

NFPA 150

Standard on Fire Safety in Racetrack Stables

1995 Edition



National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101
An International Codes and Standards Organization

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NFPA 150
Standard on
Fire Safety in Racetrack Stables
1995 Edition

This edition of NFPA 150, *Standard on Fire Safety in Racetrack Stables*, was prepared by the Technical Committee on Racetrack Stables and acted on by the National Fire Protection Association, Inc., at its Annual Meeting held May 22-25, 1995, in Denver, CO. It was issued by the Standards Council on July 21, 1995, with an effective date of August 11, 1995, and supersedes all previous editions.

This edition of NFPA 150 was approved as an American National Standard on August 11, 1995.

Changes other than editorial are indicated by a vertical rule in the margin of the pages on which they appear. These lines are included as an aid to the user in identifying changes from the previous edition.

Origin and Development of NFPA 150

After a series of disastrous fires in racetrack stables in 1975, NFPA established the Committee on Firesafety in Racetrack Stables. This committee began its work in 1976 with the establishment of three working subcommittees covering construction, occupancy requirements, and fire protection. NFPA 150, *Standard on Firesafety in Racetrack Stables*, was first published in 1979. In the 1985 edition, minor changes were made to the standard that included the printing of Table 3 from NFPA 220, *Standard on Types of Building Construction*, in Appendix A. Minor revisions were made in the 1991 edition and minor revisions to Chapter 4 were included in the 1995 edition.

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This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in membership may have occurred. A key to classifications is found at the back of this document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on the loss of life (including animal life) and property from fire in racetrack stable areas, including those stable areas, barns, and associated buildings at state, county, and local fairgrounds. The protection of dormitory and grandstand areas is the responsibility of the Committee on Safety to Life.

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NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Appendix A.

Information on referenced publications can be found in Chapter 5 and Appendix B.

Chapter 1 General

1-1 Scope. This standard contains minimum requirements for the construction, fire protection, and occupancy of racetrack stable areas, including those at state, county, and local fairgrounds. Dormitories and grandstand areas are the responsibilities of the Committees on Safety to Life and the Committee on Tents and Membrane Structures, respectively (NFPA 101®, *Life Safety Code*®; NFPA 102, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures*).

1-2 Purpose. It is the intent of these requirements to prevent the loss of life (including animal life) and property from fire in racetrack stables.

1-3 Definitions.

Approved. Acceptable to the authority having jurisdiction.

NOTE: The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization concerned with product evaluations that is in a position to determine compliance with appropriate standards for the current production of listed items.

Assigned Barn. The barn area where a trainer has been allocated stalls and space for horses and equipment.

Assistant Trainer. The person assisting the listed trainer of record, and the one who frequently handles the day-to-day affairs in training a horse or horses.

Authority Having Jurisdiction. The organization, office, or individual responsible for approving equipment, an installation, or a procedure.

NOTE: The phrase "authority having jurisdiction" is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department,

rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations the commanding officer or departmental official may be the authority having jurisdiction.

Concessionaires. The holders of a concession, such as the track kitchen, granted by the racetrack management.

Fire Door Assembly. A combination of a fire door, frame, hardware, and other accessories that together provide a specific degree of fire protection to the opening (see NFPA 80, *Standard for Fire Doors and Fire Windows*).

Fire Resistance Rating. The time, in minutes or hours, that materials or assemblies have withstood a fire exposure as established in accordance with the test procedures of NFPA 251, *Standard Methods of Tests of Fire Endurance of Building Construction and Materials*.

Flamespread Rating. A numerical classification of a material obtained according to NFPA 255, *Standard Method of Test of Surface Burning Characteristics of Building Materials*.

Halter. A piece of equipment that fits around a horse's head, like a bridle, but lacking a bit. It is used in handling horses around the stable. In the event of a fire, horses can be led from stalls by halters.

Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

Listed. Equipment or materials included in a list published by an organization acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets appropriate designated standards or has been tested and found suitable for use in a specified manner.

NOTE: The means for identifying listed equipment may vary for each organization concerned with product evaluation, some of which do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

Mechanical Hotwalker. An electrical device that automatically walks a horse or several horses in a circle with an approximate radius of 10 to 15 ft (3.05 to 4.58 m).

Mixed Occupancy. A building or stable area where both horses and humans reside.

Racetrack Management. The persons who control or execute the affairs of the track itself.

Shall. Indicates a mandatory requirement.

Should. Indicates a recommendation or that which is advised but not required.

Smoke Developed Rating. A numerical classification of a material obtained according to NFPA 255, *Standard Method of Test of Surface Burning Characteristics of Building Materials*.

Tack. Stable gear; also rider's racing equipment.

Tack Room. A storage area for tack and stable equipment.

Track Security. Persons employed to protect racetrack property and to ensure the proper passage of licensed personnel; track security may be internal or external.

Trainer. The person responsible for the care and training of a horse or horses.

Chapter 2 Construction

2-1 New Construction.

2-1.1* Types of Construction. The types of construction listed in NFPA 220, *Standard on Types of Building Construction*, shall be deemed suitable for the construction of buildings included in the scope of this standard.

2-1.2 Stall and Area Limitations. Stall and area limitations for various types of construction shall be in conformance with those designated in Table 2-1.2.

Table 2-1.2 Stall and Area Limitations (See Note)

Construction Type	Stalls		Area Limitations	
	Sprinklered	Unsprinklered	Sprinklered	Unsprinklered
Type I (443-332) fire resistive	Unlimited	180	Unlimited	45,000 sq ft (4180.5 m ²)
Type II (222) Protected non-combustible/limited combustible	Unlimited	180	Unlimited	45,000 sq ft (4180.5 m ²)
Type II (111) Protected noncombustible/limited combustible	Unlimited	120	Unlimited	32,000 sq ft (2972.9 m ²)
Type II (000) Noncombustible/limited combustible	Unlimited	Not Permitted	Unlimited	Not Permitted
Type III (211-200) Protected ordinary and ordinary construction	80	Not Permitted	20,000 sq ft (1850.0 m ²)	Not Permitted
Type IV (2HH) Heavy timber	Unlimited	Not Permitted	Unlimited	Not Permitted
Type V (111-000) Protected wood frame and unprotected wood frame	60	Not Permitted	16,000 sq ft (1486.45 m ²)	Not Permitted

NOTE: The number of stalls refers to stalls only and does not include feed storage rooms, tack rooms, wash racks, drying rooms, toilets, etc.

2-1.3 Fire-Rated Separations Between Occupancies.

2-1.3.1 For the purpose of this standard, occupancies in barns shall be grouped as follows:

Group A: Stalls for housing horses.

Group B: Human sleeping rooms/quarters.

Group C: Feed rooms, tack rooms, equipment storage rooms, and other related rooms.

Group D: Blacksmith shops, kitchens, and mechanical equipment rooms.

Group E: Toilet facilities.

2-1.3.2 Minimum occupancy separation shall be as depicted in Table 2-1.3.2.

Table 2-1.3.2 Minimum Occupancy Separation in Hours
(See Note)

Occupancy Group	A	B	C	D	E
A	—	—	—	—	—
B	1 hr	—	—	—	—
C	2 hr	2 hr	—	—	—
D	2 hr	2 hr	2 hr	—	—
E	1 hr	0	1 hr	0	—

NOTE: A 50-percent reduction in the requirements shall be allowed in fully sprinklered buildings.

2-1.4 Exposure Protection. Adjacent buildings shall be separated in accordance with NFPA 80A, *Recommended Practice for Protection of Buildings from Exterior Fire Exposures*.

2-1.5 Height Restrictions. Barns shall be limited to two stories in height.

Exception: Fully sprinklered buildings.

2-1.6* Exit Travel Distances. All structures shall have exits within 100 ft (30.5 m) of travel distance from any point in the structure. This distance may be increased by 50 percent for fully sprinklered buildings.

2-1.7 Installation of Equipment. Electrical, mechanical, and fuel-burning equipment shall be installed in accordance with the following appropriate NFPA standards:

NFPA 31, *Standard for the Installation of Oil-Burning Equipment*

NFPA 54, *National Fuel Gas Code*

NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*

NFPA 70, *National Electrical Code*[®]

NFPA 90A, *Standard for the Installation of Air Conditioning and Ventilating Systems*

NFPA 90B, *Standard for the Installation of Warm Air Heating and Air Conditioning Systems*

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances*.

2-1.8 Insulation.

2-1.8.1 In buildings of Type I and Type II construction, exposed combustible insulation shall be prohibited.

2-1.8.2 In buildings of Type III, Type IV, and Type V construction, exposed insulation shall have a flamespread rating of 100 or less and a smoke developed rating of 450 or less when tested in accordance with NFPA 255, *Standard Method of Test of Surface Burning Characteristics of Building Materials*. In addition, insulation types that melt and drip, or that produce loose flaming brands when exposed to fire, shall be prohibited unless protected by an approved thermal barrier.

2-1.9 Stall Dividers.

2-1.9.1 In sprinklered buildings, stall dividers shall be constructed of materials that meet Class A, B, or C interior finish rating as defined in NFPA 101, *Life Safety Code*.

2-1.9.2* In unsprinklered buildings, noncombustible stall dividers shall be provided for a maximum of every four adjacent stalls. All stall dividers shall be at least 7¹/₂ ft (2.3 m) high and shall form a tight barrier between stalls. Interior faces of noncombustible dividers shall be permitted to be surfaced with materials meeting Class A, B, or C interior finish ratings.

2-2 Existing Construction.

2-2.1* Combustible Barns. Existing barns of Types III, IV, and V construction shall be equipped throughout with an approved automatic extinguishing system.

2-2.2* Minimum Occupancy Separations. Existing barns shall comply with the minimum occupancy separations specified in 2-1.3.

Chapter 3 Occupancy Requirements

3-1 Management Responsibilities.

3-1.1 All trainers or their assistants and all concessionaires or their assistants shall serve as liaison to the track security and fire protection supervisors.

3-1.2 All trainers or their assistants and all concessionaires or their assistants shall acquaint themselves with and brief their employees as to the following:

- (a) Smoking regulations.
- (b) Location of fire alarm notification system in immediate area of assigned barn.
- (c) Location of all fire extinguishers and extinguishing equipment in assigned barn area.
- (d) Track regulations regarding occupancy, use of extension cords for extending electrical circuits, and use of electrical appliances.
- (e) Track regulations regarding storage and use of feed, straw, tack, and supplies.
- (f) Track regulations with regard to fire and security, copies of which shall be provided to all trainers or their assistants and all concessionaires or their assistants. These regulations shall be used in instructing members of the trainers' and concessionaires' staffs assigned to the barn area.

3-1.3 All security personnel, trainers, and concessionaires or their assistants shall be available for instruction in basic fire protection practice.

3-1.4 Signs providing the following information shall be posted in every barn and associated buildings:

- (a) Location of manual fire alarm stations, emergency telephones, or other methods of fire alert.
- (b) Location of fire protection first-aid appliances.
- (c) Emergency procedures specific to the particular track facilities.

3-2 Kitchens. Track kitchens shall be protected in accordance with NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Equipment Operations*.

3-3* Open Burning. No open burning shall be permitted. Open flame heating devices other than as permitted by 2-1.7 shall not be allowed.

3-4 Smoking. Smoking shall be prohibited except in designated safe areas. Proper warning signs shall be posted.

3-5 Waste Removal and Housekeeping.

3-5.1 An adequate and systematic procedure for general housekeeping, cleanliness, waste removal, and orderliness shall be maintained.

3-5.2 Adequate detached noncombustible trash containers, for other than stall waste, shall be provided and a frequent removal program established.

3-5.3 Hay or straw shall not be stored in aisles.

3-6 Electrical Systems and Appliances.

3-6.1 Electrical systems and appliances shall be installed in accordance with the requirements of NFPA 70, *National Electrical Code*.

3-6.2 Use of any portable electrical appliance shall be restricted to the following conditions:

- (a) Multiple-outlet adaptors shall be prohibited.
- (b) Not more than one continuous extension cord shall be used to connect one appliance to the fixed receptacle, and such cord shall be listed for hard service and properly sized for the intended application.
- (c) Extension cords shall be used only on a temporary (immediate) basis.

3-6.3 Extension cords shall not be supported by any metal objects such as nails, screws, hooks, and pipes.

3-6.4 Plug caps and receptacles used in extension cords shall be heavy-duty type equipped with a reliable grounding pole and attached to the cord in a manner to provide strain relief.

3-6.5 All electrical appliances used in the stable area shall be listed.

3-6.6 Outdoor electrical appliances (e.g., mechanical hot-walkers) served by the barn electrical system shall be installed in accordance with NFPA 70, *National Electrical Code*.

3-6.7 Portable cooking and heating appliances shall be used only in spaces designated for such use provided they are separated from the stabling and storage areas of the barn by construction as set forth in 2-1.3.2.

3-6.8 Portable electrical heating and cooking appliances shall be of a type that automatically interrupts electrical current to the heating element when the appliance is not in its normal operating position (tip-over disconnect).

3-6.9 Use of exposed element heating appliances such as immersion heaters shall be prohibited.

3-6.10* In barns to be constructed, the electrical distribution system shall be so installed that at least one receptacle is provided immediately outside each stall. Receptacles and wiring shall be installed in positions that minimize the possibility of damage by horses.

3-6.11 Permanently installed lighting facilities shall be provided throughout the barn.

3-7* Hot Water. Permanently installed facilities for the production and distribution of hot water shall be provided in each barn.

3-8 Flammable Liquids. The storage of flammable and combustible liquids, except those used for medicinal purposes, shall be prohibited.

3-9 Control of Vehicular Traffic. All vehicular access shall be subject to local established rules. Aisles shall be maintained clear of obstruction at all times, and access to fire equipment shall not be blocked.

3-10 Animal Evacuation.

3-10.1 A halter shall be worn by each horse at all times.

3-10.2 Animals shall be restricted to ground floor occupancy in multistory barns.

Exception: Barns that are constructed so that each floor level exits at ground level for the length of the building on at least one building side.

Chapter 4 Fire Protection

4-1 Sprinkler Protection.

4-1.1 Where automatic sprinklers are required, the system shall be installed and maintained in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*, and NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

4-1.2 Automatic sprinkler systems shall be designed in accordance with Ordinary Hazard Group 2 classification.

4-2 Water Supplies. The water supply shall be capable of providing the pressure and discharge capacity required for automatically supplying sprinklers, hydrants, and hose lines.

Exception: Where automatic sprinkler protection is not required, an approved alternative water supply source designed and installed in accordance with NFPA 1231, *Standard on Water Supplies for Suburban and Rural Fire Fighting*, shall be permitted if approved by the authority having jurisdiction.

4-3* Fire Hydrants. Fire hydrants shall be provided as follows:

(a) All portions of major track structures such as barns, kitchens, and maintenance buildings shall be located within 300 ft (91.44 m) of a fire hydrant.

(b) Fire hydrants shall be located so that a fire department pumper can approach to within 10 ft (3.05 m) of the hydrant. Fire hydrants shall be protected from vehicle damage.

4-4 Fire Extinguishers. Fire extinguishers shall be provided in accordance with NFPA 10, *Standard for Portable Fire Extinguishers*. Such extinguishers shall have a minimum 2A rating

and shall be not more than a 75-ft (22.86-m) travel distance from any point within a building.

4-5 Alarm Systems.

4-5.1 All major unsprinklered track buildings such as barns, kitchens, and maintenance buildings shall have a manual fire alarm system. The alarm system shall sound an audible and visual exterior alarm for purposes of initiating emergency action.

4-5.1.1 Manual fire alarm stations shall be so located as to be readily available in all portions of the premises in accordance with NFPA 72, *National Fire Alarm Code*.

4-6 Lightning Protection. Lightning protection, where provided, shall be installed according to NFPA 780, *Standard for the Installation of Lightning Protection Systems*.

Chapter 5 Referenced Publications

5-1 The following documents or portions thereof are referenced within this standard and shall be considered part of the requirements of this document. The edition indicated for each reference is the current edition as of the date of the NFPA issuance of this document.

5-1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 10, *Standard for Portable Fire Extinguishers*, 1994 edition.

NFPA 13, *Standard for the Installation of Sprinkler Systems*, 1994 edition.

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 1995 edition.

NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, 1992 edition.

NFPA 54, *National Fuel Gas Code*, 1992 edition.

NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*, 1995 edition.

NFPA 70, *National Electrical Code*, 1996 edition.

NFPA 72, *National Fire Alarm Code*, 1993 edition.

NFPA 90A, *Standard for the Installation of Air Conditioning and Ventilating Systems*, 1993 edition.

NFPA 90B, *Standard for the Installation of Warm Air Heating and Air Conditioning Systems*, 1993 edition.

NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*, 1994 edition.

NFPA 101, *Life Safety Code*, 1994 edition.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*, 1992 edition.

NFPA 220, *Standard on Types of Building Construction*, 1995 edition.

NFPA 251, *Standard Methods of Tests of Fire Endurance of Building Construction and Materials*, 1995 edition.

NFPA 255, *Standard Method of Test of Surface Burning Characteristics of Building Materials*, 1990 edition.

NFPA 780, *Standard for the Installation of Lightning Protection Systems*, 1995 edition.

NFPA 1231, *Standard on Water Supplies for Suburban and Rural Fire Fighting*, 1993 edition.

Appendix A

Appendix A is not a part of the requirements of this NFPA document but is included for informational purposes only. This appendix contains explanatory material, numbered to correspond with the applicable text paragraphs.

A-2-1.1 Table A-2-1.1 on the following page is a reprint of Table 3-1 from NFPA 220, *Standard on Types of Building Construction*.

A-2-1.6 Exit distances are more stringent than those specified in NFPA 101, *Life Safety Code*, because of the difficulty of evacuating panicked horses from the structure.

A-2-1.9.2 This requirement is intended to reduce the speed with which a fire will spread by creating noncombustible dividers of solid construction between every group of four stalls.

A-2-2.1 Installation of an automatic extinguishing system in existing barns of Types III, IV, and V construction should be accomplished on an individual facility basis as negotiated with the local authority having jurisdiction.

A-2-2.2 Compliance with minimum occupancy separations in existing barns should be accomplished on an individual facility basis as negotiated with the local authority having jurisdiction.

A-3-3 This restriction is intended primarily to prohibit open flame heaters in the stable area. It is not intended to limit properly installed and equipped devices such as gas water heaters and blacksmith forges as long as they are approved by the authority having jurisdiction.

A-3-6.10 One duplex receptacle located between two stalls will adequately meet this requirement.

A-3-7 Heated water is required by trainers and grooms for care of the horses. Without the provision of permanently piped hot water, sundry devices, even though prohibited, will be used to heat the water. When planning such installations it is desirable to provide at least 2 gal of water per hr (2.103 m × 10⁻⁶ m³/sec) at 140°F (60°C) for each stabled horse.

A-4-3 Hydrant spacing requirements are more stringent than those specified in NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, due to the difficulty of manipulating long lines in such congested areas.

Table A-2-1.1 Fire resistance ratings (in hours) for Type I through Type V Construction

	Type I		Type II			Type III		Type IV	Type V	
	443	332	222	111	000	211	200	2HH	111	000
Exterior Bearing Walls –										
Supporting more than one floor, columns, or other bearing walls.....	4	3	2	1	0 ¹	2	2	2	1	0 ¹
Supporting one floor only.....	4	3	2	1	0 ¹	2	2	2	1	0 ¹
Supporting a roof only.....	4	3	1	1	0 ¹	2	2	2	1	0 ¹
Interior Bearing Walls –										
Supporting more than one floor, columns, or other bearing walls.....	4	3	2	1	0	1	0	2	1	0
Supporting one floor only.....	3	2	2	1	0	1	0	1	1	0
Supporting roofs only.....	3	2	1	1	0	1	0	1	1	0
Columns –										
Supporting more than one floor, columns, or other bearing walls.....	4	3	2	1	0	1	0	H ²	1	0
Supporting one floor only.....	3	2	2	1	0	1	0	H ²	1	0
Supporting roofs only.....	3	2	1	1	0	1	0	H ²	1	0
Beams, Girders, Trusses & Arches –										
Supporting more than one floor, columns, or other bearing walls.....	4	3	2	1	0	1	0	H ²	1	0
Supporting one floor only.....	3	2	2	1	0	1	0	H ²	1	0
Supporting roofs only.....	3	2	1	1	0	1	0	H ²	1	0
Floor Construction	3	2	2	1	0	1	0	H ²	1	0
Roof Construction	2	1 ^{1/2}	1	1	0	1	0	H ²	1	0
Exterior Nonbearing Walls	0 ¹	0 ¹	0 ¹	0 ¹	0 ¹	0 ¹	0 ¹	0 ¹	0 ¹	0 ¹

 Those members that shall be permitted to be of approved combustible material.

¹ See NFPA 220, A-3-1 (Table).

² "H" indicates heavy timber members; see NFPA 220 for requirements.

Appendix B Referenced Publications

B-1 The following documents or portions thereof are referenced within this standard for informational purposes only and thus should not be considered part of the requirements of this document. The edition indicated for each reference is the current edition as of the date of the NFPA issuance of this document.

B-1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, 1995 edition.

NFPA 80, *Standard for Fire Doors and Fire Windows*, 1995 edition.

NFPA 80A, *Recommended Practice for Protection of Buildings from Exterior Fire Exposures*, 1993 edition.

NFPA 101, *Life Safety Code*, 1994 edition.

NFPA 102, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures*, 1995 edition.

NFPA 220, *Standard on Types of Building Construction*, 1995 edition.