



# In-Station Training

## TM 24-10 Residential Fire



### Author

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### Purpose

Conditions evident on the exterior of a structure are not always the clearest indication of what is happening on the inside (UL FSRI, 2018). Use of a thermal imager (TI) when conducting 360-degree reconnaissance may provide critical information regarding interior fire conditions (or it may not). Firefighters and fire officers must use the available cues along with a sound understanding of fire dynamics when performing structure fire size-up.

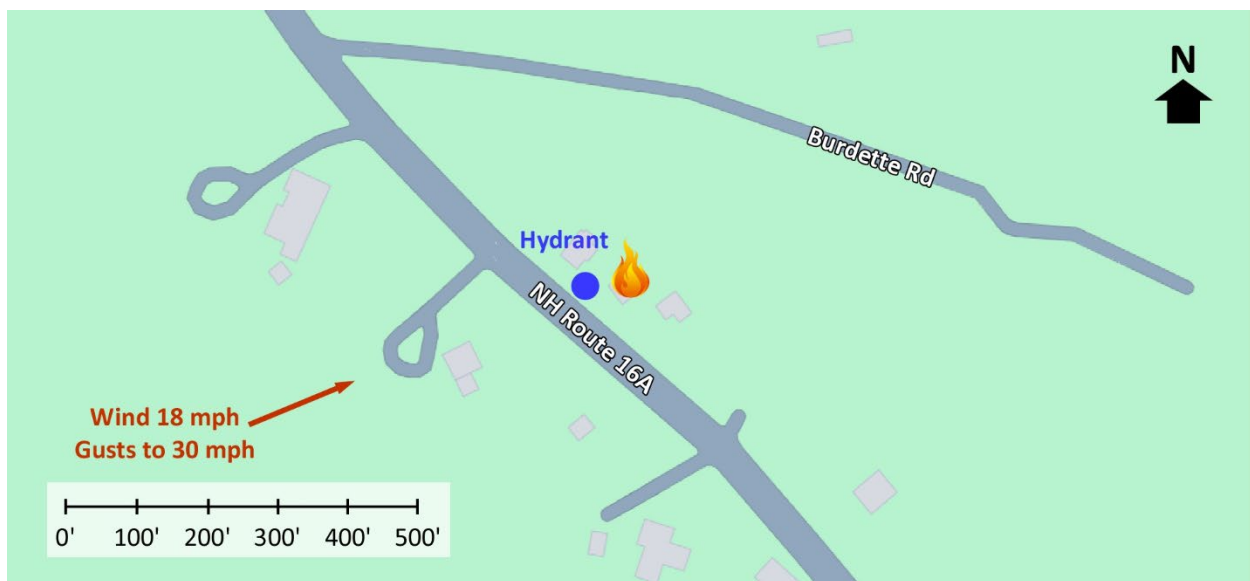
### Learning Outcomes

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 residential fire at 152 NH Route 16A, Bartlett New Hampshire on January 15, 2024, at 12:35 (Metro Fire, 2024). 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. (2024a). [Map, 152 NH Route 16A, Bartlett NH]. <https://bit.ly/3Udgyrb>.

Figure 2. Aerial View



*Note:* Adapted from Google. (2024b). [Aerial view 152 NH Route 16A, Bartlett NH].  
<https://bit.ly/42c5dtr>.

The closest hydrant is adjacent to the main fire occupancy on Route 16A as illustrated in Figures 1 and 2.

Figure 3. Alpha/Bravo Corner



*Note:* Adapted from Google. (2023a). [Street view, 152 NH Route 16A, Bartlett NH].  
<https://bit.ly/3S7Ujju>.



Figure 4. Side Alpha



*Note:* Adapted from Google. (2023b). [Street view, 152 NH Route 16A, Bartlett NH].

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

The temperature is currently 38° F with wind from the west southwest at 18 mph with gusts to 30 mph (Weather Underground, 2024). You have been dispatched to 152 NH Route 16A a report of a residential fire at 12:35. You are the company officer or AIC of the first arriving engine and have your company's typical staffing.

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

Dispatch provides an update reporting smoke from the roof of a house. You hear a command officer and two other engines with typical staffing for your agency go enroute. You will arrive from the northwest on Route 16A. The second engine will arrive from the same direction four minutes after you. The command officer will arrive shortly after the second engine. All other units dispatched on the first alarm will arrive after the command officer.

Watch the of the incident video (Metro Fire, 2024) from 00:05 to 00:35 and examine Figure 5 illustrating conditions on arrival.

Figure 5. Conditions on Arrival



*Note:* Adapted from Metro Fire. (2024). 1/15/2024 Arrival video Working fire Bartlett NH, 152 Route 16A [video]. <https://bit.ly/3u6KpH7>.

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?

Conditions on Sides Bravo, Charlie, and Delta are consistent with those observed on Side Alpha with a small amount of smoke issuing from the building at the eaves on Side Delta and from the peak of the gable roof on Side Charlie. If the door is opened to check for life, fire, and layout as part of 360-degree reconnaissance, watch the [incident video](#) (Metro Fire, 2024) from 02:48 to 02:58 and examine Figure 6, do not see or hear any evidence of building occupants, and observe the door on Side Alpha enters a small front porch, a closed door between the front porch and the interior of the house and a fire in the living space towards the middle of the house.

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. Engine 2 arrives and reports that they are Level 1 on 16A at Burdette Road. State the tactical assignment you would give them 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.

Figure 6. Front Porch and Location of Interior Windows and Doors on Side Alpha



Note: Adapted from Zillow. (2021). 152 NH Route 16A, Bartlett, NH 03845. <https://bit.ly/3SVGtSU>.

Now go back and watch the [incident video](#) (Metro Fire, 2024) from 02:35 to 03:40 illustrating incident operations prior to the first engine company's arrival at this incident. As illustrated in the video, a fire officer made entry prior to the arrival of the first engine and deployment of an attack line.

8. When the fire officer was about to open the door prior to initial entry, they were wearing self-contained breathing apparatus and facepiece without being on-air. When conducting 360-degree reconnaissance, would you be wearing your facepiece and under what circumstances or when would you go on air?
  
9. At 02:41 in the incident video, the fire officer enters the front porch. For 15 seconds there is a bi-directional air track at the door, smoke discharge then diminishes and almost ceases for several seconds and then returns to a bi-directional air track at the door and begins issuing from the porch windows. Smoke discharge on Side Alpha goes from light gray to darker gray and flames become visible through the Side Bravo porch window closest to the house. These changes likely occurred when the fire officer entered the porch and then opened the interior door. What fire behavior would be associated with these changes in smoke and air track indicators?
  
10. After the fire officer exited and closed the exterior door to the porch, increased smoke discharge from the porch continued with increased velocity for some time and then diminished. What changes in fire behavior might explain these changes in air track?
  
11. If you accessed the enclosed porch when performing 360-degree reconnaissance would you have gone through the porch and opened the door to the house to continue your reconnaissance of life, fire, and layout prior to a charged line being stretched to the door? Why or why not? How would this be different than performing this reconnaissance at an exterior door that leads directly to the interior of the house?

**Additional Learning:** Watch [\*Tactical Considerations EP 6 - Nothing Showing Means Nothing\*](#) (UL FSRI, 2018), [\*Sizing Up the Door\*](#) (Insight Training LLC, 2021), [\*Door Assessment for Forcible Entry Intro\*](#) (Western Buckeye Training, LLC, 2022) and [\*Life Fire Layout\*](#) (Forge Fire and Company, 2022).

Discuss 360-degree reconnaissance with your crew. Focus on what to look for beyond the presence of a basement and type or absence of a basement, differences in height (stories) other than reported in your initial radio report (IRR), hazards, and visible or reported occupants. The 360 should also consider layout and arrangement (particularly as it relates to fire control and search), location of the fire, and building, smoke, air track, heat, and flame (B-SAHF) indicators that may not have initially been visible or have changed.

## References

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- Underwriters Laboratories Fire Safety Research Institute (UL FSRI). (2018). *Tactical considerations ep 6 - nothing showing means nothing* [video]. Retrieved February 10, 2024, from <https://bit.ly/4bu9VGZ>.
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