

# COLD STORAGE WAREHOUSE FIRE: LEARNING FROM WORCESTER

BY TIMOTHY J. KEARNEY

**O**N FRIDAY, MARCH 22, AT 1154 HOURS, THE JERSEY City (NJ) Fire Department was dispatched for a fire reported at 580 Henderson Street. The building, a cold storage warehouse, was part of an industrial complex that had stood vacant for many years. The building was well known to the Jersey City Fire Department, as it was basically the sister building of that which claimed the lives of six firefighters in Worcester, Massachusetts, in December 1999.

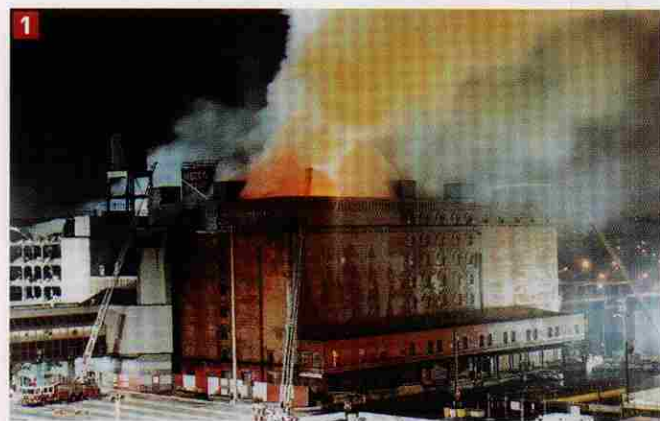
## THE BUILDING

The building was constructed in two phases. The original section of the building, which was mill construction, was eight stories in height. The second phase of the building (added at a later time), which was of fire-resistive construction, was seven stories in height. The piping was ripped out of the building, rendering any fire protection systems present useless. The only major difference between this building and other warehouse buildings was that there were no window openings throughout the structures with the exception of two smaller windows located in between the floor levels in the stairwells.

The outer perimeter walls were built out approximately one foot from the floors; steel tie rods connected the wall to the floors approximately every 10 feet on all floor levels. This one-foot shaftway (which is basically what it was; you could stand on the first-floor level and look up and see the bottom of the roof on the seventh floor) was filled with five inches of cork material, which was attached to the interior side of the exterior walls by a composite asphalt adhesive material. Over the cork there was an additional five to six inches of polystyrene insulation covered by a thin coating of a plaster-type finish added to provide a hard surface to the wall. The cork/polystyrene composite materials served to insulate the entire structure, which in essence made the structure a large refrigerator.

The lower floors provided access to more than one stairwell; however, on the upper floors this was not possible because of compartmentation. On floor two there was a large unprotected opening in the floor (15 feet by 15 feet) that was used to move stock from floor to floor. There were six elevator shafts throughout the structure, most with missing doors, resulting in open shafts.

The building was once owned and operated by the Union Terminal Cold Storage Company, which handled the shipping and receiving of



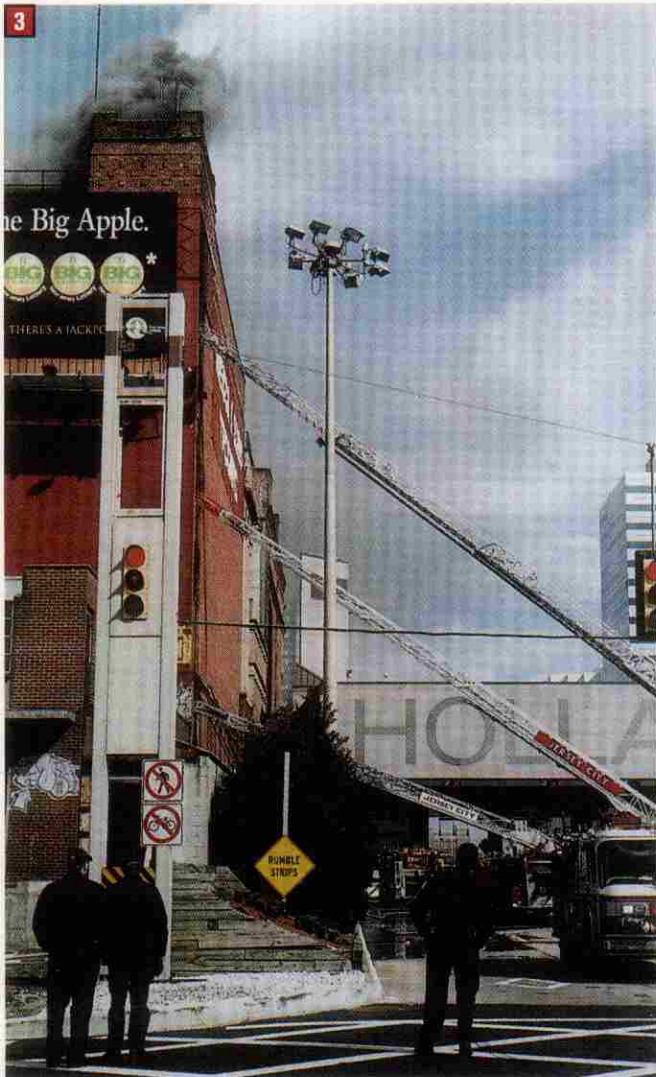
(1, 2) Apparatus use the entrance to the Holland Tunnel, which connects New Jersey to New York City, to put master streams in operation. Units operated at this location for 13 days, keeping the tunnel closed to all traffic for one week. (Photos by Mike McNamara.)



frozen food products. The property was later bought by the Mecca Trucking Company, and although the grounds were used for the storage of tractor trailers, the structure itself lay vacant for years. The structure, which occupied an entire city block, was approximately 300 feet by 500 feet and was actually four sections interconnected by five stairwells.

The building abutted the entrance to the Holland Tunnel, which is owned and operated by the Port Authority of New York and New Jersey (PA). The Holland Tunnel is a major commuter artery between Jersey City and New York City for thousands of vehicles. Traffic was

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(3) Responders removed two civilians by aerial ladder.

shut down at the onset of fire operations. PA employees (toll collectors) were evacuated to the PA Administration building a block away.

The Jersey City Fire Department had the usual problems that all urban departments have in such buildings: numerous small fires; the homeless seeking shelter in the building; and plumbing, sprinkler, and waste piping ripped out of the building and sold for scrap.

### THE FIRE

Units that responded to this alarm were not the normally assigned units from the area because of a second-alarm fire in a 36-story commercial high-rise at 525 Washington Boulevard. Reports from the first-arriving engine and ladder companies at the Washington Boulevard fire stated that there was light smoke on floors 16 through 19. The policy of the Jersey City Fire Department is to upgrade all responses to high-rise buildings to second-alarm status on confirmation of a working fire. Units responding from the Heights section of the city were reporting smoke in the area.

It was soon realized that the smoke visible from the outside was, in fact, from the Mecca Trucking building approximately three blocks from the Washington Boulevard address. At this point, the first-due ladder reported that there was an overheated electrical motor in a mechanical room on floor 16, which was the cause of the

smoke condition. All responding second-alarm units were diverted from the Washington Boulevard address to respond to the fire in the Mecca Trucking building.

Third Battalion Chief John Austin arrived on the scene at 1204 hours and reported heavy fire conditions. One male victim was visible, hanging out a stairwell window on the third floor. Austin transmitted a second alarm and directed incoming units to the location of the male victim.

Firefighters using an aerial ladder removed the victim through the window, along with a second victim who was overcome and lying on the stairwell floor below the window. The window was approximately 24 inches wide by 48 inches high. It consisted of two units set in steel frames mullioned together. The victims were pulled through a 24- by 24-inch opening, the size of one sash. Firefighters could not break through the steel frame with the hand tools they had with them at the time.

Battalion Chief Pete Gasiorowski arrived on the scene moments later and was assigned as the interior division. As the on-duty deputy chief was engaged at the fire on Washington Boulevard, Chief of Department Frederick "Rick" Eggers responded from Fire Headquarters. After arriving on the scene and receiving a report on activities from Austin, Eggers assumed command. Austin was reassigned to the interior of the building to supervise activities on floors one through three. Gasiorowski was assigned floors four through seven. The overall strategy was to rescue all visible people who were trapped, start a search for others who may be trapped in the building, then confine the fire to the building of origin through defensive operations. Reports from police were that as many as 50 homeless people could be occupying the building.

**THE IC REALIZED THE RISK VS. GAIN WAS NOT ENOUGH TO JEOPARDIZE THE LIVES OF FIREFIGHTERS FOR A BUILDING THAT HAD STOOD VACANT FOR NUMEROUS YEARS.**

Initially approximately 50 firefighters operated in the interior of the building, putting out the smaller fires on the lower floors with 1½-inch handlines. Firefighters were making progress on the lower floors. The fire burrowed into the cork on one of the lower levels, traveled up the inside of the exterior walls, and took possession of most of the sixth and seventh floors; large spot fires were located on all floors below floor six, including the basement. Crews stretched a 1½-inch handline with a 2½-inch backup line to the sixth floor and two 2½-inch handlines to the seventh floor.

The spot fires on the lower floors were caused by the cork composite material's burning and sliding down the wall until it landed in a large pile on the floor, resembling a moderately sized rubbish fire. It is interesting to note that the fire would burn at the area where the cork was glued to the wall and travel upward until the weight of the burning cork would pull it from the wall and it would fall in large sections, causing the piles of burning cork. As the sections of cork fell to the floor, they sounded like a series of minor explosions. There was no visibility on the upper floors because of the heavy fire conditions and the lack of a means to ventilate the structure.

At 1211 hours, I arrived on the scene, after picking up from the

## Cold Storage Warehouse Fire: Learning from Worcester



(4) Smoke is showing from stairwells at each corner of the building. Note the leaning water tower on top of the building. (5) Large cracks in the west wall show the heavy fire inside and helped lead to the IC's decision to withdraw personnel from the building.

Washington Boulevard fire, and was assigned as the incident operations officer. Because there were no window openings in the building and windows in the stairwells were located between floor levels, it became very difficult to monitor which units were working on which floors. Also, the radio transmissions from operating units proved that units weren't exactly sure which floors they were on because of lack of floor markings in the building.

After assessing the operation, the incident commander (IC) decided to pull all firefighters out of the building and have an accountability roll call as per department SOPs. After all personnel were accounted for, units were reassigned to a specific floor under the command of a battalion chief. Also, during this period, the building's integrity was assessed.

Fires on the lower floors were extinguished but were quickly reignited by large pieces of flaming cork sliding down the inside face of the exterior wall. The fire conditions on floor seven quickly became extremely difficult from the lack of vertical ventilation, and the ceiling was lined with approximately eight inches of the cork material, which was heavily involved in fire. The fire was so intense on the seventh floor that, at one point, two 2½-inch handlines that were placed in the entryway at the stairwell proved to be inadequate for firefighters to get a foothold at this location.

Primary searches were conducted at all locations accessible to firefighters (search areas were large, open spaces typical of warehouses; dangers such as unprotected openings in floors, open elevator shafts, and lack of means to ventilate the building rendered some locations inaccessible). Thermal imaging cameras were used to scan the open floor areas for victims and to monitor crews as they searched and fought the fire. After the searches were concluded, the IC decided to withdraw all units from the building permanently. Also, the scene safety officer reported to the IC that the building was starting to develop a large crack down the west wall.

There were a few tense moments during the building evacuation. The officer of Ladder 12 radioed that his unit was trapped on the roof because of fire extending into the stairwell used to access the roof. Because of heavy smoke conditions on the roof, they found it difficult to traverse the roof to locate another exit. At this point the F.A.S.T. (Firefighter Assist Search Team) was activated and sent to the area at which Ladder 12 was operating. After a short time, the officer of Ladder 12 radioed back to command that he and his crew



of three firefighters had found a safe stairwell and were in the process of exiting the building. The F.A.S.T. unit acknowledged this report, and all units were accounted for.

The withdrawal of units from the building created a logistical nightmare for the daily commuters from New Jersey into New York City for one week. The Holland Tunnel remained closed to traffic from the initial response at 1200 hours on March 22 until a partial reopening on March 28. The issue of interstate travel brought many agencies into play over the closing of the Holland Tunnel.

The fire department set up a fire watch consisting of an engine and a ladder, and units stood by at the scene using master streams to keep the main body of fire confined to the Mecca Trucking complex. The fire eventually extended throughout the structure, and the remaining portions of the building were razed by a demolition company. One engine company remained during the demolition.

### MAJOR LESSON LEARNED

After the tragic fire in Worcester, Massachusetts, in a similar building, the incident commander realized that the risk vs. gain was not enough to jeopardize the lives of firefighters for a building that had stood vacant for numerous years. Once an assessment was made that all savable people had been removed from the building, it became apparent that the only way to protect firefighters on the scene was to withdraw them from the building and set up a watch line to confine the fire to the building. In situations like these, we often save a vacant structure, only to come back over and over again to put out many more fires. The firefighters in Worcester did not die in vain; we in Jersey City learned a valuable lesson from them for fighting the Mecca Building fire. ■

