could you do about it?

Your second alarm assignment is an additional three engines, ladder company and battalion chief. Watch the incident video (Newsworking. (2024) from 01:30 to 03:30 before answering the next several questions.

15. Based on conditions observed during this video segment, what are your assumptions regarding the location and extent of the fire? What are the most significant avenues of fire spread that will need to be addressed?

Engine 1 transmits the following message:

*Front Command, Engine 1 with priority traffic.*

*Fire knocked down on Floor 1, likely extension to Floor 2 and the attic, also have extension to a one-story addition on Side Charlie of the Bravo 1.*

16. What are your priorities for assignment of second alarm companies and chief officer? What critical factors impact on this decision?

Companies on Alpha stretched lines to Floors 1 and 2 of the Main Fire Occupancy as well as Bravo 1. Companies positioned on Strawberry Alley to Side Charlie for fire control on the exterior of the Main Fire Occupancy and the Bravo 1. The first arriving ladder company went to the roof for vertical ventilation, creating an exhaust opening on Side Alpha on the Bravo Side peak of the roof.

Watch the [incident video](#) (Newsworking, 2024) from 08:00 to 15:00 illustrating conditions on Sides Alpha and Charlie.

17. Based on conditions during these video segments what are your assumptions regarding CAN reports received from companies operating on Floors 1 and 2 of the Main Fire Occupancy?

Watch the [incident video](#) (Newsworking, 2024) from 15:05 to 20:00 illustrating changing conditions and companies abandoning the building and the [second incident video](#) showing an aerial view (Lehigh Valley Fire Scene, 2024) from 02:41 to 11:30 (note that the incident audio accompanying the drone footage is not synchronized with the video).

18. What would explain the change in incident conditions, companies abandoning the building, and shifting to a defensive strategy?

19. What influenced the effectiveness or ineffectiveness of the exterior streams (ground level and elevated master stream) used for defensive fire control?



**Additional Learning:** Watch [Balloon Frame Construction of the 19th Century](#) (Neuss, 2015) with your crews and discuss how building construction was likely to have impacted the incident in this 10-Minute Training.

Watch the [incident video](#) (Newsworking, 2024) from 19:30: to 21:00 with your crews and discuss the following:

- How did smoke conditions change once water was applied using the elevated master stream? Examine the smoke and air track indicators at the vertical vent opening and compare this to smoke and air track indicators from other areas of the building.
- Given the cone angle, position, and movement of the nozzle, how do you think water was distributed in the attic? What surfaces had good distribution of water and what areas did not.? What factors influenced distribution?
- How did water distribution from the elevated master stream compare to water applied from handlines at ground level (observed during other video segments in this training)?

## References

- Google. (2024a). [Map, 16 South Front Street, Coplay Borough, PA]. Retrieved January 15, 2025, from <https://bit.ly/3BMt2ij>.
- Google. (2024b). [Aerial view 16 South Front Street, Coplay Borough, PA]. Retrieved January 15, 2025, from <https://bit.ly/4j71Yva>.
- Google. (2024c). [Street view 16 South Front Street, Coplay Borough, PA]. Retrieved January 15, 2025, from <https://bit.ly/4gGYyxK>.
- Google. (2024d). [Street view 16 South Front Street, Coplay Borough, PA]. Retrieved January 15, 2025, from <https://bit.ly/4fM3gch>.
- Google. (2024e). [Street view 16 South Front Street, Coplay Borough, PA]. Retrieved January 15, 2025, from <https://bit.ly/3W1QIWX>.
- Google. (2024f). [3d aerial view 16 South Front Street, Coplay Borough, PA]. Retrieved January 15, 2025, from <https://bit.ly/4fKLMNd>.
- Lehigh Velley Fire Scene. (2024). *2nd alarm dwelling fire - Coplay Borough, PA 18 S Front St* [video]. Retrieved January 13, 2025, from <https://bit.ly/40vVL4U>.
- Neuss, M. (2015). Balloon frame construction of the 19th century. Retrieved January 15, 2025, from <https://bit.ly/4gTVcYp>.
- Newsworking. (2024). *Firefighters Stretching in on a 2-alarm house fire in Pennsylvania (Early Video)*. Retrieved January 13, 2025, from <https://bit.ly/3DDfhDg>.

Redfin. (2017). 16 S Front St, Coplay Borough, PA 18037-1240. Retrieved January 15, 2025, from <https://bit.ly/4gXVZH6>.

Weather Underground (2024). *Allentown, PA weather history* [historical weather December 14, 2024]. Retrieved January 13, 2025, from <https://bit.ly/42baDqk>.