This study was funded by a Grant from the Four Corners Regional Commission (Grant FCRC No. 311-800-020-1).

THE REPORT OF THE GOVERNOR'S

COMMISSION ON FIRESAFETY CODES

MARCH 11, 1981

Any statements of opinion and/or recommendations are those of the authors and do not necessarily reflect the official opinion of the Four Corners Regional Commission or any of its members. Additional funding was provided by the Federal Emergency Management Agency.

Printed as a public service by
NEVADA INDEPENDENT INSURANCE AGENTS

March 11, 1981

The Honorable Robert List, Governor
State of Nevada
Capitol Complex
Carson City, NV. 89710

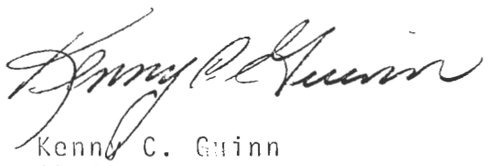
Dear Governor List:

Transmitted herewith, pursuant to your Executive Order of November 24, 1980, is the final report of your Commission on Firesafety Codes. With the issuance of this report the Commission has completed your charge.

In our effort to address the many technical and administrative problems associated with code promulgation and enforcement the Commission participated in eight meetings in Las Vegas. You will find this report to be extremely comprehensive within the time parameters available. However, because of the magnitude of the many problem areas considered by this volunteer group, we have not been able to provide all encompassing recommendations or solutions. Ultimately the many ramifications of the areas addressed by the Commission will require an ongoing effort by a standing body as advocated within the report.

You are to be commended for your formation and support of the Commission on Firesafety Codes. The Commission worked diligently in the discharge of your Executive Order and deserve appreciation from the people of the State of Nevada for their effort. I personally appreciate the opportunity to have been a part of this endeavor. I feel that this document will serve as a guideline in years to come for other States and Nations as they too attempt to cope with the many problems of public safety.

Sincerely Yours,



Kenny C. Guinn
Chairman
Governor's Commission on
Firesafety Codes

KCG/kk

GOVERNOR'S COMMISSION ON FIRESAFETY CODES

CHAIRMAN

DR. KENNY C. GUINN,	Las Vegas Financial Executive

MEMBERS

JOHN G. DEGENKOLB,	Glendale, California Fire Protection Engineer
THALIA DONDERO,	Clark County Commission Member
BILL FARR,	Washoe County Commission Chairman
JASPER S. HAWKINS,	Phoenix, Arizona Architect
TOM HUDDLESTON,	Nevada State Fire Marshal
ROY L. PARRISH,	Clark County Fire Chief
PERRY C. TYREE,	Colorado Springs, Colorado Regional Building Official
ROBERT D. WEBER,	Clark County Director of Building and Zoning

STAFF

DENNIS R. COLLING

KAREN KEPHART

TABLE OF CONTENTS

APPENDIXES

SCOPE OF CHARGE AND MEMBERSHIP OF COMMISSION

The Governor's Commission on Firesafety Codes was established by the Honorable Robert List, Governor of the State of Nevada on November 24, 1980 by executive order. (Appendix I) The Governor's charge to the Commission was to conduct a thorough review of all conditions and regulations pertaining to firesafety codes of the State of Nevada regulating the construction of high-rise buildings and public assembly occupancies within the State of Nevada for their adequacy and effectiveness in protecting the public. It was mandated that this review should be extended to evaluation of codes and regulations governing the same classifications of occupancies constructed prior to adoption of the current State Fire Marshal's codes and regulations. (Appendix II) The Commission was directed to deliver its findings and recommendations to the Governor no later than March 1, 1981.

The Commission, which consisted of nine members, included a representative of the private business sector, State and local officials, elected public representatives, and experts in the field of fire and building codes. Dr. Kenny Guinn, Las Vegas financial executive, was appointed chairman of the Commission. Tom Huddleston, the Nevada State Fire Marshal, Roy Parrish, Clark County Fire Chief, and Robert Weber, Clark County Director of Building and Zoning, were the State and local officials appointed to the Commission. Bill Farr, Washoe

County Commission Chairman and Thalia Dondero, Clark County Commission member, were the two elected officials on the Commission. Following a national search, three prominent fire and building code experts were appointed to the Commission. John G. Degenkolb, Glendale, California fire protection engineer, Jasper S. Hawkins, Phoenix architect and Perry Tyree, Colorado Springs Regional Building Official accepted positions on the Commission.

The Commission held its first meeting December 3, 1980. A total of eight meetings were conducted in Las Vegas under the direction of Dr. Kenny Guinn, the chairman of the Commission. Based on the Commission's determination of the Governor's charges, the codes and regulations adopted by the Nevada State Fire Marshal in 1978 were reviewed. In addition, the Commission reviewed the 1979 edition of the Uniform Building Code to see if modification was needed prior to adoption by the Nevada State Fire Marshal. A third area of review was an evaluation of possible methods to improve the lifesafety features of existing high-rise and public assembly occupancies within the State.

CODES AND REGULATIONS ADOPTED BY THE NEVADA STATE FIRE MARSHAL IN 1978

After consideration of available relevant materials, it is the unanimous finding of the Commission that the present code and regulatory structure of Nevada concerning new construction of high-rise buildings is consistent with and more stringent than most codes and regulations in the United States and has been so since 1978.(Appendix III) The various code authorities on the Commission unanimously agree that Nevada's mandatory sprinkler requirement, along with other adopted regulations and codes, clearly substantiate that Nevada is in a place of national leadership in the area of fire and lifesafety protection in new high-rise construction. (Appendix II) The present codes and regulations governing public assembly occupancy spaces in the State of Nevada compare favorably with other leading states throughout the nation with the exception of interior finish requirements. This comparison is supported by the fact that most states base their fire and lifesafety requirements on certain model codes and/or National Fire Protection Association codes. A full range of model codes has been adopted by the Nevada State Fire Marshal to deal with all aspects of fire and lifesafety. However, the Commission as a whole has determined that specific areas in the codes governing public assembly occupancy spaces require improvement and must be dealt with as set forth within the Commission's recommendations.

ANALYSIS OF THE 1979 UNIFORM BUILDING CODE

Pursuant to the Commission's review of the 1979 edition of the Uniform Building Code, the following code changes were submitted by members of the Commission for consideration and distribution nationwide to numerous code authorities including architects, private industry, code writing organizations and code enforcement agencies for comment.

1807 (a) Scope. This section shall apply to all Group B, Division 2 office buildings and Group R, Division 1 occupancies, each having floors used for human occupancy located more than 55 feet or 5 stories above the lowest level of fire department vehicle access. Such buildings shall be provided with an approved automatic sprinkler system in accordance with Section 1807 (c).

1807 (b) Certificate of Occupancy. Add the following sentences. "All such equipment shall be tested quarterly by an approved agency. All lifesafety equipment shall be reset and certified by an approved agency after having been actuated. A log of such tests shall be kept available for inspection by the Fire Department. Testing shall follow procedures developed by the building designer and approved by the Building Official."

1807 (e) Alarm and Communication System. Retain the present sub-section but with (2) modified to be consistent with the present Fire Marshal requirements which refers to an 80 decibel level of sound at all points within the protected property.

]807 (f) Central Control Station. Retain the present sub-section but with further modification as currently in the Fire Marshal requirements which call for the central control station to be separated from the remainder of the building by a 2-hour fire-resistive construction and to have a door directly to the exterior whenever possible.

1807 (h) Delete the present section and substitute a requirement that elevators be installed in compliance with ANSI A17.1-1978 with the 1981 amendments. Then add the following sentence:

"All elevators on all floors shall open into elevator lobbies which are separated from the remainder of the building, including corridors, as is required for corridor construction in Section 3304 (g) and (h)."

1807 (j) Modify (1) by adding at the end of the present sentence "sprinkler operation or power failure."

Modify (3) by changing the figure 0.15 to 0.25 in 3rd line.

Section 3802 (b) 2B Modify to read:

"Every casino, showroom and other assembly room of more than 5,000 square foot area."

EXCEPTION. Churches and theaters having only fixed seating.

Section 3802 (c) Add a new Item B under (1) and redesignate the existing Items B, C and D. The new Item B is to read as follows: "In buildings over two stories in height."

After extended deliberation by the Commission and examination of the limited responses to the Commission's letter dated January 6, 1981.(Appendix IV) This Commission recommends that the Governor direct the Nevada State Fire Marshal to make the following modifications when adopting the 1979 Uniform Building Code which will regulate all new construction.

1807 (a) Scope. This section shall apply to all Group B, Division 2 office buildings and Group R, Division 1 occupancies, each having floors used for human occupancy located more than 55 feet above the lowest level of fire department vehicle access. Such buildings shall be provided with an approved automatic sprinkler system in accordance with Section 1807 (c).

1807 (b) Certificate of Occupancy. Add the following sentences. "All such equipment shall be tested quarterly by an approved agency. All lifesafety equipment shall be reset and certified by an approved agency after having been actuated. A log of such tests shall be kept available for inspection by the Fire Department. Testing shall follow procedures developed by the building designer and approved by the Building Official."

1807 (e) Alarm and Communication System. Retain the present sub-section but with (2) modified to be consistent with the present Fire Marshal requirements which refers to an 80 decibel level of sound at all points within the protected property.

1807 (f) Central Control Station. Retain the present sub-section but with further modification as currently in the Fire Marshal requirements which call for the central control station to be separated from the remainder of the building by a 2-hour fire-resistive construction and to have a door directly to the exterior whenever possible.

1807 (h) Delete the present section and substitute a requirement that elevators be installed in compliance with ANSI A17.1-1978 with the 1979 and 1980 amendments and Section 211.3 of the 1981 amendments. (Appendix V) Then add the following sentence:

"All elevators on all floors shall open into elevator lobbies which are separated from the remainder of the building (Appendix VI) including corridors, as is required for corridor construction in Section 3304 (g) and (h)."

1807 (j) Modify (1) by adding at the end of the present sentence "sprinkler operation or power failure."

Modify (3) by changing the figure 0.15 to 0.25 in 3rd line.

3802 (b) Modify 2B to read:

"Every casino, showroom and other assembly room of more than 5,000 square foot area."

EXCEPTION. Churches and theaters having only fixed seating.

3802 (b) Add a new Item B under (1) and redesignate the existing Items B, C and D. The new Item B is to read as follows: "In buildings over two stories in height."

RETROACTIVE APPLICATIONS

During consideration of methods to improve the fire and lifesafety features of existing high-rise and public assembly occupancies, the Commission reviewed the 1976 Uniform Building Code requirements for updating fire and lifesafety features in existing buildings constructed prior to Nevada's most recent code adoption in 1978. This review revealed Chapter 1 of the 1976 edition of the Uniform Building Code as the only existing legal vehicle to compel the incorporation of retroactive lifesafety features in existing structures. These provisions are only applicable to an existing structure when the value of the additions or alterations exceeds fifty percent (50%) of the value of the existing structure. Thus the provisions are of little or no value in resolving the present problems relating to existing high-rise buildings in Nevada. (Appendix VII)

The Commission considered the retroactive provisions of Chapter 1 of the Uniform Building Code to be too general in nature and therefore the Commission determined that specific requirements must be proposed. With this thought in mind the Commission studied a fire hazard analysis survey of thirty-five (35) high-rise fires occurring during the period of September, 1964 - January, 1975.(Appendix VIII) This survey provided substantial information concerning specific recurring building deficiencies having an adverse affect on fire and lifesafety of both occupants and firefighters. Predicated upon the

information obtained in this analysis and through extensive discussion within the Commission, the Governor's Commission on Firesafety Codes feels the following recommendations must be implemented to develop a reasonable degree of fire and lifesafety in existing buildings.

1. All Group B, Division 2 office buildings and Group R, Division 1 occupancies, each having floors used for human occupancy located more than fifty-five feet (55') above the lowest level of fire department vehicle access shall be sprinklered in each exit corridor with at least one sprinkler head located inside each room over every door opening onto that corridor. (Appendix IX)

2. In assembly occupancies of over five thousand square feet (5,000 sq.ft.) of floor area which can be used for exhibition or display purposes including casinos and showrooms, sprinklers are required. All concealed and occupiable spaces not physically separated by approved fire rated construction from the area required to be sprinklered shall also be sprinklered. EXCEPTION: Churches and theaters having only fixed seating.

3. Open stairways or vertical shafts in buildings three (3) or more stories in height shall be enclosed with protected assemblies or by alternate means providing equivalent fire and lifesafety.

4. Door closers shall be required on doors opening into exit corridors.

5. Emergency lighting shall be required in exit corridors and other integral portions of means of egress essential for safe evacuation of the building in question.

6. Smoke detectors shall be required in sleeping quarters offered in all R1 occupancies (apartments and hotels).

7. One-way voice communication systems shall be required in each sleeping room offered in all high-rise (55') occupancies.

8. Immediate action shall be taken to assure adequate exit facilities.

9. Combustible fiber board interior finishes shall not be allowed in A1, A2 or A2.1 occupancies (assembly occupancies over 300 occupants).

10. Whenever it is found that the corridor is being used to supply air to a guest room or dwelling unit, that use must be discontinued by sealing off the opening. The authority having jurisdiction may permit the continued use of the corridor to supply air provided smoke detectors are installed within the corridor in conformance with their listed spacing. Actuation of any two detectors shall cause the air supply to the corridor to shutdown and cause closure of the opening between the room and the corridor.

11. Automatic recall to the first floor or an alternate, non-fire floor will be required for all elevators in high-rises (55') in conformance with the 1978 edition of ANSI A17.1 and Section 211.3 of the 1981 amendments. Appendix V)

12. There shall be a posting of the number of each floor in the stairwell and every elevator lobby area.

13. Evacuation routes shall be posted in each sleeping room in all high-rise R1 occupancies (apartments and hotels).

14. Automatic shut off shall be provided for the heating, ventilating and air conditioning system as proscribed in the 1979 edition of the Uniform Mechanical Code Section 1009 with an added smoke detector as required in the 1978 edition of the National Fire Protection Association Standard 90A for automatic shutdown.

15. Consideration should be given to the establishment of emergency helistops where applicable and approved by the authority having jurisdiction.

16. Requirements for fire alarm systems shall conform to Section 1202 B paragraph 2 of the 1979 Uniform Building Code.

These recommendations have been more specifically directed toward places of assembly and hotels and apartment houses. While the Commission's recommendations include all buildings having a floor level more than fifty-five feet (55') above

the level of fire department vehicle access, buildings of other occupancies such as office buildings must be given additional study. The sprinkler, elevator, stair enclosure and automatic shut-off for heating, ventilating and air-conditioning systems regulated by Section 1009 of the Uniform Mechanical Code, 1979 edition, requirements are applicable to all buildings exceeding fifty-five feet (55').

IMPLEMENTATION

Adequate enforcement of codes and regulations was of primary importance throughout the Commission's deliberations. Potential trade-offs or alternatives were seen to be a necessary ingredient in a practical retroactive program. Rapid and active participation must be encouraged through the application of tax incentives for the private sector. A timetable for implementation must be set, structures must be individually reviewed and procedures for retroactive implementation of fire and lifesafety features must be developed.

Due to the magnitude of the complex problems studied by the Commission we have not been able to provide all encompassing recommendations or solutions. Therefore, the Governor's Commission on Firesafety Codes feels strongly that an ongoing standing Advisory Board must be formed to consider retroactive application of lifesafety features to existing structures and to serve as an active appeals board. This Advisory Board should be within the office of the Nevada State Fire Marshal with a fulltime paid staff and a budget. This standing Advisory Board would consider the additional matters the Commission found beyond its time limitation capabilities to thoroughly examine. It is the feeling of this Commission that the Advisory Board can begin to generate positive results almost immediately. The Commission further feels that it is imparitive that retroactive application take place as soon as possible. However, due to the highly technical and controversial nature of retroactive application recommencations,

a period not to exceed three (3) years from the date applicable legislation is signed into law by the Governor of the State of Nevada will be required for the State of Nevada or the local authority having jurisdiction to survey and implement some of these recommendations and to adequately address the numerous ramifications of retroactive fire and lifesafety modifications. It is important to note that many of the Commission's recommendations such as smoke detectors, stairwell numbering and emergency lighting can be implemented immediately. The Commission strongly recommends plans for corrections must be submitted to the authority having jurisdiction within six (6) months after the completion date of a survey for an individual building.

The Commission also recommends the development of an evaluation process that would determine the adequacy of existing code enforcement practices. This would involve the Advisory Board in the conducting of reviews of the local jurisdiction's pre-design conferences, plan reviews, construction site inspections, regular inspection programs insuring maintenance and management of existing buildings. The Commission believes this evaluation should result in identification of needs for staffing, resources, and legal authority as well as the development of guidelines and materials for use by the State and local authorities.

Under the auspices of an active Advisory Board, the Commission feels fire and lifesafety programs must be developed for education and training in schools, for the general public, for operating personnel and building staff. A program to

evaluation of new technology and architectual designs must be developed and maintained at the highest level if Nevada is to provide the best possible fire and lifesafety protection for its citizens and visitors. Should the current laws of the State of Nevada on revenue and expenditure limitations (caps) adversly effect these recommendations by the Commission, Nevada legislation must be developed to alleviate the problem.

The Commission further recommends that the Congressional Delegation of the State of Nevada move toward the development of reasonable incentives for the private sector for retro-active application of new fire and lifesafety features. This could translate into tax incentives such as investment credits, accelerated depreciation schedules and tax credits. The Commission further urges the Congressional Delegation to consider calling national committee hearings in this regard and to submit appropriate bills in the United States Senate and the United States House of Representatives.

Similarly, this Commission calls upon the Nevada State Legislature to consider related types of incentives at the State and local level. This might include, for example, adjustments for assessments of real property.

SUMMARY

The Governor's Commission on Firesafety Codes has found that due to its time constraints, it has only begun a process through which the State of Nevada may ultimately address all of the problems associated with fire and lifesafety in existing high-rise and public assembly occupancies.

The members of the Commission wish to emphasize the existance of the myriad of technical and administrative details to be resolved. The members were not able to completely consider the areas of application, initiation or enforcement. Failure to adequately address such areas will have serious ramifications upon any programs or laws developed as a result of this Commission's findings and recommendations. It is, therefore, the *unanimous recommendation* of the Governor's Commission on Firesafety Codes that the State of Nevada establish an Advisory Board with adequate staff, funding and support, to develope a systematic ongoing program to deal with the many issues beyond the immediate recommendations of the Commission. Modifications of the 1979 Uniform Building Code are recommended to the Nevada State Fire Marshal for inclussion in his adoption of this code. The scope of Section 1807 of the 1979 Uniform Building Code is expanded. Sprinklering requirements are strengthened. Alarm and communication system requirements are modified. Lobbies are required for elevators. Exit requirements from stairways are expanded.

In conjunction with these modifications to the 1979 Uniform Building Code this Commission recommends testing requirements for all fire and lifesafety equipment be incorporated in the Nevada State Fire Marshal regulations.

The Commission feels its most far reaching recommendations relate to the retroactive measures encompassing manditory sprinklering, smoke detectors, door closers, emergency lighting, elevator control, one-way voice communication in sleeping rooms, open stairwell enclosure, posting of evacuation routes, helistops, numbering of floors, automatic shut off for air systems, improvement of egress, flammable finishes, fire alarms and air supply control.

These recommendations in conjunction with the establishment of the ongoing Advisory Board will place the State of Nevada in the forefront of fire and lifesafety throughout the Nation.

Appendix I

STATE OF NEVADA

EXECUTIVE CHAMBER

CARSON CITY

AN EXECUTIVE ORDER BY THE GOVERNOR

WHEREAS, ensuring the safety of the public is a primary function of Government; and

WHEREAS, the threat of fire is a continuous danger to the safety of the public and can be the cause of death and injury; and

WHEREAS, the various levels of Government are charged with establishing and enforcing codes and regulations designed to minimize the chance of injurious fires; and

WHEREAS, the codes and regulations concerning fire safety are in need of periodic review for improvements in order to properly protect the public;

NOW, THEREFORE, I, ROBERT LIST, GOVERNOR OF THE STATE OF NEVADA, pursuant to the powers conferred upon me by the Constitution and laws of this State, do hereby establish

THE GOVERNOR'S COMMISSION ON FIRE-SAFETY CODES

SCOPE:

The purpose of THE GOVERNOR'S COMMISSION ON FIRE-SAFETY CODES is to review all codes and regulations currently in effect that pertain to fire-safety codes in high-rise and public-assembly occupancies within the State of Nevada, and all other codes and regulations relating to the subject of fire safety in high-rise and public-assembly occupancies already in existence prior to 1973, for their adequacy and effectiveness in protecting the public.

THE COMMISSION:

The Commission will consist of nine members including the general public representatives and experts in the field of fire safety.

The Chairman shall be selected by the Governor at the time of appointment.

The Commission shall meet at the call of the Chairman.

The Commission expires on March 1, 1981, upon submission of its report and recommendations to the Governor no later than that date.

CHARGE:

The Commission is hereby ordered and directed to conduct a thorough review of all conditions and regulations currently in effect that pertain to fire-safety codes in high-rise and public-assembly occupancies within the State of Nevada, and all other codes and regulations relating to the subject of fire safety in high-rise and public-assembly occupancies already in existence prior to 1973, for their adequacy and effectiveness in protecting the public. Further, the Commission is directed to deliver its findings and recommendations to the Governor no later than March 1, 1981. The Commission is empowered to conduct what hearings it deems necessary to gather needed information.

Appendix I
Continued

The Commission is also ordered and directed to work closely with all existing organizations at the local levels which can assist in achieving the purposes of this Order.

All State departments, boards, commissions, offices and employees are directed to cooperate with and assist the Commission in its work, within the limitations of staffing and other available resources.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Nevada to be affixed at the State Capitol this 24th day of November, in the year of our Lord, one thousand nine hundred and eighty.

Governor

Secretary of State

By: _____

January 19, 1981

The Honorable Robert List, Governor
State of Nevada
Capitol Complex
Carson City, Nevada 89710

Dear Governor List:

The executive order that you issued creating the Commission on Fire-Safety Codes charged us with three primary duties. We, the aforementioned Commission, are pleased to report the discharge of the first of those duties.

After consideration of all available relevant materials, it is the unanimous finding of the Commission that the present code structure of Nevada, relative to new construction of the highrise buildings, is consistant with the most stringent in the United States and has been so since 1978. The various code authorities on the Commission unanimously agree that Nevada's mandatory sprinkler requirement, along with other adopted regulations and codes, clearly substantiate that Nevada is in a place of national leadership in terms of fire-safety protection in new highrise construction.

The present codes and regulations governing public assembly occupancy spaces in the State of Nevada compare very favorably with other leading states throughout the nation. This comparison is supported by the fact that most states conduct their fire-safety requirements based on the model building code and the N.F.P.A. life safety code. A full range of model codes have been adopted in the State of Nevada to deal with all aspects of fire building safety. However, as a commission, we have determined that specific areas in the codes governing public assembly occupancy spaces require improvement. The Commission has drafted proposals aimed at improving the safety factors in all new construction of public assembly occupancies and other buildings. These proposals have been distributed throughout the nation to concerned organizations and knowledgeable individuals for their comments. Final recommendations pertaining to the Commission's proposals to expand the 1979 codes will be presented to you in a final report.

As you are aware, the new codes and state regulations adopted in 1978 do not apply to existing buildings erected prior to the adoption. The Commission is currently considering the question of retro-fitting of those existing buildings and will finalize a report to you prior to the March 1 deadline.

Very truly yours,

Kenny C. Guinn, Chairman
Governor's Commission on Fire-Safety Codes

KCG:pj
cc: Commission Members

STATE FIRE MARSHAL DIVISION
CAPITOL COMPLEX
CARSON CITY, NEVADA 89710

ROBERT LIST
GOVERNOR

JAMES L. WADHAMS, DIRECTOR
DEPARTMENT OF COMMERCE
T. J. HUDDLESTON, FIRE MARSHAL
STATE FIRE MARSHAL DIVISION
(702) 885-4290

Appendix IV

January 6, 1981

Gentlemen:

As you may be aware, Governor Robert List of Nevada appointed a nine member commission on Firesafety Codes in the wake of the recent Las Vegas M.G.M. fire. Part of the charge of that commission is to review current model codes to see if they can be made even stronger in dealing with fire and lifesafety. Attached is a listing of suggested changes to the 1979 Edition of the Uniform Building Code currently being considered by the Commission. You, along with other code authorities and industry representatives are requested to review and comment on these proposals. All comments should be sent to me:

T.J. Huddleston
Nevada State Fire Marshal
Capitol Complex
Carson City, Nevada 89710

The commission will prepare it's final report by not later than the middle of February, I would appreciate hearing from you as soon as possible. On behalf of Governor Robert List and the Commission, thank you in advance for your participation. If I can be of any assistance please contact me at (702) 885-4290.

Very Truly Yours,

T.J. Huddleston
Nevada State Fire Marshal

TJH:jj

Appendix IV
Continued

Following are preposed modifications to the 1979 edition of the Uniform Building Code as agreed on by the Nevada Governor's Commission on Firesafety Codes:

1807(a) Scope. This section shall apply to all Group B, Division 2 office buildings and Group R, Division 1 occupancies, each having floors used for human occupancy located more than 55 feet or 5 stories above the lowest level of fire department vehicle access. Such buildings shall be provided with an approved automatic sprinkler system in accordance with Section 1807(c).

1807(b) Certificate of Occupancy. Add the following sentences. "All such equipment shall be tested quarterly by an approved agency. All lifesafety equipment shall be reset and certified by an approved agency after having been actuated. A log of such tests shall be kept available for inspection by the building designer and approved by the Building Official."

1807(e) Alarm and Communication System. Retain the present sub-section but with (2) modified to be consistent with the present Fire Marshal requirements which refers to an 80 decibel level of sound at all points within the protected property.

1807(f) Central Control Station. Retain the present Sub-section but with further modification as currently in the Fire Marshal requirements which call for the central control station to be separated from the remainder of the building by 2-hour fire-resistive construction and to have a door to the exterior whenever possible.

1807(h) Delete the present section and substitute a requirement that elevators shall be installed in compliance with ANSI A17.1-1978 with the 1981 amendments. Then add the following sentence:
"All elevators on all floors shall open into elevator lobbies which are separated from the remainder of the building, including corridors, as is required for corridor construction in Section 3304 (g) and (h)."

1807(j) Modify (1) by adding at the end of the present sentence "sprinkler operation or power failure."

Modify (3) by changing the figure 0.15 to 0.25 in 3rd line.

Section 3802(b)2B Modify to read:
"Every casino, showroom and other assembly room of more than 5,000 square foot area."
EXCEPTION. Churches and theaters having only fixed seating.

Section 3802(c) Add a new Item B under (1) and redesignate the existing Items B, C and D. The new Item B is to read as follows: "In buildings over two stories in height."

Appendix IV
Continued

LIST TO WHICH THE PROPOSED CHANGES TO THE 1979 UNIFORM BUILDING CODE WERE DISTRIBUTED FOR COMMENT:

Joe Sacco
Office of State Fire Marshal
7171 Bowling Drive, St. 800
Sacramento, CA. 95823

I.C.B.O.
5360 S. Workman Mill Road
Whittier, CA. 90601

Neil D. Houghton, Building
Owner and Managers
3350 N. Central Ave.
Phoenix, AZ. 85012

American Iron & Steel Inst.
J.C. Spence
1000 Sisteenth St., N.W.
Washington, D.C. 20036

CA Lathing & Plastering
Contractors Association
Clay M. Johnston
25332 Narbourne Ave., #170
Lomita, CA 90717

Drywall Industry Trust Fund
Robert Gulick
9800 S. Sepulveda Blvd.
Los Angeles, CA 90045

Gypsum Association
Marvin Smith
1800 N. Highland Ave.
Hollywood, CA. 90028

National Automatic Sprinkler
Association
Ed Reilly
P.O. Box 719
Mt. Kisko, N.Y. 10549

National Forest Products Assoc.
Wallace Norum
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Mt. View, CA. 94040

Portland Cement Association
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Paul Heilstedt, Tech. Director
BOCA
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Homewood, IL. 60430

Bill Tangye, Tech. Director
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John Russell, Vice-Pres. &
District Manager
Grubb & Ellis Commercial
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John Fisher, AIA
Mitchell & Giurgola Arch.
12S 12th. St.
Philadelphia, PA. 19107

Crawford Greene, AIA
3603 Granada St.
Tampa, FL. 33609

William E. Snyder, Arch.
1555 E. Flamingo Rd. #440
Las Vegas, NV. 89109

Appendix V

Rule 211.3 Operation of Elevators Under Fire or Other Emergency Conditions:

All elevators having a travel of 25 ft. (7.62m) or more, above or below the designated level (see Section 3-Definitions), shall conform to the following:

211.3 Phase I and II Operation

1. Phase I Emergency Recall Operation
   a. A three position (on, off and by-pass) key-operated switch shall be provided only at the designated level for each single elevator or for each group of elevators. The key shall be removable in the "on" and "off" positions.

      When the switch is in the "off" position, normal elevator service shall be provided and the smoke detectors required by Rule 211.3a-1-b shall be functional. When the switch is in the "by-pass" position, normal elevator service shall be restored independent of the smoke detectors required by Rule 211.3a-1-b.

      When the switch is in the "on" position:
      (1) All cars controlled by this switch and which are on automatic service shall return nonstop to the designated level and the doors shall open and remain open.

      (2) A car traveling away from the designated level shall reverse at or before the next available floor without opening its doors.

      (3) A car stopped at a landing shall have the in-car emergency stop switch rendered inoperative as soon as the door is closed, and the car starts toward the designated level. A moving car, traveling to or away from the designated level, shall have the in-car emergency stop switch rendered inoperative immediately.

      (4) A car standing at a floor other than the designated level, with doors open and the in-car emergency stop switch in the run position, shall conform to the following:

         (a) Elevators having automatic power-operated horizontally sliding doors shall close the doors without delay and proceed to the designated level.

(b) Elevators having power-operated vertically sliding doors provided with automatic or momentary pressure closing operation per Rule 112.3d shall have the closing sequence initiated without delay in accordance with Rule 112.3d(1), (2), (3) and (5) and the car proceed to the designated level.

(c) Elevators having power-operated doors provided with continuous pressure closing operation per Rule 112.3b or elevators having manual doors, shall conform to the requirements of Rule 211.3c. Sequence operation, if provided, shall remain effective.

(5) Door reopening devices for power-operated doors which are sensitive to smoke or flame shall be rendered inoperative. Mechanically actuated door reopening devices not sensitive to smoke or flame shall remain operative. Door closing shall conform to the requirements of Rule 112.3.

(6) All car and corridor call buttons and all corridor door opening and closing buttons shall be rendered inoperative and all call registered lights and directional lanterns shall be extinguished and remain inoperative. Position indicators, when approved, shall remain in service.

(7) All cars shall be provided with a visual and audible signal system which shall be activated to alert the passengers that the car is returning nonstop to the main floor or other designated level.

b. Smoke detectors shall be installed in accordance with NFPA No. 722, Automatic Fire Detectors, Chapter IV, in each elevator lobby at each floor and associated elevator machine rooms. The activation of a smoke detector in any elevator lobby or associated elevator machine rooms other than the designated level, shall cause all cars in all groups that serve that lobby to return nonstop to the designated level. If the smoke detector at the designated level is

activated, the cars shall return to an alternate level approved by the enforcing authority unless the Phase 1 key-operated switch (Rule 211.3a-1-a) is in the "on" position. Smoke detectors and/or smoke detector systems shall not be self resetting. The operation shall conform to the requirements of Rule 211.3a(1)(a).
Exception (Rule 211.3a(1)(b): Elevator lobbies at unenclosed landings.

2. Phase II Emergency In-Car Operation
   a. A two-position (off and on) key-operated switch shall be provided in or adjacent to an operating panel in each car, and it shall become effective only when the designated level Phase I key-operated switch (Rule 211.3a-1-a) is in the "on" position or a smoke detector (Rule 211.3a-1-b) has been activated, and the car has returned to the designated level. The key shall be removable only in the "off" position. When in the "on" position, it shall place the elevator on emergency in-car operation.

      The operation of elevators on Phase II emergency in-car operation shall be by trained emergency service personnel only and shall be as follows:

      (1) An elevator shall be operable only by a person in the car.

      (2) All corridor call buttons and directional lanterns shall remain inoperative.

      (3) The opening of power-operated doors shall be controlled only by continuous pressure "open" buttons or switches. If the switch or button is released prior to the doors reaching the fully open position, the doors shall automatically reclose. Open doors shall be closed by either the registration of a car call or by pressure on "Door Close" switch or button.

      (4) Door reopening devices rendered inoperative per Rule 211.3a(1)(a)(5) shall remain inoperative.

      (5) Means shall be provided to cancel registered car calls.

(6) Elevators shall only be removed from Phase II operation by moving the emergency key-operated switch in the car to the "off" position with the car at the designated or alternate level.

3. Multi-Deck Elevators

Multi-deck elevators shall conform to the requirements of Rules 211.3a-2 and 4 and to the additional requirements as follows:

a. The Phase I key-operated switch in the car required by Rule 211.3a-2 for emergency service operation shall be located in the top deck. The elevators shall be provided with means for placing the lower deck out of service shall be located in that deck or adjacent to the entrance at the lower lobby floor.

4. Switch Keys

The switches required by Rules 211.3a-1 and 211.3a-2 shall be operable by the same key but which is not a part of a building master key system. There shall be a key for the designated level switch and for each elevator in the group. These keys shall be kept on the premises in a location readily accessible to authorized personnel, but not where they are available to the public.
NOTE: (Rule 211.3a(4)) Local authorities may specify a uniform key or key security for their jurisdiction.

211.3b Designated Attendant-Operated Elevators

Elevators operable only by a designated attendant in the car shall be provided with a visual and audible signal system conforming to the requirements of Rule 211.3a-1-a-(7), than shall be activated when the key-operated switch required by Rule 211.3a(1)(a) is in the "on" position or when a smoke detector required by Rule 211.3a-1-b has been activated to alert the attendant to close the doors and return nonstop to the designated level.

211.3c Elevators Arranged for Dual Operation

Elevators arranged for dual operation, shall, when on automatic operation, conform to the requirements of Rule 211.3a. When operated by a designated attendant in the car, elevators shall conform to the requirements of Rule 211.3b. When the doors are closed and the car is in motion, the elevator may conform to the requirements of Rule 211.3a.

211.3d Inspection Operation

When an elevator is on inspection operation, a continuous audible signal which is audible on top of the car shall sound when the Phase I key-operated switch (Rule 211.3a-1-a) or a smoke detector required by Rule 211.3a-1-b is actuated to alert the operator of an emergency. Cars shall remain under the control of the operator until returned to service.

211.3e Operating Procedures

Instructions for operation of elevators under Phase I shall be incorporated with or adjacent to the Phase I key-operated switch (Rule 211.3a-1-a) at the designated level. Instructions for operation of elevators under Phase II shall be incorporated with or adjacent to the switch, in or adjacent to the operating panel in each car, required by Rule 211.3a-2. Instructions shall be in letters not less than 1/8 in. (3.2min) in height and shall be permanently installed and protected against removal and defacement.

Appendix VI

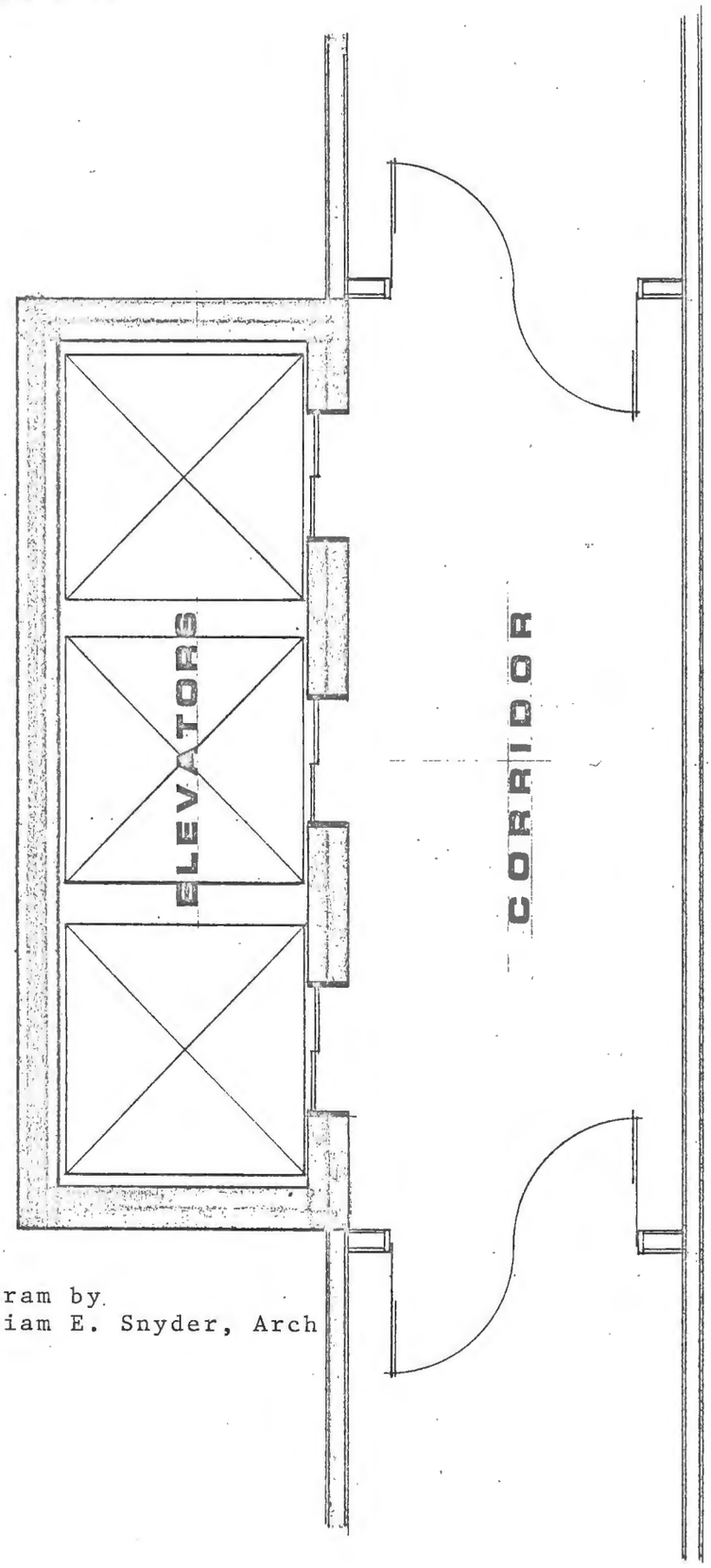


Diagram by
William E. Snyder, Arch

Appendix VI
Continued

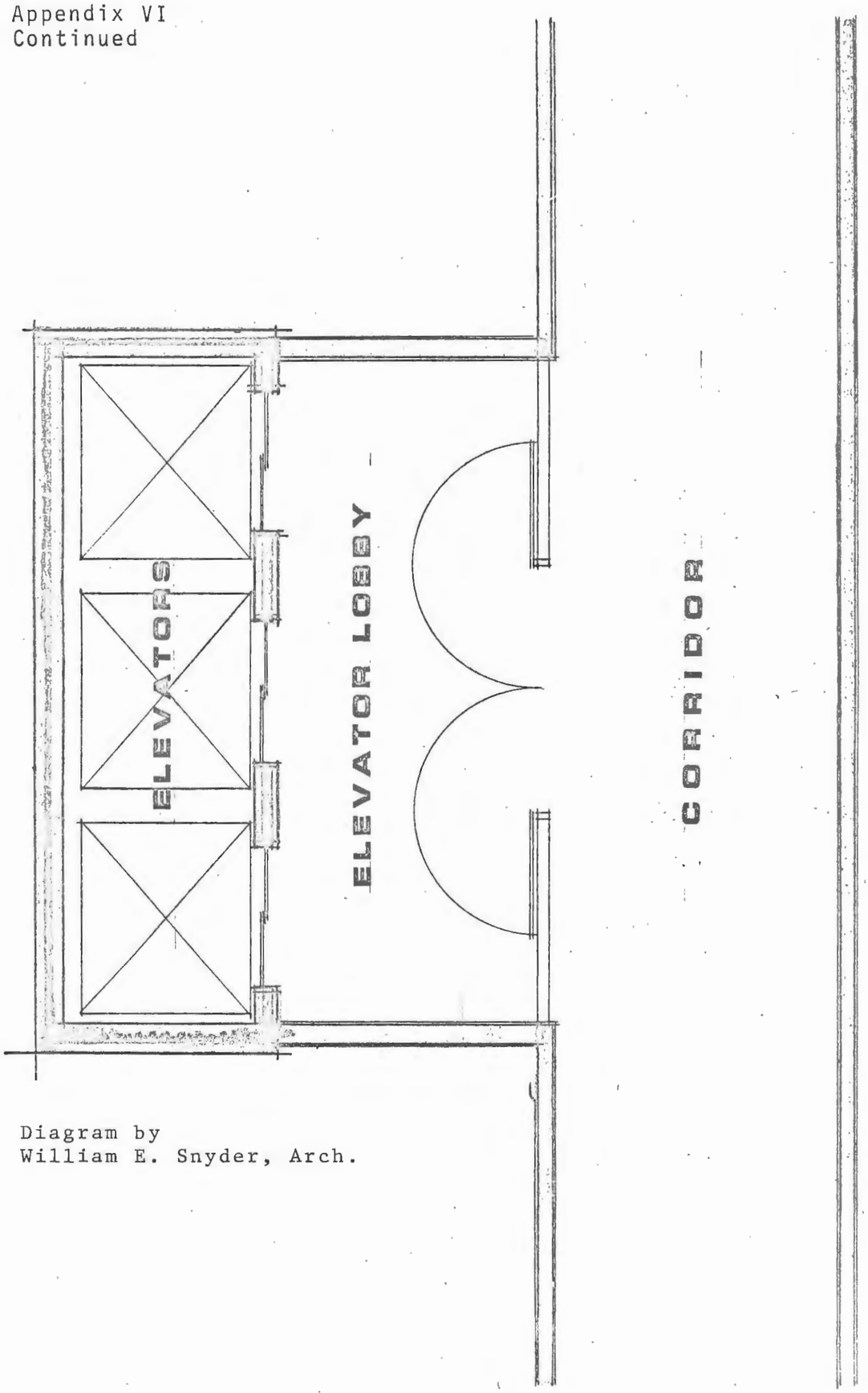


Diagram by
William E. Snyder, Arch.

Appendix VI
Continued

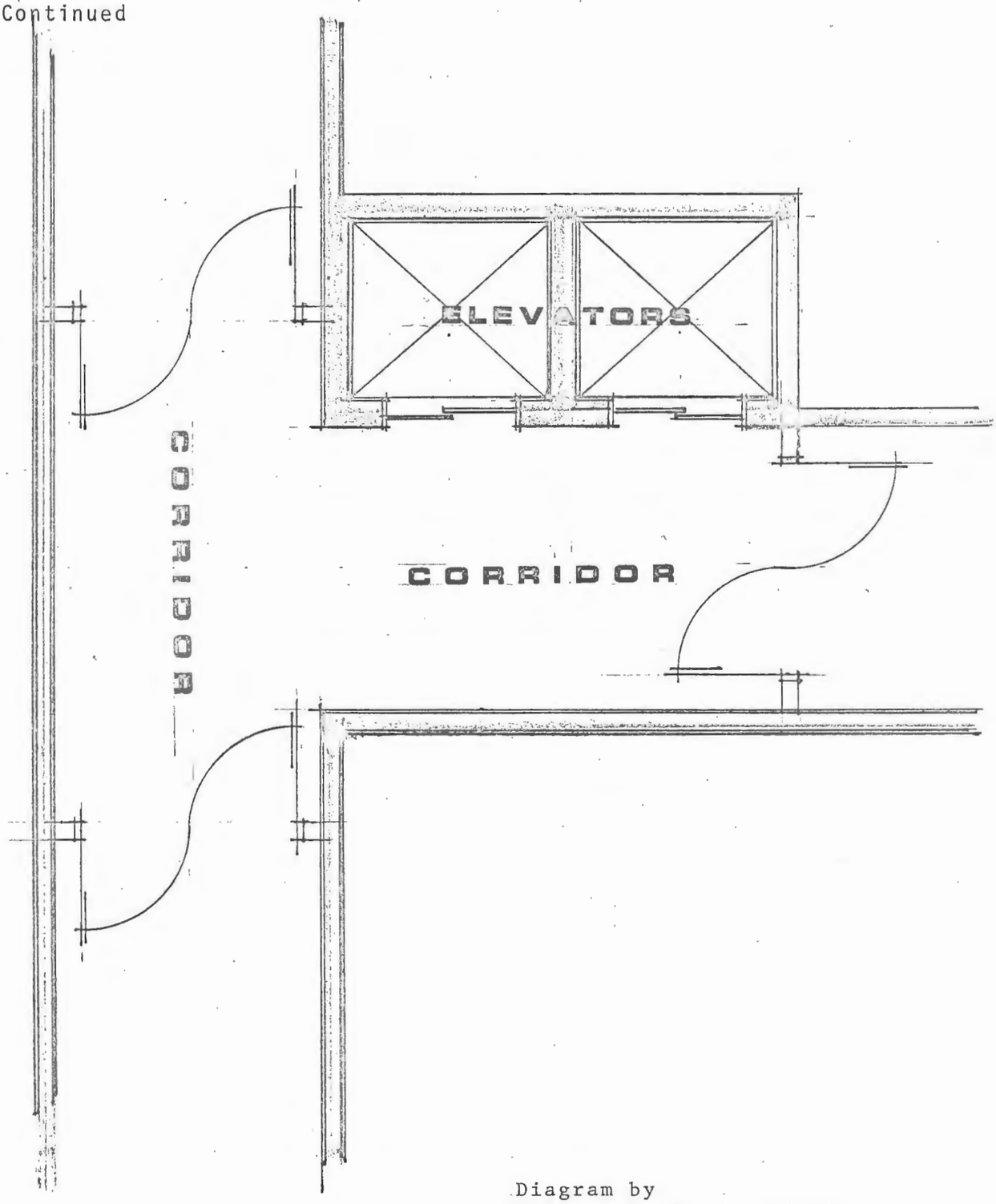


Diagram by
William E. Snyder, Arch.

Section 104. (b) Additions, Alterations and Repairs: More than 50 percent. When additions, alterations, or repairs within any 12-month period exceed 50 percent of the value of the existing building or structure, such building or structure shall be made to conform to the requirements for new buildings or structures.

Section 104. (c) Additions, Alterations and Repairs: 25 to 50 percent. Additions, alterations, and repairs exceeding 25 percent but not exceeding 50 percent of the value of an existing building or structure and complying with the requirements for new buildings or structures may be made to such building or structure within any 12-month period without making entire building or structure comply. The new construction shall conform to the requirements of this Code for new building of like area, height, and occupancy. Such building or structure, including new additions, shall not exceed the areas and heights specified in this Code.

Section 104. (d) Additions, Alterations and Repairs: 25 percent or less. Structural additions, alterations, and repairs to any portion of an existing building or structure, within any 12-month period, not exceeding 25 percent of the value of the building or structure shall comply with all of the requirements for new buildings or structures, except that minor structural additions, alterations, or repairs, when approved by the Building Official, may be made with the same material of which the building or structure is constructed. Such building or structure, including new additions, shall not exceed the areas and heights specified in this Code.

Appendix VIII

FIRE HAZARD ANALYSIS SURVEY

EXISTING HIGH RISE BUILDINGS

The attached chart indicates those building deficiencies that appear to occur on a repetative basis in serious high rise fires and which are causative factors in relation to extensive property and life loss in such fires.

Those fires referenced from NFPA Fire Journal reports include all high rise fires which were investigated by NFPA staff and reported thereon for the period 1969 through January 1975. Fires occurring outside of the United States are included because they illustrate many of the problems common to high rise building fires and the information gleaned from these fires should affect current fire protection thinking in this country.

The totals of each deficiency are listed in descending order of occurrence.

Fire Safety Building Deficiencies

1. Open Vertical Shafts and Poke Thru----------16
2. Fire Alarm Deficiency----------14
3. Elevators----------14
4. Sub-standard Corridor Openings----------12
5. Improper Action----------12
6. Flammable Finish----------10
7. Inadequate Egress---------- 9
8. No Door Closer---------- 9
9. Open Stairs---------- 8
10. HVAC Recirculation---------- 6
11. No Emergency Lighting---------- 5

The column titled "Fire Alarm Deficiency" includes those instances where there was no fire alarm or where it was reported as being ineffective. It also includes those instances where lack of communication facilities to instruct occupants was a serious factor.

"No Emergency Lighting". Included those instances where this information was given.

HVAC (Heating, Ventilating and Air Conditioning). Includes all instances where air handling of fan systems contributed to fire, smoke or heat extension.

"Improper Action". Includes those instances where management or staff that should have had fire safety training acted or failed to act in a proper manner.

"Elevator". Includes instances where elevator equipment or controls failed, or where the elevator shaft formed a path of travel for fire, smoke of heat extension. In these cases vertical smoke migration was a significant factor when elevators were found at the fire floor with doors open.

Exterior vertical extension of fire was an important factor in six of the reported fires, three occurring in South America. This information was not included in the chart.

A short summary of each fire is included to provide informational background on the similarity of building deficiencies that are repeatedly described as causative factors in extensive life and property loss in high rise building fires. However, for full information on each fire, it is suggested that the referenced reports be perused.

E. Condon
12/8/75

Appendix VIII
Continued

	DATE	LOCATION	DESCRIPTION	OPEN STAIRS	OPEN VERTICAL SHAFTS AND POKE THRU	INADEQUATE EGRESS	FIRE ALARM DEFICIENT	NO EMERGENCY LIGHTING	TOTAL RECIRCULATION	IMPROPER ACTION	SUB-STANDARD CURTAIN OPENING	FLAMMABLE FINISH	ELEVATOR	NO DOOR CLOSER	SOURCE
1.	9/23/64	San Francisco	7 Story - Office					X			X		X	X	(2)
2.	2/7/67	Montgomery, Al.	10 Story - Restaurant & Hotel			X						X			(3)
3.	1/24/69	Chicago	39 Story - Apartments				X				X		X		(1)
4.	1/25/70	Chicago	25 Story - Hotel				X			X	X		X	X	(1)
5.	4/12/70	San Francisco	6 Story - Hotel		X			X			X			X	(2)
6.	5/15/70	San Francisco	11 Story - Furniture Mart		X						X	X		X	(2)
7.	8/5/70	New York	50 Story - Office		X		X		X			X	X		(1)
8.	11/18/70	San Francisco	52 Story - Office				X		X				X		(2)
9.	12/4/70	New York	47 Story - Office		X		X						X		(1)
10.	12/20/70	Tucson	11 Story - Hotel	X		X	X	X			X	X		X	(1)
11.	1/1/71	Los Angeles	25 Story - Apartments										X	X	(2)
12.	1/4/71	San Francisco	6 Story - Apartments	X	X		X	X			X				(2)
13.	2/10/71	San Francisco	22 Story - Office						X						(2)
14.	3/28/71	Los Angeles	21 Story - Restaurant & Hotel		X										(1)
15.	7/6/71	Nashville	28 Story - Office				X		X						(1)
16.	7/23/71	New Orleans	15 Story - Hotel				X			X			X		(1)
17.	2/24/72	Sao Paulo	31 Story - (Andraus)	X	X	X	X	X			X	X			(1)
18.	5/13/72	Osaka	7 Story	X	X	X	X			X					(1)
19.	11/15/72	Chicago	100 Story - Office 7 Apartments							X					(1)
20.	11/29/72	New Orleans	16 Story - Office			X					X	X	X	X	(1)
21.	11/30/72	Atlanta	11 Story - Apartments		X					X	X	X	X	X	(1)
22.	12/15/72	Ventnor, N.J.	19 Story - Apartments				X								(1)
23.	12/28/72	Dallas	16 Story - Apartments		X										(1)
24.	1/8/73	Madison	10 Story - Apartments							X			X	X	(1)
25.	4/2/73	Rosemont	10 Story - Hotel		X	X	X			X			X		(1)
26.	6/25/73	Tucson	11 Story - Office							X					(1)
27.	7/23/73	Bogota	36 Story - Office		X	X					X	X			(1)
28.	11/5/73	Indianapolis	(Group Fire)												
29.	11/10/73	Toronto	43 Story - Office	X						X			X		(1)
30.	11/28/73	Kumato	9 Story - Department Store	X	X					X					(1)
31.	1/15/74	Rio, Brazil	31 Story - (Vacant)	X	X	X						X			(1)
32.	2/1/74	Sao Paulo	25 Story - (Joelma)	X	X	X	X			X		X			(1)
33.	9/8/74	Virginia Beach	11 Story - Hotel							X	X				(1)
34.	11/12/74	Los Angeles	15 Story - Office		X				X				X		(1)
35.	1/31/75	San Francisco	22 Story - Office						X						(2)
			TOTALS	8	16	9	14	5	6	12	12	10	14	4	

SOURCE
(1) = Fire Journal
(2) = Fire Department Report
(3) = N.F.P.A. Publication

Appendix VIII
Continued

1. San Francisco, Ca. - September 23, 1964
717 Market Street - 7 story office building 1 fatality

The fire originated on the 6th floor and spread to the adjoining offices on the floor. Transoms and unrated corridor doors, without closers, were contributory to the fire spread.

Two firemen were trapped in the elevator on the fire floor when the heavy smoke prevented the electric eye from operating. One fireman survived, the second fireman died October 21, 1964.
S.F.F.D. Fire Report.

2. Montgomery Alabama - February 7, 1967
10 story Penthouse Restaurant - 25 fatalities

"The loss of 25 lives in this fire, the largest loss of life in a U.S. restaurant fire in almost 25 years, was blamed on 3 factors; inadequate exits, combustible interior finish, and lack of sprinklers"

"- - - From the general location of the bodies it was obvious that there would have been little or no loss of life had the second stairway been extended to the penthouse and clearly marked"

from: N.F.P.A. Publication No.FR 74-1, 1974
titled "A study of Restaurant Fires"

3. Chicago, Illinois - January 24, 1969
39 story apartments - 4 fatalities

The fire occurred in the 36th story. Conditions indicate the fire burned for some time.

The 10-inch wide spaces at one side of each apartment are covered by a panel of 1-inch particle board - - -.

The apartment building has no alarm system, automatic sprinklers or detection system.

There was no way for the products of combustion to vent themselves except through the door, through the elevator doors, or into the apartments.

Use of elevators by occupants of floors beneath the fire hindered elevator evacuation of the floors above. Fire fighters were delayed in reaching the fire because of the heavy demand on the elevators.

The particle board adjacent to the doors burned through in some places, allowing fire to enter a few apartments.
Fire Journal - May, 1969

4. Chicago, Illinois - January 25, 1970
25 story hotel - 2 fatalities

Each guest room has a standard 1-1/4-inch frame door with 1/4-inch panel.

Before the fire about 50 chairs awaiting repair had been stored in the 9th floor elevator lobby. (where the fire originated) Other elevators responded unoccupied to the 9th floor level, apparently because of fire damage to the call circuit ---.

The two victims were attempting to reach the stairway. As they went they left the doors open.

One of the significant features of this fire was the lack of an alarm sounding system.
Fire Journal - May, 1970

Continuing San Francisco, California - April 12, 1970
6 story hotel

Fire originating in the main floor restaurant dining room rapidly spread through the ceiling space and raced upward through two unprotected plumbing shafts located by the center firewall. Hall doors were 1/4-inch panel without closers.
S.F.F.D. Fire Report

6. San Francisco, California - May 15, 1970
11 story furniture mart building

The fire originated on the 11th floor and spread throughout the entire 11th floor and through the roof doing considerable damage.

The fire spread rapidly throughout the display spaces due in part to the absence of fire rated corridor walls and doors without closers.
S.F.F.D. Fire and Inspection reports.

7. New York City, N.Y. August 5, 1970
50 story office building (#1 N.Y. Plaza) - 2 fatalities

"The inside face of the curtain wall and the spaces between and above the windows are insulated with one-inch Dorvan FR 100 Polystyrene foam board ---

"Except for the concrete and metal, almost everything in the building is combustible to some degree - foam plastic wall insulation, electrical cables, ceiling tiles, partitions and insulation on air handling units ---

"Openings in the floors around air conditioning ducts, electrical fixtures, and the cables themselves, as well as the vertical shafts in the outer wall cut off only by a sheet of aluminum, allowed fire spread between floors."

Two dead men were found on the floor of the elevator at the 33rd floor.

Since the return air fans were not shut down smoke was drawn into the return air shafts through the openings on the 33rd floor. This smoke carried by positive pressure through the supply ducts and to some extent through the return air shafts to the various floors, was of sufficient intensity on most floors to require evacuation.
Fire Journal - January 1971

8. San Francisco, California - November 18, 1970
52 story office building

"Smoke damage occurred throughout most of the thirty-fifth floor, with minor smoke damage as high as the thirty-eighth floor. The major structural components performed as designed."

Smoke penetrated into elevator shafts and was carried to higher floors. Building occupants using these elevators became frightened, and one case of serious hysterical behavior was noted.

The supervising chief on the fire floor was unable to communicate by department radio with the command post at the building front, street level occupants complained of lack of information and direction.
S.F.F.D. Fire Report

9. New York City, N.Y. - December 4, 1970
919 3rd Avenue - 47 story office building - 3 fatalities

"If this fire had occurred on one of the upper floors, where it could not have been attacked by hose streams through windows, lack of vertical protection might have contributed to fire spread to floors above ---

"Means should be provided to notify all employees of an emergency and of the action to be taken by them. At 919 Third Avenue employees on upper floors complainte chiefly of lack of notification of the fire."

Three people died in the fire, two in the hall and one in the elevator on the fire dloor.

Occupants complained of lack of direction.
Fire Journal - March, 1971

10. Tucson, Arizona - December 20, 1970
Pioneer Hotel - 11 stories - 28 fatalities

Investigators feel that the fires were set sometime before midnight, and they spread rapidly joining and then spreading up the two open stairways.

Very few people became aware of the fire in time, as there was no alarm system.

The light panel doors held up fairly well and did not allow a significant amount of fire in the rooms. The rooms in which doors were left open were completely burned out ---.

The carpet and wall covering did however, (contribute to the fire load), and to a degree sufficient to cause the fatalities and the severe damage.

There was a fire escape within several feet of where the bodies were found (2-victims). The window to the fire escape had been covered -- a light drape had been hung to cover this part of the wall.

Fire Journal - May 1971

11. Los Angeles, California - January 1, 1971
25 Story Apartment

A Christmas tree fire gutted a 4th floor apartment and spread out the open doorway filling the building from the 4th floor to the top story with heavy black smoke. Heat and smoke traveled from the fire through the halls into the elevator shaft destroying the equipment. The flames shot up the shafts sending columns of smoke down each corridor.

"In summing up the elevator indident I arrive at certain possibilities (all elevators were at the fire floor with doors open):

1. That tenants called the elevators to the fire floor, smoke obscured the photo electric beams and the doors remained open;
2. That the intense head of the hall fire short circuited the 4th floor call buttons and the elevators came to the fire floor.

L.A.F.D. Fire Report.

12. San Francisco, California - January 4, 1971
6 Story Apartment building

The fire originated on the stairs between the basement and first floor levels, spread up the stairs to the 6th floor at which point it mushroomed out through the panel door into the public hall and into several of the apartments on that floor.

The fire alarm did not sound, apparently due to damage during the fire.

S.F.F.D. Fire Report

13. San Francisco, California - February 10, 1971
22 story office building

"An electrical fire in the air conditioning filter system spread smoke throughout the building, requiring evacuation of the entire structure."

S.F.F.D. Fire Report

14. Los Angeles, California - March 28, 1971
21 story office building - roof restaurant

The fire in the restaurant on the top floor was confined to the restaurant area by a two-hour fire resistive wall with a Class B rated door that seperated the restaurant from the remaining area.

Water flowing down through "polk-thru" holes left unsealed around conduit, piping, and ducts caused water damage three floors below the fire.

Fire Journal - November, 1971

15. Nashville, Tenn. - July 6, 1971
28 story office building

The fire occurred on the first floor in the fan room of the air handling system.

Employees discovered the fire when dense smoke poured into the first floor lobby. The fans were shut down and the three smoke filled floors of the building were evacuated, but the manual fire evacuation system (alarm) failed to function.

Fire Journal - November, 1971

16. New Orleans, Louisiana - July 23, 1971
17 story Hotel - 6 fatalities

None of the victims was burned. Smoke inhalation was tentatively listed as the cause of all deaths.

Guests said they heard the fire alarm, but it sounded "more like somebodies alarm clock"

Five of the victims were trying to escape from the motor hotel by using the elevator from the 15th floor. When the elevator reached the 12th floor it stopped and the doors opened. Five of the six passengers died from the head and smoke in the corridor.

The delay in reporting the fire was an obvious erron on the part of the hotel management.

Had the guard not opened the door to the fire room, and had he instead operated the alarm, and started evacuating people, he and the five others who died would probably be alive today.

Fire Journal - January, 1972

17. Sao Paulo, Brazil - February 24, 1972
31 stories (Andraus) - 16 fatalities.

"Wind velocity and combustible interior finish were factors contributing to fire spread--

"Reducing the fuel contributed by combustible ceilings and wall partitions could have slowed fire spread, providing more time for evacuation to a safe area or for fire extinguishment----

"Fuel control, compartmentation, and provision of automatic detection or extinguishing systems are important considerations in a systems approach to fire safety design."

The door construction in the office stairway was mixed hollow-core wood, solid core wood, and metal.

Fire Journal - July, 1972

18. Osaka, Japan - May 13, 1972
7 story building - 118 fatalities

"The principle causes of the many casulties were:

1. The four open stairways
2. Failure to announce the fire and its location and to instruct the occupants over the loud speakers.
3. The rapid rise of toxic smoke and hot gases from the 3rd floor through open stairways, elevators and shafts,---"

Fire Journal, March, 1973.

19. Chicago, Illinois - November 15, 1972
100 story office and apartment building.

Starting on the 96th story, the fire caused damage to the 95th and 97th stories also.

---Fire fighters found that the fire had entered the 97th story through windows.

This fire is an excellent example of the value of careful fire department planning, including coordination of emergency procedures with those of building maintenance and security personnel.

Fire Journal - March 1973

20. New Orleans, Louisiana - November 29, 1972
16 story office building - 6 fatalities

"It was the lightweight doors to the corridors and the delayed discovery that allowed the fire to do so much damage ---

"There was little to burn in the corridor. The damage there and in the beauty salon appeared due to burning of fire gases from the room of origin, in addition to the burning of the interior finish in the beauty salon."

Combustible interior finish in the 16th story restaurant aided the fire spread.
Fire Journal, May 1973

21. Atlanta, Georgia - November 30, 1972
11 Story Apartment - 10 fatalities

"A combination of factors contributed to the fire exposure: Delayed alarm; the open door to the apartment of origin, use of corridor to supply make up air, use of corridor carpeting with fire hazard characteristics beyond what is considered acceptable ---

"Considerable smoke and head were spread by the elevator shaft. The shaft was exposed by open elevator doors on the fire floor and on the tenth floor ---
Fire Journal - May, 1973

22. Ventnor, New Jersey - December 15, 1972
19 story Apartment - 1 fatality

One fire fighter was killed and three others were injured in a fourth floor fire. The alarm system was found to be wholly inadequate, since many occupants could not hear the alarm.
Fire Journal - July, 1973.

23. Dallas, Texas - December 28, 1972
16 story reinforced concrete apartment

The fire started in a Christmas tree in an 8th floor apartment. "The fire was confined to the apartment of origin and to about 40 feet of corridor to the left and right of the apartment, but all floors above the fire floor received extensive damage from smoke that spread through the poke-throughs and ceiling spaces.
Fire Journal - May, 1973

24. Madison, Wisconsin - January 8, 1973
10 story apartment - 3 fatalities.

The fire originated in a 4th floor apartment, whose door was left open after discovery of the fire, allowing head and smoke to fill the corridor.

Occupants failed to actuate the manual alarm after discovery of fire; an employee investigated before calling the fire department. Heat and smoke had extended to upper floors through the elevator shaft, because one elevator had remained at the 4th floor with its door open ----.
Fire Journal - September, 1973

25. Rosemont (Chicago), Illinois - April 2, 1973
10 story Atrium (Hotel)

The atrium structure rose from the 2nd to the 11th floor and was topped by an extensive skylight.

The fire started in the 2nd floor night club in the hotel. Fire fighters found the atrium charged with smoke and the night club fully involved.

1. The mechanical smoke exhaust system did not operate, because the switch connecting the smoke detection system had been turned off.
2. Exit doors were painted the same color as the surrounding wall, obscuring their locations in the dense smoke.
3. The fire alarm system was not heard by all guests, necessitating the calling of guest rooms by telephone.
4. Guests attempted to use automatic elevators for escape. Since the elevators could not be manually controlled, [illegible] to ride the cars to prevent their use.

Fire Journal - November, 1973

26. Tuscon, Arizona - June 25, 1973
6 and 11 story twin towers, office building

The fire occurred in the 4th floor which was used for storage of 1400 plastic voting machines, miscellaneous office furniture, etc.

On arrival the first fire companies found flames extending from windows on the fourth floor and entering windows on the fifth and sixth floors.

At least one employee on the eleventh floor did not hear the alarm, but an intercom system was also used to announce the fire, its location, and the two escape routes. A supervisor attempted to extinguish the fire before calling the fire department.
Fire Journal - January, 1974

27. Bogota, Colombia - July 23, 1973
56 story office building - 4 fatalities

A single stairway ran from the basement to the roof. Stairway doors at each floor were hollow core wood ---.

Spaces between the outer metal skin and the outer walls of the occupied area created a pathway for fire to spread from floor to floor.

Much of the interior wall surface was combustible.

The fire department did not receive a report of the fire until 35 minutes after the fire had been discovered.
Fire Journal - July, 1974

28. Indianapolis, Indiana - November 5, 1973
Group Fire

This group fire involved 7 buildings including one 17 story apartment, a 13 story and a 7 story office building and a 7 story garage. Exterior exposures constituted the principle problem and the fire reports have insufficient detailed information to be of any value in the hazard analysis survey.
Fire Journal - July, 1974

29. Toronto, Canada - November 10, 1973
43 story office building

The building had enclosed stairwells, but the accounting office had an open stairwell between the 27th and 28th floors.

The fire occurred in the mail room on the 27th floor and activated a smoke detector on the 28th floor at the top of the open stairwell, which registered on the ground floor console. Fire fighters took the elevator to the 27th floor, assuming it to be the floor below the fire but when the elevator door opened, fire fighters were confronted with intense heat, and the smoke prevented the door from closing. The fire fighters were equipped with self-contained breathing equipment and were able to by-pass the electric eye switch and descend to the 26th floor, from where they used the staircase to attack the fire.
Fire Journal - March, 1974

30. Kumato, Japan - November 28, 1973
9 story department store - 103 fatalities

"The fire originated in combustible materials stored in a stairway, and spread rapidly to all floors above by way of stairways and esculator floor openings --

"No one can remember a fire alarm being given nor was any warning or guidance broadcast over the loudspeakers to direct the occupants to safety---
Most of the 1400 occupants escaped to the ground through interior stairways."
Fire Journal - May 1974

31. Rio de Janeiro, Brazil - January 15, 1974
31 stories - (Unoccupied)

"Factors influencing fire spread were combustible ceilings, open stairwells, combustible wall covering in stairways, partial sprinkler protection, that was overcome by an already well developed fire." "This fire points to one important reason why open stairways should not be permitted."
Fire Journal - July, 1974

32. Sao Paulo, Brazil - February 1, 1974
25 stories - 179 fatalities

"While the basic building construction was fire resistive, the interior finish consisted entirely of combustible materials, which contributed to the rapid spread of the fire throughout the building." Only one stairway was provided, and it was not enclosed. There was no local evacuation alarm, no exit signs and no emergency procedure to guide occupants."

"In my opinion the severity of the fire and its rapid spread can be attributed to the following.

1. Unprotected interior vertical shafts.
2. Extreme usage of portable L.P. Gas cylinders
3. Combustible interior partitioning and ceiling without restriction as to flame spread.
4. Inadequate protection of wall openings re. too much glass without proper fire barriers.
5. Improper electrical wiring
6. Inadequate fire resistance of roof."

The building had no illuminated exit signs, or emergency illumination.
Fire Journal - July 1974 and Building Standards, May/June, 1974

33. Virginia Beach, Virginia - September 8, 1974
11 story hotel - 1 fatality.

"The fire was initially contained in the room of origin on the 9th floor. If the room door had been left closed and the fire department had been called promptly the damage would probably have been contined to that room.

All the room doors had been undercut 1-1/8-inch to 1-1/4-inch. There was evidence of fire spread from the hall to nearby carpet inside rooms by means of these openings.

Of significance in this fire was the <u>delayed alarm</u> and the failure of certain fire protection devices"
Fire Journal - January, 1975

34. Los Angeles, California - November 12, 1974
15 story office building

The fire occurred in the 8th floor where maintenance workers were using lacquer thinner to clean walls.

About 2000 occupants evacuated safely, mostly down the two stairways which were equipped with fire doors and ventilating tower.

The airconditioning system which was not designed to exhaust smoke and heat helped spread the smoke throughout the building. Smoke was also transmitted to other floors by the elevators; also through breeches made through floors and walls by contractors for various conduits.
Fire Journal - November 1975

35. San Francisco, California - January 31, 1975
22 story office building - S.F. International Building

The fire started in the cloth type aerosolve Air Filters in the air conditioning plenum on the second level. Smoke was recirculated throughout the building, requiring evacuation of all occupants. Property damage was slight.
S.F.F.D. Fire Report.

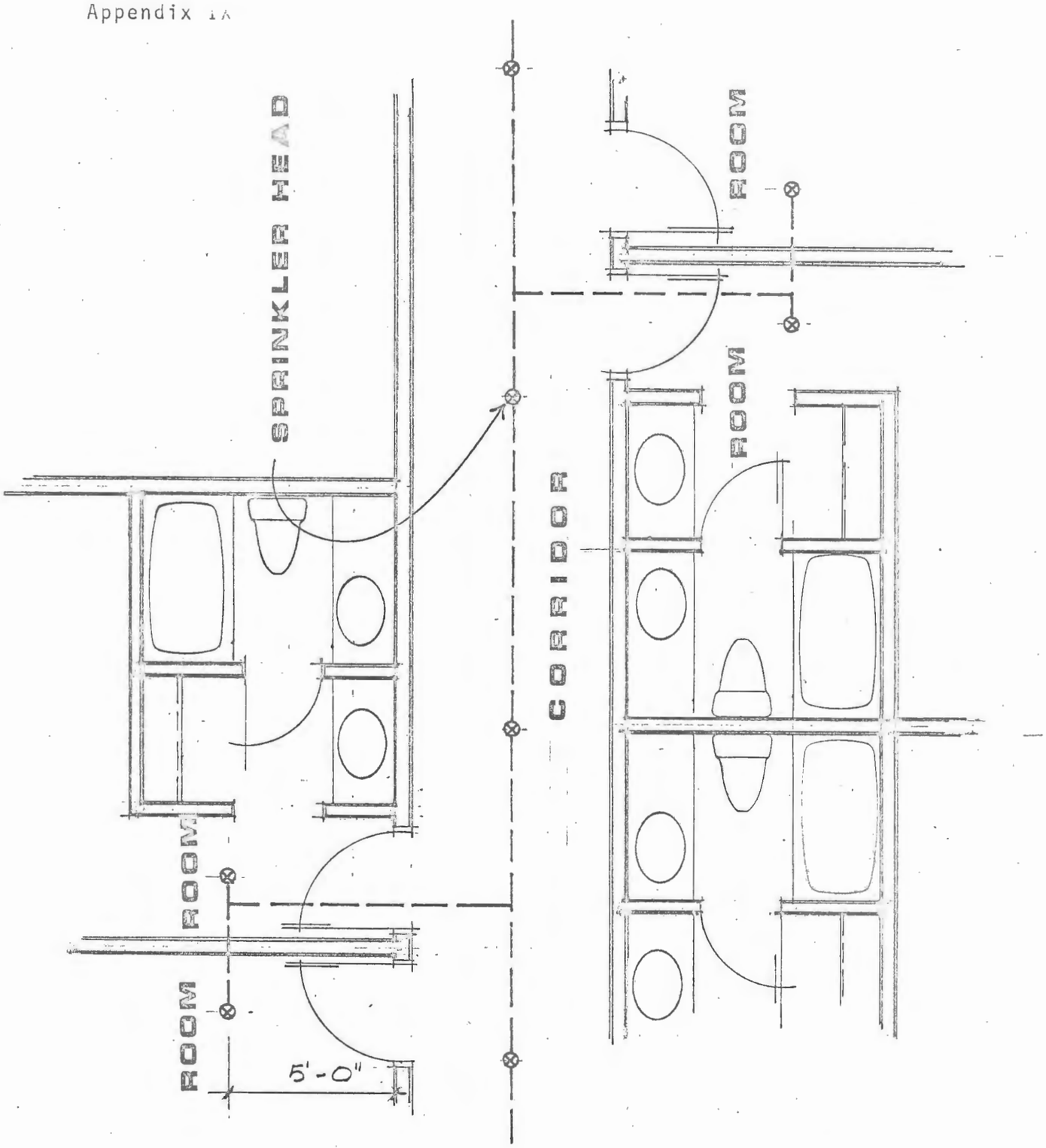


Diagram by
William E. Snyder, Arch.

BASIL A. PATERSON
Secretary of State

STATE OF NEW YORK
DEPARTMENT OF STATE
162 WASHINGTON AVENUE
ALBANY, NEW YORK 12231

February 26, 1981

Mr. Dennis Colling
Office of Nevada State
Fire Marshal
Capitol Complex
Carson City, Nevada 89710

Dear Mr. Colling:

A Special Fire Safety Task Force was appointed by New York State Governor Hugh L. Carey. The Task Force was chaired by Secretary of State Basil A. Paterson, and was comprised of local and state government officials, and experts in the health, fire prevention and safety fields.

I am enclosing the Report of the Task Force for your information. Also enclosed is a News Release from Secretary of State Paterson which summarizes the Report.

It is hoped this Report will be helpful in reducing fire deaths throughout the United States, even though it is applicable only to the State of New York.

Sincerely,

Francis A. McGarry

Francis A. McGarry
State Fire Administrator
Office of Fire Prevention
and Control

FAM:amp

Encls.

THE REPORT OF THE GOVERNOR'S COMMISSION ON FIRESAFETY CODES

MARCH 11, 1981

March 9, 1981

The Honorable Robert List, Governor
State of Nevada
Capitol Complex
Carson City, NV. 89710

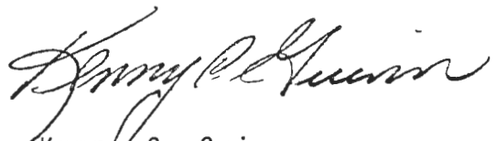
Dear Governor List:

Transmitted herewith, pursuant to your Executive Order of November 24, 1980, is the final report of your Commission on Firesafety Codes. With the issuance of this report the Commission has completed your charge.

In our effort to address the many technical and administrative problems associated with code promulgation and enforcement the Commission participated in eight meetings in Las Vegas. You will find this report to be extremely comprehensive within the time parameters available. However, because of the magnitude of the many problem areas considered by this volunteer group, we have not been able to provide all encompassing recommendations or solutions. Ultimately the many ramifications of the areas addressed by the Commission will require an ongoing effort by a standing body as advocated within the report.

You are to be commended for your formation and support of the Commission on Firesafety Codes. The Commission worked diligently in the discharge of your Executive Order and deserve appreciation from the people of the State of Nevada for their effort. I personally appreciate the opportunity to have been a part of this endeavor. I feel that this document will serve as a guideline in years to come for other States and Nations as they too attempt to cope with the many problems of public safety.

Sincerely Yours,



Kenny C. Guinn
Chairman
Governor's Commission on
Firesafety Codes

KCG/kk

GOVERNOR'S COMMISSION ON FIRESAFETY CODES

CHAIRMAN

DR. KENNY C. GUINN, Las Vegas Financial Executive

MEMBERS

JOHN G. DEGENKOLB,	Glendale, California Fire Protection Engineer
THALIA DONDERO,	Clark County Commission Member
BILL FARR,	Washoe County Commission Chairman
JASPER S. HAWKINS,	Phoenix, Arizona Architect
TOM HUDDLESTON,	Nevada State Fire Marshal
ROY L. PARRISH,	Clark County Fire Chief
PERRY C. TYREE,	Colorado Springs, Colorado Regional Building Official
ROBERT D. WEBER,	Clark County Director of Building and Zoning

STAFF

DENNIS R. COLLING

KAREN KEPHART

Funding for the Report of the Governor's Commission on Firesafety Codes was provided through the Four Corners Regional Commission and through the Federal Emergency Management Agency.

TABLE OF CONTENTS

APPENDIXES

SCOPE OF CHARGE AND MEMBERSHIP OF COMMISSION

The Governor's Commission on Firesafety Codes was established by the Honorable Robert List, Governor of the State of Nevada on November 24, 1980 by executive order. (Appendix I) The Governor's charge to the Commission was to conduct a thorough review of all conditions and regulations pertaining to firesafety codes of the State of Nevada regulating the construction of high-rise buildings and public assembly occupancies within the State of Nevada for their adequacy and effectiveness in protecting the public. It was mandated that this review should be extended to evaluation of codes and regulations governing the same classifications of occupancies constructed prior to adoption of the current State Fire Marshal's codes and regulations. (Appendix II) The Commission was directed to deliver its findings and recommendations to the Governor no later than March 1, 1981.

The Commission, which consisted of nine members, included a representative of the private business sector, State and local officials, elected public representatives, and experts in the field of fire and building codes. Dr. Kenny Guinn, Las Vegas financial executive, was appointed chairman of the Commission. Tom Huddleston, the Nevada State Fire Marshal, Roy Parrish, Clark County Fire Chief, and Robert Weber, Clark County Director of Building and Zoning, were the State and local officials appointed to the Commission. Bill Farr, Washoe

County Commission Chairman and Thalia Dondero, Clark County Commission member, were the two elected officials on the Commission. Following a national search, three prominent fire and building code experts were appointed to the Commission. John G. Degenkolb, Glendale, California fire protection engineer, Jasper S. Hawkins, Phoenix architect and Perry Tyree, Colorado Springs Regional Building Official accepted positions on the Commission.

The Commission held its first meeting December 3, 1980. A total of eight meetings were conducted in Las Vegas under the direction of Dr. Kenny Guinn, the chairman of the Commission. Based on the Commission's determination of the Governor's charges, the codes and regulations adopted by the Nevada State Fire Marshal in 1978 were reviewed. In addition, the Commission reviewed the 1979 edition of the Uniform Building Code to see if modification was needed prior to adoption by the Nevada State Fire Marshal. A third area of review was an evaluation of possible methods to improve the lifesafety features of existing high-rise and public assembly occupancies within the State.

CODES AND REGULATIONS ADOPTED BY THE NEVADA STATE FIRE MARSHAL IN 1978

After consideration of available relevant materials, it is the unanimous finding of the Commission that the present code and regulatory structure of Nevada concerning new construction of high-rise buildings is consistent with and more stringent than most codes and regulations in the United States and has been so since 1978.(Appendix III) The various code authorities on the Commission unanimously agree that Nevada's mandatory sprinkler requirement, along with other adopted regulations and codes, clearly substantiate that Nevada is in a place of national leadership in the area of fire and lifesafety protection in new high-rise construction. (Appendix II) The present codes and regulations governing public assembly occupancy spaces in the State of Nevada compare favorably with other leading states throughout the nation with the exception of interior finish requirements. This comparison is supported by the fact that most states base their fire and lifesafety requirements on certain model codes and/or National Fire Protection Association codes. A full range of model codes has been adopted by the Nevada State Fire Marshal to deal with all aspects of fire and lifesafety. However, the Commission as a whole has determined that specific areas in the codes governing public assembly occupancy spaces require improvement and must be dealt with as set forth within the Commission's recommendations.

ANALYSIS OF THE 1979 UNIFORM BUILDING CODE

Pursuant to the Commission's review of the 1979 edition of the Uniform Building Code, the following code changes were submitted by members of the Commission for consideration and distribution nationwide to numerous code authorities including architects, private industry, code writing organizations and code enforcement agencies for comment.

1807 (a) Scope. This section shall apply to all Group B, Division 2 office buildings and Group R, Division 1 occupancies, each having floors used for human occupancy located more than 55 feet or 5 stories above the lowest level of fire department vehicle access. Such buildings shall be provided with an approved automatic sprinkler system in accordance with Section 1807 (c).

1807 (b) Certificate of Occupancy. Add the following sentences. "All such equipment shall be tested quarterly by an approved agency. All lifesafety equipment shall be reset and certified by an approved agency after having been actuated. A log of such tests shall be kept available for inspection by the Fire Department. Testing shall follow procedures developed by the building designer and approved by the Building Official."

1807 (e) Alarm and Communication System. Retain the present sub-section but with (2) modified to be consistent with the present Fire Marshal requirements which refers to an 80 decibel level of sound at all points within the protected property.

1807 (f) Central Control Station. Retain the present sub-section but with further modification as currently in the Fire Marshal requirements which call for the central control station to be separated from the remainder of the building by a 2-hour fire-resistive construction and to have a door directly to the exterior whenever possible.

1807 (h) Delete the present section and substitute a requirement that elevators be installed in compliance with ANSI A17.1-1978 with the 1981 amendments. Then add the following sentence:

"All elevators on all floors shall open into elevator lobbies which are separated from the remainder of the building, including corridors, as is required for corridor construction in Section 3304 (g) and (h)."

1807 (j) Modify (1) by adding at the end of the present sentence "sprinkler operation or power failure."

Modify (3) by changing the figure 0.15 to 0.25 in 3rd line.

Section 3802 (b) 2B Modify to read:

"Every casino, showroom and other assembly room of more than 5,000 square foot area."

EXCEPTION. Churches and theaters having only fixed seating.

Section 3802 (c) Add a new Item B under (1) and redesignate the existing Items B, C and D. The new Item B is to read as follows: "In buildings over two stories in height."

After extended deliberation by the Commission and examination of the limited responses to the Commission's letter dated January 6, 1981.(Appendix IV) This Commission recommends that the Governor direct the Nevada State Fire Marshal to make the following modifications when adopting the 1979 Uniform Building Code which will regulate all new construction.

1807 (a) Scope. This section shall apply to all Group B, Division 2 office buildings and Group R, Division 1 occupancies, each having floors used for human occupancy located more than 55 feet above the lowest level of fire department vehicle access. Such buildings shall be provided with an approved automatic sprinkler system in accordance with Section 1807 (c).

1807 (b) Certificate of Occupancy. Add the following sentences. "All such equipment shall be tested quarterly by an approved agency. All lifesafety equipment shall be reset and certified by an approved agency after having been actuated. A log of such tests shall be kept available for inspection by the Fire Department. Testing shall follow procedures developed by the building designer and approved by the Building Official."

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1807 (h) Delete the present section and substitute a requirement that elevators be installed in compliance with ANSI A17.1-1978 with the 1979 and 1980 amendments and Section 211.3 of the 1981 amendments. (Appendix V) Then add the following sentence:

"All elevators on all floors shall open into elevator lobbies which are separated from the remainder of the building (Appendix VI) including corridors, as is required for corridor construction in Section 3304 (g) and (h)."

1807 (j) Modify (1) by adding at the end of the present sentence "sprinkler operation or power failure."

Modify (3) by changing the figure 0.15 to 0.25 in 3rd line.

3802 (b) Modify 2B to read:

"Every casino, showroom and other assembly room of more than 5,000 square foot area."

EXCEPTION. Churches and theaters having only fixed seating.

3802 (b) Add a new Item B under (1) and redesignate the existing Items B, C and D. The new Item B is to read as follows: "In buildings over two stories in height."

RETROACTIVE APPLICATIONS

During consideration of methods to improve the fire and lifesafety features of existing high-rise and public assembly occupancies, the Commission reviewed the 1976 Uniform Building Code requirements for updating fire and lifesafety features in existing buildings constructed prior to Nevada's most recent code adoption in 1978. This review revealed Chapter 1 of the 1976 edition of the Uniform Building Code as the only existing legal vehicle to compel the incorporation of retroactive lifesafety features in existing structures. These provisions are only applicable to an existing structure when the value of the additions or alterations exceeds fifty percent (50%) of the value of the existing structure. Thus the provisions are of little or no value in resolving the present problems relating to existing high-rise buildings in Nevada. (Appendix VII)

The Commission considered the retroactive provisions of Chapter 1 of the Uniform Building Code to be too general in nature and therefore the Commission determined that specific requirements must be proposed. With this thought in mind the Commission studied a fire hazard analysis survey of thirty-five (35) high-rise fires occurring during the period of September, 1964 - January, 1975.(Appendix VIII) This survey provided substantial information concerning specific recurring building deficiencies having an adverse affect on fire and lifesafety of both occupants and firefighters. Predicated upon the

information obtained in this analysis and through extensive discussion within the Commission, the Governor's Commission on Firesafety Codes feels the following recommendations must be implemented to develop a reasonable degree of fire and lifesafety in existing buildings.

1. All Group B, Division 2 office buildings and Group R, Division 1 occupancies, each having floors used for human occupancy located more than fifty-five feet (55') above the lowest level of fire department vehicle access shall be sprinklered in each exit corridor with at least one sprinkler head located inside each room over every door opening onto that corridor. (Appendix IX)

2. In assembly occupancies of over five thousand square feet (5,000 sq.ft.) of floor area which can be used for exhibition or display purposes including casinos and showrooms, sprinklers are required. All concealed and occupiable spaces not physically separated by approved fire rated construction from the area required to be sprinklered shall also be sprinklered. EXCEPTION: Churches and theaters having only fixed seating.

3. Open stairways or vertical shafts in buildings three (3) or more stories in height shall be enclosed with protected assemblies or by alternate means providing equivalent fire and lifesafety.

4. Door closures shall be required on doors opening into exit corridors.

5. Emergency lighting shall be required in exit corridors and other integral portions of means of egress essential for safe evacuation of the building in question.

6. Smoke detectors shall be required in sleeping quarters offered in all R1 occupancies (apartments and hotels).

7. One-way voice communication systems shall be required in each sleeping room offered in all high-rise (55') occupancies.

8. Immediate action shall be taken to assure adequate exit facilities.

9. Combustible fiber board interior finishes shall not be allowed in A1, A2 or A2.1 occupancies (assembly occupancies over 300 occupants).

10. Whenever it is found that the corridor is being used to supply air to a guest room or dwelling unit, that use must be discontinued by sealing off the opening. The authority having jurisdiction may permit the continued use of the corridor to supply air provided smoke detectors are installed within the corridor in conformance with their listed spacing. Actuation of any two detectors shall cause the air supply to the corridor to shutdown and cause closure of the opening between the room and the corridor.

11. Automatic recall to the first floor or an alternate, non-fire floor will be required for all elevators in high-rises (55') in conformance with the 1978 edition of ANSI A17.1 and Section 211.3 of the 1981 amendments. Appendix V)

12. There shall be a posting of the number of each floor in the stairwell and every elevator lobby area.

13. Evacuation routes shall be posted in each sleeping room in all high-rise R1 occupancies (apartments and hotels).

14. Automatic shut off shall be provided for the heating, ventilating and air conditioning system as proscribed in the 1979 edition of the Uniform Mechanical Code Section 1009 with an added smoke detector as required in the 1978 edition of the National Fire Protection Association Standard 90A for automatic shutdown.

15. Consideration should be given to the establishment of emergency helistops where applicable and approved by the authority having jurisdiction.

16. Requirements for fire alarm systems shall conform to Section 1202 B paragraph 2 of the 1979 Uniform Building Code.

These recommendations have been more specifically directed toward places of assembly and hotels and apartment houses. While the Commission's recommendations include all buildings having a floor level more than fifty-five feet (55') above

the level of fire department vehicle access, buildings of other occupancies such as office buildings must be given additional study. The sprinkler, elevator, stair enclosure and automatic shut-off for heating, ventilating and air-conditioning systems regulated by Section 1009 of the Uniform Mechanical Code, 1979 edition, requirements are applicable to all buildings exceeding fifty-five feet (55').

IMPLEMENTATION

Adequate enforcement of codes and regulations was of primary importance throughout the Commission's deliberations. Potential trade-offs or alternatives were seen to be a necessary ingredient in a practical retroactive program. Rapid and active participation must be encouraged through the application of tax incentives for the private sector. A timetable for implementation must be set, structures must be individually reviewed and procedures for retroactive implementation of fire and lifesafety features must be developed.

Due to the magnitude of the complex problems studied by the Commission we have not been able to provide all encompassing recommendations or solutions. Therefore, the Governor's Commission on Firesafety Codes feels strongly that an ongoing standing Advisory Board must be formed to consider retroactive application of lifesafety features to existing structures and to serve as an active appeals board. This Advisory Board should be within the office of the Nevada State Fire Marshal with a fulltime paid staff and a budget. This standing Advisory Board would consider the additional matters the Commission found beyond its time limitation capabilities to thoroughly examine. It is the feeling of this Commission that the Advisory Board can begin to generate positive results almost immediately. The Commission further feels that it is imparitive that retroactive application take place as soon as possible. However, due to the highly technical and controversial nature of retroactive application recommencations,

a period not to exceed three (3) years from the date applicable legislation is signed into law by the Governor of the State of Nevada will be required for the State of Nevada or the local authority having jurisdiction to survey and implement some of these recommendations and to adequately address the numerous ramifications of retroactive fire and lifesafety modifications. It is important to note that many of the Commission's recommendations such as smoke detectors, stairwell numbering and emergency lighting can be implemented immediately. The Commission strongly recommends plans for corrections must be submitted to the authority having jurisdiction within six (6) months after the completion date of a survey for an individual building.

The Commission also recommends the development of an evaluation process that would determine the adequacy of existing code enforcement practices. This would involve the Advisory Board in the conducting of reviews of the local jurisdiction's pre-design conferences, plan reviews, construction site inspections, regular inspection programs insuring maintenance and management of existing buildings. The Commission believes this evaluation should result in identification of needs for staffing, resources, and legal authority as well as the development of guidelines and materials for use by the State and local authorities.

Under the auspices of an active Advisory Board, the Commission feels fire and lifesafety programs must be developed for education and training in schools, for the general public, for operating personnel and building staff. A program for

evaluation of new technology and architectual designs must be developed and maintained at the highest level if Nevada is to provide the best possible fire and lifesafety protection for its citizens and visitors. Should the current laws of the State of Nevada on revenue and expenditure limitations (caps) adversly effect these recommendations by the Commission, Nevada legislation must be developed to alleviate the problem.

The Commission further recommends that the Congressional Delegation of the State of Nevada move toward the development of reasonable incentives for the private sector for retro-active application of new fire and lifesafety features. This could translate into tax incentives such as investment credits, accelerated depreciation schedules and tax credits. The Commission further urges the Congressional Delegation to consider calling national committee hearings in this regard and to submit appropriate bills in the United States Senate and the United States House of Representatives.

Similarly, this Commission calls upon the Nevada State Legislature to consider related types of incentives at the State and local level. This might include, for example, adjustments for assessments of real property.

SUMMARY

The Governor's Commission on Firesafety Codes has found that due to its time constraints, it has only begun a process through which the State of Nevada may ultimately address all of the problems associated with fire and lifesafety in existing high-rise and public assembly occupancies.

The members of the Commission wish to emphasize the existance of the myriad of technical and administrative details to be resolved. The members were not able to completely consider the areas of application, initiation or enforcement. Failure to adequately address such areas will have serious ramifications upon any programs or laws developed as a result of this Commission's findings and recommendations. It is, therefore, the *unanimous recommendation* of the Governor's Commission on Firesafety Codes that the State of Nevada establish an Advisory Board with adequate staff, funding and support, to develope a systematic ongoing program to deal with the many issues beyond the immediate recommendations of the Commission. Modifications of the 1979 Uniform Building Code are recommended to the Nevada State Fire Marshal for inclussion in his adoption of this code. The scope of Section 1807 of the 1979 Uniform Building Code is expanded. Sprinklering requirements are strengthened. Alarm and communication system requirements are modified. Lobbies are required for elevators. Exit requirements from stairways are expanded.

In conjunction with these modifications to the 1979 Uniform Building Code this Commission recommends testing requirements for all fire and lifesafety equipment be incorporated in the Nevada State Fire Marshal regulations.

The Commission feels its most far reaching recommendations relate to the retroactive measures encompassing manditory sprinklering, smoke detectors, door closers, emergency lighting, elevator control, one-way voice communication in sleeping rooms, open stairwell enclosure, posting of evacuation routes, helistops, numbering of floors, automatic shut off for air systems, improvement of egress, flammable finishes, fire alarms and air supply control.

These recommendations in conjunction with the establishment of the ongoing Advisory Board will place the State of Nevada in the forefront of fire and lifesafety throughout the Nation.

Appendix I

STATE OF NEVADA

EXECUTIVE CHAMBER

CARSON CITY

AN EXECUTIVE ORDER BY THE GOVERNOR

WHEREAS, ensuring the safety of the public is a primary function of Government; and

WHEREAS, the threat of fire is a continuous danger to the safety of the public and can be the cause of death and injury; and

WHEREAS, the various levels of Government are charged with establishing and enforcing codes and regulations designed to minimize the chance of injurious fires; and

WHEREAS, the codes and regulations concerning fire safety are in need of periodic review for improvements in order to properly protect the public;

NOW, THEREFORE, I, ROBERT LIST, GOVERNOR OF THE STATE OF NEVADA, pursuant to the powers conferred upon me by the Constitution and laws of this State, do hereby establish

THE GOVERNOR'S COMMISSION ON FIRE-SAFETY CODES

SCOPE:

The purpose of THE GOVERNOR'S COMMISSION ON FIRE-SAFETY CODES is to review all codes and regulations currently in effect that pertain to fire-safety codes in high-rise and public-assembly occupancies within the State of Nevada, and all other codes and regulations relating to the subject of fire safety in high-rise and public-assembly occupancies already in existence prior to 1973, for their adequacy and effectiveness in protecting the public.

THE COMMISSION:

The Commission will consist of nine members including the general public representatives and experts in the field of fire safety.

The Chairman shall be selected by the Governor at the time of appointment.

The Commission shall meet at the call of the Chairman.

The Commission expires on March 1, 1981, upon submission of its report and recommendations to the Governor no later than that date.

CHARGE:

The Commission is hereby ordered and directed to conduct a thorough review of all conditions and regulations currently in effect that pertain to fire-safety codes in high-rise and public-assembly occupancies within the State of Nevada, and all other codes and regulations relating to the subject of fire safety in high-rise and public-assembly occupancies already in existence prior to 1973, for their adequacy and effectiveness in protecting the public. Further, the Commission is directed to deliver its findings and recommendations to the Governor no later than March 1, 1981. The Commission is empowered to conduct what hearings it deems necessary to gather needed information.

Appendix I
Continued

The Commission is also ordered and directed to work closely with all existing organizations at the local levels which can assist in achieving the purposes of this Order.

All State departments, boards, commissions, offices and employees are directed to cooperate with and assist the Commission in its work, within the limitations of staffing and other available resources.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Nevada to be affixed at the State Capitol this 24th day of November, in the year of our Lord, one thousand nine hundred and eighty.

Governor

Secretary of State

By: _____

Appendix II

NEVADA STATE FIRE MARSHAL REGULATIONS

Nevada State Fire Marshal Division
Carson City, Nevada

T. J. Huddleston
Nevada State Fire Marshal

TABLE OF CONTENTS

ARTICLE 1 GENERAL PROVISIONS

ARTICLE 2 PORTABLE FIRE EXTINGUISHERS AND FIXED HOOD SYSTEMS

ARTICLE 3 PROTECTIVE SIGNALING SYSTEMS

ARTICLE 4 AUTOMATIC SPRINKLER SYSTEMS (COMMERCIAL)

ARTICLE 5 AUTOMATIC SPRINKLER SYSTEM (RESIDENTIAL)

ARTICLE 6 CLASSIFICATION OF HEALTH CARE FACILITIES

ARTICLE 7 HISTORIC OR ARCHITECTURALLY SIGNIFICANT BUILDINGS

ARTICLE 8 ADOPTED CODES

ARTICLE I GENERAL PROVISIONS

Chapter I

Title, Intent and Scope

1.101 Title.

This regulation shall be known as the state fire marshal's regulation.

1.102 Intent.

This regulation prescribes minimum requirements for sales, rental, leasing, installation, and service of fire and life safety equipment in accordance with the provisions of NRS 477.030.

This regulation deals with methods of restoring historic or architecturally significant buildings and classifies health facilities pursuant to the provisions of NRS 477.020.

Where no specific standards or requirements are specified in this regulation or contained within other codes adopted by the state fire marshal, compliance with the National Fire Codes of the National Fire Protection Association as adopted by the state fire marshal in this regulation is prima facie evidence of compliance with this intent.

1.103 Scope.

This regulation applies to all persons who are not specifically excepted. This regulation applies to all equipment, conditions, or buildings with the state unless specifically excepted.

Where there is a conflict between this regulation and any code, ordinance, or regulation adopted by local authority, the more stringent requirement providing the greatest fire and life safety to the public applies.

National codes are adopted with modifications by the state fire marshal within this regulation and are enforceable jointly with this regulation.

Chapter II

Administration

1.201 Enforcement.

Administration and enforcement of this regulation are the duties of the state fire marshal and his authorized representatives under the provisions of NRS 477.030.

Chapter III

Licenses and Registration

General Provisions

1.301 Licenses and Registration.

A license or certificate of registration issued by the state fire marshal constitutes conditional permission for a person to engage in the sale, installation, or servicing of equipment or systems specified on the license or certificate of registration. Licenses and certificates do not take the place of any other documents required by law.

A license or certificate issued by the state fire marshal remains the property of the state fire marshal division and must be renewed as required by this regulation. The license or certificate is not transferable and is revocable for cause.

1.302 Application for Licenses or Certificates.

All applications for licenses or certificates required by this regulation must be made to the state fire marshal in the manner required by this regulation.

1.303 Inspections.

Prior to issuing a license or certificate, the state fire marshal or his authorized representative may inspect vehicles, equipment, buildings, devices, premises, or any area to be used in performing the activities permitted by the license or certificate.

1.304 Compliance Required.

Licenses and certificates issued under this regulation are presumed to contain the requirement that the applicant, his agents, and employees carry out the permitted activity in compliance with all the requirements of law and this regulation.

Chapter IV

License and Registration

Portable Fire Extinguishers and Fixed Hood Systems

1.401 License Required.

No person may service or install a portable fire extinguisher or fixed hood extinguishing system unless licensed under the provisions of this regulation or otherwise excepted. Each licensee must be properly equipped and staffed by persons qualified under this regulation to perform the acts of service authorized by the type of license issued. Licenses and certificates of registration are not transferable and may be issued in any combination of the following types:

(a) Type A: All activities included in types B, C, and D.

(b) Type B: Service, charge, recharge, inspect, install, or any combination thereof.

(c) Type C: Hydrostatic testing of any fire extinguisher cylinders not listed by the United States Department of Transportation.

(d) Type D: Hydrostatic testing of any cylinders listed by the United States Department of Transportation.

(e) Type E: Certified for installation of pre-engineered fixed hood extinguishing systems.

A licensee may take orders for any acts of service for which he is not licensed provided the orders are actually completed by a person licensed to perform those acts.

1.402 Certificate of Registration Required.

No person other than a new employee may service portable or fixed fire extinguishing systems unless he has a certificate of registration issued by the state fire marshal and is employed by a licensee or a person exempt from license requirements as provided in Section 1.409 of this regulation. A certificate of registration is not transferable and may not be issued to anyone who has not attained the age of 18 years.

1.403 Approval of State Fire Marshal.

In addition to requirements of Section 1.402 of this regulation, any person who desires to engage in the installation, servicing, or inspection of a manufacturer's pre-engineered fixed hood extinguishing systems must be declared qualified to perform such act or acts by the state fire marshal. The state fire marshal may declare to be qualified a person who provides certification from a manufacturer of fixed hood extinguishing systems that he has received instruction and training in the installation, maintenance, servicing, and inspection of fixed hood extinguishing systems.

1.404 New Employees.

The provisions of Section 1.402 do not prohibit the servicing of portable fire extinguishers by new employees of a licensee for a period of not

more than 90 days after the beginning of employment, if the servicing is conducted in the presence and under the direct supervision of a registrant. A new employee may not service portable fire extinguishers if after the completion of the 90-day period he fails to pass a written examination.

1.405 Hydrostatic Test Requirements.
Each person who performs hydrostatic testing of fire extinguishers manufactured in accordance with the specifications of the United States Department of Transportation must do so in accordance with the procedure specified by that department for compressed gas cylinders and must have a hydrostatic testing endorsement authorizing such testing issued by the state fire marshal and attached to the certificate or license.

1.406 Separate License Required.
A separate license is required for each business location.

1.407 Duplicate License or Certificate.
A duplicate license or certificate of registration may be issued to replace a license or certificate which has been lost or destroyed upon the submission of written statement from the licensee or the registrant to the state fire marshal attesting that the license or certificate of registration has been lost or destroyed. The prescribed fee must accompany the written statement for a duplicate license or certificate of registration.

1.408 Replacement of Extinguishers.
A licensee shall replace extinguishers removed from premises for servicing with spare extinguishers of equal or higher UL ratings during the period the extinguishers which are being serviced are removed.

1.409 Exceptions.
The provisions of Chapter IV of this article do not apply to:
(a) The filling or charging of a portable fire extinguisher prior to its initial sale by its manufacturer.
(b) A person who services only his own portable fire extinguishers for his own use by maintaining fire extinguisher facilities adequate for the purpose. This exception does not apply if the fire extinguishers are required by any statute, regulation, or ordinance, in which case the person servicing the required extinguishers must possess a certificate of registration.

1.410 Applications.
Application for a license or a certificate of registration must be made on forms prescribed by the state fire marshal. Each application must be accompanied by the required fee and contain the following information:
(a) Name and address of the applicant.
(b) Business address.
(c) Fictitious names used, if any.
(d) Type of work performed.
(e) Other pertinent information which the state fire marshal requires.

1.411 Examination.

Each applicant for a certificate of registration shall pass a written examination given by the state fire marshal in order to qualify for a certificate. The examination is divided into four parts. An applicant must receive a passing score on parts one and two before a certificate will be issued. The examination may be supplemented by practical tests or demonstrations necessary to determine the applicant's knowledge and ability to service portable fire extinguishers and fixed fire extinguishing systems. A certificate of registration endorsed with the type of qualification will be issued to each qualified person.

Information needed to pass the examination may be found in N.F.P.A. Number 10, Standard for the Installation, Maintenance, and Use of Portable Fire Extinguishers; this article; and the Fire Protection Handbook, Fourteenth Edition.

1.412 Date and Place of Examination.

When application for a license or a certificate of registration is made to the state fire marshal, he will set a date and place for testing of the applicant which is not more than 90 days after receipt of the application. Testing is available at the Carson City office of the state fire marshal at any time during normal working hours. Applicants traveling to Carson City for the purpose of testing must do so at their own expense.

1.413 Re-Examination.

An applicant who fails the written examination or any part thereof must wait 15 days from the date of his prior examination before retesting. A fee is charged for re-examination.

An applicant who fails part four of the written examination may be issued a Type B and C certificate of registration if he so desires. If at a later date the applicant wishes to reapply for a Type A certificate of registration, he must complete an application and pay the required fees as if the application were being made for the first time.

1.414 Hydrostatic Testing Information.

For hydrostatic testing information for DOT listed cylinders, reference may be made to Compressed Gas Association Pamphlet C-1, Methods for Hydrostatic Testing of Compressed Gas Cylinders.

Chapter V

License

Protective Signaling Systems and Automatic Sprinkler Systems (Commercial and Residential)

1.501 License Required.

No distributor or installer may service or install any fire alarm system or automatic sprinkler system unless licensed to do so under the provisions of this regulation. Each licensee must be properly equipped and staffed by personnel qualified to perform installation and service of fire alarm systems, automatic sprinkler systems or both.

1.502 Separate License Required.

A separate license is required for each business location.

1.503 Duplicate License.

A duplicate license may be issued to replace a license which has been lost or destroyed upon the submission of a written statement from the licensee to the state fire marshal attesting that the license has been lost or destroyed. The prescribed fee must accompany the written statement for duplicate license.

1.504 Application.

Application for a license must be made on forms prescribed by the state fire marshal. Each application must be accompanied by the required fee and contain the following information.

(a) Name and address of the applicant.
(b) Business address.
(c) Fictitious name used, if any.
(d) Type of work performed.
(e) Other pertinent information required by the state fire marshal.

Chapter VI

Fees

1.601 Fee Schedule—Portable Fire Extinguishers and Fixed Hood Systems.

(a) License with authorization to conduct hydrostatic tests of Department of Transportation listed and marked cylinders	$250
(b) License without authorization to conduct hydrostatic test of Department of Transportation listed and marked cylinders	200
(c) Authorization for installation of fixed hood extinguishing systems	50
(d) Certificate of registration	40
(e) Renewal fee for certificates of registration	20
(f) Re-examination fee for certificates	15
(g) Duplicate license or certificate	5
(h) Change of address or location on license	50

1.602 Fee Schedule—Protective Signaling Systems or Automatic Sprinkler Systems (Commercial and Residential).

License with authorization to design, install, maintain, and service fire alarm systems or automatic sprinkler systems (includes hydraulically designed system)	$250
Duplicate or amended license	5

Chapter VII

Renewals

Portable Fire Extinguishers and Fixed Hood Systems, Protective Signaling Systems and Automatic Sprinkler Systems (Commercial and Residential)

1.701 Expiration.

All licenses and certificates of registration expire on December 31 of the year in which they are issued. Application for renewal must be made annually on or before November 1. Renewal applications must be accompanied by the appropriate fee. A penalty of 50 percent of the renewal fee will be charged if the renewal fee is not paid on or before November 1.

If an application and the appropriate fee for renewal of a license or certificate of registration is void, then the firm or registrant holding the license or certificate of registration shall cease to perform those services authorized by the license or certificate of registration.

When a certificate of registration has expired and the registrant desires to continue to service portable fire extinguishers or fixed hood extinguishing systems, application must be made to the state fire marshal for an original certificate of registration in accordance with the regulations relating to applications for original certificates.

When a license has expired and the licensee desires to continue either in the business of servicing portable fire extinguishers or fixed hood extinguishing systems or installing or servicing fire alarm systems or fire sprinkler systems, application must be made to the state fire marshal for an original license as if application was being made for the first time. A penalty of 50 percent of the original fee will be charged in addition to the original fee.

Chapter VIII

Records Required

Protective Signaling Systems and Automatic Sprinkler Systems (Commercial and Residential)

1.801 Records.

Accurate records must be maintained by the licensee of all installations, service, and service agreements made by him.

1.802 License List.

The state fire marshal will keep a list of the names, addresses, and license numbers of all licensees. The record of all numbers will be available for inspection.

1.803 Change of Status Report.

Any change of location of licensee must be reported to the office of the state fire marshal in writing within 7 days after the change. A new license will be issued upon notification and payment of the prescribed fee.

Chapter IX

Denial, Revocation, and Suspension of Certificates and Licenses

1.901 Grounds.

The state fire marshal may refuse to issue or renew, or may suspend any certificate of registration or license if he determines that an applicant, licensee, or registrant has:

(a) Obtained or attempted to obtain a license or certificate or registration by fraud or misrepresentation.

(b) Been guilty of malpractice or incompetence in fire extinguisher sales or servicing, installation, servicing, or sales of fire alarm systems and automatic sprinkler systems.

(c) Advertised fire extinguisher sales or servicing, fire alarm systems and automatic sprinkler systems installation, servicing, or sales by means of known false or deceptive statements.

(d) Repeatedly failed to timely pay the annual renewal license or certificate of registration fees provided in these regulations.

(e) Violated any provision of the regulations adopted by the state fire marshal.

1.902 License and Certificate Ownership.

All licenses and certificates of registration remain the property of the state fire marshal and may not be suspended or revoked by any other person.

Chapter X

Division Hearings

1.1001 Investigation.

When the state fire marshal receives written notice or a complaint from any source alleging fraud, misrepresentation, malpractice, or incompetence on the part of any person licensed or certified under this regulation, he will conduct an investigation of the allegations. After the investigation is completed to the satisfaction of the state fire marshal and he has reviewed all the pertinent facts, he will give written notice to all interested parties stating his findings and intention to take action, if any.

1.1002 Investigative Hearings.

The state fire marshal may call involved parties to appear before him for an investigative hearing to determine just cause to set a formal administrative hearing for revocation or suspension of certificates of license pursuant to Chapter 233B of NRS.

The state fire marshal will give at least 10 days written notice to all involved parties of his intention to hold an investigative hearing. Notice of the hearing will be sent to the current address of involved parties on file with the state fire marshal division. Failure of a holder of a certificate or license to appear for a duly called investigative hearing is a violation of a provision of certification or licensing of that person and constitutes grounds for revocation or suspension of the license or certificate.

1.1003 Denial of Original or Renewal License or Certificate.

A person who has been denied an original or renewal license or certificate by the state fire marshal is entitled to a formal administrative hearing. The person may request an administrative hearing within 10 days after notice of denial. A written request must be sent to the state fire marshal. The state fire marshal, upon receipt of a request for an adminstrative hearing, will immediately take necessary action to schedule an administrative hearing. Failure on the part of an applicant to pass tests required in this regulation does not constitute grounds to request an administrative hearing.

1.1004 Administrative Hearings.

Administrative hearings will be conducted in accordance with Chapter 233B of NRS and subsection 5 of NRS 477.033.

1.1005 Entitlement.

Any person who has been denied a license or certificate by the state fire marshal is entitled to a hearing in accordance with the provisions of Chapter X of Article 1 of this regulation.

Any person who has a license or certificate suspended or is denied renewal by the state fire marshal is entitled to a hearing in accordance with the provisions of Chapter X of Article 1 of this regulation.

Chapter XI

Definitions

1.1101 General Provisions.

For the purposes of this regulation:

(a) The present tense includes the past and future tenses, and the future, the past.

(b) The masculine gender includes the feminine and neuter.

(c) The singular number includes the plural and the plural, the singular.

(d) If any provision of this regulation or the application thereof to any person or circumstances is held invalid, the remainder of the regulation, and the application of that provision to other persons or circumstances shall not be affected thereby.

1.1102 Definitions.

As used in this regulation, unless the context otherwise requires, the words and terms defined in Chapter XI of this regulation have the meanings ascribed to them.

1.1103 "Administrator" means the executive officer of a political subdivision.

1.1104 "Alarm Service" means the service required following:

(a) The manual operation of a fire alarm box;

(b) The transmission of an alarm indicating the operation of protective equipment or systems, such as an alarm from waterflow in a sprinkler system, the discharge of carbon dioxide, the detection of smoke, the detection of excessive heat; or

(c) The transmission of an alarm from other protective systems.

1.1105 "Alarm Signal" means a signal indicating an emergency requiring immediate action such as an alarm of fire from a manual box, a waterflow alarm, an alarm from an automatic fire alarm system, or other emergency signal.

1.1106 "Alter" and "Alteration" mean any change, modification, or deviation in construction or occupancy.

1.1107 "Annunciator" means a unit containing two or more identified targets or indicator lamps in which each target or lamp indicates the circuit, condition, or location annunciated.

1.1108 "Antifreeze System" means a sprinkler system employing automatic sprinklers attached to a piping system containing an antifreeze solution and connected to a water supply in which the antifreeze solution is followed by water from the water supply.

1.1109 "Approved" means that the state fire marshal has approved a practice or piece of equipment as the result of investigation and tests conducted under his supervision, or by reason of accepted principles or tests by national authorities or technical or scientific organizations recognized by the state fire marshal.

1.1110 "Assembly" means the gathering together of 50 or more persons in drinking or dining establishments, or 50 or more persons in any other place for any purpose.

1.1111 "Building" means any structure erected for the support, shelter, or enclosure of persons, animals, or property.

1.1112 "Building Official" means the official of the state or a political subdivision charged with the administration of a building code.

1.1113 "Certificate" and "Certificate of Registration" means a document issued by the state fire marshal to a person who has passed the prescribed tests which grants conditional permission to perform the acts described on the document.

1.1114 "Chief" means the chief officer of the fire department serving a jurisdiction or his authorized representative.

1.1115 "Chief of Police" means the chief law enforcement officer of a jurisdiction or his authorized representative.

1.1116 "Combination Paging Alarm System" means a fire alarm system designed to provide a general fire alarm and voice communication. The system may be used in whole or in part in common with another signaling system such as voice page or a musical program system if all components are of a type approved by the state fire marshal and the non-emergency system does not degrade the alarm and paging functions of the system.

1.1117 "Custodial Care Facility" means a building or a part of a building which is used for lodging or boarding four or more persons who are incapable of caring for themselves because of age or physical or mental limitations. The term includes facilities such as homes for aged, nurseries providing custodial care for children under six years of age, adult group care facilities, and facilities for the care of the mentally retarded. Day care facilities which do not provide lodging or boarding for institutional occupants are not covered in this definition.

1.1118 "Dry System" means a sprinkler system employing automatic sprinklers attached to a piping system containing air or inert gas under atmospheric or higher pressures in which loss of pressure from the opening of a sprinkler or detection of a fire condition causes the release of water into the piping systems and out through the opened sprinkler.

1.1119 "Dwelling" means any structure which contains one or two dwelling units intended to be used for human occupancy.

1.1120 "Dwelling Unit" means a single unit which has provisions for living and sleeping and which may provide for cooking and sanitation.

1.1121 "Fixed Hood System" means a fixed extinguishing system which is utilized in the hood and duct system over cooking equipment.

1.1122 "Governing Body" means:
(a) If a building is within a municipality, the governing body of that municipality;
(b) If a building is not within any municipality, the board of county commissioners of the county in which it is located; or
(c) If a building is located within Carson City, the Board of Supervisors.

1.1123 "Heating or Cooking Appliance" means any electric, gas, or oil-fired appliance not intended for central heating.

1.1124 "Hospital" means a building or a part of a building which is used for medical, psychiatric, obstetric, or surgical care on a 24-hour basis of four or more inpatients. The term includes general hospitals, mental hospitals, tuberculosis hospitals, hospitals for children, and all such facilities providing inpatient care.

1.1125 "Hydrostatic Testing" means a test under pressure of the required strength of a container by hydrostatic methods.

1.1126 "I.C.C. Container" means any container approved by the United States Interstate Commerce Commission for shipping any liquid, gas, or solid material of a flammable, toxic or other hazardous nature.

1.1127 "Inspection" means the handling and observation of a fixed hood system, portable fire extinguisher unit, fire sprinkler system or alarm system to check for damage to the system or unit which could preclude its functioning as designed. "Inspection" does not include actual maintenance.

1.1128 "Jurisdiction" means any county, city, town, district, or other political subdivision in the state.

1.1129 "License" means a document issued by the state fire marshal conditionally authorizing a person to engage in the business of, and receive a fee for, any of the following:
(a) Installation of protective signaling systems.
(b) Maintenance and service of protective signaling systems.
(c) Design of protective signaling systems.
"License" also means a document issued by the state fire marshal to a

person who has satisfied the requirements which grants conditional permission to perform service, charging, maintenance, repair, installation, or hydrostatic testing of any approved portable fire extinguisher, fixed hood system, fire sprinkler system, or alarm system.

1.1130 "Maintenance" means repair service, including periodic inspections and tests, required to keep the protective signaling system and automatic sprinkler systems and their component parts in an operative condition at all times, together with replacement of the system or of their components when it becomes undependable or inoperative. "Maintenance" also means the disassembly of an extinguisher or extinguishing system, and a complete check of all working parts and all parts which have a bearing on the performance of the extinguisher or system, to insure their integrity.

1.1131 "N.F.P.A." means the National Fire Protection Association.

1.1132 "Nursing Home" means a building or a part of a building which is used for lodging, boarding, and nursing care on a 24-hour basis of four or more persons who, because of mental or physical incapacity, are unable to provide for their own needs and safety without assistance. The term includes convalescent homes, infirmaries operated by or for homes for the aged, and intermediate care facilities.

1.1133 "Owner" means a person who owns property and his duly authorized agent or attorney, a purchaser, devisee or fiduciary, and a person having a vested or contingent interest in the property.

1.1134 "Person" means a natural person, corporation, partnership, association, or other entity, public or private.

1.1135 "Pipe" as used in this regulation includes pipe and tubing.

1.1136 "Portable Fire Extinguisher" means any approved device capable of being moved from place to place which contains dry chemicals, fluids, or gases for the purpose of extinguishing fires and the means for application of its contents.

1.1137 "Pre-Engineered System" means a packaged system of components designed to be installed according to pre-tested limitations as listed by a nationally recognized testing laboratory, or as determined by the state fire marshal.

1.1138 "Protective Signaling System" means electrically operated circuits, instruments, and devices, together with the necessary electrical energy, designed to transmit fire alarms and supervisory and trouble signals necessary for the protection of life and property.

1.1139 "Protective Systems, Equipment or Apparatus" means automatic sprinklers standpipes, carbon dioxide systems, and other devices

used for extinguishing fires and for controlling temperatures or other conditions dangerous to life or property.

1.1140 "Recharging" means emptying the extinguishing agent container, refilling with the appropriate extinguishing agent, charging the container with the appropriate propellant, and reasonable preventative maintenance to insure integrity.

1.1141 "Registrant" means a person who has been issued a certificate of registration by the state fire marshal.

1.1142 "Restrained Care Facility" means a building or a part of a building which is used to house persons who are under restraint or security.

1.1143 "Service" and "Servicing" mean maintenance of portable fire extinguishers or fixed extinguishing systems in accordance with applicable adopted standards, including all charging, filling, recharging, refilling, repairing, installing, hydrostatic testing, and tagging. "Service" and "Servicing" also mean servicing of protective signaling systems and automatic sprinkler systems and components in accordance with adopted standards, and may include maintenance, installation, repairing, restoration, inspections, and tests.

1.1144 "Smoking" means the carrying or use of lighted pipe, cigar, cigarette, or tobacco in any form.

1.1145 "Sprinkler System" means an integrated system of piping connected to a water supply, including a controlling valve and a device for actuating an alarm when the system operates, with sprinklers which will automatically initiate water discharge over a fire area.

1.1146 "Supervisory Service" means the service required to assure the operating condition of automatic sprinkler systems and other systems for the protection of life and property.

1.1147 "Supervisory Signal" means a signal indicating the need of action in connection with the supervision of watchmen or of sprinkler and other extinguishing systems or equipment, or with the maintenance features of other protective systems.

1.1148 "System" means any assembly, electrical or mechanical, and all parts and portions connected to it.

1.1149 "Trouble Signal" means a signal indicating trouble of any nature, such as a circuit breaker or ground, occurring in the devices or wiring associated with a protective signaling system.

1.1150 "U.L." means Underwriters Laboratories, Inc.

1.1151 "Uniform Building Code" means the code published by the International Conference of Building Officials.

1.1152 "Uniform Fire Code" means the code published jointly by the Western Fire Chiefs and the International Conference of Building Officials.

1.1153 "Uniform Mechanical Code" means the code published jointly by the International Association of Plumbing and Mechanical Officials and the International Conference of Building Officials.

1.1154 "Uniform Plumbing Code" means the code published by the International Association of Plumbing and Mechanical Officials.

1.1155 "Wet System" means a system employing automatic sprinklers attached to a piping system containing water and connected to a water supply, in which water discharges immediately from sprinklers opened by a fire.

ARTICLE 2 PORTABLE FIRE EXTINGUISHERS AND FIXED HOOD SYSTEMS

Chapter I

Intent and Scope

2.101 Intent.

This article prescribes conditions of license and certification requirements for any person engaged in the sale, leasing, installation, or servicing of portable fire extinguishers and fixed hood systems in accordance with NRS 477.033.

2.102 Scope.

This article applies to all persons within, or conducting business within, the state unless specifically excepted.

This article applies to all portable fire extinguisher equipment and all fixed hood extinguishing systems required for the protection of cooking equipment unless specifically excepted.

Chapter II

Approved Equipment

2.201 Approval Required.

No portable fire extinguisher or component of a fixed fire extinguishing system may be sold or leased in this state unless it has been approved, labeled, or listed by Underwriters Laboratories, Inc., Underwriters Laboratories of Canada, Factory Mutual Laboratories, or other testing laboratories approved by the state fire marshal.

2.202 Prohibited Extinguishing Agents.

No portable fire extinguisher or fixed fire extinguishing system may be sold, leased, installed, or serviced in this state if it uses an extinguishing agent carbon tetrachloride, chlorobromomethane, methyl bromide, trichlortrifluoroethane or any other agent which has not been accepted by a laboratory approved under Section 2.201 of this article. Any accepted Halon system must be approved by the state fire marshal or his authorized representative. Plans for proposed Halon installations must be submitted to the state fire marshal or his authorized representative with the application for approval.

2.203 Inverted Extinguishers Prohibited.

Inverting type extinguishers may not be hydrostatically tested after January 1, 1977. Each such extinguisher which becomes due for hydrostatic test after that date must be permanently removed from service.

Chapter III

Equipment Service Requirements

2.301 Installation, Service, and Maintenance.

All installation, inspection, maintenance, and service of portable fire extinguishers and fixed hood extinguishing systems must be in accordance with the most current editions of N.F.P.A. Standards 10, 11, 11A, 11B, 12, 12A, 12B, 15, 16, 17, and 96 as amended.

2.302 Annual Service Required.

Regardless of exceptions contained in the applicable N.F.P.A. Standards, all portable fire extinguishers except the pressurized water type with pressure indicator gauges must be recharged at least annually, whenever the service seal has been broken, and whenever inspection indicates the extinguisher might fail to function.

2.303 Internal Maintenance Tag Required.

For the recharging of any dry chemical type of extinguishment cylinder to be valid, the serviceman must date and initial an approved self-sticking tag with the date and initials corresponding to the exterior service tag. The internal maintenance tag must be placed securely on the topmost exposed portion of the pick-up tube prior to reassembly and recharging. Failure to initial, date, and place an internal maintenance tag is grounds for suspension or revocation of a serviceman's certificate of registration.

Chapter IV

Annual and Interim Report Required

2.401 Annual Report.

The licensee shall report to the state fire marshal by November 1 of each year the name, address, and certificate number of each registrant in his employ as of October 1 of that year.

2.402 License and Certificate List.

The state fire marshal will keep a list of the names, addresses, and license and certificate numbers of all licensees and registrants.

2.403 Change of Status Report.

Each licensee shall within 10 days of employment report to the state fire marshal the name, address, and certificate number of each registrant and the name and address of each new employee who services portable fire extinguishers or fixed hood extinguishing systems. Each licensee shall report terminations of employment of registrants within 10 days. A change of address of any registrant must be reported by the registrant to the state fire marshal within 15 days after the change. The registrant shall record the new address on the reverse side of the certificate. Licensees and registrants who fail to report changes of address are subject to the penalties set forth in Section 1.901 of this regulation.

2.404 Change of Location Report.

Any change of location of a licensed firm must be reported to the state fire marshal in writing within 7 days of the change. A new license will be issued upon approval of the new location by the state fire marshal and the payment of the prescribed fee.

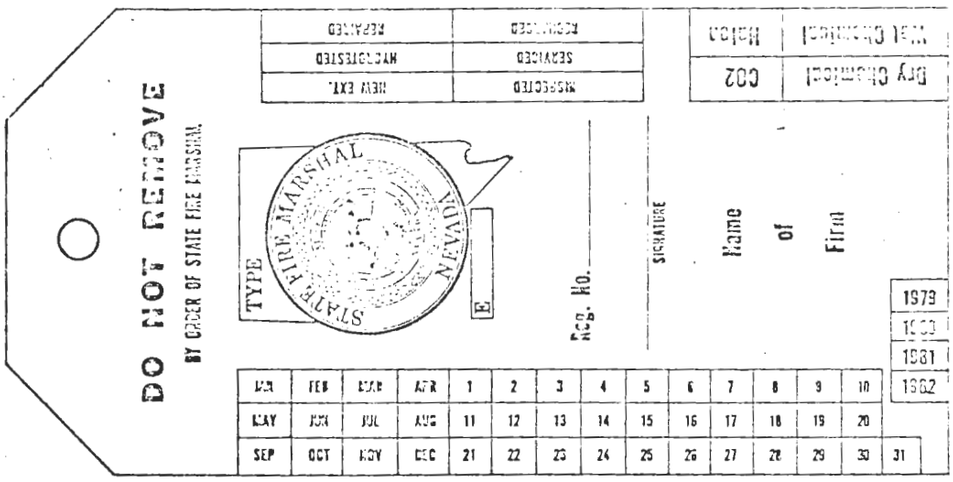
2.405 Records Available.

Reports required by this chapter are public records and may be inspected at the office of the state fire marshal.

Chapter V

Service Tags

2.501 Service Tags.
Fire extinguisher tags must be in the following form:



2.502 Where Required.
The service tag must be attached to the extinguisher by means of wire, string, or plastic ties, or be a self-adhesive tag approved by the state fire marshal. Self-adhesive tags must be so attached as to be readily visible for inspection.

2.503 Hydrostatic Label Required.
A suitable Mylar or equally durable material label must be affixed by a heatless method to all extinguisher shells which are not listed by the United States Department of Transportation and which have passed a hydrostatic test. The label must include the following:
(a) The date on which the hydrostatic test was performed.
(b) The test pressure used.
(c) The name of person or agency performing the test.

Chapter VI

Fixed Hood Extinguishing System Requirements

2.601 Service Evidence.

The installer shall submit evidence of capability to provide for repair, recharging, and restoration of fixed hood extinguishing systems within 24 hours of notification of a fire or a fault in the system. Evidence of service capability is subject to approval by the state fire marshal and must include service equipment; qualified service personnel; the necessary stock of parts, products, and devices; and a valid license issued by the state contractors' board as well as the certification and approval of a major manufacturer of fixed hood extinguishing systems that is acceptable to the state fire marshal.

2.602 Maintenance Agreement Required.

(a) Where a fixed hood extinguishing system is required by any statute, regulation, or ordinance, a satisfactory agreement on the maintenance of the system, including the cleaning of both filters and ducts, must be provided. All systems, including filters and ducts, must be under the supervision of qualified persons approved by the state fire marshal.

(b) A copy of the maintenance agreement along with proof that the firm or company providing the maintenance is adequately covered by liability insurance must be provided by the firm or company to the local fire department having jurisdiction.

(c) A service tag conforming to the requirements of chapter V, section 2.501 shall be attached to all systems.

2.603 Installation.

Installation of fixed hood extinguishing systems must meet the applicable standards listed in section 2.301 of these regulations and any other applicable standards adopted by the state fire marshal and the local authority having jurisdiction.

2.604 Specifications, Plans, and Approvals.

(a) Detailed plans of fixed hood systems must be submitted to and approved by the local authority having jurisdiction.

(b) The specifications must state that the installation will conform to applicable standards listed in this regulation and meet the approval of the authority having jurisdiction.

(c) The specifications must include that a "bag" test of the system will be performed to the satisfaction of and witnessed by the authority having jurisdiction.

(d) Plans must be drawn to an indicated scale and must be made so that they can be easily reproduced.

(e) Plans must contain sufficient detail to enable the authority having jurisdiction to evaluate the effectiveness of the system.

(f) Plans must be submitted to and approved by the authority having jurisdiction before the work starts.

(g) Where field conditions necessitate any substantial change from the approved plan, the corrected (as built) plan must be submitted to the authority having jurisdiction for approval.

ARTICLE 3 PROTECTIVE SIGNALING SYSTEMS

Chapter I

Intent and Scope

3.101 Intent.

This article prescribes license requirements for persons engaged in the sale, leasing, installation, or servicing of protective signaling systems and components in accordance with NRS 477.033.

3.102 Scope.

(a) This article applies to all persons within or conducting business within the state unless specifically excepted.

(b) This article applies to all protective signaling systems and components installed within the state after the effective date of this regulation.

(c) This article does not apply to municipal fire alarm systems.

Chapter II

Approved Equipment

3.201 Approval Required.

No fire alarm system, fire alarm device, or component of any fire alarm system may be sold, leased, or installed in this state unless it is approved, labeled, or listed by Underwriters Laboratories, Inc., Underwriters Laboratories of Canada, Factory Mutual Laboratories, or other testing laboratories approved by the state fire marshal as qualified to test such systems or devices.

3.202 N.F.P.A. Compliance.

In addition to other provisions of these regulations, fire alarm systems must comply with one of the following N.F.P.A. standards:

(a) National Electrical Code (Article 760) N.F.P.A. 70.
(b) Central Station Protective Signaling Systems, N.F.P.A. 71.
(c) Local Protective Signaling Systems, N.F.P.A. 72-A.
(d) Auxiliary Protective Signaling Systems, N.F.P.A. 72-B.
(e) Remote State Protective Signaling Systems, N.F.P.A. 72-C.
(f) Proprietary Protective Signaling Systems, N.F.P.A. 72-D.

3.203 Detector to Comply.

Each class of detector must comply with the proper one of the following standards:

(a) N.F.P.A. 72-E Standard for Automatic Fire Detectors.
(b) U.L. Standard No. 217 for Photo Electric Type Detectors.
(c) U.L. Standard 217 for Ionization Type Detectors.
(d) U.L. Standard 539 for Single and Multiple Heat Detectors.

3.204 Listing to be Provided.

Where smoke detectors are required by any statute, regulation, or ordinance, evidence of approval must be furnished to the purchaser at the time of purchase or delivery. The evidence must be an unabridged copy of the approved smoke detector listings sheet issued by the state fire marshal.

Chapter III

Equipment Service Requirements

3.301 Service Evidence.

The distributor or installer shall submit evidence of capability to provide for repair and restoration of fire alarm systems within 24 hours of notification of a fire or fault in the system. Evidence of service capability is subject to approval by the state fire marshal and must include service equipment, qualified service personnel, the necessary stock of parts and devices, and a valid license issued by the state contractor's board, as well as the certification and approval of the manufacturer from whom the equipment is purchased.

3.302 Maintenance Agreement Required.

(a) Where fire alarm systems are required by any statute, regulation, or ordinance, a satisfactory agreement on the maintenance of the system must be provided. All systems must be under the supervision of qualified persons. These persons shall cause proper tests and inspections to be made at prescribed intervals and have general charge of all alterations and additions to the systems under their supervision.

(b) A copy of the maintenance agreement along with proof that the firm or company providing the maintenance is adequately covered by liability insurance shall be provided by the firm or company to the local fire department having jurisdiction.

(c) A service tag conforming to the requirements of this chapter, section 3.305 shall be attached to all systems.

3.303 Installation.

Installation of fire alarm equipment and systems must meet the standards listed in section 3.202 of these regulations and any other applicable standards and specifications adopted by the state fire marshal and the local authority having jurisdiction.

3.304 Specifications, Plans, and Approvals.

(a) Detailed plans of alarm systems must be submitted to and approved by the local authority having jurisdiction.

(b) The specifications must state that the installation will conform to applicable standards listed in this regulation and meet the approval of the authority having jurisdiction.

(c) The specifications must include the specific tests which may be required to meet the approval of the authority having jurisdiction.

(d) Plans must be drawn to an indicated scale or be suitably dimensioned and must be made so that they can be easily reproduced.

(e) Plans must contain sufficient detail to enable the authority having jurisdiction to evaluate the effectiveness of the system.

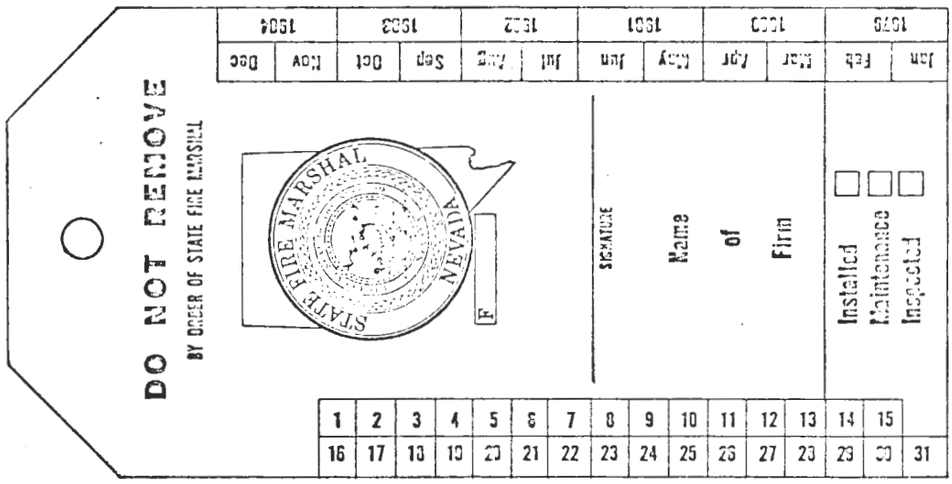
(f) Plans must be submitted to and approved by the authority having jurisdiction before the work starts.

(g) Where field conditions necessitate any substantial change from the

approved plan, the corrected (as built) plan must be submitted to the authority having jurisdiction for approval.

3.305 Service Tag.

(a) Protective signaling system service tags must be in the following form:



(b) The service tag must be attached to the protective signaling system by the last person to work on the system for any purpose. The tag must be punched in an approved manner to indicate type of service performed on the system and the date. The service tag must be signed by the person doing the work.

Chapter IV

Combination Paging Alarm Systems

3.401 Equipment Criteria.

(a) Cone and horn type loudspeakers and line matching transformers employed in paging alarm systems must meet or exceed the following requirements:

(1) The horn or loudspeaker must be rated at a minimum wattage to provide coverage specified in subsection (a) of Section 3.402 of this regulation.

(2) The matching transformer must be rated at a minimum of twice the speaker load required wattage specified in subsection (a) of Section 3.402 of this regulation.

(3) Loudspeaker ratings will be calculated for the speaker as actually installed and used, with the backbox, grille, and matching transformer attached.

(4) Speakers must be housed in a metal backbox specifically designed for loudspeakers.

(5) Where applicable the speaker must be located near the initiating device.

(6) Loudspeakers, housings, horns, and similar devices which are used primarily for alarm devices must be red in color.

(7) Reentry horns mounted flush or on the surface must be used in hallways, mechanical rooms, and similar areas.

(8) Where surface speaker enclosures for two-way or one-way projection are permitted, they must be constructed of steel or aluminum and provide protection to the speaker. Tamper-proof mounting is recommended.

(9) Any areas with environmental conditions detrimental to cone type speakers must be provided with flush or surface horn type loudspeakers meeting minimum cone speaker requirements.

(10) Each sleeping room in a protected premises must be equipped with a loudspeaker.

(11) Alarm sounding devices must be U.L. listed for fire alarm use and application.

(12) A responsible person, such as the architect or design engineer, must establish that the alarm equipment meets the minimum standards set forth in this regulation.

(13) The responsibility for number and placement of loudspeakers to meet the requirements of Subsection (a) of Section 3.402 of this regulation is with the architect or designer.

(b) The amplification signal generating devices and supervising detection or monitoring equipment must meet current N.F.P.A. standards and the following requirements:

(1) Amplification equipment, tone generators, and associated equipment must be installed to provide a completely independent operating system. Each system must include a "fail-safe" panel which will monitor

the sound system against opens, shorts, grounds, mechanical damage, and loss of power in all components while equipment is in use or on standby. Power amplifiers and signal generators must be designed with solid state circuitry, and be tested and approved for fire alarm use by a recognized testing laboratory, an agency approved by the state fire marshal, or both.

(2) The tone generator must emit a unique tone distinctive in sound and oscillation which will provide a disturbance pattern to awaken a sleeping person.

(3) When the supervisory panel has detected a fault, it must emit an audible and visual indication of system trouble. These signals must be indicated at all annunciator panels and at central control. Trouble indicators, wherever located, must include a silencing switch for the audio trouble indication. Trouble lamps may not be canceled until the equipment fault is corrected.

(c) Each system must include a central control panel provided with the following control features:

(1) The central control panel must have access to all voice communications systems, manual and automatic fire alarm panels, status indicators, and controls for elevators and air handling systems, controls for unlocking stairwell doors, a public telephone with a direct outside line, sprinkler valve and water flow indicators and standby controls.

(2) All cabinet or panel metalware must have been manufactured by a company regularly engaged in the manufacture of electrical or electronic type enclosures.

(3) Switching and annunciator panels must be segmented in groups with identical push-on, push-off back lit switches with each separate group clearly marked to identify the systems it controls.

3.402 Design Criteria.

(a) Areas to be protected by a paging alarm system must be covered with sufficient loudspeakers to achieve not less than 80 db of sound at any place within the protected property.

(b) Amplification equipment output load must not exceed 50 to 75 percent of its rated output for the entire system

(c) The paging alarm system central control panel and annunciator panel must consist of selector switches, as previously specified, with one switch for each speaker zone. Zoning must be approved by the state fire marshal or local fire department having jurisdiction. The system must be capable of selective voice transmission by the use of one or more zone switches. One switch must be provided for calling all zones.

(d) The central control panel must include a power supply and associated equipment and circuitry for a telephone communication system. The telephone handset must be located at the panel. The fire department telephone communication system requirement may be satisfied by the installation of an internal telephone system, complete with handset at indicated locations, or the installation of jacks installed at the indicated locations

and portable handsets stored at the central control station. A public telephone with a direct outside line must be provided at the central control panel.

(e) A paging microphone must be provided at each annunciator panel and central control panel. Keying the paging microphone button must mute all fire alarm signals and the fire alarm function must be automatically restored when the microphone is not in use. The fire department annunciator panel microphone must be capable of overriding all fire signals and the central control panel.

(f) General alarm capabilities must be available by manual switch at annunciator panels and the central control panel, and key operated from each manual pull station. The use of presignals from manual pull stations to management is permitted if management has an emergency procedure approved by the state fire marshal or the local fire department. The presignal system must be interconnected to an approved central receiving station where such services are available.

(g) Two or more annunciator panels must be provided. One annunciator panel must be provided for management in a location which is manned at all times. One annunciator panel must be located on the exterior of the building adjacent to the fire department standpipe or sprinkler connection, or in a location approved by the local fire department.

(h) The fire department annunciator panel must be of the same annunciator and switching design as the central control panel and be equipped with a monitor speaker. Access to the fire department control panel must be by common key lock acceptable to the local fire department.

(i) Keying a microphone at the central control panel or the fire department annunciator panel must automatically silence monitor speakers at that location.

(j) All system components including audio generating components (speakers or equivalent) must be continuously supervised and annunciated on all panels.

(k) When requested to do so by the fire department, the owner must perform and provide actual on-premises tests to demonstrate system operation and audio coverage specified in this section or certify thereto.

(l) An actual test of the system is required once each month. All equipment must be maintained in proper operating condition.

(m) Where cross-ventilation is not possible because of building design or air handling system design, controls for the ejection of smoke must be provided at the central control panel and fire department annunciator panel, including:

(1) Air supply (on-off).

(2) Exhaust (on-off).

(3) Detection (Override capability of automatic detection shutdown).

ARTICLE 4 AUTOMATIC SPRINKLER SYSTEM (Commercial)

Chapter I

Intent and Scope

4.101 Intent.

This article prescribes license requirements for any person who is engaged in the sale, leasing, installation, or servicing of commercial automatic sprinkler systems in accordance with NRS 477.033.

4.102 Scope.

This article applies to all persons within or conducting business within this state without restriction.

This article applies to all commercial sprinkler systems and components installed within this state after the effective date of this regulation.

Chapter II

Approved Equipment

4.201 Approval Required.

No automatic sprinkler system or component may be sold, leased, or installed in this state unless it has been approved, labeled, or listed by Underwriters Laboratories, Inc., Underwriters Laboratories of Canada, Factory Mutual Laboratories, or other testing laboratories approved by the state fire marshal as qualified to test such systems or components.

4.202 Compliance Required.

Automatic sprinkler systems must comply with the following N.F.P.A. standards and state regulations listed in this section:

(a) Installation of Sprinkler Systems, N.F.P.A. 13.
(b) Care and Maintenance of Sprinkler Systems, N.F.P.A. 13A.
(c) Standpipe and Hose Systems, N.F.P.A. 14.
(d) Water Spray Fixed Systems for Fire Protection, N.F.P.A. 15.
(e) Foam-Water Sprinkler Systems, N.F.P.A. 16
(f) Article 3 of this regulation.
(g) Uniform Fire Code.
(h) Outside Protection, N.F.P.A. 24

Chapter III

Equipment Service Requirements

4.301 Service Evidence.

The distributor or installer shall submit evidence of capability to provide repair and restoration of automatic sprinkler systems within 24 hours of notification of a fire or fault in the system. Evidence of service capability is subject to approval by the state fire marshal and must include lists of service equipment, qualified service personnel, the necessary stock of parts and devices, and a valid license issued by the state contractor's board as well as certification and approval of the manufacturer from whom the equipment is purchased.

4.302 Maintenance Agreement Requirement.

(a) Where automatic sprinkler systems are required by any statute, regulation, or ordinance, a satisfactory agreement on the maintenance of the system must be provided. All systems must be under the supervision of qualified persons. These persons shall cause proper tests and inspections to be made at prescribed intervals and must have general charge of all alterations and additions to the systems under their supervision.

(b) A copy of the maintenance agreement along with proof that the firm or company providing the maintenance is adequately covered by liability insurance shall be provided by the firm or company to the local fire department having jurisdiction.

(c) A service tag conforming to the requirements of this chapter, section 4.304 (m) and 4.305 shall be attached to all systems.

4.304 Specifications, Plans, and Approvals.

(a) Detailed plans must be submitted for approval of the local authority having jurisdiction.

(b) The specifications must state that the installation will conform to the applicable standards listed in this regulation and be approved by the authority having jurisdiction.

(c) The specifications must include the specific tests required to meet the standards for approval of the authority having jurisdiction.

(d) Plans must be drawn to an indicated scale or be suitably dimensioned, and must be made so that they can be easily reproduced.

(e) Plans must contain sufficient detail to enable the authority having jurisdiction to evaluate the effectiveness of the system.

(f) Plans must be submitted to the authority having jurisdiction before work starts.

(g) Where field conditions necessitate any substantial change from the approved plan, the corrected plan showing the system as installed must be submitted to the authority having jurisdiction for approval.

(h) Calculations must be established from the applicable sprinkler system design curve of Table 2-2.1 (B) of N.F.P.A. 13, Table 5-1.2 and 5-2.2 of N.F.P.A. 231, or Table 6-11.1 of N.F.P.A. 231C. Calculations

must be computed from the water flow test that has been approved by the authority having jurisdiction.

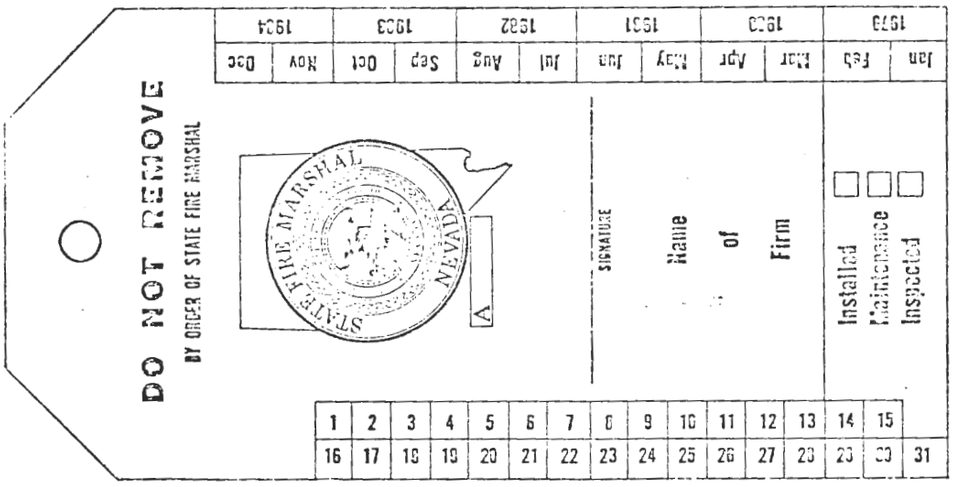
(i) All hydrostatic tests of systems and the flushing of underground systems must be witnessed by a representative of the authority having jurisdiction.

(j) The authority having jurisdiction must be notified 24 hours prior to any test so that the tests may be scheduled for witnessing.

(k) Upon completion of the installation of any fire sprinkler system, a letter of certification must be issued by the fire sprinkler contractor to the authority having jurisdiction. The letter must certify that the system has been installed in accordance with the original approved plans and all applicable national, state, and local codes.

(l) The installer shall properly identify all hydraulically designed fire sprinkler systems by a permanently attached placard indicating the location and number of sprinkler heads in the hydraulically designed system or sections and the discharge density over the designed area of discharge.

(m) The last person to work on a fire sprinkler system for any purpose shall attach a service tag, as required in Section 4.305 of this Article, to the OS & Y valve of the riser. The tag must be punched in an approved manner to indicate type of service performed on the system and the date. The service tag must be signed by the person doing the work.



4.305 Service Tag.

(a) Sprinkler system service tags must be in the preceding form.

(b) In the event the OS & Y valve is not electrically supervised, the service tag must serve as a seal for the valve.

(c) In the event the OS & Y valve is electrically supervised, the service tag must be attached in such a manner that the valve may be closed for testing of the supervision without removing the tag.

Chapter IV

Inspection and Maintenance

4.401 Frequency.

All automatic fire sprinkler systems must be inspected at least four times a year. One of the quarterly inspections must be termed an annual inspection and be conducted in accordance with the provisions of this chapter, Section 4.402. The other quarterly inspections may be conducted by any person, including an employee of a firm, who, in the opinion of the authority having jurisdiction, has sufficient knowledge of the system to conduct such an inspection.

4.402 Annual Inspections.

(a) Annual inspections must be made by a qualified automatic fire sprinkler contractor.

(b) The annual inspection must comply with the provisions of N.F.P.A. 13 and this regulation and include, without limitation, the following:

(1) Post indicator valves, underground gate valves, and OS & Y valves must be operated to make sure that they are in good operating condition and do not leak. Each control valve must be secured in its open position by means of a seal.

(2) Fire pumps must be started and operated until water is discharged freely from the relief valve and checked for ample pressure, proper supply of lubricating oil, operating condition of relief valve and level of water in priming tank.

(3) Fire department connections must be inspected, caps must be in place, threads in good condition, ball drip or drain in order, and check valve not leaking.

(4) Underground pipes connecting water supply to sprinkler system must be flushed with sufficient flow of water to remove any obstruction from the pipe lines.

(c) Wet system—alarm valves:

(1) Test alarms by opening the inspector's test connection, the by-pass test connection, or both, in conjunction with making a water flow test when facilities and conditions permit.

(2) Check cold weather valves and exposed piping to assure their proper conditions for winter and summer operations.

(3) Test the solution in anti-freeze system for satisfactory condition, as required in the Standard for the Installation of Sprinkler Systems (N.F.P.A. No. 13).

(d) Dry systems—dry valves, accelerators, etc.:

(1) Test the alarms, both water flow and air, if provided, and perform a water flow test through the drain connection when facilities and conditions permit.

(2) Check air pressure, priming water level, latching arrangements, automatic drip connections when provided, and the general condition of

the dry pipe valves, accelerators or exhausters, and their environment, including dry pipe valve room or enclosures.

(3) Trip test dry pipe valves, together with accelerators and exhausters, if provided, in accordance with standard testing and reporting procedures required by the authority having jurisdiction.

(4) After testing, restore the system and the dry pipe valve to operation according to the manufacturer's instructions.

(5) Open condensation drains on drum drip connections and drain low points during fall and winter inspections.

4.403 Annual Inspection Report.

A copy of the annual inspection report must be sent to the authority having jurisdiction by the automatic fire sprinkler contractor conducting said inspection.

ARTICLE 5 AUTOMATIC SPRINKLER SYSTEM (Residential)

Chapter I

Intent and Scope

5.101 Intent.

This article prescribes license requirements for any person engaged in the sale, leasing, installation, or servicing of residential automatic sprinkler systems in accordance with NRS 477.033.

5.102 Scope.

(a) This article applies to all persons within or conducting business within this state without restriction.

(b) This article applies to all sprinkler systems and components installed after the effective date of this regulation within one and two family dwellings and mobile homes in this state.

Chapter II

Approved Equipment

5.201 Approval Required.

(a) Only new, listed sprinklers may be employed in the installation of sprinkler systems.

(b) No material or device which has not been approved by the state fire marshal or a testing laboratory recognized by the state fire marshal may be used in sprinkler systems.

(c) Pre-engineered sprinkler systems must be installed in accordance with the listing assigned to the system by a testing laboratory recognized by the state fire marshal.

(d) Pre-engineered systems may incorporate special materials, devices, method of installation, or design if approved by the state fire marshal.

(e) All systems must be tested for leakage for a minimum of one hour at a pressure not less than 50 percent above normal system operating water pressure.

Chapter III

Working Plans

5.301 Plans Required.

Working plans must be submitted to the authority having jurisdiction for approval before any equipment is installed or remodeled. Working plans must contain:

(a) The name of the company installing the system.

(b) The general location and exact address of the job location.

(c) A rough plot plan showing water supply and property lines in relation to the installation site.

(d) Water pressure at the installation site.

(e) A rough floor plan with system coverage indication.

(f) Any additional information required by the state fire marshal.

Chapter IV

Water Supply, Valves and Gauges

5.401 Water Supply.

(a) Water supply connections direct from city water mains or combination domestic—automatic sprinkler connections must be from an acceptable water supply source.

(b) When sprinkler systems are directly connected to a potable water supply, a check valve approved by the authority having jurisdiction must be installed on the discharge side of the control valve.

(c) Meters are not recommended for use in sprinkler systems.

(d) An elevated tank of at least 250 gallons capacity is an acceptable water supply source.

(e) A water source and automatic pump, which will supply a minimum of 25 gallons per minute flow, is an acceptable water supply source.

5.402 Valves and Drains.

(a) Each sprinkler system must have a water control valve located immediately on the discharge side of its water supply.

(b) Each sprinkler system must have a one-half inch or larger drain connection with valve on the system side of the control valve.

(c) Additional drains must be installed for each trapped portion of a dry system which is subject to freezing temperatures.

5.403 Gauges.

(a) A pressure gauge must be installed on the system side of the control valve on wet and antifreeze systems.

(b) A pressure gauge must be installed to indicate water supply pressure, and a second gauge must be installed to indicate air or inert gas pressure in dry systems.

Chapter V

System Design

5.501 Application Rate.
The minimum design density is 0.10 gallons per minute per square foot.

5.502 Water Demand.
The water demand for the system is 25 gallons per minute, or the area of the largest room in square feet multiplied by 0.10 and the result expressed as gallons per minute, whichever is less.

5.503 Sprinkler Coverage.
(a) Standard sprinklers mounted at the ceiling must be spaced so that the maximum area protected by a single sprinkler does not exceed 256 square feet in conventionally constructed dwelling units, and 100 square feet in mobile homes.
(b) The maximum distance between ceiling mounted sprinklers may not exceed 16 feet on or between pipe lines, and the maximum distance to a wall or partition may not exceed 8 feet.
(c) Sidewall sprinklers must be spaced so that the maximum area protected does not exceed 256 square feet in conventionally constructed dwelling units and 100 square feet in mobile homes.
(d) For sidewall sprinklers, the maximum distance between sprinklers mounted along the same wall may not exceed 16 feet. The maximum distance to an adjacent corner may not exceed 8 feet. The maximum projected throw may not exceed 16 feet in any case.
(e) Special sprinklers may be installed with larger protection areas or distances between sprinklers than those specified in Subsections (a) through (d) of this section when the installations are made in accordance with the listings of a testing laboratory recognized by the state fire marshal, or with approval of the state fire marshal.

5.504 System Types.
(a) A wet pipe system must be used when all piping is installed in areas not subject to freezing.
(b) Where system piping is located in unheated areas subject to freezing, a dry or antifreeze system must be used.
(c) Antifreeze systems must conform to state or local district health department regulations. Glycerine, diethylene glycol, ethylene glycol, propylene glycol, and similar materials may not be used in antifreeze solutions in water supply tanks.

5.505 Piping Types.
(a) Pipe or tube used in sprinkler systems must be made of the materials listed in Table 1 or in accordance with Subsections (b) through (g) of this section. The chemical properties, physical properties, and dimensions of the materials listed in Table 1 must be at least equivalent to the standards

cited in the table and designed to withstand a working pressure of not less than 175 pounds per square inch (P.S.I.).

TABLE 1

Material and Dimensions	Standard
Ferrous Piping (Welded, Seamless Welded and Seamless Steel Pipe for Ordinary Uses, Specification for Black and Hot-Dipped Zinc Coated, Galvanized)	ASTM A120-72a
Specification for Welded and Seamless Steel Pipe	ASTM A53-72a
Wrought Steel Pipe	ASTM B3610-70a
Copper Tube (Drawn Seamless) Specification for Seamless Copper Tube	ASTM B75-72 or
Specification for Seamless Copper Water Tube	ASTM B88-72
Specification for General Requirements for Wrought Seamless Copper and Copper Alloy Tube	ASTM B251-72
Brazing Filler Metal (Classification BCuP-3 or BCuP-4)	AWS A5.8-69
Solder Metal, 95-5 (Tin Antimony Grade 95TA)	ASTM B32-70

(b) Standard-wall schedule 40 pipe is permitted.

(c) Copper tube must have a wall thickness of Type K, L, or M.

(d) Other types of pipe or tube may be used, but only those listed for the purpose by a testing laboratory recognized by the state fire marshal, or those approved for use by the state fire marshal.

(e) Thin-wall steel pipe with a wall thickness of 0.120 inches may be joined with approved mechanical groove couplings and grooves rolled on the pipe by an approved groove rolling machine.

(f) Fittings used in sprinkler systems must be made of materials listed in Table 2 or approved in accordance with Subsection (c) of Section 5.506 of this regulation. The chemical properties, physical properties, and dimensions of the materials listed in Table 2 must be at least equivalent to materials which meet the standards cited in the table. Fittings used in sprinkler systems must be designed to withstand the working pressures involved, but not less than 175 P.S.I. cold water pressure.

TABLE 2

Material and Dimensions	Standard
Cast Iron—	
Cast Iron Screwed Fittings 125 and 250 lb.	ANSI B16.4-1971
Cast Iron Pipe Flanges and Flanged Fittings	ANSI B16.1-1967
Malleable Iron—	
Malleable Iron Screwed Fittings 150 and 300 lb.	ANSI B16.3-1971
Steel—	
Factory-Made Wrought Steel Buttweld Fittings	ANSI B16.9-1961
Buttwelding Ends for Pipe, Valves, Flanges, and Fittings	ANSI B16.25-1972
Specification for Piping Fittings of Wrought Carvon, Steel and Alloy Steel for Moderate and Elevated Temperatures	ASTM A234-73
Steel Pipe Flanges and Flanged Fittings	ANSI B16.5-1973
Forged Steel Fittings Socket Welded and Threaded	ANSI B16.11-1973
Copper—	
Wrought Copper and Bronze Solder Joint Pressure Fittings	ANSI B16.22-1973
Cast Brass Solder Joint Fittings	ANSI B16.18-1972

5.506 Copper Tube Joints.

(a) Joints for the connection of copper tube must be brazed except in wet-pipe copper tube systems.

(b) Soldered or brazed joints may be used for wet-pipe copper tube systems.

(c) Other types of fittings may be used if listed for this purpose by a testing laboratory recognized by the state fire marshal or approved for this use by the state fire marshal.

5.507 Pipe Sizing.

(a) The required size for sprinkler piping must be determined in accordance with this Section and Section 5.508, unless the piping has been hydraulically calculated to achieve the design density specified in Section 5.501. When piping is sized hydraulically, calculations must be made in accordance with the methods described in N.F.P.A. Standard Number 13. The minimum pipe size for use in sprinkler systems is ¾ inch.

(b) To determine the size of piping for systems connected to a city water supply and fitted sprinklers with half inch orifices, the following approximate method is acceptable:

(1) Determine water pressure in the street.

(2) Arbitrarily select pipe sizes.

(3) Deduct meter losses, if any.

(4) Deduct loss for elevation (building height in feet × 9.434 = P.S.I.).

(5) Deduct losses from street to control valve by multiplying the factor from Table 3 by the total length of pipe in feet.

TABLE 3

Design Factors (P.S.I. Ft.) with 25 G.P.M. Flow

Pipe Size, Inches	Steel (C = 120)	Copper (C = 140)
¾	0.64	0.52
1	0.20	0.14
1¼	0.05	0.05
1½	0.02	0.02
2	0.008	0.004

(6) Deduct losses for piping within the building by multiplying the factor from Table 3 by the total length in feet of each size of pipe between the control valve and the farthest sprinkler.

(7) Deduct valve and fitting losses. Count the valves and fittings from the control valve to the farthest sprinkler. Determine the equivalent length for each valve and fitting as shown in Table 4 and add these values to obtain the total equivalent length for each pipe size. Multiply the equivalent length for each size by the factor from Table 3 and total these values.

(8) In buildings with more than one story or level, steps 1 through 6 must be repeated to determine the required pipe size for each floor.

(9) If the remaining pressure is less than 20 P.S.I., pipe or meter size must be increased. If the remaining pressure is substantially greater than 20 P.S.I., it may be possible to decrease piping or meter size.

(10) The size of the remaining piping must be determined in the same manner as the piping to the farthest sprinkler unless smaller sizes are justified by calculations and approved by the authority having jurisdiction.

5.508 Pipe Sizing Other than City Supply.

To determine the proper size of piping for systems with an elevated tank, pump, or pump-tank combination, determine the pressure at the water supply outlet and proceed through steps 2, 4, 6, 7, 8, 9 and 10 of 5.507 (b).

TABLE 4

Equivalent Length of Pipe in Feet for Fittings and Valves

Fitting/Valve Diameter Inches	Elbows			Tees		Valves					
	45 Degrees	90 Degrees	Long Radius	Flow Thru Branch	Flow Thru Run	Gate	Angle	Globe	Globe "Y" Pattern	Cocks	Check
¾	1	2	1	4	1	1	10	21	11	3	3
1	1	3	2	5	2	1	12	28	15	4	4
1¼	2	3	2	6	2	2	15	35	18	5	5
1½	2	4	3	8	3	2	18	43	22	6	6
2	3	5	3	10	3	2	24	57	28	7	8

Based on Crane Technical Paper No. 410.

TABLE 5

Pressure Drop in Meters

Meter Size (Inches)	Pressure Loss at 25 gpm (psi)
⅝	28.0
¾	10.0
1	3.6
1½	1.2
2	Less than 1.0
3	Negligible

5.509 Piping Configurations.

Piping configurations may be looped, gridded, straight run, or combinations thereof.

5.510 Piping Support.

(a) Piping must be supported from structural members of adequate size to support it. Hanging methods must be comparable to those used in the most recently adopted uniform plumbing code.

(b) Piping laid on open joists or rafters must be strapped or secured in a manner to preclude lateral movement.

5.511 Sprinkler Heads.

(a) The use of ordinary (135°–170°F.) and intermediate (175°–225°F.) temperature rated sprinklers is permitted.

(b) Intermediate temperature heads must be used in attics, furnace rooms, and elsewhere where normal ambient air temperatures may exceed 100°F. Ordinary temperature heads must be used in all other areas.

(c) All sprinkler heads in a building must have the same orifice size unless the system is hydraulically calculated and approved by the authority having jurisdiction.

5.512 Sprinkler Location.

Sprinklers must be installed in all areas, unless omitted from some areas upon written approval of the authority having jurisdiction.

5.513 Waterflow Alarm.

Sprinkler systems must be provided with a waterflow detecting device approved by the state fire marshal and arranged to sound an alarm which will be audible in all living areas over background noise levels with all intervening doors closed. The alarm must be designed to function even if there is an interruption of normal electrical service.

5.514 Additional Requirements.

The authority having jurisdiction may require additional plans, documentation of testing data, engineering specifications, and equipment when it judges that it is necessary.

ARTICLE 6 CLASSIFICATION OF HEALTH CARE FACILITIES

Chapter I

Intent and Scope

6.101 Intent.

This article prescribes classifications for health care facilities to provide a basis for code approval of licensing pursuant to NRS 477.120 and chapter 449 of NRS.

6.102 Scope.

This article applies to all health care facilities in this state.

Chapter II

Classifications

6.201 Institutional Occupancies.

Institutional buildings are those used for purposes such as medical or other treatment or care of persons suffering from physical or mental illness, disease or infirmity; for the care of infants, convalescents, or aged persons; and for penal or corrective purposes. Institutional buildings provide sleeping facilities for the occupants and are occupied by persons who are incapable of caring for themselves because of age, physical or mental disability, or because of security measures not under the occupants' control.

6.202 Institutional Occupancy Groups.

Institutional occupancies are divided into three groups for the purpose of identification and classification:

(a) Health care facilities, including hospitals, nursing homes, and intermediate care facilities.

(b) Custodial care facilities.

(c) Restrained care facilities

ARTICLE 7 HISTORIC OR ARCHITECTURALLY SIGNIFICANT BUILDINGS

Chapter I

Intent and Scope

7.101 Intent.

This article prescribes methods for the restoration of historic or architecturally significant buildings in a manner which, without requiring full compliance with current codes, will include consideration for the safety of property and life in accordance with NRS 477.030.

7.102 Scope.

This article applies to all historic or architecturally significant buildings designated under this article within this state.

Chapter II

Qualification

7.201 Means for Qualification.

The means by which a building may be qualified and become subject to this article are:

(a) An application designating the building by name and address must be submitted by the legal owner to the governing body of the area in which the building is located.

(b) The application must include justification to the satisfaction of the governing body that the building is of historic or architectural significance.

(c) The application must include plans or descriptions of the proposed restoration as the governing body requires.

(d) Certification of a building's historic or architectural significance must be obtained from the division of historic preservation and archeology of the department of conservation and natural resources.

Chapter III

Approval

7.301 Local Approval.

The governing body may, after reviewing all pertinent facts including established criteria to determine the historic or architectural significance of a building, indicate by resolution addressed to the state fire marshal that the building in question qualifies in their opinion as a building of historic or architectural significance, and ask that it be so designated.

7.302 State Approval.

(a) Upon receipt of resolution from a governing body and certification from the division of historic preservation and archeology of the department of conservation and natural resources, the state fire marshal will investigate the building in question and prepare a document of requirements showing equipment and building construction required to ensure reasonable safety of property and life.

(b) The state fire marshal will then cause a hearing to be held before the state fire marshal's advisory board. All interested parties including the state fire marshal, the state historic preservation officer, and the legal owner of the building may be present.

(c) After hearing all pertinent facts and reviewing the document of requirements, the state fire marshal's advisory board may issue an order listing all provisions of restoration.

Chapter IV

Restoration

7.401 Plans Required.

(a) Three complete sets of architectural plans showing required structural calculations and encompassing all advisory board provisions of restoration must be submitted to the state fire marshal for review and approval.

(b) After review, if he approves the plans, the state fire marshal will retain one set of the approved plans and submit two sets to the local building official.

7.402 Building Permit.

(a) Upon receiving the plans from the state fire marshal, the local building official shall issue a building permit at the local permit fee schedule plus 10 percent. The 10 percent surcharge on the fee schedule must be remitted to the state fire marshal by the local building official.

(b) If there is no local building permit fee schedule, a fee in accordance with table No. 3-A of the 1976 edition of the uniform building code must be submitted to the state fire marshal when the original plans are submitted by the contractor. The state fire marshal will then remit the fee less 10 percent to the governing body.

7.403 Construction.

All construction must be done by a contractor licensed by the state contractors' board and must conform to the approved plans.

7.404 Inspections.

All inspections for compliance with the approved plans must be made by the local building official, and at his request, the state fire marshal will provide assistance.

Chapter V

Final Approval

7.501 Certificate of Occupancy.

Upon completion of construction and after all final approvals by the local building official and the state fire marshal, the state fire marshal will issue a certificate of occupancy listing any special conditions of occupancy.

7.502 Posting of Certificate of Occupancy.

The certificate of occupancy must be conspicuously posted on the premises in view of the public at all times.

Chapter VI

Article Limitations

7.601 Permits, Licenses, Etc.

Nothing in this article supersedes local requirements for business licenses, permits, or other documents required by the governing body for the building to be used for commercial purposes.

ARTICLE 8 ADOPTED CODES

Chapter I

Adopted Codes Listing

8.101 General.

The following nationally recognized codes are hereby adopted by the state fire marshal, with additions and deletions as noted in chapters II, III, IV, and V of this article.

(a) 1967 and 1973 Edition, N.F.P.A. 101 Life Safety Code.
(b) 1976 Edition, Uniform Fire Code.
(c) 1976 Edition, Uniform Building Code.
(d) 1976 Edition, Uniform Building Code Standards.
(e) 1976 Edition, Uniform Mechanical Code.
(f) 1976 Edition, Uniform Plumbing Code.
(g) 1978 Edition, National Electrical Code.

8.102 National Fire Codes.

In addition to the adopted codes, the state fire marshal hereby adopts the 1978 Edition, N.F.P.A. National Fire Codes as nationally recognized standards of good practice to supplement the other adopted codes and this regulation. In the absence of specific code requirements in the other adopted codes, the state fire marshal will interpret application of the National Fire Codes.

Chapter II

Additions, Deletions: U.F.C.

8.201 General.

The following additions and deletions are part of the state fire marshal's adoption of the 1976 Edition of the Uniform Fire Code:

(a) Section 1.215 deleted.

(b) Section 1.216 add: Gypsum Association, 201 N. Wells St., Chicago, IL 60606.

(c) Section 13.316 add: All buildings erected within the state after the effective date of the state fire marshal regulation, which are taller than 75 feet above grade at any point, must be equipped throughout with approved automatic fire sprinkler systems. Sprinkler systems must be installed in accordance with N.F.P.A. Standard 13.

(d) Article 20 deleted. Add: Liquefied petroleum gases must be stored, handled, and transported in accordance with the regulations of the Nevada liquefied petroleum gas board and N.F.P.A. Standard 58.

Chapter III

Additions, Deletions: U.B.C.

8.301 General.

The following additions and deletions are a part of the state fire marshal's adoption of the 1976 Edition of the Uniform Building Code:

(a) Section 204 deleted.

(b) Section 303 deleted. Add: Fees may be set by the governing body of the city or county.

(c) Section 3802 (b) add subsection 12: All buildings erected after the adoption of the state fire marshal regulations within this state, which are taller than 75 feet above grade at any point, must be equipped throughout with approved automatic fire sprinkler systems. Sprinkler systems must be installed in accordance with N.F.P.A. Standard 13.

(d) Section 1807 (g) add: The central control station must be housed in a room separated from the building in which it is located by a minimum of two-hour, non-combustible construction. The central control station room must be served by an exterior door whenever possible.

Chapter IV

Additions, Deletions: U.B.C. Standards

8.401 General.

The following addition and deletion is a part of the state fire marshal's adoption of the 1976 Edition of the Uniform Building Code Standards:

(a) Standard 38-1 deleted. Add: Automatic fire extinguishing systems must be installed in accordance with N.F.P.A. Standard 13.

Chapter V

Additions, Deletions: U.M.C.

8.501 General.

The following addition and deletion is a part of the state fire marshal's adoption of the 1976 Edition of the Uniform Mechanical Code:

(a) Section 1009 deleted. Add: Smoke detectors must be installed in accordance with N.F.P.A. Standard 90A.

Appendix

January 19, 198

The Honorable Robert List, Governor
State of Nevada
Capitol Complex
Carson City, Nevada 89710

Dear Governor List:

The executive order that you issued creating the Commission on Fire-Safety Codes charged us with three primary duties. We, the aforementioned Commission, are pleased to report the discharge of the first of those duties.

After consideration of all available relevant materials, it is the unanimous finding of the Commission that the present code structure of Nevada, relative to new construction of the highrise buildings, is consistant with the most stringent in the United States and has been so since 1978. The various code authorities on the Commission unanimously agree that Nevada's mandatory sprinkler requirement, along with other adopted regulations and codes, clearly substantiate that Nevada is in a place of national leadership in terms of fire-safety protection in new highrise construction.

The present codes and regulations governing public assembly occupancy spaces in the State of Nevada compare very favorably with other leading states throughout the nation. This comparison is supported by the fact that most states conduct their fire-safety requirements based on the model building code and the N.F.P.A. life safety code. A full range of model codes have been adopted in the State of Nevada to deal with all aspects of fire building safety. Howeyer, as a commission, we have determined that specific areas in the codes governing public assembly occupancy spaces require improvement. The Commission has drafted proposals aimed at improving the safety factors in all new construction of public assembly occupancies and other buildings. These proposals have been distributed throughout the nation to concerned organizations and knowledgeable individuals for their comments. Final recommendations pertaining to the Commission's proposals to expand the 1979 codes will be presented to you in a final report.

As you are aware, the new codes and state regulations adopted in 1978 do not apply to existing buildings erected prior to the adoption. The Commission is currently considering the question of retro-fitting of those existing buildings and will finalize a report to you prior to the March 1 deadline.

Very truly yours,

Kenny C. Guinn, Chairman
Governor's Commission on Fire-Safety Codes

KCG:pj
cc: Commission Members

ROBERT LIST
GOVERNOR

STATE FIRE MARSHAL DIVISION
CAPITOL COMPLEX
CARSON CITY, NEVADA 89710

JAMES L. WADHAMS, DIRECTOR
DEPARTMENT OF COMMERCE
T. J. HUDDLESTON, FIRE MARSHAL
STATE FIRE MARSHAL DIVISION
(702) 885-4290

Appendix IV

January 6, 1981

Gentlemen:

As you may be aware, Governor Robert List of Nevada appointed a nine member commission on Firesafety Codes in the wake of the recent Las Vegas M.G.M. fire. Part of the charge of that commission is to review current model codes to see if they can be made even stronger in dealing with fire and lifesafety. Attached is a listing of suggested changes to the 1979 Edition of the Uniform Building Code currently being considered by the Commission. You, along with other code authorities and industry representatives are requested to review and comment on these proposals. All comments should be sent to me:

T.J. Huddleston
Nevada State Fire Marshal
Capitol Complex
Carson City, Nevada 89710

The commission will prepare it's final report by not later than the middle of February, I would appreciate hearing from you as soon as possible. On behalf of Governor Robert List and the Commission, thank you in advance for your participation. If I can be of any assistance please contact me at (702) 885-4290.

Very Truly Yours,

T.J. Huddleston
Nevada State Fire Marshal

TJH:jj

Appendix IV
Continued

Following are preposed modifications to the 1979 edition of the Uniform Building Code as agreed on by the Nevada Governor's Commission on Firesafety Codes:

1807(a) Scope. This section shall apply to all Group B, Division 2 office buildings and Group R, Division 1 occupancies, each having floors used for human occupancy located more than 55 feet or 5 stories above the lowest level of fire department vehicle access. Such buildings shall be provided with an approved automatic sprinkler system in accordance with Section 1807(c).

1807(b) Certificate of Occupancy. Add the following sentences. "All such equipment shall be tested quarterly by an approved agency. All lifesafety equipment shall be reset and certified by an approved agency after having been actuated. A log of such tests shall be kept available for inspection by the building designer and approved by the Building Official."

1807(e) Alarm and Communication System. Retain the present sub-section but with (2) modified to be consistent with the present Fire Marshal requirements which refers to an 80 decibel level of sound at all points within the protected property.

1807(f) Central Control Station. Retain the present Sub-section but with further modification as currently in the Fire Marshal requirements which call for the central control station to be separated from the remainder of the building by 2-hour fire-resistive construction and to have a door to the exterior whenever possible.

1807(h) Delete the present section and substitute a requirement that elevators shall be installed in compliance with ANSI A17.1-1978 with the 1981 amendments. Then add the following sentence:
"All elevators on all floors shall open into elevator lobbies which are separated from the remainder of the building, including corridors, as is required for corridor construction in Section 3304 (g) and (h)."

1807(j) Modify (1) by adding at the end of the present sentence "sprinkler operation or power failure."

Modify (3) by changing the figure 0.15 to 0.25 in 3rd line.

Section 3802(b)2B Modify to read:
"Every casino, showroom and other assembly room of more than 5,000 square foot area."
EXCEPTION. Churches and theaters having only fixed seating.

Section 3802(c) Add a new Item B under (1) and redesignate the existing Items B, C and D. The new Item B is to read as follows: "In buildings over two stories in height."

Appendix IV
Continued

LIST TO WHICH THE PROPOSED CHANGES TO THE 1979 UNIFORM BUILDING CODE WERE DISTRIBUTED FOR COMMENT:

Joe Sacco
Office of State Fire Marshal
7171 Bowling Drive, St. 800
Sacramento, CA. 95823

I.C.B.O.
5360 S. Workman Mill Road
Whittier, CA. 90601

Neil D. Houghton, Building
Owner and Managers
3350 N. Central Ave.
Phoenix, AZ. 85012

American Iron & Steel Inst.
J.C. Spence
1000 Sisteenth St., N.W.
Washington, D.C. 20036

CA Lathing & Plastering
Contractors Association
Clay M. Johnston
25332 Narbourne Ave., #170
Lomita, CA 90717

Drywall Industry Trust Fund
Robert Gulick
9800 S. Sepulveda Blvd.
Los Angeles, CA 90045

Gypsum Association
Marvin Smith
1800 N. Highland Ave.
Hollywood, CA. 90028

National Automatic Sprinkler
Association
Ed Reilly
P.O. Box 719
Mt. Kisko, N.Y. 10549

National Forest Products Assoc.
Wallace Norum
P.O. Box 4012
Mt. View, CA. 94040

Portland Cement Association
Jim Barris
Old Orchard Road
Skokie, IL. 60076

Paul Heilstedt, Tech. Director
BOCA
17926 S. Halsted
Homewood, IL. 60430

Bill Tangye, Tech. Director
SBCC
900 Montclair Road
Birmingham, AL. 35213

Bill Goss
5715 W. 76 Street
Los Angeles, CA. 90045

Steve Klamke
SPI
355 Lexington Ave.
New York, N.Y. 10017

Wally Prebis
Prestressed Concrete
1510 Glen Ayr Dr. St. 2
Lakewood, CO. 80215

Walter Burgess, Architect
308 West Fillmore
Colorado Springs, CO. 80907

Gordon Vickery, Administrator
Federal Emergency Management
Agency
U.S. Fire Administration
Washington, D.C. 20007

Randall W. Scott, ABA-HUD
3512 Maple Ct.
Falls Church, VA. 22041

Alan Brunacini, Chief
City of Phoenix Fire Department
620 W. Washington St.
Phoenix, AZ. 85003

Appendix IV
Continued

Ross Hildebrandt, Director
Building Safety Department
251 W. Washington St. Rm. 341
Phoenix, AZ. 85003

Daryl Lippincott
Vice-Pres. & Regional Manager
Coldwell Banker
2346 N. Central Ave.
Phoenix, AZ. 85004

Edward P. DeLorenzo, President
Edward P. DeLorenzo Architect
3101 Maryland Pkwy., St. 112
Las Vegas, NV. 89109

George Reeves
Executive Vice-Pres.
Del Webb Realty & Manag. Co.
3800 N. Central Ave.
Phoenix, AZ. 85004

John Russell, Vice-Pres. &
District Manager
Grubb & Ellis Commercial
Brokerage Company
2035 N. Central Ave.
Phoenix, AZ. 85012

John Fisher, AIA
Mitchell & Giurgola Arch.
12S 12th. St.
Philadelphia, PA. 19107

Crawford Greene, AIA
3603 Granada St.
Tampa, FL. 33609

William E. Snyder, Arch.
1555 E. Flamingo Rd. #440
Las Vegas, NV. 89109

Appendix V

Rule 211.3 Operation of Elevators Under Fire or Other Emergency Conditions:

All elevators having a travel of 25 ft. (7.62m) or more, above or below the designated level (see Section 3-Definitions), shall conform to the following:

211.3 Phase I and II Operation

1. Phase I Emergency Recall Operation
   a. A three position (on, off and by-pass) key-operated switch shall be provided only at the designated level for each single elevator or for each group of elevators. The key shall be removable in the "on" and "off" positions.

      When the switch is in the "off" position, normal elevator service shall be provided and the smoke detectors required by Rule 211.3a-1-b shall be functional. When the switch is in the "by-pass" position, normal elevator service shall be restored independent of the smoke detectors required by Rule 211.3a-1-b.

      When the switch is in the "on" position:
      (1) All cars controlled by this switch and which are on automatic service shall return nonstop to the designated level and the doors shall open and remain open.

      (2) A car traveling away from the designated level shall reverse at or before the next available floor without opening its doors.

      (3) A car stopped at a landing shall have the in-car emergency stop switch rendered inoperative as soon as the door is closed, and the car starts toward the designated level. A moving car, traveling to or away from the designated level, shall have the in-car emergency stop switch rendered inoperative immediately.

      (4) A car standing at a floor other than the designated level, with doors open and the in-car emergency stop switch in the run position, shall conform to the following:

         (a) Elevators having automatic power-operated horizontally sliding doors shall close the doors without delay and proceed to the designated level.

(b) Elevators having power-operated vertically sliding doors provided with automatic or momentary pressure closing operation per Rule 112.3d shall have the closing sequence initiated without delay in accordance with Rule 112.3d(1), (2), (3) and (5) and the car proceed to the designated level.

(c) Elevators having power-operated doors provided with continuous pressure closing operation per Rule 112.3b or elevators having manual doors, shall conform to the requirements of Rule 211.3c. Sequence operation, if provided, shall remain effective.

(5) Door reopening devices for power-operated doors which are sensitive to smoke or flame shall be rendered inoperative. Mechanically actuated door reopening devices not sensitive to smoke or flame shall remain operative. Door closing shall conform to the requirements of Rule 112.3.

(6) All car and corridor call buttons and all corridor door opening and closing buttons shall be rendered inoperative and all call registered lights and directional lanterns shall be extinguished and remain inoperative. Position indicators, when approved, shall remain in service.

(7) All cars shall be provided with a visual and audible signal system which shall be activated to alert the passengers that the car is returning nonstop to the main floor or other designated level.

b. Smoke detectors shall be installed in accordance with NFPA No. 722, Automatic Fire Detectors, Chapter IV, in each elevator lobby at each floor and associated elevator machine rooms. The activation of a smoke detector in any elevator lobby or associated elevator machine rooms other than the designated level, shall cause all cars in all groups that serve that lobby to return nonstop to the designated level. If the smoke detector at the designated level is

activated, the cars shall return to an alternate level approved by the enforcing authority unless the Phase 1 key-operated switch (Rule 211.3a-1-a) is in the "on" position. Smoke detectors and/or smoke detector systems shall not be self resetting. The operation shall conform to the requirements of Rule 211.3a(1)(a).
Exception (Rule 211.3a(1)(b): Elevator lobbies at unenclosed landings.

2. Phase II Emergency In-Car Operation
   a. A two-position (off and on) key-operated switch shall be provided in or adjacent to an operating panel in each car, and it shall become effective only when the designated level Phase I key-operated switch (Rule 211.3a-1-a) is in the "on" position or a smoke detector (Rule 211.3a-1-b) has been activated, and the car has returned to the designated level. The key shall be removable only in the "off" position. When in the "on" position, it shall place the elevator on emergency in-car operation.

      The operation of elevators on Phase II emergency in-car operation shall be by trained emergency service personnel only and shall be as follows:

      (1) An elevator shall be operable only by a person in the car.

      (2) All corridor call buttons and directional lanterns shall remain inoperative.

      (3) The opening of power-operated doors shall be controlled only by continuous pressure "open" buttons or switches. If the switch or button is released prior to the doors reaching the fully open position, the doors shall automatically reclose. Open doors shall be closed by either the registration of a car call or by pressure on "Door Close" switch or button.

      (4) Door reopening devices rendered inoperative per Rule 211.3a(1)(a)(5) shall remain inoperative.

      (5) Means shall be provided to cancel registered car calls.

(6) Elevators shall only be removed from Phase II operation by moving the emergency key-operated switch in the car to the "off" position with the car at the designated or alternate level.

3. Multi-Deck Elevators

Multi-deck elevators shall conform to the requirements of Rules 211.3a-2 and 4 and to the additional requirements as follows:

a. The Phase I key-operated switch in the car required by Rule 211.3a-2 for emergency service operation shall be located in the top deck. The elevators shall be provided with means for placing the lower deck out of service shall be located in that deck or adjacent to the entrance at the lower lobby floor.

4. Switch Keys

The switches required by Rules 211.3a-1 and 211.3a-2 shall be operable by the same key but which is not a part of a building master key system. There shall be a key for the designated level switch and for each elevator in the group. These keys shall be kept on the premises in a location readily accessible to authorized personnel, but not where they are available to the public.
NOTE: (Rule 211.3a(4)) Local authorities may specify a uniform key or key security for their jurisdiction.

211.3b Designated Attendant-Operated Elevators

Elevators operable only by a designated attendant in the car shall be provided with a visual and audible signal system conforming to the requirements of Rule 211.3a-1-a-(7), than shall be activated when the key-operated switch required by Rule 211.3a(1)(a) is in the "on" position or when a smoke detector required by Rule 211.3a-1-b has been activated to alert the attendant to close the doors and return nonstop to the designated level.

211.3c Elevators Arranged for Dual Operation

Elevators arranged for dual operation, shall, when on automatic operation, conform to the requirements of Rule 211.3a. When operated by a designated attendant in the car, elevators shall conform to the requirements of Rule 211.3b. When the doors are closed and the car is in motion, the elevator may conform to the requirements of Rule 211.3a.

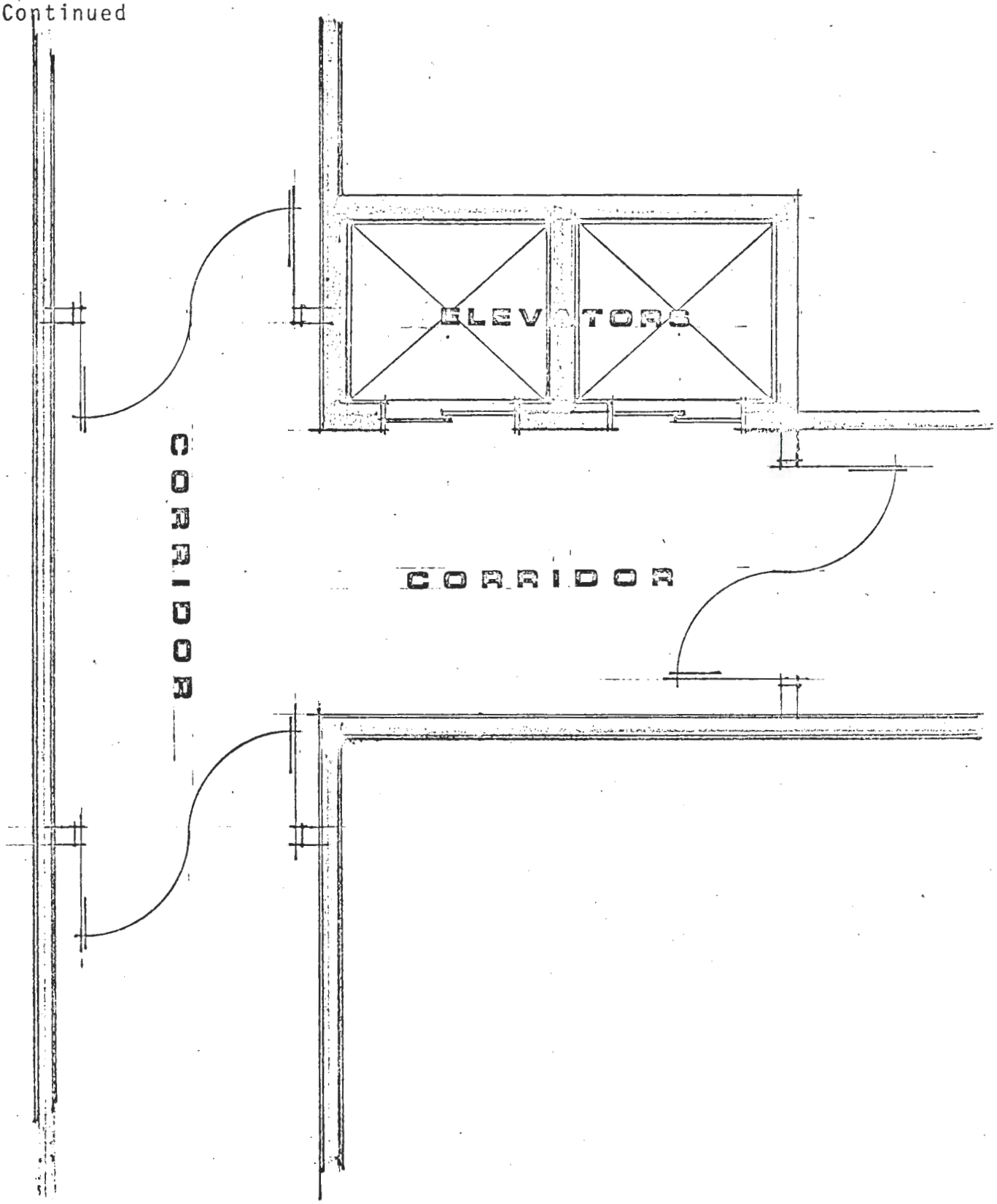
211.3d Inspection Operation

When an elevator is on inspection operation, a continuous audible signal which is audible on top of the car shall sound when the Phase I key-operated switch (Rule 211.3a-1-a) or a smoke detector required by Rule 211.3a-1-b is actuated to alert the operator of an emergency. Cars shall remain under the control of the operator until returned to service.

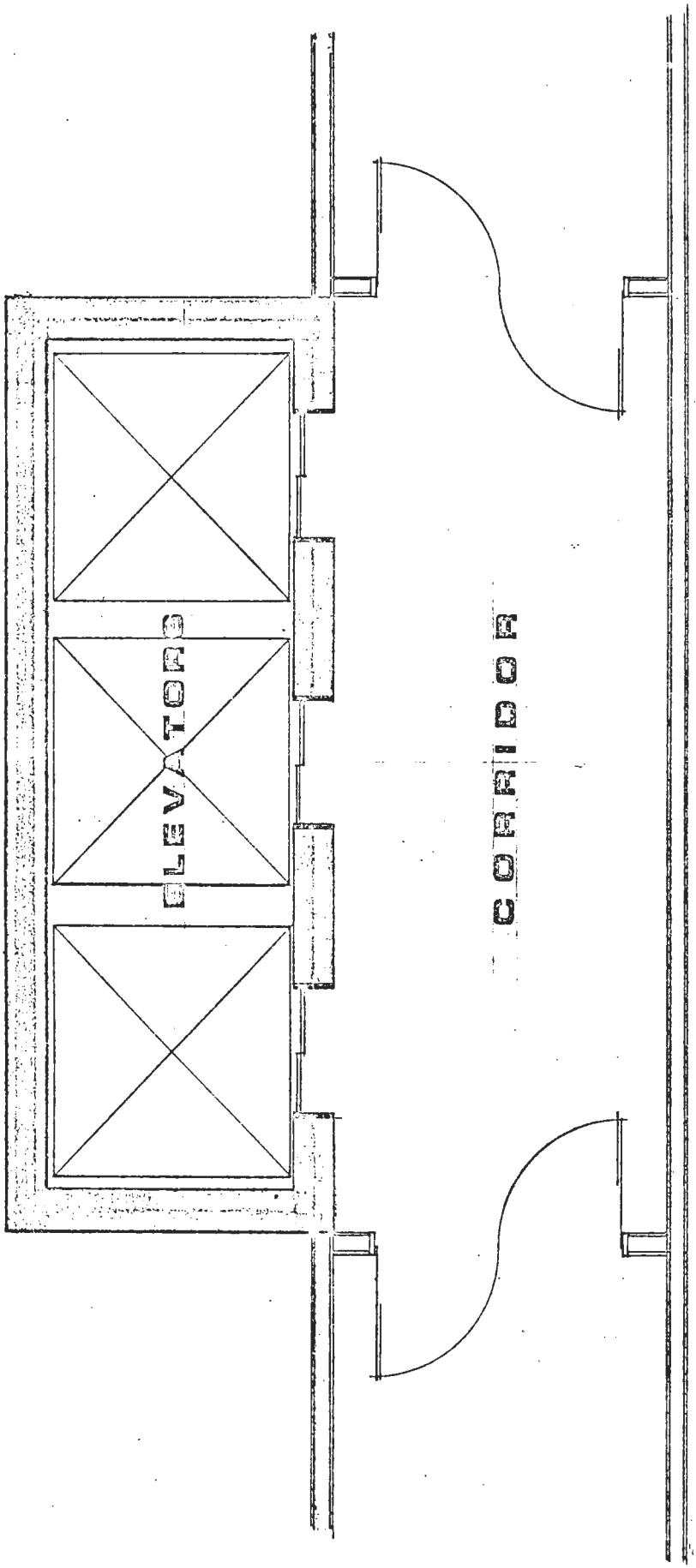
211.3e Operating Procedures

Instructions for operation of elevators under Phase I shall be incorporated with or adjacent to the Phase I key-operated switch (Rule 211.3a-1-a) at the designated level. Instructions for operation of elevators under Phase II shall be incorporated with or adjacent to the switch, in or adjacent to the operating panel in each car, required by Rule 211.3a-2. Instructions shall be in letters not less than 1/8 in. (3.2min) in height and shall be permanently installed and protected against removal and defacement.

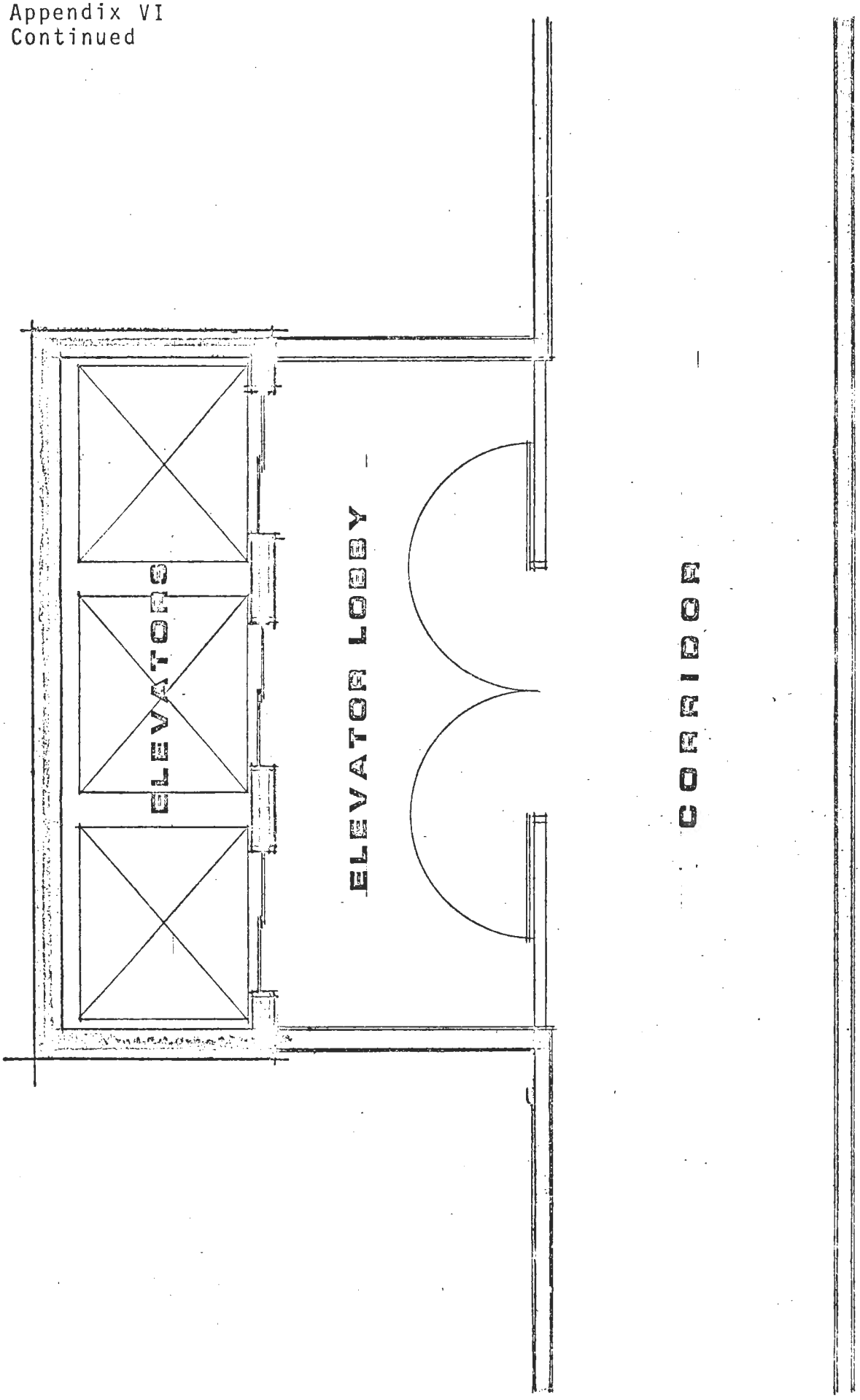
Appendix VI
Continued



Appendix VI



Appendix VI
Continued



Section 104. (b) Additions, Alterations and Repairs: More than 50 percent. When additions, alterations, or repairs within any 12-month period exceed 50 percent of the value of the existing building or structure, such building or structure shall be made to conform to the requirements for new buildings or structures.

Section 104. (c) Additions, Alterations and Repairs: 25 to 50 percent. Additions, alterations, and repairs exceeding 25 percent but not exceeding 50 percent of the value of an existing building or structure and complying with the requirements for new buildings or structures may be made to such building or structure within any 12-month period without making entire building or structure comply. The new construction shall conform to the requirements of this Code for new building of like area, height, and occupancy. Such building or structure, including new additions, shall not exceed the areas and heights specified in this Code.

Section 104. (d) Additions, Alterations and Repairs: 25 percent or less. Structural additions, alterations, and repairs to any portion of an existing building or structure, within any 12-month period, not exceeding 25 percent of the value of the building or structure shall comply with all of the requirements for new buildings or structures, except that minor structural additions, alterations, or repairs, when approved by the Building Official, may be made with the same material of which the building or structure is constructed. Such building or structure, including new additions, shall not exceed the areas and heights specified in this Code.

Appendix VIII

FIRE HAZARD ANALYSIS SURVEY

EXISTING HIGH RISE BUILDINGS

The attached chart indicates those building deficiencies that appear to occur on a repetative basis in serious high rise fires and which are causative factors in relation to extensive property and life loss in such fires.

Those fires referenced from NFPA Fire Journal reports include all high rise fires which were investigated by NFPA staff and reported thereon for the period 1969 through January 1975. Fires occurring outside of the United States are included because they illustrate many of the problems common to high rise building fires and the information gleaned from these fires should affect current fire protection thinking in this country.

The totals of each deficiency are listed in descending order of occurrence.

Fire Safety Building Deficiencies

1. Open Vertical Shafts and Poke Thru----------16
2. Fire Alarm Deficiency----------14
3. Elevators----------14
4. Sub-standard Corridor Openings----------12
5. Improper Action----------12
6. Flammable Finish----------10
7. Inadequate Egress---------- 9
8. No Door Closer---------- 9
9. Open Stairs---------- 8
10. HVAC Recirculation---------- 6
11. No Emergency Lighting---------- 5

The column titled "Fire Alarm Deficiency" includes those instances where there was no fire alarm or where it was reported as being ineffective. It also includes those instances where lack of communication facilities to instruct occupants was a serious factor.

"No Emergency Lighting". Included those instances where this information was given.

HVAC (Heating, Ventilating and Air Conditioning). Includes all instances where air handling of fan systems contributed to fire, smoke or heat extension.

"Improper Action". Includes those instances where management or staff that should have had fire safety training acted or failed to act in a proper manner.

"Elevator". Includes instances where elevator equipment or controls failed, or where the elevator shaft formed a path of travel for fire, smoke of heat extension. In these cases vertical smoke migration was a significant factor when elevators were found at the fire floor with doors open.

Exterior vertical extension of fire was an important factor in six of the reported fires, three occurring in South America. This information was not included in the chart.

A short summary of each fire is included to provide informational background on the similarity of building deficiencies that are repeatedly described as causative factors in extensive life and property loss in high rise building fires. However, for full information on each fire, it is suggested that the referenced reports be perused.

E. Condon
12/8/75

Appendix VIII
Continued

	DATE	LOCATION	DESCRIPTION	OPEN STAIRS	OPEN VERTICAL SHAFTS AND PROP. IN	INADEQUATE EGRESS	FIRE ALARM DEFICIENT	NO EMERGENCY LIGHTING	FIRE RECIRCULATION	IMPROPER ACTION	SUBSTANDARD INTERIOR FINISH	FLAMMABLE FINISH	ELEVATOR	10 DOOR CLOSER	SOURCE
1.	9/23/64	San Francisco	7 Story - Office					X			X		X	X	(2)
2.	2/7/67	Montgomery, Al.	10 Story - Restaurant & Hotel			X						X			(3)
3.	1/24/69	Chicago	39 Story - Apartments				X				X		X		(1)
4.	1/25/70	Chicago	25 Story - Hotel				X			X	X		X	X	(1)
5.	4/12/70	San Francisco	6 Story - Hotel		X			X			X			X	(2)
6.	5/15/70	San Francisco	11 Story - Furniture Mart		X						X	X		X	(2)
7.	8/5/70	New York	50 Story - Office		X		X		X			X	X		(1)
8.	11/18/70	San Francisco	52 Story - Office				X		X				X		(2)
9.	12/4/70	New York	47 Story - Office		X		X						X		(1)
10.	12/20/70	Tucson	11 Story - Hotel	X		X	X	X			X	X		X	(1)
11.	1/1/71	Los Angeles	25 Story - Apartments										X	X	(2)
12.	1/4/71	San Francisco	6 Story - Apartments	X	X		X	X			X				(2)
13.	2/10/71	San Francisco	22 Story - Office						X						(2)
14.	3/28/71	Los Angeles	21 Story - Restaurant & Hotel		X										(1)
15.	7/6/71	Nashville	28 Story - Office				X		X						(1)
16.	7/23/71	New Orleans	15 Story - Hotel				X			X			X		(1)
17.	2/24/72	Sao Paulo	31 Story - (Andraus)	X	X	X	X	X			X	X			(1)
18.	5/13/72	Osaka	7 Story	X	X	X	X			X					(1)
19.	11/15/72	Chicago	100 Story - Office & Apartments							X					(1)
20.	11/29/72	New Orleans	15 Story - Office			X					X	X	X	X	(1)
21.	11/30/72	Atlanta	11 Story - Apartments		X					X	X	X	X	X	(1)
22.	12/15/72	Ventnor, N.J.	19 Story - Apartments				X								(1)
23.	12/29/72	Dallas	16 Story - Apartments		X										(1)
24.	1/8/73	Madison	10 Story - Apartments							X			X	X	(1)
25.	4/2/73	Rosemont	10 Story - Hotel		X	X	X			X			X		(1)
26.	6/25/73	Tucson	11 Story - Office							X					(1)
27.	7/23/73	Bogota	36 Story - Office		X	X					X	X			(1)
28.	11/5/73	Indianapolis	(Group Fire)												
29.	11/10/73	Toronto	43 Story - Office	X						X			X		(1)
30.	11/28/73	Kumato	9 Story - Department Store	X	X					X					(1)
31.	1/15/74	Rio, Brazil	31 Story - (Vacant)	X	X	X						X			(1)
32.	2/1/74	Sao Paulo	25 Story - (Joelma)	X	X	X	X			X		X			(1)
33.	9/8/74	Virginia Beach	11 Story - Hotel							X	X				(1)
34.	11/12/74	Los Angeles	15 Story - Office		X				X				X		(1)
35.	1/31/75	San Francisco	22 Story - Office						X						(2)
			TOTALS	8	16	9	11	5	5	12	12	13	11	9	

SOURCE
(1) = Fire Journal
(2) = Fire Department Report
(3) = N.F.P.A. Publication

Appendix VIII
Continued

1. San Francisco, Ca. - September 23, 1964
717 Market Street - 7 story office building 1 fatality

The fire originated on the 6th floor and spread to the adjoining offices on the floor. Transoms and unrated corridor doors, without closers, were contributory to the fire spread.
Two firemen were trapped in the elevator on the fire floor when the heavy smoke prevented the electric eye from operating. One fireman survived, the second fireman died October 21, 1964.
S.F.F.D. Fire Report.

2. Montgomery Alabama - February 7, 1967
10 story Penthouse Restaurant - 25 fatalities

"The loss of 25 lives in this fire, the largest loss of life in a U.S. restaurant fire in almost 25 years, was blamed on 3 factors; inadequate exits, combustible interior finish, and lack of sprinklers"
"- - - From the general location of the bodies it was obvious that there would have been little or no loss of life had the second stairway been extended to the penthouse and clearly marked"
from: N.F.P.A. Publication No.FR 74-1, 1974
titled "A study of Restaurant Fires"

3. Chicago, Illinois - January 24, 1969
39 story apartments - 4 fatalities

The fire occurred in the 36th story. Conditions indicate the fire burned for some time.
The 10-inch wide spaces at one side of each apartment are covered by a panel of 1-inch particle board - - -.
The apartment building has no alarm system, automatic sprinklers or detection system.
There was no way for the products of combustion to vent themselves except through the door, through the elevator doors, or into the apartments.
Use of elevators by occupants of floors beneath the fire hindered elevator evacuation of the floors above. Fire fighters were delayed in reaching the fire because of the heavy demand on the elevators.
The particle board adjacent to the doors burned through in some places, allowing fire to enter a few apartments.
Fire Journal - May, 1969

4. Chicago, Illinois - January 25, 1970
25 story hotel - 2 fatalities

Each guest room has a standard 1-1/4-inch frame door with 1/4-inch panel.
Before the fire about 50 chairs awaiting repair had been stored in the 9th floor elevator lobby. (where the fire originated) Other elevators responded unoccupied to the 9th floor level, apparently because of fire damage to the call circuit ---.
The two victims were attempting to reach the stairway. As they went they left the doors open.
One of the significant features of this fire was the lack of an alarm sounding system.
Fire Journal - May, 1970

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Continued

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One of the significant features of this fire was the lack of an alarm sounding system.

Fire Journal - May, 1970

Continued

San Fr. ..isco, California - April 12, 197
6 story hotel

Fire originating in the main floor restaurant dining room rapidly spread through the ceiling space and raced upward through two unprotected plumbing shafts located by the center firewall. Hall doors were 1/4-inch panel without closers.
S.F.F.D. Fire Report

6. San Francisco, California - May 15, 1970
11 story furniture mart building

The fire originated on the 11th floor and spread throughout the entire 11th floor and through the roof doing considerable damage.

The fire spread rapidly throughout the display spaces due in part to the absence of fire rated corridor walls and doors without closers.
S.F.F.D. Fire and Inspection reports.

7. New York City, N.Y. August 5, 1970
50 story office building (#1 N.Y. Plaza) - 2 fatalities

"The inside face of the curtain wall and the spaces between and above the windows are insulated with one-inch Dorvan FR 100 Polystyrene foam board ---

"Except for the concrete and metal, almost everything in the building is combustible to some degree - foam plastic wall insulation, electrical cables, ceiling tiles, partitions and insulation on air handling units ---

"Openings in the floors around air conditioning ducts, electrical fixtures, and the cables themselves, as well as the vertical shafts in the outer wall cut off only by a sheet of aluminum, allowed fire spread between floors."

Two dead men were found on the floor of the elevator at the 33rd floor.

Since the return air fans were not shut down smoke was drawn into the return air shafts through the openings on the 33rd floor. This smoke carried by positive pressure through the supply ducts and to some extent through the return air shafts to the various floors, was of sufficient intensity on most floors to require evacuation.
Fire Journal - January 1971

8. San Francisco, California - November 18, 1970
52 story office building

"Smoke damage occurred throughout most of the thirty-fifth floor, with minor smoke damage as high as the thirty-eighth floor. The major structural components performed as designed."

Smoke penetrated into elevator shafts and was carried to higher floors. Building occupants using these elevators became frightened, and one case of serious hysterical behavior was noted.

The supervising chief on the fire floor was unable to communicate by department radio with the command post at the building front, street level occupants complained of lack of information and direction.
S.F.F.D. Fire Report

9. New York City, N.Y. - December 4, 1970
919 3rd Avenue - 47 story office building - 3 fatalities

"If this fire had occurred on one of the upper floors, where it could not have been attacked by hose streams through windows, lack of vertical protection might have contributed to fire spread to floors above ---

"Means should be provided to notify all employees of an emergency and of the action to be taken by them. At 919 Third Avenue employees on upper floors complainte chiefly of lack of notification of the fire."

Three people died in the fire, two in the hall and one in the elevator on the fire dloor.

Occupants complained of lack of direction.
Fire Journal - March, 1971

10. Tucson, Arizona - December 20, 1970
Pioneer Hotel - 11 stories - 28 fatalities

Investigators feel that the fires were set sometime before midnight, and they spread rapidly joining and then spreading up the two open stairways.

Very few people became aware of the fire in time, as there was no alarm system.

The light panel doors held up fairly well and did not allow a significant amount of fire in the rooms. The rooms in which doors were left open were completely burned out ---.

The carpet and wall covering did however, (contribute to the fire load), and to a degree sufficient to cause the fatalities and the severe damage.

There was a fire escape within several feet of where the bodies were found (2-victims). The window to the fire escape had been covered -- a light drape had been hung to cover this part of the wall.
Fire Journal - May 1971

11. Los Angeles, California - January 1, 1971
25 Story Apartment

A Christmas tree fire gutted a 4th floor apartment and spread out the open doorway filling the building from the 4th floor to the top story with heavy black smoke. Heat and smoke traveled from the fire through the halls into the elevator shaft destroying the equipment. The flames shot up the shafts sending columns of smoke down each corridor.

"In summing up the elevator indident I arrive at certain possibilities (all elevators were at the fire floor with doors open):
1. That tenants called the elevators to the fire floor, smoke obscured the photo electric beams and the doors remained open;
2. That the intense head of the hall fire short circuited the 4th floor call buttons and the elevators came to the fire floor.
L.A.F.D. Fire Report.

12. San Francisco, California - January 4, 1971
6 Story Apartment building

The fire originated on the stairs between the basement and first floor levels, spread up the stairs to the 6th floor at which point it mushroomed out through the panel door into the public hall and into several of the apartments on that floor.

The fire alarm did not sound, apparently due to damage during the fire.
S.F.F.D. Fire Report

13. San Francisco, California - February 10, 1971
22 story office building

"An electrical fire in the air conditioning filter system spread smoke throughout the building, requiring evacuation of the entire structure."
S.F.F.D. Fire Report

14. Los Angeles, California - March 28, 1971
21 story office building - roof restaurant

The fire in the restaurant on the top floor was confined to the restaurant area by a two-hour fire resistive wall with a Class B rated door that seperated the restaurant from the remaining area.

Water flowing down through "polk-thru" holes left unsealed around conduit, piping, and ducts caused water damage three floors below the fire.
Fire Journal - November, 1971

15. Nashville, Tenn. - July 6, 1971
28 story office building

The fire occurred on the first floor in the fan room of the air handling system.

Employees discovered the fire when dense smoke poured into the first floor lobby. The fans were shut down and the three smoke filled floors of the building were evacuated, but the manual fire evacuation system (alarm) failed to function.

Fire Journal - November, 1971

16. New Orleans, Louisiana - July 23, 1971
17 story Hotel - 6 fatalities

None of the victims was burned. Smoke inhalation was tentatively listed as the cause of all deaths.

Guests said they heard the fire alarm, but it sounded "more like somebodies alarm clock"

Five of the victims were trying to escape from the motor hotel by using the elevator from the 15th floor. When the elevator reached the 12th floor it stopped and the doors opened. Five of the six passengers died from the head and smoke in the corridor.

The delay in reporting the fire was an obvious erron on the part of the hotel management.

Had the guard not opened the door to the fire room, and had he instead operated the alarm, and started evacuating people, he and the five others who died would probably be alive today.

Fire Journal - January, 1972

17. Sao Paulo, Brazil - February 24, 1972
31 stories (Andraus) - 16 fatalities.

"Wind velocity and combustible interior finish were factors contributing to fire spread--

"Reducing the fuel contributed by combustible ceilings and wall partitions could have slowed fire spread, providing more time for evacuation to a safe area or for fire extinguishment----

"Fuel control, compartmentation, and provision of automatic detection or extinguishing systems are important considerations in a systems approach to fire safety design."

The door construction in the office stairway was mixed hollow-core wood, solid core wood, and metal.

Fire Journal - July, 1972

18. Osaka, Japan - May 13, 1972
7 story building - 118 fatalities

"The principle causes of the many casulties were:

1. The four open stairways
2. Failure to announce the fire and its location and to instruct the occupants over the loud speakers.
3. The rapid rise of toxic smoke and hot gases from the 3rd floor through open stairways, elevators and shafts,---"

Fire Journal, March, 1973.

19. Chicago, Illinois - November 15, 1972
100 story office and apartment building.

Starting on the 96th story, the fire caused damage to the 95th and 97th stories also.

---Fire fighters found that the fire had entered the 97th story through windows.

This fire is an excellent example of the value of careful fire department planning, including coordination of emergency procedures with those of building maintenance and security personnel.

Fire Journal - March 1973

20. New Orleans, Louisiana - November 29, 1972
16 story office building - 6 fatalities

"It was the lightweight doors to the corridors and the delayed discovery that allowed the fire to do so much damage ---

"There was little to burn in the corridor. The damage there and in the beauty salon appeared due to burning of fire gases from the room of origin, in addition to the burning of the interior finish in the beauty salon."

Combustible interior finish in the 16th story restaurant aided the fire spread.
Fire Journal, May 1973

21. Atlanta, Georgia - November 30, 1972
11 Story Apartment - 10 fatalities

"A combination of factors contributed to the fire exposure: Delayed alarm; the open door to the apartment of origin, use of corridor to supply make up air, use of corridor carpeting with fire hazard characteristics beyond what is considered acceptable ---

"Considerable smoke and head were spread by the elevator shaft. The shaft was exposed by open elevator doors on the fire floor and on the tenth floor ---
Fire Journal - May, 1973

22. Ventnor, New Jersey - December 15, 1972
19 story Apartment - 1 fatality

One fire fighter was killed and three others were injured in a fourth floor fire. The alarm system was found to be wholly inadequate, since many occupants could not hear the alarm.
Fire Journal - July, 1973.

23. Dallas, Texas - December 28, 1972
16 story reinforced concrete apartment

The fire started in a Christmas tree in an 8th floor apartment. "The fire was confined to the apartment of origin and to about 40 feet of corridor to the left and right of the apartment, but all floors above the fire floor received extensive damage from smoke that spread through the poke-throughs and ceiling spaces.
Fire Journal - May, 1973

24. Madison, Wisconsin - January 8, 1973
10 story apartment - 3 fatalities.

The fire originated in a 4th floor apartment, whose door was left open after discovery of the fire, allowing head and smoke to fill the corridor.

Occupants failed to actuate the manual alarm after discovery of fire; an employee investigated before calling the fire department. Heat and smoke had extended to upper floors through the elevator shaft, because one elevator had remained at the 4th floor with its door open ----.
Fire Journal - September, 1973

25. Rosemont (Chicago), Illinois - April 2, 1973
10 story Atrium (Hotel)

The atrium structure rose from the 2nd to the 11th floor and was topped by an extensive skylight.

The fire started in the 2nd floor night club in the hotel. Fire fighters found the atrium charged with smoke and the night club fully involved.

1. The mechanical smoke exhaust system did not operate, because the switch connecting the smoke detection system had been turned off.
2. Exit doors were painted the same color as the surrounding wall, obscuring their locations in the dense smoke.
3. The fire alarm system was not heard by all guests, necessitating the calling of guest rooms by telephone.
4. Guests attempted to use automatic elevators for escape. Since the elevators could not be manually controlled, firefighters had to ride the cars to prevent their use.

Fire Journal - November, 1973

26. Tuscon, Arizona - June 25, 1973
6 and 11 story twin towers, office building

The fire occurred in the 4th floor which was used for storage of 1400 plastic voting machines, miscellaneous office furniture, etc.

On arrival the first fire companies found flames extending from windows on the fourth floor and entering windows on the fifth and sixth floors.

At least one employee on the eleventh floor did not hear the alarm, but an intercom system was also used to announce the fire, its location, and the two escape routes. A supervisor attempted to extinguish the fire before calling the fire department.
Fire Journal - January, 1974

27. Bogota, Colombia - July 23, 1973
36 story office building - 4 fatalities

A single stairway ran from the basement to the roof. Stairway doors at each floor were hollow core wood ---.

Spaces between the outer metal skin and the outer walls of the occupied area created a pathway for fire to spread from floor to floor.

Much of the interior wall surface was combustible.

The fire department did not receive a report of the fire until 35 minutes after the fire had been discovered.
Fire Journal - July, 1974

28. Indianapolis, Indiana - November 5, 1973
Group Fire

This group fire involved 7 buildings including one 17 story apartment, a 13 story and a 7 story office building and a 7 story garage. Exterior exposures constituted the principle problem and the fire reports have insufficient detailed information to be of any value in the hazard analysis survey.
Fire Journal - July, 1974

29. Toronto, Canada - November 10, 1973
43 story office building

The building had enclosed stairwells, but the accounting office had an open stairwell between the 27th and 28th floors.

The fire occurred in the mail room on the 27th floor and activated a smoke detector on the 28th floor at the top of the open stairwell, which registered on the ground floor console. Fire fighters took the elevator to the 27th floor, assuming it to be the floor below the fire but when the elevator door opened, fire fighters were confronted with intense heat, and the smoke prevented the door from closing. The fire fighters were equipped with self-contained breathing equipment and were able to by-pass the electric eye switch and descend to the 26th floor, from where they used the staircase to attack the fire.
Fire Journal - March, 1974

30. Kumato, Japan - November 28, 1973
9 story department store - 103 fatalities

"The fire originated in combustible materials stored in a stairway, and spread rapidly to all floors above by way of stairways and esculator floor openings --

"No one can remember a fire alarm being given nor was any warning or guidance broadcast over the loudspeakers to direct the occupants to safety---
Most of the 1400 occupants escaped to the ground through interior stairways."
Fire Journal - May 1974

31. Rio de Janeiro, Brazil - January 15, 1974
31 stories - (Unoccupied)

"Factors influencing fire spread were combustible ceilings, open stairwells, combustible wall covering in stairways, partial sprinkler protection, that was overcome by an already well developed fire." "This fire points to one important reason why open stairways should not be permitted."
Fire Journal - July, 1974

32. Sao Paulo, Brazil - February 1, 1974
25 stories - 179 fatalities

"While the basic building construction was fire resistive, the interior finish consisted entirely of combustible materials, which contributed to the rapid spread of the fire throughout the building." Only one stairway was provided, and it was not enclosed. There was no local evacuation alarm, no exit signs and no emergency procedure to guide occupants."

"In my opinion the severity of the fire and its rapid spread can be attributed to the following.

1. Unprotected interior vertical shafts.
2. Extreme usage of portable L.P. Gas cylinders
3. Combustible interior partitioning and ceiling without restriction as to flame spread.
4. Inadequate protection of wall openings re. too much glass without proper fire barriers.
5. Improper electrical wiring
6. Inadequate fire resistance of roof."

The building had no illuminated exit signs, or emergency illumination.
Fire Journal - July 1974 and Building Standards, May/June, 1974

33. Virginia Beach, Virginia - September 8, 1974
11 story hotel - 1 fatality.

"The fire was initially contained in the room of origin on the 9th floor. If the room door had been left closed and the fire department had been called promptly the damage would probably have been contined to that room.

All the room doors had been undercut 1-1/8-inch to 1-1/4-inch. There was evidence of fire spread from the hall to nearby carpet inside rooms by means of these openings.

Of significance in this fire was the <u>delayed alarm</u> and the failure of certain fire protection devices"
Fire Journal - January, 1975

34. Los Angeles, California - November 12, 1974
15 story office building

The fire occurred in the 8th floor where maintenance workers were using lacquer thinner to clean walls.

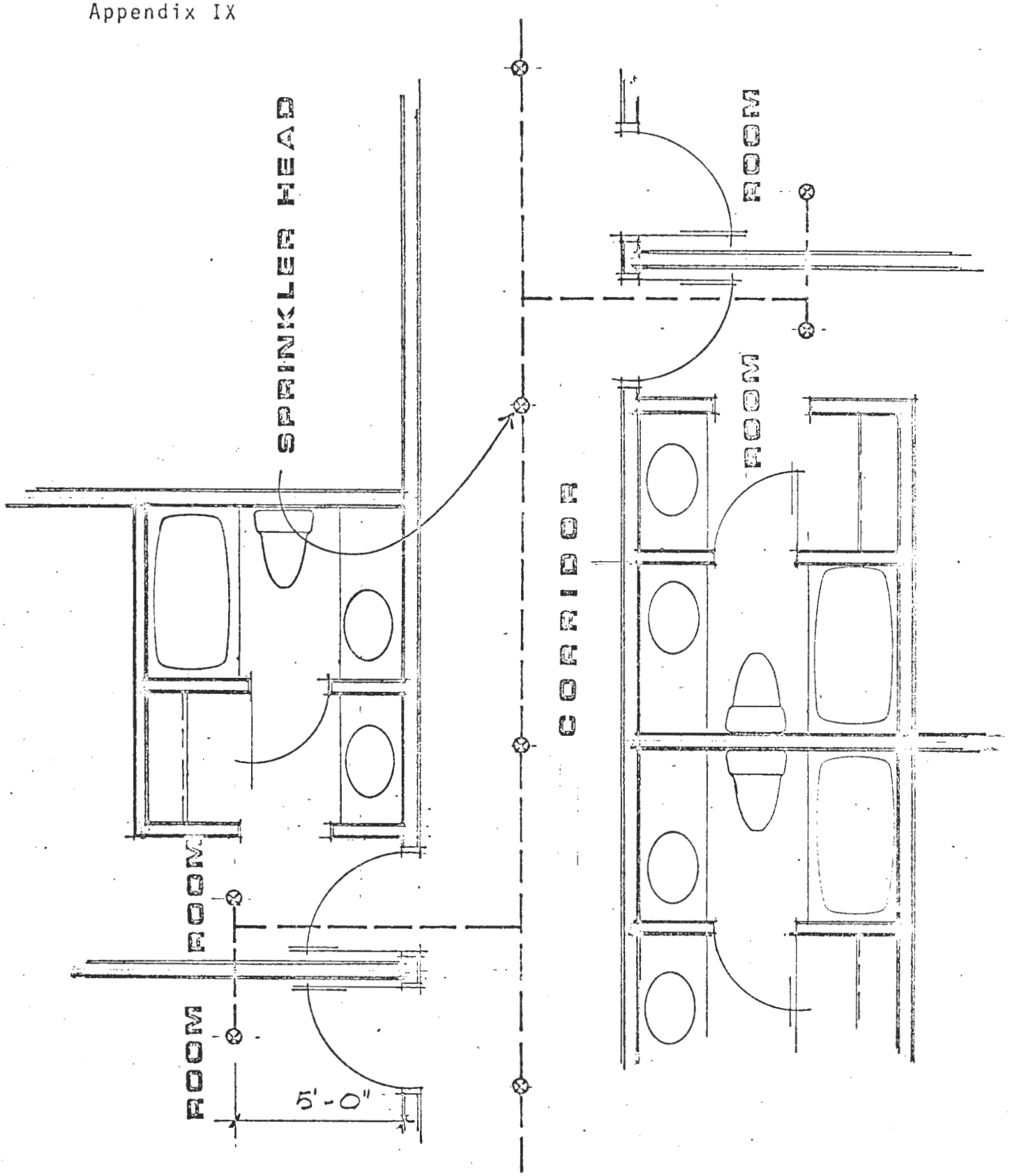
About 2000 occupants evacuated safely, mostly down the two stairways which were equipped with fire doors and ventilating tower.

The airconditioning system which was not designed to exhaust smoke and heat helped spread the smoke throughout the building. Smoke was also transmitted to other floors by the elevators; also through breeches made through floors and walls by contractors for various conduits.
Fire Journal - November 1975

35. San Francisco, California - January 31, 1975
22 story office building - S.F. International Building

The fire started in the cloth type aerosolve Air Filters in the air conditioning plenum on the second level. Smoke was recirculated throughout the building, requiring evacuation of all occupants. Property damage was slight.
S.F.F.D. Fire Report.

Appendix IX



NOTE Jan. 2, 1980
1-1-1-1-1

PERMISSION IS GIVEN TO REPRINT CAPITOL NEWS SERVICE

SPECIAL HIGH-RISE SAFETY PACKAGE

(Editor's Note)--- In the interest of public safety, Capitol News Service would like to present an in-depth view of the high-rise building fire problems and solutions in California.

Included in this special package are articles written by some of the foremost high-rise fire safety experts in California and the nation.

State Fire Marshal Phil Favro, Los Angeles and San Francisco Fire Department officials John Gerard and Emmet Condon, respectively, all present both localized and statewide views.

State Senator William Campbell, R-Hacienda Heights, who is chairman of the Senate Select Committee on Fire Services outlines his views on legislative action regarding high-rise fire safety also.

Other experts' opinions included are those of Norman Jackson, a retired Los Angeles Fire Department Task Force Commander and Cliff Dektar, a recognized high-rise safety specialist.

Capitol News Service hopes this comprehensive package provides readers with a complete view of the history and future of high-rise fire safety and what part the public, as well as the firefighters, must play.

All of those officials whose opinions are presented here join Capitol News in suggesting that people pay attention to fire dangers everywhere and that they will contact their local fire departments immediately when a fire is discovered. Hopefully, lives can be saved.

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HIGH RISE FIRE SAFETY

By Philip C. Favro, State Fire Marshal
Capitol News Service

SACRAMENTO (Capitol) -- The fire at the MGM Grand Hotel in Las Vegas that claimed 84 lives in November, has been the catalyst for endless controversy, and the obvious questions...Were the codes adequate? Was enforcement effective? Could it happen here? Much has been written, and the debate rages on over the cause, contributing factors, and "what ifs."

I guess the clearest answer, the easiest responce, is: "Sure it could happen here, it could happen anywhere, because we don't have complete control over the environment in which we live." But at least in California, we have begun to understand our built-in environment better, and have taken steps to control it more effectively.

In 1976, the State adopted two sets of regulations pertaining to high rise buildings. One, the Regulations for New High-Rise, affects all buildings constructed after July 1, 1974. Basically, these regulations require complete sprinkler systems, automatic smoke and fire detection systems, elevator protection, and internal communications system for fire fighters. Contributing experts from government and industry,including representatives of the California hotel and motel industry, developed these regulations and quite frankly, if the MGM Grand had been constructed and maintained in accordance with the California Code for New High-Rise Structures, 84 people would not have died.

However, hundreds of buildings in California...like the MGM... are not built according to that code because they were in existence before its adoption. In response to that problem California fire officials promulgated a separate set of regulations for existing buildings. These were based on

a careful analysis of the 35 most serious high-rise fires on record. The intent was to isolate consistent failures that contributed to those fires, and use those failures as a starting point.

Specifically, eight causal factors were documented as being present in most of the 35 fires:

--Unprotected vertical openings

--Inadequate egress facilities

--Lack of elevator control under emergency conditions

--Lack of emergency lighting for exit doors and exitways

--Lack of adequate building alarm systems

--Combustible interior finishes

--Smoke circulation

--Locked stairway doors

We could add a ninth, which was clearly evident in every case -- inappropriate human behavior. If you look at this list closely, you can see that all these factors were present in one way or another in the MGM tragedy.

In California, high-rise regulations for existing buildings are aimed at preventing these factors from occurring. As the April 1981 compliance date approaches, and as most buildings in California meet the standards, the likelihood of a "towering inferno" here diminishes accordingly.

But that's only part of the answer. People use buildings...they live, work, and play in them. And as long as they do, the safety built into those buildingswill be compromised. Ignorance, inattentiveness, apathy -- these are the attitudes that allow individuals to diminish the effectiveness of required fire safety systems.

Just as human behavior spoils the integrity of our total environment, human behavior also reduces the reliability of our built-environment.

MORE

Built-in protection can offset many human failings, but it has its price. We live in a world where continued improvement in passive protection is expected, yet the necessary technology costs big money to implement. If the citizenry is willing to trade the necessary dollars --in order to be afforded an effective, passive fire protection system (i.e.,everything totally sprinklered) --then we can count on a higher level of safety than we now enjoy. But, if the citizenry chooses not to make that trade --and there is every indication that it does not--then we can continue to look forward to occasional catastrophic losses despite our best efforts to the contrary.

Of course, there is a third option available --that is, widespread acceptance of personal responsibility, all across the board, to ensure that buildings which are built safe are maintained safe. And that assurance depends upon the individual attentiveness of each of us in our professional, as well as our personal lives. It means that in the design and construction phases architects, engineers, and contractors know why safety systems are being required, and not take shortcuts to avoid them. It means that building owners and managers know and understand why systems are built into their properties, and how and why they operate. It means that the people who use the buildings not prop open doors or block exits, not ignore warning signs; that they understand why elevators should not be used in case of fire; and why evacuation pre-plans and drills are so important.

It is this option that we must take, because it is only in this way that we can significantly reduce the yearly toll we pay in fire loss -- in high-rise buildings, in low-rise buildings, in the work place, and, most importantly, in our homes, where most fires and deaths occur.

CODES Jan. 2, 1981
1-1-1-1-1
COMMENTARY

MGM FIRE DEATHS WERE PREVENTABLE

By Cliff Dektar

Capitol News Service

SACRAMENTO (Capitol)--- "Code violations blamed in MGM Grand fire deaths," "They didn't have to die," -- these headlines sum up the bottom line in the fire at the MGM Grand Hotel in Las Vegas in which 84 persons died.

Investigators have already determined that there have been "significant" violations of fire and building codes which contributed to the rapid spread of the fire.

"This fire could have happended in many other hotels and in other high-rise buildings," a retired fire chief commented. "Everyone thinks the firemen are miracle workers and can quickly reach the scene of a high-rise fire and put it out -- but it is not true. With ladders that average 100 feet, there is no way rescues can be made if the structure itself doesn't have proper protection, including alarms, automatic sprinklers, air conditioning controls and elevator controls."

Another fire expert observes: "Although older codes did not require full sprinkling, for years fire departments have tried to get buildings with high public occupancy to sprinkle all rooms, in about two years the insurance savings would pay for the installation."

Some structures, like the Bonaventure Hotel in Los Angeles had good management and, although not compelled to have full sprinklers, they decided to completely sprinkle the hotel."

Not only fire chiefs like John Gerard of Los Angeles and Deputy Chief Emmet D. Condon of San Francisco, have been urging high-rise safety, but visionary and practical politicians like

MORE

Senator William Campbell who is chairman of the Senate Select Committee on Fire Services and Fred Kline, former president of the Los Angeles City Fire Commission and current Vice Chairman of the Los Angeles County Fire Services Commission have constantly urged upgrading of codes to make high-rise structures more fire safe.

California now has the most comprehensive high-rise safety regulations in the nation. Among the new minimum standards for existing buildings are enclosing of interior exits and stairwells, two exit systems on each floor, solid core or 20-minute rated doors, installation of fire alarm systems, elevator systems must be protected and elevators must automatically return to the first floor in fires, personnel voice communications systems must be installed throughout the building, in buildings over 150 feet high emergency electrical systems and pumps must be installed, all wood construction on high-rise buildings most be sprinkled, in buildings over 150 feet high floor loud speakers or some type of communication must be installed so the command post can direct operations of the entire floor, high-rise building management must pre-plan and drill for fire emergenices.

Of course, all high-rise buildings constructed after July, 1974 have strict fire and building code requirements ranging from full sprinkling to smoke detection, communications and alarm systems.

Although the Los Angeles City Fire Department wanted tougher high-rise and hotel regulations after the Ponet Square Hotel fire took 19 lives, political considerations delayed the effect of certain retrofit protection requirements - until the Stratford Arms fire disaster several years later which brought the new, tougher codes into quicker enforcement.

MORE

Chief Gerard points out that his department actively participates in high-rise fire protection when a building is only a concept in the mind of an architect and carries through to full use of the structure.

"Fire prevention and pre-fire inspections, public education and the High-Rise Fire-Fighting Incident Command Systems provide a higher degree of safety for the occupants of high-rise buildings in Los Angeles than in any other major U.S. city."

The Los Angeles Times reported that plans for a $50 million 500-plus room hotel in the Bunker Hill Redevelopment project were rejected by Los Angeles fire and building experts because it wouldn't meet the rigid city requirements. The developer scrapped the design and taking into consideration the comments of the city experts, drafted new, safer plans which were approved.

Deputy Cheif Condon noted that in San Francisco a concerned fire department worked with the Building Owners and Managers to help make high-rise structures more fire safe. The "Life Safety System" in the Bay Area was first used in the Transamerica Pyramid and several others in planning stage followed suit. In 1973 the building code was amended to require all new construction must meet the "Life Safety System" requirement and shortly thereafter California adopted the same concept for all new high-rise buildings.

"California took the lead in the area of high-rise fire protection before the Las Vegas and New York incidents," Sen. Campbell said. "The future of high-rise fires will not only depend on our ability to put these fires out, but on how well we prevent these tragedies from occurring," Campbell added.

SAN FRANCISCO Jan. 2, 1981
1-1-1-1-1
COMMENTARY

SAN FRANCISCO FIRE DEPARTMENT DEALS WITH HIGH RISE FIRES

By Deputy Chief Emmet D. Condon, San Francisco Fire Department

Capitol News Service

SACRAMENTO (Capitol) -- High-rise office buildings, hotels and combinations of both are increasing in numbers in the major cities of the nation. Excessive land costs and improved construction technology have contributed to their popularity. With occupancy loads in the thousands and closed environmental systems effectively isolating the interior from dependence on the outside atmosphere, these buildings are, in effect, small cities.

However, fire experience in such buildings in Canada and the eastern United States has resulted in death to occupants and excessively high property losses. In addition, firefighters attempting to control such fires have suffered severe injuries in increasing numbers and in some cases, paid with their lives.

The San Francisco Fire Department has been gravely concerned with the possibility of similar adverse fire experience occurring in the city. After conducting an intense investigation and review of construction methods and fire control procedures, the San Francisco Fire Department proposed a series of recommendations designed to correct identified deficiencies.

The recommendations were based on the following principles:

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a) The safest, most effective and most practical method of fire control in high-rise buildings requires the use of engineered automatic fire-suppression systems.

b) Complete building evacuation of thousands of people is impractical and often introduces unnecessary hazards.

c) Buildings should be so designed and protected to sucessfully contain and control a fire without danger to other floors or their occupants.

d) Toxic smoke and heat has to be effectively controlled and channelled out of fire-involved buildings without contaminating other areas of the building.

The objective outlined above had to be economically feasible in today's financial climate and must continue to allow architects and engineers the greatest possible freedom and flexibility of design.

The San Francaiso Fire Department believed those aims could be achieved by incorporating reasonable methods of construction and fire protection facilities which would allow safe occupancy and minimal fire losses

Additionally, investigation of several high-rise fires revealed that ringing fire alarm bells provided little information to the occupants on the upper floors of a high rise building involved in fire. One of the proposed code revisions recommended a voice alarm system which would allow the fire department to provide important information and direction to occupants during an emergency.

These recommendations of the San Francisco Fire Department were recommended to the business community in the early 1970's, together with a list of "balanced equivalents," which is effect returned additional rental space to the owner. The Building Owners and Managers Association and the California Hotel and Motel Association were receptive to the proposal. The first building to adopt the

recommendations, now labeled as the "Life Safety System," was the Transamerica Pyramid. Several buildings, which were in the planning stage, followed suit, and in 1973 the San Francisco Building Code was amended to require that all new construction must meet the "Life Safety System" requirements. Shortly thereafter the State Fire Marshal adopted similar regulations which mandated the "Life Safety System" concept in all new high-rise buildings in the state of California.

With the adoption of these regulations on a state-wide basis for new construction the attention of the fire service was focused on the existing high-rise buildings in the state, most of which were located in San Francisco and Los Angeles.

Fortunately, the fire service received support from the business community and knowledgeable professionals when they addressed this problem. One of the most prominent supporters was Fred Kline, a former Los Angeles Fire Commissioner, and present vice-chairman of the Los Angeles County Fire Services Commission, who was instrumental in convincing the late George Moscone, then a state Senator, that it was important for the Legislature to address the problem.

The result was Senate Bill 941, introduced by Senator Moscone, which mandated the State Fire Marshal to hold public hearings and adopt regulations which would provide a "reasonable level of safety" for both the occupants of high-rise buildings and the firefighters who had to enter the buildings to effect rescue and suppression of fire.

As a result of this legislation, the State Fire Marshal appointed a broad-based committee, representative of the fire service, the Apartment

House Association, Building Owners and Managers Association, California Hotel and Motel Association, and several representative organizations.

This committee analyzed a large group of serious fires and identified several deficiences that occurred on a repetitive basis and were related to extensive property and life loss.

The resultant list of causes included open stairs and vertical shafts, deficient or missing fire alarms, recirculating air handling systems, substandard corridor openings, flammable finishes, elevators, lack of emergency lighting and inadequate egress.

The regulations that were subsequently adopted were designed to correct these deficiencies. They were adopted on April 22, 1976 and included a compliance date of April 26, 1979.

However, it was soon apparent that the two-year enforcement period was insufficient to allow corrections of all buildings and an extention was provided for an additional two years until April 26, 1981.

The lack of trained building staff who took no action, or who acted incorrectly during serious fires was also considered as a contributory cause in the fires that were analyzed. Thus, one of the state regulations requires that a trained Fire Safety Director must be in attendance in each high-rise building.

To insure that these persons are properly trained, the San Francisco Fire Department had instituted a training program in the local Community College. To date, more than 400 persons have received this vital training program which will hopefully provide a high level of safety for the occupants of California's high-rise buildings.

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HIGH-RISE Jan. 2, 1981
1-1-1-1-1-1
COMMENTARY

HIGH-RISE FIRE PROTECTION

By Senator William Campbell
Chairman
California Senate Select Committee on Fire Services

Capitol News Service

SACRAMENTO (Capitol)--- The recent hotel fires in Las Vegas, Nevada, and Westchester County, New York, reiterate the need for this nation to adequately address the problems and dangers of fires occurring above ground-level floors. The tragic loss of 84 lives and the immense suffering of 700 fire victims as a result of the MGM Grand Hotel fire, once again illustrates our incapability of adequately handling the unique problems inherent in a high-rise building fire. Even when a fire is raging only a short distance above ground, as was the case in the Westchester County fire, difficulties in fire suppression and rescue are accentuated. Twenty-six people died in the Westchester County Hotel fire, and an additional 40 People were injured; an incident which occurred only three stories above ground.

These two fires, thousands of miles apart, were related in two very signigicant ways. Both fires occurred in buildings that were not fully sprinklered and the tremendous loss of life and the high number of injuries were directly related to the fact that individuals were trapped by fire in rooms above the ground floor. These tragedies are all the more reprehensible when one realizes that adequate fire

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safety precautions could have probably ameliorated the impact of these fires significantly.

California has long recognized the need to address the problems of high-rise building fires. Minimum fire safety standards for the construction of new high-rise buildings (structures in excess of 75 feet) have constantly been examined and implemented by various levels of government. The state's concern with high-rise fire safety eventually led to a 1973 law, mandating the State Fire Marshal to develop minimum standards for high-rise buildings constructed prior to July 1, 1974.

High-rise fire safety standards were developed by the State Fire Marshal's Office in cooperation with local fire personnel, local public officials, representatives of the California hotel and motel industry, building inspectors, engineers, contractors, and others.

These standards were adopted in 1976, implementing the most conprehensive high-rise fire safety regulations in the nation. Compliance with these fire and life-safety regulations for existing high-rise buildings must be accomplished by April 26, 1981. After that date, local fire authorities will strictly enforce the adopted regulations for fire and life-safety protection in all high-rise buildings. Failure to comply may result in legal action to prevent the public from entering buildings that have not conformed to the adopted regulations.

Some of the highlights of the minimum standards for existing hihg-rise buildings are:

1. Must have two (2) exiting systems from each floor; interior exits (stairwells) must be enclosed;
2. Solid core doors, or 20 minute rated doors must be installed, transoms must be closed, etc.;

3. Fire alarm systems must be installed;

4. Elevator systems must be protected, and in case of fire the elevator must automatically go to the first floor;

5. Personnel voice communication systems must be installed throughout the building, jacks must be available for firefighters to plug into for communication with the command post;

6. In buildings over 150', emergency electrical systems and pumps must be installed to assist in elevating the water to the upper floors of the building;

7. All wood construction high-rise buildings must be sprinkled;

8. In buildings over 150', floor loud speakers of some type communication system must be installed so the command post can direct operations of the entire floor;

9. All high-rise buildings must pre-plan and drill for fire emergencies.

As chairman of the California State Senate Select Committee on Fire Services, I am confident that our approach to high-rise fire and life-safety is the best in the nation. We have realistically assessed the problem of fire rescue and suppression when it involves fires above ground-floor levels. While we will not relax in our attempts to

develop new techniques to combat high-rise fires, we have wisely chosen not to lay the burden of protecting lives and property in high-rise fires solely on our fire rescue and suppression capability.

To protect California from a similar tragedy as depicted by the MGM Grand Hotel fire, we in the fire service will continue to stress adequate fire protection systems and design in all high-rise buildings. It is absolutely essential that we understand the problems inherent in high-rise fire safety, and move to resolve them. California has taken the lead in this area, and I am sure we will not refrain from continually upgrading our fire safety regulations. The future of high-rise fires will not solely depend upon our ability to put those fires out, but on how well we prevent those tragedies from occurring. In California we will continue to stress fire safety and fire prevention. The lives of our residents depend upon that goal.

△ △ △WCpw

FIRE Jan. 2, 1981
1-1-1-1-1
COMMENTARY

CALIFORNIA'S HIGH-RISE FIRE CODES BEST IN THE NATION

By Norman L. Jackson

Task Force Commander Los Angeles Fire Department (Retired)

Capitol News Service

SACRAMENTO (Capitol) -- California has the finest protections in the nation against high-rise fires, state and city officials agree.

They concur that it is because California long has recognized the need to address the problems--and done plenty about them. Minimum fire safety standards for construction of new high-rise buildings (structures in excess of 75 feet) have been examined almost constantly and implemented by various levels of government.

The state's concern eventually led to a 1973 law which mandated the state fire marshal to develop minimum standards for high-rise structures constructed prior to July 1, 1974.

The standards were developed by the marshal's office in cooperation with local fire personnel, local public officials, contractors, building inspectors, engineers and others and adopted in 1976. Compliance with these rules for existing high-rise buildings must be accomplished by April 1, 1981.

After that date, local fire authorities will strictly enforce the regulations in all high rise buildings.

Originally the standards were to have gone into effect on April 26, 1979, but it soon was apparent that the two-year period was too short and an extension to next April was approved.

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A leader in seeking support for the standards was Fred Kline, a former Los Angeles fire commissioner and presently vice-chairman of the Los Angeles County Fire Services Commission, who convinced the late George Moscone of San Francisco, then of the state Senate, to persuade the Legislature it was important for the legislators to address the problem.

Emmet D. Condon, deputy chief of the San Francisco Fire Department, points out that one of the state regulations requires that a trained fire safety director must be in attendance in each high-rise building.

To insure that such personnel is properly trained, the San Francisco Fire Department instituted a program in a community college there and hundreds of persons have completed the course.

In Los Angeles there are about 480 high-rise buildings and the city fire marshal's office estimates safety measures have been taken in more than 200 of them and are near completion in another 200. The owners of 30 or 40 were described recently as "dragging their feet."

Following an apartment house blaze in 1970, the city Department of Building and Safety supervised retrofitting of 1500 old hotels and apartments with either sprinkler systems or enclosed stairway shafts. Those buildings also were required to reinforce hallway doors to help block the spread of flames.

The City Council recently approved a requirement that all hotels and apartment houses install battery-operated smoke detectors immediately and electrically-operated detectors by 1983.

State fire codes require employers to post notices of emergency procedure.

Fire officials want employers to conduct fire drills like the ones required in schools, claiming such exercises would help both workers in a

high-rise office building and tell hotel employees how to help guests in an emergency.

The Los Angeles Fire Department checks all high-rise structures for compliance with the state code for fire safety. It also makes on-site inspections -- prior to and during construction -- as well as a complete check once a year and a partial night inspection three times a year to check exits, lighting and obvious fire hazards in those buildings occupied at night.

In addition to the safety measures cited earlier, existing high-rise buildings must have solid core doors or 20-minute rated doors and transoms must be closed. Elevators must, in case of a fire, automatically go to the first floor.

Personnel voice communications systems must be installed throughout the building. In buildings more than 150 feet tall, emergency electrical systems and pumps will be required to assist getting water to the upper floors.

In the words of State Senator William Campbell, chairman of the Senate Select Committee on Fire Services:

"I am confident that our approach to high-rise fire and life-safety is the best in the nation. We have realistically assessed the problem of fire rescue and suppression when it involves fires above ground level.

"While we will not relax in our attempts to develop new techniques to combat high-rise fires, we have wisely chosen not to lay the burden of protecting lives and property in high-rise fires solely on fire rescue and suppression capability.

"I am sure we will not refrain from continually upgrading our fire safety regulations. The future of high-rise fires will not depend on our ability to put out those fires. The lives of our residents depend on that goal."

LOS ANGELES Jan. 2, 1981
1-1-1-1-1-1
COMMENTARY

HIGH-RISE BUILDINGS

By Chief John C. Gerard
Chief Engineer and General Manager
Los Angeles City Fire Department

Capitol News Service

SACRAMENTO (Capitol)--- In light of the MGM fire in Las Vegas, Nevada, and other major high-rise fires around the world, the question once again arises to whether there is adequate fire safety requirements, fire prevention inspection programs, and fire suppression resources to control disastrous high-rise fires in the City of Los Angeles.

In regards to built-in fire protection, much has been accomplished for new high-rise buildings constructed after July of 1974. Fire and Building Code requirements for these buildings include: automatic fire sprinklers, manual-pull fire alarm systems, smoke detection systems within the duct work of heating, air-conditioning, and ventilation systems; emergency electrical power, heliport landing facilities, building communication systems; Fire Department communication systems, and smoke control systems. These requirements and others make the modern high-rise building as fire safe as the state of the art provides.

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There are also special fire safety features required for high-rise buildings built before July of 1974. Approximately 486 buildings in the City of Los Angeles must comply with the Retroactive High-Rise Regulations, Title 19, California Administrative Code, by April 26, 1981.

Some of the retroactive requirements include two means of egress from every floor, enclosed stairshafts, smoke detectors, recall for elevators, fire alarm manual pull boxes, smoke control systems, and owners of all high-rise buildings are required to have, and use, emergency fire evacuation plans and procedures, with responsible people assigned to implement them. As part of the evacuation, the Los Angeles Fire Department requires that instructions be placed on the doorway of every apartment exit door indicating the procedures to follow in case of a fire. For all high-rise buildings, evacuation maps and procedures are required to be prominently displayed in the hallways and elevator lobbies. Fire drills are required.

During the period when the regulations for existing high-rise buildings were being developed, the Los Angeles City Fire Department had great concern for the degree of fire protection and life safety that would be provided for existing high-rise buildings. We have always been of the opinion that if an existing high-rise building

was completely fire sprinklered, all of the present existing high-rise provisions, with the exception of vertical shaft enclosures, would have been unnecessary. However, due to the political climate at the time, the current regulations for existing high-rise buildings were approved and fire sprinklers were not required.

The Los Angeles City Fire Department plan checks all high-rise buildings for compliance with the Fire Code and Title 19 of the California Administrative Code, in addition to making on-site inspections, prior to and during construction. High-rise buildings have a complete fire prevention inspection once a year to ensure that all built-in fire protection systems are operational and that the building complies with all Fire Code requirements; and a partial night inspection is made three times a year to specifically check exit ways, lighting, and obvious fire hazards in those buildings occupied at night.

The fire prevention inspections mitigate against fires occurring in these buildings and further reduce the chances for large destructive fires.

When fires do occur, the Los Angeles City Fire Department utilizes a high-rise emergency procedure which has been developed and refined during the past ten years. All fire fighting units train

on high-rise procedures and are formally evaluated in this area on an annual basis.

The procedures utilized by the Los Angeles City Fire Department in controlling high-rise emergencies include a command structure that ensures officer control in critical areas and specific company procedures related to fire suppression and rescue. The procedures maximize the use of resources involved in the incident and provide for the type of logistical support required in these demanding situations.

The effectiveness of our system has been proven at many actual high-rise emergencies and, as a result, has been adopted by many other fire departments throughout the country.

The Los Angeles City Fire Department's active participation in the high-rise fire protection system begins when a building is only a concept in mind of an architect and carries through to the full use of the structure. This fire protection system includes plan checking, new construction inspections, fire prevention and pre-fire inspections, public education programs and the High-Rise Fire-Fighting Incident Command Systems. This program provides a higher degree of safety for the occupants of high-rise buildings in the City of Los Angeles than in any other major city in the country.

△ △ △JGpw

731 EAST GLENDALE AVE.
SPARKS, NEVADA 89431
TEL: (702) 331-0590

February 23, 1981
Letter #30-0281-07

State Fire Marshal Division
Capitol Complex
Carson City, Nevada 89710

Attn: Bill Brewer

Bill,

With the recent tragedies resulting from the MGM Grand and Hilton Hotel fires in Las Vegas, Nv., there has been various actions initiated by the Governor's Office and the Nevada State Legislature.

These actions, if positive, will institute recommendations and requirements for various businesses throughout Nevada to install, upgrade, or supplement the Life safety systems in numerous properties.

I presume there will be a strong opposition to these actions should they become a reality, simply because of the economics of any instilled requirements.

Therefore, for your information I am giving you a monetary budget figure of $2.50 to $3.50 per square foot to retrofit Fire Sprinklers into existing facilities. I've discussed the above figures with others in our industry and they concur as to its realisticness.

However, these amounts are very owner dependent due to performing work under "business as usual conditions". They are also dependent upon the size of the facility and existing system components which could be utilized in a retrofit.

Should suggested requirements become a reality, it would be in the owner's best interest to fully retrofit a system versus corridor and one room exposure sprinklers. The reason for this is that in order for an owner to get full credit on his insurance premiums, the whole building must be fully protected.

By getting full insurance credit, the initial investment for retrofitting will amortize the systems'

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cost versus the premium savings over a period of time.

Thank You for affording me this opportunity of providing this information. I trust the aforementioned figures will be of some value to you.

If I can be of future service, please feel free to contact me.

Sincerely,

Barney Franich

Barney Franich

GRINNELL FIRE PROTECTION
SYSTEMS CO., INC.

BF/cjd

STATE OF WASHINGTON

DICK MARQUARDT
STATE INSURANCE COMMISSIONER
AND STATE FIRE MARSHAL

REPLY TO:
OLYMPIA OFFICE
INSURANCE BUILDING
OLYMPIA, WASHINGTON 98504
753-7300, AREA CODE 206

OFFICE OF

INSURANCE COMMISSIONER

December 23, 1980

Wayne D. Wilson, Deputy Attorney General
State of Nevada, Commerce Division-Insurance
201 South Fall Street
Carson City, Nevada 89710

Dear Wayne:

Enclosed please find a number of items relating to our department's role, as State Fire Marshal, in the inspection of transient accommodation facilities.

In addition to the present regulations for fire protection in transient accommodations I've enclosed proposed regulations developed by the Deputy State Fire Marshal which are scheduled for adoption within the next 30 days. I've also enclosed a number of documents related to the actual inspection of transient accommodations for your reference as well as a copy of the Findings of Fact, Conclusions of Law and Order on Hearing I came up with in a hearing on the Ridpath Hotel located in Spokane, Washington.

As regards the Ridpath matter, counsel for the hotel raised numerous arguments to the effect that the existing regulation was ambiguous and/or that the State Fire Marshal lacked statutory and regulatory authority to mandate changes in an existing structure. While such arguments were not sustained at the hearing it was felt prudent to address some of the issues raised in an amended regulation. Hence the proposed regulation included for your review.

Enjoy the scintillating rading.

Very truly yours,

DICK MARQUARDT
Insurance Commissioner

By Scott Jarvis

SCOTT JARVIS
Public Defender

Enclosures

TRANSIENT ACCOMMODATIONS -STANDARDS FOR FIRE PROTECTION

WAC 212-52-001. PURPOSE. This regulation, promulgated pursuant to the authority contained in 70.62.290 RCW, establishes the minimum fire and life safety standards necessary for obtaining state fire marshal for buildings, or portions thereof, which are licensed or applying for licensure as a transient accommodation.

WAC 212-52-005. DEFINITIONS. The following definitions shall apply when used in this regulation:

(1) "Approved" as to fire protection systems, assemblies, and devices shall mean approved by the state fire marshal as the result of tests conducted by him, or by reason of accepted principles or tests by national authorities, technical or scientific organizations.

(2) "Audible," when used in this regulation, shall mean loud enough to be heard. (Webster's New World Dictionary.)

(3) "Central station office" shall mean an office to which remote alarm and supervisory signalling devices are connected, where personnel are in attendance at all times to supervise the circuits and investigate signals.

(4) "Exit" is a continuous and unobstructed means of egress to a public way, and shall include intervening doors, doorways, corridors, exterior exit balconies, ramps, stairways, smoke-proof enclosures, horizontal exits, exit courts and yards.

(5) "Fire-resistive construction" shall mean the type of construction which meets recognized standard fire test conditions, measured in accordance with a common standard, normally expressed in hours or increments thereof, applicable to a variety of materials, situations and conditions of exposure.

(6) "Interior finish" shall mean interior wainscoting, panelling, or other finish applied structurally or for decoration, acoustical correction, surface insulation, or similar purposes. Interior finish materials are classified numerically, based on their exposure to and reactions in specified fire tests. The numerical classes are referred to as "flame-spread classifications."

(7) "Licensee" is the person, firm or corporation to whom the transient accommodation license is issued.

(8) "Licensing agency" shall mean the Washington state department of Social and health services.

(9) "Lobby" shall mean an anteroom, a large vestibule, or the main floor circulation center of a hotel.

(10) "State Building Code Act" refers to chapter 19.27 RCW, effective January 1, 1975, which establishes state-wide building and fire prevention codes and mandates enforcement by each city, town and county.

(11) "Transient accommodation," as defined in chapter 70.62 RCW, shall mean any facility such as a hotel, motel, resort, condominium, or any other facility or place offering three or more lodging units to travelers and transient guests.

NOTE: 248-144-020 WAC supplements above definition by indicating that the three or more lodging units are offered "for periods of less than one month."

WAC 212-52-010. APPLICATION AND SCOPE. All buildings,or portions thereof, licensed as transient accommodations shall comply with the fire and life safety standards as specified in this regulation.

EXCEPTIONS: (1) Transient accommodations built to conform to the requirements of the codes adopted by reference in the State Building Code Act, or a more recent edition of the Uniform Building Code, and which a certificate of occupancy has been issued by the local building official, are exempt from compliance with this regulation. A copy of the certificate of occupancy shall be provided to the state fire marshal to verify compliance with the requirements of the building code. NOTE: Transient accommodations constructed or licensed one year after the date of this regulation shall be subject to compliance with 212-52-050 WAC, or the exceptions thereto, and 212-52-075(1) WAC.

(2) Transient accommodations inspected and approved as meeting the fire and life safety requirements of chapter 212-52 WAC, adopted pursuant to Administrative Order FM 77-3, filed December 8, 1977, are exempt from compliance with this regulation: PROVIDED That, (a) the fire and life safety standards of the specified regulation have been maintained, and (b) the continued use of the building as a transient accommodation is not dangerous to life.

(2) Transient accommodations located within a municipality exempted from compliance with this regulation, based on a written agreement between the municipality and the state fire marshal's office.

WAC 212-52-020. EXEMPTION FROM COMPLIANCE WITH THIS REGULATION; APPLICATION, PROCEDURE, REVIEW. (1) Upon receipt of written application for exemption, municipalities having comprehensive regulatory programs covering transient accommodations which provide fire and life safety standards equal to or more restrictive than the standards established by this regulation, may be exempted from compliance with these standards.

(2) The state fire marshal shall provide the exempted municipality with a list of transient accommodations within their jurisdiction. The exempted municipality shall certify those facilities approved for licensing as transient accommodations based on compliance with local fire and life safety requirements or written agreements necessary to bring the facility up to requirements.

(3) The state fire marshal shall review the exemption program within exempted municipalities at two year intervals.

WAC 212-52-025. INSPECTIONS. (1) Upon receipt of an application for a license, or at least ninety days prior to the expiration date of a current license, the licensing agency shall submit a written request for inspection to the state fire marshal.

(2) The state fire marshal shall evaluate the inspection request to determine that the facility is subject to an inspection by the state fire marshal. If an inspection is warranted, the state fire marshal shall inspect the facility for compliance with section 212-52-010 of this regulation. EXCEPTION: Where the transient accommodation is located within an exempted municipality, the request for inspection shall be forwarded to the fire marshal of the exempted municipality for action.

WAC 212-52-027. APPROVAL. Upon completion of the inspection and the facility is found to be in substantial compliance with this regulation, a notification of conditional approval shall be forwarded to the licensing agency. After subsequent reinspections indicate full compliance with this regulation, a notification of full approval shall be forwarded to the licensing agency.

WAC 212-52-030. RIGHT OF APPEAL. A facility aggrieved by the corrective orders of the state fire marshal or his authorized representative may appeal to the state fire marshal within five days of the order. If the state fire marshal confirms the order, it shall remain in force.

WAC 212-52-037. ALTERNATE METHODS. The state fire marshal may modify any of the provisions of this regulation upon application in writing by the owner or licensee or his duly authorized representative, where there are practical difficulties in carrying out the strict letter of this regulation. The particulars of such modification may be granted or allowed: PROVIDED, That in the opinion of the state fire marshal the modification does not create a condition that is dangerous to life. The decision of the state fire marshal shall be entered upon the record, and a signed copy shall be furnished the owner or licensee.

WAC 212-52-040. OCCUPANCY SEPARATION. The lobby, public dining rooms, and cocktail lounge shall be separated from the means of egress by one hour fire-resistive construction.

EXCEPTIONS: (1) Occupancy separation shall not be required if the entire ground floor is equipped with an approved sprinkler system.

(2) One of the two required means of egress may pass through the lobby provided the lobby is constructed as per a corridor, with all openings protected by a self-closing or automatic-closing fire assembly.

(3) One of the two required means of egress may pass through a lobby having only a registration or reception desk and guest sitting area.

WAC 212-52-045. HAZARDOUS AREAS. Every room containing a boiler or central heating plant, laundry, parking garage, storage room, mechanical room, electrical room, maintenance shop, and any other space within the building which presents an unusual or extreme hazard to thesafety of the guests shall be separated from the guest area and the means of egress by at least one hour fire-resistive construction.

WAC 212-52-050. INTERIOR STAIRWAYS. Every interior stairway shall be enclosed with walls of not less than one hour fire-resistive construction. Where existing partitions form part of a stairwell enclosure, wood lath and plaster in good condition will be acceptable in lieu of one hour fire-resistive construction. Doors to such enclosures shall be protected by a self-closing door equivalent to a solid wood door not less than 1 3/4 inches thick. Enclosures shall be required for landings between flights and any corridors, passageways or public rooms (lobby) necessary for continuous exit to the exterior of the building. The stairway need not be enclosed in a continuous shaft, if cut off at each story by the fire-resistive construction required for stairwell enclosures.

EXCEPTIONS: (1) Stairway enclosures shall not be required in buildings three or less stories in height if automatic sprinkler protection is provided in the following locations: (a) Room side of each guest room door opening onto the corridor; (b) Corridors, stairways, passageways, and ways leading to outside exits; and (c) Hazardous areas encroaching upon the means of egress or otherwise posing a threat to guest safety.

(2) Stairway enclosures shall not be required where the stairway serves only one adjacent floor: PROVIDED, That (a) corridors, stairways, exit passageways and ways leading to outside exits are equipped with an automatic smoke detection system electrically interconnected to an approved fire alarm system; and (b) activation of the building fire system results in the transmission of alarm indication to the fire department legally committed to serve the facility or to an approved central station office.

WAC 212-52-055. OTHER VERTICAL OPENINGS. In transient accommodations where stairway enclosures are required, elevators, dumbwaiters, laundry and rubbish chutes, pipe chases and other vertical openings between floors shall be firestopped at each floor level or enclosed in continuous shafts, with all openings provided with self-closing or locking doors. Shafts not of fire-resistive or noncombustible construction shall be provided with an automatic sprinkler head at the top, connected to the domestic water system.

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WAC 212-52-060. INTERIOR FINISH. Ceiling and wall covering materials in corridors, stairways, passageways and other areas through which travel is necessary for continuous exit to the outside of the building shall have flame spread ratings of seventy-five or less unless the areas are provided with automatic sprinklers.

The flame spread rating of existing surface materials may be reduced to acceptable levels by the application of flame retardant paints or finishes, applied according to manufacturer's recommendations. Records of date of application, product applied, and the manner and rate of application shall be maintained for verification.

WAC 212-52-065. GUEST ROOM PROTECTION. All transoms and openings other than doors between rooms and corridors shall be fixed closed and covered with a minimum of three-fourths inch plywood, one-half inch gypsum wallboard or an equivalent material to provide at least one-half hour fire resistance.

WAC 212-52-070. GUEST ROOM DOORS. (1) Guest room doors shall be steel, 1 3/4 inch solid wood core or equivalent.

EXCEPTION: (a) Existing 1 3/8 inch sold wood-core doors may be continued in use if the door frames are not adequate to accommodate 1 3/4 inch solid wood core doors, (b) Existing nonconforming panel-type doors may continue in use if converted or modified by the application of fire-resistive materials securely fastened to the door rails, (c) Existing nonconforming panel-type doors may continue in use if the corridors and guest rooms are protected by an automatic sprinkler system, and (d) Guest room doors need not be 1 3/4 inch solid wood core if they open onto an exit balcony, such as in motels.

(2) Guest room doors shall be self-closing and tight fitting to prevent the passage of smoke. Vision panels shall be wired glass, set in metal frames.

EXCEPTION: (a) Guest room doors need not be self-closing if the corridors are protected by an automatic sprinkler system, (b) Guest room doors need not be self-closing if corridors, stairways, passageways, and ways leading to outside exits are equipped with automatic smoke detectors electrically interconnected to activate an approved fire alarm system which transmits a signal to the fire department legally committed to serve the facility or to an approved central station office, (c) Guest room doors need not be self-closing if the door opens

onto an outside exit balcony, such as in motels.

WAC 212-52-075. FIRE ALARM. (1) An approved electrically supervised fire alarm system shall be provided in each transient accommodation where the guest rooms empty into a common interior corridor. Transient accommodations constructed or licensed after the effective date of this regulation, which are not equipped with an automatic sprinkler system, shall be provided with an approved automatic smoke detection system throughout common interior corridors.

(2) Audible devices shall be located in such a manner that the alarm signal is audible throughout the transient lodging portion of the building.

(3) An alarm sending station shall be provided at the desk or other location under continuous supervision by employees. Additional sending stations shall be located at or near each required exit from each floor.

(4) Where transient accommodations are equipped with automatic sprinkler systems, an electrical interconnection shall be provided between the sprinkler system and the fire alarm system, whereby activation of the sprinkler system will result in an alarm signal.

(5) The fire alarm system shall be under the supervision of a responsible person, who shall cause proper tests and inspections to be made at least once each month.

WAC 212-52-080. NUMBER OF EXITS. (1) Not less than two exits, remote from each other, shall be provided from each floor occupied for sleeping purposes. An existing fire escape may serve as one required exit if properly maintained, and access thereto is not obstructed.

EXCEPTION: Second floors, occupied by ten or less may be served by one exit.

(2) Exits shall be so arranged that it is possible to go in either direction from any guest room and reach an exit, except that dead-end corridors not exceeding thirty-five feet in length from the guest room door may be permitted.

(3) When the occupant load is more than ten above the first floor, exterior exit balconies, such as may be found on motels, shall be equipped with not less than two remote stairways to ground level.

(4) Every sleeping room below the fourth floor shall have a window capable of being opened without tools, with a sill height not over 48 inches above the floor, and providing the minimum opening height dimensions of 24 inches and width dimension of 20 inches, to provide a minimum net clear opening of 5.7 square feet.

WAC 212-52-090. EXIT DOORS. (1) Exterior exit doors from the building shall be openable from the inside without the use of a key or any special knowledge or effort, and the unlatching shall not require more than a single operation.

(2) Exit doors shall swing in the direction of egress.

EXCEPTIONS: Exit doors need not swing in the direction of egress (a) in transient accommodations having less than ten guest rooms, or (b) where door may block access to fire escape balconies, or (c) if the door would otherwise block or restrict the means of egress.

WAC 212-52-095. EXIT SIGNS. At every required exit doorway and wherever otherwise required to clearly indicate the direction of egress, an exit or directional sign shall be provided. Exit signs shall be illuminated at all times the building is occupied. Exit signs may be of the internally illuminated type, or a standard placard containing the word "EXIT," which may be illuminated by an adjacent corridor light: PROVIDED, That the exit placard is visible from the guest room.

WAC 212-52-100. CORRIDOR LIGHTING; ILLUMINATING THE MEANS OF EGRESS. (1) Stairways, corridors, passageways, and public areas serving as required exits shall be provided with lighting, to the extent that the way leading to outside exits is clearly visible at all times.

(2) In multistory transient accommodations having twenty-five or more guest rooms, power for corridor lighting shall be provided by means of separate circuits or separate energy sources.

WAC 212-52-105. FIRE EXTINGUISHERS. (1) At least one approved 2A-rated fire extinguisher shall be provided in the corridor of each guest-occupied floor. Additional extinguishers shall be provided as required, to ensure that one is within seventy-five feet of each guest room door.

(2) In buildings not having public corridors, an approved extinguisher shall be provided at a convenient location near the registration desk in a plainly marked enclosure accessible at all times to guests.

(3) Additional extinguishers of a size and type commensurate with the hazard presented shall be provided as required in other areas in which a fire would affect guest safety.

WAC 212-52-110. OBSTRUCTIONS. Furniture, appliances or similar objects shall not be placed in corridors or other means of egress in such a manner as to obstruct corridors, passageways or stairways. Exits, exit signs, fire alarms and fire extinguishers shall be easily visible and not obstructed by curtains or other decorative materials or fixtures.

WAC 212-52-115. MAINTENANCE. Fire protection systems, equipment and devices shall be properly maintained.

(1) Manual fire alarm systems shall be operationally tested by the facility staff at least once each month. A record of the operational tests shall be maintained on the premises.

(2) Automatic fire detection systems shall be inspected at least annually. The inspection shall be conducted by a person or agency with the technical qualifications and special purpose equipment necessary to accomplish the inspection. A report of the inspection shall be provided on forms supplied by the state fire marshal office.

(3) Sprinkler systems shall be inspected at least annually. The inspection shall be conducted by a person or agency with the technical qualifications and special purpose equipment necessary to accomplish the inspection. A report of the inspection shall be provided on forms supplied by the state fire marshal office.

(4) Automatic smoke detection devices (single station) shall be operationally tested at monthly intervals by the facility staff,or in accordance with the instructions supplied by the manufacturer. A record of the operational tests shall be maintained on the premises.

(5) At monthly intervals, the facility staff shall accomplish a visual inspection of fire extinguishers. The visual inspection must provide a reasonable assurance that the extinguisher is operational, and at its proper location. Monthly visual inspections shall be recorded, indicating the date inspected and initials of the inspector.

(6) Self-closing fire doors shall be maintained in the closed position, except where they are held open on approved door releases activated by products of combustion detectors other than heat. Under no conditions shall manually activated door stops be installed on a fire door.

(7) Fire door hardware, latches and closing devices shall be maintained in proper working condition.

(8) Guest room door self-closing devices shall be maintained in proper working condition.

(9) Corridor, stairway and exit lights shall be inspected daily. Burned out bulbs shall be promptly replaced.

(10) Fire retardant paints or solutions shall be renewed at intervals necessary to maintain the fire retardant properties of the object or exposure to which it has been applied.

(11) "No smoking" signs shall be posted in rooms or areas where the state fire marshal determines smoking to be hazardous. Where smoking is permitted, suitable ash trays or receptacles shall be provided to deposit used smoking materials.

WAC 212-52-120. EMERGENCY PROCEDURES PLAN. (1) Each licensed transient accommodation shall develop and maintain a written fire emergency plan, specifying actions to be taken by the staff in the event of a fire emergency. The procedure shall include: (a) The actions taken by the staff upon being notified of a fire, (b) the actions to take for summoning the fire department, (c) the actions to take for assisting guests or others endangered by fire, (d) the actions required for guest safety as directed by the fire department, or the procedure for evacuating the building.

(2) The licensee or facility manager is responsible for assuring the staff is familiar with their duties, as defined in the emergency plan. Training classes, covering each element of the emergency plan, shall be conducted at the time of employment and at annual intervals thereafter. An employee training record, indicating the date of training and names of employees receiving training, shall be maintained for the record.

WAC 212-52-125. SEVERABILITY. If any provision of these regulations or their application to any person is held invalid, the remainder of the regulations or the application of the provision to other persons or circumstances is not affected.

STATE OF WASHINGTON

DICK MARQUARDT
STATE INSURANCE COMMISSIONER
AND STATE FIRE MARSHAL

TOM BRACE
CHIEF FIRE MARSHAL

REPLY TO:
OLYMPIA OFFICE
INSURANCE BUILDING
OLYMPIA, WASHINGTON 98504
753-3605, AREA CODE 206

OFFICE OF

STATE FIRE MARSHAL

In the Matter of)
) NO. FM 80 - 1
RIDPATH HOTEL)
) FINDINGS OF FACT, CONCLUSIONS
Appellants.) OF LAW AND ORDER ON HEARING

TO: Joe Duncalfe, Manager Ridpath Hotel, and Dennis M. McLaughlin, Attorney at Law.

And To: Chief Deputy State Fire Marshal Tom Brace and Assistant Attorney General Clifford Foster.

Pursuant to RCW 48.48.130, ch. 48.04 RCW, RCW 48.48.050, WAC 212-52-030 and ch. 212-52 WAC, and after notice to all interested parties and persons, the above-entitled matter came on regularly for hearing before the Fire Marshal of the State of Washington, in the Offices of the Insurance Commissioner and State Fire Marshal, Second Floor, Insurance Building, Olympia, Washington, on Thursday, February 21, 1980, at 9:00 a.m. All persons to be affected by the above-entitled matter were given the right to be present during the giving of all testimony, to offer testimony, and had reasonable opportunity to inspect all documentary evidence. Participating in the hearing were: Clifford Foster, Assistant Attorney General, representing the State Fire Marshal; and Dennis M. McLaughlin, Attorney at Law, representing the Ridpath Hotel. Testifying on behalf of the State Fire Marshal were Tom Brace, Chief Deputy State Fire Marshal, and George Williams, Deputy State Fire Marshal. Testifying on behalf of the Ridpath Hotel were Joe Duncalfe, Hotel Manager, Pat K. Sheehan of Simplex Time Records Corporation, and Robert R. Reese, Director, Spokane Department of Buildings. Scott Jarvis, Public Defender for the Insurance Commissioner's Office, was designated hearing examiner by the State Fire Marshal to hear and determine the matter.

NATURE OF PROCEEDING

The purpose of this hearing was to take testimony and evidence and hear argument as to whether the conclusions of the State Fire Marshal, to the effect that both the "tower section" and the "motor inn section" of the Ridpath Hotel do not meet the requirements of ch. 212-52 WAC as to occupancy separations, interior stairways and the number of proper exits, were reasonable and proper. In addition to the taking of testimony and evidence a viewing of the structure in question was held on February 27, 1980, with the Hearing Examiner and the parties in attendance.

FINDINGS OF FACT

1. This hearing was duly and properly convened, and all substantive and procedural requirements under the laws of the State of Washington have been satisfied.

2. The Ridpath Hotel, hereinafter called the "Ridpath", is located at West 515 Sprague Avenue, Spokane, Washington.

3. The Ridpath is composed of two main occupancy units, a "tower section" and a "motor inn section". There is, in addition, a small "original section" which for purposes of these findings will be considered part of the "tower section."

4. The tower section contains approximately 266 guest rooms within its 12 stories.

5. The motor inn section of the Ridpath contains some 76 guest rooms within its 5 stories.

6. On the 24th of April, 1979, both the tower section and the motor inn section of the Ridpath were inspected by Deputy State Fire Marshal George Williams pursuant to ch. 212-52 WAC.

7. The purpose of ch. 212-52 WAC, as set forth in WAC 212-52-001, is to establish the minimum fire and life safety standards necessary for obtaining fire marshal approval for licensing transient accommodations.

8. Ch. 212-52 WAC was adopted pursuant to authority, specifically RCW 70.62.290, authorizing the State Fire Marshal to promulgate and enforce rules and regulations establishing fire and life safety requirements not inconsistent with the provisions of ch. 70.62 RCW.

9. The purpose of ch. 70.62 RCW, as stated in RCW 70.62.200, "is to provide for the development, establishment, and enforcement of standards for the maintenance and operation of hotels and motels through a licensing program to promote the protection of the health and welfare of individuals using such accommodations in this state."

10. In order for a transient accommodation to remain as an approved transient accommodation facility it must presently be in compliance with the minimum fire and life safety standards as specified in ch. 212-52 WAC.

11. Ch. 19.27 RCW is known, pursuant to RCW 19.27.010, as the State Building Code Act.

12. RCW 19.27.080 provides in part that "nothing in this 1974 act (RCW 19.27.010-19.27.090 and 70.92A.060) shall affect the provisions of chapters...70.62...."

13. The matter of the citations issued to the Ridpath by the City of Spokane on September 13, 1978, and the ultimate disposition of those citations, are not relevant to the concerns of this hearing. The State Fire Marshal clearly has jurisdiction to conduct inspections such as that concerned herein pursuant to ch. 70.62 RCW and ch. 212-52 WAC and to order that corrections for any deficiencies found be made. The State Fire Marshal is not subject to previous dispositions of these or similar related matters by any other state, county or local agency.

14. At the conclusion of the April 24, 1979, inspection of the tower section of the Ridpath the State Fire Marshal issued a "FIRE AND LIFE SAFETY INSPECTION: STATEMENT OF DEFICIENCY" for the tower section of the Ridpath. (Ex. 1)

15. At the conclusion of the April 24, 1979, inspection of the motor inn section of the Ridpath the State Fire Marshal issued a "FIRE AND LIFE SAFETY INSPECTION: STATEMENT OF DEFICIENCY" for the motor inn section of the Ridpath. (Ex. 2)

16. The deficiency statement for the tower section set forth 7 "Items." The Ridpath questions the validity and propriety of only Item 1 and Part 1 of Item 5. The deficiency statement for the motor inn set forth 6 "Items." The Ridpath questions the validity and propriety of only Item 1 and Item 4.

17. Item 1 of the tower section deficiency statement states:

> Occupancy Separations: Several businesses located on the periphery of the lobby, including the driveway providing access to the parking garage, are not separated from the lobby area by one hour fire resistive or equivalent construction.

WAC 212-52-040 is cited as a reference and under the heading "Corrective Action Required" is found:

> Each of the peripheral businesses and the garage access driveway shall be separated from the lobby area by one hour fire resistive construction.
> ALTERNATIVE: The entire lobby area, including all peripheral business spaces and the driveway paralleling that section of the lobby open to the driveway, shall be protected by an approved sprinkler system.

18. Item 5, Part 1, of the tower section deficiency statement states:

NUMBER OF EXITS:

Part 1. Two enclosed interior stairways empty into the lobby area, rather than to discharge upon the public way.

WAC 212-52-080 is cited as a reference and under the heading "Corrective Action Required" is found:

Part 1. Exercise one of the following options.

Option 1. Extend the two stairway enclosures to the extent that exit discharge occurs on the public way.

Option 2. Extend the sprinkler system to provide protection for the entire lobby area, including that portion of the garage access driveway which parallels the lobby, and the businesses located on the lobby periphery.

Install a smoke barrier separating the upper level of the lobby, at a point near or at the top of the short stairway. The required openings in the smoke barrier shall be self closing or automatic closing on products of combustion detectors other than heat. The "pair of doors" near the outside stair discharge point, and the door at the point of entry into the East Wing 3rd Floor Corridor, shall be automatic closing on products of combustion detectors other than heat.

19. The "several businesses located on the periphery of the lobby, including the driveway providing access to the parking garage", referred to in Item 1 of the tower section deficiency statement consist of a newsstand and an art gallery and an exit to the driveway in close proximity to the businesses and the lobby.

20. Entrance to the newsstand and the art gallery cannot be made other than from within the Ridpath interior.

21. The "driveway providing access to the parking garage" passes within two to three feet of the exit cited in Item 1 of the tower section deficiency statement.

22. The walls of the businesses located on the periphery of the lobby and the exit between the lobby and the driveway are composed primarily of plate glass.

23. The newsstand and art gallery areas are owned by the Ridpath and leased to tenants. The Ridpath dictates the general appearance of the businesses, the use to which the space is put, the hours of

operation, and can approve or disapprove the merchandise offered in the businesses. Employees of the businesses are not employees of the Ridpath and are not included within the framework of the Ridpath's procedures to be used by front office personnel in case of fire. The Ridpath does not provide janitorial services to the businesses.

24. WAC 212-52-040 provides:

> Occupancy separations shall be provided between the transient accommodation portion of the building and those other occupancies not under the same control or incidental to the transient accommodation operation. Lobbies and public dining rooms, not including cocktail lounges, shall not require a separation, if the kitchen is so separated from the dining room or the cooking appliances provided with fixed automatic extinguishing systems.

25. But for the specific exclusion of lobbies and public dining rooms from the occupancy separation requirements of WAC 212-52-040 those areas would be considered as not being under the same control or incidental to the transient accommodation operation for purposes of the provisions of WAC 212-52-040.

26. The newsstand and art gallery are less important to the operation of the transient accommodation than are the lobby or public dining room of the Ridpath.

27. As the newsstand and art gallery are not specifically exempted from the provisions of WAC 212-52-040, as are the lobby and dining room of the Ridpath, they must be considered as not under the same control or incidental to the transient accommodation operation and, therefore, subject to the occupancy separation requirements of WAC 212-52-040.

28. The driveway is not separated from the transient accommodation portion of the structure by an occupancy separation of one hour fire resistive construction.

29. The term "occupancy separation" is not defined in ch. 212-52 WAC. Nor is the term "occupancy" defined in the regulation.

30. WAC 212-52-045 provides:

> Every room containing a boiler or central heating plant, laundries, parking garages, storage rooms and other occupancies within the building which present an unusual or extreme hazard to the safety of the guests may be required to have automatic extinguishing or detection systems, if not otherwise adequately separated by fire resistive construction.

31. The driveway providing access to the parking garage of the Ridpath does, for the most part, fall within and under the tower section of the Ridpath. As such it is an extension of, and therefore part of, the parking garage and must be considered an "occupancy" for purposes of ch. 212-52 WAC.

32. The driveway is not specifically exempted from the provisions of WAC 212-52-040 relating to occupancies and must be considered as not being under the same control or incidental to the transient accommodation operation and, therefore, subject to the occupancy separation requirements of WAC 212-52-040.

33. The driveway providing access to the parking garage must be separated from the lobby area by a proper occupancy separation.

34. Reference to one hour fire resistive or equivalent construction as a minimum standard for fire and life safety is found in WAC 212-52-050 and 212-52-060.

35. The State Fire Marshal's requirement that the occupancies listed in Item 1 of the tower section deficiency statement must be separated from the lobby by one hour fire resistive or equivalent construction is reasonable and consistent with his statutory duty to promulgate and enforce rules and regulations establishing fire and life safety requirements. Ch. 70.62 RCW.

36. The State Fire Marshal's alternative corrective action for the deficiencies stated in Item 1 of the tower section deficiency statement is reasonable. The requirement of automatic sprinkling systems is found in a number of sections of the regulation, specifically, WAC 212-52-040, 212-52-045, 212-52-075 and 212-52-080. The use of sprinklers in this case would be an acceptable safety alternative to the initial corrective action suggested.

37. The State Fire Marshal's deficiency statement for the tower section, Item 1, did not refer to WAC 212-52-045.

38. The State Fire Marshal's failure to refer to WAC 212-52-045 in the tower section deficiency statement, Item 1, did not prejudice the Ridpath in this appeal as more than adequate notice as to the nature of the deficiency relating to the driveway is reflected in the deficiency notice and in the communications between the parties prior to this hearing. (Ex. 3 and testimony of parties as to the cooperative atmosphere existent between the parties.)

39. The construction given WAC 212-52-080 by the State Fire Marshal is that all four types of "Exits" found in that section must exit directly from the structure.

40. The construction given WAC 212-52-080 by the Ridpath is that the "interior stairway or ramp" type exit can only be interpreted by referring to WAC 212-52-050, and that a reading of that section along with WAC 212-52-080 requires a finding that the exits in the tower section of the Ridpath need not directly exit from the structure but may, instead, exit into the lobby area and thence out of the structure through the lobby exits.

41. The tower section of the Ridpath has two interior stairways which terminate on a mezzanine one level above the lobby. In both instances a person seeking the shortest route out of the structure from guest occupied areas must negotiate a number of turns in hallways, descend a number of flights of enclosed stairs to a mezzanine level, descend an open stairway to the lobby level and proceed out of the structure through exits off the lobby.

42. In all cases, persons seeking to exit the tower section of the Ridpath must pass through an area of open space that is common to the tower section's lobby and mezzanine levels.

43. A primary goal of ch. 212-52 WAC is providing safe escape routes for occupants of transient accommodations.

44. A safe escape route may not exist during a fire if one has to pass through an area with a common atmosphere with other sections of the structure, such as the kitchen or lobby. The Ridpath tower's escape routes, discharging as they do at the mezzanine level above the lobby, do not serve to insure that safe, smoke-free passageways to the exterior of the building are available.

45. The State Fire Marshal designed the WAC 212-52-080 to ensure that hotel and motel guests are provided with at least two quick, smoke-free and direct means of egress from their rooms to the exterior of the building.

46. The State Fire Marshal considers an "exit" as consisting of an entrance, a passageway and a point of discharge. WAC 212-52-080 was designed to provide for two such "exits" from each floor occupied for sleeping purposes within a transient accommodation.

47. WAC 212-52-050 sets forth fire protection standards for interior stairways.

48. Exception (2) to WAC 212-52-050 provides:

> Enclosures shall not be required in buildings where the stairway serves only one adjacent floor, terminates at a street

entrance or lobby suitably separated from the rest of the building, and the corridors, stairways and passageways are provided with automatic smoke detectors, connected to a common alarm system.

49. The Ridpath tower's present interior stairways serve the entire tower section, not just one adjacent floor, as persons on floors above the mezzanine, including those persons in the large restaurant at the top of the structure, can exit from the building only by way of the mezzanine, stairs to the lobby and the exits from the lobby.

50. The interior stairways of the Ridpath tower section do not fit within WAC 212-52-050(2).

51. The State Fire Marshal's interpretation of WAC 212-52-080, requiring, for life safety purposes, that all exits lead directly outside is reasonable.

52. The two interior stairways in the Ridpath tower section, cited in the deficiency notice, do not lead directly outside.

53. The lobby and mezzanine area of the Ridpath tower section do not constitute one room or one lobby or a single "occupancy". They are two separate and distinct rooms or lobbies or "occupancies" on two separate floors of the hotel.

54. As two separate "occupancies" the stairway between the two occupancies need not be enclosed as required by WAC 212-52-050 if it (the stairway) is cut off at each story by the fire resistive construction required for stairwell enclosures and adequate alternative exits are provided.

55. The stairway between the two separate occupancies of the lobby and the mezzanine is not cut off at each story by the fire resistive construction required for stairwell enclosures. Nor are adequate alternate exits provided.

56. The stairway between the two separate occupancies of the lobby and the mezzanine does not meet the standards set forth in WAC 212-52-050 for interior stairways. Nor does it fall within exception (2) to WAC 212-52-050 as it serves more than one adjacent floor.

57. Item 1 of the motor inn section deficiency statement states:

Interior Stairway: Interior stair, servicing the lobby and second floor, is not enclosed nor is there any fire resistive separation between floors.

WAC 212-52-050(2) is cited as a reference and under the heading "Corrective Action Required" is found:

> Install a partition of one hour fire resistive construction, at the point of corridor termination at the northwest and northeast ends of the second floor near each elevator. Doors installed in the opening in the partition shall be automatic closing on products of combustion detectors other than heat.
>
> ALTERNATIVE:
>
> Provide a complete automatic smoke detection system throughout the second floor corridor and lobby area. The automatic smoke detection circuit(s) shall be electrically interconnected to activate the house fire alarm system.

58. Item 4 of the motor inn deficiency statement states:

> Number of Exits: Two enclosed stairways, located at the northeast and northwest corners of the building, empty into the lobby rather than on the public way.

WAC 212-52-080 is cited as a reference and under the heading "Corrective Action Required" is found:

> Exercise one of the following options:
>
> 1. Provide openings in the exterior wall to permit the enclosed stairways to discharge upon the public way.
>
> 2. Provide automatic sprinkler protection throughout the lobby area; special attention to be given to the arrangement of sprinklers to assure sprinkler discharge impinges upon the door openings between the lobby and assembly areas on the lobby periphery.

59. The State Fire Marshal's reference to WAC 212-52-050(2) instead of WAC 212-52-050 relative to Item 1 of the motor inn section deficiency notice did not prejudice the Ridpath in this appeal. The Ridpath's recognition of the nature of the matter in issue is demonstrated by its reference to the City of Spokane's consideration of the same citation at page 17 of its MEMORANDUM IN SUPPORT OF MOTION TO VACATE AND DISMISS OFFICE OF THE STATE FIRE MARSHALL'S STATEMENT OF DEFICIENCY AND CORRECTIVE NOTICE (Ex. 6) and by the extensive and detailed discussions between the parties (Ex. 3 and testimony of parties as to the cooperative atmosphere and lengthy discussions between the parties).

60. The stairway in question in Item 1 of the motor inn deficiency statement serves a common corridor that discharges into an open area at the northwest and northeast corners of the structure. The corridor in question in this Item is part of an interior stairway as set forth in WAC 212-52-050 and must meet the standards for enclosures found in that section.

61. The entrances to the corridor in Item 1 of the motor inn deficiency statement are not protected by partitions of one hour fire resistive construction. Guests occupying rooms along this corridor/interior stairway do not have the necessary protection afforded by partitions of fire resistive construction from the spread of smoke and fire originating from or passing through the open area at the end of the corridor.

62. The fact that guests in close proximity to the corridor in Item 1 of the motor inn deficiency statement have the option of seeking refuge in the swimming pool area, an area surrounded in its entirety by the motor inn structure, is of little value when considering the need for adequate protection from smoke and fire and immediate and secure exiting from the area of danger.

63. Exception (2) to WAC 212-52-050 does not apply to the deficiency cited in Item 1 of the motor inn deficiency statement as the corridor/interior stairway cited therein serves more than one adjacent floor.

64. Exception (2) to WAC 212-52-050, specifically the reference to enclosures not being required where the stairway serves only one adjacent floor..., relates to transient accommodations wherein the stairway concerned does not lead, by means of additional stairways, corridors, passageways or public rooms, to any additional floors.

65. The interior stairway serving the lobby and second floor of the motor inn section and thereafter the guest occupied corridor on the second floor does not meet the requirements of WAC 212-52-050.

66. The motor inn section of the Ridpath has two enclosed stairways located at the northeast and northwest corners of the structure that terminate at the lobby.

67. The motor inn section of the Ridpath has a stairway on the south side of the structure which unquestionably meets the requirements of WAC 212-52-050. It provides a continuous, enclosed exiting from the structure, adequately separated from any smoke or fire filled environments.

68. Guests seeking emergency exiting from the motor inn section of the Ridpath can receive safe exiting by utilizing the stairway on the south side of the structure. Said exiting leads directly to an outside balcony or landing which is provided with an outside stair.

69. Guests seeking a safe, rapid and direct exit from the motor inn section who do not, for whatever reason, avail themselves of the south side exit are faced with the necessity of passing through a corridor, possibly smoke or fire filled, and then determining whether to choose a path that ultimately exits at a mezzanine (pool) level, in the lobby, or in the basement garage.

70. Any refuge to be gained by exiting to the pool area would be illusory in many conflagrations.

71. The garage exit, with the probable presence of automobiles and petroleum products, poor ventilation and poorly marked exiting, presents an exiting option of little practical value and significant additional danger.

72. Persons seeking exiting down the stairs from the second floor mezzanine would have to pass through an area of open space that is common to the lobby area and the mezzanine area prior to reaching an exit to the exterior of the building.

73. A safe escape route may not exist during a fire if one has to pass through an area which has a common atmosphere with other sections of the structure such as the lobby in the motor inn section. The likelihood of a contaminated atmosphere in this common area is enhanced by the presence of combustible materials at the reception desk and the presence of other possibly inflammable materials in the lobby and the mezzanine areas.

74. Findings of Fact numbers 39, 40, 43, 45, 46, 47, 48, 51, 54, 55, 56 are on point to the discussion of Item 4 of the motor inn deficiency notice and are herein incorporated as Findings of Fact as to said Item 4.

75. The two enclosed stairways, located at the northeast and northwest corners of the motor inn section do not meet the standards set forth in WAC 212-52-080.

76. Statements as to the substantial cost of compliance with the Fire Marshal's corrective actions were not substantiated on the record.

CONCLUSIONS OF LAW

Pursuant to said Findings of Fact, the Hearing Examiner designated by the State Fire Marshal to hear and determine this matter hereby makes the following Conclusions of Law:

1. That the "tower section" of the Ridpath Hotel is presently not in compliance with the requirements of WAC 212-52-040 in that it does not have proper occupancy separations between the lobby and several businesses located on the periphery of the lobby and between the lobby and the driveway access to the parking garage, as required by WAC 212-52-040.

2. That the "tower section" of the Ridpath Hotel is presently not in compliance with the provisions of WAC 212-52-080 in that it does not have two exits, as that term is defined in WAC 212-52-080, permitting direct exiting from the structure.

3. That the "motor inn section" of the Ridpath Hotel is presently not in compliance with the provisions of WAC 212-52-050 in that it does not have a properly enclosed interior stairway, as that term is defined in WAC 212-52-050, serving the lobby and the second floor and guest occupied sections of the "motor inn."

4. That the "motor inn section" of the Ridpath Hotel is presently not in compliance with the provisions of WAC 212-52-080 in that it does not have two exits, as that term is defined in WAC 212-52-080, permitting direct exiting from the structure.

5. In all instances in this matter, the State Fire Marshal's interpretations of ch. 212-52 WAC have been reasonable and in keeping with the legislative goal of protecting the health and welfare of individuals using transient accommodations in the State of Washington.

6. In all instances in this matter the State Fire Marshal's required corrective action has been reasonable and in keeping with the legislative goal of protecting the health and welfare of individuals using transient accommodations in the State of Washington.

7. The State Fire Marshal's Statements of Deficiency and Required Corrective Action for the tower and motor inn sections of the Ridpath Hotel should be affirmed.

ORDER

On the basis of the foregoing Findings of Fact and Conclusions of Law, to the effect that the tower and motor inn sections of the Ridpath Hotel are presently not in compliance with the requirements of ch. 212-52 WAC,

IT IS HEREBY ORDERED that the State Fire Marshal's conclusions, to the effect that the Ridpath Hotel is presently not in compliance with the requirements of ch. 212-52 WAC and that specific required corrective action must be taken if said Hotel is to retain its transient accommodation license from the Department of Social and Health Services, are determined to be proper.

This Order is entered pursuant to RCW 48.48.130, ch. 48.04 RCW, ch. 34.04 RCW, WAC 1-08-410, and ch. 212-52 WAC.

DATED AND ISSUED at Olympia, Washington, this 8th day of April, 1980.

DICK MARQUARDT
Insurance Commissioner
and State Fire Marshal

By 

SCOTT JARVIS
Public Defender and
Hearing Examiner

WEST VIRGINIA

STATE FIRE CODE

Rules and Regulations of the West Virginia State Fire Commission

State Capitol
Charleston, West Virginia

Dated: June 8, 1979

Effective Date:
December 14, 1979

STATE FIRE COMMISSION

James S. Richmond, Chairman
State Fire Commission

James W. Fife, Vice-Chairman

West Virginia State Fire Code

Rules and Regulations of the
West Virginia State Fire Commission

Table of Contents

SECTION 1. General

1.01. Scope - These regulations establish the rules and regulations deemed necessary by the State Fire Commission for the safeguarding of life and property from the hazards of fire and explosion.

1.02. Authority - These rules and regulations are issued under authority of West Virginia Code, Chapter 29, Article 3.

1.03. Effective Date - These rules and regulations were adopted on the 8th day of June, 1979, and are dated as of June 8, 1979, and have a proposed effective date of December 1, 1979.

1.04. Filing Date - These rules and regulations were initially filed in the Secretary of State's office on the 15th day of June, 1979, and again on the 21st day of September, 1979.

1.05. Certification - These rules and regulations are certified authentic by the State Fire Commission.

1.06. Exemption - This State Fire Code has no application to buildings used wholly as dwelling houses for no more than two families and has no application to farm structures. Provided, however, that farm structures (1) used for group sleeping accommodations for farm workers or (2) used for educational or institutional occupancy shall not be exempt from the requirements of this State Fire Code.

1.07. Incorporation of Other Documents - This State Fire Code does not include a reprinting of all the requirements imposed by statute or by the incorporation of various National Standards and

Codes cited in Section 4 of these Rules and Regulations, for ascertaining these additional standards and requirements it is necessary to make reference to said other documents.

SECTION 2. Reporting of Fire Incidences by Fire Department, Brigades, and Companies

Any organized fire department or company in West Virginia shall report every fire incident to the State Fire Marshal on the forms provided by the State Fire Marshal. Every fire incident shall be reported within thirty (30) days after the date of the incident. EXCEPTION: Any fire or explosion involving human fatality, property damage in excess of $250,000, or arson or suspected arson, shall be reported immediately.

SECTION 3. Reserved

SECTION 4. National Standards and Codes

4.01. Incorporation of National Standards and Codes - The standards and requirements as set out and established by the 1979 edition of "The National Fire Codes" published by the National Fire Protection Association (but not including standards and requirements directed to the operation of local fire departments) shall have the same force and effect as if set out verbatim in these regulations and are hereby adopted and promulgated by the State Fire Commission as a part of the State Fire Code. The State Fire Marshal shall make use of the standards and requirements within said publications in all matters coming under his jurisdiction. A copy

of the said "The National Fire Codes" has been filed with the Secretary of State and a copy of the Table of Contents of said publication is included herewith. Information regarding the purchase of the aforesaid "The National Fire Codes" (or separate volumes thereof) may be obtained by writing to the National Fire Protection Association, 470 Atlantic Avenue, Boston, Massachusetts 01120.

4.02. National Standards and Codes - Modification of Fireworks Display Regulations. The "Regulations of the State Fire Marshal For the Display of Fireworks" as contained in N.F.P.A. 494L of the 1979 edition of "The National Fire Codes" above referred to shall have the same force and effect and shall control the same as if set out verbatim in these regulations and are hereby adopted and promulgated by the State Fire Commission as a part of the State Fire Code, but with numbered paragraphs 3 and 4 thereof changed to read as follows:

> 3. Upon receipt of such application at least 15 days in advance of the date set for this display, the Chief of the Fire Department shall make, or cause to be made an investigation of the site of the proposed display for the purpose of determining whether the provisions of these regulations are complied with in the case of the particular display. He shall confer with the Chief of the Police Department, or the County Sheriff if the site for the proposed display is to be outside the limits of a municipality, about the application and whether issuance of a permit would be consistent with public safety. Being satisfied that a display is properly lawful, the Chief of Police (or the County Sheriff, if the site of the proposed display is outside the limits of a municipality) and the Chief of Fire Department shall together endorse the application, stating that they approve the display as being in conformance with all parts of the law and with these regulations. Failure to approve the application

by either the Fire Chief or Police Chief (or County Sheriff, as the case might be) shall be sufficient cause for the State Fire Marshal to deny a permit.

4. The application, following endorsement by the Chiefs of the Fire and Police Departments (or County Sheriff, as the case might be), shall be sent to the State Fire Marshal who shall then, upon receipt of evidence of financial responsibility as required by law in such cases, issue a nontransferable permit authorizing the display.

These changes to said N.F.P.A. 494L are made to make certain that it is understood that the County Sheriff (rather than City Police Chief) is the local police authority referred to in West Virginia Code 29-3-24 in those situations where the proposed site of a fireworks display is outside the limits of a municipality.

4.02. National Standards and Codes, Tables of Contents

(1) National Fire Codes - Published by National Fire Protection Association:

NATIONAL FIRE CODES — CONTENTS 1979

VOLUME 1

10 Portable Fire Extinguishers
11 Foam Extinguishing Systems
11A High Expansion Foam Systems
11B Synthetic Foam and Combined Agent Systems
12 Carbon Dioxide Systems
12A Halon 1301 Systems
12B Halon 1211 Systems
13 Sprinkler Systems, Installation

VOLUME 2

13D Sprinkler Systems, Dwellings
14 Standpipe & Hose Systems
15 Water Spray Fixed Systems
16 Foam-Water Sprinkler & Spray Systems
17 Dry Chemical Systems
18 Wetting Agents
19B Respiratory Protective Equipment for Fire Fighters
194 Fire Hose Connections
196 Fire Hose
197 Initial Fire Attack, Training Standard on
20 Centrifugal Fire Pumps
22 Water Tanks
24 Outside Protection
295 Wildfire Control by Volunteer Fire Departments
30 Flammable & Combustible Liquids Code

VOLUME 3

31 Oil Burning Equipment
32 Dry Cleaning Plants
321 Classification of Flammable Liquids
327 Cleaning Small Tanks
33 Spray Application
34 Dip Tanks
35 Manufacture of Organic Coatings
36 Solvent Extraction Plants
37 Sta. Combustion Engines & Gas Turbines
385 Tank Vehicles for Flammable & Combustible Liquids
386 Portable Shipping Tanks
395 Flammable & Combustible Liquids on Farms and Isolated Construction Projects
40 Cellulose Nitrate Motion Picture Film
40E Storage of Pyroxylin Plastic
43A Liquid and Solid Oxidizing Materials
43C Storage of Gaseous Oxidizing Materials
43D Storage of Pesticides in Portable Containers
44A Fireworks, Manufacturing, Transportation and Storage
45 Fire Protection for Laboratories Using Chemicals
48 Magnesium, Storage and Handling
481 Titanium, Storage, Handling
490 Ammonium Nitrate Storage

VOLUME 4

493 Intrinsically Safe Apparatus
495 Explosive Materials
496 Purged Enclosures for Electrical Equipment
498 Explosives, Motor Vehicle Terminals
50 Bulk Oxygen Systems
50A Gaseous Hydrogen Systems
50B Liquefied Hydrogen Systems
51 Welding & Cutting, Oxygen-Fuel Gas Systems for
51A Acetylene Cylinder Charging Plants
51B Cutting & Welding Processes
54 National Fuel Gas Code
56B Respiratory Therapy
56C Laboratories in Health-Related Institutions
56D Hyperbaric Facilities
56E Hypobaric Facilities
56F Nonflammable Medical Gas Systems

VOLUME 5

56G Inhalation Anesthetics in Ambulatory Care Facilities
57 Fumigation
58 Liquefied Petroleum Gases, Storage and Handling
59 Liquefied Petroleum Gases at Utility Gas Plants
59A Liquefied Natural Gas, Storage and Handling
61A Manufacturing and Handling Starch
61B Grain Elevators, Bulk Handling Facilities
61C Feed Mills, Dust Hazards
61D Agricultural Commodities for Human Consumption
63 Industrial Plants, Dust Explosions
65 Aluminum Processing and Finishing
651 Aluminum or Magnesium Powder
653 Coal Preparation Plants, Dust Hazards
654 Plastics Industry, Dust Hazards
655 Sulfur Fires, Explosions, Prevention
656 Spice Grinding Plants, Dust Hazards
66 Pneumatic Conveying Systems
664 Woodworking Plants, Dust Hazards
69 Explosion Prevention Systems

VOLUME 6

70 National Electrical Code
70A Electrical Code for One- and Two-Family Dwellings

VOLUME 7

71 Central Station Signaling Systems
72A Local Protective Signaling Systems
72B Auxiliary Signaling Systems
72C Remote Station Signaling Systems
72D Proprietary Signaling Systems
72E Automatic Fire Detectors
74 Household Fire Warning Equipment
75 Electronic Computer/Data Processing Equipment
76A Essential Electrical Systems
78 Lightning Protection Code
79 Electrical Metalworking Machine Tools
80 Fire Doors and Windows
81 Fur Storage, Cleaning
82 Incinerators, Rubbish Handling
85 Oil- and Gas-Fired Single Burner Boiler-Furnaces
85B Furnace Explosions in Natural Gas-Fired Multiple Burner Boiler-Furnaces

VOLUME 8

85D Fuel Oil-Fired Multiple Burner Boiler-Furnaces
85E Pulverized Coal-Fired Multiple Burner Boiler-Furnaces
85F Pulverized Fuel Systems
85G Implosions in Multiple Burner Boiler-Furnaces
86A Ovens and Furnaces
86B Industrial Furnaces
86C Industrial Furnaces — Special Processing Atmospheres
86D Industrial Vacuum Furnaces
87 Piers and Wharves
88A Parking Structures
88B Repair Garages
90A Air Conditioning & Ventilating Systems
90B Warm Air Heating & Air Conditioning

VOLUME 9

91 Blower & Exhaust Systems
96 Commercial Cooking Equipment, Vapor Removal
101 Life Safety Code
102 Assembly Seating, Tents, & Air-Supported Structures
211 Chimneys, Fireplaces & Vents
214 Water Cooling Towers

(cont. on inside back cover)

(1) continued

NATIONAL FIRE CODES — CONTENTS 1979

VOLUME 9 (cont.)

220 Building Construction, Standard Types
224 Homes, Camps in Forest Areas
231 General Storage, Indoor
231B Cellular Rubber and Plastics, Storage
231C Rack Storage of Materials
231D Storage of Rubber Tires
232 Record Protection
241 Building Construction and Demolition Operations
251 Fire Tests, Building Construction & Materials
252 Fire Tests, Door Assemblies

VOLUME 10

253 Flooring Radiant Panel Test
255 Building Materials, Tests of Surface Burning Characteristics
256 Fire Tests, Roof Coverings
257 Fire Tests of Window Assemblies
258 Measuring Smoke Generated By Solid Materials
259 Potential Heat, Bldg. Materials
302 Motor Craft
303 Marinas & Boatyards
306 Control of Gas Hazards on Vessels
312 Vessels During Construction, Protection of
407 Aircraft Fuel Servicing
408 Aircraft Fire Extinguishers
409 Aircraft Hangars
412 Aircraft Foam Fire Fighting Vehicles, Test Procedures
414 Aircraft Rescue, Fire Fighting Vehicles
415 Aircraft Fueling Ramp Drainage
416 Airport Terminal Buildings
417 Aircraft Loading Walkways
418 Roof-top Heliport Construction and Protection
423 Aircraft Engine Test Facilities
501A Installation of Mobile Homes
501C Recreational Vehicles
501D Recreational Vehicle Parks

VOLUME 11

505 Powered Industrial Trucks
512 Truck Fire Protection
513 Motor Freight Terminals
601A Guard Operations in Fire Loss Prevention
701 Flame-Resistant Textiles and Films, Fire Tests for
702 Flammability of Wearing Apparel
703 Fire Retardant Treatments, Building Materials
704 The Fire Hazards of Materials
803 Nuclear Power Plants
1001 Fire Fighter Professional Qualifications
1002 Prof. Qual., Fire Apparatus Driver/Operator
1003 Airport Fire Fighter Prof. Qual.
1021 Prof. Qual., Fire Officer
1031 Prof. Qual., Fire Inspector, Fire Investigator and Fire Prev. Ed. Officer
1041 Prof. Qual., Fire Service Instructor
1123 Fireworks, Public Display
1221 Public Fire Service Comm.
1231 Water Supplies for Suburban and Rural Fire Fighting
1501 Fire Dept. Safety Officer
1901 Automotive Fire Apparatus
1921 Fire Department Portable Pumping Units
1931 Fire Department Ground Ladders
1971 Protective Clothing for Structural Fire Fighting

VOLUME 12

1 Fire Prevention Code
3M Health Care Emergency Preparedness
9 Training Reports and Records
10L Model Enabling Act, Portable Fire Extinguishers
13A Sprinkler Systems, Maintenance
13E Fire Department Operations in Properties Protected by Sprinkler, Standpipe Systems
198 Fire Hose, Care of
21 Steam Fire Pumps, Maintenance
26 Supervision of Valves
27 Private Fire Brigades
291 Fire Hydrants, Uniform Markings
292M Water Charges, Private Protection
325M Properties of Flam. Liquids, Gases, Solids
328 Manholes and Sewers, Flammable & Combustible Liquids and Gases in
329 Underground Leakage of Flammable and Combustible Liquids
46 Forest Products, Storage
482M Zirconium, Plants Producing

VOLUME 13

49 Hazardous Chemicals Data
491M Hazardous Chemical Reactions

VOLUME 14

492 Separation Distances of Ammonium Nitrate and Blasting Agents
494L Model State Fireworks Law
497 Electrical Installations in Chemical Plants
53M Fire Hazards in Oxygen-Enriched Atmospheres
56HM Home Respiratory Therapy
68 Explosion Venting, Guide
70B Electrical Equipment Maintenance
70L Model State Electric Law
76C High-Frequency Electricity in Health Care Facilities
77 Static Electricity
80A Protection from Exposure Fires

VOLUME 15

89M Clearances, Heat Producing Appliances
92M Waterproofing and Drainage of Floors
97M Glossary of Heating Terms
203M Roof Coverings
204 Smoke & Heat Venting Guide
206M Building Areas & Heights
231A General Storage, Outdoor
232AM Archives and Record Centers
307 Marine Terminals, Operation
402 Aircraft Rescue, Fire Fighting, Standard Operating Procedures
403 Aircraft Rescue, Fire Fighting Services at Airports
406M Fire Dept. Handling Crash Fires
410A Aircraft Electrical Maintenance
410B Aircraft Oxygen Maintenance
410C Aircraft Fuel System Maintenance
410D Aircraft Cleaning, Painting & Paint Removal
410E Aircraft Welding Operations in Hangars
410F Aircraft Cabin Cleaning Operations
419 Airport Water Supply Systems
421 Aircraft Interior Fire Protection
422M Aircraft Fire Investigators Manual
424 Airport/Community Emergency Planning
501BM Mobile Home Heating and Cooling Load Calculations

VOLUME 16

601 Guard Service in Fire Loss Prevention
801 Facilities Handling Radioactive Materials
802 Nuclear Reactors
901 Uniform Coding for Fire Protection
902M Fire Reporting Field Incident Manual
903M Fire Reporting Property Survey Manual
910 Protection of Library Collections
911 Protection of Museum Collections
1122L Code For Unmanned Rockets
1201 Organization for Fire Services
1202 Organization of a Fire Department
1904 Fire Department Aerial Ladders and Elevating Platforms

SECTION 5. Sprinkler Protection (All Other Occupancies) Required After Exceeding Certain Maximum Area

Approved automatic sprinkler systems will be installed in all new buildings, used for any occupancies, exceeding the areas in the following table. EXCEPTION: As to occupancies noted in Section 6 of these rules and regulations, sprinkler protection shall be provided as required by said Section 6.

TYPE OF CONSTRUCTION	BUILDING HEIGHT 1 STORY	2 STORY	MORE THAN 2 STORIES AND UP TO 40 FEET	MORE THAN 40 FEET	MORE THAN 75 FEET
	AREA IN SQUARE FEET				
Fire Resistive Type A	40,000	30,000	10,000	Sec. 10-High Rise	Sec. 10-High Rise
Fire Resistive Type B	40,000	30,000	10,000	Sec. 10-High Rise	Sec. 10-High Rise
Protected Limited-Combustible	20,000	15,000	5,000	Sec. 10-High Rise	Not Permitted
Heavy Timber	9,000	6,000	3,000	Sec. 10-High Rise	Not Permitted
Ordinary	7,000	4,000	Any Area Requires Sprinkling	Not Permitted	Not Permitted
Unprotected Limited-Combustible	7,000	4,000	Any Area Requires Sprinkling	Not Permitted	Not Permitted
Wood Frame	5,000	3,000	Any Area Requires Sprinkling	Not Permitted	Not Permitted

Notes to Table:

(1) The word "area" means that area enclosed by exterior or foundation walls, fire walls, or a combination of exterior or foundation walls and fire walls of not less than 2-hour fire rating and all openings are protected with approved automatic or self-closing fire doors.

(2) The phrase "not permitted" means that buildings of these heights are not permitted for the type of construction indicated.

(3) The phrase "Sec. 10-High Rise" means that sprinkling is required as provided in Section 10 of the rules and regulations dealing with High Rise Regulations.

(4) Fire-Resistive Types A and B, Protected Limited-Combustible, Heavy Timber, Ordinary, Unprotected Limited-Combustible, and Wood Frame definitions are located in NFPA 220, Standard on Types of Building Construction.

SECTION 6. Sprinkler Protection (certain occupancies)

All nursing, convalescent, old age, custodial care, and long term or extended care homes or institutions, existing and new, regardless of the type of construction, shall be provided with complete automatic sprinkler protection in accordance with Standard 13 contained within the aforesaid National Fire Codes. EXCEPTION: Homes caring for not more than three patients.

SECTION 7. Carpeting and Floor Covering

All carpeting and other floor coverings used within the State of West Virginia shall have a flame spread of no more than 75, smoke development factor of no more than 150, by test report from a nationally recognized testing laboratory. This test is the Steiner Tunnel Test in accordance with Standard 255 contained within aforesaid The National Fire Codes. EXCEPTION: Gymnasium and Arena synthetic floor covering. Maximum flame spread: 75. Maximum smoke factor: 450.

SECTION 8. Maintenance of Fire Hazard; Order for Correcting Condition, Removal of Material, Repair, Demolition, etc.; Order to Contain Notice to Comply and Right to Appeal

Whenever the State Fire Marshal, by and through persons working under his direction, shall determine (based upon the State Fire Code and/or on the experience and knowledge applied in the operation of his office) (1) that any building or structure has been constructed, altered, or repaired in a manner violating the State Fire Code as promulgated prior to the commencement of such construction, alterations, or repairs, or (2) that any building

or structure is being maintained or used in such a way as to endanger life or property from the hazards of fire or explosion, or (3) that any building or other structure or property of any kind, which, for want of repairs, or by reason of its age, dilapidated, or abandoned condition or for any other reason constitutes a fire hazard, and is located or constructed so as to constitute a danger to other buildings, property, persons, life, or limb, or (4) that in any building or upon any premises there is located any combustible, flammable, or explosive substance or material or other condition dangerous to the safety of persons occupying the building or premises and adjacent premises and property, then the State Fire Marshal shall order such condition or thing to be corrected, or combustible, flammable, or explosive, items to be removed, or such building or buildings to be repaired, closed to occupants, or removed, as required by the circumstances, and such order shall be promptly complied with by the owner, agent, occupant, and lessee of such premises, place, property, or thing. Any such order may be expressed in the alternative, e.g., allowing repair but on the failure to repair requiring demolition. Any such order by the State Fire Marshal which concludes that a fire hazard exists, shall advise what repairs, and/or demolition, must be accomplished, shall advise that compliance therewith shall be completed within thirty (30) days of issuance, shall advise that in the event of noncompliance, the State Fire Marshal is authorized by statute to enter into and upon the premises affected by such

order and cause the building, structure, premises, or thing to be repaired, torn down, materials removed, and all dangerous conditions to be remedied (as the case may be) at the expense of the owner, and shall advise that the subject order can be contested by entering an appeal to the State Fire Commission as outlined in Section 12 of these Rules and Regulations.

SECTION 9. Interference with Fire Protection Equipment

No person shall render any portable or fixed fire extinguishing system or device or any fire warning system inoperative or inaccessible except as may be necessary during emergencies, maintenance, drills or prescribed testing.

SECTION 10. High Rise Buildings - Fire Safety Standards and Requirements

10.01. General - All new buildings or structures more than forty (40) feet in height, measured from the lowest grade level to the highest point of the structure, shall be subject to the rules and regulations set forth herein for high rise buildings. These high rise regulations shall not nullify or interfere with existing city ordinances or local laws previously adopted relative to this subject. EXPECTION: Industrial occupancies not occupied as business offices.

10.02. Automatic Fire Extinguishing Systems - Any building or structure as defined in 10.01 used for human occupancy

shall have an approved automatic fire extinguishing system throughout the entire building installed in accordance with The National Fire Codes as provided in the Standard 13 thereof.

10.03. Compartmentation - Compartmentation shall be provided in every high rise building to provide areas of refuge for the building's occupants. This may be provided by:

a. Installation of a horizontal exit dividing a story into two areas of approximately the same size and not exceeding 30,000 square feet.

b. Sub-dividing the building into 5 story compartments by interrupting the stairshaft with smoke barrier every 5th floor, provided the building exceeds 9 floors, or through the use of smoke-proof enclosures for all stairways, or any other method which will protect against the movement of smoke from one compartment to another.

10.04. Fire Alarm System - The fire alarm system shall conform to the standards and requirements imposed by Section 4 and Section 11 of these rules and regulations.

10.05. Emergency Audible Communication - Any high rise building or structure used for human occupancy that is seventy-five (75) feet in height or greater measured from the lowest grade level to the highest point of the structure, shall have an approved continuously electrically supervised fire department communication system.

10.06. High Rise Central Control Station - In every new High Rise a central control station for Fire Department operations shall be provided in a location approved by the State Fire Marshal or the designated local fire authority. It shall contain the fire department voice communication system panel, fire detection, and alarm system panels, status indicators and controls of air handling systems, a public telephone, and emergency controls and valves.

10.07. Emergency Power - A permanently installed emergency power generation system conforming to Standard 70 of The National Fire Codes shall be provided in every high rise building 75 feet in height or greater used for human occupancy.

All power, lighting, signal, and communication facilities, required by these rules and regulations or otherwise, shall be transferable to the stand-by power system.

The emergency system shall be of sufficient effectiveness to provide service to, but not limited to, the following:

a. Fire Alarm System
b. Exit & Other Emergency Lighting
c. Fire Protection Equipment
d. Required Mechanical Ventilation
e. Fire Department Elevator
f. Fire Department Communication System

10.08. Smoke Control - Ventilation for the removal of the products of combustion shall be provided in every story meeting nationally recognized standards.

10.09. Concessions - The following concessions can be considered when the high rise building is completely sprinklered throughout:

(1) Fire Resistive time periods may be reduced by one hour in the following assemblies:

(a) Interior bearing walls
(b) Exterior bearing walls
(c) All non-bearing walls
(d) Beams & trusses supporting roofs
(e) Beams supporting floors and roofs

Example: 3-hour wall reduced to a 2-hour.

No concession can be allowed which would result in the corridor walls having less than 1-hour fire resistance rating.

SECTION 11. Fire Alarm Systems

11.01. General Requirements for All Occupancies -

(1) Sprinkler system(s) installed - The OS & Y and P.I.V. Valves shall be electrically supervised and tied into the trouble side of the panel.

(2) Sprinkler System shall be tied in with main alarm system so flow will activate the fire alarm.

(3) All fire alarm system wiring shall be placed in separate metal conduits or metal raceways and installed in accordance with Standards 70, 72-A, and 72-B of The National Fire Codes.

(4) All fire alarm systems including all components shall be electrically supervised, and also shall be tied in ahead of the main power disconnect, unless secondary power source is required.

(5) All fire alarm systems should be tied into the fire department legally serving that facility or area, subject to acceptance and approval of such a tie-in by the local fire department, or to a control communication center responsible for receiving emergency calls with 24-hour surveillance. EXCEPTION: All institutional occupancies "shall" be tied into a fire department or a communication center.

(6) All heating, air conditioning, ventilation systems greater than 2,000 CFM and less than 15,000 CFM shall have a smoke detector in the return air duct or plenum for direct automatic shut down, to close main dampers and to sound alarm when actuated.

(a) All heating, air conditioning, ventilation systems greater than 15,000 CFM shall have smoke detectors installed in both supply and return air duct to shut down equipment and sound alarm, 2nd-close main dampers.

(b) Institutional and high rise buildings' detectors shall be zoned to indicate floor and/or area of origin at the fire alarm annunciator panel.

(c) 100% utilization of outside air will not require detector in duct intake of outside air.

(7) Sounding devices shall be of such character and so located as to arouse all occupants of the facility or building thereof endangered by fire and shall be different than any other system which utilizes signals for notification other than fire. Visual devices shall be provided in all occupancies as required by The Life Safety Code (NFPA 101). EXCEPTION: All institutional occupancies other than Penal shall have chimes in patient sleeping area.

(8) Manual pull stations shall be located at all required fire exits with no station greater than 200 feet of each other. Manual pull stations shall be of same general operational type. See specific occupancy provisions for additional requirements.

(9) Thermal detectors are required in the following hazardous areas in all occupancies requiring a fire alarm system and as listed or identified in The Life Safety Code (NFPA 101):

(a)	Elevator shafts	r/r (rate of rise)
(b)	Attic and cockloft spaces	Fixed temperature
(c)	Storage Rooms	r/r (rate of rise)
(d)	Furnace of boiler rooms	Fixed temperature
(e)	Janitor closets	r/r (rate of rise)
(f)	Kitchens & utility rooms	Fixed temperature
(g)	Laboratories, Home Economics, Woodworking Shops, Auto Shops, & Locker rooms	r/r (rate of rise)

EXCEPTION: Thermal detectors are not required in areas provided with sprinkler protection or dwelling units of apartments.

(10) Smoke detectors are required in the following areas in all occupancies requiring fire alarm systems:

(a) Electrical panel rooms
(b) Corridors which have adjacent sleeping rooms
(c) Computer, computer tape storage rooms, computer room sub-floor area
(d) Auditorium stages
(e) Top of stair enclosures

Smoke detectors where required shall be placed a maximum of 15 feet from ends of corridors and walls and 30 feet on centers. Variance with these requirements must have submission of technical data to justify exceeding these distance requirements.

(11) A building or structure being used for more than one occupancy must comply with the fire alarm system requirements of all such occupancies.

(12) All structurally connected buildings shall have one fire alarm system. (Note: Interconnected systems are considered one system.)

(13) Having an approved Fire Alarm System will not negate the necessity of satisfying other requirements of the State Fire Code.

(14) Audible trouble signal of the Fire Alarm System shall be readily available for monitoring.

(15) All facilities having sleeping accommodations shall be required to have emergency power to the fire alarm system. (Note: Dry-cell batteries are not permitted.)

11.02. Requirements for Educational Occupancy -

(1) A fire alarm system is required in every educational occupancy, and such a system must meet the requirements and standards as provided herein. Educational occupancies include all buildings used for the gathering of persons for the purposes of instruction. Educational occupancies include (but are not limited to):

Schools	Academies
Universities	Nursery Schools
Colleges	Kindergartens
Head Start	Secondary & College Libraries

Day Care Facilities (all ages)
Sheltered Work Shops

(2) The General Requirements for all occupancies shall be complied with in all educational occupancies as if herein restated verbatim.

(3) Open Plan Classroom Concepts will require a complete smoke detection system throughout the facility.

(4) Day Care Centers located in buildings other than educational facilities shall have smoke detectors installed on ceilings of each story in front of the doors to the stairways and at no greater than 30 feet spacing in the corridors of all floors occupied by the center. Detectors shall also be installed in lounges and recreation areas in the center.

(5) An annunciator panel or fire alarm panel is to be readily accessible to local fire department personnel if more than one zone is required or provided.

(6) Alarm audible signal shall be of a distinct signal and separate from the signal for changing of classes.

(7) Rate of rise thermal detectors are required in all Rest Rooms, but are not required if there are two or fewer fixtures.

(8) Smoke detectors shall be in all corridors, except in a single-story building with direct exiting to the exterior from every room via a door.

11.03. Requirements for Assembly Occupancy -

(1) A fire alarm system is required in every place of assembly, and such a system must meet the requirements as provided herein. Places of assembly include, but are not limited to, all buildings or portions of buildings used for gathering of 50 or more persons. Places of assembly shall include those facilities used for such purposes as deliberation, worship, entertainment, amusement, or awaiting transportation. Places of assembly include (but are not limited to):

Theaters	Churches
Motion Picture Theaters	Dance Halls
Assembly Halls	Club Rooms
Exhibition Halls	Passenger Facilities,
Museums	terminals of air, surface,
Skating Rinks	underground, and marine
Gymnasiums	Public transportation
Bowling Lanes	facilities
Pool Rooms	Recreation Piers
Armories	Courthouses
Mortuary Chapels	Conference Rooms
Restaurants	Broadcasting Studios

A place of assembly used for any educational purposes, e.g., kindergarten, early childhood education, or day care facilities shall be classed as an educational facility and the fire alarm requirements provided for Educational Occupancy must be met.

(2) The General Requirements for all Occupancies shall be complied with in all places of assembly as if herein restated verbatim.

(3) Annunciator panel and fire alarm panel are to be readily accessible to Fire Department and inspection personnel.

(4) A movie theater is required to provide a sounding audible device and a means for alerting the local Fire Department of the alarm is required.

11.04. Requirements for Institutional Occupancy -

(1) A fire alarm system is required in every institutional occupancy, and such a system must meet the requirements and standards as provided herein. Institutional buildings are those used for purposes such as medical or other treatment or care of persons suffering from physical or mental illness, disease, or infirmity;

for the care of infants, convalescents or aged persons; and for penal or corrective purposes.

(2) The General Requirements for every Occupancy shall be complied with in all institutional occupancies as if herein restated verbatim.

(3) Institutional occupancies are hereinafter placed in Groups A, B, and C and these designations then used to indicate which group or groups must comply with the stated requirement, all as follows:

GROUPS

A. Health Care Facilities
   Hospitals
   Nursing Homes

B. Residential - Custodial Care
   Nurseries
   Home for the Aged (Group Home/Group Residence)
   Mentally Retarded Care Institutions
   Detoxification Center of Homes

C. Residential - Restrained Care
   Penal Institutions
   Reformatories
   Jails
   Detention Homes
   Group Homes for Juveniles

REQUIREMENTS

A, B, and C	(a)	Annunciator Panel or Fire Alarm Panel is to be readily accessible to Fire Department personnel.
A and B	(b)	An approved automatic smoke detection system shall be installed in all corridors of hospitals, nursing homes, and residential-custodial care facilities. Smoke detectors shall be spaced 30 feet on centers and no more than 15 feet from any wall or exit.

A and B	(c)	Manual pull stations shall be installed every 50 feet throughout the facility in patient room areas starting at the end of corridors. All other manual pull stations are in accordance with general requirements.
A	(d)	Hospitals and Nursing Homes fire alarm systems shall have annunciators located at all nurse's stations, the telephone switchboard, and at such other supervised locations from which assistance may be summoned.
C	(e)	Smoke detectors shall be installed in corridors of jail cells. If no corridor exists, the installations shall be at the highest point of the cell area. A metal cage for protection from occupant's abuse is advised and shall not interfere with the operation.
C	(f)	Smoke detectors shall be installed in corridors of reformatories for rehabilitation where sleeping facilities exist. If no corridors are provided, smoke detectors are required in sleeping rooms.

11.05. Requirements for Residential Occupancy -

(1) A fire alarm system is required for each of the herein enumerated groups of residential buildings, and such system must meet the requirements and standards provided herein. A residential building is one in which sleeping accomodations are provided for normal residential purposes and includes all buildings designed to provide sleeping accommodations, but shall not include those buildings classified and used for institutional occupancy.

(2) The General Requirements for every Occupancy shall be complied with in all residential occupancies as if herein restated verbatim.

(3) Residential Occupancies are hereinafter placed in Groups A, B, C, D, and E, and these designations then used to indicate which group or groups must comply with the stated requirement, all as follows:

GROUPS

A. Hotels/Motels/Lodging or Rooming Houses - 4 or more people.

B. Apartments

C. Dormitories, Orphanages for age 6 years and older

D. Dwelling units - 12 or more, Town Houses

E. Group Homes, Halfway Houses

REQUIREMENTS

A. (Hotels/Motels/Lodging or Rooming and/or Boarding Houses with 4 or more guests)

(1) Smoke detectors shall be placed a maximum of 15 feet from ends of corridors and walls and located 30 feet on centers throughout all inside corridors.

(2) A manual pull station shall be located at each stairway exit and elevator lobby with no manual pull stations exceeding 200 feet separations and located inside corridors.

(3) Motels (single story) shall have manual pull stations every 75 feet on exterior walls. (Minimum requirement shall be one.)

B. (Apartments)

(1) Apartment buildings having 12 or more units or more than three stories shall have a fire alarm system.

(2) Apartments up to 12 units in a single building of less than four stories shall in each apartment unit have a self-contained smoke detector in accordance with Standard 74 of the National Fire Codes.

(3) A manual pull station at each floor level exit is required.

(4) A self-contained smoke detector shall be installed in all apartments located at the entrance to the bedrooms. The configuration of rooms will dictate the number of detectors required.

(5) Apartment buildings containing more than 12 units or more than three stories shall have smoke detectors installed 30 feet on centers and 15 feet from ends of corridors.

C. (Dormitory)

(1) Smoke detectors shall be installed in all corridors of sleeping room areas spaced 30 feet on centers and 15 feet from any wall or ends of corridors.

(2) All rooms not properly separated from corridors shall have smoke detectors spaced as provided in B(4).

D. (Dwelling Units - 12 or more, Town Houses)

(1) Same requirements are imposed as for apartments. (Note: 2-hour fire wall every 12 units does not require a fire alarm system except for single station detectors as in Section 11.05(3)B(2).

E. (Group Homes - Halfway Houses)

(1) Smoke detectors shall be installed in all corridors of sleeping room areas spaced 30 feet on centers and 15 feet from any wall or ends of corridors.

(2) All rooms not properly separated from corridors shall have smoke detectors spaced as provided in E(1).

11.06. Requirements for Mercantile Occupancy -

(1) A fire alarm system is required in every mercantile occupancy over 3,000 square feet, and such system must meet the requirements and standards as provided herein. Mercantile Occupancies

include stores, markets, and other rooms, buildings, or structures for the display and sale of merchandise. Included in this occupancy group are:

Class A & B Stores as defined by Life Safety Code

Supermarkets	Drugstores
Department Stores	Auction Rooms
Shopping Centers	Malls

(2) The General Requirements for all Occupancies will be complied with in all mercantile occupancies as if herein restated verbatim.

(3) Unprotected or undivided attic space and cocklofts, will require fixed temperature thermal detectors throughout.

(4) However, if the mercantile occupancy has a complete and approved sprinkler protection system, a fire alarm system will not be required.

11.07. Requirements for Business Occupancy -

(1) A fire alarm system is required in every business occupancy having a combined capacity of 50 or more occupants and such system must comply with the General Requirements for all Occupancies.

(2) Business Buildings are those used for the transaction of business, other than those covered under Mercantile, for the keeping of accounts and records, and similar purposes. Included but not limited to in this occupancy group are:

Doctors' Offices	Town Halls
Dentists' Offices	Courthouses
City Halls	General Offices

11.08. Requirements for Industrial and Storage Occupancy - A fire alarm system is required in all Industrial and Storage Occupancies as required in The National Fire Codes (Life Safety Code) referred to in Section 4 of these rules and regulations.

SECTION 12. Order of Decision of the State Fire Marshal; and Appeals and Procedure for Appeals from such Orders or Decisions

Any person aggrieved by an order or final written decision of the State Fire Marshal based upon or made in the course of the administration or enforcement of the provisions of Article 3 of Chapter 29 of the Official Code of the State of West Virginia or based upon or made pursuant to these rules and regulations, and desiring to contest such order or decision may file an appeal from such order or written decision with the State Fire Commission. Preserving the right to have such an appeal and the manner of proceeding with the resulting contested case shall be governed by the following rules and regulations and by the corresponding state statutes, i.e., West Virginia Code 29-3-1, et seq., and West Virginia Code, Chapter 29A.

12.01. State Fire Marshal's Order and Decisions are Final and Conclusive - Any order or final written decision of the State Fire Marshal based upon or made in the course of the administration or enforcement of the provisions of Article 3 of Chapter 29 of the official Code of the State of West Virginia, or based upon or made pursuant to these rules and regulations, shall be final and conclusive, unless vacated or modified upon review pursuant to the appeal rights and procedures provided by said statute and these rules and regulations.

12.02. West Virginia Code 29-3-12(g) and (i) Inquiry and Investigation - The testimony which may be obtained by the State Fire Marshal pursuant to the authority stated in West Virginia Code 29-3-12(g) and (i) shall be obtained without compliance with the provisions set forth in these Rules and Regulations governing "Procedure in Contested Cases." Where appropriate, a subsequent order by the State Fire Marshal relating to the testimony so obtained shall, the same as any other order by the State Fire Marshal, be subject to the appeal rights provided in West Virginia Code 29-3-1, et seq.

12.03. Appeal Petition - The appeal petition is to be typewritten, styled "Appeal Petition," and submitted with an original and one (1) copy. It shall be complete in itself so as to fully state the matters contested. No telegram, telephone call, or similar communication will be regarded as an appeal petition. The petition must contain and include the following: (1) a copy of the order or decision of the State Fire Marshal being contested; (2) a clear and concise assignment of each error which the petitioner alleges to have been committed by the State Fire Marshal in issuing said order or decision with each assignment of error being shown in separately numbered paragraphs; (3) a clear and concise statement of fact upon which the petitioner relies as sustaining his assignment of errors; (4) the address petitioner desires to have all notices, documents, and the final order mailed to; (5) the telephone number or numbers where petitioner can be contacted; (6) the names and addresses of all persons having any ownership interest in the property which is the subject of the State Fire Marhsal's order

being contested; (7) a prayer setting forth the relief sought; and (8) the signature of the petitioner or its duly authorized officer.

12.04. Time Requirement and Manner of Filing Appeal Petition - An appeal petition must be personally delivered or mailed to the State Fire Marshal within thirty (30) days following service upon the petitioner, or within thirty (30) days following actual receipt if service be not required or for some reason not made of the order or decision being contested. Any appeal petition that is mailed shall be by certified mail, return receipt requested, and shall be considered timely if postmarked within the said thirty (30) day period. Any appeal petition not delivered or mailed as aforesaid within said thirty (30) day period shall not be timely filed and the order or decision of the State Fire Marshal being contested by the untimely appeal petition shall be final and conclusive.

12.05. Copy of Appeal Petition to State Fire Commission - Upon receipt of an appeal petition, the State Fire Marshal shall forthwith supply a copy of same to the State Fire Commission together with an opinion by the State Fire Marshal regarding the urgency of the matter being contested. The State Fire Marshal may elect to file a response to the Appeal Petition, and if he so does, same shall be delivered to the State Fire Commission and a copy mailed to the petitioner.

12.06. Scheduling Appeal Petition for and Notice of Hearing - The State Fire Commission through its employees or agents shall schedule a hearing on the appeal petition giving the petitioner

and the State Fire Marshal at least ten (10) days' written notice of the date, time, and place of the hearing. Said notice to the petitioner shall be by personal delivery or by certified mail, return receipt requested, shall contain a short and plain statement of the matters to be considered at the hearing, shall contain a copy of the State Fire Marshal's response, if any, to the appeal petition, and shall be mailed or personally delivered by the State Fire Commission no later than thrity (30) days after receipt of the appeal petition. A copy of the said notice to the petitioner shall be supplied to the State Fire Marshal. Any such hearing shall be conducted at a designated location at the State Capitol in Charleston, West Virginia, or in the discretion of the State Fire Commission at a location within the County where the premises in question are totally or partially located.

12.07. Authorized Representative - The petitioner may appear individually, or by counsel.

12.08. Continuances - A motion for continuance will not be granted unless made three days before the hearing in writing, or during the hearing, in either case for good and sufficient cause. Upon consideration of a motion for continuance, the urgency of the situation shall be determined and taken into consideration. Conflicting engagements of counsel or the employment of new counsel will not be regarded as good ground for a continuance, unless set forth in a motion filed promptly after the notice of hearing has been mailed, or unless extenuating circumstances are shown, which the State Fire Commission or hearing examiner deems adequate.

12.09. Absence of Petitioner or Counsel at the Scheduled Hearing - The absence of the petitioner or his legal counsel at a hearing, after service of notice of time, date, and place, shall not be the occassion for delay or continuance. The hearing shall proceed and the case be regarded as having been submitted for decision on the part of the absent petitioner or petitioners.

12.10. Hearing Examiner - Any member of the State Fire Commission may conduct a hearing on an appeal petition, issue subpoenas and subpoenas duces tecum, and shall have full authority to conduct the proceedings on an appeal petition, and, when so acting shall be referred to as the hearing examiner. Alternatively, the State Fire Commission may authorize and empower an impartial attorney as a hearing examiner with the specific powers listed in West Virginia Code 29A-5-1(d).

12.11. Subpoenas and Subpoenas Duces Tecum - At any hearing held hereunder, the tesitmony of witnesses and the production of documentary evidence may be required through the use of subpoenas and subpoenas duces tecum. Such subpoenas or subpoenas duces tecum may be issued at the request of the petitioner, the State Fire Marshal, or of the State Fire Commission, and shall be issued by and in the name of the State Fire Commission.

Every such subpoenoa and/or subpoena duces tecum shall be served at least five (5) days before the return date thereof, either by personal service made by any person eighteen (18) years of age, or older, or by registered or certified mail, but a return acknowledgment signed by the person to whom the subpoena or subpoena duces tecum is directed shall be required to prove service by registered or certified mail.

Any party requesting a subpoena or subpoena duces tecum must see that it is properly served. Service of a subpoena or subpoena duces tecum issued at the insistence of the State Fire Commission is the responsibility of such Commission.

Any public official who serves any such supboena or subpoena duces tecum shall be entitled to the same fee as a sheriff who serves a witness subpoena for a circuit court of this State; and fees for the attendance and travel of witnesses shall be the same as for witnesses before the circuit courts of this State. All such fees shall be paid by the State Fire Commission if the subpoena or subpoena duces tecum is issued at the instance of the commission. All such fees related to any subpoena or subpoena duces tecum issued at the instance of the petitioner or the State Fire Marshal shall be paid by the party requesting such subpoena or subpoena duces tecum.

A request for a subpoena or subpoena duces tecum shall be in writing and shall contain a statement acknowledging that the requesting party agrees to pay the aforesaid fee.

Any person receiving a subpoena or subpoena duces tecum issued hereunder shall honor the same as though it were issued by a circuit court of the State, and shall appear as a witness and/or produce such books, records, or papers in response to such subpoena or subpoena duces tecum. In case of disobedience or neglect of any subpoena or subpoena duces tecum served on any person or the refusal of any witness to testify to any matter regarding which he or she may be lawfully interrogated, the circuit court of the county in which the hearing is being held, upon application by the State Fire Commission, shall compel obedience by attachment

proceedings for contempt as in the case of disobedience of the requirements of a subpoena or subpoena duces tecum issued from such circuit court or a refusal to testify therein.

12.12 Evidence - (1) All witnesses appearing at such hearing shall testify under oath or affirmation. Every adverse party shall have the right of cross-examination of witnesses who testify, and shall have the right to submit rebuttal evidence.

(2) All relevant and material evidence, including papers, records, agency staff memoranda and documents in the possession of the State Fire Commission or the State Fire Marshal of which either party desires to avail himself, may be offered and made a part of the record in the case, notwithstanding admissibility objections which might be validly asserted in a court of law.

(3) Irrelevant, immaterial, or unduly repetitious evidence shall be excluded. Except as otherwise herein stated, the rules of evidence as applied in civil cases in the circuit courts of this State shall be followed in considering what evidence shall be admitted. However, when necessary to ascertain facts not reasonably susceptible of proof under those rules, reasonably authenticated evidence not admissible thereunder may be admitted, except where precluded by statute or privilege, if it is of a type commonly relied upon by reasonably prudent men in the conduct of their affairs.

12.13. Record of Proceedings - All of the testimony, evidence, and rulings on admissibility of evidence at any such hearing shall be reported by stenographic notes and characters or by mechanical means and in such a manner that an accurate transcript of the testimony may be prepared. An official record of the hearing will be prepared by the State Fire Commission, but a transcript, as aforesaid, need not be prepared by the State Fire Commission unless it be required for an appeal.

12.14. Informal Disposition - At any stage of the proceedings, informal disposition may be made of any contested case by stipulation, agreed settlement, consent order, or default.

12.15. Decision by State Fire Commission - Upon the conclusion of the hearing, the person designated by the State Fire Commission as hearing examiner shall prepare a recommended decision supported by findings of fact and conclusions of law affirming, modifying, or vacating the earlier order or decision of the State Fire Marshal with respect to which said hearing was held, and the State Fire Commission may, thereafter, either accept, modify, or reject such recommended decision, if it shall accept such decision it shall sign the same as its own; if it shall reject or modify the same, it shall prepare a written decision setting forth findings of facts and conclusions of law. In either event, the order signed by the State Fire Commission shall be final unless vacated or modified upon judicial review thereof. A copy of said order shall be served upon each party to the hearing and his attorney of record, if any, in person or by certified mail, return receipt requested.

12.16. Judicial Review - An appeal may be taken by the petitioner or by the State Fire Marshal to the Circuit Court of the county where the premises are totally or partially located, if filed within thirty (30) days after the date upon which such party was served with a copy of the final order or decision of the State Fire Commission. The final order signed by the State Fire Commission shall be final and conclusive if the proceedings for judicial review have not been duly instituted within the said thirty (30) day period.

SECTION 13. Severability

The sections and subsections of these rules and regulations shall be deemed severable. Should any section or subsection be deemed by judicial opinion unconstitutional or in any manner contrary to the laws of the State of West Virginia, then such opinion or enactment shall invalidate only that particular section or subsection of these rules and regulations and all other sections shall remain in full force and effect (provided such remaining portions are not determined to be inseparable) and to this end these rules and regulations are declared separable.

SPECIAL FIRE SAFETY TASK FORCE
REPORT TO GOVERNOR HUGH L. CAREY

Adequacy of Existing Fire Codes and Recommendations for Their Improvement

February 19, 1981

SPECIAL FIRE SAFETY TASK FORCE

TABLE OF CONTENTS

PREFACE

This is a report by the Special Fire Safety Task Force to Governor Hugh L. Carey. The Task Force was appointed by the Governor on December 9, 1980. It is comprised of local and state government officials, and experts in the health, fire prevention and safety fields. Its activities have been coordinated by the State Office of Fire Prevention and Control.

The Task Force members are:

Basil A. Paterson	Secretary of State and Chairman of the Task Force
Lee Alexander	Mayor, City of Syracuse
Warren Anderson	Majority Leader, New York State Senate
David Axelrod	Commissioner, State Department of Health
Richard A. Berman	Commissioner, New York State Division of Housing and Community Renewal, Chairman of Building Codes Council
J. Armand Burgun	Senior Partner, Rogers, Burgun, Shahine and Deschler, Architects, Chairman of the NFPA Committee on Safety to Life
Alfred DelBello	County Executive, Westchester County, Chairman of County Executives Association
Thomas Disbrow	Chairman, New York State Fire Safety Advisory Board
Alan Douglas	Fire Inspector and Codes Officer, Town of Onondaga
James L. Emery	New York State Assembly Minority Leader
Stanley Fink	New York State Assembly Speaker
William C. Hennessy	Commissioner, New York State Department of Transportation and Chairman, New York State Disaster Preparedness Commission
William Hopmeier	President, Firemen's Association of the State of New York
Charles J. Hynes	Fire Commissioner, City of New York
Gerald Lynch	President, John Jay College of Criminal Justice, Chairman, Fire Fighter Personnel Standards and Education Commission
Francis A. McGarry	State Fire Administrator, Department of State
Manfred Ohrenstein	Senate Minority Leader, New York State Senate
Richard Smith	Fire Commissioner, Yonkers Fire Department

The Task Force appreciates the assistance of the many people who participated in the Public Hearings, submitted written comments, and especially the following individuals:

John Collins
Donald Croteau
Lawrence DeLong
James Dillon
Milton Duke
Michael Edwards
Richard Farley
Renzy Hanshaw
Richard Harris
William Leavy
David Roberts
Joseph Spinnato

In addition, the Task Force wishes to especially thank the Chairpersons of the Task Force Sub-Committees.

Lee Alexander	- Review of Impact of Retroactive Code Enforcement
J. Armand Bergun	- Impact of Technological Changes and Experiences on Codes
Alfred DelBello	- Assessment of Existing Building and Fire Code Provisions
William Hopmeier	- Impact of Uniform State Building and Fire Prevention Code
Gerald Lynch	- Review of Adequacy of Present Enforcement System

EXECUTIVE SUMMARY

"Legislation is borne of catastrophe ... it always seems to be that we have to have a catastrophe and a loss of life before anybody gives a damn."[1] With this in mind, the Task Force attacked the problem so that no one might ever say that again.

Here is what the Task Force concluded:

- No single, adequate, enforceable building and fire code, with a minimum level of protection for the public, throughout the State.
- No adequate mechanism for incorporating technological change.
- An inadequate enforcement system characterized by the lack of trained personnel and lack of consistent qualifications.
- Retroactive enforcement of building and fire codes is essential. The majority of buildings in use in the year 2000 have already been built.
- Most fire deaths are caused by smoke inhalation with an apparent increase of involvement of petrochemical based and other synthetic materials.

The Task Force approached the problem assigned by establishing committees to work on each area of concern. In addition, the Task Force conducted a series of public hearings in Buffalo, Syracuse, Albany and White Plains. Using this approach, the Task Force was able to reach consensus on the problems with the existing fire code and enforcement system and direction for improvements which might be taken.

To meet the challenge of the inadequacies noted above, the Task Force makes the following recommendations:

1). Create a System of Effective Enforcement

Give county governments the power to enforce building and fire codes where cities, towns or villages within the county elect not to do so or are unable to effectively regulate. Give the State the power to

enforce where the local and county governments do not, or are unable to effectively regulate.

2). Establish a Consolidated Code-Making Body

Establish a single, state-level body which would have responsibility for developing a uniform building and fire code using a consensus mechanism. This code must have a strong life safety perspective and be enforceable throughout the State. It must establish clear minimum fire safety requirements for all structures (both new and existing, public and private) throughout the State.

In the interim, as soon as a recommended enforcement mechanism is in place, the existing State Building Construction Code and the State Fire Prevention Code should be made applicable in all areas of the State which are not now covered by a code. This provides a minimum level of protection for those areas not presently covered. Existing local codes will be left in place.

3). Improve Training of Code Enforcement Personnel

Assign responsibility at the State level for training and certifying code enforcement personnel using a system similar to the existing fire training program.

4). Initiate Intensive Public Awareness Program

An active program of public education on the importance of life safety codes should be designed to encourage compliance with safety laws and sensitivity to unsafe conditions. An informed public facing a life-threatening situation is far more capable of taking appropriate action.

5). Petrochemical and Synthetic Material Study

One of the major causes of death in fire tragedies is a direct result of the hazards of petrochemical based, and other synthetic construction materials and furnishings. It is recommended that the State

undertake an intensive study of the manufacturing of these petrochemical based and synthetic construction materials and furnishings.

6). Interim Legislative Actions to Provide a Greater Level of Safety

The Task Force encourages the legislature to pass your earlier proposals.[2]

A. Legislation to require the installation of early warning devices, such as heat and smoke detection for all public assembly facilities.

B. Legislation to require the regulation of flame spread and smoke propagation for floor coverings, furnishings, fixtures and other contents, and to regulate the fire load in all areas of public assembly.

The Task Force further recommends:

a. Mandatory notification of where fire exits are located, either written or verbal, depending upon the type of occupancy.

b. Installation of automatic fire suppression systems in certain existing buildings. Incentives be provided that could include tax incentives, insurance premium reductions, revolving funds, low cost loans, etc. The Task Force recommends that such legislation include the types of buildings which would be covered, implementation schedules to be imposed and incentives to be provided.

c. Building plan review by both fire and building officials.

NO SET OF RECOMMENDATIONS CAN GUARANTEE TOTAL SAFETY OR PROTECTION FOR THE PUBLIC AGAINST LOSS OF LIFE OR PROPERTY BY FIRE. WE CAN ONLY SEEK TO MINIMIZE THESE LOSSES THROUGH A THOUGHTFUL, COMPREHENSIVE, AND SENSIBLE MIX OF ALTERNATIVES DIRECTED TOWARDS CONTROLLING THE HAZARDS.

We must come up with a coordinated plan of action aimed not just at today or tomorrow, but to the days and years ahead. It is believed that implementation of the recommendations contained in this report will move New York State toward this objective.

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[1] Arthur Pforzheimer, Chairman of the Legislative Committee of the Firemen's Association of the State of New York, testified in White Plains, New York, on January 23, 1981.

[2] Appendix D - Governor's News Release dated December 9, 1980.

FINDINGS

1. The Adequacy of Existing Building and Fire Code Provisions

A single, adequate, enforceable building and fire code does not exist in this State. A multiplicity of codes and statutes exist (there are 18 different State legal authorities to establish and enforce fire and building regulations), but no one code covers all occupancies, is acceptable to all jurisdictions, or adequately covers the contents of buildings in terms of fire-load,[3] flame-spread[4] and smoke propagation.[5] In addition, there are extensive areas in the State where no codes are enforced for the general population. In those areas, only special occupancy codes, such as the Sanitary Code or the Labor Law, are enforced.

"We are faced with a 'patchwork quilt of codes'. In the case of Stouffer's, for example, I call it the tale of two cities or two communities. And I don't mean to be disparaging to any community. But White Plains, we all know, is the neighboring community of Harrison. Harrison's fire code has not been updated since 1925 and its building code wasn't upgraded until 1960. Although sprinklers and smoke detectors are within the code, they were not specifically required in this place of public assembly. So where it was a matter of a few feet within the less stringent codes of Harrison and outside of the more stringent codes of White Plains' jurisdiction, it was not necessary to meet the codes."[6]

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[3] Fire-load - the total amount of combustible material permitted in a specific area.

[4] Flame-spread - the rate at which flame will travel across the surface of a material.

[5] Smoke propagation - the smoke generating ability or characteristic of a material.

[6] Assemblyman John Branca - Testified in White Plains, NY on January 23, 1981.

2. The Ability of Code-Making Bodies to Reflect Technology Development

Committee research and public hearing testimony found the following: each of the various building and fire codes in the State are developed by different mechanisms; do not equally incorporate technical change in a formal manner, do not adequately reflect input from all groups affected by the code, and the possibility that the existing code-making structure may allow new building materials to be accepted without adequate testing. (The current testing and rating systems for building materials and furnishings seem inadequate because they do not always consider the various ways in which such materials might be used.)

"We are living in a highly technological society. Changes are occurring so rapidly that codes do not apply, or are incapable of changing to adopt to this new problem."[7]

3. The Adequacies of Local Enforcement Systems with Respect to Qualifications and Training for Enforcement Officers and Overlapping Jurisdiction

In New York State, the local enforcement system ranges from being quite good in the larger cities, to being virtually non-existent in the rural areas. The reasons for these disparities are: lack of trained personnel, the lack of consistent qualifications for such personnel, problems with coordination between fire and building departments, and the lack of local capacity to afford enforcement programs. In addition, because of the multiplicity of codes at various levels, certain establishments are covered by more than one code and can be inspected and cited by local, state and/or federal agents.

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[7]Joseph Jaret, Chief Deputy Fire Coordinator for Suffolk County, testified in White Plains on January 31, 1981.

"When a local municipality adopts a Fire Prevention Code, part of the legislation indicates who will enforce this code. On one occasion...the permanent town employee who was charged with this enforcement was the Animal Control Officer. The dog catcher is now the Town Fire Marshal."[8]

4. Retroactive Application of Code Amendments

The necessity of retroactive application of code amendments becomes apparent when one considers that a vast majority of all buildings which will be in use in the year 2000 have already been constructed. Therefore, some provisions to improve life safety must be applied to all existing buildings if they are to be effective. Certain priorities for special occupancies, such as public assembly areas, the elderly, and the handicapped, have a greater priority for retroaction than the single-family, private dwellings. The cost of retroactively modifying buildings to meet new code provisions may be expensive and the need for incentive and compliance schedules must be addressed.

"What in hell should we do with these buildings that are already standing? There's nothing in the Building Code that applies. It's not retroactive. There's nothing in the Fire Code that says I can go over and say, 'Look, I'm willing to give you five or 10 years, but I want you to start sprinkling that place from the top down,' and sooner or later they will get down to where we can reach them with our aerial ladders, but until they get down there, we'll sweat."[9]

5. The Need for a Uniform Statewide Fire Prevention and Building Construction Code

Because of a lack of a uniform State code, many problems in enforcement

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[8]Michael Waters, County Fire Coordinator, Onondaga County, testified in Syracuse, on January 20, 1981.

[9]Chief Thomas Hanlon, Fire Chief of the City of Syracuse, December 22, 1980.

and compliance exist. There are many areas with no code. Then there are other areas with a multiplicity of codes and enforcement activities. Without a uniform code, training for code enforcement is difficult, if not impossible to carry out. The resultant lack of consistency creates a significant lapse in public safety which contributes to the hundreds of fire deaths which occur each year in this State.

"I don't believe we can invite people to travel from New York to Buffalo and offer them different protections at every stop along the Thruway. I think they have to have a standard protection in any kind of building that they're in. That's a tough job, but we have to get on to it."[10]

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[10]Alfred DelBello, County Executive, Westchester County, Chairman of County Executives Association, December 22, 1980.

RECOMMENDATIONS

The recommendations which follow should be considered in light of the time frame necessary for implementation.

Work should begin immediately on developing a uniform Building and Fire Prevention Code, with the provision that interim measures be enacted until such a code has been developed. Implementation of these interim measures shall begin upon the enactment of the enforcement mechanism. This assumes that such enforcement legislation can be passed and implemented more quickly than the development of a uniform code. Enforcement of building and fire codes is the most critical element in the fire protection system. The effectiveness of any code in providing adequate levels of safety is directly proportionate to the effectiveness of the enforcement activities.

1. *Enforcement* -

   Give county governments the power to enforce building and fire codes where cities, towns or villages within the county elect not to do so or are unable to effectively regulate. Give the State the power to enforce where the local and county governments do not, or are unable to effectively regulate. This recommendation follows similar provisions of concurrent jurisdiction now existing for the State Police, the Weights and Measures Program in the Department of Agriculture and Markets and enforcement of the Sanitary Code by the Department of Health. Funds to pay for this activity could come from State revenues, a percentage tax on fire insurance premiums, or a fee for inspection services.

The establishment of a uniform Building and Fire Code for the State requires that the mechanism of enforcement for such a code be uniform as well. State enforcement of fire and life safety regulations for special occupancies can be consolidated into a single State agency, suitably structured to provide priority attention to fire and life safety objectives. This single enforcement mechanism would consolidate all existing regulations of special occupancies for fire safety purposes now widely dispersed among a number of State agencies.

Currently, the State Health Department provides enforcement in temporary residences, hospitals, and nursing homes. The Labor Department provides enforcement of health and safety regulations in factories and mercantile occupancies. The Department of State's Office of Fire Prevention and Control inspects all State University facilities, all State-owned office occupancies, including the Empire State Plaza, and provides inspection services to the Education Department, Division for Youth, and the Health Department. The Office has recently received requests to provide inspection services to the Board of Racing and Wagering, and the Office of General Services for State-leased occupancies.

Existing enforcement models, such as those for penal codes, weights and measures regulations, and the Health Department fire and life safety regulations, demonstrate that it is possible to develop a uniform enforcement mechanism. They call for concurrent jurisdiction[11] and graduated oversight[12] responsibilities. Such systems provide coordinated, consistent enforcement without overlap and conflict, and maintain the primacy of local enforcement.

The place to begin is to strengthen existing code enforcement efforts at the local level. In areas where no such efforts exist, responsibility should be established for this function.

Failure of municipalities to adopt adequate code enforcement programs within a reasonable period of time would result in the direct assumption of this function by the county. The county office would provide technical assistance for specialized enforcement problems in municipalities conducting their own enforcement. The county office would also review all enforcement activities in its jurisdiction, review and approve all requests for variances, and review recommended alternatives for existing structures. Enforcement at the county level can bring an objectivity to the process and strengthen uniform application and interpretation of code provisions.

While direct State enforcement is limited, the State can provide backup technical assistance to the county's enforcement function by sharing expertise and advice, and by providing a final review step in the variance process. State review of all variances and alternative safety recommendations would ensure uniform interpretation and application of code requirements Statewide.

The restructuring of the enforcement process would enhance the adequacy of enforcement Statewide. The establishment of concurrent enforcement authority at the municipal, county and State levels would establish a competent, coordinated enforcement system throughout the State.

2. *Code-making Body:*

Establish a single, state-level body which would have responsibility for developing a mandatory building and fire code using a consensus mechanism. This code must have a strong life safety perspective and be enforceable throughout the State. The single code-making body will include a balance between government, industry, independent experts, fire safety officers, and consumers. The code-making body will be responsible for considering options and exemptions from the uniform code.

The code must apply to new and existing, public and private structures. It must be one that architects can accept, builders can afford, owners can live with, and government is able and willing to enforce. This standard code should contain provisions for: building construction, contents, usage and maintenance of new and existing buildings, apply to government as well as privately owned buildings, and have special provisions for certain occupancies such as areas of public assembly, hospitals, schools, etc. Local options to the new code's fire protection provisions would be rigidly restricted.

Under the purview of the single systematic code-making body, special full representative committees would be established to address the safety levels and code provisions of particular occupancies. In this way, a broad-based representation would be maintained, while specific areas covered by the code would be developed by appropriate expertise and interest groups.

The uniform code would be placed on a periodic revision schedule. At the beginning of each code cycle (approximately every three years), the code-making body will issue a call for public comment. These public hearings will allow for examination of any code provision so interest groups would be unable

to unduly influence the content of regulation. If revisions are proposed, either by a sub-committee or some other interested party, the technical committee involved must consider each comment received and vote to reject it, accept it or accept it in principle with modification.

The code would be developed and formulated in several major sections. The first section would contain general construction provisions, definitions of types of occupancies, hazards, means of egress, fire protection features and building service equipment.

The second section would contain provisions necessary for each particular occupancy: places of assembly, health care facilities, multiple dwellings such as hotels and motels, one and two-family homes, and educational, penal, mercantile, business, industrial, and storage occupancies. (Each particular occupancy would be the responsibility of a single subcommittee.)

The third section would contain requirements to regulate the usage, maintenance, and general fire prevention behaviors necessary for safe occupancy of all facilities.

The fourth section would contain uniform administrative and enforcement procedures for effectively applying the provisions of the code.

In the interim, as soon as a recommended enforcement mechanism is in place, the existing State Building Construction Code and the State Fire Prevention Code should be made applicable in all areas of the State which are not covered by a legally adopted code. This provides a minimum level of protection for those areas not presently covered. Existing local codes will be left in place.

3. *Training and Certification of Enforcement Personnel.*

Minimum qualifications for all code enforcement personnel, using a mechanism similar to the existing Fire Fighter Personnel Standards and Education Commission, is recommended. The State alternatives include licensing and/or certification of enforcement personnel by the State. Responsibility should be assigned at the State level for training code enforcement personnel, similar to the existing fire training program.

Minimum qualifications and training requirements must be established for enforcement officers. Periodic training is also needed to keep personnel abreast of technological changes and code amendments.

The current State fire training program includes courses for inspectors and code enforcement personnel. These programs can be strengthened to meet minimum training requirements when established. The training can be delivered in the context of the existing delivery system, including both regional and residential training opportunities.

4. *Public Awareness Program*

An active program of public education on the importance of life safety codes should be designed to encourage compliance with safety laws and sensitivity to the unsafe condition. An informed public facing a life-threatening situation is far more capable of taking appropriate action.

The Task Force calls upon all forms of public communication and media to make appropriate time and space available for effective communication, announcements and messages, aimed at increasing the concern and awareness of the public on life safety issues.

5. *Petrochemical and Synthetic Materials Study.*

One of the major causes of death in fire tragedies is a direct result of the hazards of petrochemical based, and other synthetic construction materials and furnishings.

It is recommended that the State undertake an intensive study of the manufacturing of these petrochemical based and synthetic construction materials and furnishings to determine the following:

a) *The substantial reduction of the fire, flame, and smoke hazards of these materials through chemical alteration.*

b) *The impact on building costs if they are legislatively restricted or banned.*

c) *Assess the economic impact on State industry.*

INTERIM LEGISLATIVE ACTIONS TO IMPROVE LIFE SAFETY

Several interim legislative actions are recommended to provide a greater level of safety:

1) That guests at meetings and gatherings be read or provided a notification of where fire exits are located and what to do in case of an emergency. In addition, all hotels and motels post notices in each room showing the nearest fire exits and what they should do in case of fire. Eating establishments and places of entertainment, such as cabarets, nite clubs, taverns and the life be required to have such notification posted in a conspicuous place.

2) Installation of automatic fire suppression systems in certain existing buildings. Incentives be provided that could include tax incentives, insurance premium reductions, revolving funds, low cost loans, etc. The Task Force recommends that such legislation include the types of buildings which would be covered, implementation schedules to be imposed and incentives to be provided.

3) Require building plan review by fire and building officials.

The Task Force also encourages the legislature to pass your earlier proposals.

A) Legislation to require the installation of early warning devices, such as heat and smoke detection for <u>all</u> public assembly facilities.

B) Legislation to require the regulation of flame spread and smoke propagation for floor coverings, furnishings, fixtures and other contents, and to regulate the fire load in all areas of public assembly.

APPENDIX A

COMMITTEE REPORTS

ASSESSMENT OF EXISTING BUILDING AND FIRE CODE PROVISIONS

COMMITTEE REPORT

Al DelBello, Chairman

The Committee feels codes definitely need to be rewritten, updated, and existing codes need to be strengthened. We probably will have to establish a model code. It is felt that the process by which we approach the model code should be dealt with by the entire Committee.

The results of the state wide code survey in each county will be very important to the final assessment and report.

We should write a state code that can serve as a basis for comment (and criticism).

Care should be taken when changing codes to deal with existing buildings that met with standards when built, to achieve a realistic level of fire protection.

Sprinklers or other fire protection features when added could result in a reduce insurance rate.

It was emphasized that the state should reimburse local governments for code enforcement.

There should be a properly trained code enforcement agency responsible for fire safety related activities either at county, state or local levels with adequate resources. Presently, there are different layers which overlap or cause a lack of coverage in different areas.

Some fire safety concerns can be readily solved through legislation.

There is also a need for a public education program. Public information messages may help to make the public aware of dangerous fire safety conditions.

A code should deal with existing buildings, retrofitting and grandfathering.

It was noted that in one county there was a lack of codes in nine cases and good codes in other cases. Originally it was felt that there should be a county code, however after considering the information, we feel there should be a state code that could be strengthened at the county level.

A state commission should be formed to oversee provisions of the code, not to approve or disapprove, but to see that provisions of the code are not weakened.

Due to the cost of enforcement, the fire services could be in charge of inspections.

It was stated that the Insurance Services Office has available information on codes adopted in various municipalities in this state. People were not aware that this information was readily available. This proves again that there is information on fire safety which is segregated and stored in a way that it is not easily obtainable.

It was felt that the present laws and regulations should be stripped out and should be started over in a logical manner.

The county is a logical focal point for supervision of fire prevention. However, there may be problems at the county levels, such as conflicts with larger cities within the counties.

The responsibility has to be at one level. By using the county level, some uniformity would be gained. There could only be 58 variations instead of thousands.

It would be hard to believe that what is good for the city would not be applicable for the county. Many of the county legislators are from the cities as well as the other areas of the counties.

Presently it appears that the codes are complex and very difficult to work with.

An effort should be made to make them understandable. It must be stressed that building codes apply to new buildings and fire codes apply to maintenance of existing buildings.

If you are basically talking about maintenance of existing buildings countywide, it is agreed that that is a point.

APPENDIX A

REVIEW OF IMPACT OF UNIFORM STATE BUILDING AND FIRE PREVENTION CODE

COMMITTEE REPORT

William Hopmeier, Chairman

The Committee to Review Impact of Uniform State Building and Fire Prevention Codes convened on December 30, 1980, at the New York State Department of Health in Albany. Present were William Hopmeier, Chairman; William Leavy; Howard Gates; Frank DeCotis, New York State Department of Health; and Dave Roberts.

The Committee reviewed a proposed issues paper and list of recommendations prepared, as an agenda, by Mr. Hopmeier. Following discussion of the Code situation, the Committee concluded as follows:

1. Proper impact for a uniform building and fire prevention code requires development of a statewide building and fire safety code which will establish minimum standards for all construction and maintenance of public and private facilities in all political subdivisions including State sponsored and operated facilities.
2. Enforcement of such code, either through County or other authorized subdivisions, should utilize the fire control hierarchy. The State role should consist of establishment of performance standards and the evaluation of adequacy of local enforcement by the Office of Fire Prevention and Control. Where such is found to be inadequate, enforcement shall be directly carried out by the office.
3. To achieve the above, the State Office of Fire Prevention and Control should be authorized to establish such standards, to audit performance and to directly perform code enforcement activities where indicated.

4. A program of local assistance to Counties would need to be established to provide financial support for non-state code enforcement in areas performing in accord with the Office of Fire Prevention and Control standards. Estimated financial impact is five million dollars/year which may be offset by inspection fee revenue in whole or part.
5. A Commission should be established, authorized with review of code impact and adequacy of enforcement, as an oversight to the State program's operation and to develop needed code revisions. An annual report to the Governor and Legislature on the status of code impact and effectiveness in New York State could be required of the Commission.
6. It should be required that all existing buildings of over ten stories in height (possibly limited to facilities of public assembly, public congregation and use by the traveling public) shall 'retrofit' to conform to the minimum State code requirements over a time period (up to ten years is suggested) or at the time of major change in occupancy or structure, whichever occurs first.
7. The revised codes must include vigorous standards for all new materials used in construction and furnishing of facilities utilizing accepted testing laboratory acceptability standards.
8. Development of minimum State Building and Fire Protection Codes must include recodification of all current provisions for construction and fire safety.

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SPECIAL FIRE SAFETY TASK FORCE

COMMITTEE ON

IMPACT OF TECHNOLOGICAL CHANGES & EXPERIENCES ON CODES

J. ARMAND BURGUN, CHAIRMAN

The Committee does believe that experience does play an important role in the modification of building codes. Events such as the Coconut Grove Night Club fire in Boston in 1942 in which 492 lives were lost, focused national attention upon the importance of adequate exits and related fire safety features. The fires at Hartford Hospital, the Harmer House in Marietta, Ohio, and Sac Osage Hospital in Osceola, Missouri have all had their impact on health care codes.

Many of the changes brought about by these events were well thought out and have had a lasting impact. A few, however, were panic overreaction which were not enforced and soon modified or forgotten.

Technology should play a more important part in the modification of building, fire and life safety codes than it does. Much research has been and is currently, being undertaken by such organizations as the National Fire Protection Association, the National Bureau of Standards, the National Research Council of Canada, the University of Maryland, Illinois Institute of Technology, the United States Fire Administration, local fire services, industry, etc. In order for these research efforts and technological improvements to find their way into codes requires two efforts.

First, the material has to be collected, evaluated and disseminated to code-writing groups; and second, there must be a mandatory review process established for all existing codes and standards.

Unfortunately, many codes, building laws, standards or rules are not reviewed for many years, some even decades. This permits obsolete provisions to stay in place and does not allow the codes to keep pace with the latest state of the art. A mandatory review of the entire code should be required at least every three years.

The Committee believes that a building code and a fire prevention code should be companion documents and should be written, reviewed and amended at the same time. They should be published in one document; however, in

separate sections. Compartmentation is only an effective deterent against the spread of fire and smoke if it is properly maintained after the building has been occupied. The same is true for automatic detection, extinguishment or other life safety devices or design such as an engineered smoke control system.

Certain fire protection philosophies are assumed for different occupancies such as the total evacuation system for schools and the protect in place system for health care and penal occupancies. Fire drill training is as important in both systems as is early warning. Education is essential to proper performance.

The Committee believes that an effective and enforceable building and fire prevention code must have credibility in the eyes of legislators, the enforcing authorities, the design and building profession and the public to be protected. It must be uniform in content and uniformly enforced, eliminating overlapping jurisdiction, duplications and conflicts with other applicable codes.

It must keep pace with the latest state of the art by requiring a complete review every three years, and it should contain only proven, mandatory requirements, allowing local jurisdictions to add unique provisions for their areas such as lack of fire department, water supply, exposure problems between buildings, etc.

It should be based on facts rather than opinions making full use of research and modern technology. It must seek a balance between safety and the unreasonable infringement on freedom and liberty of occupants. The code must be cost effective or it could be at best wasteful or at worst ignored.

It must provide the design professions with alternative methods of achieving better or equivalent life safety in order to permit design innovations and not inhibit progress. The code must be concerned with interior decoration and furnishings as they play an important role in fire safety. They may be highly toxic and may propagate flame along the surface to accomplish flashover ahead of sprinkler operation.

The code should be coordinated and compatible with national, as well as international standards, espciallly as they deal with design standards, product manufacturers, flame spread and smoke development ratings, toxity values, etc. This is especially important with such federal programs as Medicare, Medicaid, OSHA, HUD mortgage guarantees, etc.

Finally, the codes must deal with new as well as existing construction. We have already built over 90% of the buildings that will be in use in New York State by the year 2000. Existing buildings are not only numerous, many are obsolete, were often constructed under ancient or nonexistant codes, have been altered many times -- sensibly or otherwise, have often changed occupancies -- sensibly or otherwise, and usually have far more deficiencies than new construction. The 1981 edition of the Life Safety Code covers both new and existing for all occupancies. Such tools as the "Fire Safety Evaluation System" developed by the National Bureau of Standards would be an invaluable aid in assessing the degree of danger inherent in each building for a given occupancy.

The Committee believes that code enforcement by education is the best and most effecient method of gaining acceptance and compliance. Attached to

this report are the methods currently used to amend the New York State Building Construction Code, the New York State Education Department, the New York State Corrections Commission and the New York State Health Department and the National Fire Protection Association. Also attached is a copy of the Federal Register, Part VI, Department of Commerce "Federal Interaction with Voluntary Standards Bodies; Procedures" dated January 6, 1981.

The Committee recommends that, in order to accomplish the above, the State of New York develop a mandatory building and fire prevention code in one document covering new and existing buildings. The codes should adopt by reference, recognized national standards such as ANSI and NFPA. The codes should be developed by a consensus process similar to that used by the National Fire Protection Association. The membership of the code-writing body should be broad based and balanced as to representation. It should include representatives of all New York State Departments concerned, building officials, fire service officials, design professionals, independent experts, industry, providers and consumers. Representatives from other code-writing groups from the private as well as the federal sector should be involved especially those involved with testing or research such as the National Bureau of Standards.

The code-writing organization should be under a parent overall Committee with sectional committees that deal with basic building blocks, such as means of egress, fire resistivity, interior finishes, windows and doors and occupancies committees such as housing, health care, education, etc. The committee efforts should be directed toward working with all sectors of the state and permit as much public input as possible. The committee should be charged with a compelte review of the codes at least every three years.

APPENDIX A

REVIEW OF IMPACT OF RETROACTIVE CODE ENFORCEMENT

COMMITTEE REPORT

Lee Alexander, Chairman

Retroactive Code Enforcement

Introduction

Hearings having been conducted during the week of January 19, 1981, in Buffalo, Syracuse, Albany, and White Plains; we are prepared to present our preliminary findings on the potential impact of requirements for retroactive code enforcement.

Given the limited time and resources available for, not just the work of this committee, but the work of the Special Task Force, as a whole, our findings present only the most general and broad conclusions. We hope that it will be possible to enhance these conclusions by consultations with architects, engineers, members of the building trades, business operators, property owners, and other members of the general public who could participate with and contribute to our examination.

On the evidence presented to date, compliance with the most effective aspects of retroactive code enforcement will present a serious hardship for all concerned. These include sprinklers, which are reported to be 95 percent effective in the suppression and/or containment of fire - and substantial changes in the nature of building materials and furnishings which would contribute substantially to a reduction in the production of the toxic gases which presently claim many more lives than does fire, itself.

A second group of actions may be more easily implemented. This group includes pressurization, detection and warning systems, and announcements to be made at public gatherings, which you, Mr. Chairman, have suggested, and which can be implemented without delay.

In preface to our findings, we are dealing with a difficult and sensitive problem. Ironically, it is not that we do not know how to describe the ideal situation, it is that we have not yet decided how to come to terms with it.

We do know that there is no single, simple, inexpensive solution to our dilemma. To the contrary, the solution requires a thoughtful, comprehensive, and sensible mix of alternatives, a coordinated plan of action aimed, not just to today or tomorrow, but to the years ahead, as well.

The Most Difficult Solutions

Sprinklers

The cost of sprinkler installation, from 50-cents to $1.00 per square foot (roughly the cost of wall-to-wall carpeting), must also take into account excessively high construction loan interest rates and the additional costs of testing and maintenance.

In some instances, owners who lease or rent property to others may face legal problems through a basic conflict between the requirements of retrofitting and the terms and conditions of leases. In other instances, owners will be unable to recover retrofitting costs through rent.

The retrofitting of sprinkler systems will be a disruptive process; in some cases, major reconstruction will accompany installation.

Balanced against the difficulties, sprinklers save lives and property, and they do so automatically.

Materials/Furnishings

A change from petrochemical-based materials and furnishings to others which, although they may burn, give off lower levels of smoke and less toxic quantities and types of gases, would work to suppress noxious

fumes, flashover, fire intensity, and other aspects of fire in modern buildings.

With more resistant and less poisonous fuel, a fire would progress more slowly, be more subject to suppression, less threatening to occupants during the first few minutes between detection and evacuation efforts.

At the same time, the impact of such a change on those industries and businesses which now formulate, produce, market, install, and maintain petrochemical based materials and furnishings would be high, as would be the inevitable replacement costs for building owners and occupants. In the first instance, building costs, themselves, might be altered upward substantially. We do not know.

The use of petrochemical based materials and furnishings is pervasive today. Even a phased transition to other types might seem impractical. The solution to the problem may well be in a chemical manipulation of these products to render them more resistant to fire, but our committee has received no testimony on this alternative, and its value remains speculative.

We do know, however, that the products of combustion, smoke and lethal gases, are deadly long before flames and heat reach the victims of most fires, and that they are just as deadly to the firefighters who must wade through them, often blindly, in order to reach and subdue the flames of a fire, and to rescue trapped occupants.

We also know that this solution, although difficult, deserves further serious consideration.

The Less Difficult Solutions

Pressurization

The use of fans and ducts to pressurize corridors, stairwells, and hallways is both a practical and cost efficient alternative. The IDS Center in Minneapolis, a 58-story building erected in 1972, was retrofitted for pressurization in 1976 at a total cost of $59,500.

Implementation of this alternative is more the product of redeployment, with some additional equipment, of existing ductwork and air movement systems than it is the result of retrofitting with all new equipment.

Pressurization provides not only safe escape for occupants in a fire emergency, safety for people both above and below a fire floor, it also provides clear and safe access by firefighters, who thus are able to more quickly and safely approach a fire.

In our opinion, pressurization is both a safety measure for the general public and an effective firefighting tool.

Detection/Warning

Detection and warning systems are the least expensive and most easily retrofitted measures identified in our hearings, but they also are subject to reliability problems, with attendant monitoring and maintenance costs.

In some instances on record, frequent false alarms generate total shutdown by building management agents or their employees, and/or a mood by occupants to disregard the alarms.

In our opinion, based on the testimony we have received, detection and warnings systems are preferred to every extent possible but of secondary importance to other measures, especially sprinklers.

Planning/Information

As the Chairman, Mr. Paterson, has recommended, people at public gatherings and events should be advised of the information they will need in the event of a fire. It is too late to wait until a fire has been discovered.

Each public facility should have a formal fire emergency/evacuation plan. Exits must be well marked. Independent emergency lighting should be provided. Instructions should be given to the public at all gatherings about each of the essential elements they must depend upon in the event of a fire, much as airline personnel routinely advise passengers before each flight.

Summary

In summary, it is our conclusion that the most effective measures to be taken to protect and preserve life in the event of fire are the most complex and most costly to implement through retrofitting. These are sprinklers and a change from petrochemical based building materials and interior furnishings.

As has been stated at our hearings, fully 90 percent of the buildings which will be in use in the year 2000 already exist today. Virtually all of these buildings would be subject to any retroactive code enforcement effort.

Two goals, therefore, become evident: the need to design a new set of requirements for fire safety - and the need to implement such new requirements in ways which minimize their impact and which enhance opportunities for compliance.

Recommendations

1) We recommend the phased implementation of retroactive code enforcement changes. The time period is subject to further discussion,

but it has been suggested that changes be enforced on the basis of 10 percent compliance per year over a period of ten years. This would spread the burden over a period of time. Legislation requiring retrofitting should relieve owners of any contractual obligations with lessors or renters which would work to prevent compliance.

2) We recommend a program of incentives to encourage the fullest possible and speediest compliance with changes in fire safety requirements. We recommend the following:

- Low interest loans designed to encourage maximum financial contributions by owners, themselves, perhaps requiring 50-percent private capitalization.
- Grants for owners who demonstrate special hardship conditions which prevent them from compliance on their own to any reasonable extent. We envision this incentive to apply to small, so-called "Mom and Pop" operations.
- Tax incentives/credits for retrofitting activities which conform to the higher standards, with the size of the incentive keyed to the speed at which retrofitting is completed - that is the faster the retrofitting, the higher the credit.

3) We recommend changes in New York law relating to the insurance industry which will require rate reductions keyed, not just to the retroactive changes in code enforcement, but to all additional fire safety techniques and technology which may be developed and deployed, as well.

In the past, the insurance industry has seemed content to assess a total risk and to apply rates accordingly. Building owners have seemed content to balance insurance costs against the negligible and inconsistent availability of rate incentives and simply to pay. This has worked to suppress the implementation of fire safety technology and techniques.

REVIEW THE ADEQUACY OF PRESENT ENFORCEMENT SYSTEM

COMMITTEE REPORT

Gerald Lynch, Chairman

This committee has met on several occasions, in Albany and New York City, to examine and discuss the present fire protection enforcement system in our State. The size of the problem became immediately apparent to all, and especially to those of us who were considering the matter for the first time.

The development of our recommendations should be considered in the context of several factors which permeated our deliberations and fact-gathering:

a) The fire prevention enforcement system is no more a "system" than is the criminal justice "system."

b) Prevention enforcement has been more a function of community size, economics, political priorities, the variables of which code or codes to which a community has made a commitment, and the inevitable realities of competing governmental financial needs than of the recognition of the real hazards.

c) It proved to be impossible to consider the adequacy of the present enforcement "system" in the abstract since such enforcement as is done is inevitably intertwined with provisions of the various codes. We therefore had to consider and comment upon proposed code modifications. In this regard I commend the report of the committee on uniform codes chaired by Mr. Hopmeier and submitted to you earlier.

d) The recodification of the protective mechanisms in the many codes into a uniform set of standards is a necessity to begin the process of effective and humane protection for the people of this State. Such recommendations as may evolve could have political and fiscal implications for the State and local governments, but this Committee should not be thereby dissuaded from rendering its best collective judgment.

Recommendations:

1. The rural and semi-rural areas of our State have not been given the sort of State assistance in code enforcement which might enable them to provide adequate protection for their citizens. It was determined that the New York State 50/50 cost-sharing formula for code enforcement in communities with populations over 100,000 (which results in $8,000,000 in aid to NYC annually) should be extended to our smaller communities. The extension of this aid should be conditioned minimally upon:

a) acceptance of a uniform fire protection code, and

b) the training, oversight and performance evaluation by the NYS Office of Fire Prevention and Control, and

c) a clear provision for the withdrawal of local aid should enforcement not meet the aforementioned minimum uniform code requirements

2. The development and enactment of a uniform building and fire prevention code to establish clear minimum fire safety requirements for all structures (both new and existing, both private and public) throughout the State. The aforementioned implies the combining of

fire protection provisions of existing codes for buildings, fire prevention, etc. It was the committee's judgment that this proposed uniform code should rigidly restrict local options to the new code's fire protection provisions.

3. The professional training of regional inspectors and the concomitant performance evaluation of such inspectors are obvious necessities in successfully implementing the proposed uniform code. It is considered fiscally prudent by this committee to locate this responsibility in the existing structures of the NYS Office of Fire Prevention and Control. This mandate should clearly provide OFPC with authority to impose sanctions for non-compliance, such as the authority to intervene and supersede local inspections where it is determined that unsafe conditions persist.

4. In consideration of the implementation of the aforementioned improved fire protection enforcement system, several support mechanisms should be considered:

a) The increased costs of local inspection and State supervision should be offset by a schedule of fees to be applied to builders and owners of realty. These fees should be maintained at minimal levels to cover costs to the State and not to develop into a revenue source.

b) An ongoing evaluation apparatus should be designated under the jurisdiction of the Office of Fire Prevention and Control to assure that the new codes and enforcement policies properly address the safety needs of the public.

5. The question of fire safety protection in public buildings and structures built under governmental auspices received a great deal of our attention. On this point we would remind the Chair of public testimony offered at the hearings in Buffalo and Syracuse regarding the inadequacy of fire protection in UDC sponsored residential structures in those jurisdictions. Therefore it is recommended that:

a) the principle of governmental exemptions from codes and enforcement provisions be re-examined in light of the reality that such exemptions suggest a lower quality of protection for the employees and residents of governmental and government-sponsored structures than that required of the private sector, and

b) by way of emphasis and specificity the committee urges that the Education Law be amended to specify who shall conduct fire safety inspections in all schools, both public and private, and further that such specified individuals be the subjects of training and certification by the NYS OFPC. These amendments should include the requirement that infractions of, or non-compliance with, the uniform fire safety codes be made a matter of public record by notification to local government and the local school board.

6. All work places in the State should be required to adhere to the minimum fire safety codes.

7. The matter of tax incentives should be explored in consideration of the installation and maintenance of upgraded fire prevention and protection systems and practices as approved by the OFPC.

8. A meaningful state-wide public education program should be designed and executed to address the following circumstances:

a) The public must be reminded by means other than the periodic disasters such as happened at Stouffer's Inn of the critical nature of superior codes and enforcement.

b) The political leaders across the State will be more effective in implementing quality protection if they have the implicit support of an informed electorate.

c) The sad fact that 8,000 Americans per year perish in fires and that this represents the worst experience of all of the industrialized nations in the world. Death by fire must not be considered inevitable by the leadership of this great State. The education of our public is therefore of paramount importance in making new legislation and codes workable and effective.

d) The names of persistent fire safety violators in licensed premises should be published in the same fashion as health code violators in NYC are made publicly known.

9. The question of local options and perceived needs for exemption from the uniform code should be the responsibility of the evaluation unit recommended in 4.(b) above.

The foregoing represents our best judgments regarding the matter of the safety code enforcement in our State. We grant that our suggestions are rather general in nature but will claim that this broadness results from the strictures of time and not the limitations of our interest and concern for these critical matters of public policy. In closing, we

collectively commend the Chair for moving the matters before this diverse Task Force with such effectiveness, energy and admirable grace.

We will continue to be available to you in whatever way you think useful.

APPENDIX B

SUMMARY OF CODE APPLICATION AND ENFORCEMENT

OBTAINED FROM COUNTY-BY-COUNTY SURVEY

OFFICE OF FIRE PREVENTION AND CONTROL

County Code Survey - status as of
February 12, 1981

Main survey form received by Office of Fire Prevention and Control	31
- complete information provided	10
- most information provided	13
- little information provided	8
Statement of county head received, signed by principal or by someone else	13

Out of a total of 57 counties plus New York City.

Contact has been, and is continuing to be, made with both counties that have not returned the survey and those who sent incomplete information.

The 31 surveys returned provided information on 844 municipalities, out of a total of about 1,550.

This represents approximately 14,012,000 people out of a 1980 U.S Census estimate of 17,477,000 for the State, including 7,015,000 in New York City.

INITIAL REVIEW OF CODE SURVEY
(as of 2/12/81)

1. Adoption of building code far outnumbers Fire Code adoptions (which we knew before). The majority of places adopting a fire code have used the State Fire Prevention Code. In second place are the AIA/NBFU Code. All other code types are fairly small in number.

2. The acceptance of building and fire codes has a direct relationship with greater population density and higher property valuation.

3. In the "more well-off" counties, those with a good mix of urban/suburban development and a sound economy, the municipalities generally have the codes (see Dutchess, Monroe, etc.).

4. Enforcement is a mixed bag with levels of personnel and competence having the same relationship with population and property value as number 2.

5. Fire department and other fire inspection activities are very light and in no way adequate for the job. Full-time effort is minimal. Experience, training and capabilities are questionable.

6. Those areas that have a pattern of adoption of codes tend to be communities which have had one or more particular tragedies in the past.

7. In a minority of cases, the fire codes that do exist are enforced by non-fire department personnel, such as a building inspector, zoning administrator, etc.

8. Many places have no zoning, building, or fire codes. But a few of these places have adopted minimal land use regulations necessary to qualify for the federal flood insurance program.

February 12, 1981

TABULATION OF SURVEY INFORMATION

Surveys Returned - 31 providing data on:

		Percent
cities	44	5
villages	354	42
towns	446	53
	844 municipalities	100% (or just over ½ of all municipalities in NYS)

This is out of 58 surveys sent, covering over 1,500 municipalities.

Acceptance of Building Codes

	no code	1 or more codes	no reply	total
city	0 0% 0%	42 9% 95%	2 4% 5%	44 100%
village	106 32% 30%	229 49% 65%	19 42% 5%	354 100%
town	227 68% 51%	195 42% 44%	24 53% 5%	446 100%
total places	333 100% 40%	446 100% 55%	45 100% 5%	844 100%

Acceptance of Fire Codes

	no code	1 or more codes	no reply	total
city	1 -% 2%	43 13% 98%	0 0% 0%	44 100%
village	170 34% 48%	181 56% 51%	3 21% 1%	354 100%
town	333 66% 75%	102 31% 23%	11 79% 3%	446 100%
total places	504 100% 54%	326 100% 39%	14 100% 2%	844 100%

APPENDIX C

CURRENT STATE LEGAL AUTHORITIES FOR RULE MAKING

APPENDIX C CURRENT STATE LEGAL AUTHORITIES FOR RULE MAKING

CORRECTION LAW

Sec.
25. Mutual assistance by institutional and local fire fighting facilities.

EXECUTIVE LAW

ARTICLE 18 - STATE BUILDING CODE

Sec.
370. Statement of legislative findings and purposes.
371. Short title.
372. Definitions.
373. State building code council established.
374. Purpose of the council.
374-a. Procedure for acceptance and withdrawl by municipalities.
375. Standards for code.
376. Limitation of application.
377. Procedure for adoption of rules or regulations and modification, amendment or repeal thereof.
378. Powers of the council.
378-a. Powers of the commissioner of housing.
379. Incorporation of higher standards by council upon recommendation of municipality.
380. Issuance of licenses, permits and certificates.
381. State building construction board of review.
382. Powers and duties of the board of review.
383. Administration.
384. Injunction and abatement of illegal construction.
385. Penalties for violation.
386. Local building regulations.
387. Construction.

ARTICLE 18-A - STATE BUILDING CONSERVATION AND FIRE PREVENTION CODE

Sec.
390. Statement of legislative findings and purposes
391. State building conservation and fire prevention code
392. Procedure for acceptance or withdrawl by municipalties
393. Procedure for adoption or amendment
394. Adoption of higher standards upon recommendation of municipalities
395. Local variances in application
396. Jurisdiction, administration and enforcement
397. Local regulations
398. Review
399. Construction

Amendments, 373., 374-a., 378-b., 379., 382., 386., 390., 391., 393., 395., 396., 397., 399.

GENERAL BUSINESS LAW

OIL AND DISTILLED SPIRITS

Sec.
306. Fire and light within one hundred and fifty feet of warehouses in the counties of New York, Kings, Queens, and Nassau prohitited
306-a. Law violation

ARTICLE 29 Flammable Fabrics Act

GENERAL CITY LAW

20.12 Fire Protection

LABOR LAW

ARTICLE 7 - GENERAL PROVISIONS

Sec.
200. General duty to protect the health and safety of employees: enforcement

FACTORIES
TITLE 3 - FIRE HAZARD

Sec.
260. Incombustible, fire proof and fire resisting or fire resistive material
261. Fire door
262. Fireproof window or fire window
263. Fireproof partition or fire partition
264. Fireproof building
265. Fire wall
266. Exterior enclosed fireproof stairway
267. Horizontal exit
268. Exterior screened stairway
269. Application of provisions
270. Construction of buildings erected after October first, nineteen hundred and thirteen
271. Requirements for buildings erected before October first, nineteen hundred and thirteen
273. Fire escapes erected after October first, nineteen hundred and thirteen, on buildings theretofore erected
274. Fire escapes erected before October first, nineteen hundred and thirteen
277. Notice of issue of local construction permit
278. Limitation of number of occupants
279. Fire alarm signal systems and fire drills
280. Automatic fire extinguishing systems
316. Duties of owners and occupiers

Amendments 200., 200-f., 270., 272.

LABOR LAW

INDUSTRIAL CODE RULE

# 2	Exits, Exit Enclosures, Vertical Openings and Floors in Factory Buildings
# 5	Fire Alarm Signal Systems
# 7	Fire-Restrictive Construction
# 7	(Supplement) Approved Materials and Assemblies Required in Fire-Resistive Construction
# 8	Construction, Guarding, Equipment, Maintenance and Operation of Elevators, Dumbwaiters, Escalators, Hoists and Hoistings, in Factories and Mercantile Establishments
#12	Control of Air Contaminants in Factories
#13	Specifications of Fire Escapes Accepted as Required Means of Exit
#15	Smoking in Factories
#18	Exhause Systems
#20	Automatic Fire Extinguishing Systems
#24	Fire Drills
#26	Mercantile Establishments
#29	Dry Dyeing Plants and Dry Cleaning Plants
#36	State Standard Building Code for Places of Public Assembly
#37	Manufacturing, Handling and Storage of Military Pyrotechnics
#38	Radiation Protection
#39	Possession, Handling, Storage and Transportation of Explosives
#44	Fire Hazard Classification of Occupancies
#45	Amusement Devices and Temporary Structures at Carnivals, Fairs and Amusement Parks
#380	Existing Fire Escapes

NEW YORK STATE DEPARTMENT OF SOCIAL SERVICES

1. Regulation for Foster Care Residential Facilities
2. Family Day Care Homes
3. Day Care Center

NEW YORK STATE COMMISSION OF CORRECTION

1. Fire Safety Regulations

Sec.
7039. - 7039.10

NEW YORK STATE DIVISION FOR YOUTH

Sec. 515.1 Mutual Aid with other Fire Departments

NEW YORK STATE EDUCATION DEPARTMENT

Regulations of the Commissioner of Education

NEW YORK STATE DIVISION OF SUBSTANCE ABUSE SERVICES

Part 2020 of the Mental Hygiene Law

NEW YORK STATE HEALTH DEPARTMENT

Part 7 New York Sanitary Code

OFFICE OF MENTAL HEALTH

Sec.
7.27(b) Fire mutual aid

OFFICE OF MENTAL RETARDATION

Sec.
13.27(b) Fire mutual aid

ARTICLE 14, PART 86
Operation of Community Residences with respect to Safety to Life from Fire

MULTIPLE DWELLING LAW

GENERAL PROVISIONS

Sec.
3. Application to cities, towns and villages
4. Definitions
11. Dwellings damaged or moved
12. Prohibited uses
13. Application of chapter to existing dwellings
14. Application of chapter to uncompleted dwellings
25. Application of article three
26. Height, bulk, open spaces
30. Lighting and ventilation of rooms
31. Size of rooms
32. Alcoves
33. Cooking spaces
34. Rooms in basements and cellars
35. Entrance doors and lights
36. Windows and skylights for public halls and stairs
37. Artificial hall lighting

TITLE 2 - FIRE PROTECTION AND SAFETY

Sec.
50. Entrance halls
50-c. Rights of tenants to operate and maintain a lobby attendant service
51. Shafts, elevators and dumbwaiters
51-a. Peepholes
51-b. Mirrors in connection with self-service elevators
51-c. Rights of tenants to install and maintain locks in certain entrance doors
52. Stairs
53. Fire escapes
54. Cellar entrance
55. Wainscoting
56. Frame buildings and extensions
57. Bells, mail receptacles
58. Incombustible materials
59. Bakeries and fat boiling
60. Motor Vehicle storage
61. Business uses
62. Parapets, guard railings and wires
63. Sub-curb uses
64. Lighting, gas meters, gas and oil appliances
65. Boiler rooms
66. Lodging houses
67. Hotels and certain other class A and class B dwellings
75. Water supply
76. Water-closet and bath accomodations

FIREPROOF MULTIPLE DWELLINGS

NON-FIREPROOF MULTIPLE DWELLINGS

GARDEN-TYPE PROJECTS

CONVERTED DWELLINGS

TENEMENTS

OCCUPANCY - ARTISTS

Amendments, 50., 78., 104.

MULTIPLE RESIDENCE LAW

INTRODUCTORY PROVISIONS; DEFINITIONS

OLD MULTIPLE DWELLINGS

HOTELS AND SIMILAR DWELLINGS

NEW MULTIPLE DWELLINGS

FIREPROOF NEW MULTIPLE DWELLINGS

MULTIPLE RESIDENCE LAW

NON-FIREPROOF NEW MULTIPLE DWELLINGS

Sec.
251. Height limitation
252. Sub curb use
253. Construction of first floor
254. Egress from dwellings
255. Egress from apartments
256. Bulkheads and scuttles
257. Public stairs
258. Public halls
259. Cellar and basement stairs
300. Registry of owner

RULES & REGULATIONS

Rule 1 Fire alarm systems in hotels and similar dwellings
Rule 2 Fire detecting systems in hotels and similar dwellings
Rule 3 Watchman's clocksystems in hotels and similar dwellings
Rule 4 Sprinkler systems in hotels and similar dwellings
Rule 5 Sprinkler systems for special locations in multiple dwellings
Rule 6 Fire escape systems
Rule 7 Motor vehicles storage in new multiple dwellings or upon the premises thereof

MUNICIPAL HOME RULE LAW

10. General powers of local governments to adopt and amend local laws

PUBLIC HEALTH LAW

206. Commissioner; general powers and duties
Amendments, 206.

REAL PROPERTY LAW

PORTABLE KEROSENE HEATERS

Sec.
239. Legislative findings
239-a. Definitions
239-b. Unapproved portable kerosene heaters prohibited in structures
239-c. Penalties for violation
239-d. Application of article

TOWN LAW

130.(5) Fire prevention

VILLAGE LAWS

FIRE DEPARTMENT

10-1002 Rules and regulations
10-1004 Organization of companies

APPENDIX D

PRELIMINARY REPORT TO THE GOVERNOR

(December 8, 1980)

BASIL A. PATERSON
Secretary of State

STATE OF NEW YORK
DEPARTMENT OF STATE
162 WASHINGTON AVENUE
ALBANY, NEW YORK 12231

TO: GOVERNOR HUGH L. CAREY

FROM: BASIL A. PATERSON

DATE: DECEMBER 8, 1980

The staff and I have reviewed the general questions surrounding the needs for action in the areas of fire prevention and control. Herewith are summarized recommendations and I am attaching a preliminary background report.

The Department of State's recommendations fall into three categories: Immediate, those requiring legislation, and issues with sufficient complexities to require further study.

I. We recommend the following immediate actions:

A. Direct me as Secretary of State to request that County Executives, Chairpersons of County Legislatures, and Chairpersons of County Boards of Supervisors, in and through their County Fire Coordinators, file a report with the Secretary of State by January 15, 1981, which will include:

1. a survey to determine the application of Building and Fire Codes in each of the municipalities of the County.

2. a description of the method of enforcement in effect in each community.

B. Direct the State Commissioner of Health to take the steps necessary to insure that all Counties fully implement Part 7 of the Sanitary Code - with special emphasis on training of employees on evacuation procedures. (Part 7 of the State Sanitary Code, promulagated under the State Public Health Law, establishes regulations to provide health and sanitary protection, including fire protection, to the public in certain hotels, motels, and other temporary residences in the State.)

C. Direct the State Building Code Council to re-evaluate the standard for "adequate" means of egress in public assembly occupancies.

D. Initiate a Public Awareness and Education Campaign that

(1) requests that all public gatherings be informed, by announcement, of the location of emergency exits and what to do in case of fire.

(2) immediately request that the media widely publicize that the operators of public assembly facilities have been requested to make such announcements.

(3) establish an information and complaint telephone line to assist the public in the identification of facilities not complying with fire protection codes or not making such announcements.

II. We recommend the following Legislative actions:

A. Legislation be proposed to require the installation of early warning devices, such as heat and smoke de-

tection for all public assembly occupancies.

B. Legislation be proposed to require the regulation of flame spread [1] and smoke propagation for floor coverings, furnishings, fixtures and other contents, and to regulate the fire load [2] in all public assembly occupancies.

III. To deal with those issues requiring further study we recommend the creation of a Special Fire Safety Task Force composed of representatives of State legislative leaders, local officials, and experts in the field of fire safety. This body should be directed to make a comprehensive report by February 15, 1981. Its work can be coordinated by the State Office of Fire Prevention and Control.

Suggested areas for review by the Task Force are:

(1) The adequacy of existing building and fire code provisions.

(2) The ability of the code-making bodies to reflect technological developments in fire and life safety as well as lessons learned from experience.

(3) The adequacy of the local enforcement system for fire and life safety regulations, including qualifications and training for enforcement officers, consistency of code interpretation and uniform application of provisions.

(4) Retroactive application of Code Amendments.

(5) The need for a uniform statewide Fire Prevention and Building Construction Code.

1-flame spread-the rate at which flame will travel across the surface of a material.

2-fire load-the total amount of combustible material permitted in a specific area.

A PRELIMINARY REPORT ON THE STATUS OF FIRE AND LIFE SAFETY REQUIREMENTS IN NEW YORK STATE

Prepared for Governor Hugh L. Carey

December 8, 1980

By Basil A. Paterson,
Secretary of State

SUMMARY

On November 21, 1980, the nation was shocked by the disastrous fire in the MGM Grand Hotel in Las Vegas, Nevada. Shortly thereafter, the Staff of the Department of State Office of Fire Prevention and Control had begun a review of facts in the MGM fire to determine what lessons could be learned to improve fire and life safety in New York State. On December 3rd, staff officials met in Albany to discuss, among several issues, the results of the fire including early detection and the possible impact of sprinkler protection for public assemblies. Staff deliberations on the MGM fire were suddenly interrupted.

On December 4, 1980 at approximately 10:20 a.m., a fire flashed through Stouffer's Inn Conference Center located in the Town of Harrison, Westchester County, New York. The fire took 26 lives and injured an additional 24 persons. This fire occurred only two weeks after the MGM Hotel fire in which 84 people lost their lives and more than 300 were injured. At the time of the MGM fire, there were many who thought this type of fire could not happen in New York State. The fact of the matter is a similar fire did occur, and conditions exist in many other types of buildings that could possibly result in future large losses of life due to fire.

The short period of time available for completion necessitates that this report be considered preliminary. It contains highlights of what is generally considered to be a complex subject which impacts directly the daily life of every citizen in the State. While information on both the Harrison and Las Vegas fires is still incomplete, reflections on available facts is warranted.

While the issues of early detection and effective means of evacuation are brought to the forefront by the tragedies of Westchester County and the MGM Hotel, it should be noted that on the same day that the Stouffer's Conference Center fire occurred nine lives were lost in a Brooklyn multiple residence fire and two lives were lost in Staten Island in a private dwelling. These grim statistics occurring continually necessitate action not only with respect to places of public assembly such as conference centers and hotels, but in occupied buildings of all types.

The incident at Stouffer's Inn Conference Center raises questions regarding the adequacy of building and fire codes in New York State, and the manner in which they are enforced. The complexities of these questions and the scope of their possible answers impact the entire socio-economic structures of the State, the traditional areas of influence of State agencies, and current status of State-local government relationships.

BUILDING AND FIRE CODES IN NEW YORK STATE

At present, in New York State, the adoption and enforcement of both Building and Fire Codes is the responsibility of cities, towns and villages. The State Building Code Council has promulgated a State Building Construction Code and a State Fire Prevention Code that are available for adoption by local municipalities. To date, of the more than 900 municipalities, over 700 have adopted the State Building Construction Code and approximately 150 municipalities have adopted the State Fire Prevention Code.

In addition, the City of New York and the City of Buffalo have adopted their own building codes. These two cities have also adopted their own fire prevention codes, and several other municipalites throughout the State have adopted either the National Building Code or the National Fire Prevention Code; both of which are model codes developed and recommended by the American Insurance Association. At present there is one county, Nassau, that has enacted a county-wide fire prevention code, which is enforced by the office of the County Fire Marshal.

In addition, there is a complexity of State laws and State agency rules and regulations on fire and life safety which complicates the situation. These laws, rules and regulations apply concurrently and sometimes in conflict with local codes.

For example, the State Multiple Residence Law is applicable in communities across the State, except in the Cities of New York and Buffalo. In addition, State Health Department rules and regulations (Part 7 of the Sanitary Code) apply statewide to temporary residences such as hotels, motels, camps, etc. For correction facilities of both the State and local governments, rules and regulations from the Commission of Corrections apply

statewide, and for local mental health facilities, rules and regulations of the Office of Mental Health are applicable. In certain other instances, local occupancies will come under the additional regulations of the Department of Labor and the Industrial Code rules. This plethora of fire and life safety regulations present a complex matrix of standards which is at times conflicting and, at the very least, confusing.

Basically, the matrix of interaction is based on four major variables:

(1) Geographic location - Has the locality passed a code; either a State recommended model code or any other model codes for construction, electrical, or fire?

(2) Occupancy type of structure - For certain types of occupancies the State has enacted requirements that are in force, irrespective of local codes. Each occupancy type (hotel, apartment building, convention center, sports arena, etc.) could be affected by several different State agencies, each of which have codes that in some way include fire standards, (most notable amongst these are the Health Department's State Sanitary Code, the Labor Department's Industrial Code Rules, the Multiple Residence Law, and the Federal Occupational Safety and Health Act. In addition, there are regulations imposed by agencies such as the Department of Social Services and the Department of Education before they will allocate State and Federal subsidies).

(3) Time of construction of building - All of the standards in categories #1 and #2 above will vary depending upon their application to new construction or whether they require upgrading of existing buildings.

(4) Ownership of buildings - State Government exemption from local and State standards has been interpreted by the courts to apply to fire

and life safety codes. This exemption has been extended to legal entities created by the State. Thus, for example, a hotel built by a regional industrial development entity created by the State does not have to legally comply with any of the otherwise in force local or State standards. Compliance is therefore, voluntary.

THE STATE BUILDING CONSTRUCTION CODE AND ITS ENFORCEMENT

The following sequential outline is designed to evaluate strengths and weaknesses of the existing State Building Construction Code and enforcing aspects.

(1) The State Building Code Council promulgates regulations for the construction of buildings and the installation of equipment that is essential to building operation and maintenance, such as, plumbing, heating, electrical, ventilation and fire-protection equipment. "The purpose of its regulations is to encourage the standardization of construction practices, equipment and material and eliminate restrictive, obsolete and conflicting building regulations which unnecessarily increase cost, retard the use of new materials or provide unwarranted preferential treatment to materials, products or methods of construction; and to establish reasonable safeguards for the safety, health and welfare of the occupants and users of buildings." [1]

(2) "The administration and enforcement of the code are the responsibility of the local municipality pursuant to its own administrative ordinance." [2]

(3) The municipalities of the State have the option to adopt or not to adopt the State Building Construction Code.

When a municipality adopts the State Building Construction Code, a local inspector is responsible for the interpretation and enforcement of the Code. There are no standard qualifications for building inspectors. Varied backgrounds and training prerequisites account for wide disparities in levels of expertise. Hence, the enforcement of the codes would vary from community to community.

[1] State Building Construction Code., "Forward", page v, 1972 ed.

[2] Ibid, page v.

(4) Enforcement is a local responsiblity.

(5) Builders and developers may appeal to the State Building Construction Code Council for variances from certain provisions of the code.

(6) Recent criticism from local fire officials statewide reflects their belief that the Code Council does not adequately reflect public safety interests. One member of the Council is specifically chosen from a public safety group. This is a result of a recent legislation changing its membership.

It should be noted that tougher laws, codes, and standards are only as effective as their enforcement.

STATE OF NEW YORK
EXECUTIVE CHAMBER
HUGH L. CAREY, GOVERNOR

Michael Patterson, Press Secretary
518-474-8418
212-977-2716

FOR RELEASE:
IMMEDIATE, TUESDAY
DECEMBER 9, 1980

GOVERNOR CAREY RELEASES REPORT ON FIRE STANDARDS: WILL IMPLEMENT RECOMMENDATIONS

Governor Hugh L. Carey today released a preliminary report prepared by Secretary of State Basil A. Paterson on the status of fire and life safety codes throughout New York State. The Governor announced he will begin implementation of several of the report's recommendations for immediate and long-range action.

Last Friday, Governor Carey requested Secretary Paterson's office to prepare the report over the weekend, following the fire which killed 26 persons at a hotel meeting room in Westchester County.

Immediate actions which Governor Carey said would begin today include:

--He will request that all county executives in the state prepare county-wide reviews of the fire and safety codes of all localities in their counties, including the inadequacies of the codes and the effectiveness of their local enforcement. County governments do not have the authority to develop or enforce fire codes, as do cities and towns. However, Governor Carey said he will propose legislation giving county governments such authority to adopt their own plans.

--Governor Carey directed State Health Commissioner Dr. David Axelrod to report by December 15 on the effectiveness of county-by-county enforcement and implementation of the state sanitary code, which includes standards for fire safety in hotels, motels, resorts and similar facilities, and step up efforts to insure full implementation and enforcement.

Governor Carey said the short term report he received from the Department of State is "the initial step in what must be a long and thoughtful effort to develop fire and safety codes which uniformly reflect the latest fire prevention knowledge. However, the steps must be taken now, to assure that similar tragedies might be averted."

(more)

Governor Carey noted that regional health department officials were directed to evaluate county-by-county enforcement of the fire standards immediately following the MGM Grand Hotel fire in Las Vegas.

Governor Carey said he will also implement the following longer term recommendations in the report:

--The Department of State will begin development of a public awareness campaign through which all public gatherings can be advised by facility operators of the locations of fire exits and emergency procedures. The program will enlist the cooperation of operators of public facilities, and include a toll-free telephone line by which the public can identify facilities not cooperating in the effort.

--The Governor will organize a Special Fire Safety Task Force of local government officials and experts in the fire prevention and safety field to make a comprehensive report by February 15, 1981 on the adequacy of existing fire codes and how they might be improved. Secretary Paterson will chair the group.

--Governor Carey will propose legislation requiring the installation of early warning devices such as heat and smoke detectors for all public assembly areas and requring the regulation of flame spread and smoke propagation for furnishings in such areas and to regulate the fire load--the allowable amount of combustible material--in an area.

# # #

STATE OF NEW YORK
DEPARTMENT OF STATE

HUGH L. CAREY
Governor

BASIL A. PATERSON
Secretary of State

news release

SW 15381

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FOR RELEASE:
FRIDAY,
FEBRUARY 20, 1981

Secretary of State Basil A. Paterson announced today five recommendations submitted to Governor Hugh L. Carey by the Special Fire Safety Task Force which call for the development of a Uniform Building and Fire Prevention Code throughout the State.

The Task Force, chaired by Secretary of State Paterson, was comprised of local and state government officials, and experts in the Health, Fire Prevention and Safety fields. The Task Force was appointed by the Governor last December following the tragic MGM Grand Hotel fire in Las Vegas, Nevada and the fire at Stouffer's Inn Conference Center in Harrison, New York.

In its report to the Governor, the Task Force reported that it has found:

- No single, adequate, enforceable building safety code or fire code with a minimum level of protection for the public in the State.
- No adequate mechanism for incorporating technological change.
- An inadequate fire code enforcement system characterized by a lack of trained personnel and a lack of consistent qualifications for those personnel.
- Retroactive enforcement of building and fire codes is essential, since the majority of buildings in use in the year 2000 have already been built.
- Most fire deaths are caused by smoke inhalation with an apparent increase of involvement of petrochemical-based and other synthetic materials.

To deal with the above identified conclusions, the Task Force made five comprehensive recommendations which would:

1. Develop a system of effective enforcement.
2. Establish a consolidated code-making body to develop a mandatory statewide code.

(over)

2. Designate the Office of Fire Prevention and Control in the Secretary of State's Office as the single agency to provide training for local enforcement personnel and to be the single State agency responsible for fire code enforcement. In line with that, "I am asking the Secretary of State to submit a budget estimate for funds necessary to carry out this new assignment, contingent upon needed legislation," the Governor said.
3. Make applicable the State Building Construction Code and the State Fire Prevention Code to those areas of the State presently not covered to provide a minimum level of protection.
4. Direct the Secretary of State to immediately begin identifying those types of buildings which would be recommended for retroactive application of automatic fire suppression systems, what implementation schedules would be imposed and the incentives which should be provided. This report is to be submitted within 30 days.
5. The Secretary of State will draft specific recommendations for the establishment of a special study group to initiate an intensive survey of the fire hazards related to the use and storage of petrochemicals and other synthetic materials.

To insure speedy enactment of this necessary Fire Safety Program, "I urge all parties concerned to move rapidly toward a program that will improve the lives and property of New Yorkers," the Governor said.

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(EDITOR'S NOTE: A copy of the report is available by writing to the Department of State, 162 Washington Avenue, Albany, New York 12231).

SPECIAL FIRE SAFETY TASK FORCE
REPORT TO GOVERNOR HUGH L. CAREY

Adequacy of Existing Fire Codes and Recommendations for Their Improvement

February 19, 1981

SPECIAL FIRE SAFETY TASK FORCE

TABLE OF CONTENTS

PREFACE

This is a report by the Special Fire Safety Task Force to Governor Hugh L. Carey. The Task Force was appointed by the Governor on December 9, 1980. It is comprised of local and state government officials, and experts in the health, fire prevention and safety fields. Its activities have been coordinated by the State Office of Fire Prevention and Control.

The Task Force members are:

Basil A. Paterson	Secretary of State and Chairman of the Task Force
Lee Alexander	Mayor, City of Syracuse
Warren Anderson	Majority Leader, New York State Senate
David Axelrod	Commissioner, State Department of Health
Richard A. Berman	Commissioner, New York State Division of Housing and Community Renewal, Chairman of Building Codes Council
J. Armand Burgun	Senior Partner, Rogers, Burgun, Shahine and Deschler, Architects, Chairman of the NFPA Committee on Safety to Life
Alfred DelBello	County Executive, Westchester County, Chairman of County Executives Association
Thomas Disbrow	Chairman, New York State Fire Safety Advisory Board
Alan Douglas	Fire Inspector and Codes Officer, Town of Onondaga
James L. Emery	New York State Assembly Minority Leader
Stanley Fink	New York State Assembly Speaker
William C. Hennessy	Commissioner, New York State Department of Transportation and Chairman, New York State Disaster Preparedness Commission
William Hopmeier	President, Firemen's Association of the State of New York
Charles J. Hynes	Fire Commissioner, City of New York
Gerald Lynch	President, John Jay College of Criminal Justice, Chairman, Fire Fighter Personnel Standards and Education Commission
Francis A. McGarry	State Fire Administrator, Department of State
Manfred Ohrenstein	Senate Minority Leader, New York State Senate
Richard Smith	Fire Commissioner, Yonkers Fire Department

The Task Force appreciates the assistance of the many people who participated in the Public Hearings, submitted written comments, and especially the following individuals:

John Collins
Donald Croteau
Lawrence DeLong
James Dillon
Milton Duke
Michael Edwards
Richard Farley
Renzy Hanshaw
Richard Harris
William Leavy
David Roberts
Joseph Spinnato

In addition, the Task Force wishes to especially thank the Chairpersons of the Task Force Sub-Committees.

Lee Alexander	- Review of Impact of Retroactive Code Enforcement
J. Armand Bergun	- Impact of Technological Changes and Experiences on Codes
Alfred DelBello	- Assessment of Existing Building and Fire Code Provisions
William Hopmeier	- Impact of Uniform State Building and Fire Prevention Code
Gerald Lynch	- Review of Adequacy of Present Enforcement System

EXECUTIVE SUMMARY

"Legislation is borne of catastrophe ... it always seems to be that we have to have a catastrophe and a loss of life before anybody gives a damn."[1] With this in mind, the Task Force attacked the problem so that no one might ever say that again.

Here is what the Task Force concluded:

- No single, adequate, enforceable building and fire code, with a minimum level of protection for the public, throughout the State.
- No adequate mechanism for incorporating technological change.
- An inadequate enforcement system characterized by the lack of trained personnel and lack of consistent qualifications.
- Retroactive enforcement of building and fire codes is essential. The majority of buildings in use in the year 2000 have already been built.
- Most fire deaths are caused by smoke inhalation with an apparent increase of involvement of petrochemical based and other synthetic materials.

The Task Force approached the problem assigned by establishing committees to work on each area of concern. In addition, the Task Force conducted a series of public hearings in Buffalo, Syracuse, Albany and White Plains. Using this approach, the Task Force was able to reach consensus on the problems with the existing fire code and enforcement system and direction for improvements which might be taken.

To meet the challenge of the inadequacies noted above, the Task Force makes the following recommendations:

1). *Create a System of Effective Enforcement*

Give county governments the power to enforce building and fire codes where cities, towns or villages within the county elect not to do so or are unable to effectively regulate. Give the State the power to

enforce where the local and county governments do not, or are unable to effectively regulate.

2). Establish a Consolidated Code-Making Body

Establish a single, state-level body which would have responsibility for developing a uniform building and fire code using a consensus mechanism. This code must have a strong life safety perspective and be enforceable throughout the State. It must establish clear minimum fire safety requirements for all structures (both new and existing, public and private) throughout the State.

In the interim, as soon as a recommended enforcement mechanism is in place, the existing State Building Construction Code and the State Fire Prevention Code should be made applicable in all areas of the State which are not now covered by a code. This provides a minimum level of protection for those areas not presently covered. Existing local codes will be left in place.

3). Improve Training of Code Enforcement Personnel

Assign responsibility at the State level for training and certifying code enforcement personnel using a system similar to the existing fire training program.

4). Initiate Intensive Public Awareness Program

An active program of public education on the importance of life safety codes should be designed to encourage compliance with safety laws and sensitivity to unsafe conditions. An informed public facing a life-threatening situation is far more capable of taking appropriate action.

5). Petrochemical and Synthetic Material Study

One of the major causes of death in fire tragedies is a direct result of the hazards of petrochemical based, and other synthetic construction materials and furnishings. It is recommended that the State

undertake an intensive study of the manufacturing of these petrochemical based and synthetic construction materials and furnishings.

6). Interim Legislative Actions to Provide a Greater Level of Safety

The Task Force encourages the legislature to pass your earlier proposals.[2]

A. Legislation to require the installation of early warning devices, such as heat and smoke detection for all public assembly facilities.

B. Legislation to require the regulation of flame spread and smoke propagation for floor coverings, furnishings, fixtures and other contents, and to regulate the fire load in all areas of public assembly.

The Task Force further recommends:

a. Mandatory notification of where fire exits are located, either written or verbal, depending upon the type of occupancy.

b. Installation of automatic fire suppression systems in certain existing buildings. Incentives be provided that could include tax incentives, insurance premium reductions, revolving funds, low cost loans, etc. The Task Force recommends that such legislation include the types of buildings which would be covered, implementation schedules to be imposed and incentives to be provided.

c. Building plan review by both fire and building officials.

NO SET OF RECOMMENDATIONS CAN GUARANTEE TOTAL SAFETY OR PROTECTION FOR THE PUBLIC AGAINST LOSS OF LIFE OR PROPERTY BY FIRE. WE CAN ONLY SEEK TO MINIMIZE THESE LOSSES THROUGH A THOUGHTFUL, COMPREHENSIVE, AND SENSIBLE MIX OF ALTERNATIVES DIRECTED TOWARDS CONTROLLING THE HAZARDS.

We must come up with a coordinated plan of action aimed not just at today or tomorrow, but to the days and years ahead. It is believed that implementation of the recommendations contained in this report will move New York State toward this objective.

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[1] Arthur Pforzheimer, Chairman of the Legislative Committee of the Firemen's Association of the State of New York, testified in White Plains, New York, on January 23, 1981.

[2] Appendix D - Governor's News Release dated December 9, 1980.

FINDINGS

1. The Adequacy of Existing Building and Fire Code Provisions

A single, adequate, enforceable building and fire code does not exist in this State. A multiplicity of codes and statutes exist (there are 18 different State legal authorities to establish and enforce fire and building regulations), but no one code covers all occupancies, is acceptable to all jurisdictions, or adequately covers the contents of buildings in terms of fire-load,[3] flame-spread[4] and smoke propagation.[5] In addition, there are extensive areas in the State where no codes are enforced for the general population. In those areas, only special occupancy codes, such as the Sanitary Code or the Labor Law, are enforced.

"We are faced with a 'patchwork quilt of codes'. In the case of Stouffer's, for example, I call it the tale of two cities or two communities. And I don't mean to be disparaging to any community. But White Plains, we all know, is the neighboring community of Harrison. Harrison's fire code has not been updated since 1925 and its building code wasn't upgraded until 1960. Although sprinklers and smoke detectors are within the code, they were not specifically required in this place of public assembly. So where it was a matter of a few feet within the less stringent codes of Harrison and outside of the more stringent codes of White Plains' jurisdiction, it was not necessary to meet the codes."[6]

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[3] Fire-load - the total amount of combustible material permitted in a specific area.

[4] Flame-spread - the rate at which flame will travel across the surface of a material.

[5] Smoke propagation - the smoke generating ability or characteristic of a material.

[6] Assemblyman John Branca - Testified in White Plains, NY on January 23, 1974

2. The Ability of Code-Making Bodies to Reflect Technology Development

Committee research and public hearing testimony found the following: each of the various building and fire codes in the State are developed by different mechanisms; do not equally incorporate technical change in a formal manner, do not adequately reflect input from all groups affected by the code, and the possibility that the existing code-making structure may allow new building materials to be accepted without adequate testing. (The current testing and rating systems for building materials and furnishings seem inadequate because they do not always consider the various ways in which such materials might be used.)

"We are living in a highly technological society. Changes are occurring so rapidly that codes do not apply, or are incapable of changing to adopt to this new problem."[7]

3. The Adequacies of Local Enforcement Systems with Respect to Qualifications and Training for Enforcement Officers and Overlapping Jurisdiction

In New York State, the local enforcement system ranges from being quite good in the larger cities, to being virtually non-existent in the rural areas. The reasons for these disparities are: lack of trained personnel, the lack of consistent qualifications for such personnel, problems with coordination between fire and building departments, and the lack of local capacity to afford enforcement programs. In addition, because of the multiplicity of codes at various levels, certain establishments are covered by more than one code and can be inspected and cited by local, state and/or federal agents.

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[7] Joseph Jaret, Chief Deputy Fire Coordinator for Suffolk County, testified in White Plains on January 31, 1981.

"When a local municipality adopts a Fire Prevention Code, part of the legislation indicates who will enforce this code. On one occasion...the permanent town employee who was charged with this enforcement was the Animal Control Officer. The dog catcher is now the Town Fire Marshal."[8]

4. Retroactive Application of Code Amendments

The necessity of retroactive application of code amendments becomes apparent when one considers that a vast majority of all buildings which will be in use in the year 2000 have already been constructed. Therefore, some provisions to improve life safety must be applied to all existing buildings if they are to be effective. Certain priorities for special occupancies, such as public assembly areas, the elderly, and the handicapped, have a greater priority for retroaction than the single-family, private dwellings. The cost of retroactively modifying buildings to meet new code provisions may be expensive and the need for incentive and compliance schedules must be addressed.

"What in hell should we do with these buildings that are already standing? There's nothing in the Building Code that applies. It's not retroactive. There's nothing in the Fire Code that says I can go over and say, 'Look, I'm willing to give you five or 10 years, but I want you to start sprinkling that place from the top down,' and sooner or later they will get down to where we can reach them with our aerial ladders, but until they get down there, we'll sweat."[9]

5. The Need for a Uniform Statewide Fire Prevention and Building Construction Code

Because of a lack of a uniform State code, many problems in enforcement

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[8] Michael Waters, County Fire Coordinator, Onondaga County, testified in Syracuse, on January 20, 1981.

[9] Chief Thomas Manlon, Fire Chief of the City of Syracuse, December 22, 1980.

and compliance exist. There are many areas with no code. Then there are other areas with a multiplicity of codes and enforcement activities. Without a uniform code, training for code enforcement is difficult, if not impossible to carry out. The resultant lack of consistency creates a significant lapse in public safety which contributes to the hundreds of fire deaths which occur each year in this State.

"I don't believe we can invite people to travel from New York to Buffalo and offer them different protections at every stop along the Thruway. I think they have to have a standard protection in any kind of building that they're in. That's a tough job, but we have to get on to it."[10]

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[10] Alfred DelBello, County Executive, Westchester County, Chairman of County Executives Association, December 22, 1980.

RECOMMENDATIONS

The recommendations which follow should be considered in light of the time frame necessary for implementation.

Work should begin immediately on developing a uniform Building and Fire Prevention Code, with the provision that interim measures be enacted until such a code has been developed. Implementation of these interim measures shall begin upon the enactment of the enforcement mechanism. This assumes that such enforcement legislation can be passed and implemented more quickly than the development of a uniform code. Enforcement of building and fire codes is the most critical element in the fire protection system. The effectiveness of any code in providing adequate levels of safety is directly proportionate to the effectiveness of the enforcement activities.

1. *Enforcement* -

   Give county governments the power to enforce building and fire codes where cities, towns or villages within the county elect not to do so or are unable to effectively regulate. Give the State the power to enforce where the local and county governments do not, or are unable to effectively regulate. This recommendation follows similar provisions of concurrent jurisdiction now existing for the State Police, the Weights and Measures Program in the Department of Agriculture and Markets and enforcement of the Sanitary Code by the Department of Health. Funds to pay for this activity could come from State revenues, a percentage tax on fire insurance premiums, or a fee for inspection services.

The establishment of a uniform Building and Fire Code for the State requires that the mechanism of enforcement for such a code be uniform as well. State enforcement of fire and life safety regulations for special occupancies can be consolidated into a single State agency, suitably structured to provide priority attention to fire and life safety objectives. This single enforcement mechanism would consolidate all existing regulations of special occupancies for fire safety purposes now widely dispersed among a number of State agencies.

Currently, the State Health Department provides enforcement in temporary residences, hospitals, and nursing homes. The Labor Department provides enforcement of health and safety regulations in factories and mercantile occupancies. The Department of State's Office of Fire Prevention and Control inspects all State University facilities, all State-owned office occupancies, including the Empire State Plaza, and provides inspection services to the Education Department, Division for Youth, and the Health Department. The Office has recently received requests to provide inspection services to the Board of Racing and Wagering, and the Office of General Services for State-leased occupancies.

Existing enforcement models, such as those for penal codes, weights and measures regulations, and the Health Department fire and life safety regulations, demonstrate that it is possible to develop a uniform enforcement mechanism. They call for concurrent jurisdiction[11] and graduated oversight[12] responsibilities. Such systems provide coordinated, consistent enforcement without overlap and conflict, and maintain the primacy of local enforcement.

The place to begin is to strengthen existing code enforcement efforts at the local level. In areas where no such efforts exist, responsibility should be established for this function.

Failure of municipalities to adopt adequate code enforcement programs within a reasonable period of time would result in the direct assumption of this function by the county. The county office would provide technical assistance for specialized enforcement problems in municipalities conducting their own enforcement. The county office would also review all enforcement activities in its jurisdiction, review and approve all requests for variances, and review recommended alternatives for existing structures. Enforcement at the county level can bring an objectivity to the process and strengthen uniform application and interpretation of code provisions.

While direct State enforcement is limited, the State can provide backup technical assistance to the county's enforcement function by sharing expertise and advice, and by providing a final review step in the variance process. State review of all variances and alternative safety recommendations would ensure uniform interpretation and application of code requirements Statewide.

The restructuring of the enforcement process would enhance the adequacy of enforcement Statewide. The establishment of concurrent enforcement authority at the municipal, county and State levels would establish a competent, coordinated enforcement system throughout the State.

2. *Code-making Body:*

Establish a single, state-level body which would have responsibility for developing a mandatory building and fire code using a consensus mechanism. This code must have a strong life safety perspective and be enforceable throughout the State. The single code-making body will include a balance between government, industry, independent experts, fire safety officers, and consumers. The code-making body will be responsible for considering options and exemptions from the uniform code.

The code must apply to new and existing, public and private structures. It must be one that architects can accept, builders can afford, owners can live with, and government is able and willing to enforce. This standard code should contain provisions for: building construction, contents, usage and maintenance of new and existing buildings, apply to government as well as privately owned buildings, and have special provisions for certain occupancies such as areas of public assembly, hospitals, schools, etc. Local options to the new code's fire protection provisions would be rigidly restricted.

Under the purview of the single systematic code-making body, special full representative committees would be established to address the safety levels and code provisions of particular occupancies. In this way, a broad-based representation would be maintained, while specific areas covered by the code would be developed by appropriate expertise and interest groups.

The uniform code would be placed on a periodic revision schedule. At the beginning of each code cycle (approximately every three years), the code-making body will issue a call for public comment. These public hearings will allow for examination of any code provision so interest groups would be unabl

to unduly influence the content of regulation. If revisions are proposed, either by a sub-committee or some other interested party, the technical committee involved must consider each comment received and vote to reject it, accept it or accept it in principle with modification.

The code would be developed and formulated in several major sections. The first section would contain general construction provisions, definitions of types of occupancies, hazards, means of egress, fire protection features and building service equipment.

The second section would contain provisions necessary for each particular occupancy: places of assembly, health care facilities, multiple dwellings such as hotels and motels, one and two-family homes, and educational, penal, mercantile, business, industrial, and storage occupancies. (Each particular occupancy would be the responsibility of a single subcommittee.)

The third section would contain requirements to regulate the usage, maintenance, and general fire prevention behaviors necessary for safe occupancy of all facilities.

The fourth section would contain uniform administrative and enforcement procedures for effectively applying the provisions of the code.

In the interim, as soon as a recommended enforcement mechanism is in place, the existing State Building Construction Code and the State Fire Prevention Code should be made applicable in all areas of the State which are not covered by a legally adopted code. This provides a minimum level of protection for those areas not presently covered. Existing local codes will be left in place.

3. *Training and Certification of Enforcement Personnel.*

Minimum qualifications for all code enforcement personnel, using a mechanism similar to the existing Fire Fighter Personnel Standards and Education Commission, is recommended. The State alternatives include licensing and/or certification of enforcement personnel by the State. Responsibility should be assigned at the State level for training code enforcement personnel, similar to the existing fire training program.

Minimum qualifications and training requirements must be established for enforcement officers. Periodic training is also needed to keep personnel abreast of technological changes and code amendments.

The current State fire training program includes courses for inspectors and code enforcement personnel. These programs can be strengthened to meet minimum training requirements when established. The training can be delivered in the context of the existing delivery system, including both regional and residential training opportunities.

4. *Public Awareness Program*

An active program of public education on the importance of life safety codes should be designed to encourage compliance with safety laws and sensitivity to the unsafe condition. An informed public facing a life-threatening situation is far more capable of taking appropriate action.

The Task Force calls upon all forms of public communication and media to make appropriate time and space available for effective communication, announcements and messages, aimed at increasing the concern and awareness of the public on life safety issues.

5. *Petrochemical and Synthetic Materials Study.*

One of the major causes of death in fire tragedies is a direct result of the hazards of petrochemical based, and other synthetic construction materials and furnishings.

It is recommended that the State undertake an intensive study of the manufacturing of these petrochemical based and synthetic construction materials and furnishings to determine the following:

a) *The substantial reduction of the fire, flame, and smoke hazards of these materials through chemical alteration.*

b) *The impact on building costs if they are legislatively restricted or banned.*

c) *Assess the economic impact on State industry.*

INTERIM LEGISLATIVE ACTIONS TO IMPROVE LIFE SAFETY

Several interim legislative actions are recommended to provide a greater level of safety:

1) That guests at meetings and gatherings be read or provided a notification of where fire exits are located and what to do in case of an emergency. In addition, all hotels and motels post notices in each room showing the nearest fire exits and what they should do in case of fire. Eating establishments and places of entertainment, such as cabarets, nite clubs, taverns and the life be required to have such notification posted in a conspicuous place.

2) Installation of automatic fire suppression systems in certain existing buildings. Incentives be provided that could include tax incentives, insurance premium reductions, revolving funds, low cost loans, etc. The Task Force recommends that such legislation include the types of buildings which would be covered, implementation schedules to be imposed and incentives to be provided.

3) Require building plan review by fire and building officials.

The Task Force also encourages the legislature to pass your earlier proposals.

A) Legislation to require the installation of early warning devices, such as heat and smoke detection for <u>all</u> public assembly facilities.

B) Legislation to require the regulation of flame spread and smoke propagation for floor coverings, furnishings, fixtures and other contents, and to regulate the fire load in all areas of public assembly.

APPENDIX A

COMMITTEE REPORTS

APPENDIX A

ASSESSMENT OF EXISTING BUILDING AND FIRE CODE PROVISIONS

COMMITTEE REPORT

Al DelBello, Chairman

The Committee feels codes definitely need to be rewritten, updated, and existing codes need to be strengthened. We probably will have to establish a model code. It is felt that the process by which we approach the model code should be dealt with by the entire Committee.

The results of the state wide code survey in each county will be very important to the final assessment and report.

We should write a state code that can serve as a basis for comment (and criticism).

Care should be taken when changing codes to deal with existing buildings that met with standards when built, to achieve a realistic level of fire protection.

Sprinklers or other fire protection features when added could result in a reduce insurance rate.

It was emphasized that the state should reimburse local governments for code enforcement.

There should be a properly trained code enforcement agency responsible for fire safety related activities either at county, state or local levels with adequate resources. Presently, there are different layers which overlap or cause a lack of coverage in different areas.

Some fire safety concerns can be readily solved through legislation.

There is also a need for a public education program. Public information messages may help to make the public aware of dangerous fire safety conditions.

A code should deal with existing buildings, retrofitting and grandfathering.

It was noted that in one county there was a lack of codes in nine cases and good codes in other cases. Originally it was felt that there should be a county code, however after considering the information, we feel there should be a state code that could be strengthened at the county level.

A state commission should be formed to oversee provisions of the code, not to approve or disapprove, but to see that provisions of the code are not weakened.

Due to the cost of enforcement, the fire services could be in charge of inspections.

It was stated that the Insurance Services Office has available information on codes adopted in various municipalities in this state. People were not aware that this information was readily available. This proves again that there is information on fire safety which is segregated and stored in a way that it is not easily obtainable.

It was felt that the precent laws and regulations should be stripped out and should be started over in a logical manner.

The county is a logical focal point for supervision of fire prevention. However, there may be problems at the county levels, such as conflicts with larger cities within the counties.

The responsibility has to be at one level. By using the county level, some uniformity would be gained. There could only be 58 variations instead of thousands.

It would be hard to believe that what is good for the city would not be applicable for the county. Many of the county legislators are from the cities as well as the other areas of the counties.

Presently it appears that the codes are complex and very difficult to work with.

An effort should be made to make them understandable. It must be stressed that building codes apply to new buildings and fire codes apply to maintenance of existing buildings.

If you are basically talking about maintenance of existing buildings countywide, it is agreed that that is a point.

APPENDIX A

REVIEW OF IMPACT OF UNIFORM STATE BUILDING AND FIRE PREVENTION CODE

COMMITTEE REPORT

William Hopmeier, Chairman

The Committee to Review Impact of Uniform State Building and Fire Prevention Codes convened on December 30, 1980, at the New York State Department of Health in Albany. Present were William Hopmeier, Chairman; William Leavy; Howard Gates; Frank DeCotis, New York State Department of Health; and Dave Roberts.

The Committee reviewed a proposed issues paper and list of recommendations prepared, as an agenda, by Mr. Hopmeier. Following discussion of the Code situation, the Committee concluded as follows:

1. Proper impact for a uniform building and fire prevention code requires development of a statewide building and fire safety code which will establish minimum standards for all construction and maintenance of public and private facilities in all political subdivisions including State sponsored and operated facilities.
2. Enforcement of such code, either through County or other authorized subdivisions, should utilize the fire control hierarchy. The State role should consist of establishment of performance standards and the evaluation of adequacy of local enforcement by the Office of Fire Prevention and Control. Where such is found to be inadequate, enforcement shall be directly carried out by the office.
3. To achieve the above, the State Office of Fire Prevention and Control should be authorized to establish such standards, to audit performance and to directly perform code enforcement activities where indicated.

4. A program of local assistance to Counties would need to be established to provide financial support for non-state code enforcement in areas performing in accord with the Office of Fire Prevention and Control standards. Estimated financial impact is five million dollars/year which may be offset by inspection fee revenue in whole or part.
5. A Commission should be established, authorized with review of code impact and adequacy of enforcement, as an oversight to the State program's operation and to develop needed code revisions. An annual report to the Governor and Legislature on the status of code impact and effectiveness in New York State could be required of the Commission.
6. It should be required that all existing buildings of over ten stories in height (possibly limited to facilities of public assembly, public congregation and use by the traveling public) shall 'retrofit' to conform to the minimum State code requirements over a time period (up to ten years is suggested) or at the time of major change in occupancy or structure, whichever occurs first.
7. The revised codes must include vigorous standards for all new materials used in construction and furnishing of facilities utilizing accepted testing laboratory acceptability standards.
8. Development of minimum State Building and Fire Protection Codes must include recodification of all current provisions for construction and fire safety.

"Moving Mankind Toward Safety From Fire"

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SPECIAL FIRE SAFETY TASK FORCE

COMMITTEE ON

IMPACT OF TECHNOLOGICAL CHANGES & EXPERIENCES ON CODES

J. ARMAND BURGUN, CHAIRMAN

The Committee does believe that experience does play an important role in the modification of building codes. Events such as the Coconut Grove Night Club fire in Boston in 1942 in which 492 lives were lost, focused national attention upon the importance of adequate exits and related fire safety features. The fires at Hartford Hospital, the Harmer House in Marietta, Ohio, and Sac Osage Hospital in Osceola, Missouri have all had their impact on health care codes.

Many of the changes brought about by these events were well thought out and have had a lasting impact. A few, however, were panic overreaction which were not enforced and soon modified or forgotten.

Technology should play a more important part in the modification of building, fire and life safety codes than it does. Much research has been and is currently, being undertaken by such organizations as the National Fire Protection Association, the National Bureau of Standards, the National Research Council of Canada, the University of Maryland, Illinois Institute of Technology, the United States Fire Administration, local fire services, industry, etc. In order for these research efforts and technological improvements to find their way into codes requires two efforts.

First, the material has to be collected, evaluated and disseminated to code-writing groups; and second, there must be a mandatory review process established for all existing codes and standards.

Unfortunately, many codes, building laws, standards or rules are not reviewed for many years, some even decades. This permits obsolete provisions to stay in place and does not allow the codes to keep pace with the latest state of the art. A mandatory review of the entire code should be required at least every three years.

The Committee believes that a building code and a fire prevention code should be companion documents and should be written, reviewed and amended at the same time. They should be published in one document; however, in

separate sections. Compartmentation is only an effective deterent against the spread of fire and smoke if it is properly maintained after the building has been occupied. The same is true for automatic detection, extinguishment or other life safety devices or design such as an engineered smoke control system.

Certain fire protection philosophies are assumed for different occupancies such as the total evacuation system for schools and the protect in place system for health care and penal occupancies. Fire drill training is as important in both systems as is early warning. Education is essential to proper performance.

The Committee believes that an effective and enforceable building and fire prevention code must have credibility in the eyes of legislators, the enforcing authorities, the design and building profession and the public to be protected. It must be uniform in content and uniformly enforced, eliminating overlapping jurisdiction, duplications and conflicts with other applicable codes.

It must keep pace with the latest state of the art by requiring a complete review every three years, and it should contain only proven, mandatory requirements, allowing local jurisdictions to add unique provisions for their areas such as lack of fire department, water supply, exposure problems between buildings, etc.

It should be based on facts rather than opinions making full use of research and modern technology. It must seek a balance between safety and the unreasonable infringement on freedom and liberty of occupants. The code must be cost effective or it could be at best wasteful or at worst ignored.

It must provide the design professions with alternative methods of achieving better or equivalent life safety in order to permit design innovations and not inhibit progress. The code must be concerned with interior decoration and furnishings as they play an important role in fire safety. They may be highly toxic and may propagate flame along the surface to accomplish flashover ahead of sprinkler operation.

The code should be coordinated and compatible with national, as well as international standards, espciallly as they deal with design standards, product manufacturers, flame spread and smoke development ratings, toxity values, etc. This is especially important with such federal programs as Medicare, Medicaid, OSHA, HUD mortgage guarantees, etc.

Finally, the codes must deal with new as well as existing construction. We have already built over 90% of the buildings that will be in use in New York State by the year 2000. Existing buildings are not only numerous, many are obsolete, were often constructed under ancient or nonexistant codes, have been altered many times -- sensibly or otherwise, have often changed occupancies -- sensibly or otherwise, and usually have far more deficiencies than new construction. The 1981 edition of the Life Safety Code covers both new and existing for all occupancies. Such tools as the "Fire Safety Evaluation System" developed by the National Bureau of Standards would be an invaluable aid in assessing the degree of danger inherent in each building for a given occupancy.

The Committee believes that code enforcement by education is the best and most efficient method of gaining acceptance and compliance. Attached to

this report are the methods currently used to amend the New York State Building Construction Code, the New York State Education Department, the New York State Corrections Commission and the New York State Health Department and the National Fire Protection Association. Also attached is a copy of the Federal Register, Part VI, Department of Commerce "Federal Interaction with Voluntary Standards Bodies; Procedures" dated January 6, 1981.

The Committee recommends that, in order to accomplish the above, the State of New York develop a mandatory building and fire prevention code in one document covering new and existing buildings. The codes should adopt by reference, recognized national standards such as ANSI and NFPA. The codes should be developed by a consensus process similar to that used by the National Fire Protection Association. The membership of the code-writing body should be broad based and balanced as to representation. It should include representatives of all New York State Departments concerned, building officials, fire service officials, design professionals, independent experts, industry, providers and consumers. Representatives from other code-writing groups from the private as well as the federal sector should be involved especially those involved with testing or research such as the National Bureau of Standards.

The code-writing organization should be under a parent overall Committee with sectional committees that deal with basic building blocks, such as means of egress, fire resistivity, interior finishes, windows and doors and occupancies committees such as housing, health care, education, etc. The committee efforts should be directed toward working with all sectors of the state and permit as much public input as possible. The committee should be charged with a compelte review of the codes at least every three years.

APPENDIX A

REVIEW OF IMPACT OF RETROACTIVE CODE ENFORCEMENT

COMMITTEE REPORT

Lee Alexander, Chairman

Retroactive Code Enforcement

Introduction

Hearings having been conducted during the week of January 19, 1981, in Buffalo, Syracuse, Albany, and White Plains; we are prepared to present our preliminary findings on the potential impact of requirements for retroactive code enforcement.

Given the limited time and resources available for, not just the work of this committee, but the work of the Special Task Force, as a whole, our findings present only the most general and broad conclusions. We hope that it will be possible to enhance these conclusions by consultations with architects, engineers, members of the building trades, business operators, property owners, and other members of the general public who could participate with and contribute to our examination.

On the evidence presented to date, compliance with the most effective aspects of retroactive code enforcement will present a serious hardship for all concerned. These include sprinklers, which are reported to be 95 percent effective in the suppression and/or containment of fire - and substantial changes in the nature of building materials and furnishings which would contribute substantially to a reduction in the production of the toxic gases which presently claim many more lives than does fire, itself.

A second group of actions may be more easily implemented. This [illegible] including communication, detection and warning systems, and announcements made at public gatherings, which you, Mr. Chairman, have suggested [illegible] can be implemented without delay.

In preface to our findings, we are dealing with a difficult and sensitive problem. Ironically, it is not that we do not know how to describe the ideal situation, it is that we have not yet decided how to come to terms with it.

We do know that there is no single, simple, inexpensive solution to our dilemma. To the contrary, the solution requires a thoughtful, comprehensive, and sensible mix of alternatives, a coordinated plan of action aimed, not just to today or tomorrow, but to the years ahead, as well.

The Most Difficult Solutions

Sprinklers

The cost of sprinkler installation, from 50-cents to $1.00 per square foot (roughly the cost of wall-to-wall carpeting), must also take into account excessively high construction loan interest rates and the additional costs of testing and maintenance.

In some instances, owners who lease or rent property to others may face legal problems through a basic conflict between the requirements of retrofitting and the terms and conditions of leases. In other instances, owners will be unable to recover retrofitting costs through rent.

The retrofitting of sprinkler systems will be a disruptive process; in some cases, major reconstruction will accompany installation.

Balanced against the difficulties, sprinklers save lives and property, and they do so automatically.

Materials/Furnishings

A change from petrochemical-based materials and furnishings to others which, although they may burn, give off lower levels of [illegible] less toxic quantities and types of gases, would work to suppress [illegible]

flames, flashover, fire intensity, and other aspects of fire in modern buildings.

With more resistant and less poisonous fuel, a fire would progress more slowly, be more subject to suppression, less threatening to occupants during the first few minutes between detection and evacuation efforts.

At the same time, the impact of such a change on those industries and businesses which now formulate, produce, market, install, and maintain petrochemical based materials and furnishings would be high, as would be the inevitable replacement costs for building owners and occupants. In the first instance, building costs, themselves, might be altered upward substantially. We do not know.

The use of petrochemical based materials and furnishings is pervasive today. Even a phased transition to other types might seem impractical. The solution to the problem may well be in a chemical manipulation of these products to render them more resistant to fire, but our committee has received no testimony on this alternative, and its value remains speculative.

We do know, however, that the products of combustion, smoke and lethal gases, are deadly long before flames and heat reach the victims of most fires, and that they are just as deadly to the firefighters who must wade through them, often blindly, in order to reach and subdue the flames of a fire, and to rescue trapped occupants.

We also know that this solution, although difficult, deserves further serious consideration.

The Less Difficult Solutions

Pressurization

The use of fans and ducts to pressurize corridors, stairwells, and hallways is both a practical and cost efficient alternative. The IDS Center in Minneapolis, a 58-story building erected in 1972, was retrofitted for pressurization in 1976 at a total cost of $59,500.

Implementation of this alternative is more the product of redeployment, with some additional equipment, of existing ductwork and air movement systems than it is the result of retrofitting with all new equipment.

Pressurization provides not only safe escape for occupants in a fire emergency, safety for people both above and below a fire floor, it also provides clear and safe access by firefighters, who thus are able to more quickly and safely approach a fire.

In our opinion, pressurization is both a safety measure for the general public and an effective firefighting tool.

Detection/Warning

Detection and warning systems are the least expensive and most easily retrofitted measures identified in our hearings, but they also are subject to reliability problems, with attendant monitoring and maintenance costs.

In some instances on record, frequent false alarms generate total shutdown by building management agents or their employees, and/or a mood by occupants to disregard the alarms.

In our opinion, based on the testimony we have received, detection and warnings systems are preferred to every extent possible but of secondary importance to other measures, especially sprinklers.

Planning/Information

As the Chairman, Mr. Paterson, has recommended, people at public gatherings and events should be advised of the information they will need in the event of a fire. It is too late to wait until a fire has been discovered.

Each public facility should have a formal fire emergency/evacuation plan. Exits must be well marked. Independent emergency lighting should be provided. Instructions should be given to the public at all gatherings about each of the essential elements they must depend upon in the event of a fire, much as airline personnel routinely advise passengers before each flight.

Summary

In summary, it is our conclusion that the most effective measures to be taken to protect and preserve life in the event of fire are the most complex and most costly to implement through retrofitting. These are sprinklers and a change from petrochemical based building materials and interior furnishings.

As has been stated at our hearings, fully 90 percent of the buildings which will be in use in the year 2000 already exist today. Virtually all of these buildings would be subject to any retroactive code enforcement effort.

Two goals, therefore, become evident: the need to design a new set of requirements for fire safety - and the need to implement such new requirements in ways which minimize their impact and which enhance opportunities for compliance.

Recommendations

1) We recommend the phased implementation of retroactive code enforcement changes. The time period is subject to further discussion.

but it has been suggested that changes be enforced on the basis of 10 percent compliance per year over a period of ten years. This would spread the burden over a period of time. Legislation requiring retrofitting should relieve owners of any contractual obligations with lessors or renters which would work to prevent compliance.

2) We recommend a program of incentives to encourage the fullest possible and speediest compliance with changes in fire safety requirements. We recommend the following:

- Low interest loans designed to encourage maximum financial contributions by owners, themselves, perhaps requiring 50-percent private capitalization.
- Grants for owners who demonstrate special hardship conditions which prevent them from compliance on their own to any reasonable extent. We envision this incentive to apply to small, so-called "Mom and Pop" operations.
- Tax incentives/credits for retrofitting activities which conform to the higher standards, with the size of the incentive keyed to the speed at which retrofitting is completed - that is the faster the retrofitting, the higher the credit.

3) We recommend changes in New York law relating to the insurance industry which will require rate reductions keyed, not just to the retroactive changes in code enforcement, but to all additional fire safety techniques and technology which may be developed and deployed, as well.

In the past, the insurance industry has seemed content to assess total risk and to apply rates accordingly. Building owners have seemed content to balance insurance costs against the negligible and incalculable availability of rate incentives and simply to pay. This has worked to [illegible] the implementation of fire safety technology and [illegible]

REVIEW THE ADEQUACY OF PRESENT ENFORCEMENT SYSTEM

COMMITTEE REPORT

Gerald Lynch, Chairman

This committee has met on several occasions, in Albany and New York City, to examine and discuss the present fire protection enforcement system in our State. The size of the problem became immediately apparent to all, and especially to those of us who were considering the matter for the first time.

The development of our recommendations should be considered in the context of several factors which permeated our deliberations and fact-gathering:

a) The fire prevention enforcement system is no more a "system" than is the criminal justice "system."

b) Prevention enforcement has been more a function of community size, economics, political priorities, the variables of which code or codes to which a community has made a commitment, and the inevitable realities of competing governmental financial needs than of the recognition of the real hazards.

c) It proved to be impossible to consider the adequacy of the present enforcement "system" in the abstract since such enforcement as is done is inevitably intertwined with provisions of the various codes. We therefore had to consider and comment upon proposed code modifications. In this regard I commend the report of the committee on uniform codes chaired by Mr. Hopmeier and submitted to you earlier.

d) The recodification of the protective mechanisms in the many codes into a uniform set of standards is a necessity to begin the process of effective and humane protection for the people of this State. Such recommendations as may evolve could have political and fiscal implications for the State and local governments, but this Committee should not be thereby dissuaded from rendering its best collective judgment.

Recommendations:

1. The rural and semi-rural areas of our State have not been given the sort of State assistance in code enforcement which might enable them to provide adequate protection for their citizens. It was determined that the New York State 50/50 cost-sharing formula for code enforcement in communities with populations over 100,000 (which results in $8,000,000 in aid to NYC annually) should be extended to our smaller communities. The extension of this aid should be conditioned minimally upon:

a) acceptance of a uniform fire protection code, and

b) the training, oversight and performance evaluation by the NYS Office of Fire Prevention and Control, and

c) a clear provision for the withdrawal of local aid should enforcement not meet the aforementioned minimum uniform code requirements

2. The development and enactment of a uniform building and fire prevention code to establish clear minimum fire safety requirements for all structures (both new and existing, both private and public) throughout the State. The aforementioned implies the combining of

fire protection provisions of existing codes for buildings, fire prevention, etc. It was the committee's judgment that this proposed uniform code should rigidly restrict local options to the new code's fire protection provisions.

3. The professional training of regional inspectors and the concomitant performance evaluation of such inspectors are obvious necessities in successfully implementing the proposed uniform code. It is considered fiscally prudent by this committee to locate this responsibility in the existing structures of the NYS Office of Fire Prevention and Control. This mandate should clearly provide OFPC with authority to impose sanctions for non-compliance, such as the authority to intervene and supersede local inspections where it is determined that unsafe conditions persist.

4. In consideration of the implementation of the aforementioned improved fire protection enforcement system, several support mechanisms should be considered:

a) The increased costs of local inspection and State supervision should be offset by a schedule of fees to be applied to builders and owners of realty. These fees should be maintained at minimal levels to cover costs to the State and not to develop into a revenue source.

b) An ongoing evaluation apparatus should be designated under the jurisdiction of the Office of Fire Prevention and Control to assure that the new codes and enforcement policies properly address the safety needs of the public.

5. The question of fire safety protection in public buildings and structures built under governmental auspices received a great deal of our attention. On this point we would remind the Chair of public testimony offered at the hearings in Buffalo and Syracuse regarding the inadequacy of fire protection in UDC sponsored residential structures in those jurisdictions. Therefore it is recommended that:

a) the principle of governmental exemptions from codes and enforcement provisions be re-examined in light of the reality that such exemptions suggest a lower quality of protection for the employees and residents of governmental and government-sponsored structures than that required of the private sector, and

b) by way of emphasis and specificity the committee urges that the Education Law be amended to specify who shall conduct fire safety inspections in all schools, both public and private, and further that such specified individuals be the subjects of training and certification by the NYS OFPC. These amendments should include the requirement that infractions of, or non-compliance with, the uniform fire safety codes be made a matter of public record by notification to local government and the local school board.

6. All work places in the State should be required to adhere to the minimum fire safety codes.

7. The matter of tax incentives should be explored in consideration of the installation and maintenance of upgraded fire prevention and detection systems and practices as approved by the OFPC.

8. A meaningful state-wide public education program should be designed and executed to address the following circumstances:

a) The public must be reminded by means other than the periodic disasters such as happened at Stouffer's Inn of the critical nature of superior codes and enforcement.

b) The political leaders across the State will be more effective in implementing quality protection if they have the implicit support of an informed electorate.

c) The sad fact that 8,000 Americans per year perish in fires and that this represents the worst experience of all of the industrialized nations in the world. Death by fire must not be considered inevitable by the leadership of this great State. The education of our public is therefore of paramount importance in making new legislation and codes workable and effective.

d) The names of persistent fire safety violators in licensed premises should be published in the same fashion as health code violators in NYC are made publicly known.

9. The question of local options and perceived needs for exemption from the uniform code should be the responsibility of the evaluation unit recommended in 4.(b) above.

The foregoing represents our best judgments regarding the matter of the safety code enforcement in our State. We grant that our suggestions are rather general in nature but will claim that this broadness results from the strictures of time and not the limitations of our interest and concern for these critical matters of public policy. In closing

collectively commend the Chair for moving the matters before this diverse Task Force with such effectiveness, energy and admirable grace.

We will continue to be available to you in whatever way you think useful.

APPENDIX B

SUMMARY OF CODE APPLICATION AND ENFORCEMENT

OBTAINED FROM COUNTY-BY-COUNTY SURVEY

OFFICE OF FIRE PREVENTION AND CONTROL

County Code Survey - status as of
February 12, 1981

Main survey form received by Office of Fire Prevention and Control	31
- complete information provided	10
- most information provided	13
- little information provided	8
Statement of county head received, signed by principal or by someone else	13

Out of a total of 57 counties plus New York City.

Contact has been, and is continuing to be, made with both counties that have not returned the survey and those who sent incomplete information.

The 31 surveys returned provided information on 844 municipalities, out of a total of about 1,550.

This represents approximately 14,012,000 people out of a 1980 U.S Census estimate of 17,477,000 for the State, including 7,015,000 in New York City.

INITIAL REVIEW OF CODE SURVEY
(as of 2/12/81)

1. Adoption of building code far outnumbers Fire Code adoptions (which we knew before). The majority of places adopting a fire code have used the State Fire Prevention Code. In second place are the AIA/NBFU Code. All other code types are fairly small in number.

2. The acceptance of building and fire codes has a direct relationship with greater population density and higher property valuation.

3. In the "more well-off" counties, those with a good mix of urban/suburban development and a sound economy, the municipalities generally have the codes (see Dutchess, Monroe, etc.).

4. Enforcement is a mixed bag with levels of personnel and competence having the same relationship with population and property value as number 2.

5. Fire department and other fire inspection activities are very light and in no way adequate for the job. Full-time effort is minimal. Experience, training and capabilities are questionable.

6. Those areas that have a pattern of adoption of codes tend to be communities which have had one or more particular tragedies in the past.

7. In a minority of cases, the fire codes that do exist are enforced by non-fire department personnel, such as a building inspector, zoning administrator, etc.

8. Many places have no zoning, building, or fire codes. But a few of these places have adopted minimal land use regulations necessary to qualify for the federal flood insurance program.

February 12, 1981

TABULATION OF SURVEY INFORMATION

Surveys Returned - 31 providing data on:

		Percent
cities	44	5
villages	354	42
towns	446	53
	844 municipalities	100% (or just over ½ of all municipalities in NYS)

This is out of 58 surveys sent, covering over 1,500 municipalities.

Acceptance of Building Codes

	no code	1 or more codes	no reply	total
city	0 0% 0%	42 9% 95%	2 4% 5%	44 100%
village	106 32% 30%	229 49% 65%	19 42% 5%	354 100%
town	227 68% 51%	195 42% 44%	24 53% 5%	446 100%
total places	333 100% 40%	446 100% 55%	45 100% 5%	844 100%

Acceptance of Fire Codes

	no code	1 or more codes	no reply	total
city	1 -% 2%	43 13% 98%	0 0% 0%	44 100%
village	170 34% 48%	181 56% 51%	3 21% 1%	354 100%
town	333 66% 75%	102 31% 23%	11 79% 3%	446 100%
total places	504 100% 54%	326 100% 39%	14 100% 2%	844 100%

APPENDIX C

CURRENT STATE LEGAL AUTHORITIES FOR RULE MAKING

APPENDIX C CURRENT STATE LEGAL AUTHORITIES FOR RULE MAKING

CORRECTION LAW

Sec.
25. Mutual assistance by institutional and local fire fighting facilities.

EXECUTIVE LAW

ARTICLE 18 - STATE BUILDING CODE

Sec.
370. Statement of legislative findings and purposes.
371. Short title.
372. Definitions.
373. State building code council established.
374. Purpose of the council.
374-a. Procedure for acceptance and withdrawl by municipalities.
375. Standards for code.
376. Limitation of application.
377. Procedure for adoption of rules or regulations and modification, amendment or repeal thereof.
378. Powers of the council.
378-a. Powers of the commissioner of housing.
379. Incorporation of higher standards by council upon recommendation of municipality.
380. Issuance of licenses, permits and certificates.
381. State building construction board of review.
382. Powers and duties of the board of review.
383. Administration.
384. Injunction and abatement of illegal construction.
385. Penalties for violation.
386. Local building regulations.
387. Construction.

ARTICLE 18-A - STATE BUILDING CONSERVATION AND FIRE PREVENTION CODE

Sec.
390. Statement of legislative findings and purposes
391. State building conservation and fire prevention code
392. Procedure for acceptance or withdrawl by municipalties
393. Procedure for adoption or amendment
394. Adoption of higher standards upon recommendation of municipalities
395. Local variances in application
396. Jurisdiction, administration and enforcement
397. Local regulations
398. Review
399. Construction

Amendments, 373., 374-a., 378-b., 379., 382., 386., 390., 391., 393., 395., 396., 397., 399.

GENERAL BUSINESS LAW

OIL AND DISTILLED SPIRITS

Sec.
306. Fire and light within one hundred and fifty feet of warehouses in the counties of New York, Kings, Queens, and Nassau prohitited
306-a. Law violation

ARTICLE 29 Flammable Fabrics Act

GENERAL CITY LAW

20.12 Fire Protection

LABOR LAW

ARTICLE 7 - GENERAL PROVISIONS

Sec.
200. General duty to protect the health and safety of employees: enforcement

FACTORIES
TITLE 3 - FIRE HAZARD

Sec.
260. Incombustible, fire proof and fire resisting or fire resistive material
261. Fire door
262. Fireproof window or fire window
263. Fireproof partition or fire partition
264. Fireproof building
265. Fire wall
266. Exterior enclosed fireproof stairway
267. Horizontal exit
268. Exterior screened stairway
269. Application of provisions
270. Construction of buildings erected after October first, nineteen hundred and thirteen
271. Requirements for buildings erected before October first, nineteen hundred and thirteen
273. Fire escapes erected after October first, nineteen hundred and thirteen, on buildings theretofore erected
274. Fire escapes erected before October first, nineteen hundred and thirteen
277. Notice of issue of local construction permit
278. Limitation of number of occupants
279. Fire alarm signal systems and fire drills
280. Automatic fire extinguishing systems
316. Duties of owners and occupiers

Amendments 200., 200-f., 270., 272.

LABOR LAW

INDUSTRIAL CODE RULE

# 2	Exits, Exit Enclosures, Vertical Openings and Floors in Factory Buildings
# 5	Fire Alarm Signal Systems
# 7	Fire-Restrictive Construction
# 7	(Supplement) Approved Materials and Assemblies Required in Fire-Resistive Construction
# 8	Construction, Guarding, Equipment, Maintenance and Operation of Elevators, Dumbwaiters, Escalators, Hoists and Hoistings, in Factories and Mercantile Establishments
#12	Control of Air Contaminants in Factories
#13	Specifications of Fire Escapes Accepted as Required Means of Exit
#15	Smoking in Factories
#18	Exhause Systems
#20	Automatic Fire Extinguishing Systems
#24	Fire Drills
#26	Mercantile Establishments
#29	Dry Dyeing Plants and Dry Cleaning Plants
#36	State Standard Building Code for Places of Public Assembly
#37	Manufacturing, Handling and Storage of Military Pyrotechnics
#38	Radiation Protection
#39	Possession, Handling, Storage and Transportation of Explosives
#44	Fire Hazard Classification of Occupancies
#45	Amusement Devices and Temporary Structures at Carnivals, Fairs and Amusement Parks
#380	Existing Fire Escapes

NEW YORK STATE DEPARTMENT OF SOCIAL SERVICES

1. Regulation for Foster Care Residential Facilities
2. Family Day Care Homes
3. Day Care Center

NEW YORK STATE COMMISSION OF CORRECTION

1. Fire Safety Regulations

Sec.
7039. - 7039.10

NEW YORK STATE DIVISION FOR YOUTH

Sec. 515.1 Mutual Aid with other Fire Departments

NEW YORK STATE EDUCATION DEPARTMENT

Regulations of the Commissioner of Education

NEW YORK STATE DIVISION OF SUBSTANCE ABUSE SERVICES

Part 2020 of the Mental Hygiene Law

NEW YORK STATE HEALTH DEPARTMENT

New York Sanitary Code

OFFICE OF MENTAL HEALTH

Sec.
7.27(b) Fire mutual aid

OFFICE OF MENTAL RETARDATION

Sec.
13.27(b) Fire mutual aid

ARTICLE 14, PART 86
Operation of Community Residences with respect to Safety to Life from Fire

MULTIPLE DWELLING LAW

GENERAL PROVISIONS

Sec.
3. Application to cities, towns and villages
4. Definitions
11. Dwellings damaged or moved
12. Prohibited uses
13. Application of chapter to existing dwellings
14. Application of chapter to uncompleted dwellings
25. Application of article three
26. Height, bulk, open spaces
30. Lighting and ventilation of rooms
31. Size of rooms
32. Alcoves
33. Cooking spaces
34. Rooms in basements and cellars
35. Entrance doors and lights
36. Windows and skylights for public halls and stairs
37. Artificial hall lighting

TITLE 2 - FIRE PROTECTION AND SAFETY

Sec.
50. Entrance halls
50-c. Rights of tenants to operate and maintain a lobby attendant service
51. Shafts, elevators and dumbwaiters
51-a. Peepholes
51-b. Mirrors in connection with self-service elevators
51-c. Rights of tenants to install and maintain locks in certain entrance doors
52. Stairs
53. Fire escapes
54. Cellar entrance
55. Wainscoting
56. Frame buildings and extensions
57. Bells, mail receptacles
58. Incombustible materials
59. Bakeries and fat boiling
60. Motor Vehicle storage
61. Business uses
62. Parapets, guard railings and wires
63. Sub-curb uses
64. Lighting, gas meters, gas and oil appliances
65. Boiler rooms
66. Lodging houses
67. Hotels and certain other class A and class B dwellings
75. Water supply
76. Water-closet and bath accomodations

FIREPROOF MULTIPLE DWELLINGS

NON-FIREPROOF MULTIPLE DWELLINGS

GARDEN-TYPE PROJECTS

CONVERTED DWELLINGS

OCCUPANCY - ARTISTS

Amendments, 50., 78., 104.

MULTIPLE RESIDENCE LAW

INTRODUCTORY PROVISIONS; DEFINITIONS

OLD MULTIPLE DWELLINGS

HOTELS AND SIMILAR DWELLINGS

NEW MULTIPLE DWELLINGS

FIREPROOF NEW MULTIPLE DWELLINGS

MULTIPLE RESIDENCE LAW

NON-FIREPROOF NEW MULTIPLE DWELLINGS

Sec.
251. Height limitation
252. Sub curb use
253. Construction of first floor
254. Egress from dwellings
255. Egress from apartments
256. Bulkheads and scuttles
257. Public stairs
258. Public halls
259. Cellar and basement stairs
300. Registry of owner

RULES & REGULATIONS

Rule 1 Fire alarm systems in hotels and similar dwellings
Rule 2 Fire detecting systems in hotels and similar dwellings
Rule 3 Watchman's clocksystems in hotels and similar dwellings
Rule 4 Sprinkler systems in hotels and similar dwellings
Rule 5 Sprinkler systems for special locations in multiple dwellings
Rule 6 Fire escape systems
Rule 7 Motor vehicles storage in new multiple dwellings or upon the premises thereof

MUNICIPAL HOME RULE LAW

10. General powers of local governments to adopt and amend local laws

PUBLIC HEALTH LAW

206. Commissioner; general powers and duties
Amendments, 206.

REAL PROPERTY LAW

PORTABLE KEROSENE HEATERS

Sec.
239. Legislative findings
239-a. Definitions
239-b. Unapproved portable kerosene heaters prohibited in structures
239-c. Penalties for violation
239-d. Application of article

TOWN LAW

130.(5) Fire prevention

VILLAGE LAWS

FIRE DEPARTMENT

[illegible] Rules and regulations
[illegible] Organization of companies

APPENDIX D

PRELIMINARY REPORT TO THE GOVERNOR

(December 8, 1980)

BASIL A. PATERSON
Secretary of State

STATE OF NEW YORK
DEPARTMENT OF STATE
162 WASHINGTON AVENUE
ALBANY, NEW YORK 12231

TO: GOVERNOR HUGH L. CAREY

FROM: BASIL A. PATERSON

DATE: DECEMBER 8, 1980

The staff and I have reviewed the general questions surrounding the needs for action in the areas of fire prevention and control. Herewith are summarized recommendations and I am attaching a preliminary background report.

The Department of State's recommendations fall into three categories: Immediate, those requiring legislation, and issues with sufficient complexities to require further study.

I. We recommend the following immediate actions:

A. Direct me as Secretary of State to request that County Executives, Chairpersons of County Legislatures, and Chairpersons of County Boards of Supervisors, in and through their County Fire Coordinators, file a report with the Secretary of State by January 15, 1981, which will include:

1. a survey to determine the application of Building and Fire Codes in each of the municipalities of the County.

2. a description of the method of enforcement in effect in each community.

B. Direct the State Commissioner of Health to take the steps necessary to insure that all Counties fully implement Part 7 of the Sanitary Code - with special emphasis on training of employees on evacuation procedures. (Part 7 of the State Sanitary Code, promulagated under the State Public Health Law, establishes regulations to provide health and sanitary protection, including fire protection, to the public in certain hotels, motels, and other temporary residences in the State.)

C. Direct the State Building Code Council to re-evaluate the standard for "adequate" means of egress in public assembly occupancies.

D. Initiate a Public Awareness and Education Campaign that

(1) requests that all public gatherings be informed, by announcement, of the location of emergency exits and what to do in case of fire.

(2) immediately request that the media widely publicize that the operators of public assembly facilities have been requested to make such announcements.

(3) establish an information and complaint telephone line to assist the public in the identification of facilities not complying with fire protection codes or not making such announcements.

II. We recommend the following Legislative actions:

A. Legislation be proposed to require the installation of early warning devices, such as heat and smoke de-

tection for all public assembly occupancies.

B. Legislation be proposed to require the regulation of flame spread [1] and smoke propagation for floor coverings, furnishings, fixtures and other contents, and to regulate the fire load [2] in all public assembly occupancies.

III. To deal with those issues requiring further study we recommend the creation of a Special Fire Safety Task Force composed of representatives of State legislative leaders, local officials, and experts in the field of fire safety. This body should be directed to make a comprehensive report by February 15, 1981. Its work can be coordinated by the State Office of Fire Prevention and Control.

Suggested areas for review by the Task Force are:

(1) The adequacy of existing building and fire code provisions.

(2) The ability of the code-making bodies to reflect technological developments in fire and life safety as well as lessons learned from experience.

(3) The adequacy of the local enforcement system for fire and life safety regulations, including qualifications and training for enforcement officers, consistency of code interpretation and uniform application of provisions.

(4) Retroactive application of Code Amendments.

(5) The need for a uniform statewide Fire Prevention and Building Construction Code.

1-Flame spread-the rate at which flame will travel across the surface of a material.

2-Fire load-the total amount of combustible material permitted in a specific area.

A PRELIMINARY REPORT ON THE STATUS OF FIRE AND LIFE SAFETY REQUIREMENTS IN NEW YORK STATE

Prepared for Governor Hugh [illegible]

December 8, 1980

By David A. Peterson,
Secretary [illegible]

SUMMARY

On November 21, 1980, the nation was shocked by the disastrous fire in the MGM Grand Hotel in Las Vegas, Nevada. Shortly thereafter, the Staff of the Department of State Office of Fire Prevention and Control had begun a review of facts in the MGM fire to determine what lessons could be learned to improve fire and life safety in New York State. On December 3rd, staff officials met in Albany to discuss, among several issues, the results of the fire including early detection and the possible impact of sprinkler protection for public assemblies. Staff deliberations on the MGM fire were suddenly interrupted.

On December 4, 1980 at approximately 10:20 a.m., a fire flashed through Stouffer's Inn Conference Center located in the Town of Harrison, Westchester County, New York. The fire took 26 lives and injured an additional 24 persons. This fire occurred only two weeks after the MGM Hotel fire in which 84 people lost their lives and more than 300 were injured. At the time of the MGM fire, there were many who thought this type of fire could not happen in New York State. The fact of the matter is a similar fire did occur, and conditions exist in many other types of buildings that could possibly result in future large losses of life due to fire.

The short period of time available for completion necessitates that this report be considered preliminary. It contains highlights of what is generally considered to be a complex subject which impacts directly the daily life of every citizen in the State. While information on both the Harrison and Las Vegas fires is still incomplete, reflections on available facts is warranted.

While the issues of early detection and effective means of evacuation are brought to the forefront by the tragedies of Westchester County and the MGM Hotel, it should be noted that on the same day that the Stouffer's Conference Center fire occurred nine lives were lost in a Brooklyn multiple residence fire and two lives were lost in Staten Island in a private dwelling. These grim statistics occurring continually necessitate action not only with respect to places of public assembly such as conference centers and hotels, but in occupied buildings of all types.

The incident at Stouffer's Inn Conference Center raises questions regarding the adequacy of building and fire codes in New York State, and the manner in which they are enforced. The complexities of these questions and the scope of their possible answers impact the entire socio-economic structures of the State, the traditional areas of influence of State agencies, and current status of State-local government relationships.

BUILDING AND FIRE CODES IN NEW YORK STATE

At present, in New York State, the adoption and enforcement of both Building and Fire Codes is the responsibility of cities, towns and villages. The State Building Code Council has promulgated a State Building Construction Code and a State Fire Prevention Code that are available for adoption by local municipalities. To date, of the more than 900 municipalities, over 700 have adopted the State Building Construction Code and approximately 150 municipalities have adopted the State Fire Prevention Code.

In addition, the City of New York and the City of Buffalo have adopted their own building codes. These two cities have also adopted their own fire prevention codes, and several other municipalites throughout the State have adopted either the National Building Code or the National Fire Prevention Code; both of which are model codes developed and recommended by the American Insurance Association. At present there is one county, Nassau, that has enacted a county-wide fire prevention code, which is enforced by the office of the County Fire Marshal.

In addition, there is a complexity of State laws and State agency rules and regulations on fire and life safety which complicates the situation. These laws, rules and regulations apply concurrently and sometimes in conflict with local codes.

For example, the State Multiple Residence Law is applicable in communities across the State, except in the Cities of New York and Buffalo. In addition, State Health Department rules and regulations (Part 7 of the Sanitary Code) apply statewide to temporary residences such as hotels, motels, camps, etc. For correction facilities of both the State and local governments, rules and regulations from the Commission of Corrections apply

statewide, and for local mental health facilities, rules and regulations of the Office of Mental Health are applicable. In certain other instances, local occupancies will come under the additional regulations of the Department of Labor and the Industrial Code rules. This plethora of fire and life safety regulations present a complex matrix of standards which is at times conflicting and, at the very least, confusing.

Basically, the matrix of interaction is based on four major variables:

(1) Geographic location - Has the locality passed a code; either a State recommended model code or any other model codes for construction, electrical, or fire?

(2) Occupancy type of structure - For certain types of occupancies the State has enacted requirements that are in force, irrespective of local codes. Each occupancy type (hotel, apartment building, convention center, sports arena, etc.) could be affected by several different State agencies, each of which have codes that in some way include fire standards, (most notable amongst these are the Health Department's State Sanitary Code, the Labor Department's Industrial Code Rules, the Multiple Residence Law, and the Federal Occupational Safety and Health Act. In addition, there are regulations imposed by agencies such as the Department of Social Services and the Department of Education before they will allocate State and Federal subsidies).

(3) Time of construction of building - All of the standards in categories #1 and #2 above will vary depending upon their application to new construction or whether they require upgrading of existing buildings.

(4) Ownership of buildings - State Government exemption from local and State standards has been interpreted by the courts to apply to fire

and life safety codes. This exemption has been extended to legal entities created by the State. Thus, for example, a hotel built by a regional industrial development entity created by the State does not have to legally comply with any of the otherwise in force local or State standards. Compliance is therefore, voluntary.

THE STATE BUILDING CONSTRUCTION CODE AND ITS ENFORCEMENT

The following sequential outline is designed to evaluate strengths and weaknesses of the existing State Building Construction Code and enforcing aspects.

(1) The State Building Code Council promulgates regulations for the construction of buildings and the installation of equipment that is essential to building operation and maintenance, such as, plumbing, heating, electrical, ventilation and fire-protection equipment. "The purpose of its regulations is to encourage the standardization of construction practices, equipment and material and eliminate restrictive, obsolete and conflicting building regulations which unnecessarily increase cost, retard the use of new materials or provide unwarranted preferential treatment to materials, products or methods of construction; and to establish reasonable safeguards for the safety, health and welfare of the occupants and users of buildings."[1]

(2) "The administration and enforcement of the code are the responsibility of the local municipality pursuant to its own administrative ordinance."[2]

(3) The municipalities of the State have the option to adopt or not to adopt the State Building Construction Code.

When a municipality adopts the State Building Construction Code, a local inspector is responsible for the interpretation and enforcement of the Code. There are no standard qualifications for building inspectors. Varied backgrounds and training prerequisites account for wide disparities in levels of expertise. Hence, the enforcement of the codes would vary from community to community.

[1] State Building Construction Code., "Forward", page v, 1972 ed.

(4) Enforcement is a local responsiblity.

(5) Builders and developers may appeal to the State Building Construction Code Council for variances from certain provisions of the code.

(6) Recent criticism from local fire officials statewide reflects their belief that the Code Council does not adequately reflect public safety interests. One member of the Council is specifically chosen from a public safety group. This is a result of a recent legislation changing its membership.

It should be noted that tougher laws, codes, and standards are only as effective as their enforcement.

STATE OF NEW YORK
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HUGH L. CAREY, GOVERNOR

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FOR RELEASE:
IMMEDIATE, TUESDAY
DECEMBER 9, 1980

GOVERNOR CAREY RELEASES REPORT ON FIRE STANDARDS: WILL IMPLEMENT RECOMMENDATIONS

Governor Hugh L. Carey today released a preliminary report prepared by Secretary of State Basil A. Paterson on the status of fire and life safety codes throughout New York State. The Governor announced he will begin implementation of several of the report's recommendations for immediate and long-range action.

Last Friday, Governor Carey requested Secretary Paterson's office to prepare the report over the weekend, following the fire which killed 26 persons at a hotel meeting room in Westchester County.

Immediate actions which Governor Carey said would begin today include:

--He will request that all county executives in the state prepare county-wide reviews of the fire and safety codes of all localities in their counties, including the inadequacies of the codes and the effectiveness of their local enforcement. County governments do not have the authority to develop or enforce fire codes, as do cities and towns. However, Governor Carey said he will propose legislation giving county governments such authority to adopt their own plans.

--Governor Carey directed State Health Commissioner Dr. David Axelrod to report by December 15 on the effectiveness of county-by-county enforcement and implementation of the state sanitary code, which includes standards for fire safety in hotels, motels, resorts and similar facilities, and step up efforts to insure full implementation and enforcement.

Governor Carey said the short term report he received from the Department of State is "the initial step in what must be a long and thoughtful effort to develop fire and safety codes which uniformly reflect the latest fire prevention knowledge. However, the steps must be taken now, to make sure similar tragedies might be averted."

(more)

Governor Carey noted that regional health department officials were directed to evaluate county-by-county enforcement of the fire standards immediately following the MGM Grand Hotel fire in Las Vegas.

Governor Carey said he will also implement the following longer term recommendations in the report:

--The Department of State will begin development of a public awareness campaign through which all public gatherings can be advised by facility operators of the locations of fire exits and emergency procedures. The program will enlist the cooperation of operators of public facilities, and include a toll-free telephone line by which the public can identify facilities not cooperating in the effort.

--The Governor will organize a Special Fire Safety Task Force of local government officials and experts in the fire prevention and safety field to make a comprehensive report by February 15, 1981 on the adequacy of existing fire codes and how they might be improved. Secretary Paterson will chair the group.

--Governor Carey will propose legislation requiring the installation of early warning devices such as heat and smoke detectors for all public assembly areas and requring the regulation of flame spread and smoke propagation for furnishings in such areas and to regulate the fire load--the allowable amount of combustible material--in an area.

# # #

STATE OF NEW YORK
DEPARTMENT OF STATE

HUGH L. CAREY
Governor

BASIL A. PATERSON
Secretary of State

news release

SW 15381

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FOR RELEASE:
FRIDAY,
FEBRUARY 20, 1981

Secretary of State Basil A. Paterson announced today five recommendations submitted to Governor Hugh L. Carey by the Special Fire Safety Task Force which call for the development of a Uniform Building and Fire Prevention Code throughout the State.

The Task Force, chaired by Secretary of State Paterson, was comprised of local and state government officials, and experts in the Health, Fire Prevention and Safety fields. The Task Force was appointed by the Governor last December following the tragic MGM Grand Hotel fire in Las Vegas, Nevada and the fire at Stouffer's Inn Conference Center in Harrison, New York.

In its report to the Governor, the Task Force reported that it has found:

- No single, adequate, enforceable building safety code or fire code with a minimum level of protection for the public in the State.
- No adequate mechanism for incorporating technological change.
- An inadequate fire code enforcement system characterized by a lack of trained personnel and a lack of consistent qualifications for those personnel.
- Retroactive enforcement of building and fire codes is essential, since the majority of buildings in use in the year 2000 have already been built.
- Most fire deaths are caused by smoke inhalation with an apparent increase of involvement of petrochemical-based and other synthetic materials.

To deal with the above identified conclusions, the Task Force made five comprehensive recommendations which would:

1. Develop a system of effective enforcement.
2. Establish a consolidated code-making body to develop a mandatory statewide code.

(over)

3. Improve training of code enforcement personnel.

4. Initiate an intensive public awareness program.

5. Undertake an intensive study of the use of petrochemical and other synthetic materials in buildings and furnishings.

The Task Force also recommends the following interim legislative measures to provide a greater level of safety until the above measures are implemented:

1. Mandatory notification of where fire exits are located in public assembly facilities.

2. Installation of automatic fire suppression systems in certain existing buildings.

3. Building plan review by both fire and building officials.

In addition, the Task Force concurred in Governor Carey's earlier recommendations for legislation to require the installation of warning devices for heat and smoke detection for all public buildings, and to require the regulation of flame spread and smoke propagation for floor coverings, furnishings, fixtures and other contents, and to regulate the fire load in all areas of public assembly.

Governor Carey commended the Task Force, under the chairmanship of Secretary Paterson, on the comprehensiveness of the Task Force report, and congratulated Task Force members for the report's "solid recommendations for improvement."

The Governor said he will begin to immediately implement the recommendations of the Task Force by taking the following actions:

1. Develop and submit specific legislation consolidating code-making in a single State entity for legislative action. This body will have the responsibility for developing a uniform building and fire code establishing minimum fire safety requirements for all public and private structures, both new and existing, in the state.

2. Designate the Office of Fire Prevention and Control in the Secretary of State's Office as the single agency to provide training for local enforcement personnel and to be the single State agency responsible for fire code enforcement. In line with that, "I am asking the Secretary of State to submit a budget estimate for funds necessary to carry out this new assignment, contingent upon needed legislation," the Governor said.
3. Make applicable the State Building Construction Code and the State Fire Prevention Code to those areas of the State presently not covered to provide a minimum level of protection.
4. Direct the Secretary of State to immediately begin identifying those types of buildings which would be recommended for retroactive application of automatic fire suppression systems, what implementation schedules would be imposed and the incentives which should be provided. This report is to be submitted within 30 days.
5. The Secretary of State will draft specific recommendations for the establishment of a special study group to initiate an intensive survey of the fire hazards related to the use and storage of petrochemicals and other synthetic materials.

To insure speedy enactment of this necessary Fire Safety Program, "I urge all parties concerned to move rapidly toward a program that will improve the lives and property of New Yorkers," the Governor said.

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(EDITOR'S NOTE: A copy of the report is available by writing to the Department of State, 162 Washington Avenue, Albany, New York 12231).