

East Side Explosion and Collapse

by Deputy Chief Daniel Donoghue

By all accounts, the morning of July 10, 2006, was turning into a beautiful summer day. The temperature was in the lower 70s and the sky was clear with only a hint of a breeze. At 0840 hours, the Manhattan Communications Office began receiving calls for an explosion and building collapse at the corner of Madison Avenue and 62nd Street. Within minutes, due to the numerous calls received and the information provided, the Manhattan CO dispatched four engines, three trucks, Rescue 1, Squad 18 and several specialized units, including Ladders 25 and 116, assigned on major collapse incidents with their rescue collapse vehicles.

The first-arriving unit, Ladder 16, under the command of Lieutenant Mike McGevena, was met with a large cloud of smoke and dust as they made their turn onto 62nd Street from Madison Avenue. Though visibility was limited, it was apparent that a major collapse had occurred and a large fire quickly was spreading throughout the two-story pile of debris that had--only minutes before--been a building of undetermined dimensions. Lieutenant McGevena quickly transmitted the major emergency signal 10-60 for a collapse at 0846 hours. On receipt of this signal, the Manhattan CO immediately dispatched the remaining units assigned on the major emergency response matrix.

Battalion Chief Wayne McPartland, Battalion 8, arrived within moments of Ladder 16, along with Engines 39 and 8. These units were faced with the following circumstances:

- A fully collapsed building with heavy fire throughout the debris. The original building address and dimensions were unknown. Reports of people possibly trapped in the collapsed building were received from the dispatcher.
- Exposure #2, a four-story, occupied brownstone, appeared intact. However, building stability and the number of occupants were unknown. A light smoke condition existed on the lower floors.
- Exposure #4, a 17-story, occupied, fireproof multiple dwelling, was separated from the collapsed building by a small alley.

Numerous shaft windows facing this alley were shattered by the blast. Fire was beginning to enter several apartments on floors two, three and four via these windows.

- Conditions in exposure #3 were unknown.
- The cause of the blast was unknown. Natural gas was suspected; however, other causes had to be ruled out.
- Dozens of frightened civilians were running away from the area. Some of these people received minor injuries from the blast. One victim, who had been passing the building just prior to the collapse, required hospitalization.

Operations

Ladder 16 members passed the collapse and placed their aerial ladder on the roof of exposure #2. Engine 39, under the command of Lieutenant Christopher King, hooked up to a hydrant on the corner of 62nd Street and set up an in-line pumping operation. The apparatus was positioned near the front of the collapse in order to use the deck gun on the quickly expanding fire. Engine 8, under the command of Lieutenant Kevin Sullivan, alertly ordered his members to assist Engine 39. Engine 39's deck gun was placed into operation, while a 2¹/₂-inch hand-line was stretched to the front of the collapse debris. Engine 8 also stretched an additional supply line to Engine 39 and a 3¹/₂-inch line to the front of the collapse for use by a tower ladder.

The second-due truck, Tower Ladder 35, under the command of Lieutenant Mike Boeri, was directed to place their rig on the exposure #2 side of the collapse. This position provided coverage of the collapse and exposure #2. The placement of these units provided excellent coverage of the collapse and exposures, while keeping the immediate area in front of the collapse open.

Deputy Chief Daniel Donoghue, Division 3, arrived at 0848 hours as the first-alarm units were beginning their attack on the fire. After conferring with Chief McPartland, a Command Post was established on the sidewalk opposite the collapse. Deputy

Chief James Nichols, Division 1, responding on the 10-60 signal, was directed to set up an Operations Post on 61st Street, the exposure #3 side.

Preliminary searches for surface victims in the street and sidewalk area were in progress. Due to the intense fire, units were unable to approach the main portion of the collapse. Fire was communicating to apartments on the second, third and fourth floors of exposure #4, the 17-story multiple dwelling. Battalion Chief Gerald Wren, Battalion 11, responding on the second alarm, was assigned to this exposure. Most of the second-alarm units also were assigned to this location. Battalion Chief John Belnavis, Battalion 9, was assigned to exposure #2.

Since this area of Manhattan contains numerous embassies, consulates and other sensitive occupancies, terrorism was a distinct possibility. Squad 18 members were directed to survey the area with their atmospheric meters. These readings proved negative. Subsequent monitoring also proved negative. The NYPD was requested to sweep the area for potential secondary devices and assist with the mounting traffic problem on



(Left) Water is poured on remains of four-story collapsed building. The incident went to six alarms before being brought under control. A buried victim was brought out alive, but he died later in the hospital. (Right) Dr. Nicholas Bartha's brownstone (arrow) before the gas explosion and fire reduced it to rubble.

photo courtesy of FDOC

the Avenues.

Chief Donoghue transmitted a third alarm at 0910 hours as units in exposures #2, 3 and 4 were heavily engaged. Fire in the collapse began to darken down as Engine 39's deck gun, Ladder 35's bucket and the 2¹/₂-inch hand-line poured water on the debris. Battalion 9 reported a high carbon monoxide level in exposure #2 with a medium smoke condition, but no fire. A hand-line was stretched to the first floor as a precaution. Several occupants were evacuated and primary searches were negative in this brownstone occupancy.

Chief Wren reported fire in four apartments on three floors in exposure #4. Four lines were stretched and operating off the standpipe. Trucks were heavily engaged. Primary searches were underway. Division 1 was operating in exposure #3 with members from Engine 23, Rescue 1 and Ladder 116 with their collapse vehicle.

Manhattan Borough Commander Assistant Chief Michael Weinlein arrived and assumed command. Chief Donoghue was assigned as the Operations Chief and instructed to supervise operations in the collapse area. To improve communications and gain more effective control of units on the scene, the command channel was placed into use at this time.

Commissioner Nicholas Scoppetta, Chief of Department Salvatore Cassano and Chief of Operations Patrick McNally arrived on the scene at approximately 0915 hours and were apprised of the situation. A fourth alarm was transmitted at 0927 hours.

During this time, Chief Donoghue consulted with Deputy Chief William Siegel, Rescue Operations, Rescue Battalion Chief James Yakimovich and Safety Battalion Chief Daniel Martinetion to develop a plan to begin limited void searches. The building damage was so great that there was little hope of finding any survivors. It was decided that Rescue 4, under the command of Lieutenant Luis Torres, begin limited searches of accessible voids near the front of the building under close supervision of Chief Officers. Rescue 1, under the command of Lieutenant Thomas Donnelly, searched the voids in the rear.

While the fire had been darkened down, the possibility of further collapse was great. Units were assisting Con Edison with locating the gas shut-off. The odor of natural gas was strong. The large-caliber streams operating in the front were shut down. Hand-lines operating out of exposure #4's windows also were notified not to direct their streams toward the front of the collapse. Three hand-lines (two in the front and one in the rear) were in place for protection of members searching.

Void searches

Using their CO and gas meters, members of Rescue 4 began to make searches of voids. While checking a void near the former front entrance to the building, FF Richard Schmidt, Rescue 4, reported hearing a voice under the rubble. All handie-talkie and hose stream noise was ordered silent. FF Schmidt descended into the void via a portable ladder and located a conscious, severely injured male victim. The victim, later identified as Dr. Nicholas Bartha, was in a small room located directly beneath the stoop area. FF Charles Wiemann, Rescue 4, entered the void to assist. A 10-45 code 2 was transmitted to the Command Post at 1011 hours.

Atmospheric meter readings indicated no explosive levels, but CO readings were approaching 100 ppm. The removal proved to be difficult. The victim was behind a closed metal door with a four- by six-inch glass panel at the top. FF Schmidt broke this glass and passed the Fast Pak facepiece to the victim. The two members then began to force the door. After close inspection, it was decided additional shoring would not be required. The metal door was folded downward and FF Schmidt entered the room to assess the victim.

With the victim's airway protected utilizing the Fast Pak, FF Schmidt performed C-spine stabilization with a rigid neck collar and diamond-lashed the victim to a backboard using tubular webbing. A mechanical advantage system was called for, but not used. Although the victim weighed in excess of 270 pounds, by using ropes, members were able to haul the victim out to awaiting Paramedics. This confined space removal, while undertaken during extremely difficult and dangerous conditions, took approximately 20 minutes. Information received from the victim indicated there were no other people in the building. It was decided to hold off on additional searches until the utilities were shut off.

Conditions improve

A fifth and sixth alarm were transmitted at 1019 and 1154 hours, respectively, to cover the various exposures and provide for relief. ConEd shut the gas off via the curb valve after a

large amount of debris on the sidewalk was cleared. Electric also was shut off in the street. As soon as the gas was shut off, units went about final extinguishment in the collapse area. All fire was extinguished and all apartments were searched in exposure #4.

At the height of operations, a full second-alarm assignment operated in this exposure. Using a transit on the freestanding front parapet wall and visual reports from members operating on the roof and in Ladder 35's bucket, exposure #2's stability was monitored closely throughout the operation. Department of Building engineers also assisted.

The Command Post soon was notified by the Fire Marshals that information they had received from several sources pointed to the possibility of an intentional explosion. Once it became apparent that no additional victims would be found, arson investigation became the main focus. Fire Marshals and Firefighters sifted through the rubble for two days, searching for evidence of natural gas line and/or appliance tampering.

Lessons learned/reinforced

• The \$17 million, state-of-the-art Fire Department Operations Center (FDOC) was enormously helpful to the successful mitigation of this incident. With callers providing conflicting addresses for the building, within seconds, FDOC personnel

10-60, Major Emergency Response
Signal 10-60 provides the response of an enhanced second alarm and is transmitted for a major collapse, airplane crash (except airport crash Boxes 37--LaGuardia and 269--Kennedy Airport), train derailment or similar emergency with the potential for multiple casualties. The total response will be:

- 8 Engine Companies • 4 Ladder Companies
- 6 Battalion Chiefs (third-due Battalion Chief is designated Safety Officer; sixth-due Battalion Chief is designated Resource Unit Leader) • 2 Deputy Chiefs
- Squad 1 with Technical Response Vehicle
- 1 additional Squad Company
- Tactical Support Unit
- Rescue Operations Battalion
- Haz-Mat Battalion
- Safety Operating Battalion • 1 FAST unit
- 2 Collapse Rescue Task Forces
- 2 SOC Support Ladder Companies
- SOC Logistics Support Van
- SOC Compressor Truck • 1 Satellite Unit
- Field Communications Unit
- Recuperation and Care (RAC) Unit
- Mobile Command Center
- Public Information Officer

EMS resources assigned on a 10-60 include:

- 1 EMS Division Chief
- 2 EMS Division Captains
- 1 Haz-Tac Officer • 4 BLS ambulances
- 1 Logistical Support Unit (LSU)
- 1 Major Emergency Response Vehicle (MERV)
- 1 Mobile Respiratory Treatment Unit (MRTU)
- 1 EMS Deputy Chief
- 3 EMS Conditions Officers
- 2 ALS ambulances
- 1 OMA response physician

On transmission of a 10-60, the appropriate Battalion Chief shall be designated Air Recon Chief and shall respond in accordance with Department policy and procedures. Following the transmission of a 10-60, the incident will be upgraded to a second alarm and the remainder of the total response shall be provided.



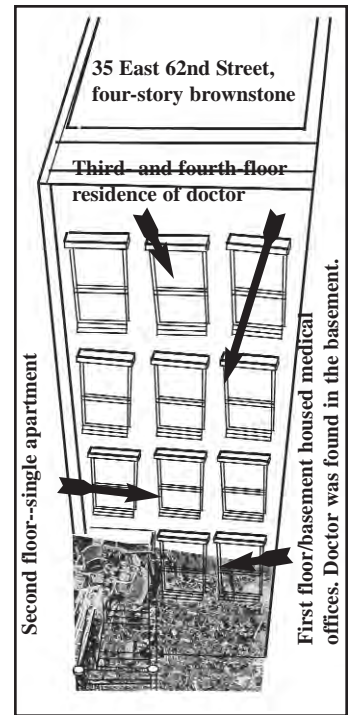
Firefighters search through the debris for victims.

were able to determine the destroyed building's address, size, number of exposures and usage (doctor's office and residence) and transmit that information to the Incident Commander.

- The initial placement of apparatus at collapse operations differs significantly compared to other, more routine incidents. The first-alarm units positioned themselves well. Ladder 16, an aerial ladder, took the front of exposure #2. Engine 39's use of in-line pumping allowed a large-caliber stream to be used quickly on the expanding fire. Tower Ladder 35's position allowed coverage of the collapse building and exposure #2. The immediate front of the collapse area was clear. Engine 8 assisted Engine 39 and set up a much-needed relay to Engine 39 to augment the ILP. The quick application of large-caliber streams on the collapse played a vital role in the eventual rescue of the fire victim.
- The Incident Commander must be aware of the need to transmit greater alarms as soon as it becomes apparent that additional help may be required. This includes company Officers arriving on-scene prior to a Chief Officer. Ladder 16 transmitted the signal 10-60 immediately. This signal provides an enhanced second alarm, along with specialized collapse units. Although obvious at this collapse, units should be aware of the need to transmit this alarm at lesser collapse incidents. Even "small" collapse incidents may prove to be extremely complicated and time-consuming. It's best to be safe rather than sorry, especially when life safety is involved. The Manhattan CO was proactive in starting out units of the collapse matrix well before the initial units arrived on the scene.
- Members must refrain from tunnel vision. While the collapse proved to be visually stunning, once the first-alarm units were operating on the collapse, exposure #4--the occupied, 17-story multiple dwelling--became a main concern. Units did an exceptional job in extinguishing four apartment fires on three floors, while searching all apartments on the collapse side of the building.
- Operations on the debris pile need to be well-coordinated and supervised. Members not directly involved in the search and supervision were instructed to remain off the collapse. The only exceptions were members on the three safety hand-lines (one nozzle Firefighter and Officer on each line). Ladder 7, EMS Paramedics and a medical doctor were positioned just off the pile until needed. The collapse supervisor must use a risk vs. reward mentality when approaching these situations. Rescue 4 members were instructed to do a cursory search of voids near the main entrance. The possibility of fire flare-up, a second gas explosion and/or further collapse were considered and precluded a more

aggressive search until a victim was positively identified and located. Once located, two members of Rescue 4 were positioned in an extremely dangerous area in order to remove the victim. The removal was successful and done in a highly professional manner.

- All members must maintain situational awareness. While the most logical explanation for an explosion, fire and collapse in cases similar to this is a large natural gas leak and ignition, units must be aware of other potential causes. The NYPD was requested to check the exposures and areas near the collapse for potential secondary devices. Squad 18 was directed to monitor the collapse for radiological and chemical "hits."



The initial sweep proved negative. Additional sweeps during operations continued to prove negative. The building address must be identified as early as possible so that information pertaining to the address (i.e., CIDS) will be made available.

- Successful operations depend on good communications. Establishing the command channel allowed communications to progress smoothly during this rapidly expanding operation. Assistant Chief Michael Weinlein arrived shortly after the third alarm was transmitted. Chief Weinlein assumed command and established a command channel. This was an optimal time to establish the command channel. A total of nine Battalion Chiefs (including Safety, Haz-Mat and Rescue) are assigned on the 10-60 signal. An additional two Battalions were responding on the third alarm. The majority of these Chiefs had just arrived or were not yet on-scene. Battalion Chief James Ginty, Battalion 12, the Resource Unit Leader, assisted by Aide to the 3rd Division, FF Francis Heffernan, was responsible for ensuring that the command channel activation was properly implemented. (The Resource Unit Leader formerly was called the Com-Cord Chief.)
- Natural gas leaks are a common type of emergency response for the FDNY. Members must be aware that this type of incident can be extremely dangerous. Do not take these runs for granted. Natural gas has an explosive range of five to 15 percent. It is odorless and tasteless, but has the familiar "rotten egg" odorant, mercaptan, added when used for domestic consumption. Do not depend on this odor to detect the presence of natural gas. Always use a gas detector to determine the level.

This incident garnered national attention and was watched live by millions of television viewers, courtesy of the large network coverage. The members operated in a truly professional manner. This event proves again why the FDNY enjoys the great reputation it has. To all units that operated at this Box, good job!

About the Author...

Deputy Chief Daniel Donoghue is a 21-year veteran of the FDNY. He is assigned to the 3rd Division. He holds an associate degree in nursing. This is his first article for WNYF.



Members are urged to review the following WNYF articles:

- "Utility Hazards--Natural Gas Hazards," by Battalion Chief Frank Montagna and Matthew Palmer, ConEd Field Operations Planner, in the 3rd/2003 issue.
- "Investigation of East Side Gas Explosion/Collapse," by Assistant Chief Fire Marshal Robert Byrnes, on page 5 of this issue.