



# In-Station Training

## TM 24-38a Aircraft Crash into Townhouse Complex



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### Purpose

Aircraft incidents and fires in multi-unit residential complexes can both present significant challenges to incident commanders. These challenges increase exponentially when these types of incidents are combined. This 10-Minute Training examines an incident of this type from the perspective of IC #2.

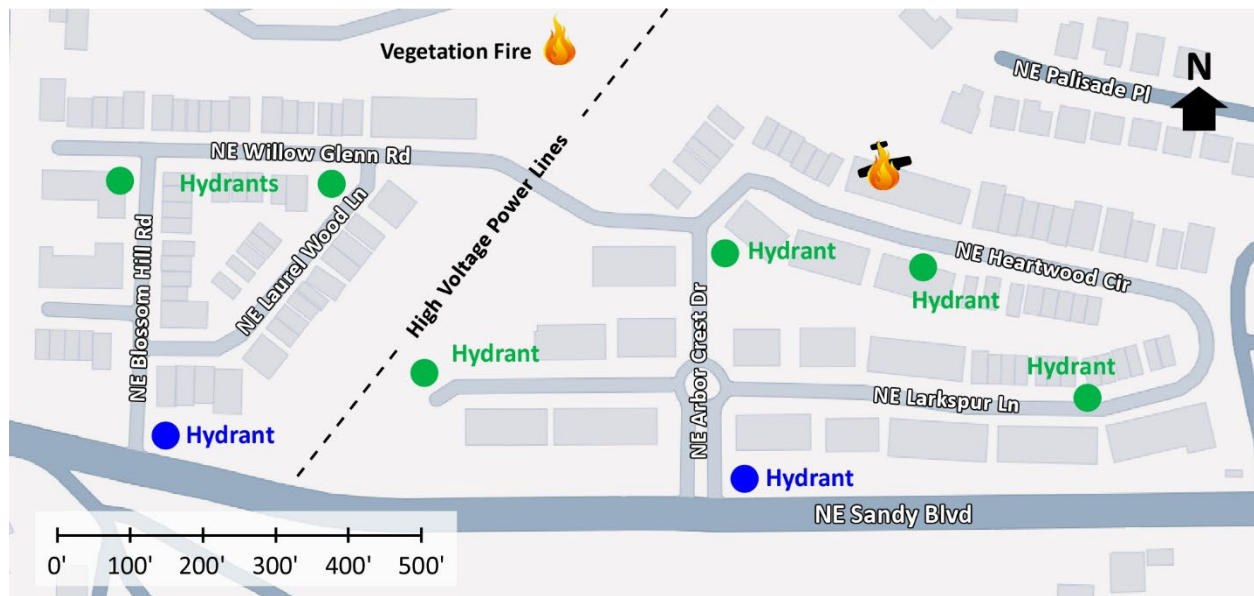
### Learning Outcomes

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 general aviation aircraft crash into townhomes at 21843 NE Heartwood Circle on August 31, 2024, at 10:20 (LaBuda, 2024; Fox Live Now, 2024; OPB Staff & AP Staff, 2024; Gresham Fire, 2024; & Broadcastify 2024a, 2024b, 2024c). 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

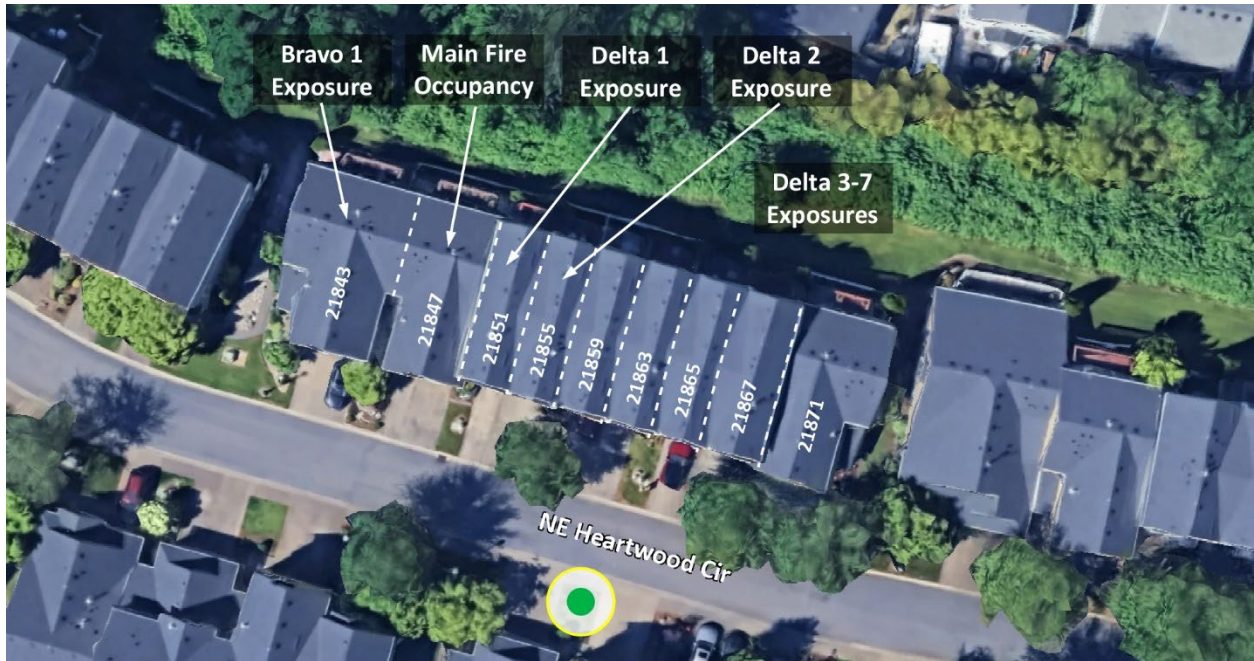


Note: Adapted from Google. (2024a). [Map, 21847 Heartwood Circle, Fairview, OR].

<https://bit.ly/3Z94GJ8>,

The closest hydrants are at the intersection of NE Arbor Crest Drive and NE Heartwood Circle and just beyond the incident location on NE Heartwood Circle. Additional hydrants are located throughout the complex as illustrated in Figure 1.

Figure 2. Aerial View



Note: Adapted from Google. (2024b). [Aerial view 21847 Heartwood Circle, Fairview, OR]. <https://bit.ly/4dLXbw3>.

Figure 3. Side Alpha 3D



Note: Adapted from Google. (2023a). [3d aerial view 21847 Heartwood Circle, Fairview, OR]. <https://bit.ly/3AYqj4E>.

Figure 4. Charlie/Delta Corner 3D



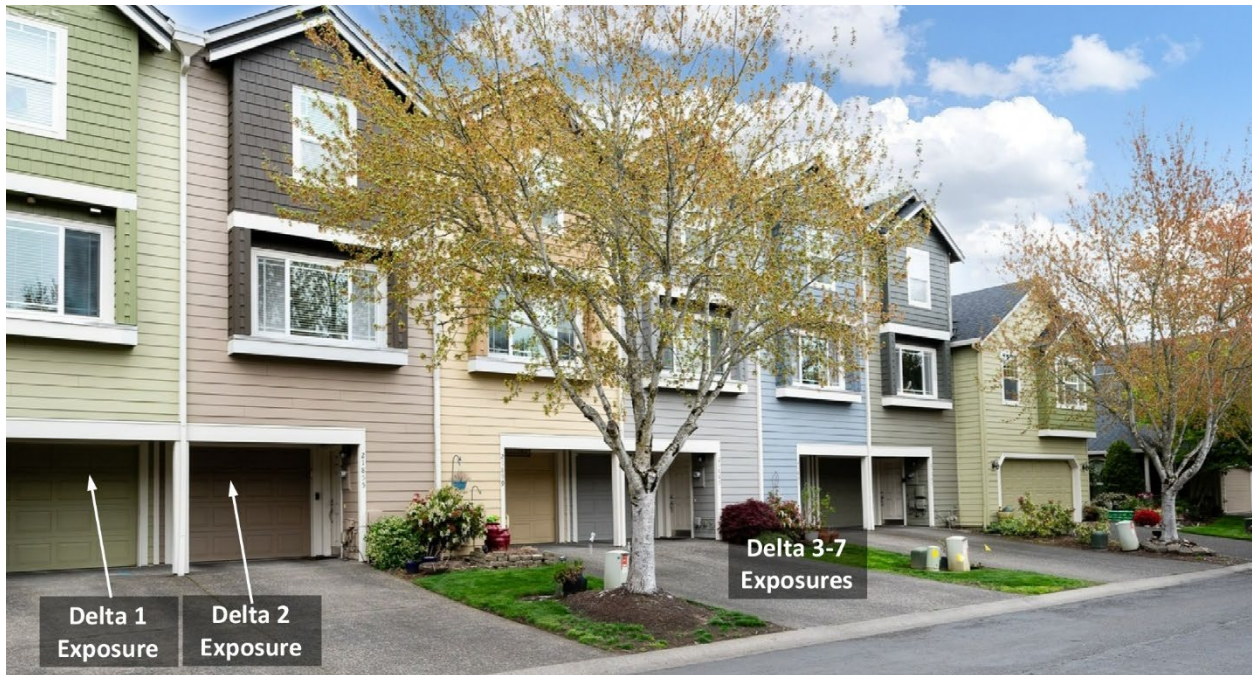
Note: Adapted from Google. (2023b). [3d aerial view 21847 Heartwood Circle, Fairview, OR]. <https://bit.ly/4cTOHn8>.

Figure 5. Side Alpha-Main Fire Occupancy and Delta Exposures



Note: Adapted from Redfin. (2021). 21851 NE Heartwood Cir, Fairview, OR 97024. <https://bit.ly/3AM75zn>.

Figure 6. Side Alpha-Delta Exposures



Note: Adapted from Google. (2023d). [Street view 21847 Heartwood Circle, Fairview, OR].

<https://bit.ly/3Xc2Owu>

No pre-incident street view of the Bravo 1 Exposure is available.

Make a note of your resource and staffing assumptions prior to continuing with this 10-Minute Training. **You will arrive from the west on NE Sandy Boulevard after the third company.** Additional resources on the first alarm will arrive later in the incident.

You hear Troutdale Airport tower call 911 dispatch by radio.

*911 Dispatch, Troutdale Tower; Crash, Crash, Crash, Crash approximately 2 mile west of the field. Big black smoke in a residential area it was a twin aircraft.*

Medic 1, who is out of quarters near the incident, confirms, reporting a black header and is headed that way as well. Medic 1 requests a first alarm assignment and an ops channel.

Dispatch broadcasts a first alarm for an aircraft crash and almost simultaneously broadcasts a first alarm for a structure fire at 21892 Bramble Way. Chief 2 contacts you and advises that he will take the aircraft crash so you can respond to the structure fire. Initially it is unclear if the two incidents dispatched are related (but are in the same vicinity).

Temperature is 71° F with wind from the west northwest at 8 mph (Weather Underground, 2024). While responding you hear four engines, in addition to Medic 1 (advanced life support (ALS) ambulance) who is already responding. The engines have staffing typical of your agency.

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

As you are responding, Medic 1 provided the following initial radio report:

*On scene of a large, two- and three-story townhouse complex with a working fire, middle of row, flames from the roof, give me a second alarm.*

Dispatch requests an address and Medic 1 provides the following update report:

*Residents report the address as 21867 Heartwood Circle, fire extending to the exposures, working on evacuation.*

Dispatch transmits a second alarm for the structure fire at 21892 Bramble Way (not the address reported by Medic 1). The first engine will arrive from the west on NE Sandy Boulevard.

Engine 1 advises that they will be first arriving and corrects the address to Medic 1's location on Heartwood Circle. Engine 1 arrives and provides the following radio report.

*Engine 1 is on-scene of a medium two-story townhouse complex with a working fire, middle of row with extension to the Bravo 1 and Delta 1. Delta will be the big end. Stretching an attack line on Side Alpha for fire control, offensive strategy, continue the second alarm, Engine 1 is Heartwood Command.*

Heartwood Command (Engine 1) provides Medic 1 with the following orders:

*Assist my apparatus operator in stretching a supply line back to the hydrant at the intersection of NE Willow Glenn and NE Heartwood Circle and then assist Engine 1 with the attack line.*

Engine 2 reports Level 1 on a hydrant at the entrance to the complex at NE Sandy Boulevard and NE Arbor Crest Drive. Heartwood Command provides the following orders for Engine 2 and an update report to dispatch.

*Engine 2 lay into Engine 1 from the hydrant at NE Willow Glenn and NE Heartwood Circle and stretch a second attack line on Side Alpha for fire control.*

*No 360 due to size, continuing offensive, Engine 1 is accountability on Side Alpha.*

Engine 3 advises command they are Level 1 on a hydrant at the entrance to the complex at NE Sandy Boulevard and NE Arbor Crest Drive. Heartwood Command provides the following assignment to Engine 3.

*Engine 3, stretch an attack line off Engine 1, through Alpha for fire control and primary search in the main fire occupancy.*

Examine Figures 7 and 8 illustrating conditions on your approach and from the Alpha/Bravo Corner.

Figure 7. Conditions Observed from NE Abor Crest Drive on Approach.



*Note:* Adapted from Fox Live Now. (2024). *Plumes of smoke engulf homes after plane crashes in Oregon neighborhood* [video]. <https://bit.ly/3X6IEVX>.

Figure 8. Conditions on the Alpha/Bravo Corner upon Arrival of Chief 1



*Note:* Adapted from LaBuda, D. (2024). *Townhomes engulfed in flames after small plane crash in Fairview* [video]. <https://bit.ly/3TdrcNg>.

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

*That is correct, Engine 1, Engine 2 are operating attack lines for fire control on Side Alpha, Medic 2 is evacuating the Delta exposures that are not yet involved, and Engine 3 is through Alpha for fire control and primary search. Need to get companies into Bravo 1 and Delta 1 for primary search and fire control.*

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.

Engine 4 arrives and reports that they are Level 1 on a hydrant at NE Sandy Boulevard and NE Arbor Crest Drive.

6. State the tactical assignment that you will give Engine 4 exactly as you would transmit it.
7. Chief 2 arrives and advises that they are Level 1. State the assignment you will give Chief 2 exactly as you would transmit it.

Reflect on your strategic decision-making and responses to questions 1 through 7 before answering the remaining questions.

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

To provide a bit of context in Multnomah County a “rescue” is a SUV or pickup truck that is used for medical incidents to take some of the response load from heavy apparatus. A rescue is staffed with an emergency medical technician (EMT) and paramedic (or two paramedics) and are typically co-located with an engine but operate independently. The term “base” is equivalent to Level 2 Staging in Blue Card.

Watch the first 03:00 of the [incident video](#) (LaBuda, 2024) before answering the next question. The incident video starts after the arrival of the first several companies and before transfer of command from IC #1 to IC #2.



14. IC #1 did not report completing 360-degree reconnaissance or provide any information regarding conditions on Side Charlie (Broadcastify, 2024a). Given the nature of the incident, the report of an aircraft crashed into the building, fire conditions in the main fire occupancy and the exposures, and structural conditions that can be observed in the first incident video segment what concerns would you have regarding structural stability?
15. In this incident, IC #1 (Engine 30) did not specify strategy as part of their initial radio report, but clearly was operating offensively based on assignments provided to later arriving companies. IC #2 (C7) clearly identified an offensive strategy and reinforced IC #1's incident action plan. Was this consistent with your approach to this incident? Why or why not?

Watch the [incident video](#) (LaBuda, 2024) from 03:00 to 10:00 before answering the next several questions.

16. At 07:29, a company operating on Floor 2 of the main fire occupancy reported that they have a wall that was about to collapse and that they are moving to the exterior. At 07:48 a company operating in the Bravo Division begins exterior application of water into Floor 2 of the Bravo 1 exposure. How would you communicate a strategic shift to defense in the main fire occupancy while remaining offensive in the Delta exposures or Delta 2 through 7 depending on your perspective regarding structural stability?
17. IC #2 used company officers as division supervisors (possibly due to a lack of available command officers early in the incident). What were the advantages and disadvantages of using a company officer as a tactical supervisor for companies working in the hazard zone?

**Additional Learning:** In this aircraft crash into a townhouse complex, IC #1 and IC #2 were both presented with rapidly developing fire conditions, structural compromise, significant life hazards and exposures. Listening to the incident audio<sup>1</sup> (Tac4 Fireground Archives, 2024) and using a tactical worksheet to track strategy (offensive or defensive), tactical assignments, and incident organization, and accountability provides several learning opportunities.

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<sup>1</sup> The incident audio is not in real time, dead airspace has been removed making the incident communications at a faster pace than during the actual incident.

- Practice in using your tactical worksheet during a complex incident.
- Identification of where incident communications aided your situational awareness.
- Recognition of the relationship between incident organization and communications (e.g., how the companies, division supervisors, and the IC communicated with one another).

As you work through this activity, use a note pad to document where you were frustrated, had unanswered questions, or where the information provided to IC #2 was unclear to you.

Listen to the first 06:09 of the [incident audio](#) (Tac4 Fireground Archives, 2024), prior to the arrival of IC #2 (C7). Consider how you would process the audio information while responding to the incident. Unless you normally respond with a support officer (aide), don't use your tactical worksheet yet!

Listen to the remainder of the [incident audio](#) (Tac4 Fireground Archives, 2024) and use a tactical worksheet to track strategy (offensive or defensive), tactical assignments, and incident organization, and accountability.

Review your notes and tactical worksheet. Think about strategy, tactics, organization, and communications in this incident. What lessons did you learn? How will these lessons inform your practice as an incident commander?

## References

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