



Author

Chief Ed Hartin

Purpose

Cold weather, high wind, and fire extension into structural voids are all critical fireground factors. When these factors intersect, the challenge presented to companies operating at an incident and the incident commander increase exponentially.

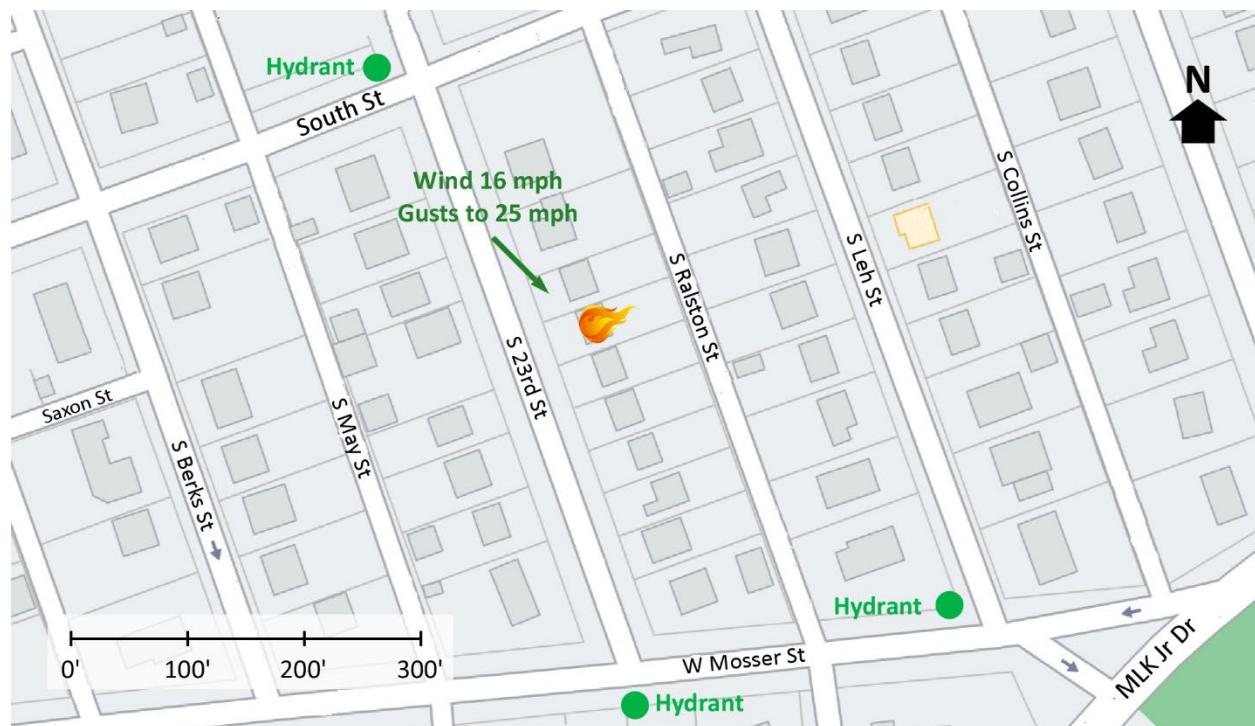
Learning Outcomes

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 523 South 23rd Street in Allentown, Pennsylvania on February 3, 2023, at 17:14 (Newsworking, 2023 & Salamone, 2023). Review the map and photos (Figures 1-5) to gain an understanding of area and building involved.

Figure 1. Map of the Incident Area



Note: Adapted from Google. (2023a). [map 523 South 23rd Street, Allentown, PA]. <http://bit.ly/3yhQj6B>.

The closest hydrant is at the intersection of South Street and South 23rd Street. An additional hydrant is located on West Mosser Street at South 23rd Street as illustrated in Figure 1.

Figure 2. Aerial View



Note: Adapted from Google. (2023b). [aerial view 523 South 23rd Street, Allentown, PA].
<https://bit.ly/3yn0Nlc>.

Figure 3. Alpha/Bravo Corner



Note: Adapted from Google. (2021a). [street view 523 South 23rd Street, Allentown, PA].
<http://bit.ly/3YA1H8s>.

Figure 4. Alpha/Delta Corner



Note: Adapted from Google. (2021b). [street view 523 South 23rd Street, Allentown, PA].

<http://bit.ly/3L5GK2I>.

Figure 5. Charlie/Delta Corner



Note: Adapted from Google. (2023c). [3d aerial view 523 South 23rd Street, Allentown, PA].

<http://bit.ly/3ynX6eW>.

You were dispatched to 523 South 23rd Street for a residential fire at 17:14. You are responding to this incident as the first arriving command officer and will have an extended response time. Temperature is 16° F with a 16-mph wind from the northwest with gusts to 25 mph (Weather Underground, 2023). While responding you hear four engines, an advanced life support (ALS) ambulance, and a second command officer go enroute. The engines have staffing typical of your agency. The first engine will arrive from the north on South 23rd Street. The second engine and ALS ambulance will arrive from the same direction approximately six minutes after the first. The third engine will arrive 12 minutes after the first. Make a note of your staffing assumptions prior to continuing with this 10-Minute Training. **You will arrive from the south on South 23rd Street after the third engine.** Any additional resources that have been dispatched (based on your response plan) will arrive later in the incident.

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

As you were responding Engine 1 provided the following initial radio report:

On-scene of a small, one and a half story house with a working fire on Floor 2 with extension to the Bravo 1, stretching an attack line on Side Bravo for fire control, in the offensive strategy, initiating 23rd Command, give me a 2nd alarm with Level 2 Staging at West Mosser Street and MLK Drive.

A short time later, 23rd Command provides the following update.

360 complete, one and a half-stories all sides, look out basement not involved, continuing offensive, and continue the 2nd alarm.

Engine 2 arrives and advised 23rd Command they are Level 1. 23rd Command provides the following orders to Engine 2.

Forward lay from the hydrant at South and South 23rd Streets, stretch an attack line off Engine 1, through Side Alpha for fire control and primary search.

Engine 3 arrives and advised 23rd Command they are Level 1. 23rd Command provides the following orders to Engine 3.

Park out of the way, stretch a third attack line off Engine 1, deploy ladders to the roof on Side Alpha, go on deck Side Alpha.

As you arrive, you hear Engine 2 contact 23rd Command with the following priority traffic radio message.

Extremely hot, zero visibility on Floor 2, having difficulty accessing the fire behind the knee walls, withdrawing Floor 2, need exterior attack.

23rd Command acknowledges and tasks Engine 2 with primary search on Floor 1 as they exit the building.

Watch the [incident video](#) (Newsworking, 2023) from 00:08 to 01:00 and examine Figure 6 illustrating conditions on your arrival.

Figure 6. Conditions on Arrival of Chief 1



Newsworking. (2023). *Frigid temps & high winds hamper firefighters at Allentown fire* [video]. Retrieved March 7, 2023, from <https://bit.ly/3IYdEPx>.

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 Engines 1, 2, and 3 and request for a conditions, actions, and needs (CAN) report, IC #1 provides the following CAN:

Engine 1 is operating an attack line on Side Bravo and have knocked down the exterior fire on the Main Fire Occupancy and the Bravo 1, Engine 2 has withdrawn from Floor 2 and is

completing primary search on Floor 1, Engine 3 is operating an attack line on Side Alpha. Limited effect on the fire in the Floor 2 void spaces. Need a company to check for extension in the 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. Chief 2 arrives and reports that they are Level 1. State the tactical assignment you will give them exactly as you would transmit it.

You receive a priority traffic message from Engine 1, reporting significant extension into the Bravo 1 and that they are applying water from the exterior with limited effect. Watch the [incident video](#) (Newsworking, 2023) from 03:07 to 03:37 before answering the next several questions.

7. Did you initiate a strategic shift from offense to defense in the Main Fire Occupancy? Why or why not? How did current and projected fire behavior, structural stability, and resources influence your strategic decision-making?

8. What factors likely influenced the ineffectiveness of the exterior streams in controlling the fires in void spaces of the Main Fire Occupancy and the Bravo 1 Exposure? What alternative tactics may have been effective in dealing with these challenging void space fires?

Additional Learning: For more information on buildings with half-stories and their significance as a building construction critical factor read [The Half-Story](#) (Tobin, 2019).

Watch [Fognail Training Video](#) (Poudre Fire Authority, 2019a) and [Acquired Structure Test Burn: Fognail use on Attic Fires](#) (Poudre Fire Authority, 2019b) and consider how fognails could have been used for fire control in the incident addressed in this 10-Minute Training.

References

Google. (2021a). [street view 523 South 23rd Street, Allentown, PA]. Retrieved March 11, 2023, from <http://bit.ly/3YA1H8s>.

Google. (2021b). [street view 523 South 23rd Street, Allentown, PA]. Retrieved March 11, 2023, from <http://bit.ly/3L5GK2I>.

Google. (2023a). [map 523 South 23rd Street, Allentown, PA]. Retrieved March 11, 2023, from <http://bit.ly/3yhQj6B>.

Google. (2023b). [aerial view 523 South 23rd Street, Allentown, PA]. Retrieved March 11, 2023, from <https://bit.ly/3yn0Nlc>.

Google. (2023c). [3d aerial view 523 South 23rd Street, Allentown, PA]. Retrieved March 11, 2023, from <http://bit.ly/3ynX6eW>.

Newsworking. (2023). *Frigid temps & high winds hamper firefighters at Allentown fire* [video]. Retrieved March 7, 2023, from <https://bit.ly/3IYdEPx>.

Poudre Fire Authority (2019a). *Fognail training video*. Retrieved March 11, 2023, from <https://bit.ly/2BrjhU7>.

Poudre Fire Authority. (2019b). *Acquired structure test burn: fognail use on attic fires* [video]. Retrieved March 11, 2023, from <https://bit.ly/34TRuOo>.

Salamone, A. (2023) *Update: Allentown firefighters struggle in wind and cold, put out fire at two neighboring homes*. Retrieved March 7, 2023, from <http://bit.ly/3JiNW9R>.

Tobin, C. (2019) *The half-story*. Retrieved March 11, 2023, from <http://bit.ly/3T9Unj0>.

Weather Underground (2022). *Allentown, PA weather history* [historical weather February 3, 2023]. Retrieved March 10, 2023, from <http://bit.ly/3ZCnVZ3>.