In-Station Training

TM 25-08 Residential Fire

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Purpose

Almost all National Institute for Occupational Safety and Health (NIOSH) firefighter death in the line of duty reports where the fatality resulted from rapid fire progression state “fire attack and ventilation must be closely coordinated”. Quick and effective water on the fire and coordination of fire attack and ventilation are essential to safe and effective structural firefighting operations.

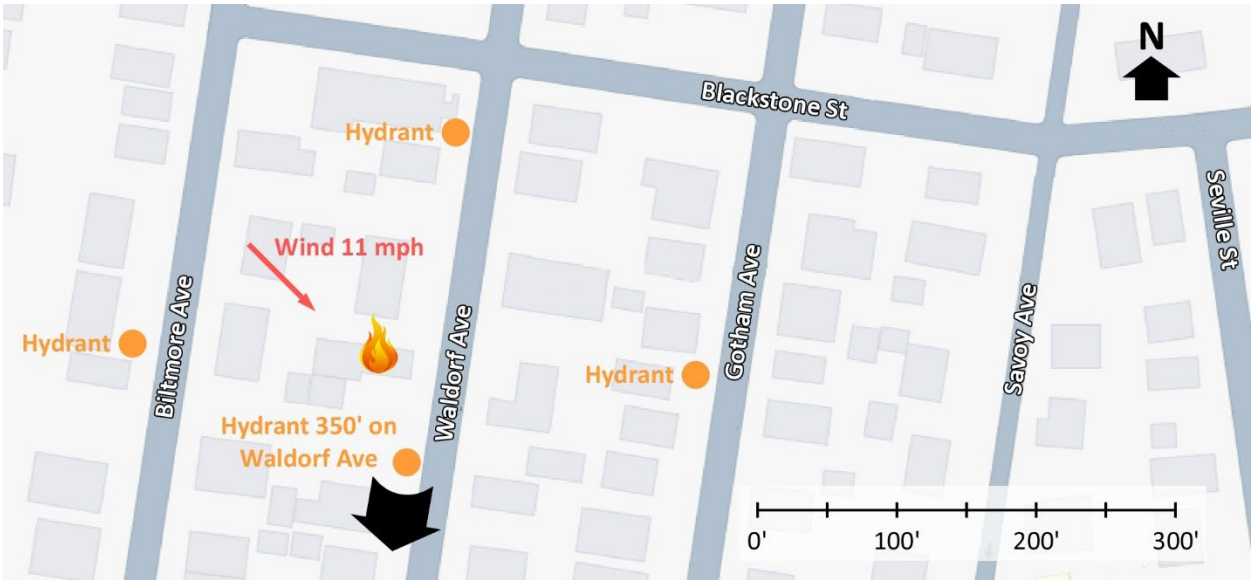
Learning Outcomes

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 147 Waldorf Avenue, Elmont, New York on Tuesday, December 24, 2024, at 16:25 (TomFirePhotography, 2024 & Taub, 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, 147 Waldorf Avenue, Elmont, NY]. https://bit.ly/41OzqAo.

Figure 2. Aerial View

Note: Adapted from Google. (2024b). [Aerial view 147 Waldorf Avenue, Elmont, NY]. https://bit.ly/3BFWWoJ.

The closest hydrant is located at Waldorf Avenue and Blackstone Street and a second hydrant is located to the south on Waldorf Avenue. There are additional hydrants in the area as illustrated in Figure 1.

Figure 3. Alpha/Delta Corner

Note: Adapted from Google. (2022a). [Street view 147 Waldorf Avenue, Elmont, NY]. https://bit.ly/3P9aX1n.

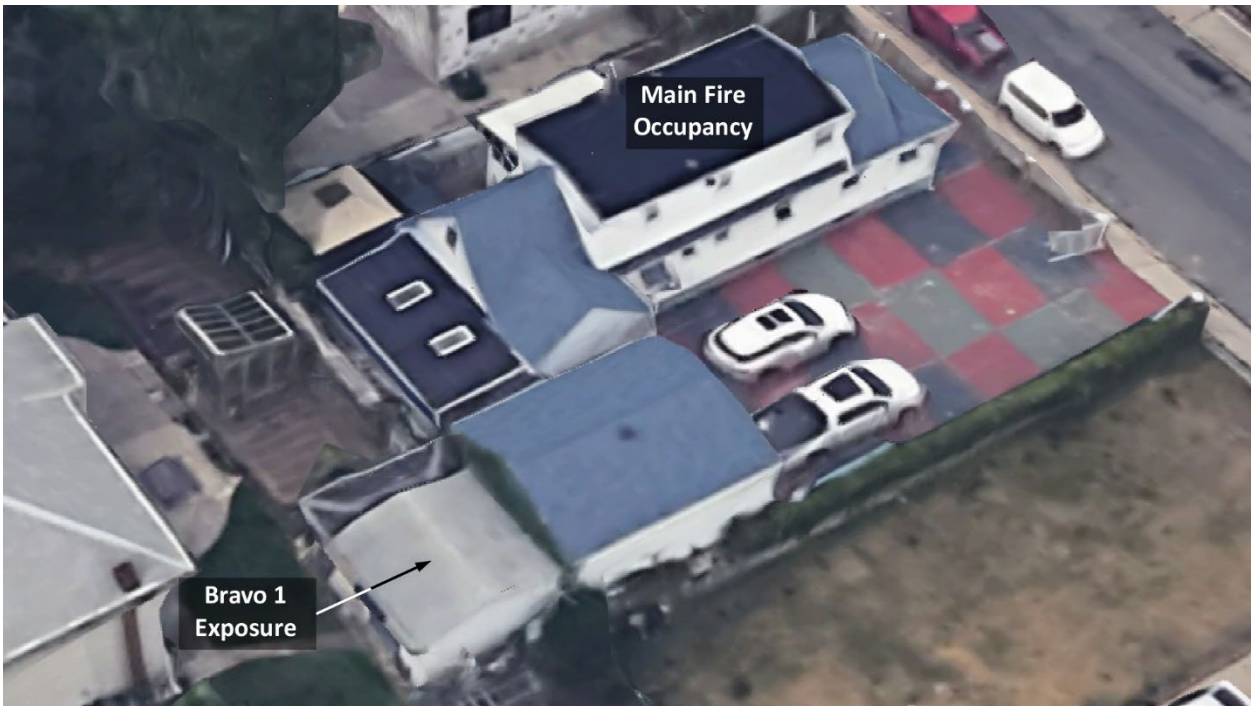
Figure 4. Side Alpha

Note: Adapted from Google. (2022b). [Street view 147 Waldorf Avenue, Elmont, NY]. https://bit.ly/41V6vuN.

Figure 5. Alpha/Bravo Corner

Note: Adapted from Google. (2022c). [Street view 147 Waldorf Avenue, Elmont, NY]. https://bit.ly/3DsAnEm.

Figure 6. Bravo/Charlie Corner



Note: Adapted from Google. (2024c). [3d aerial view 147 Waldorf Avenue, Elmont, NY]. https://bit.ly/3Duz5sC.

The temperature is currently 40° F with wind from the northwest at 11 mph (Weather Underground, 2024). **You are the company officer of an engine company**. It is Tuesday, December 24th, and you have been dispatched along with two other engines, a ladder company, medic unit, and command officer at 16:25 to 147 Waldorf Avenue for a residential fire. The engines and ladder have four-person staffing[1].

Time starts now! Answer the first eight questions within the next 10 minutes. Decide and put your answers in the form of communication you would have with your crew, other companies, and the first arriving command officer. Save discussion for after answering the first eight questions.

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

[1] 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 a command officer, two other engines, a ladder company, and an advanced life support ambulance go en route. Your engine will arrive first, approaching from the north on Waldorf Avenue. The ladder company will arrive from the same direction shortly after you. The second engine will arrive from the north two minutes after you arrive. The command officer will arrive shortly after the second engine. All other units dispatched on the first alarm will arrive after the command officer.

While responding, dispatch advises that they have multiple calls reporting smoke from the house at 147 Waldorf Avenue. Watch the incident video (TomFirePhotography, 2024) from 00:07 to 00:20 and examine Figure 7, illustrating conditions on arrival.

Figure 7. Conditions on Arrival

Note: Adapted from TomFirePhotography. (2024). **Pre-arrival* Elmont FD battles A 2 story house fire w/ flames.* [video]. https://bit.ly/3VQH75t.

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 would you give your crew?

An occupant advises that all residents of the house have evacuated. Conditions on Side Bravo are consistent with those observed on Sides Alpha and Delta. Side Charlie has limited access due to a fence and limited space between the Main Fire Occupancy and Bravo 1 Exposure (garage).

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. Ladder 1 advises that they are Level 1 at Blackstone Street and Waldorf Avenue, 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 to the north on Waldorf Avenue. State the tactical assignment you would give them exactly as you would transmit it.

8. 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.

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?

Important! In some cases, videos used in 10-Minute Trainings show less than ideal emergency operations. Remember that no firefighter or fire officer goes to an incident wanting to do a poor job. There are many factors that may influence incident operations and video or a still photograph seldom, if ever provide the entire story. Keep in mind that videos or photos of real incidents are used to provide a learning context. Keep the following in mind as you complete the remainder of this 10-Minute Training:

- Firefighters and officers all want to do good work (no one wants to do a bad job, to be injured, or to die during incident operations).
- Firefighters and officers generally perform the way that they are trained and/or consistent with the (stated or unstated) expectations of their organization.
- There are many ways to go about the business of firefighting. Many are "right" and some are "wrong" but be careful not to assume that different is incorrect just because it is different.

Watch the incident video (TomFirePhotography, 2024) from 00:30 to 05:00 before answering the next several questions.

15. How did fire conditions change from the arrival of the first engine and the time the first line is stretched through the door on Side Alpha? What factors likely influenced this change in fire conditions?

16. The first arriving engine performed a reverse lay to the hydrant beyond the fire. This line appeared to have lead lengths of 1 ¾" hose, likely connected to 2 ½" hose in the same hose bed. How did this tactic influence time to get effective water on the fire?

17. As the first line is stretched through the door on Side Alpha it appears that a window on Floor 2, Side Bravo self-vents. A short time later, a firefighter takes windows on the Alpha/Delta corner. How would these changes in ventilation impact fire behavior?

Watch the incident video (TomFirePhotography, 2024) from 05:00 to 09:30 before answering the next question.

18. What building construction factors may have presented challenges to the companies operating at this incident?

Additional Learning: Elmont, New York is in Nassau County which is on Long Island adjacent to New York City. It is likely that the apparatus configuration, hoseline deployment, and water supply tactics of the Elmont Fire Department are influenced by the Fire Department of the City of New York.

In many parts of the United States engine companies use tank water for initial attack. A continuous water supply is frequently developed using a forward lay by the first or later arriving engine company, frequently using large diameter hose. The water supply tactics used by the FDNY are considerably different.

The FDNY *Engine Company Operations* (2021) manual provides some insight into these differences. Attack lines are stretched off the rear of FDNY engines with one hose bed containing 300' of 1 ¾" hose connected to a longer length of 2 ½" hose to allow stretches over 300' while minimizing friction loss. Other hose beds contain 2 ½" hose for large attack lines. Whenever possible, engines position beyond the fire building in their direction of travel to provide a view of three sides and increase the efficiency of the hose stretch (off the rear of the apparatus). If a hydrant is not close enough for direct connection to the pump, the apparatus operator will reverse lay (FDNY back stretch) to the hydrant. FDNY places an emphasis on establishing a continuous water supply and depending on the length of the stretch before the officer calls for water, the apparatus operator may or may not use tank water for initial water supply.

The tactics used by FDNY are based on their operating environment. With closely spaced hydrants and the frequent need to stretch to upper floors of multi-story buildings, use of a reverse lay may not delay effective water on the fire. Use of a reverse lay also maximizes the space available for positioning aerial apparatus in front of the building.

Give some thought to your engine company's configuration, tactics, and operations. Reflect on what you do and why you do it. *Hint:* because that's what we have always done is not a good answer. Your tactics may be well suited to your operational environment, but it is important to understand why this is the case.

References

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