### LINE OF DUTY DEATH REPORT REPORT SLIDES



### F2022-04

Career Firefighter Killed in a Structural Collapse While Conducting Fire Attack and Search in a Derelict Single-Family Residence – Missouri

**NIOSH Fire Fighter Fatality Investigation and Prevention Program** 

- On January 13, 2022, a 33-year-old career firefighter assigned to Truck 13 (T-13) died while conducting fire suppression activities in a derelict single-family residential structure.
- Prior to the fire being reported, T-13 was out of quarters and noticed a large column of smoke.
- While enroute to investigate the origin of the smoke, a still alarm was dispatched at 11:45 for a fire in a residential structure.
- T-13, which was operating on reserve Engine 33, arrived on the scene at 11:46.
- On arrival, the T-13 acting officer (T-13A) provided his initial radio report as "heavy fire on the 2nd floor, exposure on the D side, one line off, 1st alarm."



Conditions on the arrival of Truck 13 showing post flashover fire conditions throughout the second and third floors. Photo courtesy of FD.

- The firefighter on Truck 13 riding in the C position (T-13C) checked the Side Delta exposure, which was an occupied single-family residence.
- It was determined that all occupants were out of that residence.
- The Side Bravo exposure was an empty lot.
- The T-13C firefighter deployed a 4-inch supply line approximately 130 feet to the hydrant at the end of the block for water supply.
- T-13A and the firefighter in the B-position (T-13B) deployed a 1<sup>3</sup>/<sub>4</sub>" preconnected handline to the front door of the building.
- The front door of the structure was boarded over, and forcible entry was required to gain access.
- T-13A and T-13B made entry into the structure at approximately 11:48 with an uncharged hoseline for initial fire attack and primary search.

- Approximately one minute after entry, T-13A made a visual gesture from the front door to the Truck 13 apparatus operator (T-13D) to charge the 1<sup>3</sup>/<sub>4</sub>" handline.
- T-13C and T-13D completed the connection to the hydrant and stretched a 2<sup>1</sup>/<sub>2</sub>" hoseline to protect the exposure on Side Delta at approximately 11:50.
- Next to arrive on the scene at approximately 11:50 was Hook & Ladder 5 (H&L-5), Engine 28 (E-28), and Engine 24 (E-24).
- The officer of Engine 28 (E-28A) assumed command of the incident and reported, "We've got one house fully involved, exposure on Side Delta, 13's leading off with a big line."
- H&L-5 positioned for a defensive operation to protect the Side Delta exposure and began to set up their aerial ladder.



Fire building on the left, and the Side Delta exposure on the right, showing pre-fire conditions. Note indications of the fire building being a derelict structure with deteriorated conditions. Photo from Google Earth.

- Members of H&L-5 and E-28 focused their efforts on the search and protection of Side Delta exposure.
- Members of E-28, who were not aware that members of T-13 had entered the original fire building, then noticed a 1<sup>3</sup>/<sub>4</sub>" hoseline from T-13 going into the front door of the original fire building.
- They decided that they would use that hoseline for the Side Delta exposure as they did not see any point of it being used on the original fire building given the significant volume of fire and the operations towards it would be defensive.
- Fire Alarm Dispatch reported hearing an open mic from the T-13B portable radio with no response at 11:52.
- Evidence from the investigation supports that a structural collapse of the area above the second floor occurred just prior to this time and it trapped T-13B on the second floor.
- At the time of the collapse, T-13A was also pushed back down the stairs to the landing between the first and second floors.

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Second floor interior layout based on witness statements. Layout of the half story above the second floor is unknown.

- At approximately 11:53 T-13A met E-28A at the front door and advised what just happened.
- Upon observing this interaction, the captain of Engine 24 (E-24A) immediately transmitted, "E-24A, firefighter trapped inside the building, give me a second alarm with the second squad."
- Car 805, the first due Battalion Chief, arrived on the scene at 11:54 and assumed command from E-28A.
- A second alarm was dispatched at 11:55.
- Numerous crews worked for approximately the next 45 minutes to locate and extricate the downed firefighter (T-13B) who was trapped in the collapse on the second floor.
- The downed firefighter (T13-B) was deceased when located.



Side Alpha post fire conditions. Photo courtesy of FD.

# **Contributing Factors**

- Personnel staffing
- Professional development for acting fire officers
- Speed of the incident development, and the resulting impact on critical factors that are part of a risk/benefit analysis
- Derelict high-risk structure, susceptible to rapid fire spread and structural collapse
- Situational awareness at the task, tactical, and strategic levels
- Incident management, including risk assessment and management
- Mayday operations
- Communication equipment and procedures

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### Recommendations

- Ensure formal written guidance and leadership oversight is available and utilized for personnel staffing.
- Develop and utilize a professional development program for acting fire officers that includes competency verification at the appropriate level(s) of responsibility.
- When completing a risk/benefit analysis, evaluate the speed at which an incident is developing and how the speed may impact critical incident factors
- Develop and implement a High-Risk Building Management Program (HRBMP).

### Recommendations

- Develop and utilize a professional development program for situational awareness and ensure that effective situational awareness is utilized at all emergency incidents.
- Utilize formal guidance for incident management which incorporates risk assessment and management principles.
- Consistently utilize formal guidance for calling, responding to, and managing a Mayday.
- Take actions to address the five critical elements for effective fireground communications: professional development, equipment, environment, written guidance, and leadership.

### **Contact Us**

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