U.S. Fire Administration/Technical Report Series

Ten Fatality Board and Care Facility Fire

Detroit, Michigan

USFA-TR-066/June 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 and information received from officials of the Detroit Fire Department, most particularly Fire Marshal J. Richard Milliner, Fire Marshal Donald Robinson (Ret.), Fire Chief Harold Watkins, Battalion Chief Charles Evancho, Captain Donald B. Robinson (Ret.), Captain John Bozich, and Lieutenant Paul Green. We also wish to thank Captain William Peck and Sergeant Ron Connell of the Police and Fire Arson Unit and Creighton Lederer, Director, and Albert Thomas, Assistant Director, City of Detroit Building and Safety Engineering Department who also provided valuable information. Others who contributed information used in this report include Charles Kish, Chief Investigator; Dr. Bradford Helper, Chief Toxicologist; and Dr. Sawait Kanluen, Deputy Medical Examiner, Office of the Wayne County Medical Examiner; Inspector Robert Tarrant and Lieutenants John Madden and Eugene Schmitt of the Michigan State Police, Fire Marshal Division; and James Quigley, Director and Thomas Stuve, Supervisor, Adult Foster Care Licensing Division, Michigan Department of Social Services.

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Ten Fatality Board and Care Facility Fire Detroit, Michigan

Investigated by: Mark Chubb

This is Report 066 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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Ten Fatality Board and Care Facility Fire
Detroit, Michigan
June 1992

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OVERVIEW

An early morning fire in an adult board and care facility housing mentally disabled adults left ten residents dead and two seriously injured. Detroit Fire Department investigators determined that smoking materials carelessly discarded in a kitchen trash receptacle started the blaze which led to the largest loss of life in a single residential fire in the city's history.

The fire building was originally a two-family dwelling that was converted to a rooming house sometime in the 1960s. City building officials reported that their records indicated the dwelling was classified as a multi-family dwelling operating as a rooming house when they began regular inspections of it in 1969. In February 1975, the occupancy was licensed as an adult foster care facility by the Michigan Department of Social Services. An adult foster care facility would be classified as a board and care facility under National Fire Protection Association 101, *Life Safety Code* and a Use Group I-1 structure by the Building and Code Administrators International, Inc. (BOCA) *National Building Code*, 1990 edition.

Although AC-powered smoke detectors with interconnected sounding devices were installed throughout the dwelling, only one survivor – a third floor resident – reported hearing and responding to their warning. The night manager was alerted to the fire by sounds coming from the kitchen. Three other survivors reported that they first became aware of the fire when they heard the shouted warnings of the night manager and the occupant who had heard the smoke detectors. These warnings seemed to have alerted most, if not all, the building occupants, including the victims.

Two of the survivors told investigators that they saw or heard some of their fellow occupants moving around, but were unable to explain why those occupants did not get out alive. Fire department and the medical examiner's office investigators found all but one of the dead fully or partially clothed, suggesting that many of the victims attempted to dress before evacuating. According to the Wayne County Medical Examiner's Office, all ten of the deaths were caused by inhalation of combustion products.

SUMMARY OF KEY ISSUES

Issue	Comments
Building	Converted 2-1/2-story wood-frame duplex, with basement.
Casualties	Ten dead; two injured; five escaped unharmed or with minor injuries.
Origin and Cause	Detroit fire investigators believe the fire was ignited by smoking materials carelessly discarded in a trash receptacle next to the kitchen stove.
Smoke Detection	Smoke detectors were installed throughout the building; however, only one survivor reported having heard and responded to their alarm.
Emergency Planning and Preparedness	An emergency plan had not been prepared or posted and fire exit drills were not performed.
Interior Finish	Combustible interior finish materials added during remodeling contributed to rapid fire growth before the fire was detected.
Means of Egress	Unenclosed front stairways provided avenues for smoke spread which probably cutoff the primary escape routes for many of the occupants.
Fire Department Notification	Fire called in by neighbor, but several witnesses and at least one occupant reportedly attempted to notify the fire department via 9-1-1, but received busy signals.

The most important issues associated with this fire were the building features which fueled the fire and contributed to the spread of combustion products; the delayed detection and notification of building occupants; and the capabilities of the occupants themselves, most of whom were mentally or physically impaired and thereby unable to act appropriately. Questions have also arisen about the regulatory status of the premises, coordination of regulatory responsibilities between different agencies and levels of government, and compliance with the various codes, standards, ordinances, and statutes in effect at the time of the fire.

THE FIRE

The Detroit Fire Department received notification of a fire at 88-90 Pingree Street at 2:21 a.m., and dispatched a first alarm assignment consisting of four engine companies, two truck companies, one rescue company (for manpower), and one chief officer. When Engine 35 arrived they found a large amount of fire showing from the first floor front windows and door of 90 Pingree Street. After bringing the fire under control, firefighters made the grisly discovery that ten elderly or disabled residents had perished in the predawn fire. Of the seventeen people in the building at the time of the fire, only seven survived, and only five escaped unharmed. This fire has been described by Detroit fire officials as the deadliest fire in more than 40 years and the worst residential fire in the city's history.

Detroit fire investigators believe the fire started when carelessly discarded smoking materials ignited trash in a kitchen waste receptacle. Investigation revealed that the fire started in the kitchen near the floor between the stove and kitchen counter on the east side of the room. (For floor plans, see Appendix A.) A distinctive V-shaped burn pattern was clearly evident on the outside wall adjacent to this area pointing to the likely point of origin. Combustible interior finish on this wall likely provided additional fuel as the fire grew and spread. Other combustibles, including containers of cooking fat on a shelf directly above the point of origin, probably became involved allowing the fire to grow rapidly. The quantity and configuration of fuel and the relative remoteness of the room of origin from the occupied portions of the building permitted the fire to grow significantly before it was detected.

Sometime between 11:30 p.m. and midnight, the residents retired for the evening after watching a baseball game on television. The night manager, Tyree "Ricky" Fluckes, remained downstairs in the living room watching television.

Sometime shortly after 2:00 a.m., Mr. Fluckes reportedly heard sounds in the kitchen and rose to investigate.[1] Approaching the rear of the dwelling, he observed a large fire in the kitchen through a pass-through opening to the dining room. When he arrived in the rear corridor at the open door to the kitchen, he reportedly attempted to enter to fight the fire, beating back the flames with his hands in an unsuccessful attempt to reach the fire extinguisher in the northeast corner of the room.

At some point during this sequence, smoke detectors installed in the house activated, alerting Glenn Gregory, a resident in the third floor southwest bedroom. He was watching a late-night movie and proceeded downstairs immediately to investigate. On the first floor he observed through the pass-through opening that the fire was extending up the back wall of the kitchen and witnessed Mr. Fluckes trying unsuccessfully to control the fire. Mr. Gregory attempted to dial 9-1-1 from the telephone in the dining room but reported that he received busy signals on two successive attempts.

Meanwhile, the neighbor in the dwelling just west of 90 Pingree Street reported she was awakened by unusual sounds outside, and she too got up to investigate. From her front porch, she reported seeing the window on the west side of the house break out.[2] She indicated she went back inside to call the fire department and then stretched a garden hose to protect her residence.

Michigan Bell said the busy signals received by some of the occupants and neighbors who dialed 9-1-1 may have been due to high call volume reporting the incident.[3] A police department official representing the 9-1-1 operators reported that an emergency call was received from 88-90 Pingree Street at 2:18 a.m., but that no one responded to the operator when the call was answered.[4] Another call (from a neighbor) was received shortly after 2:20 a.m., and was transferred to the fire department resulting in the dispatch of the first alarm.

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[1] Mr. Fluckes could not be reached for an interview. Descriptions of his actions are based on statements he made to Detroit Fire Department investigators and one of the owners of the facility, Ophelia Simmons. These accounts are corroborated in part by the account given by Glenn Gregory, one of the residents, in a separate interview.

[2] This is considered a good benchmark for occurrence of flashover – the point at which all combustible materials in the compartment reach their auto-ignition temperatures simultaneously.

[3] WJR Radio news report, June 2, 1992.

[4] Executive Deputy Police Chief James Bannon quoted in Detroit Free Press, June 4, 1992, p. 14A.

About the time Mr. Gregory gave up his efforts to contact the fire department, Mr. Fluckes abandoned his efforts to control the fire and began attempting to wake and evacuate the residents. Two of the survivors interviewed, Mr. Darnell and Ms. Strempeck, said they first became aware of the fire when they awoke to Mr. Fluckes cries of "Fire! Fire! Everyone get out!" While Mr. Fluckes was warning residents on the upper floors of the west side of the building, Mr. Gregory returned to his room on the third floor to retrieve belongings, alerting occupants on the east side of the building along the way.

From his room directly above the room of fire origin, Willie Darnell was awakened by Mr. Fluckes's warnings. Mr. Darnell's first response to the warning upon waking was to get out of bed and dress. He confirmed that he could smell smoke when he got up but proceeded to put on trousers, shoes, and a shirt before evacuating. He also said he could hear residents of the room directly above his moving about. The sound was very much like someone shuffling about in their bare feet, and he was unaware of any commotion or shouting other than Mr. Fluckes's warnings. The bodies of two victims, Richard Pascoe and Herman Holt, were found in this third floor room above Mr. Darnell's after the fire.

Upon entering the second floor hallway to evacuate, Mr. Darnell encountered light smoke, which he passed through with little difficulty. Upon reaching the stairs, the smoke was heavier, and he had difficulty negotiating them. He proceeded only a short distance before falling down the remainder of the flight of stairs. When he landed at the bottom of the stairs he proceeded directly outside through the living room. The living room appeared relatively smoke-free at this time. Mr. Darnell also indicated he was not aware of any noise like a smoke detector sounding.

Like Mr. Darnell, Ms. Delores Strempeck said she was awakened by Mr. Fluckes's warnings that the building was on fire. When she woke, she smelled smoke but heard no smoke detector sounding. Having survived a previous fire in 1989 by jumping from a second floor window, she took Mr. Fluckes's warning seriously, wrapped herself in two blankets, and proceeded to evacuate her second floor northeast bedroom. When she entered the corridor, she encountered light smoke, covered her nose and mouth with the blankets, and proceeded to the front stairway. Like Mr. Darnell, she encountered heavier smoke there, and continued evacuating, but with greater difficulty. When she reached the first floor, she too proceeded through the living room and joined Mr. Darnell and other occupants outside.

Mr. Harris's account is less cohesive, in part due to his poor mental condition, but he indicates he was awakened by a verbal warning and proceeded directly outside. When asked about the presence of indications of fire, he said that the corridor he passed through was filling with smoke and that he covered his nose and mouth when he began to experience difficulty breathing. When asked whether he had dressed or taken other actions prior to evacuating, it became clear that he had little recollection of these events but his account suggested that he took a little time to investigate and had dressed before evacuating.

AFTER THE FIRE

The fire took more than 45 minutes to bring under control. Firefighters said that at no time during their firefighting efforts were they made aware that many of the building's occupants might still be inside. Shortly after the fire was under control, they began a search of the building and discovered that 10 of the building's 17 occupants had died.

The floor plan in Appendix A shows the locations of the victims. They were distributed throughout the building. The same number of victims was found on the east side as the west side and in the front part of the building as the rear. Eight of the victims were found on the second floor and two on the third floor.

Post mortem examinations of the victims were performed at the Office of the Wayne County Medical Examiner. Although autopsies were not conducted, blood toxicology tests were performed, and each victim was examined to confirm the most likely cause of death. Toxicology reports indicate that all 10 victims died as a result of inhalation of smoke and toxic gases, and that none of the victims were intoxicated at the time of death.

OCCUPANTS

Most occupants of this fatality became residents of one of the adult foster care facilities operated by Nu-Way Development Center after their release from State-run mental institutions prior to 1977. Newer occupants were often referred to the facility by operators of similar group homes or rooming houses.

All of the residents received some form of public assistance. Their public assistance checks were signed over to the proprietors in exchange for room and board services. Each of the residents was then allocated a small stipend from their checks for personal care and discretionary expenses.

Most of the occupants had some degree of physical or metal impairment. Of the survivors interviewed, all except the one who responded to the smoke detector activation showed moderate to severe signs of some mental disorder or physical disability. All of the residents present at the time of the fire were ambulatory. One non-ambulatory resident lived in the building but was hospitalized at the time of the fire. Despite their various impairments, the occupants of this facility would have been most appropriately classified as "slow" as defined by National Fire Protection Association (NFPA) 101 requirements for board and care facilities. This means that they were capable of self-evacuating but would be expected to experience some difficulty or delay in doing so.[5]

[5] For a complete discussion of the criteria used to evaluate the evacuation capabilities of board and care residents, see NFPA 101, *Life Safety Code*, Section A-23-1.3 and NFPA 101M (92), *Alternative Approaches to Life Safety*, Chapter 5.

Table 1. Disposition of Residents Present at Time of Fire

Name	Age	Sex	Location[a]	Disposition
Steven Gregoroff	62	M	To Be Determined	Dead
Geraldine Hammond	67	F	To Be Determined	Dead
Herman Holt	54	M	Third floor northwest bedroom	Dead
Theresa Hunter[b]	76	F	Second floor northeast bedroom	Dead
Delroy Johnson	52	M	To Be Determined	Dead
Juanita Maxwell	57	F	To Be Determined	Dead
Viola Mull	61	F	To Be Determined	Dead
Richard Pascoe	89	M	Third floor northwest bedroom	Dead
Joseph Shinske	56	M	To Be Determined	Dead
Michael Turner	45	M	To Be Determined	Dead
John Marshall	46	M	To Be Determined	Injured
Willie Sires (a.k.a. Willie Campbell)	59	M	To Be Determined	Injured
Willie Darnell[b]	64	M	Second floor northwest bedroom	Uninjured
Tyree "Ricky" Flukes[c]	37	M	First floor living room	Uninjured
Glenn Gregory[b]	47	M	Third floor southwest bedroom	Uninjured
Walter Harris[b]	Unk	M	Second floor west center bedroom	Uninjured
Delores Strempeck[b] (a.k.a. Dolores Strembek)	60	F	Second floor northeast bedroom	Uninjured

[a] Locations of survivors are where they were when they first became aware of the fire. Victims' locations correspond to where their bodies were found after the fire.

[b] These surviving residents were interviewed at the scene by the USFA investigator.

[c] The descriptions of these residents' actions during the fire are based on interviews with other survivors.

According to the owners and day manager of the facility, the capabilities of the survivors interviewed after the fire were representative of those in the building at the time of the fire. A preliminary investigation conducted by the State Department of Social Services appeared to confirm this assertion.

EMERGENCY PLANNING AND PREPAREDNESS

Survivors interviewed after the fire indicated that fire drills were not regularly conducted and that to their knowledge the facility had no emergency plan.

NFPA 101 and the BOCA *National Fire Prevention Code*/1990 both require the preparation of an emergency plan and the conduct of periodic fire drills in these occupancies. The requirements of these codes, which are outlined in the table on the following page, are quite similar in every respect except the frequency of fire exit drills. (NFPA 101 requires twice as many drills [after the first year of operation] as the BOCA *National Fire Prevention Code*.)

Although both codes specify that emergency plans must be written, neither provides specific guidance on how plans should be prepared. Important guidance on implementing these requirements, such as the descriptions of criteria used to evaluate the evacuation capabilities of occupants, are left to advisory sections and recommended practices. Many code officials and authorities having jurisdiction view such advisory provisions as unenforceable. However, codes often require such plans to be approved by the authority having jurisdiction so they are enforceable through discretionary judgment.

Lessons learned from this and other multiple-fatality fires suggest that emergency planning and preparedness can have significant impacts on the outcome of fires. However, the implicit assumptions underlying code requirements must be well understood for any emergency plan to be truly effective.

Table 2. Emergency Planning and Preparedness Requirements

Requirement	BOCA National Fire Prevention Code/1990	NFPA 101, Life Safety Code (1991), Chapter 31
Emergency Plan	Written plan required detailing evacuation or defend-in-place procedures	Written plan required detailing evacuation or defend-in-place procedures
Staff Training	Periodic instruction on their duties under the plan and special procedures needed to ensure the safety of individual residents	Periodic instruction on emergency plan and special procedures needed to ensure the safety of individual residents
Resident Training	All occupants capable of evacuating shall be trained; instruction shall include: how to assist one another and what to do if primary exit is blocked	All occupants capable of evacuating shall be trained; instruction shall include: how to assist one another and what to do if primary exit is blocked
Exit Drills	Six drills per year; two drills on each shift (12 drills required during first year of operation); drills may be announced in advance	12 drills per year; four drills on each shift; drills may be announced in advance
Smoking	No requirements	Where permitted, noncombustible safety-type ashtrays are required

The development of an emergency plan for a facility requires a thorough analysis of the facility and evaluation of the particular circumstances that apply to its occupancy and use. The requirements of NFPA 101 for board and care facilities are based on the following assumptions:

- That the facility complies in all respects with the fire protection and means of egress requirements of the code;
- That the capabilities of the residents and the staff have been evaluated and are reflected in the application of the code and the development of the emergency plan;

- That an adequate number of trained staff are assigned to each shift to implement the emergency plan;
- That the emergency plan is reviewed regularly and revised as necessary; and,
- That the emergency plan is practiced regularly (not simulated) by residents and staff alike.

In spite of the lack of installed automatic fire protection systems, and without adequate trained staff to direct or assist in evacuation, it appears that a well designed evacuation plan and regular fire drills could likely have resulted in far fewer casualties. The favorable physical and mental capabilities of the occupants, as exhibited by those who did escape successfully and the physical arrangement of the facility suggest that the occupants could have likely been trained to react more appropriately to fire conditions.

FIRE BUILDING

When the State of Michigan assumed control of licensing and regulation of the adult foster care facility in 1976, local government enforcement efforts were restrained in accordance with the State's reserved powers doctrine. At the end of 1977, State officials declined to renew the license to operate as an adult foster care facility and sought a court injunction to bar the operators – Nu-Way Development Center – from continuing to use the structure as an adult foster care facility. In an August 1979 Wayne County (Michigan) Circuit Court decision, Judge Thomas J. Brennan ordered the facility closed and permanently enjoined the owners of 88-90 Pingree Street from:

- Operating an adult foster care facility;
- Interfering with the relocation of residents to other licensed facilities;
- Interfering with the notification of residents that the home's adult foster care license had been revoked; and,
- Transferring any of the residents to unlicensed facilities they operated.[6]

All indications are that the owners violated this order and continued operating the home at 88-90 Pingree Street as an unlicensed adult foster care facility. Records furnished by the State Department of Social Services confirm that eight of the ten victims who died in this fire had been residents of an adult foster care facility operated by the defendants in this court action at the time the permanent injunction and judgment were issued.

Table 3. Occupancy Classification

Code or Jurisdiction	Classification
BOCA *National Building Code,* 1990 Edition	Use Group 1-1, Board and Care Facility
NFPA 101 – *Life Safety Code*, 1991 Edition	Large Board and Care Facility (Existing)
City of Detroit Fire Code (1977 Edition of the NFPA *National Fire Codes*)	Rooming, Boarding or Lodging House or Hotel, Motel or Dormitory
Department of Social Services State of Michigan	Adult Foster Care Facility (unlicensed)

[6] See *State of Michigan v. Nelson,* Case No. 78-819711-CZ, Circuit Court for the County of Wayne (MI).

The building was located at 88-90 Pingree Street in the center of Detroit in a residential neighborhood north of the New Center district. In recent years, this area had been referred to as a "human services ghetto" due to the large number of board and care facilities located in the six square blocks of Pingree and Blaine Streets between 2nd Avenue on the east and Woodward Avenue – the city's main north-south surface street – on the west. The building was one of four such facilities in this area which had been owned or operated by Nu-Way Development Center at one time. Of these, only two remained in operation at the time of the fire: the others having suffered previous fires. In 1989, one of these fires resulted in four deaths. (This facility was operating at the time of this fire.) Another fire in 1986, killed three occupants and destroyed that building. (The fourth building operated by Nu-Way Development had been closed for other reasons.)

Construction – The three story structure was of mixed ordinary and wood frame construction when originally constructed. Brick exterior load-bearing walls and a brick party wall separating the two halves of the structure supported the floors and roof. The party wall stopped at the underside of the wood roof deck. Openings, provided with doors, in the party wall on the first floor and third floor connected the two halves.

Table 4. Construction Requirements

Actual Building Conditions	Required by BOCA National Building Code/1990 Use Group I-1	Required by NFPA 101 Existing Board and Care
5B	5A	Type III (211)[a]
3 Story (33 feet)[b]	2 Story (35 feet)	Not required
1,800 square feet	4,200 square feet	Not required

[a] Type III (200), Type IV (2HH), Type V (111), and Type V (000) construction are only permitted when combustible construction is sheathed in materials having fire-resistance characteristics equivalent to plaster and lath construction or are capable of providing a 15-minute thermal barrier, *and* the facility is protected throughout by an automatic sprinkler system.

[b] Estimated

The original structure was ordinary construction with brick bearing walls and wood floor and roof systems, which could be classified as BOCA Type 3-B (unprotected ordinary) construction. The third floor, a finished attic, more closely resembled BOCA Type 5-A (protected wood frame) construction. Later renovations had resulted in the removal of much of the original plaster and lath ceiling on the first floor, leaving the combustible floor joists unprotected. This lowered the construction classification of the building to Type 5-B (unprotected wood frame). Original interior partitions were of plaster on lath construction supported by wood framing. Newer partitions subdividing the original spaces were gypsum wallboard on wood framing. In recent years, a metal track suspended ceiling system had been installed below the original plaster lath ceilings throughout the first floor creating a 22-inch deep concealed space. Most partitions provided good horizontal separation and prevented the spread of fire and smoke into rooms with closed doors.

Openings in the party wall and voids in the floor and wall assemblies permitted the fire to spread vertically and horizontally after flashover occurred in the kitchen. Combustible structural elements, including floor joists and wall studs, exposed when the suspended ceiling in the kitchen and first

floor rear corridor failed, fueled the fire as it advanced throughout the dwelling. Before firefighters brought the fire under control, approximately half of the third floor at the rear of the building and the roof had collapsed.

Interior Finish – Combustible interior finish had been installed in the kitchen and rear hallways during earlier renovations, possibly at the time the building was converted to an adult foster care facility. In most cases, the wall finish materials consisted of 1/8-inch plywood paneling. Investigators also uncovered 1/2-inch particle board behind the stove in the kitchen. Paneling was also found elsewhere in the occupancy, usually where there was evidence of remodeling work to cover cosmetic defects in the original construction. These materials generally have flame spread index ratings between 100 and 150, and appeared to contribute to fire growth in the kitchen and fire spread elsewhere in the occupancy.

The use of interior finish materials having flame spread index ratings greater than 75 (Class C or III) would not be permitted anywhere in an existing board and care facility by the requirements of NFPA 101, *Life Safety Code*. The BOCA *National Building Code*, 1990 edition, would have permitted Class III interior finish materials in enclosed rooms or spaces, like the kitchen, but not in corridors or egress stairways. The BOCA *National Building Code*/1990 is adopted and enforced in Detroit by the Buildings and Safety Engineering Department. State requirements for adult foster care occupancies are based on the NFPA *Life Safety Code*.

Table 5. Interior Finish Requirements

Finish Type	Actual Building Conditions			BOCA National Building Code Use Group I-1			NFPA 101 Existing Board and Care Facility		
	Wall	Ceiling	Floor	Wall	Ceiling	Floor	Wall	Ceiling	Floor
Exit stairways				I	I	II	A or B	A or B	NR
Corridors				II	II	II	A or B	A or B	NR
Enclosed rooms or spaces	III	III	ND	III	III	DOC FF-1	A or B	A or B	NR

ND = Not Determined; NR = No Requirement

Smoke Detection – Although unsprinklered, the facility was equipped with multiple-station 110-volt AC-powered smoke detectors. One detector was installed on each side of the party wall in the vicinity of the stairway and sleeping areas on the second and third floors. Likewise, a smoke detector was installed on the east side of the building on the first floor at the base of the front stairway. Detectors were also installed on each side of the party wall in the basement. No evidence of a detector could be found in the vicinity of the west side on the first floor at the base of the stairway. A smoke detector would have been required in this location by the BOCA *National Building Code*, 1990 Edition; BOCA *National Fire Prevention Code*, 1990 edition; and NFPA 74, *Standard for Household Fire Warning Equipment*.

According to Detroit building and fire officials, smoke detectors were not required in residential occupancies, which is how the facility was classified and regulated at the time of the fire. However, both the BOCA *National Building Code*, 1990 edition and the NFPA *Life Safety Code*, 1991 edition, would have required an automatic fire alarm system in this building, in addition to the multiple-station

smoke detectors, based on its use as a board and care facility. As a result, additional detectors, as well as manual means of initiating a building-wide alarm, should have been provided. The BOCA code would also have required off-site monitoring of the fire alarm system to ensure fire department notification.

Fire Extinguishers – Portable fire extinguishers were provided throughout the building. Dry chemical fire extinguishers were found in the northeast corner of the kitchen, on the second and third floors on each side at the stair landing, and on the first floor in the east side corridor in the vicinity of the sleeping areas and office. Portable fire extinguishers are not required in this occupancy by current BOCA *National Codes*. However, NFPA 101, *Life Safety Code* does require portable fire extinguishers in the vicinity of hazardous areas. Hazardous areas are those rooms or spaces where the hazard exceeds that encountered in a common one- or two-family dwelling. None of the areas in this occupancy appeared to meet this definition.

Table 6. Required Fire Protection Features

Features	Actual Building Conditions	BOCA National Building Code Use Group I-1	NFPA 101 Existing Board and Care Facility
Automatic Sprinklers	Not provided	Required for I-1 greater than 2-stories	Not required
Standpipe Hose System	Not provided	Required in I-1 of 3 or more stories	Not required
Fire Protective Signaling System	Not provided	System with automatic and manual initiation required	System with automatic and manual initiation required
Single- or Multiple-station Smoke Detectors	In corridors in vicinity of each stairway	Required in sleeping rooms	Not required
Portable Fire Extinguishers	One in corridor in vicinity of stairway on 2nd and 3rd floor and in kitchen	Not required	Not required
Central, Remote, or Proprietary Station Supervision	Not provided	Required for automatic sprinkler, standpipe, and fire alarm systems	Not required

Mr. Fluckes's delay in sounding the alarm while attempting to reach an extinguisher and fight the fire may have had a critical effect in determining the outcome of this incident, since nearly all of the occupants seem to have been motivated to act on his warnings. Without an emergency plan to give directions on what to do in the event of fire, the decision whether to attempt to fight the fire rested solely in Mr. Fluckes' hands. Because the use of portable fire extinguishers can produce unintended results and may place an untrained user in a dangerous situation, the model codes and Federal Occupational Safety and Health Administration (OSHA) regulations contain requirements for employee training when fire extinguishers are relied on for incipient stage firefighting.

Means of Egress – Corridors led from all sleeping rooms to the stairways on each floor. The original corridor walls were of plaster on lath construction. In later renovations, gypsum wallboard construction was used. All corridor walls were continuous from the floor deck to the underside of the floor/ceiling assembly above. This type of construction provided at least minimal resistance to the

passage of smoke. Sleeping room doors were of wood panel construction without closers. Although they provided some smoke and fire-resistance, many were heavily damaged by the fire. Most of these doors were equipped with two latching or locking devices requiring separate operation. Although such arrangements are now prohibited by model codes, none of the doorways were found locked after the fire, and the locking arrangements did not explain the occupants' delay in evacuating.

A single stairway was provided on each side of the party wall between the second and third floors. From the second floor down to the first, two stairways served by a common landing were provided on each side of the party wall. These stairways discharged at remote points on the first floor, but could not be considered independent or remote means of egress. Stairways adjacent to the rear stairways on each side provided access and egress from the basement. The stairways at the rear on each side were enclosed at the first floor, but open on all other floors. The front stairways were unenclosed on each floor. Both the front and rear stairways discharged inside at the first floor and were not connected to a fire-resistance rated or protected grade exit passageway. Therefore, neither stairway could be considered a continuous protected egress path.

Table 7. Means of Egress Requirements

Feature	Actual Building Conditions	BOCA National Building Code Use Group I-1	NFPA 101 Existing Board and Care Facility
Number of Exits	Two unsegregated, unenclosed stairways	Two independent, remote exits from every floor	Two independent, remote exits from every floor
Means of Escape	Openable window in each sleeping room	Openable window in each sleeping room	No requirement
Exit Access Corridors	Smoke-tight partitions with non-rated doors	No requirement	20-minute fire-resistance rated separation designed to resist passage of smoke
Exit Stairways	No enclosure	2-hour fire-resistance rated enclosure	1-hour fire-resistance rated enclosure
Exit Passageways	No grade exit passageway	2-hour fire-resistance rated enclosure	1-hour fire-resistance rated separation

REGULATORY ENVIRONMENT

Four State and local agencies had jurisdiction over this facility at some time during its occupancy. In the aftermath of this fire, considerable attention has been focused on the role of each authority and the relationship between the overlapping jurisdictions. Although the issue of who was responsible for 88-90 Pingree Street remains unresolved, it is clear the facility had "fallen between the cracks" of the regulatory system.

Prior to 1975, the City of Detroit was primarily responsible for regulating fire safety at the facility. Two city agencies, the Buildings and Safety Engineering Department and the Fire Marshal Division of the Detroit Fire Department, were the agencies responsible for enforcing building and fire safety regulations in board and care facilities.

In 1974, the Buildings and Safety Engineering Department switched from a locally promulgated building code to adoption of the BOCA *National Codes* (then known as the *Basic Codes*.) These regulations have been updated periodically since then, and the 1990 edition of the BOCA *National Building*

Code, BOCA *National Mechanical Code*, BOCA *National Plumbing Code*, and the BOCA *National Property Maintenance Code* are now in effect. All of these codes contain provisions related to fire safety. However, prior to 1987, board and care occupancies were not treated separately by these codes and were governed by the requirements for multiple-family dwellings.

Unlike many other city building departments, Detroit's Buildings and Safety Engineering Department conducts maintenance inspections to ensure compliance with building regulations. Periodic inspections of the Nu-Way Development Center were conducted by the Department's Housing and Plumbing Division. These inspections were performed to determine compliance with the local housing code and to verify that the building was being occupied and maintained in accordance with its established legal use. The Buildings and Safety Department strived to inspect these occupancies annually, but normally had a considerable backlog due to staffing limitations.

The fire department has adopted and now inspects to the 1977 set of NFPA's *National Fire Codes*, which include the 1975 edition of NFPA 101, *Life Safety Code*. The *Life Safety Code* did not recognize board and care facilities as a separate occupancy type until 1981. Until then the provisions for lodging and rooming houses or hotels, motels, and dormitories would have applied. Even under these classifications, the building failed to meet minimum fire and life safety standards.

Fire department inspectors reported that their inspections generally focused on "common-sense" fire safety practices and were intended to identify and encourage correction of hazardous conditions. As such, these inspections concentrated on maintenance of existing fire protection and life safety features and the fire safe occupation and operation of buildings and processes. Violations which would have required the installation of fire protection systems or modification of building elements, such as exit enclosure, provision of additional means of egress, or fire-resistance of building elements, were noted by fire department inspectors and referred to the Buildings and Safety Engineering Department for action.

Table 8. Applicable Code and Standards

Agency or Jurisdiction	Code or Standard
Detroit Fire Department	NFPA *National Fire Codes*, 1977 editions
City of Detroit Buildings and Safety Engineering Department	BOCA *National Building Code*/1990 BOCA *National Property Maintenance Code*/1990
Michigan State Police Fire Marshal Division	BOCA *Basic Fire Prevention Code*/1981 edition as amended
State of Michigan Department of Social Services Division of Adult Foster Care Licensing	Same as State Fire Marshal (see Act. No. 218, 1979, Section 10 (2) of the Michigan Compiled Laws)

At this time, it appears the two State agencies responsible for regulating this occupancy were the Department of Social Services and the Department of State Police, Fire Marshal Division.

In 1975, the State of Michigan became one of the first States in the Nation to enact specific regulations for board and care occupancies. Under the classification of adult foster care facilities, the State began issuing provisional licenses to exiting board and care facilities in early 1975. As this new regulatory program developed, periodic inspections were initiated to ensure compliance with fire safety, sanitation, and supervision mandates in the new laws. Fire safety specialists in the Department

of Social Services conducted many of these inspections. Under 1979 revisions to the laws, all adult foster care facilities are required to be inspected and certified in compliance with fire and life safety regulations by the Division of State Fire Marshal prior to licensure or renewal.

The State regulations explicitly superseded local authority. Although local jurisdictions could continue to inspect board and care facilities in their communities, they could not enforce their local fire and life safety regulations. Consequently, Detroit officials compiled the inspection records for all adult foster care facilities they had previously inspected and sent them to the State Department of Social Services for follow-up.

The following is a brief outline of the regulatory history of the facility beginning with its conversion from a two-family dwelling to a rooming house in 1969:

- 1969 – City of Detroit issues certificate of use and occupancy for rooming house at 88-90 Pingree Street.
- February 1975 – State Department of Social Services (DSS) begins regulating adult foster care facilities and issues a provisional license to Mid-City Living Quarters which later became Nu-Way Development Center; DSS performed regular health and safety inspections during this period.
- December 1976 – DSS declines to renew Mid-City's license due to health, safety, and supervision deficiencies noted during inspections, some of which were precipitated by complaints.
- July 1978 – DSS receives a preliminary injunction supporting the summary suspension of Nu-Way Development Center's adult foster care license; DSS social workers visit the residents of 88-90 Pingree Street and offer relocation services; all residents refuse this assistance.
- August 1979 – A permanent injunction is issued in Wayne County Circuit Court restraining Nu-Way Development Center from operating an adult foster care facility; DSS involvement with the facility ceases and regulatory authority reverts to the city.
- 1988 – Last inspection performed by city's Building and Safety Engineering Department indicates that the third floor was being occupied in violation of the building's established legal use; the case was referred for legal action, but was never prosecuted.

The Fire Marshal Division of the Detroit Fire Department conducted annual inspections of 88-90 Pingree Street. In 1988, 1989, and 1990, city fire inspectors noted significant fire and life safety deficiencies and referred these violations to the building department with the notation that the facility was probably being operated as an unlicensed adult foster care facility. Like other such violations, these were referred to the State Department of Social Services for follow-up action.

Although many or most of the fire safety deficiencies noted in previous inspections had not been corrected, a city fire inspector noted no violations when the building was inspected in 1991, the last inspection prior to the fire. Although some actions were taken, the issues were not fully resolved.

Different levels of government and different agencies at each level had varying involvements in attempting to bring the building into compliance. Charges of involuntary manslaughter are pending against the owner/operator based upon her failure to comply with the 1979 permanent injunction and failure to comply with repeated notices of fire safety violations. It is generally considered to be the responsibility of the building owner and/or operator to provide and maintain safe conditions for building occupants, without regard to the efforts or failures of regulatory agencies to enforce code requirements.

New Regulatory Programs – In March 1991, in response to situations like Nu-Way Development Center, the Department of Social Services was given the authority to relocate occupants of adult foster care facilities whose licenses were revoked even if the residents refused these services. This authority did not extend to facilities whose licenses lapsed or were voluntarily surrendered.

Since the Pingree Street fire, the City of Detroit has enacted new regulations for adult board and care facilities. These amendments to the city building code would require all new and existing adult foster care facilities with two or more unrelated incidents to comply with BOCA *National Building Code*/1990 requirements for Use Group I-1 (board and care) occupancies with a few minor amendments. These changes to the local building code must be approved by the State of Michigan before they can take effect.

Meanwhile, the State of Michigan has been holding hearings on adult foster care licensing since shortly before the fire and is expected to adopt similar, although less stringent, requirements for application Statewide.

ANALYSIS

Building features, such as combustible interior finish, voids in floor and wall assemblies, open stairways contributed to the spread of the fire. Although occupants were exposed to many cues that a significant fire was occurring, many appeared to have misinterpreted or underestimated the significance of these indicators. Without an emergency plan and regular fire drills, occupants were not prepared to evacuate promptly, which was complicated further by the lack of two independent, remote exits from each floor. Therefore, notwithstanding the other fire safety deficiencies found, the lack of an emergency plan and the failure to conduct regular fire drills appear to be the primary factors in the large loss of life in this fire. The most significant failure may be the failure of the occupants to react to the situation and quickly evacuate the building.

To understand how an emergency plan could have produced a more effective occupant response, it is important to understand the factors that may have influenced the behavior of the victims of this fire.

Individual Characteristics – It was clear that most of the occupants had definite mental and physical limitations, including advanced age, which predictably limited their abilities to escape in the event of fire. Social workers, who were familiar with the occupants and the occupancy, confirmed that most of the occupants had originally been referred by State agencies to this or other facilities owned by the same operator. They were referred to this type of facility because of their diminished mental capacities caused by mental retardation, manic-depressive illness, schizophrenia, and other dissociative disorders. Interviews with survivors indicated that, while they were capable of understanding their environment, they had sufficient difficulty performing basic life skills that they could be anticipated to have difficulty acting in the event of fire. Of the survivors, only one, Mr. Gregory, had no history of mental problems and had taken up residence at the Pingree Street board and care facility due to other medical problems. None of the victims showed signs of alcohol intoxication at the time of death. However, one fire department investigator who interviewed Mr. Fluckes at the fire scene, reported that he detected the odor of an alcoholic beverage on Mr. Fluckes' person.

Group Characteristics – The residents were a relatively stable, permanent population, with no formal structure or organization. Although some had lived together longer than others, most had lived there long enough to be quite familiar with the other occupants and the building.

One victim, Michael Turner, had moved into the house just four days before the fire. All of the other residents had lived there for periods ranging from 3 months to more than 20 years.

Each of the residents was encouraged to take responsibility for his or her own needs and occasionally performed tasks for the good of the group, such as setting the table for meals, doing basic household chores, and summoning other residents at mealtimes. No one was assigned permanent duties within the group. The caretaker was the only clearly defined leader in the group at any given time.

Caretakers were assigned to three shifts (day, evening, and night) and were responsible for cooking meals, assisting residents with basic life skills, seeing that residents took their prescribed medications, overseeing social activities, and maintaining a modicum of discipline and order within the group. The caretakers had no formal training or instruction in social services or allied health and their shift schedule and difficult working conditions contributed to a relatively high turnover rate. As a result, the caretakers may not have been intimately familiar with the histories, skills, and limitations of all of the residents.

Building Characteristics – The building characteristics were described in detail earlier. The features which contributed most to the outcome of this fire were the open stairways, combustible interior finish, and voids in walls and ceilings. The following building fire safety deficiencies were also noted during this investigation:

- Structural elements did not meet minimum standards for fire-resistance.
- Combustible interior wall finishes with high flame spread ratings were used throughout corridors and common areas.
- No automatic sprinkler system.
- No standpipe or hose system.
- No automatic or manual fire protective signaling system.
- No single- or multiple-station smoke detectors in sleeping rooms (smoke detectors were only provided in corridors on each floor near the stairways).
- Inadequate number of exits.
- Inadequate exit access corridor width, and
- No exit enclosure or protected egress path.

Such a preponderance of building fire safety deficiencies would present serious life safety hazards even to well-trained occupants, let alone untrained occupants with mental disabilities.

Fire Characteristics – This early morning fire would have been relatively unspectacular if detected earlier and suppressed more effectively while it still involved only a small area in the kitchen. Although it probably involved a relatively small amount of fuel initially, it quickly spread to nearby combustibles and interior finish materials. None of these fuels is believed to have possessed unusually severe fire hazards or toxic potencies.

Given the relative abundance of fuel, the fire only required sufficient oxygen to continue its growth and spread. Once the window on the west side of the room of origin broke, fire growth was relatively unrestricted. Windows in many other rooms had been left open for ventilation. As building occupants fled, they left interior and exterior doors open. These conditions provided a fresh air sup-

ply and a route of spread for fire and smoke. All of the survivors interviewed reported encountering smoke during their evacuations.

The route of fire spread, after the kitchen reached flashover, primarily followed the paths provided by the open doors. However, voids in walls and ceilings also provided avenues for smoke and fire to spread.

OCCUPANT BEHAVIORS

The reported occupant responses are consistent with those observed and reported in similar fires.[7] Some type of response is usually initiated when occupants receive cues or warning signals that a fire is occurring. When the early cues and warning signals about a fire are ambiguous or unrecognized, such as strange noises or odors, the occupant will usually investigate to find their source, like Mr. Fluckes and Mr. Gregory did. Once it is determined that a fire is actually occurring, based on less ambiguous signs, such as smoke or the fire itself, responses being to diverge. In multiple-family occupancies, hotels, and similar residential settings, occupants are likely to take time to dress either before or after investigating. Again, all of the victims of this fire except one was reported to have fully or partially dressed, as did a number of the survivors. This appears strongly related to the expectation that they would encounter other occupants in the process of their subsequent actions.[8] Generally, the decision to evacuate a building is arrived at only when an occupant has determined that it is unsafe to remain in the building. Apparently, the survivors interpreted the significance of the alerting cues differently and more urgently than the victims.

According to Wood (1990), the variables which are most likely to influence the decision to evacuate are (in descending order of importance):

- ***Smoke Spread*** – Occupants are more likely to respond when smoke spread is extensive.
- ***Occupancy*** – Occupants are more likely to evacuate in a home environment as opposed to a work environment.
- ***Previous fire involvement*** – People who have experienced previous fires are more likely to evacuate than others who have not.
- ***Gender*** – Women are more likely to evacuate than men.
- ***Age*** – Younger people are more likely to evacuate than older people.
- ***Training*** – Untrained people are likely to leave sooner than those who have received some firefighting training.
- ***Building familiarity*** – People completely familiar with a building are more likely to leave than those who are unfamiliar with it.
- ***Presence of Any Smoke*** – People are more likely to leave when smoke is present than in a situation where it is not.[9]

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[7] P. G. Wood, "A Survey of Behaviour in Fires," and D. Canter, "An Overview of Human Behaviour in Fires," in D. Canter, ed., *Fires and Human Behavior*, 2nd ed., London: David Fulton Publishers, 1990.

[8] D. Canter, J. Breaux, and J. Sime, "Domestic, Multiple Occupancy, and Hospital Fires," in *Fires and Human Behaviour*, 2nd ed., 1990, p. 129.

Although some of the victims did attempt to evacuate after having taken other actions first, many never made it out of their rooms. By the time many occupants began to clearly perceive the threat, apparently they found themselves unable to escape due to the worsening fire and smoke conditions in the stairways and corridors. Some of the occupants attempted to seek refuge with other victims or reach windows to signal for help, but they were unable to escape before being overcome by smoke.

Studies in the area of board and care fire safety that were conducted by the National Bureau of Standards (now known as the National Institute of Standards and Technology) in the 1980s suggest that emergency planning and regular fire drills can significantly improve the likelihood that occupants will successfully escape in the event of fire. The work of these investigators was instrumental in the development of criteria for evaluating the evacuation capabilities of residents and staff which now appear in NFPA 101, *Life Safety Code* and NFPA 101M, *Alternative Approaches to Life Safety*.

LESSONS LEARNED

1. **Building and life safety regulations must be strictly followed to ensure adequate egress time.**

   Although smoke detectors were installed in the facility at the time of the fire and were reported by one of the tenants to have operated, other significant fire safety deficiencies contributed to the rapid growth and spread of a fire which claimed ten lives. Early detection represents only part of the equation. Once a fire is detected, means must be provided to evacuate occupants promptly via a protected travel path. The open stairways in this facility were quickly compromised by smoke. The lack of a second protected travel path precluded direct egress. Untenable conditions preventing their escape would have left occupants little alternative but to jump from windows or wait for rescue by the fire department.

   Limiting the installation of combustible interior finish, protecting the means of egress, installing automatic sprinklers, or a combination of other available fire protection alternatives could likely have increased available safe egress time significantly.

2. **All board and care facilities should have up-to-date emergency plans.**

   Emergency plans for board and care occupancies must clearly state the life safety objective to be accomplished and detail the appropriate responses to fires considering the following factors:

   - Building characteristics
   - Number and training of staff
   - Number and capabilities of residents

   Chapter 5 of NFPA 101M, Alternative Approaches to Life Safety is a good tool for evaluating these factors.

   It cannot be assumed that all would have been well even if the building had complied in every respect with the provisions of current building and fire prevention codes requiring built-in protection. The occupants' mental and physical capabilities, lack of adequate trained staff, and absence

[9] P. G. Wood, (1990), pp. 85-86.

of a planned emergency response would likely have presented serious life safety hazards to the occupants even if the fire were smaller or other contributing conditions were minimized.

Plans for evacuating board and care facilities are intended to complement the capabilities of residents, staff, and the built-in protection to ensure a balanced and comprehensive fire protection and life safety environment. Frequently and unfortunately, however, either none are practiced adequately or one aspect is emphasized over the others.

3. Resident and staff training must be conducted to help ensure that all occupants take appropriate actions to escape.

The nature of the physical and mental capabilities of residents is likely to change over time. So too are the number, training, and familiarity of staff members. Practice is intended to ensure not only that everyone is familiar with the plan but prepared to implement it. If deficiencies are noted in practices, such as too few staff members to evacuate the residents needing assistance, additional staff or additional built-in protection should be provided. In this case, only one staff member was present. By delaying to fight the fire, he substantially delayed the evacuation. Despite his best efforts to alert all of the facility's occupants, he was only successful in encouraging five residents to leave promptly enough to save themselves.

4. Fire code officials should recognize and emphasize the value of emergency planning and preparedness measures.

Fire code officials traditionally focus a great deal of attention on the value of installed fire protection. Although building occupants are often assumed to exhibit uncontrolled or, at best, non-adaptive responses to fire, they frequently do respond appropriately. The fire record is replete with case studies of effective human response, indicating that adaptive, altruistic, and role motivated responses are the norm.

Fire safety training has been demonstrated to produce more effective responses. Occupants who are prepared for a fire, who know what to expect when one occurs, and what to do to protect themselves are apt to have a higher expectation of successfully evacuating, and therefore, would be more likely to try to evacuate. As described above, both staff training and protection systems are recommended, as is this fourth critical element – emergency planning and preparedness.

5. Fire safety inspections and violation notices are legal proceedings which must be pursued to their logical, legal conclusion.

The courts have ruled repeatedly that once a fire safety inspection is performed, the inspection authority incurs a special obligation to the occupants of that building to pursue every available legal remedy to compel compliance with safety standards.

Regardless which agency one holds responsible for the regulation and inspection of the Nu-Way Development Center, it is clear by the continued citation of violations by various authorities and the continued operation of the facility over a period of nearly 15 years despite those conditions, that the available procedural remedies were not diligently pursued. Besides failing to prevent this tragedy, their actions have exposed both city and State agencies to unnecessary complications in regard to pending civil litigation.

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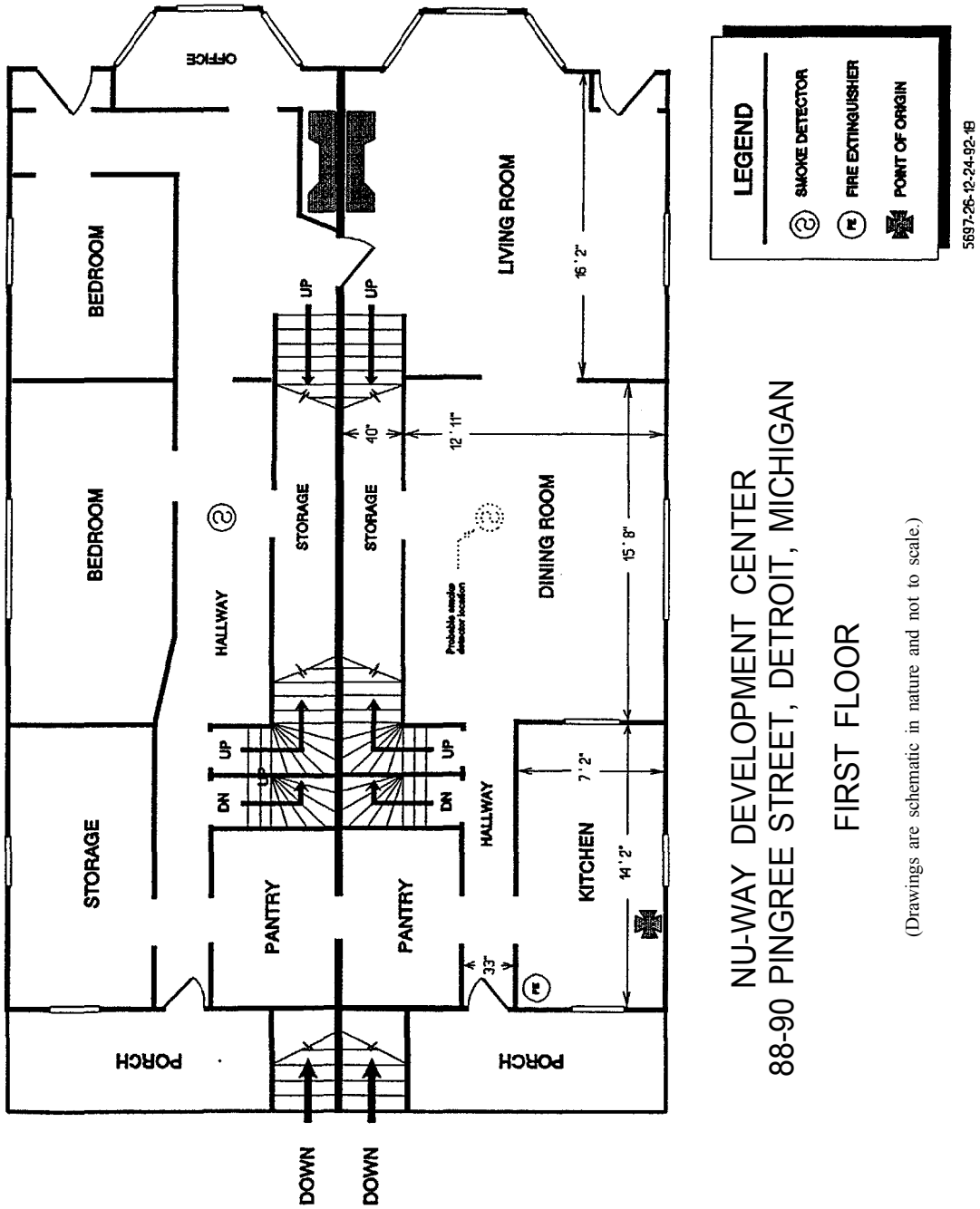
APPENDIX A

Floor Plans and Area Map

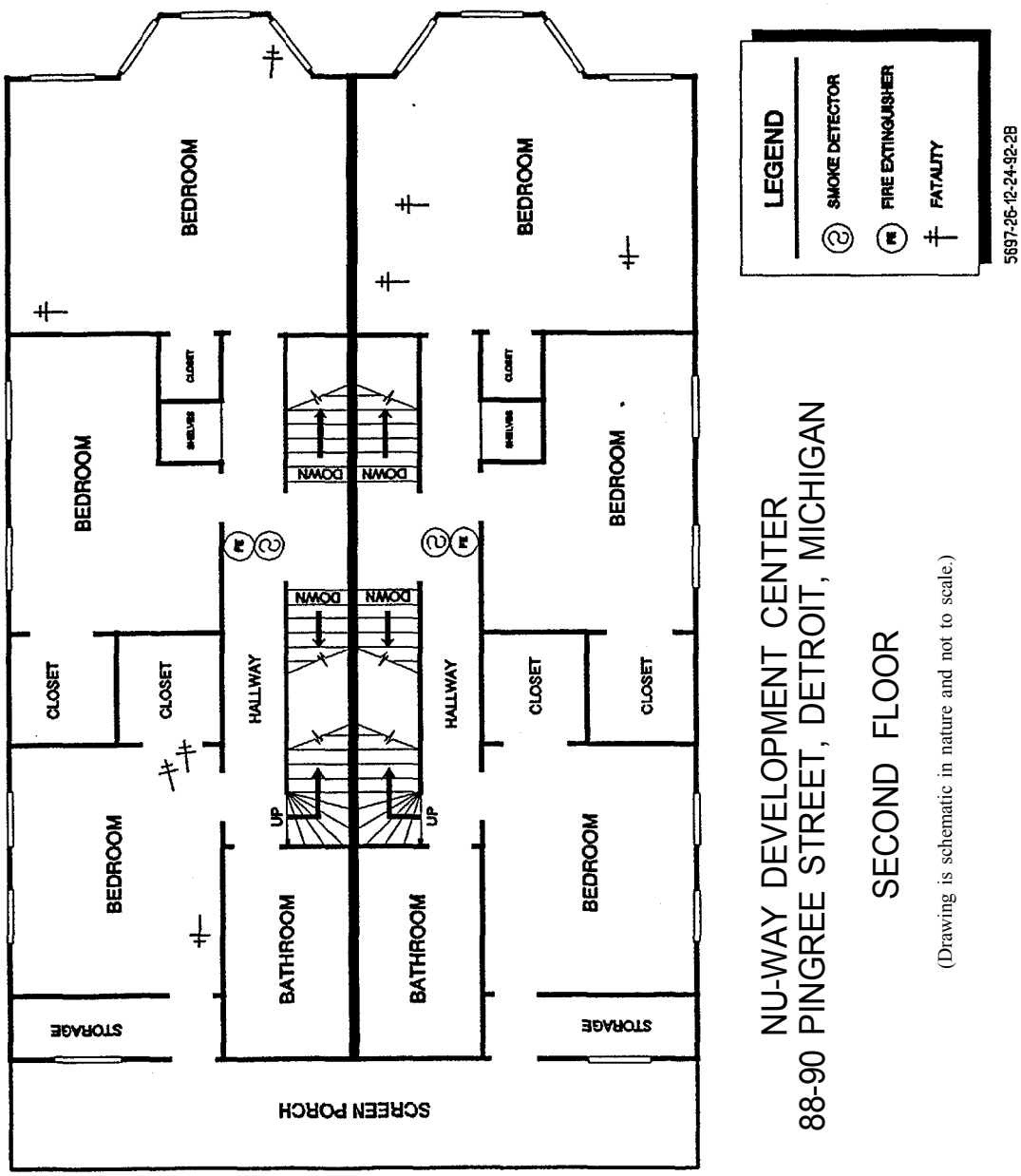


NU-WAY DEVELOPMENT CENTER
88-90 PINGREE STREET, DETROIT, MICHIGAN

FIRST FLOOR

(Drawings are schematic in nature and not to scale.)

Appendix A (continued)

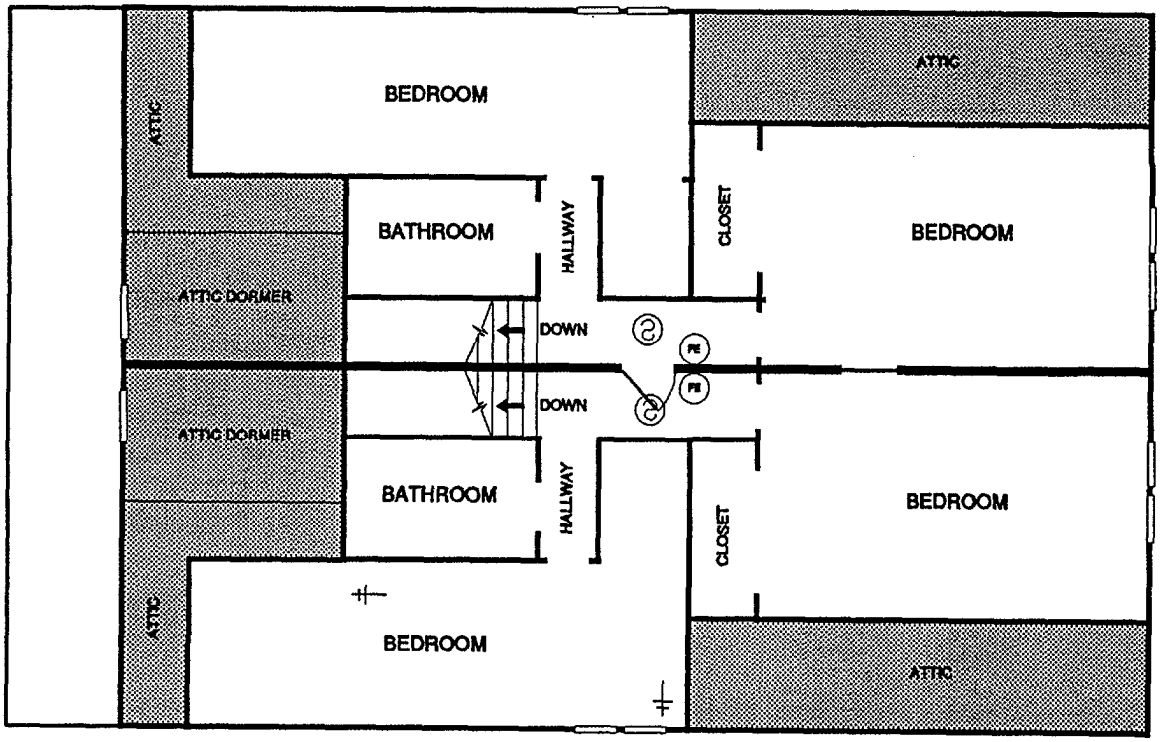


NU-WAY DEVELOPMENT CENTER
88-90 PINGREE STREET, DETROIT, MICHIGAN

SECOND FLOOR

(Drawing is schematic in nature and not to scale.)

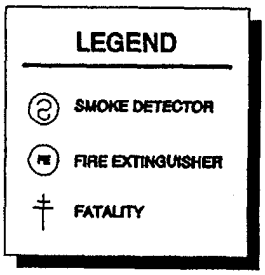
Appendix A (continued)



NU-WAY DEVELOPMENT CENTER
88-90 PINGREE STREET, DETROIT, MICHIGAN

THIRD FLOOR

(Drawing is schematic in nature and not to scale.)



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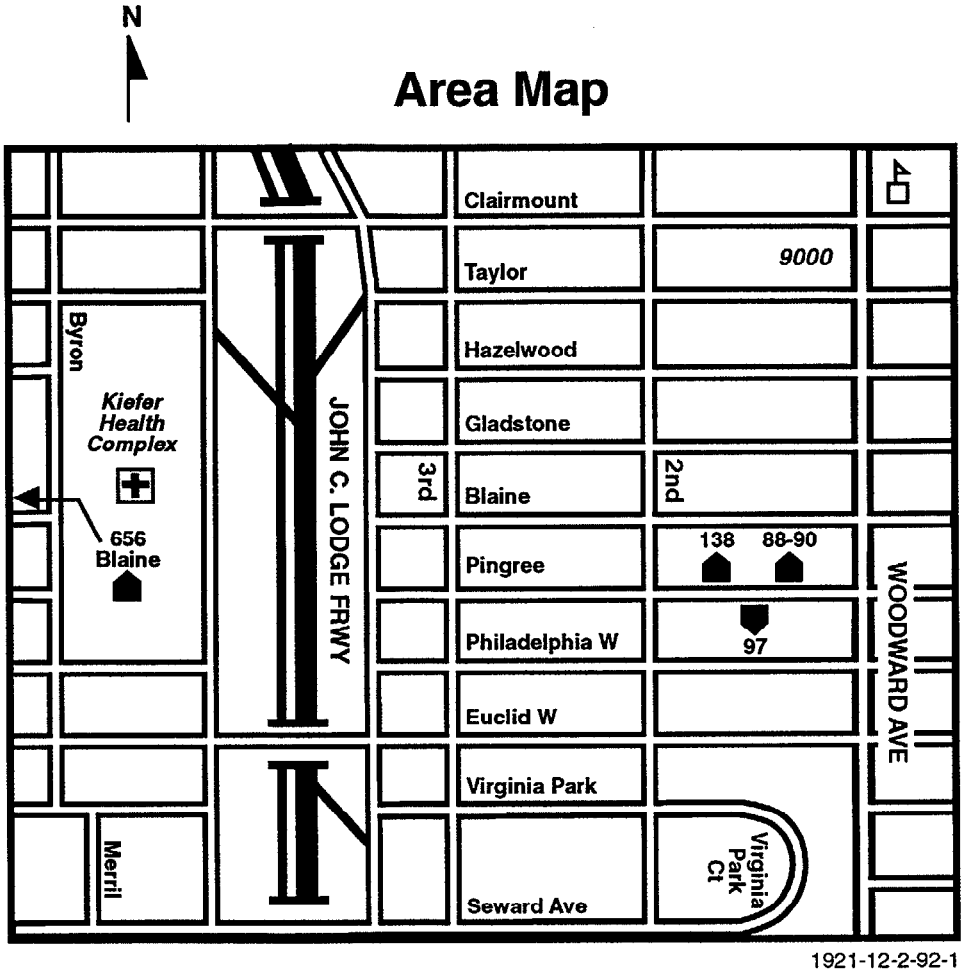
Appendix A (continued)



The above map shows locations of other adult board and care facilities operated by the owners of Nu Way Developement Center. Previous fires at two of these houses on Pingree Street involved residents of 88-90 Pingree Street.

APPENDIX B

Detroit Fire Department Investigation Report

Bozich-green-robinson | 12267 | Fatal Fire 92/32-41

Detroit Fire Department -:- Fire Marshal Division Time 0221 M. Box _____ Date 6-2-92 19__

Location	88-90 Pingree
Owner	Janie Nelson B/F/70
Address	16855 Patton 534-9873
Owner	
Address	
Occupant	
Res. Address	
Occupant	
Res. Address	
Occupied as	Adult Foster Care
Firm Name	Nu-Way Developement
Fire Originated	1st floor kitchen
Probable Cause	Careless Discard of Smoking materials
Extended to	Fatal injuries to 10 Occupants

Form C of D—315-CA (8-68)

Lad.						
Min.						
Eng.						
Min.						
Eng.						
Min.						
Eng.					Chief	
Min.					Min.	
Sqd.			Other			
Min.			Min.			

How	¾"	1½"	2½"	3"	S & A	CO_2	P. W.	Before Arrival
Ext.								

	Br.	Fr.	St.	Conc.	B. V.	Cinder Block	No. Stories
Const.	X						3

Ins. Agt. on Bldg.

Ins. Agt. on Conts.

State in detail your investigation of this fire

The fire was discovered by Tyree Fluckes B/M/37 and the Fire Department was notified by an unknown person at 0221 hrs.

The fire originated in combustibles near the stove of the 1st floor kitchen located in the Northwest corner of the dwelling. The fire extended to and throughout the kitchen and then to and throughout the 1st,2nd and 3rd floors of the entire dwelling. (a detailed report of the fire spread is contained in the follow up report submitted by Lt Paul Green and attached to this report) The fire extended to fatal smoke and burn injuries to 10 occupants of the dwelling. All ten victims were dead at the scene. Two other occupants received smoke inhalation injuries and were transported to Ford Hospital for treatment.

T/T Tyree Fluckes B/M/37, night manager of the home. Mr Fluckes stated that he came on duty at 11:00 PM. He last chaceked the kitchen-at about 12:30 AM. There was nothing on the stove and none of the burners were lit. He was in the front livingroom araea of the west side of the home when he heard glass break and the smoke detector activated. He went into the kitchen and observed fire all around the stove area. The fire was coming from the walls at the rear and northside of the stove. He tried to rearch the fire extinguisher located on the window sill of the window at the north side of the stove but was prevented from reaching it because of the flames. He attempted to beat out the flames with his hands and a towel but was unsuccessful. He then went throughout the dwelling notifying the occupants of the fire. He awoke everyone and thought that the occupants were following him out of the building. (a signed statement was taken from Mr Fluckes by the Homicide section.)

T/T Glenn Gregory B/M/47 occupant. He stated that he was an occupant of the 3rd floor of the home. He was awakened by the smoke detector and went down to the 1st

Date of investigation _____ 19____

Time of investigation _____ A. M. / P. M.

Signed

CONTINUED.....

Investigator

Appendix B (continued)

Page 2

State in detail your investigation of this fire

west side of the dwelling. He observed the fire in the kitchen and attempted to cal1 911 but received a busy signal. He made a 2nd attempt to call 911 but, got another busy signal. He went back to the 3rd floor to get his clothes and warned other occupants as he Xxx xxxx went up. He was coming down from the 3rd floor and fell on the stairs dropping his clothes. He then exited the house by the front door of the west side of the dwelling.

Investigation of the scene revealed that the dwelling involved is a brick and frame, three story duplex. There were 17 occupants registered. The dwelling contained 12 bedrooms, seven on the east side and 5 on the west. Most of the occupants had some degree of mental incapacity. The east side of the home was used to house the female occupants with the exception of the 3rd floor where to newest occupant (Herman Holt B/M/53) was housed. The dwelling had been a licensed Adult Foster Care facility but had lost its license to operate in 1978. Since that time the owners of the home had listed the dwelling as a rooming house. The home is insured by Michigan Basic Property for $60,000.00. All the victims were found in bedrooms of the home. # 1,2 and 3 were white males found in the bedroom located on the 2nd floor of the west side,front. all three were heavily sooted by smoke. #4 and 5 were located on the 3rd floor center bedroom, west side. These two victims were heavily charred. #6 and 7 were found in the front bedroom, 2nd floor east. one of these was a female found on the floor under a window and the other was a male found on the floor against the north wall of this room. #8,9 and 10 were females found on the floor of the 2nd floor bedroom,eastside rear. Photos were taken of all the victims as they were located. All victims were removed and transported to the Wayne County Morgue. At the time of this report, none of the victims had been positively identified.

DATE OF INVESTIGATION _____ 19____

TIME OF INVESTIGATION _____ A.M.
P.M.

State in detail your investigation of this fire

The following is a list of occupants known to have been in the dwelling at the time of the fire and were not accounted for as survivors, Steven Gregaroff w/M/62 dob 6-13-29. Delroy Johnson B/M/52 dob 2-3-40. Viola Mull W/F/61 dob 10-20-30.Geraldine Hammond W/F/66 dob 12-14-25.Juanita Maxwell B/F/57 dob 8-8-34. Richard Pascoe W/M/89. Joe Shinske W/M/68. Michael Turner w/M/46. Herman Holt B/M/53 dob 6-5-38. Theresa Hunter B/F/74.According to employees of the home, the above occupants were assigned to the following rooms, Steve Gregaroff, Joe Shinske and Richard Pascoe were in the front bedroom,2nd floor west. Delroy Johnson and Michael Turner 3rd floor west rear. Juanita Maxwell,Viola Mull and ,Geraldine Hammond, front bedroom,2nd floor east. Theresa Hunter rear bedroom 2nd floor east. Herman Holt, 3rd floor east.

In view of the information received, the Writers believe that this fire was accidental in nature and originated in the careless disposal of smoking materials. This investigation will be continued.....

Date of investigation _____ **19**____

Time of investigation _____ { **A. M.** / **P. M.**

Signed _____
Investigator

APPENDIX C

Revised Board and Care Facility Regulations City of Detroit

NOTICE OF ENACTMENT OF ORDINANCE TO: THE CITIZENS OF DETROIT, MICHIGAN

On October 7, 1992, the City Council adopted the following ordinance:

ORDINANCE NO. 31-92
CHAPTER 9
Article 2
To Change Requirements for Use Group I-1 Facilities

AN ORDINANCE to amend Chapter 8, Article 2 of the 1984 Detroit City Code (The Official Building Code of the City of Detroit) by adding Sections 307.2, 813.4.2, 1002.6, and 1021.2 requiring that they be for compensation, that they be for two (2) or more individuals unrelated by blood, adoption, marriage or without legal custodial arrangement, and that the include physical limitations and a reason for residency; to eliminate the definition of a Use Group I-1 to include such facilities with five (5) or less occupants; to provide that Use Group I-1 facilities shall be equipped with approved panic hardware; to provide that Use Group I-1 (fire areas with not more than two (2) stories above grade and having an occupant load of less than ten (10) shall be exempt from the requirement of an automatic fire suppression system with written approval from the Buildings and Safety Engineering Department and from the fire department pursuant to rules to be subsequently promulgated and adopted; and to provide that a portable fire extinguisher is to be installed on each occupied floor and in the basement of Group I-1 facilities.

IT IS HEREBY ORDAINED BY THE PEOPLE OF THE CITY OF DETROIT THAT:

Section 1. Chapter 9, Article 2 of the 1984 Detroit City Code (The Official Building Code of the City of Detroit) be amended by amending Sections 307.2, 813.4.2, 1002.6, and 1021.2 to read as follows:

Article 3
Use Group Classification
Section 307.0 Use Group 1, Institutional Uses

307.2 Use Group I-1: This use group shall include buildings and structures, or parts thereof, which house for compensation two (2) or more individuals unrelated by blood, adoption, marriage, or without a legal custodial arrangement, and who, because of age, mental disabilities, physical limitations, or other reasons, must live in a supervised environment but who are physically capable of responding to an emergency situation without personal assistance. Where accommodating persons of the above description, the following types of facilities shall be classified as I-1 facilities; board and

care facilities, half-way houses, group homes, social rehabilitation facilities, alcohol and drug centers and convalescent facilities.

Article 8
Means of Egress
Section 813.0 Means of Egress Doorways

813.4.2 Panic Hardware: All doors equipped with latching devices either in buildings of Use Groups A and E or portions of buildings used for assembly or educational purposes and serving rooms or space with an occupant load greater than one hundred (100), or in facilities of Use Group I-1 shall be equipped with approved panic hardware. Acceptable panic hardware shall be a door latching assembly incorporating a device which causes the door latch to release and the leaf to open when a force of fifteen (15) pounds (73 N) is applied in the direction of egress to a bar or panel, the activating portion of which extends not less than one-half of the width of the door leaf, and is applied at a height greater than thirty (30) inches (762 mm) but less than forty-four (44) inches (1118 mm) above the floor. The force shall be applied at the lock side of the door or thirty (30) inches (762 mm) from the hinged side, whichever is farther from the hinge. Where fire door assemblies are required to have panic hardware, approved fire exit hardware shall be used.

Article 10
Fire Protection Systems
Section 1002.0 Fire Suppression Systems

1002.6 Use Group I-1: An automatic fire suppression system shall be provided throughout all buildings with a Use Group I-1 fire area.

Exceptions:

1. Use Group I-2 hospitals of Type 1 construction not over five (5) stories and seventy-five (75) feet (22860 mm) in height, hospitals of Type 2A construction not over three (3) stories and forty-five (45) feet (13716 mm) in height, and hospitals of Type 2B construction not over 1 story in height.
2. Use Group I-2 nursing homes of Type 1, 2A, or 2B construction not over 1 story in height.
3. In buildings where Use Group I-2 child care facilities are located in the first story above grade and which accommodate one hundred (100) children or less with each room having an exit directly to the outside.
4. Use Group I-1 fire areas not more than two (2) stories above grade and having an occupant load less than ten (10) with the written approval from the Buildings and Safety Engineering Department and from the fire department of an adequate alternative evacuation plan pursuant to rules to be subsequently promulgated and adopted by these departments.

Section 1021.0 Fire Extinguishers

1021.2 Where required: A portable fire extinguisher shall be installed in the following locations in accordance with NFPA 10 listed in Appendix A:

1. In all buildings of Use Group A-1, A-2, A-3, E, I-2, R-1, or H;

2. In all areas containing commercial kitchen exhaust hood systems;
3. In all areas where fuel is dispensed;
4. In all areas where a flammable or combustible liquid is used in the operation of spraying, coating, or dipping;
5. In all buildings of Use Group I-3 at staff locations; access to portable extinguisher shall be permitted to be locked;
6. On each completed floor of a building under construction, other than buildings of Use Group R-3;
7. In any laboratory, shop, or other room used for similar purposes;
8. Where required by the fire prevention code listed in Appendix A; and,
9. On each occupied floor and in the basement of Use Group I-1 facilities.

Section 2. All ordinances or parts of ordinances in conflict herewith be and the same are herewith repealed.

Section 3. This ordinance is declared necessary for the preservation of the public peace, health, safety, and welfare of the People of the City of Detroit and shall be effective one hundred and twenty (120) days after the date of enactment.

(JCC P.	October 7, 1992)
Passed:	October 7, 1992
Approved:	October 14, 1992
Published:	October 25, 1992
Effective:	February 11, 1993

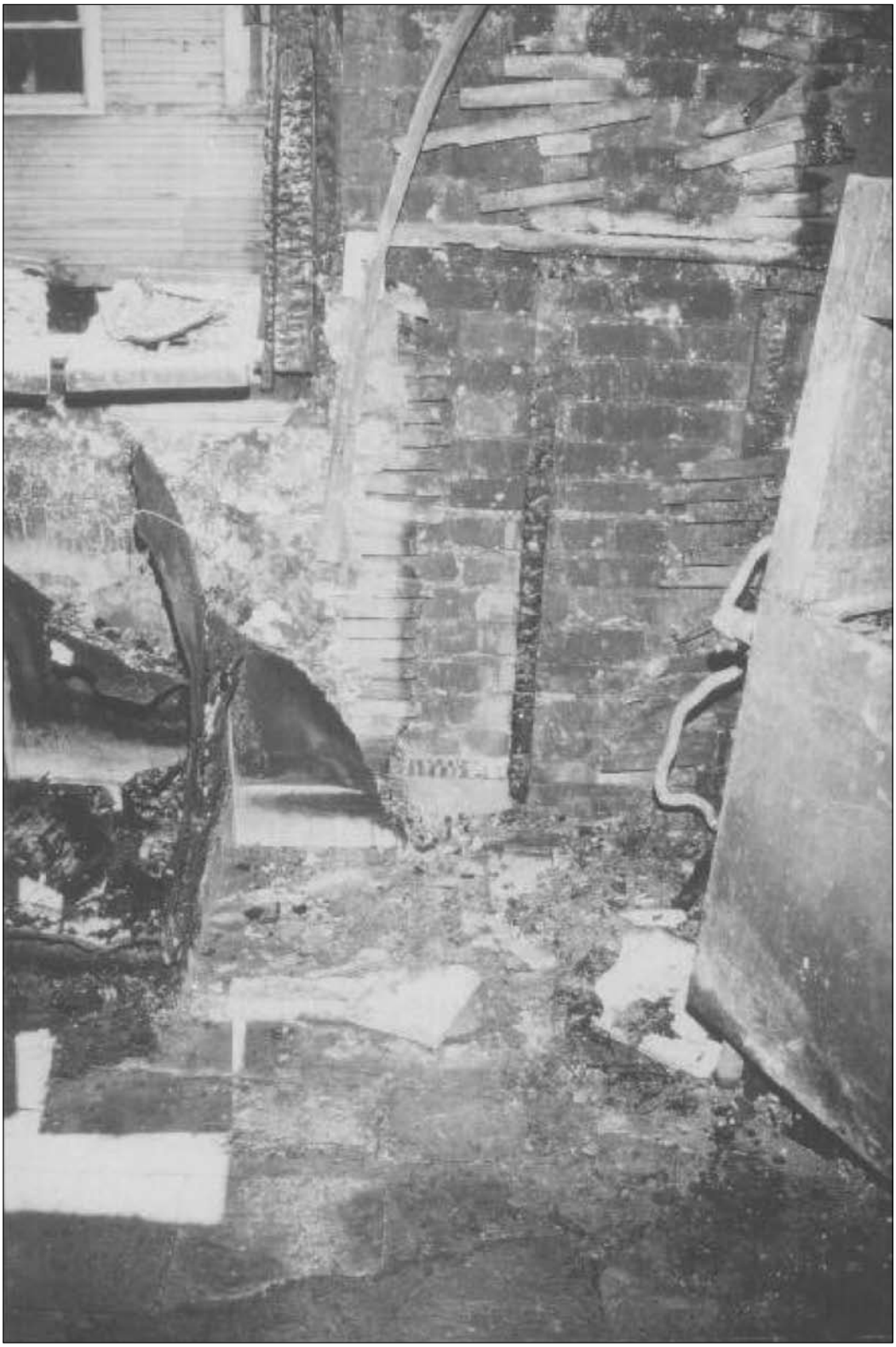
JAMES H. BRADLEY
City Clerk

APPENDIX D

Fire Scene Photographs

Exterior of 88-90 Pingree Street (structure faces south). Firefighters found fire showing from the first floor west and front, with heavy smoke showing from the second and third floors.

Appendix D (continued)



Point of origin in kitchen showing evidence of low burn near the baseboard.

Appendix D (continued)

Close-up of the point of origin. A small triangular section of the particle board installed over the plaster and lath remains in the lower center portion of the picture.

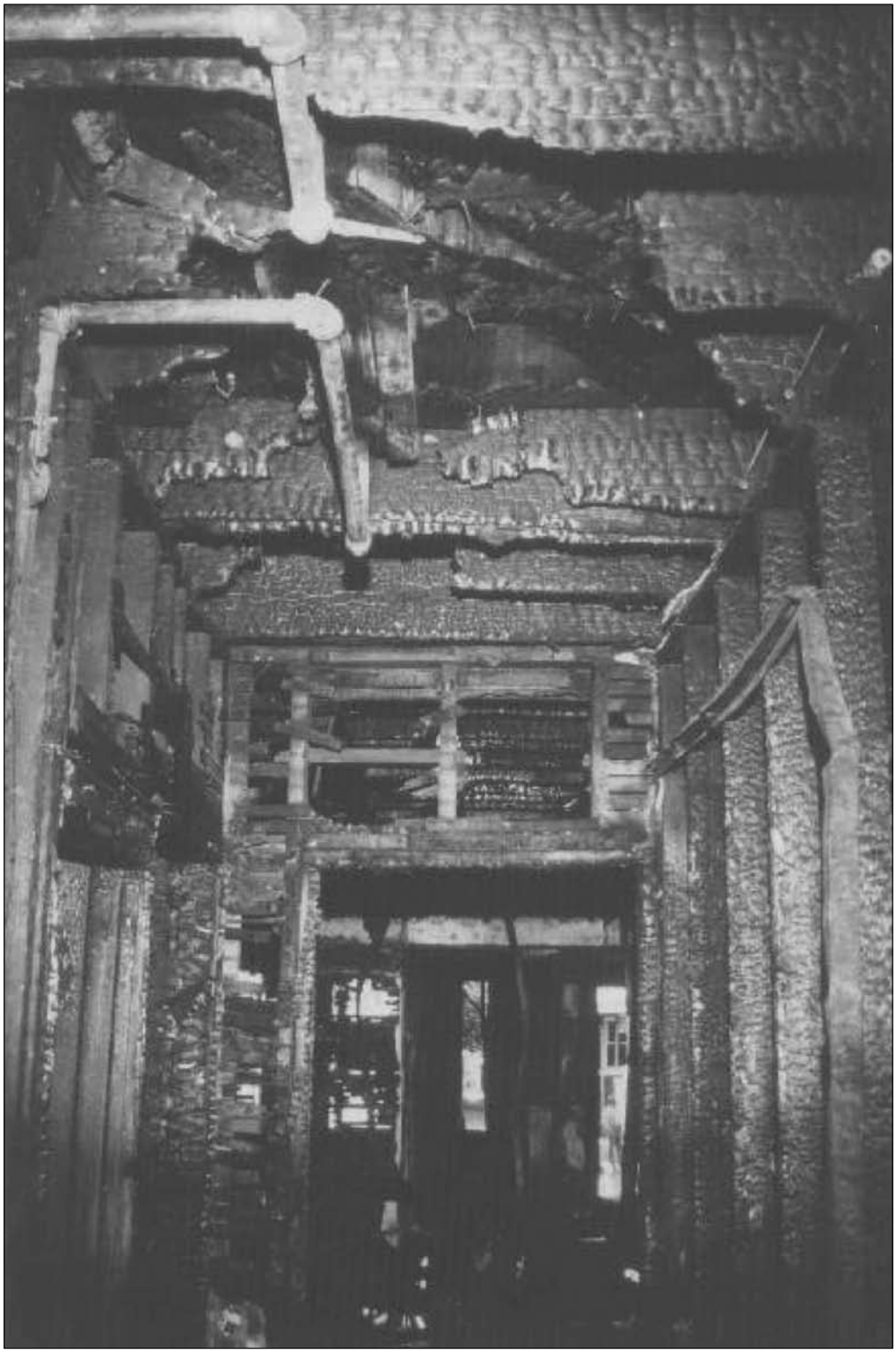
Appendix D (continued)

View from the kitchen looking south through the pass-through window into the dining room. The fire was observed through this window by Mr. Fluckes and Mr. Gregory.

Appendix D (continued)

View looking south down the rear corridor adjacent to the kitchen showing heavy damage to the wall studs near the floor level. Also visible through the door opening at the south end of the corridor is heavy fire damage in the dining room.

Appendix D (continued)

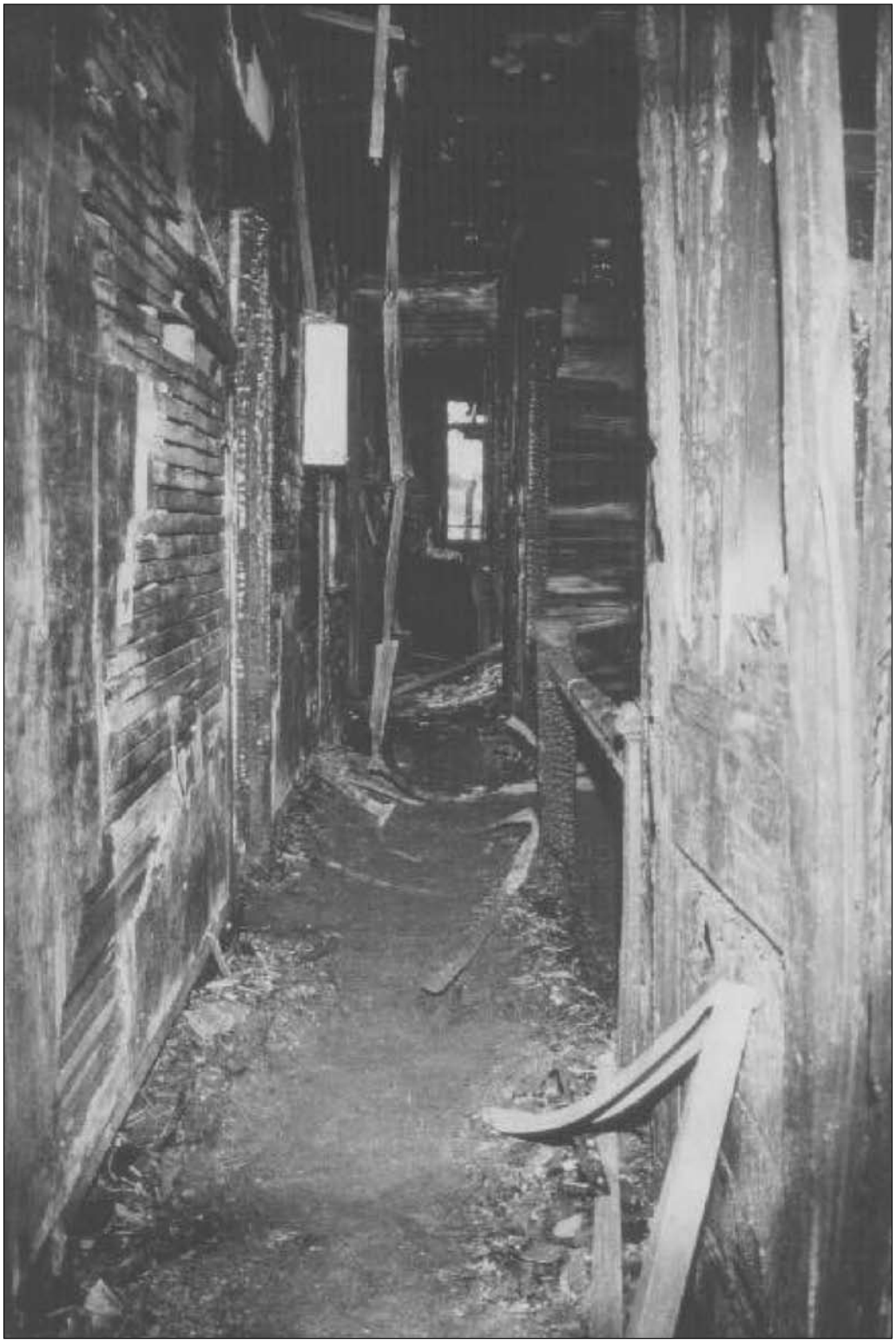


Close-up of fire damage to the ceiling area in rear corridor next to kitchen. Pipe penetrations were one avenue of fire and smoke spread to the second floor.

Appendix D (continued)

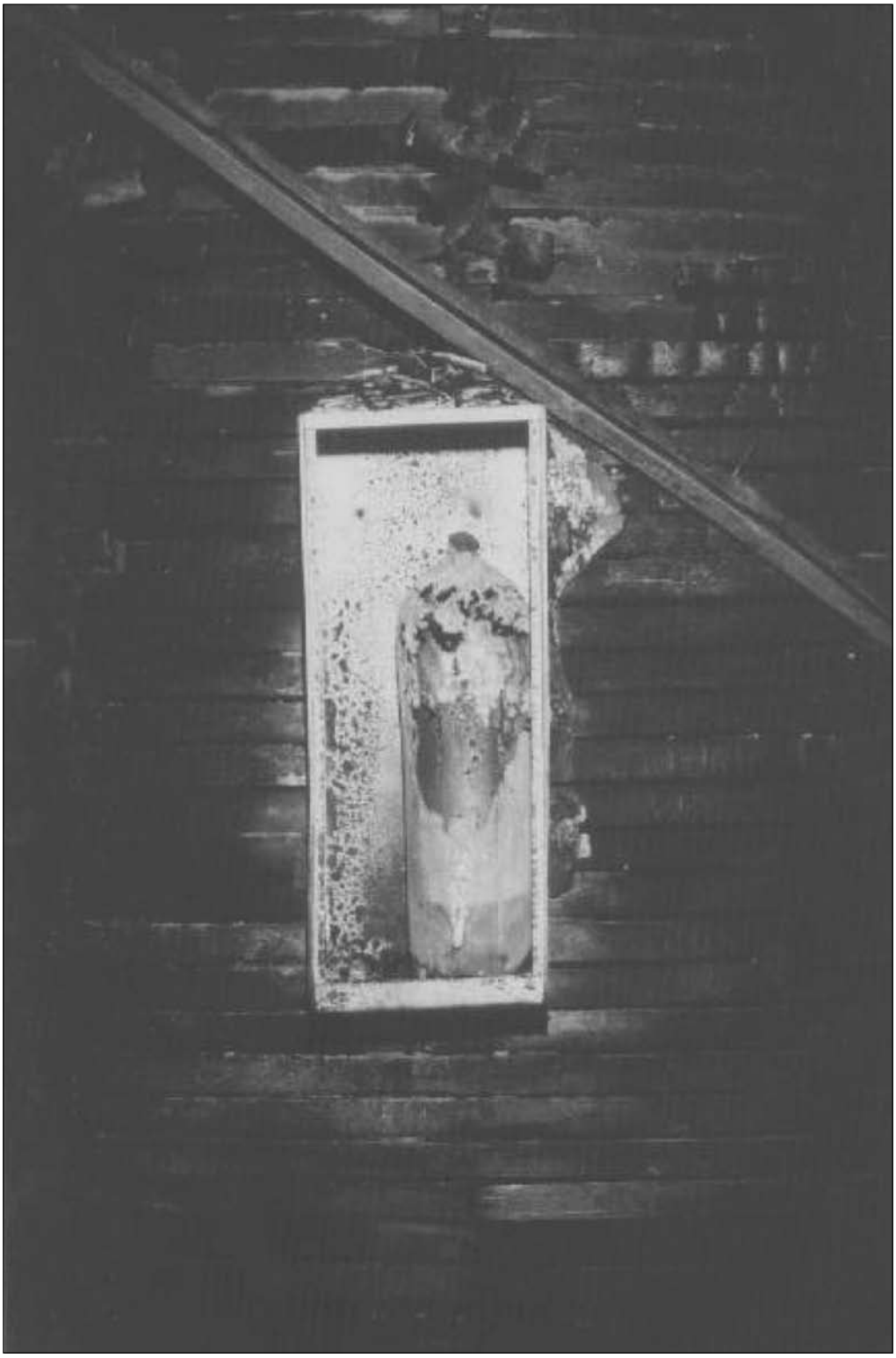
West stairway leading from the first floor living room to the second floor shows extensive charring to the stair risers, evidence of intense radiant heat exposure as the fire spread vertically cutting off the egress path.

Appendix D (continued)



Second floor west corridor looking south shows the heavy fire damage resulting from vertical fire spread via the front stairway.

Appendix D (continued)



The remains of a melted aluminum fire extinguisher shell in a cabinet on the second floor west side.

Appendix D (continued)

West side rear stairway looking down from second floor. Extensive charring and plaster spalling provide evidence of the fire spread which cutoff access to both the front and rear stairways.

Appendix D (continued)

View of west side stairway leading to the third floor. Once again, heavy fire damage to the door lintel and framing indicate that fire spread via this route was extensive.

Appendix D (continued)

View of east side front stairway looking down from second floor. Although heat damage is slightly less intense here, evidence of extensive heat and smoke spread is clear.