

Row Frames Revisited at Deadly Staten Island Five-Alarm Fire

by Battalion Chief John A. Calderone

Shortly after 0430 hours on the morning of January 11, 2009, the Staten Island Central Office started receiving multiple phone calls for a building fire on Jewett Avenue. The addresses received ranged over a two-block-long stretch from 300 to 403 Jewett Avenue. While the location of the fire was uncertain, from the number of calls received, it was certain that there was a working fire. Based on the number of calls, the dispatchers assigned four engines, two ladders and Rescue 5 on the initial alarm, which was transmitted at 0432 hours. The temperature was hovering at 25 degrees, with eight- to 12-mph winds.

Battalion Chief Dave Biesty, covering in Battalion 22, arrived

first at 0436 hours to find 401 Jewett Avenue heavily involved, with fire covering the entire exterior, fire throughout the building and through the roof. Fire also was extending into exposures #2 and #4. The fire building was a two-story, frame, 25- by 40-foot private dwelling, one of nine similar attached buildings. The Chief immediately transmitted a second alarm at 0436 hours.

While at first glance these buildings appeared to be standard row frames, this row had several surprises for operating forces. Each building was a one-family unit with open interior stairs to the second floor, not the railroad flats typically found in row frames. When constructed, there was substantial brick nogging installed up to the underside of the roof in each structure. This nogging had greatly deteriorated over the years and now was missing completely in some bays. The nogging, acting as a fire wall for all intents and purposes, resulted in nine separate structures when these buildings were constructed.

The roof pitch was from rear to front, rather than the typical front to rear. This allowed for a cockloft space of more than five feet high at the rear with less than three feet at the front. This feature permitted easy fire spread to the rear where heavy fire concentrated and extended through the deteriorated nogging into attached structures. This feature also allowed the cockloft to be used by the individual residents as an attic storage area.

Tongue-and-groove flooring had been installed as an attic floor and each building had a drop-down attic stairway installed, which was accessible from the second-floor hallway. Most of the cocklofts were packed with personal belongings, some in Collyer's mansion-type conditions, greatly contributing to the fire load in the cockloft. The roof boards also were of tongue-and-groove construction. When built, this row of nine buildings was substantially constructed, atypical of row frame construction.

The heavy fire conditions on arrival prevented initial entry into the fire building. Additionally, large trees and extensive overhead wires precluded effective use of tower ladders. Engine 163, the first engine to arrive, under the command of Lieutenant Patrick McGarty, stretched 2 1/2-inch hose as the initial line due to the heavy fire conditions. This line was extremely effective in knocking down the exterior fire, but once the line advanced into the interior, some loss of maneuverability resulted in slower operations.

The heavy fire conditions also prevented the truck companies from entering the fire building and conducting a search. The first two trucks--Ladder 79, under the command of Lieutenant John Eccleston, and Ladder 80, led by Lieutenant Robert Strafer--concentrated on aggressively searching the already involved adjoining exposures. Roof operations were instituted simultaneously by placing a 35-foot extension ladder to the roof in the front and accessing a rear setback, then pulling up a 20-foot straight ladder and using it from the setback roof to the building roof in the rear.

As soon as Engine 163 knocked down the exterior fire, members advanced into the first floor of the fire building. Engine 157, commanded by Captain Richard Scarpato,



FDNY members operate at the front exterior of Staten Island Box 55-715, 401/403 Jewett Avenue/Post Avenue/Forest Avenue, January 10, 2009.

photo by Seankelly McCauley



This photo reveals the nogging in place between the studs and up to the underside of the roof. While the nogging in this area held and prevented fire extension, the fire entered this structure through failed nogging elsewhere in the cockloft and dropped down to the top floor.

entered exposure #2 and quickly advanced to the top floor, where they operated into the fully involved cockloft. After assisting with stretching the first two lines, Engine 156, led by Lieutenant James Deignan, stretched a third line to exposure #4, knocked down fire extending on the exterior, then rapidly advanced to the top floor and operated into the heavily involved cockloft. Engine 158, commanded by Lieutenant Robert Leanza, stretched a back-up line into the fire building and operated on heavy fire.

At 0443 hours, Acting Deputy Chief John Calderone, Division 8, arrived on-scene. The interior of the fire building was still heavily involved and units were attempting to conduct a primary search. Fire was burning through the roof. There was heavy fire in the cockloft in exposures #2 and #4 and probably #2A as well. Smoke was pushing under pressure from the cornices of all nine attached buildings. The fire was traveling toward the north.

A few minutes later, Battalion Chief John Crowe, covering in Battalion 21, arrived as the 10-75 Chief. He was ordered to the roof to supervise roof operations, probably the most critical sector of operations at this fire. Squad 1 and Rescue 5 members were assigned to reinforce roof operations. Most of the second-alarm companies had not yet arrived and were needed to relieve the first-alarm units. Additional companies were needed to sustain the aggressive interior operations and take a stand to save the remaining uninvolved structures. At 0454 hours--22 minutes into the operation--Chief Calderone transmitted the third alarm.

Engine 159, staffing Satellite 5 and assigned on the All-Hands, was ordered to stretch a five-inch supply line and position its manifold in front of the fire building. Getting this manifold into position and charged early in the operation proved beneficial when engine companies arriving on subsequent alarms were ordered to stretch lines. At the height of the fire, there were nine hand-lines in operation. With many street obstructions and overhead wires, Ladder Companies 83 and 78 managed to maneuver their apparatus into positions that allowed aerials to be raised to the roof at either end of the row of buildings. If necessary, this provided remote, emergency means of egress for units operating on the roof.

As multiple-alarm units arrived, they were given assignments of either relieving first-alarm units or taking positions in exposures to reinforce the interior attack. Several large holes were cut directly over the cockloft fire in the exposures, greatly slowing the fire spread. Numerous inspection holes also were cut to monitor the cockloft. Each involved building contained sufficient fire to warrant a full first-alarm assignment. Because of the rapidly moving cockloft fire, a decision was made to make a stand in exposure #2B. This ultimately proved successful, with Engine 161 extin-



Shown above are the remains of the drop-down stairs, leading to the cockloft, which is typical of attic stairs in private dwellings. There was one in each building. This arrangement is uncommon in row frames.

guishing the cockloft fire in that building, allowing other units to be repositioned into exposures #2A and #2, working backward toward the original fire building.

Units in outlying areas of the City--such as Staten Island--are located further apart than in inner City areas. Incident Commanders must be aware of this and anticipate the need for additional units far in advance. Despite the fact that fourth and fifth alarms (0509 and 0549 hours, respectively) were transmitted in fairly rapid succession, there were times when there were no units available at the scene for assignment. Operating forces adapted. Many first- and second-alarm units, after using up their initial SCBAs and being relieved, returned to the street, changed cylinders and were given new assignments. Some units used three bottles at this fire. Likewise, sometimes it was necessary to assign engine companies to perform truck work and, at one point, a truck was assigned to relieve on a hand-line because they were the only available unit at the scene.

The operating units did an outstanding job in confining and extinguishing this fire, preventing extension into the last four buildings in the row, which were reoccupied several days later. Unfortunately, two civilians were trapped and killed on the fully involved second floor of the original fire building.

As with any major incident, there are discussion points and lessons to be reinforced.

- **Expect the unexpected.**--Almost every Officer and Firefighter assigned to units in this section of Staten Island had viewed these buildings in passing and pre-planned this fire as a typical row frame. However, these buildings had some major surprises for FDNY. They had a one-family layout with open interior stairs to

Members are urged to review "Keys to Fighting Fires in Row Frames," by Assistant Chief Joseph Callan, Bronx Borough Commander, in the 2nd/2002 issue of WNYF.



This image shows the voids created as the brick nogging deteriorated over the years. In the narrow bay adjacent to the chimney and one of the other bays, it is completely gone, while in other bays, it is in varying stages of deterioration. These voids allowed fire to spread rapidly from building to building.

the second floor, typical of a detached private dwelling. This layout is not common in row frames; neither is a drop-down stairway to a cockloft with tongue-and-groove flooring, with the cockloft used for storage. Members expect to find an open, empty cockloft, not one with a heavy fire load.

- **Roof pitch**--Most flat-roof buildings and the vast majority of row frame construction are built with the roof pitching to the rear of the building for drainage. These structures had roof construction that was pitched rear to front. This created an unusually high cockloft at the rear, which allowed fire to extend quickly toward the rear of the involved structures.
- **Brick nogging**--When these structures were built, it appeared that substantial brick nogging had been installed in every bay and void between each adjoining structure, up to the underside of the roof. Over the years, this nogging deteriorated; in some cases, to a point where no nogging existed in certain bays, allowing extension of fire not only in the cockloft, but in the basement as well. Incident Commanders always should be concerned about the integrity of brick nogging.
- **Roof access**--Wires, trees and other street obstructions prevented first-alarm ladder companies from using either an aerial or tower ladder to access the roof. Initial access was via portable ladders. Ladder companies arriving on multiple alarms were able to maneuver their apparatus at either end of the row of nine buildings and position aerials to the roof. While these aerials were remote from the fire building, with the number of people operating on the roof, they provided a safety factor as a positive means of egress had it become necessary to evacuate the roof.
- **Lines compatible with fire conditions**--Due to the heavy volume of fire on the exterior on arrival, the first-to-arrive engine Officer opted to stretch a 2¹/₂-inch hose-line as the initial line. This provided excellent exterior knockdown and prevented further exterior extension to other exposures. However, once this line advanced into the interior, its mobility was slowed and it was necessary to commit a third engine company to assist in feeding the line. Most of the other lines used were 1³/₄-inch for mobility. If it is necessary to stretch a 2¹/₂-inch line, sufficient personnel must be assigned to keep it mobile.
- **Satellite manifold**--Assignment of Satellite 5 on the All-Hands allowed for early stretching of a five-inch supply line to and positioning of their manifold in front of the fire building before multiple-alarm units blocked the street. This facilitated shorter, faster stretches of additional hand-lines and getting those lines into operation more quickly than if they had been stretched from

further distances. It also reduced street clutter by having fewer hose-lines stretched in the street for long distances.

- **Division and Battalion Firefighters**--The importance of a trained, experienced, regular aide cannot be overemphasized. At this fire, both FFs Tim McCauley, Division 8, and Robb Cobb, Battalion 22, provided intelligence and reconnaissance, monitored both Department and handie-talkie radio networks and assisted in accountability of units. This was especially important in the early stages when the fire was extending rapidly, prior to the arrival of additional Chief Officers.
- **Command channel/handie-talkie operations**--At a major operation, a good sign that one is not on the correct channel is the lack of radio transmissions being received. Additionally, if transmitting and not being acknowledged, it may indicate a problem with your radio. Try using the radio of another member to transmit your message.
- **Exposure designation**--There were two issues at this fire with exposure designation. There should be no doubt regarding which building is the fire building. Multiple-alarm units arriving after the initial fire has been knocked down need to be on the same page as the first-alarm units. There may be more fire in an exposure when multiple-alarm units reach the scene. When units report in to the Command Post or Incident Commander, if there is any doubt which building is the original fire building, ask prior to going into operation. If you start operating under the impression that one of the exposures is the original fire building, every report you provide will be incorrect and confuse operations. The other issue with exposure designation was terminology. Buildings to the left of the fire building are designated as exposures #2, #2A, #2B, etc., while buildings to the right of the fire building are designated exposures #4, #4A, #4B, etc. For exposure designation purposes, each building within a row of frame structures is considered a separate structure, sharing a common cockloft. The terminology 02 or 04 is used only to designate subdivisions within a single structure, such as individual stores within a single taxpayer structure; not at a row frame.
- **Control**--An Incident Commander develops his/her strategy based on a variety of factors that include building construction, SOPs, fire location and spread, etc. Units are to conform to orders given or they will negatively impact this strategy. Units are expected to follow orders or request permission to deviate via handie-talkie. At this operation, an engine company was given the assignment of stretching a precautionary line to the rear to prevent exterior extension. They were told not to operate into the fire building because an aggressive interior attack was being conducted. Despite the fact that fire was venting from several windows in the rear and that they *had a good shot* at the fire, this unit maintained discipline and did not operate the exterior line into the building. Had they operated into the building from the rear, they probably would have spread the fire and quite possibly caused burn injuries to operating members.

About the Author...

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