U.S. Fire Administration/Technical Report Series

Eight Fatality Row House Fire

Lessons Learned from Residential Fires with Five or More Fatalities

Chester, Pennsylvania

USFA-TR-067/December 1992

FEMA

U.S. Fire Administration Fire Investigations Program

The U.S. Fire Administration develops reports on selected major fires throughout the country. The fires usually involve multiple deaths or a large loss of property. But the primary criterion for deciding to do a report is whether it will result in significant "lessons learned." In some cases these lessons bring to light new knowledge about fire--the effect of building construction or contents, human behavior in fire, etc. In other cases, the lessons are not new but are serious enough to highlight once again, with yet another fire tragedy report. In some cases, special reports are developed to discuss events, drills, or new technologies which are of interest to the fire service.

The reports are sent to fire magazines and are distributed at National and Regional fire meetings. The International Association of Fire Chiefs assists the USFA in disseminating the findings throughout the fire service. On a continuing basis the reports are available on request from the USFA; announcements of their availability are published widely in fire journals and newsletters.

This body of work provides detailed information on the nature of the fire problem for policymakers who must decide on allocations of resources between fire and other pressing problems, and within the fire service to improve codes and code enforcement, training, public fire education, building technology, and other related areas.

The Fire Administration, which has no regulatory authority, sends an experienced fire investigator into a community after a major incident only after having conferred with the local fire authorities to insure that the assistance and presence of the USFA would be supportive and would in no way interfere with any review of the incident they are themselves conducting. The intent is not to arrive during the event or even immediately after, but rather after the dust settles, so that a complete and objective review of all the important aspects of the incident can be made. Local authorities review the USFA's report while it is in draft. The USFA investigator or team is available to local authorities should they wish to request technical assistance for their own investigation.

This report and its recommendations were developed by USFA staff and by TriData Corporation, Arlington, Virginia, its staff and consultants, who are under contract to assist the USFA in carrying out the Fire Reports Program.

The USFA greatly appreciates the cooperation received from the Chester Fire Department, particularly Chief Willie J. Hatcher, Captain James L. Johnson, and Captain Joseph Cliffe. Other people who provided valuable information for this report were Josephine Hood, Chief of Staff, City of Chester; Chief James B. Clark and Officer Stephen Fox, Chester Police Department; and Battalion Chief Theodore Holmes, District of Columbia Fire Department.

For additional copies of this report write to the U.S. Fire Administration, 16825 South Seton Avenue, Emmitsburg, Maryland 21727. The report is available on the USFA Web site at http://www.usfa.dhs.gov/

Eight-Fatality Row House Fire
Chester, Pennsylvania

Lessons Learned from Residential Fires
With Five or More Fatalities

Investigated by: Mark Chubb

This is Report 067 of the Major Fires Investigation Project conducted by TriData Corporation under contract EMW-90-C-3338 to the United States Fire Administration, Federal Emergency Management Agency.

FEMA

Department of Homeland Security
United States Fire Administration
National Fire Data Center

U.S. Fire Administration

Mission Statement

As an entity of the Department of Homeland Security, the mission of the USFA is to reduce life and economic losses due to fire and related emergencies, through leadership, advocacy, coordination, and support. We serve the Nation independently, in coordination with other Federal agencies, and in partnership with fire protection and emergency service communities. With a commitment to excellence, we provide public education, training, technology, and data initiatives.

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OVERVIEW

Multiple fatality residential fires, especially those which claim the lives of children, have a devastating effect on family members and friends left behind. The tremendous impacts of these fires on a community are powerful stimuli for improving fire safety and reinforcing many of the hard-learned lessons of the past.

During 1992, the United States Fire Administration (USFA) investigated reports of nine residential fires, each of which claimed the lives of five or more individuals. (See Appendix A for briefs on these fires.) All of these fires involved children; some claimed entire families.

The most devastating of these fires occurred December 5, 1992, in Chester, Pennsylvania, when an early morning fire swept through a row house killing eight children, all siblings, ranging in age from 15 months to 11 years. Three adults and two other children, ages 2 and 12, escaped unharmed. The fire was the worst loss of life from a single residential fire in the city's history, which dates to the early 17th century.

SUMMARY OF KEY ISSUES IN THE CHESTER FIRE

Origin and Cause	Fire started in first floor bedroom at rear of house; ruled accidental.
Casualties	Eight children dead; three adults and two children escaped unharmed.
Building	Two-story brick and frame duplex.
Smoke Detection	No detectors found; owner's and occupants' accounts conflict as to whether detectors were ever installed.
Interior Finish	Combustible interior finish throughout the first floor fueled fire growth and spread.
Fire Separation	Balloon-frame wall construction and voids created when the room of origin was added to the original building contributed to horizontal and vertical fire spread.
Risk Factors	Occurred during early morning while some occupants were still asleep; no smoke detectors; fire impeded stairway as smoke and heated gases spread; fire occurred in dwelling unit occupied by 13 people, 10 of them children under 12 years of age and under.

Like many similar fires, the victims in the Chester fire were members of a single-parent headed household, had a family income below the Federal poverty line, lived in a rented home more than 40 years old, and had no smoke detectors. These risk factors were compounded by many of the social problems endemic to the community in which they lived.

Although such a tragedy strikes everyone as extraordinary, Chester fire officials, like those in many other communities, stress that such tragedies differ only in the number of dead, not the factors which led to them or the approaches which must be undertaken to prevent them.

The impediments to Chester fire officials' and community leaders' efforts to prevent tragic fires are typical of those which challenge many other local officials, civic leaders, and concerned citizens. Although public and private efforts to prevent tragic fires began in Chester long before this fire – and continue with renewed vigor as a result of this loss – public apathy, limited resources, and competing priorities continue to frustrate such initiatives. Notwithstanding these disappointments, Chester has implemented and plans to continue progressive programs to prevent a recurrence of this tragedy, including establishing public-private fire safety partnerships, promoting installation and maintenance of smoke detectors, adopting landlord-tenant regulatory reforms, and extending residential sprinkler requirements.

In contrast to the Chester fire, a December 31, 1992, fire in a Washington, DC, row house reinforced the value of public fire education programs in preventing these tragedies. In the DC fire, a nine-year-old girl, following fire safety instructions she learned at school, woke and led the evacuation of twelve other occupants out of her burning home.

THE CHESTER FIRE

At 7:33 a.m., Saturday, December 5, The Chester Fire Department responded to a 9-1-1 call reporting a fire at 524 W. Fifth Street. When firefighters arrived on the scene two minutes later they found heavy smoke conditions and fire venting from windows on the side and rear of the west half of a brick and frame duplex. (See floor plans in Appendix B.) Three adults and two children had already escaped from the dwelling and were waiting outside when firefighters arrived. Two of the adults, Gloria Freeman and her friend, Louis Fryson, had escaped with two of her children out the second floor front windows onto the porch roof. The other adult, John Freeman, the woman's brother, had escaped by exiting through the front door.

Firefighters entered the house through the front door and attempted to reach the second floor to rescue the eight children who remained inside. The firefighters were driven back by intense flames spreading up the stairway from the kitchen and dining room, which were already fully involved.

Second and third alarms were requested at 7:40 a.m. and 7:43 a.m., respectively, summoning an additional three engines and one truck company to the scene. In all, six engines and two truck companies staffed by 50 personnel were used at the scene to control the fire, perform overhaul, and remove the victims.

Investigation revealed that the fire started in the first floor bedroom at the rear of the dwelling, behind the kitchen. This room was used as Mr. Freeman's bedroom. The cause of the fire remains undetermined; however, investigators are focusing on misuse of smoking materials.

According to Ms. Freeman, the boys' bedroom was in the rear of the house on the second floor and the girls' bedroom in the middle. All of the children were believed to have been asleep when the fire started. In a statement to investigators immediately after the fire, Ms. Freeman said that even before Mr. Freeman shouted up the stairs to tell them there was a fire, the children said that smoke was coming through the floor in their bedroom. She indicated in a subsequent interview, conducted with her attorney present, that she first became aware that the house might be on fire when her brother called out that his bedroom on the first floor was on fire. Whichever account is more accurate, she took no action until after her brother shouted up the stairs that the building was on fire.

Ms. Freeman's later statements to investigators indicated that she attempted to dial 9-1-1 to report the fire but was unable to, so Mr. Fryson called to report the fire. His call was the first of several received reporting the fire.

After dialing 9-1-1, Ms. Freeman and Mr. Fryson went from their bedroom at the front of the house into the second floor corridor where they encountered some of the children. Ms. Freeman grabbed the two closest children, boys ages 12 and 2, and retreated to her bedroom with Mr. Fryson due to the heavy smoke conditions. There they broke out the front windows and escaped onto the front porch roof. A passerby encouraged the adults to drop the kids to him and then jump to ground level and safety.

Mr. Freeman told investigators he awoke to find his bed in the first floor bedroom afire. Before notifying other occupants, Mr. Freeman indicated that he made several attempts to put the fire out, using a bucket filled with water from the kitchen located adjacent to his room. When it became apparent that his efforts were proving fruitless, he reportedly ran to the front of the house and alerted his sister.

When firefighters arrived, the rear bedroom, kitchen, and dining room had reached flashover, and fire was extending up the stairs to the second floor and through a balloon-frame wall at the rear of the structure. The fire took more than 45 minutes to control. Firefighters discovered the children's bodies in the second floor center bedroom while controlling the fire. This room was not seriously damaged by the fire and none of the children were burned. All of the children were found huddled together on the floor at the front end of the room away from the partially open door to the hallway and stair. Another door to the hallway, toward the front of the house, was closed.

Investigators checked the premises carefully but found no evidence that smoke detectors were installed in the building at the time of the fire. Although a bracket for a smoke detector was found on the ceiling, no smoke detectors were found in the fire debris. Ms. Freeman indicated that one detector had been installed in the building when she moved in five years earlier, but it had become inoperable and had been removed. Mr. Fryson confirmed that the smoke detector had become infested with insects and had been disposed of without replacement.

OTHER SIMILAR FIRES

During 1992, USFA prepared information briefs on eight other multiple fatality residential fires which claimed five or more lives. (See Appendix A for briefs on these fires.) These nine fires claimed 53 lives, 34 of them children under the age of 14. According to the National Fire Protection Association (NFPA) 27 such fires (for which they use the term "catastrophic fires" at present) occurred in 1991 and claimed 160 lives.[1]

While the incidence of residential fires with five or more fatalities has declined slightly over the past five years, despite a peak in 1989, the number of deaths has tended to decline at a somewhat greater rate. (See Table 1 and Figure 1 below which are based on the number of catastrophic fires and deaths NFPA identified and reported for 1987 through 1991.)

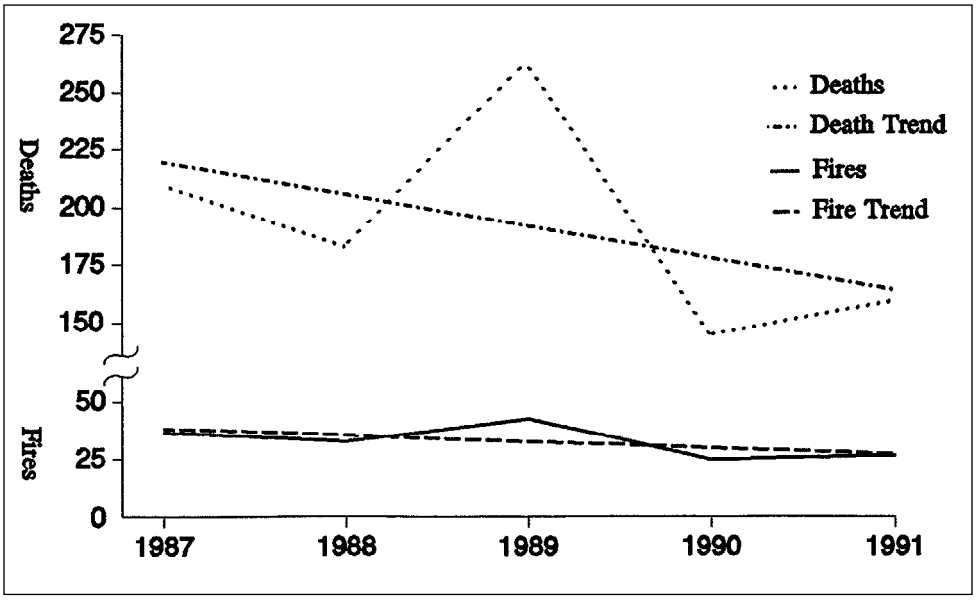
Table 1. Catastrophic Residential Fires, 1987–1991

Year	Number of Fires	No. of Fatalities
1987	37	210
1988	33	183
1989	43	263
1990	25	145
1991	27	160

Source: National Fire Protection Association

[1] A. L. Miller and K. J. Tremblay, "The Catastrophic Fires of 1991," *NFPA Journal*, July/August 1992, p. 62, prior to 1987, these fires were analyzed together with those which claimed three or more lives.

Figure 1. Trends in Catastrophic Residential Fire Incidents and Deaths, 1987-91



Source: National Fire Protection Association

These trends mirror the trends in residential fires as a whole, which are also generally downward over the same period. The significance of the fires which claim five or more lives is the considerable attention they draw because of the magnitude of the life loss in each fire. Nonetheless, they continue to represent a relatively small fraction of all U.S. fire deaths, averaging 4.4 percent of residential fire deaths and over the period 1987 through 1991.

RISK FACTORS

The Chester fire and the other residential fires with five or more fatalities that were identified by the USFA in 1992 share many common features.

Time of day--All of the fires except two occurred between 10:00 p.m. and 6:00 a.m., when all or most occupants could be expected to be asleep and smoke detectors could be most effective. The Baltimore row house fire occurred shortly after 8:00 a.m., and it is believed the children were asleep at the time of the fire. Likewise, the Chester fire occurred shortly after 7:30 a.m., and the children were asleep.

Smoke detectors--Smoke detectors were only found in the apartment building in Carbondale, Illinois. No evidence was found in any of the other fires that smoke detectors were installed when the fires occurred.

Impeded means of egress--The delay in discovering most of these fires due to lack of early-warning smoke detectors prevented many occupants from using the available means of egress before the fire produced untenable conditions. In all of the buildings of two or more stories, an open or unprotected stairway contributed to vertical fire spread and prevented some or most of the occupants from escaping. In the Ferndale, Michigan, fire, the location of the Christmas tree in the living room adjacent to the front door appeared to prevent escape. In the Detroit, Michigan, fire, security bars or

"ghetto grilles," as they are called there, prevented occupants from escaping using alternate means such as windows.

Age of victims--Of the 53 victims of the fires described in this report, 34 (64 percent) were children under 14 years of age. Children are always at greater risk in fires because of their lack of experience and their physical inability to cope with the hazards of fire exposure.

Number of occupants--More than six people lived in six of the nine residences. In each case other than the apartment building in Carbondale, Illinois, five or more people lived in a single dwelling unit. The number of people killed in these fires is important because it suggests that the only significant difference between the number of fatalities in these fires and other similar fatal fires is the number of people exposed to the incident. More people *were killed* because there were more people to *kill*.

Number of dwelling units involved--In each case, except the apartment building, all of the victims died in the same dwelling unit. This is significant because it suggests that the size of the fire is less important than the number of people exposed within the dwelling unit of origin. Overcrowding of dwelling units is common in low-income urban areas. All of these fires, except the apartment building, occurred in central cities or low-income suburbs. Fire officials in most communities characterized the residents of the buildings involved as lower income or working class.

The fire's cause appears to have been less significant than other factors in determining the outcome of these incidents. A wide cross-section of possible causes was implicated in these fires, including arson, careless use of smoking materials, misuse of auxiliary heating appliances, improper disposal of fireplace ashes, and electrical malfunctions.

A SUCCESS STORY

On December 31, 1992, tragedy was narrowly averted in an early morning fire in a Washington, DC, row house when a nine-year-old girl awoke in time to warn the twelve other occupants, all members of the girl's extended family. When interviewed after the fire, the young girl remarked that the fire safety lessons she learned at home and at school had taught her how to respond to this fire.

The girl awoke shortly after 4:00 a.m., to the odor of smoke. She quickly woke up the other members of the family, crawled out the front door to safety, and ran to a neighbor's house to call for help. When firefighters arrived, they found heavy smoke showing from the three-story wood-frame row house, but all of the occupants had evacuated. Despite the prompt response, the home was a total loss.

Although the fire originated on the third floor from a curling iron left on a bed and did not directly affect the means of egress for most of the occupants, many of the other risk factors present in other multiple fatality residential fires were present in this case. The time of day, absence of a working smoke detector (one was found in the dwelling unit but the battery was missing), and number of people in the dwelling unit all could have contributed to another catastrophe. However, the outcome of this fire was much different because of a prompt and effective response by the occupants, in particular the nine-year-old girl who had received fire safety instruction through the District of Columbia Fire Department's Junior Fire Marshal Program for third and fourth grade students.

PUBLIC FIRE EDUCATION

Residential fires are responsible for the overwhelming majority of fire deaths, ranging between 78 and 87 percent over the past five years. Although residential fires where five or more fatalities occur

represent only a small portion of overall fire deaths, usually around 4 percent, these fires closely resemble fires which claim fewer lives per incident but the vast majority overall. Moreover, they reinforce the value of public fire education messages, such as installing residential smoke detectors and fire sprinkler systems, and holding home fire exit drills.

Smoke detectors--The number of households with smoke detectors now is estimated at over 82 percent.[2] However, the number of households with properly installed and maintained smoke detectors is unknown. What is known is that of the households experiencing these reported fires, smoke detectors were not present in 44 percent of these fires and for 55 percent of fire fatalities.[3] Of the nine fires where five or more fatalities occurred described in this report, only one had working smoke detectors.

In Chester, city ordinances enacted prior to the fire required that all dwelling units in multi-family residences to be protected by smoke detectors installed by the owner. In 1987, the City of Chester distributed or installed approximately 15,000 smoke detectors to ensure that every single-family home, regardless of income or ownership, had at least one properly installed and working detector. Since 1987, limited resources drastically curtailed the smoke detector program.

In the aftermath of the December 5 fire, the Chester branch of the National Association for the Advancement of Colored People (NAACP) established a memorial fund to receive contributions in the names of the eight children who perished that morning. The fire department also established a fund to receive contributions to reinvigorate its smoke detector program. To kick the program off, a press conference was held on December 15, 1992. In attendance were U.S. Representative Curt Weldon (R-King of Prussia) and USFA Assistant Administrator James Coyle, who participated in a joint news conference with the Chester Fire Chief to launch the "Save the Children" campaign and to announce the formation of a community fire prevention task force. The program kick-off included the donation of 500 smoke detectors by the First-Alert Corporation.

These detectors will be distributed to needy families in the community and installed by Chester firefighters. According to the fire chief, the department intends to track where these detectors are installed and how they are maintained. They also intend to conduct follow-up visits in six months to check the detectors' operation and replace batteries if needed.

The District of Columbia Fire Department has an on-going smoke detector program to supply residents with free smoke detectors or batteries. After their December 31 row house fire, Fire Chief Raymond Alfred gave the nine-year-old girl who rescued her family two new smoke detectors and fresh batteries for her home and an additional supply of detectors for her friends and neighbors.

Residential fire sprinklers--In an innovative move, Chester enacted residential sprinkler legislation in 1985, requiring all new buildings of two or more stories and all new one- and two-family dwellings to be protected by automatic fire sprinkler systems. In 1989, the requirements for one- and two-family dwellings were repealed by the mayor, but not the requirements for buildings of two or more stories. At the time of the Chester fire, the fire marshal was in the process of drafting new legislation to update the fire prevention code, restore the one- and two-family residential sprinkler system requirement, and extend it to substantially renovated or rehabilitated dwellings.

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[2] Fire in the United States, 7th ed., United States Fire Administration, 1990, p. 78

[3] Fire in the United States, p. 79-80. Figures expressed are an average based on fires reported through NFIRS, 1983-87.

Home exit drills--An integral part of public fire safety education in Chester and the District of Columbia is an emphasis on escape planning and practice. Program participants are taught how to develop a home escape plan, what to do when they detect a fire in their homes, how to report a fire, and what to expect from the fire department.

Other fire prevention activities--Chester's public fire education efforts center around Fire Prevention Week in October, with school visits conducted by Chester firefighters. The fire department also provides Cardiopulmonary Resuscitation (CPR) instruction and fire safety awareness programs to civic groups upon request. In a new effort, the fire chief and some of his officers have "adopted" public schools and initiated contacts aimed at building mentoring relationships with at-risk grade-school-age children. By fostering fire safety education in the schools and providing positive role-models for kids who might be exposed to home situations conducive to increased fire risk, the chief hopes to lay the foundation for a larger effort by all members of his department. He expects this to yield positive long-term benefits by reinforcing firefighters' contributions to the community in the minds of citizens and elected officials. The fire department also anticipates that the program will increase members' sensitivity to issues of diversity in the community, as well as help them recognize and appreciate the promise and potential of the community's young people.

In the meantime, Chester is searching for ways to employ its engineering and enforcement resources more effectively to combat the problems of decay and neglect in its rental housing stock. Currently, the city employs six people in its building code enforcement program; four of these are inspectors. However, the city has approximately 6,300 dwelling units to inspect. Code changes are being considered which will require non-resident landlords to register with the city and provide annual access to dwelling units they own for maintenance inspections. Fees generated from rental unit registration will be used to subsidize a more vigorous enforcement program, perhaps employing firefighters to perform some of the inspections.

The District of Columbia Fire Departments' public education programs focus on school-age children in the third and fourth grades. As part of this program, the fire department visits every public and private grade school in the city once a year. The school visits culminate in an annual essay and poster contest, with prizes awarded during Fire Prevention Week. Additional school visits are conducted by fire department cadets--12th graders interested in fire service careers--upon request. However, these cadets provide more than fire safety education. As part of their program, the District of Columbia Fire Department requires cadets to provide outreach and tutoring services to students in the public schools. Like the Chester program, these efforts are aimed at fostering long-term successes by reaching at-risk youngsters. But again, the anticipated benefits are mutual, also yielding a greater awareness of the community among prospective city firefighters.

ANALYSIS

As the fire in the District of Columbia illustrates, public fire education efforts can work. Likewise, the benefits of residential smoke detectors and fire sprinklers have been demonstrated in countless fires over the years. The challenge is in reaching the segments of the community at greatest risk. Often these groups are made up of the poorest and least educated of a community's citizens. Moreover, other risk factors, such as smoking and alcohol or drug addiction, may also have dominant effects.

The efforts of many fire departments have focused on school-age children. One of the principal reasons for this is that many departments find school programs a cost-effective way to deliver public fire education programs to a large number of people, and it is a tradition--an accepted approach.

But, there are other even more salient reasons for working through schools:

- Children are a captive audience;
- Children are at increased risk of fire death due to inexperience and physical inability to cope with the hazards of fire;
- Children are a cost-effective way of reaching the types of families at risk of having fires; and,
- Teaching children represents a significant investment in the future of the community.

Youngsters often serve as a conduit to the adult population. Even in cases where the fire safety message is not carried home and communicated directly to parents and elders, the benefits may be reaped in other ways, as illustrated by the actions of the nine-year-old girl in the District of Columbia. District of Columbia fire officials have invested in her experience by making her an ambassador and role model for others in the community and her neighborhood.

Likewise, Chester's focus on youngsters in its efforts to fund a renewed smoke detector program and initiate a fire prevention task force uses the image of "Kids as Our Future" as a strong motivator for action to stem the fire program. Community leaders hope this effort to build a constructive educational program from the ashes of a tragedy will motivate parents to protect their children, if not themselves.

Perhaps the most promising trends in both Chester and the District of Columbia are their youth initiatives aimed at making fire department members and cadets more active in the schools and the community at-large. Given the strong associations among education and low income households and fire risk, adopting the mission of mentoring and tutoring school-age youngsters may be one of the most effective ways to combating the fire problem. By serving as role models, firefighters and cadets can help instill in youngsters a sense of empowerment and self-worth which leads to success in school, at home, and in life. Hopefully, this process will foster even greater successes for the fire service: fewer fires and fewer fire deaths. It also motivates children to become firefighters and provides a healthy role model (firefighter) for children who desperately need positive adult role models.[44]

LESSONS LEARNED

1. **The study of residential fires with five or more fatalities provides useful insight into the larger problem of residential fire deaths.**

   These high-multiple-fatality residential fires get considerable media attention but closely resemble the many other fires which take fewer lives per incident but represent the bulk of the United States fire death toll. The most significant variables influencing the outcomes of residential fires which claimed five or more lives were the absence of smoke detectors, time of fire occurrence, impeded means of egress, and the number of people present in the dwelling unit at the time of the fire. Fire cause is not highly correlated to outcome; a wide variety of fire causes were associated with these tragic fires.

[4]The International Association of Black Professional Fire Fighters promotes this type of program for just this reason.

2. The number of occupants in a dwelling unit strongly influences the number of deaths in a fatal residential fire.

Of the variables described above, the number of occupants has the strongest correlation to multiple fatalities. More people died in these fires simply because more people were exposed. When a fire is large enough to be lethal, it is more likely to be fatal when a large number of people are present. As the number of occupants in a given dwelling unit increases, so does the likelihood that the fire will involve multiple fatalities.

Interestingly, overcrowding of dwelling units alone cannot explain the number of fire deaths in these fires. Overcrowding is most often associated with low household income. In many other cultures it is quite common to have several generations living together. In Hong Kong for instance, a large number of occupants is generally credited with reducing the number of fire deaths by providing more noses to detect the smell of smoke from a hostile fire. The U.S. fire problem may differ from that of other countries in the degree of fragmentation present in households experiencing multiple-fatality fires. Nearly all of the nine fires discussed in this report involved lower or lower-middle income households in relatively poor neighborhoods or communities. Five of the nine households were headed by single mothers.

One of the other characteristics commonly associated with fragmented families which may help explain the heavy toll in these fires is alcohol or drug abuse. Although the use of alcohol was not routinely reported in these fires, it was mentioned in several cases. Other studies have shown drug use or abuse, including alcohol, to be more strongly associated with risk of dying in a fire than other variables.5

3. The types of structures involved and location of fire origin contributed to delayed detection despite the large number of people present to detect the fire.

Of the nine fires discussed in this report, all started remote from the area where most of the occupants were when the fire started. Although some multiple-family dwellings were involved, these fires generally involved highly compartmented structures with separate means of egress from each dwelling, like row houses. Without smoke detectors, occupants were forced to rely on their senses to detect the fires. Even when a large number of people were present to detect the fire, the location of fire origin and compartmentation of the structure probably delayed its detection significantly. By the time most occupants became aware that their homes were on fire, it was too late for many to escape. These findings underscore the need to promote installation and maintenance of smoke detectors.

4. Public fire safety education programs can reduce the risk of multiple-fatality residential fires.

The fire in Washington, DC, is just one of the latest cases that clearly illustrates the value of public fire education programs in minimizing the loss of life in a residential fire. Expanding these programs to reach the communities at greatest risk from fire often requires innovative approaches. To overcome the deeply embedded social ills which place segments of their communities at risk, Chester, Pennsylvania, and Washington, DC, are taking steps to redefine the way their departments and their members relate to their communities by making firefighters role models, as well as educators.

In addition to teaching school-age youth important fire safety messages, these firefighters are working to improve their self-esteem to prevent problems like truancy, dropping out of school,

teen pregnancy, and substance abuse which lead to the poverty that breeds many of the problems associated with fire risk. These approaches have shown promise in reinforcing a positive image of the fire service and sensitizing fire service members to the root causes of the fire problems in their communities.

5. Innovative and persistent approaches are required to get smoke detectors into the homes at greatest risk of multiple-fatality fires.

The fact that smoke detectors were not present in any of the fires discussed in this report, except in the incident in Carbondale, serves as a reminder that many of those at greatest risk still have not gotten the message that "Smoke detectors save lives!" Even the most effective smoke detector programs simply do not reach everyone.

Fire departments should be prepared to try innovative, even unconventional, approaches to get smoke detectors into every home in their communities and see that they are maintained. Smoke detector programs which simply offer free smoke detectors to homeowners may fall short by not ensuring that detectors are properly installed and maintained. The Chester Fire Department has taken the progressive step of installing the smoke detectors that it gives away. (There are many other examples of cities that do this, from Portland, Oregon to Baltimore, Maryland.) Furthermore, Chester plans to revisit all homes which receive smoke detectors six months after they are installed to see if they need new batteries--an excellent idea that is not often done elsewhere.

In Washington, DC, and many other communities, firefighters canvas the neighborhoods surrounding the sites of fatal fires immediately afterward to distribute free smoke detectors and public fire education literature. These are often the neighborhoods with the greatest fire risk. Prince George's County, Maryland, advertises its home fire inspection program and free smoke detectors through neighborhood businesses and civic groups after fatal fires. Other departments arrange with fire victims to offer tours of burned homes to encourage people to install smoke detectors and develop home fire escape plans. All of these programs take advantage of the attention paid to multiple-fatality residential fires to drive home important fire safety messages.

6. Fire safety education for youngsters should be tailored to their roles in the home.

School programs are an excellent way of reaching children and their families with important fire safety instruction, but they must meet the needs of the groups for which they are intended. Children today are much more sophisticated than most adults where when they were younger. And many children today are forced to assume more responsibility in the home than in days past, especially in households where both parents (or the single parent in the case of single-parent families) work away from the home. These concerns are amplified in single-parent households and blended or non-traditional families. Fire safety education programs should recognize and address the needs of children who act as caregivers by providing them with appropriate instruction to protect themselves and deal with emergencies in light of their expanded responsibilities.

The successful Washington, DC, fire demonstrates the value of the bare minimum message: evacuate, sound the alarm, and call the fire department. These are especially important lessons for youngsters who may serve as caregivers. Some public fire educators also believe that cooking safety, the importance of keeping matches and lighters out-of-reach of young children, and smoke detector maintenance and testing should be added to curricula for young caregivers

arguing that these day-to-day adult responsibilities have increasingly become the province of youngsters in at-risk households.

Other fire safety programs formerly reserved for older youngsters may have to be modified for use with younger audiences to meet the needs of changing family situations. Some public educators are discovering a need to redirect fire safety programs for babysitters--which were originally designed for adolescents--to younger age groups due to the changing roles of youngsters in the home.

Without appropriate instruction, children supervising children may be at increased risk in fire situations. Young people, like adults, are likely to take actions to protect or help others in emergencies. However, if early warning smoke detectors and proper fire safety training are not provided, these youngsters may not have adequate time, experience, or judgment to take effective action.

7. Fire investigations are a useful way of identifying public fire education needs.

Public fire educators should carefully identify the fire safety education needs of the households in their communities. One of the best ways of learning what is needed is by examining the key issues arising from the actual fires in the community. The fires discussed in this report, for instance, illustrate that one of the most important fire safety lessons is the value of installing home smoke detectors. Children are great persuaders and should be encouraged to advocate the installation of smoke detectors in their homes.

APPENDIX A

Briefs on 1992 Residential Fires with Five or More Fatalities Discussed in This Report

The following briefs are short narratives compiled soon after each of these fires came to the attention of USFA investigators. The information contained in them is based on wire service reports and interviews with local officials. Most of these briefs were written within 24-48 hours of the incident.

Eight Die in Row House Fire
Camden, New Jersey--February 3, 1992

A predawn fire in a brick row house in a working class Camden, New Jersey, neighborhood killed three adults and five children. Fire investigators ruled out incendiary causes and identified improper use of space heaters or careless smoking as possible causes of this tragic fire.

Fire officials report that two kerosene space heaters and several electric space heaters were found throughout the dwelling. One of the kerosene heaters was found in the room of origin. And at least one electric space heater was found in each room of the house. Investigators report that these auxiliary heating appliances appear to have been used as the primary heating source at the time of the fire. A fuel oil tank in the basement was found empty.

Camden firefighters responded to the scene at 3:46 a.m., and found heavy fire showing from the rear of the building upon their arrival. A second alarm summoned additional companies at 3:52 a.m. Additional personnel were sent to the scene at 4:58 a.m., to relieve the first and second alarm companies.

Firefighters reported that the fire spread rapidly from rear to front and from the first to second stories, trapping the victims. Stairways at the front and rear of the dwelling, one connecting the room of origin with the second floor sleeping area, contributed to the rapid fire spread. Fire damage was confined to the dwelling unit of origin; an adjacent unit separated by a brick party wall was undamaged.

Contacts:
Assistant Fire Marshal John Mills
Captain Marini, Public Information Officer
Camden Fire Department
(609) 757-7520

Appendix A (continued)

Six Children Die in Row House Arson
Baltimore, Maryland--July 7, 1992

An incendiary fire in a crowded East Baltimore row house resulted in the deaths of six children from smoke inhalation. A total of thirteen people were in the dwelling at the time of the fire. Baltimore firefighters received the alarm at 8:16 a.m., and Engine 24 arrived within minutes to find fire showing from the dwelling.

Nine members of one family lived on the first floor and second floors of the two-story brick row house. Four members of another family were living in the basement. At the time of the fire, six children were upstairs in the second floor bedrooms. Another child and two adults were also in the house, possibly on the second floor.

Firefighters entered the house, located and removed the six children who were trapped on the second floors. Two adults who lived on the first and second floor and one child had evacuated the building prior to the firefighters' arrival. The four basement occupants escaped through an interior stairway and rear exit.

The six children taken from the second floor and the two adults and one child from the first floor were taken to nearby Johns Hopkins University Medical Center, where four of the children were pronounced dead. A fifth child died later in the day. The sixth child, rescued from the second floor, was hospitalized in critical condition at Johns Hopkins University Medical Center but later died. The child who evacuated with the two adults was admitted to Baltimore's R. Adams Cowley Shock Trauma Center. Both of the adults were treated and released.

Investigators from Baltimore's Fire Investigation Bureau determined that the fire was intentionally set in the first floor living room at the front of the house. Fire and smoke quickly spread up the stairs connecting that room with a second floor bedroom, trapping the six children who were upstairs at the time. Fire damage throughout the dwelling was extensive, and efforts to determine if smoke detectors were present were inconclusive. Investigators received conflicting accounts from survivors regarding the presence of detectors. No detectors were found in debris at the scene, and damage in the area of the sleeping rooms and stairways was quite extensive. Fire and smoke damage was confined to the dwelling unit of origin. Brick party walls on either side kept the fire from spreading to adjacent dwellings in the densely built block. Damage to the building was estimated at $25,000 with $5,000 damage to the contents.

Autopsies on the victims were conducted at the Office of the Chief Medical Examiner in Baltimore. According to fire investigators, several of the children showed evidence of neglect and abuse; however, none were believed to have died prior to the fire. Police homicide and arson detectives arrested the children's mother after questioning the adults who were present at the time of the fire. She was charged with six counts of murder and arson.

Contacts:

Baltimore Fire Department
410 E. Lexington Street
Baltimore, Maryland 21202
(410) 396-5616 (410) 396-1985 (FAX)

Fire Chief Peter J. O'Connor
Captain Hector Torres, *Public Information Officer*
Captain Kenneth Morris, *Fire Investigation Bureau*

Appendix A (continued)

Philadelphia Row House Fire Claims Five Children October 2, 1992

An early morning fire in a Philadelphia row house claimed the lives of five children under the age of five. The children's mother and two siblings escaped unharmed, as did two other adults living with the family. One firefighter sustained minor injuries battling the early morning fire.

Philadelphia firefighters and investigators responded at 5:04 a.m., and knocked the fire down within ten minutes of their arrival. Fire damage was confined to the second floor front bedroom, hallway, and bathroom.

All five victims were found in the front bedroom on the second floor. Two of their siblings and their mother successfully escaped through the window and crawled across a common porch roof to an adjacent dwelling to reach safety. The two adults living with the family escaped through a window onto the back porch and were rescued by firefighters using ground ladders.

Investigators believe the fire originated in the bathroom on the second floor of the two-story frame dwelling. By the time occupants became aware of the fire, its location had cut off their means of escape. Fire investigators indicated there were no smoke detectors installed in the residence to provide early warning.

The cause of the fire remains under investigation. Philadelphia fire officials confirmed that the building had been without electric power for at least two days. A kerosene heater was found in the front bedroom, but it is unclear whether it was involved in the ignition scenario.

Contacts:
Captain Furlong
Lieutenant Matthew Medley
Philadelphia Fire Marshal's Office
(215) 592-5962

Security Devices Prevent Escape for Six Victims in Fatal Dwelling Fire Detroit, Michigan--October 3, 1992

A fire in a single family dwelling in a crime-plagued Detroit neighborhood has claimed the lives of all six occupants. Fire investigators report that the occupants, four adults and two children, were trapped by security bars and grates installed on the windows and doors to prevent entry.

Fire investigators believe the fire started around 10:00 p.m., when carelessly discarded smoking materials ignited a sofa in the dining room near the center of the house. The fire quickly spread to the second floor.

The occupants, representing four generations of one family, included a grandmother, her daughter, granddaughter, and two great-grandchildren. An unrelated adult male also lived in the house. Fire

Appendix A (continued)

investigators believe all of the adults were awake at the time the fire was discovered. The children were upstairs sleeping. Investigators reported that the dwelling was not equipped with smoke detectors.

One of the women reportedly was talking on the telephone with another relative when the fire was discovered. Fire investigators who interviewed the relative indicated that all of the adults were aware of the fire and had responded to it before dying. They also report that conditions at the scene indicate that the mother of the two children went to the second floor and retrieved them before succumbing to the fire herself.

Investigators believe alcohol intoxication may have played a role in the fire deaths and ordered blood alcohol tests on the adult victims.

Contact:
Fire Marshal Richard Milliner
Detroit Fire Department
(313) 596-2900

Five People Die in House Fire
South Jordan, Utah--November 8, 1992

An early morning house fire left two adults and three teenagers dead in South Jordan, a suburb fifteen miles southwest of Salt Lake City. Two of the victims were visiting from Norway. Two other occupants of the two-story wood-frame dwelling escaped unharmed.

All of the victims were related. The three teenage victims--two girls aged 14 and 15, and a 17-year-old male--were all siblings. Their grandmother and aunt, aged 50 and 80, respectively, also died. The teenagers' mother, age 47, and a 22-year-old male cousin were able to escape. The grandmother, aunt, and cousin were all visiting from Norway and had only been staying with the family for a few days when the fire occurred.

Firefighters received the call at 4:40 a.m. MST and arrived approximately eleven minutes later to find the home heavily involved in fire.

Fire Chief Gary Whatcott indicated that the fire started in the den, located in the finished basement (lower level) of the two-story home, in a cardboard box used to store fireplace ashes, and spread to the furniture in the room of origin. The location of the fire's point of origin cut off access to both the interior stairway and an exit to the outside at the rear of the home. Two of the victims were found on the lower level.

The other three victims were found on the first floor. Both survivors were asleep in first floor rooms when the fire occurred.

Smoke detectors were not found in the home, which was estimated to have been built within the last twelve years. Chief Whatcott believes all of the victims had been awakened by smoke or other

Appendix A (continued)

occupants before expiring. One of the teenage girls was believed to have been asleep in the room of fire origin and was found down the hallway in the bedroom of her 17-year-old brother.

The surviving 22-year-old cousin reported to fire investigators that he awoke to a smoke-free room when he heard the other teenage girl shouting that something was wrong. (Her body was found in the first floor hallway after the fire.) When he opened the hallway door, however, he found heavy heat and smoke conditions and quickly closed the door. He then dressed before escaping through the bedroom window.

The grandmother and aunt were found in a bathroom located adjacent to the bedroom in which they had been sleeping. The 22-year-old reported that he heard their cries for help and broke the bathroom window from the outside but was unable to rescue them.

The teenagers' mother was asleep in a bedroom at the far end of the first floor--in a room which had formerly been an attached garage--and escaped through the front door.

Chief Whatcott reported that the fire devastated the otherwise peaceful residential community of 16,000 residents. He indicated he hopes to use this tragedy to drive home the message "Smoke detectors save lives."

The South Jordan Fire Department has a volunteer force of 33 members. The chief is the only paid member. The department enforces the 1991 edition of the *Uniform Fire Code* and presents public fire safety education programs through the school system and open house events.

Contact:
Chief Gary Whatcott
South Jordan Fire Department
10400 S. 1600 West
South Jordan, UT 84065
(801) 254-0948
(801) 254-3742

Five-Fatality House Fire Linked to Holiday Decorations Ferndale, Michigan--December 4, 1992

An overnight house fire in the suburban Detroit community of Ferndale killed two adults and three children, ages 7, 5, and 2.

Ferndale Fire Chief Gary Lohmeier reported that the fire started in the vicinity of an artificial Christmas tree located in the living room of the single-story wood-frame dwelling. Preliminary indications were that the lights on the tree may have malfunctioned, sparking the blaze.

Firefighters received the first call from a neighbor who telephoned 9-1-1 shortly after 10:45 p.m., reporting a house fire with people trapped inside. Firefighters found the home fully involved, with fire showing from the front and side of the building.

Upon entering the building, firefighters found an adult and one of the children inside the front door. Another child was found in a hallway connecting the bedrooms, living room, and kitchen area. The third child was found in a utility room at the rear of the home. The adult female was found inside a bedroom in the northwest corner of the building.

Chief Lohmeier reported that all of the victims appeared to have been aware of or were responding to the fire when they died. No smoke detectors or automatic sprinklers were installed in the home.

Contact:

Chief Gary Lohmeier

Ferndale Fire Department

(313) 546-2510

Five Students Die in Apartment Fire

Carbondale, Illinois

December 6, 1992

An early morning fire in an off-campus apartment building claimed the lives of five Southern Illinois University students. One died at a Regional burn center from burns and trauma. Two other students were critically injured, with burns and trauma injuries. Most of the victims were foreign students from Malaysia, Hong Kong, Japan, Taiwan, and Bulgaria.

Carbondale Fire Chief Cliff Manis reported that the fire appeared to have been intentionally set in a third floor corridor.

The first alarm was received at Carbondale Fire Headquarters via a normal fire alarm at 1:27 a.m. CST. Carbondale firefighters responded with six personnel staffing two engines and one truck company. Upon their arrival, at 1:30 a.m., they found fire showing from second and third floor windows at the west end of the 46-unit, three-story unprotected wood-frame building and called for a General Alarm, which summoned all off-duty Carbondale firefighters to the scene. A total of 26 firefighters were used at the scene.

Several problems developed during the fire attack, including students on the third floor jumping from windows as the fire conditions worsened. Meanwhile, some first floor residents attempted to reenter their apartments while firefighters fought to control the blaze.

The building was equipped with an automatic fire alarm system with heat detectors in the stairways and corridors and manual fire alarm stations at the entrances to the stairways at each end of the floor. Each apartment was also equipped with a single-station smoke detector. The building was not sprinklered.

Combustible wainscoting in the corridors may have contributed to the rapid spread of the fire. The unusually severe fire conditions produced by the apparently accelerated fire and the inadequate fire-resistance of hollow-core wood doors separating the apartments from the corridors may have allowed fire and smoke to spread into individual apartments compounding the injuries and loss of life.

Contact:
Chief Cliff Manis
Carbondale Fire Department
609 E. College Avenue
P.O. Box 2047
Carbondale, Illinois 62902-2047
(618) 457-3221

Five-Fatality Apartment Fire
Auburn, Washington--December 17, 1992

An early morning fire in an end unit of a four-family apartment building left five people dead, including three boys, ages 3, 6, and 13. The mother of the three children was the only resident who escaped; the boys' father and a family friend perished.

The Auburn Fire Department received the alarm at 2:11 a.m., from a 9-1-1 call placed from a neighboring unit. (Press accounts that the surviving occupant attempted to dial 9-1-1 from the unit of origin could not be confirmed by Auburn fire officials.) Two engine companies, a basic life support ambulance unit, a mutual aid tanker, and a chief officer--a total of 13 personnel--were dispatched. Police officers arrived at the scene ahead of firefighters and reported a fully-involved apartment unit. The responding chief requested an additional alarm en route, summoning off-duty Auburn firefighters.

Arriving firefighters had difficulty controlling the blaze which involved both floors of the apartment in the wood-frame building. Although the fire completely gutted the unit of origin, the adjacent unit sustained only minor damage.

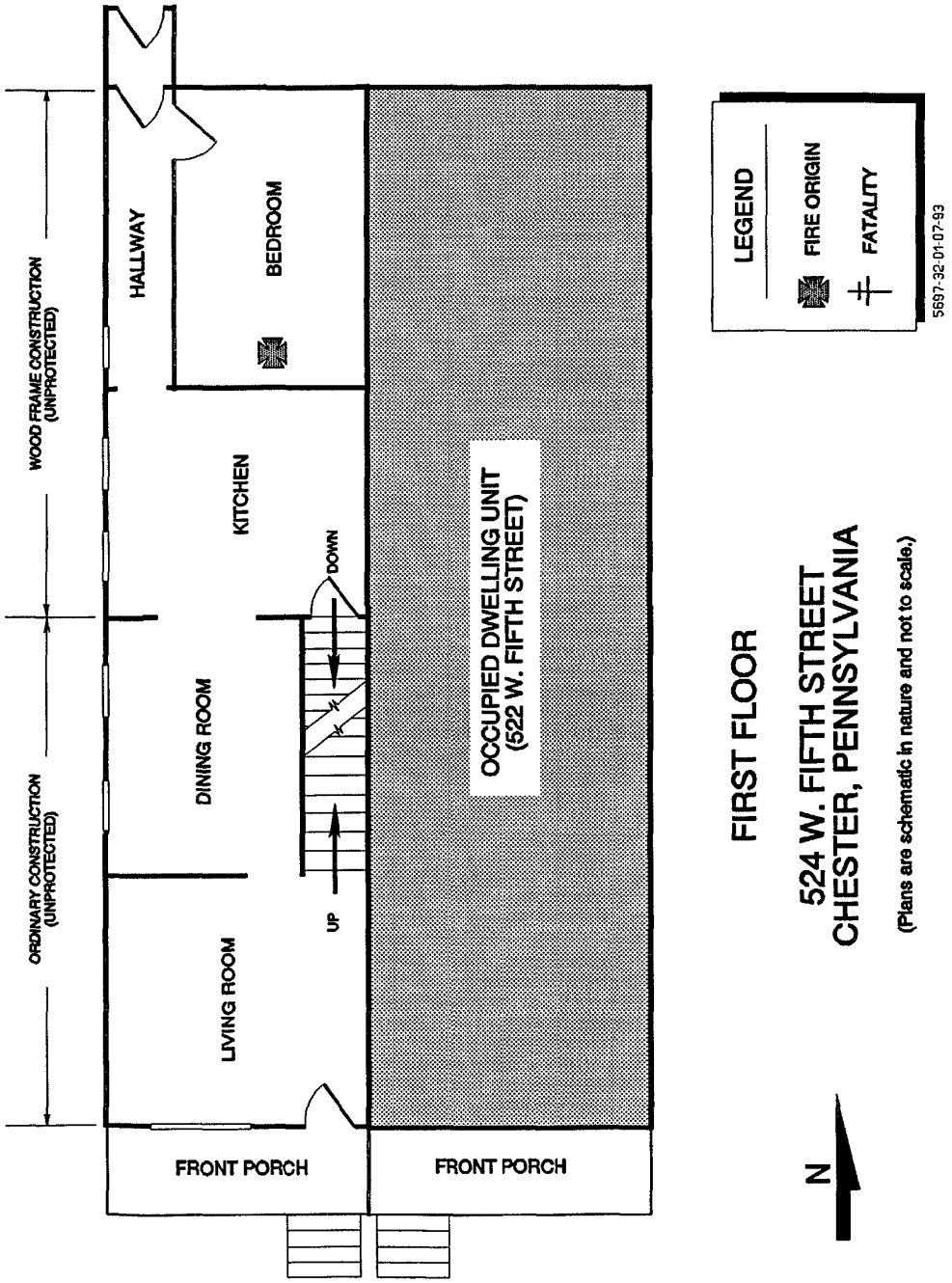
Once the fire was brought under control, firefighters found all of the victims' bodies on the second floor, either in the corridor or in bedrooms. All of the victims appeared to have been awakened, but it was unclear if smoke detectors were installed in the dwelling.

One of the scenarios considered for the cause was a child playing with a lighter. Initial interviews with the lone survivor have provided contradictory accounts of the possible cause.

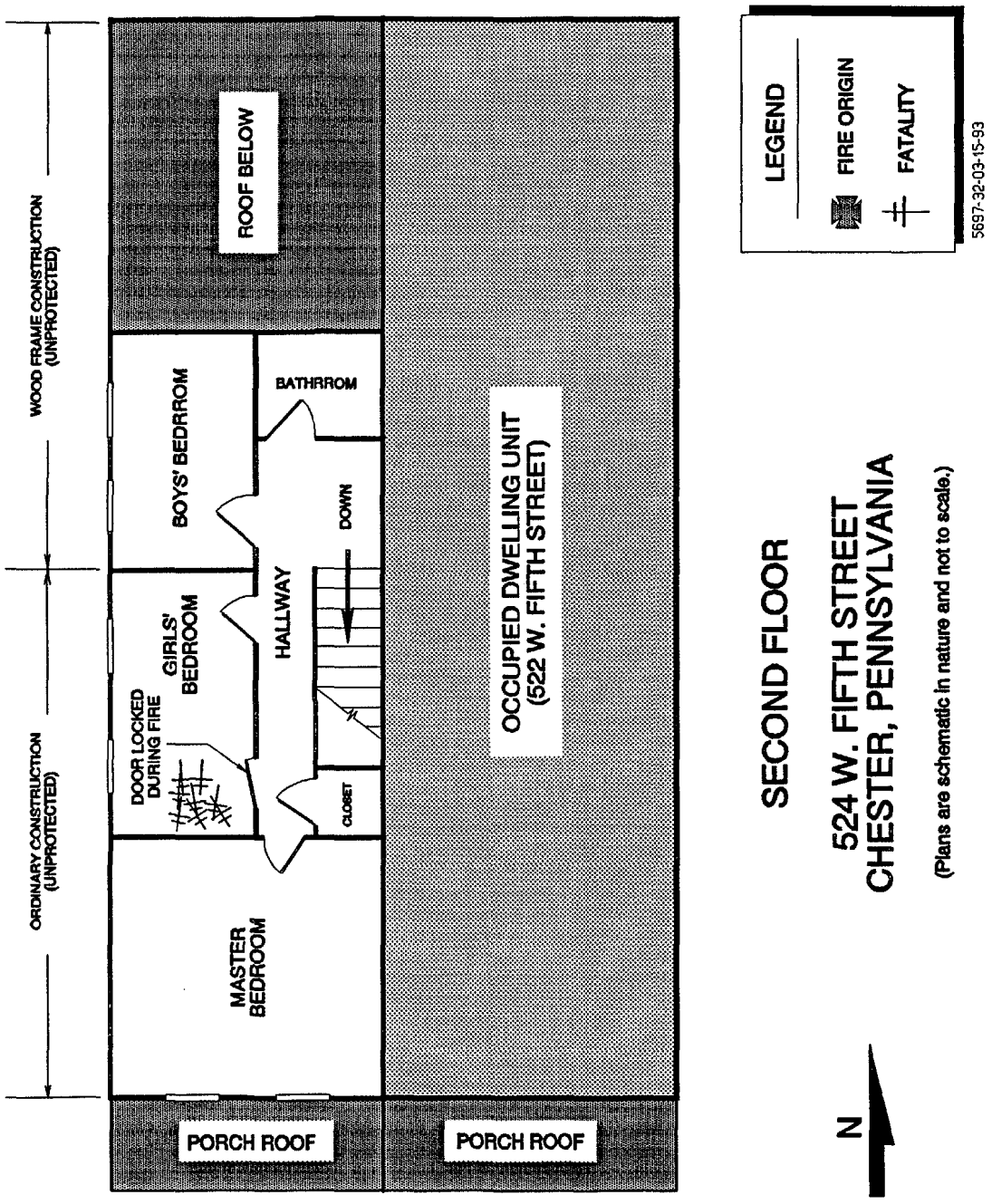
Contact:
Chief Bob Johnson
Auburn Fire Department
(206) 931-3060

APPENDIX B

Floor Plans for 524 W. Fifth Street Chester, Pennsylvania



Appendix B (continued)



APPENDIX C

Chester Fire Department Incident Report

PROBER Chief

Chester Fire Department
Complete Incident Report

Date: 01-04-1993 (CI*I03) Page#: 1-A

Department Name: Chester Fire Department ID#:99999 Incident Year : 92 Incident # : 831209 Exp # : 0
Incident Date : 12-05-1992 Day of Week : 7 Saturday Alarm Time : 0733 Arrival Time : 0735 Back In Service : 0901

Situation Found : 11 Structure fire
Action Taken : 1 Extinguishment
Mutual Aid : 1 Received
Fixed Property Use : 411 One-family dwelling: yr round use
Ignition Factor : 0 Ignition Factor undetermined
Correct Address : 524 WEST FIFTH ST Zip Code :19013 Census Tract :
Occupant Name : Freeman, Gloria Phone: Room/Apartment :
Owner Name :Portal, Mac Address :1020 POTTSTOWN PIKE Phone :NA
Owner City :WEST CHESTER State :PA Zip Code :NA
Method of Alarm : 4 Radio Inspection District : 82 Shift : D No Alarms :3
No. Fire Serv Persnl: 50 No. Engines Responded : 6 No. Aerial Apparatus Responded : 2 No. Other Vehicles Responded : 12
No. Injuries - FS : 0 No. Injuries-Civilian : 0 No. Fatalities - FS : 0 No. Fatalities - Civilian : 0

Complex : 41 Dwelling complex (one & two family) Mobile Property Type : 8 Mobile Property Type not applicable
Area of Fire Origin : 21 Sleeping room for under 5 parsons Equipment Involved in Ignition: 50 Appliances, Equipment; insuff info
Form/Heat Ignition : 0 Form of Heat of Ign undet/not rept Type of Material Ignited : 99 Type of Material not classified
Form/Material Ignitd: 31 Mattress, pillow Method of Extinguishment : 6 Prec hose-H20 hydrant/draft/standpi
Level of Fire Origin: 1 Grade level to 9 feet above grade Estimated Total Dollar Loss : $50,000

Number of Stories : 2 2 stories Construction Type : 6 Ordinary - unprotected
Extent/Damage Flame : 7 Extended beyond structure of origin Extent/Damage Smoke : 7 Extended beyond structure of origin
Detector Performace : 8 No detectors present Sprinkler Performance : 6 NO SPRINKLERS PRESENT
Type/Mat Gen Smoke : 99 Type of Material not classified Avenue of Smoke Travel : 8 No significant avenue of smoke trav
Form/Mat Gen Smoke : 1O Struc Comp, Finish; insuff info

Mobile Property: Year: Make: Model: Serial # : Lic # :
Equip Involved : Year: Make: Model: NOT AVAILABLE Serial # :

Member Making Report: 04955 Captain JAMES JOHNSON Date : 12-05-1992
Officer In Charge : 04955 Captain JAMES JOHNSON Date : 12-05-1992

Party Calling : Phone: Assigned Incident: Y Stations Responding: 81 82 83
2nd Alarm Time: 0740 3rd Alarm Time: 0743 4th Alarm Time: 5th Alarm Time: Members Attending : 1
Emergency Contact 1 : Time/Contact: Emergency Contact 2 : Time/Contact:
Contact Times-Police:0745 EMS: 0738 ELec: 0750 Gas: 0750 Water: Fuel :

Portion/Struc Inv :Well involved first floor & 2nd FI Rear
Flame Spread : 3 Fast Flame Color : 3 Orange
Smoke Condition : 2 Heavy Smoke Color : 6 Brownish Yellow

Value Structure: 40000 Loss Structure: 40000 Ins Structure: Company/Agent :
Value Contents : 10000 Loss Contents : 10000 Ins Contents : Company/Agent :
Value Mobile : Loss Mobile : Ins Mobile : Company/Agent : susp:

Temperature : 35 Wind Direction : Wind Velocity : 28 Sky Conditions : 3 Cloudy
Precipitation : 1 None Humidity : 46 Dew Point : 19 HAZMAT Reports: N

Appendix C (continued)

PROBER Chief

Chester Fire Department
Complete Incident Report

Date: 01-04-1993 (C1*103) Page #: 1-A

Department Name : Chester Fire Department ID # : 99999 Incident Year : 92 Incident # : 831209 EXP # : 1
Incident Date : 12-05-1992 Day of Week : 7 Saturday Alarm Time : 0733 Arrival Time : 0735 Back In Service : 0901

Situation Found : 11 Structure fire
Action Taken : 1 Extinguishment
Mutual Aid : 1 Received
Fixed Property Use:411 One-family dwelling: yr round use
Ignition Factor : 0 Ignition Factor undetermined
Correct Address :522 WEST FIFTH ST Zip Code :I9013 Census Tract :
Occupant Name :JACKSON, EVA Phone :215-876.0845 Room/Apartment :
Owner Name :JACKSON, EVA Address : 522 EW WEST FIFTH ST Phone :215-876-0845
Owner City :CHESTER State :PA Zip Code :19013
Method of Alarm : 4 Radio Inspection District : 82 Shift : D No Alarms : 3
No. Fire Serv Persnl: 50 No. Engines Responded : 6 No. Aerial Apparatus Responded 2:No. Other Vehicles Responded : 12
No. Injuries - FS : 0 No. Injuries-Civilian : 0 No. Fatalities - FS : 0 No. Fatalities - Civilian : 0

Complex : 41 Dwelling complex Cone & two family) Mobile Property Type : 0 Mobile Property Type undet/not rept
Area of Fire Origin : 0 Area of Origin undet/not reported Equipment Involved in Ignition: 0 Equip Invld in Ignitn undet/not rep
Form/Heat Ignition : 0 Form of Heat of Ign undet/not rept Type of Material Ignited : 0 Type of Material undet/not reported
Form/Material Ignitd: 0 Form of Material undet/not reported Method of Extinguishment : 5 Preconnected hose line H20 in tanks
Level of Fire Origin: 0 Level of Origin undetermined Estimated Total Dollar Loss : $20,000

Number of Stories : 2 2 stories Construction Type : 6 Ordinary - unprotected
Extent/Damage Flame : 6 Confined to structure of origin Extent/Damage Smoke : 7 Extended beyond structure of origin
Detector Performace : 0 Detector Performance undetermined Sprinkler Performance : 6 NO SPRINKLERS PRESENT
Type/Mat Gen Smoke : 0 Type of Material undet/not reported Avenue of Smoke Travel : 9 Most Signifi Av of Smoke not class
Form/Mat Gen Smoke : 10 Struc Comp, Finish; insuff info

Mobile Property: Year: Make: Model: Serial # : Lit # :
Equip Involved : Year: Make: Model: Serial # :

Member Making Report: 03897 Chief WILLIE J. HATCHER, SR. Date : 12-05-1992
Officer In Charge : 03897 Chief WILLIE J. HATCHER, SR. Date : 12-05-1992

Party Calling : Phone: Assigned Incident: Y Stations Responding: 81 82 83
2nd Alarm Time: 0740 3rd Alarm Time: 0743 4th Alarm Time: 5th Alarm Time: Members Attending : 0
Emergency Contact 1 : Time/Contact: Emergency Contact 2 : Time/Contact:
Contact Times-Police:0733 EMS: 0733 Elec: 0750 Gas: 0750 Water: Fuel :

Portion/Struc Inv :
Flame Spread : Flame Color
Smoke Condition : Smoke Color :

Value Structure: Loss Structure: Ins Structure: Company/Agent :
Value Contents : Loss Contents : Ins Contents : Company/Agent :
Value Mobile : Loss Mobile : Ins Mobile : Company/Agent : Susp:

Temperature Wind Direction : Wind Velocity : Sky Conditions :
Precipitation Humidity : Dew Point : HAZMAT Reports: N

Appendix C (continued)

PROBER Chief

Chester Fire Department
Complete Incident Report

Date: 01-04-1993 (C1*103) Page #: 1-B

Coments/Remarks :COMPANIES 81-1, 82-1, 82-5 AND CHESTER-II WERE DISPATCHED TO A STRUCTURE FIRE AT THE AFOREMENTIONED LOCATION. ON OUR ARRIVAL HEAVY SMOKE CONDITIONS WERE NOTICED IN THE 500 BLOCK OF WEST 5TH ST..THE PROPERTIES ON THE NORTH SIDE OF THE STREET WERE BARELY VISIBLE. I NOTICED FIRE SHOWING FROM THE FIRST FLOOR WEST SIDE AND REAR OF 524. AS I EXITED NY VEHICLE, I PROCEEDED TO THE FRONT PORCH OF THE INVOLVED STRUCTURE WHERE I SAW A BLACK MALE LEAVING THE PORCH. HE SAID "THE KIDS ARE UP STAIRS". I ATTEMPTED TO MAKE THE 2ND FLOOR VIA THE STAIR CASE, HOWEVER, THE FIRE HAD ENGULFED THE SRAIRWELL FROM ABOUT THE THIRD STEP UPWARD. I RETREATED TO THE FRONT OF THE STRUCTURE. AT THIS TIME ENGINE 81-I WAS POSITIONED, AND ATTACK LINES WERE BEING PLACED INTO SERVICE. AT THIS POINT, FIREBOARD WAS REQUESTED TO IMPLEMENT THE 2ND AND 3RD ALARM ASSIGNMENT. AND NOTIFY CHESTER-9. LT. EVAN (OFF DUTY AT THE TIME) AND I USED A GROUND LADDER INORDER TO POSITION A SECOND ATTACK LINE ON THE PORCH ROOF TO TRY AND GAIN ACCESS. COMPANY 82 UNDER THE COMMAND OF LT. BARBATO WAS ORDERED TO GAIN ACCESS TO THE SECOND FLOOR REAR USING GROUND LADDERS FROM 82-5, AT THIS POINT LT. BARBATO CONTACTED ME VIA RADIO AND INFORMED ME THAT THERE WERE NO WINDOWS ON THE REAR SECOND FLOOR OF THIS PROPERTY AND THAT HIS COMPANY WOULD BE MAKING ENTRY BY WAY OF THE FRONT WINDOWS. AFTER LT. BARBATO MADE ENTRY HE NOTIFIED ME THAT HE HAD FOUND SEVERAL VICTIMS IN THE SECOND FLOOR MIDDLE BEDROOM, AT THIS POINT HE REQUESTED PARAMEDICS TO RESPOND TO THE SECOND FLOOR. LT. GLENN MOORE OF CCMC AND CARL CRAIGLE PACKED UP AND PROCEEDED TO THE SECOND FLOOR. I THEN REQUESTED THAT LT. MOORE HAVE ADDITIONAL MEDIC UNITS DISPATCHED AS WELL AS THE CORONER. COMPANIES 65 AND 52 WERE UTILIZED FOR OVERHAUL OF THE FIRE BUILDING AS WELL AS CONTAINING THE FIRE SPREAD TO 522 WEST 5TH STREET. CITY FIRE INVESTIGATOR STEVE FOX OF THE CHESTER POLICE DEPARTMENT WAS CALLED AND RESPONDED, AND STATED HE WOULD TAKE CARE OF CONTACTING THE STATE POLICE-FIRE MARSHALL AND COUNTY CRIMINAL INVESTIGATIVE DIVISION (CID) CAPTAIN SHROPSHIRE RELIEVED ME OF COMMAND AT APPROXIMATELY 1000 HRS.

THIS FIRE WAS INVESTIGATED BY CID, CITY FIRE INVESTIGATORS AND THE PA STATE POLICE. IT APPEARED TO HAVE STARTED IN THE MATTRESS OF THE THE BED LOCATED IN THE REAR BEDROOM ON THE FIRST FLOOR. INVESTIGATORS BELIEVE THAT THE FIRE WAS ACCIDENTLY CAUSED - SEE INVESTIGATORS REPORTS FOR DETAILS.

NAMES OF THE VICTIMS.
CARNELL ANTONIO KIMBLE AGE 11
ROXANNE LEVINE KIMBLE AGE 9
AVIA ELIZABETH KIMBLE AGE 8
LARRY NOBLE KIMBLE JR. AGE 8
ASHLEY MARIE KIMBLE AGE 6
TENEASHA RENEE SHERIDAN AGE 4
PAUL HOWARD FREEMAN AGE 2
JACK EDWARD KIMBLE AGE 15 MONTHS

OWNER OF THE PROPERTY IS MAC PORTAL, WEST GOSHEN TOWNSHIP, CHESTER CO.

Impede Response
Impede Firegrd Oper :Heavy smoke conditions , Property of origin was barely visible on my arrival. First floor well involved , with extension throughout the structure and into 522 west 5th st.
Impede Extinguishmt:The fire had penetrated the interior walls of the structure ,extensive overhaul was necessary the assure complete extinguishment . This is why fire was not placed l0-11 until 0901.
Other Arrival Cond's:wind chill was 11*

Appendix C (continued)

PROBER Chief

Chester Fire Department
Complete Incident Report

Date: 01-04-1993 (CI*I03) Page #: 1-B

Coments/Remarks :THE FOLLOWING DAMAGES OCCURRED TO THIS STRUCTURE :
KITCHEN WALLS AND CEILING
REAR OF HOUSE . ROOF , CEILING AND EXTERIOR WALLS
REAR BEDROOM WALL AND CEILING
BATHROOM INTERIOR WALLS CEILING
IN ADDITION THE AFOREMENTIONED DAMAGES SMOKE ,HEAT AND WATER DAMAGES OCCURRED THROUGHOUT MOST OF THIS PROPERTY. THEREFORE, UTILITIES WERE SHUT OFF AND FAMILY WAS DISPLACED. THE NAMES OF ALL THE OCCUPANTS WERE NOT AVAILABLE, HOWEVER, IT WAS INDICATED THAT 5 ADULTS AND 4 CHILDREN OCCUPIED THIS PROPERTY.

Impede Response :SEE ORIGINAL FIRE REPORT

Impede Firegrd Oper.:SEE ORIGINAL FIRE REPORT

Impede Extinguishmnt:SEE ORIGINAL FIRE REPORT

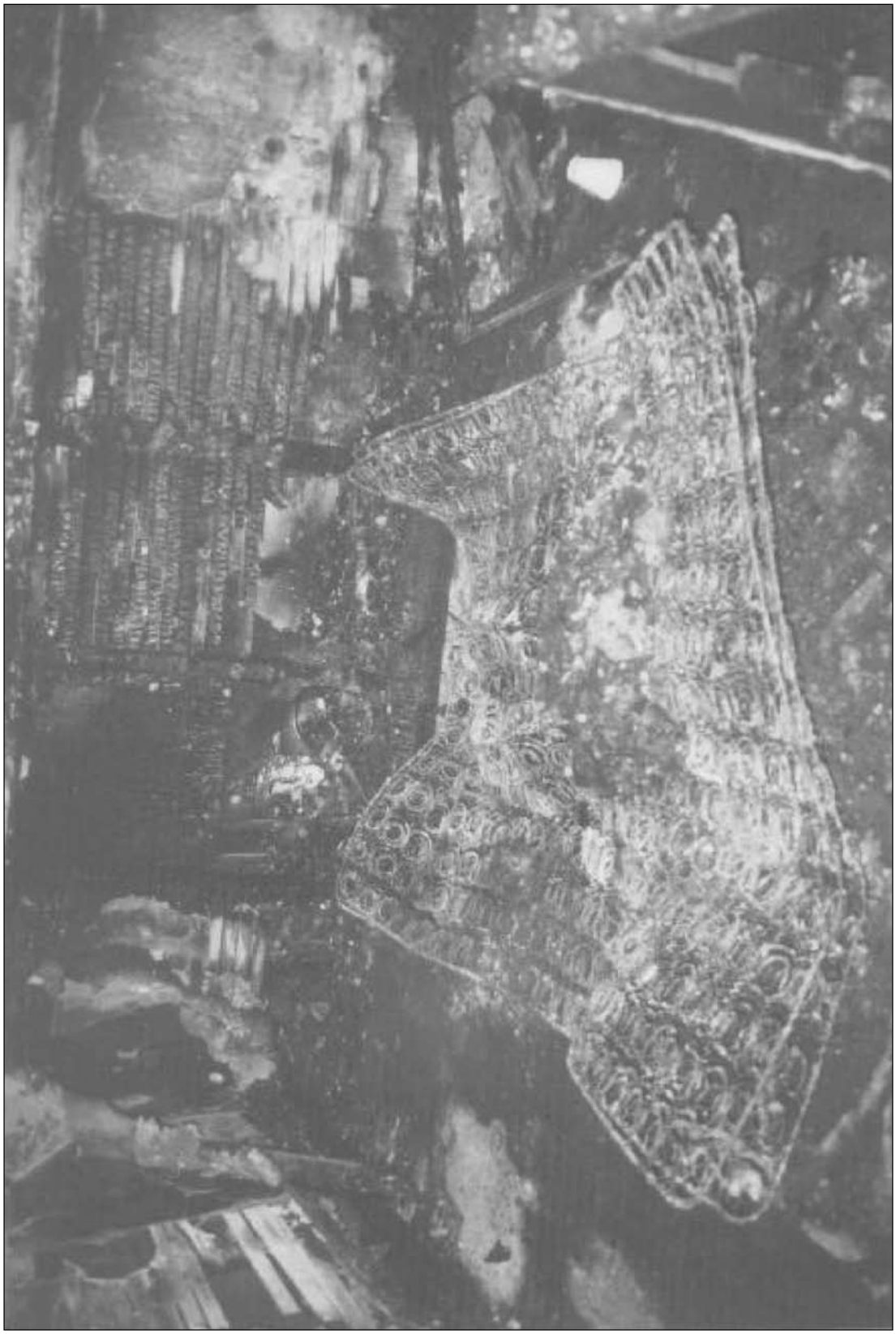
Other Arrival Cord's:

APPENDIX D

Fire Scene Photographs--Chester, Pennsylvania

Exterior view of 524 W. Fifth Street

Appendix D (continued)



Point of origin in rear bedroom. The depressed floor area under the head of the bed was burned through to the crawl space below.

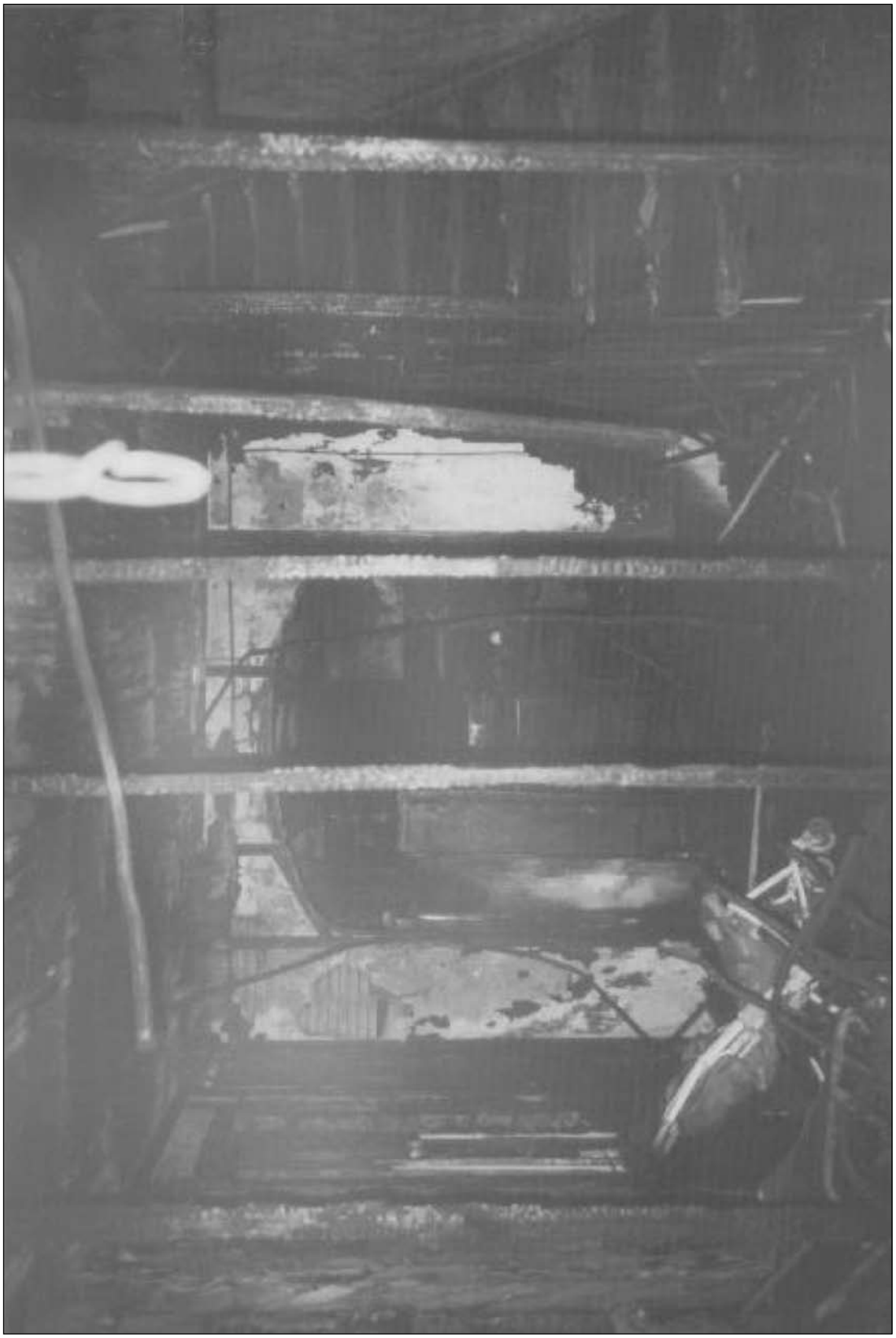
Appendix D (continued)

Wall and ceiling area above point of origin. Voids in the wall construction where the ceiling joists were attached permitted the fire spread horizontally into the kitchen and vertically into the rear exterior wall of the bedroom above.

Appendix D (continued)

Fire damage in the kitchen area looking towards the rear hallway leading to the rear bedroom where the fire started.

Appendix D (continued)



View from living room looking towards the rear of the house into the dining room. The unenclosed stairway was the primary path of heat and smoke travel to the second floor.

Appendix D (continued)

Location in second floor center bedroom where the eight victims were found huddled together.

Appendix D (continued)

Charred stud in exterior wall of second floor rear bedroom. No firestopping was provided between the first and second floors. This is typical of balloon frame construction.

Appendix D (continued)

Entrance to second floor rear bedroom looking towards hallway. The door trim detail remains intact and heavy smoke residues stain the interior walls.

Appendix D (continued)

Second floor hallway looking toward front (master) bedroom. The burn pattern on the wall above the stairway opening is evidence of flame rollover from the intense fire in the dining room, kitchen, rear hallway, and bedroom below.

Appendix D (continued)

Rear doorway to second floor center bedroom. The homemade door is partially delaminated, explaining the irregular burn pattern.

Appendix D (continued)

Thermal damage to wall and ceiling at top of front door opening to second floor center bedroom. This doorway was closed during the fire. However, convected heat and smoke from the fire below (see previous photograph) infiltrated the doorway through air gap at the top of the door.