

**LINE OF DUTY  
DEATH REPORT  
REPORT SLIDES**



**F2019-03**

**Brick Gable End Collapses at a Residential Fire Killing a Fire Captain and Seriously Injuring Three Other Firefighters – Illinois**



# Summary

- 1615 hours, homeowners returned from running several errands to find their home on fire. They called county 9-1-1.
- Engine 2311 (E2311) and Engine 2312 (E2312) were dispatched from county fire protection district (FPD) 23.
- The fire chief from the volunteer FPD 23 drove E2311 to the incident.
- While enroute the fire chief requested automatic aid from two independently operated county fire departments: county FPD 16 (volunteer) and fire department (FD) 22 (career).



# Summary



Firefighters flowing water through a window on Side Alpha. The roof had partially collapsed, but no collapse zone had been established.

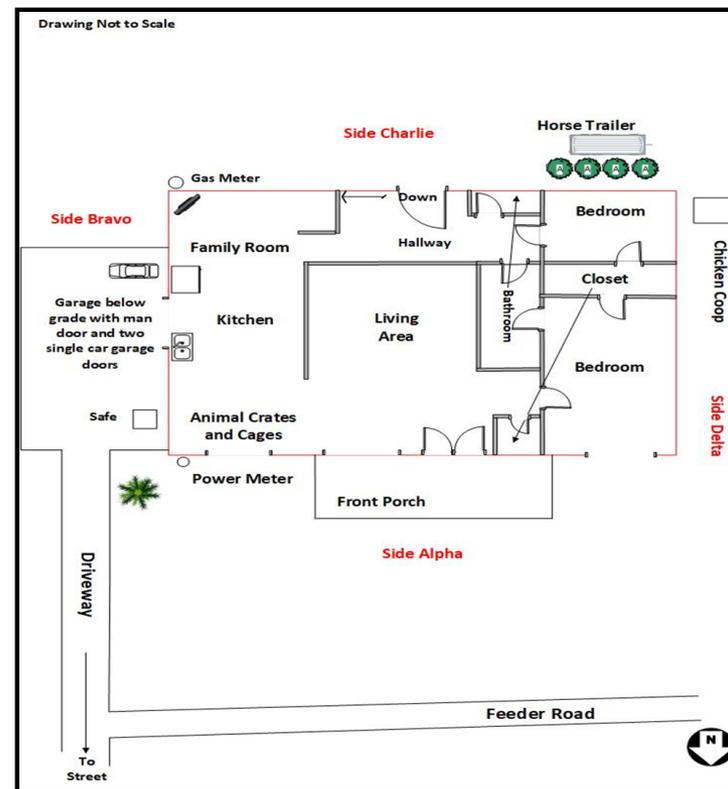
(Photo courtesy of the fire department.)

- Upon arrival at 1627 hours, the fire chief found flames and smoke venting through the roof on Side Bravo with a partial roof collapse.
- Both the occupants were out of the house upon arrival.
- The fire chief assumed Command and declared a defensive strategy. The call for a defensive strategy was not heard or received by firefighters on scene, dispatchers, or firefighters arriving in their privately owned vehicles.
- Firefighters from FPD 23 pulled and began flowing water from a 1¾-inch handline from E2311 thru a window on the Alpha/Bravo corner (see photo).



# Summary

- E2312 laid a 5-inch supply line from the nearest hydrant to E2311.
- The captain from E2312 conducted an incomplete (270°) size-up in a counterclockwise direction (Side Alpha, Side Delta Side Charlie); findings were not reported to Command.
- At 1632 hours, Command requested dispatch to send county FPD 14 (a career department) to the scene.



A diagram of the fire building's first floor and its position on the property. Dimensions are approximate. The home's square footage was 1,526 feet.



# Summary



Crews are operating interior and using an attic ladder to gain access to the attic. Crews are attempting to stop the fire from spreading to Side Delta via the attic.

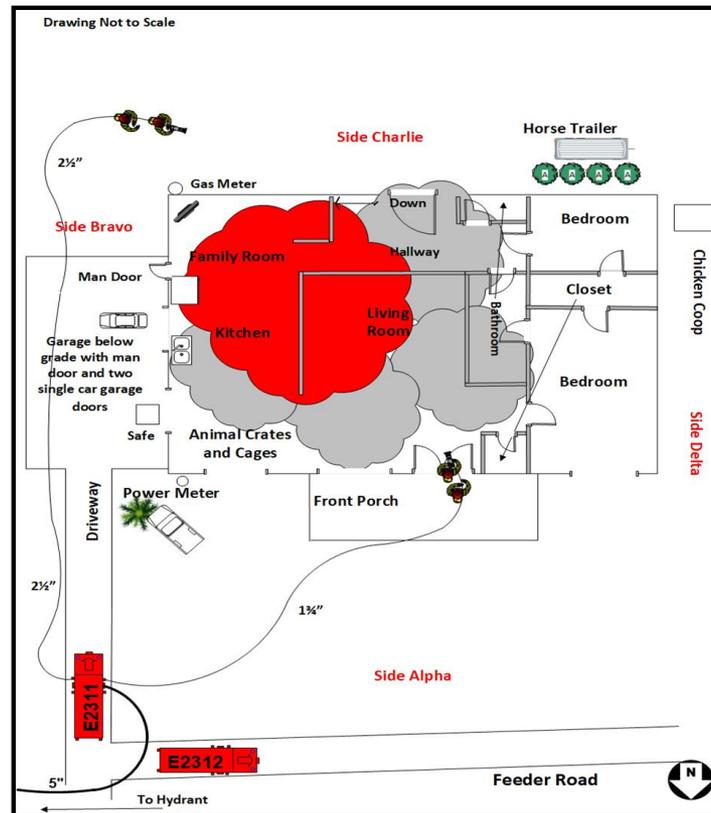
*(Photo courtesy of the fire department.)*

- At 1633 hours, firefighters from E2311 repositioned from the AB corner to an interior attack through the front door on Side Alpha.
- Excessive storage in the foyer limited advancement to only 5 to 10 feet.
- They directed water into the Side Bravo first floor and Side Charlie ceiling and attic space.



# Summary

- At 1647 hours Engine 1412 (E1412) arrived and initially staged on Side Alpha.
- After a partial walk-around, the captain of E1412 discussed the possibility of a below grade Side Bravo walk out basement fire with Command and the Side Bravo/Charlie sector chief.
- They discussed accessing the basement by cutting open the lower-level garage door with a K-12 saw (a saw fire departments frequently use to cut openings into a variety of materials).
- At 1656 hours, E1412 was at the lower-level garage doors with a K-12 saw.



Sketch of the fire suppression equipment and personnel on the nozzles of the hoselines.



# Summary



Firefighters conducting interior operations thru the front door even though approximately 45 to 50% of the roof had collapsed into the 1<sup>st</sup> floor. Red arrow indicates the end of the bricked gable rafter that eventually collapsed onto the driveway on Side Bravo. Photo taken from Side Alpha looking toward Side Bravo.

*(Photo courtesy of the fire department.)*

- At about 1655 hours, the assistant chiefs from FPD 16 and 22 became concerned about a possible roof collapse and the stability of the Side Bravo bricked gable rafter.
- These concerns were voiced to the Side Bravo/Charlie sector chief who felt the brick wall supporting the gable looked stable with no bulging, bowing, cracking, or spooling. Therefore, no collapse zone was established.
- NIOSH received conflicting information about whether these collapse concerns were voiced to Command.



# Summary

- At 1656 hours, Command radioed that the basement was about to be opened. It took a few minutes for the five firefighters operating and assisting with the K-12 saw to cut open the lower-level garage door (see photo on next slide).
- At 1703 hours, the roof's triangular brick gable rafter suddenly "tipped over" falling as a single sheet onto the driveway; a perimeter collapse (see photo on next slide).
- The gable fell approximately 21 feet before striking four firefighters from E1412 and E2212 working to open the garage door on Side Bravo. The fifth firefighter working on Side Bravo was not hit or injured.



# Summary

- Mayday called. The captain from E1412 was unconscious and not breathing. After removed from the collapse zone, cardiopulmonary resuscitation (CPR) was initiated.
- The captain was transported to a local hospital where he was evaluated and treated. At 1750 hours, the captain was pronounced deceased in the emergency department (ED) due to thoracic and cervicospinal trauma.
- On-scene paramedics stabilized the three remaining seriously injured firefighters. One was hospitalized, two were treated in the ED and released; these three firefighters survived.



Side Bravo showing below grade man door on the Side Bravo/Charlie corner, as well as the left and right garage doors. The photo was taken after the brick gable had collapsed. The right side of the garage door has been cut open.

*(Photo courtesy of the Office of the State Fire Marshal.)*



# Contributing Factors

- Lack of a collapse zone
- Lack of situational awareness
- Incomplete scene size-up
- Incomplete risk assessment and incident action plan
- Incomplete duties of command safety
- Task saturation of Command
- Lack of a Command aide
- Lack of an incident safety officer
- Inadequate water supply
- Inconsistent live fire training among volunteer firefighters
- Lack of a personnel accountability system



# Recommendations

- Fire departments should ensure Command establishes collapse/exclusion/no-entry zones at defensive fires **as needed** due to dangerous or hazardous conditions.
- Fire departments should ensure firefighters are trained in situational awareness, personal safety, and accountability.
- Fire departments should ensure the first arriving officer conducts a detailed scene size-up.
- During initial fire ground operations, fire departments should ensure Command conducts a risk assessment, develops a risk management plan, and incorporates these into an incident action plan (IAP). The IAP needs to be clearly communicated to responding personnel and, for more extensive incidents, a tactical worksheet may be required.



# Recommendations

- Fire departments should ensure their command incorporates the principles of command safety into the incident management system.
- Fire departments should develop a process to prevent task saturation of Commands during complex or multi-alarm incidents.
- Fire departments should make available a Command aide during working structure fires.
- Fire departments should ensure that an incident safety officer, independent of the Command, is appointed at working structure fires.
- Fire departments should ensure that an adequate sustainable water supply is established and maintained. Firefighters should have periodic training on hydrant operations.

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