



In-Station Training

TM 26-19 Residential Fire



Author

Chief Ed Hartin

Purpose

Fires starting on the exterior of buildings that extend into the building, particularly the attic are a common occurrence and require both exterior and interior fire control. In addition, response time and resource assignments can be significantly impacted by simultaneous incidents.

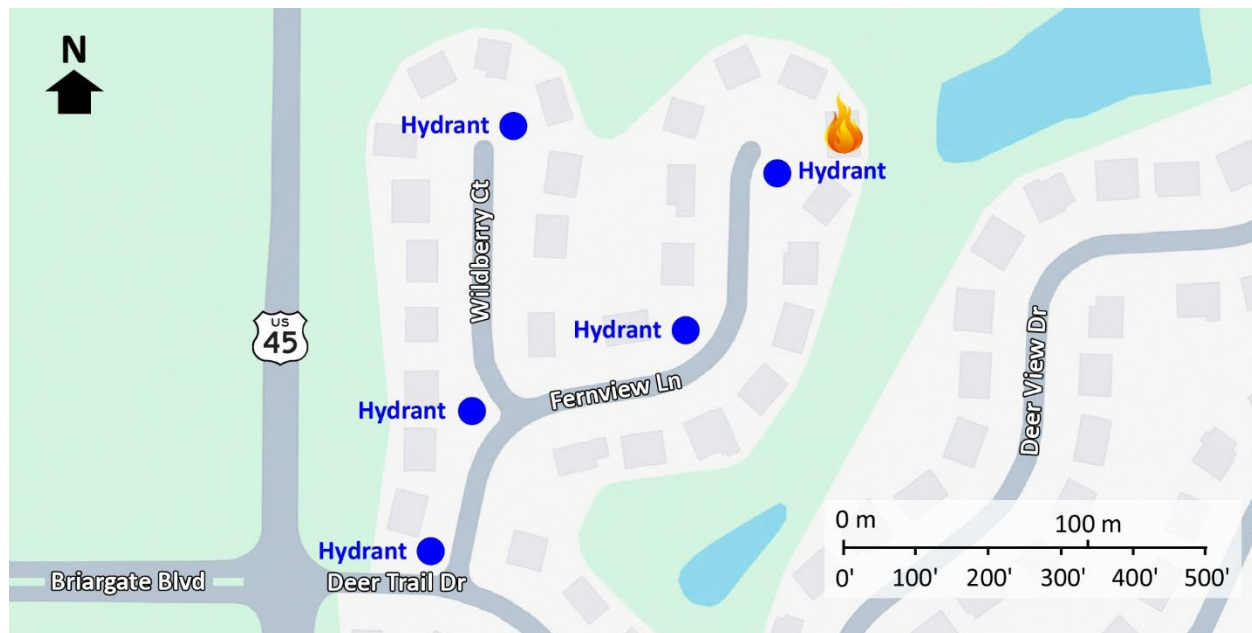
Learning Outcomes

Initial incident commanders 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 37023 Fernview Lane in Lake Villa, Illinois on Tuesday, November 4, 2025, at 09:30 (Shim, Woo-Sung, 2025a & 2025b). Review the map and photos (Figures 1-4) to gain an understanding of the building and area involved.

Figure 1. Map of the Incident Area



Note: Adapted from Google. (2026a). [Map, 37023 Fernview Lane, Lake Villa, IL]. Map data ©2026 Google. <https://bit.ly/4cUhtnV>.

The closest hydrant is located in front of the Main Fire Occupancy. There are other hydrants in the area as illustrated in Figure 1.

Figure 2. Aerial View



Note: Adapted from Google. (2026b). [Aerial view Map, 37023 Fernview Lane, Lake Villa, IL]. Imagery © Google, Imagery © Airbus Maxar Technologies, Map Data © 2026. <https://bit.ly/4mZYE7r>.

Figure 3. Side Alpha



Note: Adapted from Google. (2024). [Street view Map, 37023 Fernview Lane, Lake Villa, IL]. ©2026 Google. <https://bit.ly/42Jkh2w>. Image edited with OpenAI, 2026 and manual edits to remove background and foreground elements to accommodate simulation in Digital Combustion Fire Studio 7.

Figure 4. Bravo/Charlie Corner



Note: Adapted from Google. (2026c). [Aerial view Map, 37023 Fernview Lane, Lake Villa, IL]. Imagery © Google, Imagery © Airbus Maxar Technologies, Map Data © 2026. <https://bit.ly/4n6NNc3>.

This incident is in a suburban residential neighborhood characterized by planned subdivisions with curving streets and low-density development. The surrounding area consists primarily of detached single-family homes built from the 1990s through early 2000s, typically wood-frame construction on moderate-size lots, with some nearby townhouses and garden apartments. The single family homes in this neighborhood are predominantly owner-occupied with a relatively limited number of rental properties. The population reflects generally stable, long-term residency, with some turnover associated with newer suburban growth. English is the primary language spoken, with a minority of households reporting other languages, including Spanish (Open AI, 2026). Fire and emergency medical call volume in this area is generally moderate, typical of a suburban community.

The temperature is currently 51 F (11° C) with wind from the north northwest at 7 mph (11 kph) (Weather Underground, 2025). It is Tuesday, November 4th and you are just responding to an automatic fire alarm at Village Commons Shopping Plaza on Grand Avenue when you are diverted to a residential fire at 37023 Fernview Lane along with two other engines, a ladder company, medic unit, and command officer. Your engine has four-person staffing¹. **You are the officer of the first due engine company and realize that you will arrive first, but your response time will be approximately seven minutes due to being out of position responding to the automatic alarm.**

¹ If your first alarm deployment is different, use your own resource assignment and staffing.

This [simulation video](#) provides prompts to pause the simulation and answer related questions. Each question has a brief prompt that appears in the simulation (e.g., the text “Critical Factors” is a prompt for question 1. Click the link above or scan the QR code to access the incident simulation video.



Time starts now! Answer the first nine questions within the next 10 minutes. Save discussion until after you have answered these questions.

1. What critical factors would you consider when dispatched and during response? What conversations would you have with your crew during response?
2. Based on the dispatch information and what you know about this occupancy and response area, what do anticipate finding on arrival?



Important! Answer questions three through nine in the form of communication you would have with your crew, dispatch, other companies, and the first arriving command officer. State the communications exactly as you would say them face-to-face or over the radio. Save explanation or discussion until after you have completed these questions.

3. State your initial radio report (IRR) exactly as you would transmit it to dispatch.
4. 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?
5. Would you change the action you are taking or modify the assignments given to your crew? If so, what task orders would you provide?

6. State your follow up report exactly as you would transmit it to dispatch.

7. Ladder 1 arrives and reports that they are Level 1 at Fernview and Wildberry. State the tactical assignment you would give them exactly as you would transmit it.

8. Engine 2 arrives and reports that they are Level 1 on a hydrant to the south on Fernview. State the tactical assignment you would give them exactly as you would transmit it.

9. Based on 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 nine before answering the next eight questions. Think about what cues, patterns, or anomalies (differences from conditions that you would anticipate) informed your answers.

10. What information most influenced your expectations?

11. Did anything in the incident post-arrival challenge your initial expectations?

12. What was the actual problem once you arrived?

13. What were your tactical priorities and what was getting in the way of achieving them?

14. During initial operations, was there an immediate threat of serious injury or death to you, your crew, or other companies?

15. Was it reasonable to believe that the building was occupied?

16. Was there searchable space?

17. If you believed there was searchable space and that it was reasonable that the building was occupied, what could you do about it?

The first alarm assignment for this incident was four engines, two ambulances, and a command officer.

Watch the [news video](#) of this incident from 01:40 to 04:30 before answering the remaining questions. Click the link above or scan the QR code to access this segment of the news video.



18. How would the application of water through the gable end on Side Alpha (in the first news video segment) impact water mapping in the attic?

Watch the [news video](#) of this incident from 14:10 to 14:30 before answering the remaining questions. Click the link above or scan the QR code to access this segment of the news video.



19. How would the building features observed in this video segment impact fire extension from the exterior to the interior of the building (particularly the attic)?

20. Based on the building construction features observed in the second video segment, what would have been a more effective approach to control the attic fire from the exterior? Why?

Additional Learning

As illustrated in Figure 5, the house in this incident had rigid foam sheathing, vinyl siding, and vinyl soffits all of which had an impact on fire spread from the exterior to structural voids including the attic. In addition, there was combustible vegetation against the Alpha/Bravo Corner of the structure that (surprisingly) had a limited impact on fire development. Combustible vegetation such as arborvitae can have a significant impact on fire development and spread on the exterior of structures.

Figure 5. Building Construction



Note: Adapted from Shim, Woo-Sung. (2025a). *Resident safely escapes after house catches on fire in unincorporated Lake Villa, IL 11/04/25* [video]. <https://bit.ly/4cJU6yL>.

The flammability characteristics of rigid foam sheathing vary considerably. Polyisocyanurate (PIR) sheathing is less flammable than other types of rigid foam sheathing/insulation and tends to char, but requires significant heat to ignite and sustain flaming combustion. Extruded polystyrene (XPS) and Expanded polystyrene (EPS) are much more flammable (Pearl, 2026).

Watch the video [Tactical Consideration: Get Water in the Eaves for Attic Fires](#) (UL FSRI, 2029) and discuss this water application method with the members of your crew. Click the link above or scan the QR code to access this segment of the news video.



Discuss how to open soffits (if they have not melted) and get your company out on the drill ground and practice moving laterally while flowing water as illustrated in this video.

If you want to dig deeper into extension of exterior fires into the interior and attic fire control methods, complete the on-line course [Residential Attic and Exterior Fires](#), or dig into the [technical report](#) on the Underwriters Laboratories Fire Safety Research Institute Attic Fires Study (Kerber & Zevotek, 2014)

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