

**LINE OF DUTY  
DEATH REPORT  
REPORT SLIDES**



## **F2018-13**

**Firefighter Dies after Falling  
Through a Floor at a Large Area  
Residential Structure Fire –  
Maryland**



# Summary

- ~0120 hours - Lightning strikes a tree in the backyard and travels into home through piping in the ground.
- 0151 hours - Homeowner calls 911 to report a lightning strike and the odor of smoke in the home, but no visible fire.
- 0152 hours – Local box alarm for Box 5-62 dispatched: Engine 51 (E51), Engine 101 (E101), Tower 10 (TWR10), Battalion Chief 1 (BC1), and Paramedic 56 (P56).



An aerial view of the home showing the sides of the house as defined by the fire & rescue department.. Note that Side Charlie has an upper (1st floor) and lower (below grade) level with a swimming pool.

*(Photo courtesy of the Fire & Rescue Department.)*



# Summary



Crews operating in a defensive strategy working to knock down the fire in 8,400 square foot single-family home. Aerial photo taken at approximately 1000 hours.

*(Photo courtesy of the Fire & Rescue Department.)*

- 0200 hours - E51 arrives on-scene and reports smoke showing and requests a full box alarm for Box 5-62.
- 0201 hours - BC1, enroute, asks E51 if they can use the pool in the backyard as a water source (E51 is equipped with a hydraulic pump).
- 0202 hours - TWR10 arrives on-scene and positions on Side Alpha. E101 arrives on-scene.
- 0203 hours – E51 re-positions on Side Charlie to access swimming pool. Owner advises E51 that most of the heavy smoke is in the basement. E51 notifies BC1 that they will make entry from the “back.”
- BC1 acknowledges, arrives on-scene, establishes Command, and commits to offensive strategy.



# Summary

- 0206 hours - BC1 aide completes 360° size-up. Notifies Command that there was smoke in a finished basement on Sides Charlie and Delta.
- 0207 hours - With a charged hoseline, E51 and TWR10 enter the structure through the laundry room door on Side Charlie. E101A and B were on Side Charlie with a charged hoseline. Smoke conditions were noted with no fire. Thermal imagers showed some heat at the ceiling and floor, but no fire. Attack crews exit the structure.
- 0208 hours - E51 notified Command that the fire attack group (E51, TWR10, and now E101) would try to enter through the basement.

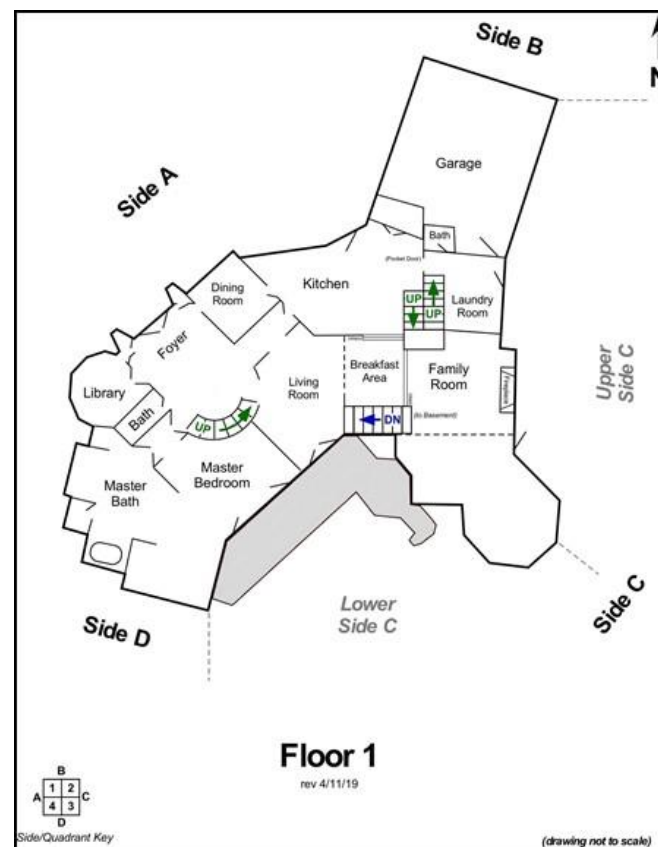


Diagram of the 1st floor.  
(Diagram courtesy of the Fire & Rescue Department.)



# Summary

- 0209 hours – E71 approaching the scene asks Command regarding water supply. Command responds that they will need to bring water from the main road, (1,300 feet from the driveway).
- 0210 hours – Attack crew enters the basement on Side Charlie.
- 0211 hours – Power to the home is secured.
- 0212 hours – IRIC in place on Side Alpha. All 3 occupants are accounted for and outside the home.
- 0213 hours – BC2 arrives on-scene: assigned to Division Charlie.

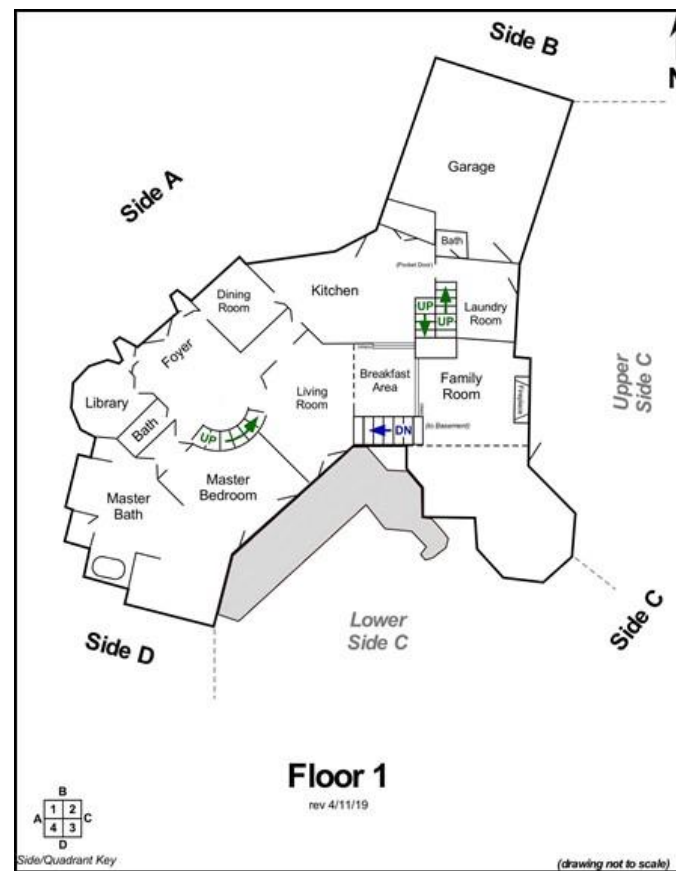
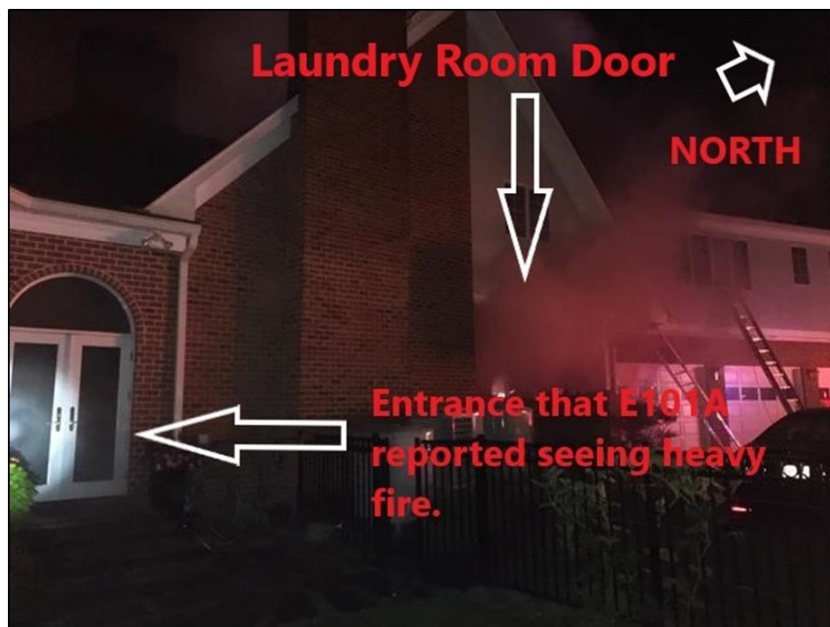


Diagram of the 1st floor.  
(Diagram courtesy of the Fire & Rescue Department.)



# Summary



Upper-level Side Charlie. Arrow shows the double doors on the left where E101A reported seeing heavy fire. The doorway with the heavy smoke showing is the entrance to the laundry room. The time is approximately 0215 hours.  
*(Photo courtesy of the Fire & Rescue Department.)*

- 0215 hours – E51A notifies Command that the fire attack crew has smoke in the basement but cannot find the fire.
- 0216 hours – E101A notifies Command that there is heavy fire on the first floor Side Charlie (see arrow in photograph). E101A orders E101B out of the baseline and they begin to pull a 200-foot 1 ¾-inch hoseline from E51 to the laundry room door.
- 0217 hours – Command is confused about where the attack group is entering the structure. TWR10A clarifies that E101 and E51 are entering the 1<sup>st</sup> floor on Side Charlie and the basement still has floor to ceiling smoke. The attack crew exited the basement, closed the door, and headed to the laundry room door on the upper level of Side Charlie.



# Summary

- 0218 hours – T7 assigned to RIC on Side Alpha.
- 0217 hours - E101B advances a 1 ¾-inch hoseline through the laundry room and into the kitchen/breakfast area with E101A trailing a significant distance behind.
- 0219 hours - E101B falls through the floor of the breakfast area into a basement level crawlspace with heavy fire conditions.
- 0220 hours - E101A transmits a Mayday on Bravo 1.
- 0221 hours - E101A transmits on Bravo 1 that E101B is in the basement, and they are trying to pull him out via the hoseline. Simultaneously, E101B transmits a clear *Who-What-Where* statement on Bravo 2 consistent with Mayday training.
- E51 and TWR10 try to find E101A and E101B in the zero-visibility conditions. E51B found E101A reaching into the hole trying to reach/pull E101B out. E51B began flowing water into the hole. E51B also tries to pull E101B out. Due to deteriorating fire and structural conditions, E51B, E101A, and TWR10 had to exit the laundry room.
- 0222 hours - 2<sup>nd</sup> Alarm requested for Box 5-62.



# Summary

- 0227 hours - PAR requested and two members of E51 were unaccounted (E51C and E51E). Both were returned to E51 and were accounted for by 0229 hours.
- 0228 hours - Laundry room is about to flash.
- 0231 hours - E51D advises Command “We are at less than a ¼ tank of water. We are out of water.”
- 0237 hours - Hydraulic pump in the pool is now working and E51 has a water source.
- 0239 hours - 2nd RIC established.
- 1008 hours - Fire declared under control.
- 1158 hours - Fire declared out.



Heavy black smoke pouring out of the 1<sup>st</sup> floor laundry room door during RIC operations.  
(Photo courtesy of the Fire & Rescue Department.)

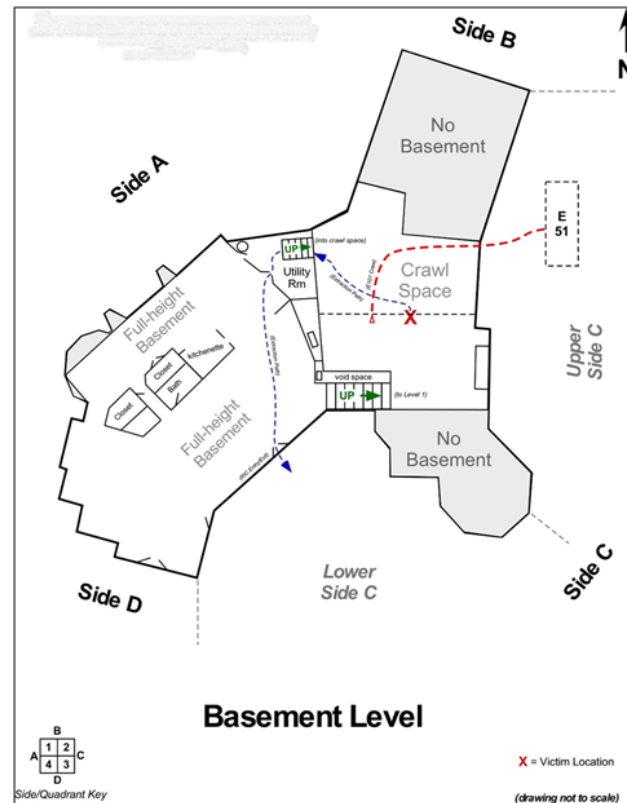




# Summary

## Rapid Intervention Operation

- 0220 hours - E71 and P56 join T7 on the rapid intervention group and re-position to Side Charlie.
- ~0228 hours – The rapid intervention group enters the basement with 300-foot 1 3/4-inch hoseline. “Cold smoke” conditions with poor visibility. Right-handed search used.
- ~0230 hours - The rapid intervention group encountered a second set of steps in the utility room leading into to the crawlspace with high heat and visible fire. The rapid intervention group moved in the direction of E101B’s alarming PASS device. Wires, and storage items impede progress. E71C reaches E101B who is unconscious. The rapid intervention group pulls/passes E101B along the extraction route (blue dotted line in the diagram).



Sketch of the basement. The red “X” marks the approximate location where E101B was found. Blue dotted line is the extraction pathway. The red dotted line is the hoseline used by E101B on the 1<sup>st</sup> floor.

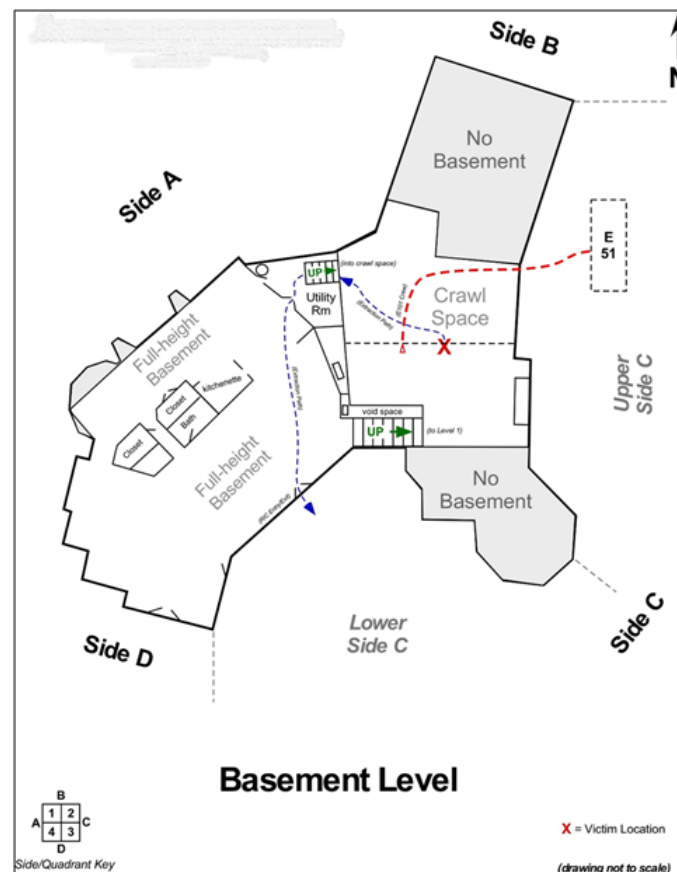
*(Diagram courtesy of the Fire & Rescue Department.)*



# Summary

## Rapid Intervention Operation Continued

- 0243 hours - E101B removed from the structure. CPR begins. The rapid intervention group located and extricated E101B in 15 minutes after entry; 22 minutes after the Mayday.
- 0246 hours - Command orders all companies to evacuate the structure and orders a defensive strategy.
- 0254 hours - Medic 105 enroute to the hospital with CPR in progress.
- 0312 hours - E101B pronounced deceased at the hospital.



Sketch of the basement. The red "X" marks the approximate location where E101B was found. Blue dotted line is the extraction pathway. The red dotted line is the hoseline used by E101B on the 1<sup>st</sup> floor.  
(Diagram courtesy of the Fire & Rescue Department.)



# Contributing Factors

- Lack of crew integrity
- Lack of complete scene size-up
- Below-grade fire
- Large area residential structure
- Lack of a defined incident action plan
- Inadequate fireground communications
- Missed critical incident benchmarks
- Member operating on the wrong radio channel
- Task saturation of the incident commander
- Lack of personnel accountability
- Wind/weather



# Recommendations

- Fire departments should ensure that crew integrity is properly maintained by visual (eye-to-eye), direct (touch), or verbal (voice or radio) contact at all times when operating in an immediately dangerous to life and health (IDLH) atmosphere. The intent is to prevent firefighters from becoming lost or missing.
- Fire departments should ensure incident commanders conduct a detailed scene size-up and risk assessment during initial fireground operations and throughout the incident including Side Charlie.
- Fire departments should develop and implement a standard operating procedure/guideline (SOP/SOG) to identify below-grade fires and ensure that appropriate tactical operations are implemented.
- Fire departments should ensure that a deployment strategy for low frequency/high risk incidents is developed and implemented for large area residential structures with unique architectural features.
- Fire departments should ensure that incident commanders develop an incident action plan (IAP) that matches conditions encountered during initial operations and throughout the incident.



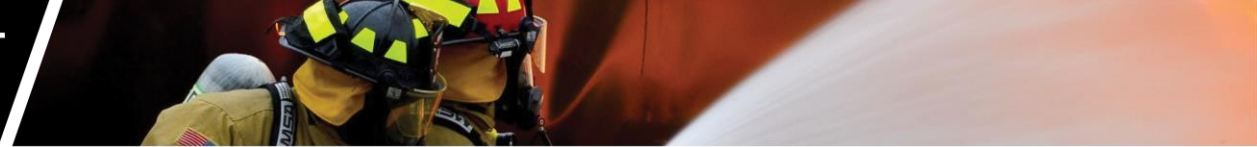
# Recommendations

- Fire departments should ensure that critical incident benchmarks and fire conditions are communicated to the incident commander throughout the incident. This requires effective fireground communications.
- Fire departments should have a procedure to ensure all members operating in the hazard zone have their radios on the designated radio channel.
- Fire departments should ensure all members and dispatchers are trained on the safety features of their portable radio, particularly the features useful during a Mayday.
- Fire departments should develop a process to prevent task saturation of the incident commander during multi-alarm incidents.
- Fire departments should ensure that the designated accountability officer is not assigned additional duties.



# Recommendations

- Fire departments should develop a training program for staff aides, incident command technicians, or staff assistants.
- Fire departments should ensure incident commanders maintain control of situation status, resource status, and communications to ensure the completion of tactical objectives.
- Fire departments should incorporate the principles of Command Safety into the incident management system during the initial assumption of command. This ensures that the strategic-level safety responsibilities are being incorporated into the command functions throughout the incident.
- Fire departments should review their SOG/SOP to ensure that water supply is established during initial fireground operations, particularly in areas with limited or no hydrants.
- Fire departments should ensure adequate staffing and deployment of resources based on the community's risk assessment.



# Recommendations

- Fire departments should periodically review and, if necessary, revise their SOP/SOG on the deployment of rapid intervention crews (RICs).
- Fire departments should use resources from the National Institute of Standards and Technology (NIST) and Underwriter's Laboratories (UL) to develop and revise operational procedures on fireground tactics and provide training in fire dynamics in structures for all firefighting staff.
- Fire departments should consider having all members carry a wire cutting tool.
- Fire departments should ensure that all members engaged in emergency operations receive annual proficiency training and evaluation on fireground operations, including live fire training. This training should be conducted with automatic aid and mutual aid fire departments.
- Fire departments should ensure adequate incident scene rehabilitation is established in accordance with NFPA 1584, Standard on the Rehabilitation Process for Members during Emergency Operations and Training Exercises.
- Fire Departments should consider a radio protocol that identifies the unit they are calling first (receiver), then identifies themselves (sender).

# CONTACT US

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