



## *Death in the line of duty...*

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

A summary of a NIOSH fire fighter fatality investigation

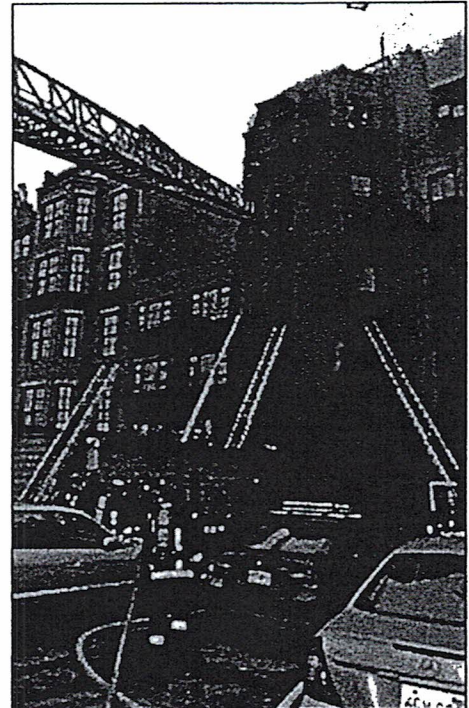
March 2, 2016

### *Lieutenant and Fire fighter Die and 13 Fire Fighters injured in a Wind Driven Fire in a Brownstone - Massachusetts*

#### Executive Summary

On March 26, 2014, a 43-year-old male career fire lieutenant and a 33-year-old fire fighter died during fire-fighting operations in an occupied multifamily residential structure (brownstone). Engine 33 was the first-due engine company assigned to Box 1579. Engine 33 arrived on scene and reported: "We have a four-story with smoke showing from the first floor. Engine 33 is stretching a 1¾-inch hoseline in the front doorway." The lieutenant and the fire fighter stretched the 1¾-inch hoseline up the front steps (uncharged), through the front door, and into the front hallway. When the lieutenant was informed the fire and a possible victim were in the basement, Engine 33 took the hoseline down the steps. The Engine 33 pump operator charged the line, but the line lost its water due to the rapidly deteriorating fire conditions which compromised the hose. Engine 7 arrived on scene and stretched a 2 ½-inch hoseline as a back-up line to Engine 33. Engine 7 stretched their line in the front door following Engine 33's hoseline. Engine 22 was on-scene and was preparing to stretch a hoseline into the basement apartment underneath the front steps. The crew from Engine 7 was moving their hoseline towards the stairwell leading to the basement, when conditions changed drastically. Fire and heat came up the steps from the basement.

A view of fireground worker leaving the rear door of the attached shed open while investigating the smoke detector activation. The conditions became untenable for the fire fighters from Engine 7. They moved out of the building to the landing of the front steps. Also, the interior door at the top of the basement stairs was open, the front exterior doors were left open by an occupant fleeing the fire, and a rear basement door or window failed. Once the rear door or window burned through, this created an unrestricted flow path from the basement to the first floor plus



the floors above, thereby triggering a rapid progression of fire conditions. This trapped the officer and fire fighter from Engine 33 in the basement. The fire, heat, and smoke through the basement and first floor created untenable conditions on both floors. Due to the intense heat and fire conditions, the 1¾-inch attack hose burned through. Command then ordered the building to be evacuated. Approximately 1 minute later, the Engine 33 lieutenant called Command and said they were running out of water. The dispatcher replied, "OK Engine 33, we are going to get you water." Command immediately called a second alarm for Box 1579. Several companies tried to make entry into Side Alpha from both the basement and the first floor of the structure, but were pushed back by heavy fire and smoke. Crews pushed through the Side Bravo exposure to initiate fire attack on Side Charlie. Crews took a 2½-inch hoseline into the basement apartment on Side Charlie. Approximately 15 minutes later, crews located the fire fighter from Engine 33 in the kitchen area of this apartment. The fire fighter was removed from the apartment and immediately taken to an ambulance for transport to the hospital. The fire fighter from Engine 33 was pronounced dead at the hospital. After the fire fighter was removed, conditions changed and the structure became fully involved. Crews were removed from the structure and the strategy was changed to defensive operations. Once the fire was completely knocked down and conditions allowed fire fighters to safely re-enter the structure, a search was made for the lieutenant of Engine 33. The lieutenant was found at the bottom of the stairs near the entrance to Apartment #10 in the basement. The lieutenant was pronounced dead at the scene.

### **Contributing Factors**

- *Delayed notification to the fire department*
- *Uncontrolled ventilation by a civilian*
- *Occupied residential building with immediate life safety concerns*
- *Staffing*
- *Scene size-up*
- *Lack of fire hydrants on Side Charlie (a private street)*
- *Lack of training regarding wind-driven fires*
- *Unrestricted flow path of the fire*
- *Lack of fire sprinkler system*

### **Key Recommendations**

*Fire departments should define fireground strategy and tactics for an occupancy that are based upon the organization's standard operating procedures. As part of the incident action plan, the incident commander should ensure a detailed scene size-up and risk assessment occurs during initial fireground operations, including the deployment of resources to Side Charlie. Scene size-up and risk assessment should occur throughout the incident.*

The National Institute for Occupational Safety and Health (NIOSH), an institute within the Centers for Disease Control and Prevention (CDC), is the Federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness. In 1998, Congress appropriated funds to NIOSH to conduct a fire fighter initiative that resulted in the NIOSH Fire Fighter Fatality Investigation and Prevention Program, which examines line-of-duty deaths or on-duty deaths of fire fighters to assist fire departments, fire fighters, the fire service and others to prevent similar fire fighter deaths in the future. The agency does not enforce compliance with state or Federal occupational safety and health standards and does not determine fault or assign blame. Participation of fire departments and individuals in