

"HAWAII ADMINISTRATIVE RULES

TITLE 12

DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

SUBTITLE 7

BOARDS

CHAPTER 45.1

STATE FIRE COUNCIL

STATE FIRE CODE

Subchapter 1 Rules of General Applicability

- §12-45.1-1 Purpose
- §12-45.1-2 Scope
- §12-45.1-3 Definitions
- §12-45.1-4 Adoption of the Uniform Fire Code
- §12-45.1-5 Adoption of and amendments to UFC
Appendix I-C, "Stairway
Identification"
- §12-45.1-6 Adoption of UFC Appendix III-C,
"Inspection, Testing and Maintenance
of Water-Based Fire Protection
Systems"
- §12-45.1-7 Adoption of UFC Appendix VI-A,
"Hazardous Materials Classifications"
- §12-45.1-8 Adoption of UFC Appendix VI-B, "Hazard
Ranking"
- §12-45.1-9 Permit authorization

Subchapter 2 Amendments to the 1997 Uniform
Fire Code and the 1998 and 1999
Supplements

§12-45.1-10	Title
§12-45.1-11	Appeals
§12-45.1-12	General
§12-45.1-13	Fire prevention bureau personnel and police
§12-45.1-14	Authority to inspect
§12-45.1-15	Unsafe buildings
§12-45.1-16	Investigations
§12-45.1-17	Adjuster's report
§12-45.1-18	Permit required
§12-45.1-19	Definitions and abbreviations
§12-45.1-20	Permits and plans
§12-45.1-21	Dimensions
§12-45.1-22	Turning radius
§12-45.1-23	Dead ends
§12-45.1-24	Bridges
§12-45.1-25	Grade
§12-45.1-26	Required water supply for fire protection
§12-45.1-27	Testing and maintenance
§12-45.1-28	Required installations
§12-45.1-29	Installation acceptance testing
§12-45.1-30	Inspection and testing
§12-45.1-31	Systems in high-rise buildings
§12-45.1-32	Smoke-control systems
§12-45.1-33	Special hazards
§12-45.1-34	General
§12-45.1-35	All occupancies except Group R, Division 3 and Group U occupancies
§12-45.1-36	Amusement buildings
§12-45.1-37	Group M occupancies
§12-45.1-38	Group R, Division 1 occupancies
§12-45.1-39	General
§12-45.1-40	Required installations
§12-45.1-41	Location of Class I standpipe hose connections
§12-45.1-42	Location of Class III standpipe hose connections
§12-45.1-43	Operations and maintenance
§12-45.1-44	General

§12-45.1-45	General
§12-45.1-46	Existing Group R occupancies
§12-45.1-47	Fire department communication system
§12-45.1-48	Central control station
§12-45.1-49	Manual fire alarm boxes
§12-45.1-50	Annunciator panel
§12-45.1-51	General
§12-45.1-52	Fire alarm system modified positive alarm sequence
§12-45.1-53	Audibility
§12-45.1-54	Permits and plans
§12-45.1-55	Incinerators
§12-45.1-56	General
§12-45.1-57	Material restrictions
§12-45.1-58	Nonmetallic containers
§12-45.1-59	Textile and film materials
§12-45.1-60	Wood
§12-45.1-61	Foam plastics
§12-45.1-62	Parade floats
§12-45.1-63	No smoking signs
§12-45.1-64	Theatrical performances
§12-45.1-65	Identification
§12-45.1-66	Additional doors
§12-45.1-67	Latch
§12-45.1-68	Elevator identification
§12-45.1-69	Fire drills
§12-45.1-70	Permits
§12-45.1-71	Permits and plans
§12-45.1-72	Decorative materials
§12-45.1-73	Plan of exit ways and aisles
§12-45.1-74	Determination of occupant load
§12-45.1-75	Candles and other open-flame devices
§12-45.1-76	Portable heating equipment
§12-45.1-77	Permits
§12-45.1-78	Permits
§12-45.1-79	Permits
§12-45.1-80	Permits
§12-45.1-81	Scope
§12-45.1-82	Permits
§12-45.1-83	Permits
§12-45.1-84	Permits
§12-45.1-85	Permits

§12-45.1-86	Permits
§12-45.1-87	Permits
§12-45.1-88	Permits
§12-45.1-89	Fumigation and thermal insecticide fogging
§12-45.1-90	Permits
§12-45.1-91	Permits
§12-45.1-92	Permits
§12-45.1-93	Permits
§12-45.1-94	Permits and plans
§12-45.1-95	Permits
§12-45.1-96	Permits and plans
§12-45.1-97	Permits and plans
§12-45.1-98	Permits
§12-45.1-99	Permits
§12-45.1-100	Permits
§12-45.1-101	Tank vehicles
§12-45.1-102	Permits
§12-45.1-103	Explosive materials
§12-45.1-104	Permits
§12-45.1-105	Seizure of fireworks
§12-45.1-106	Prohibition
§12-45.1-107	General
§12-45.1-108	Display of fireworks for retail sales
§12-45.1-109	Permits and plans
§12-45.1-110	General
§12-45.1-111	Label or placard
§12-45.1-112	Tanks abandoned in place
§12-45.1-113	General
§12-45.1-114	Hazardous materials management plan
§12-45.1-115	Hazardous materials inventory statement
§12-45.1-116	Protection from vehicles
§12-45.1-117	Permits and plan submittal
§12-45.1-118	PERMITS, PLANS AND RECORDS
§12-45.1-119	General
§12-45.1-120	Permits
§12-45.1-121	Asbestos removal
§12-45.1-122	Permits
§12-45.1-123	Recognized standards

Historical Note: Chapter 12-45.1 is based substantially upon chapter 12-45, subchapter 1. [Eff 6/6/86; am and comp 8/13/87; am and comp 4/18/92; R]

SUBCHAPTER 1

RULES OF GENERAL APPLICABILITY

§12-45.1-1 **Purpose.** The purpose of this chapter is to adopt the state fire code as required by section 132-3, Hawaii Revised Statutes (HRS). [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-2 **Scope.** This chapter sets forth minimum requirements relative to the protection of persons and property from fire loss. [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-3 **Definitions.** In this chapter, unless the context otherwise requires:

"Appendix" means the appendix attached to the Uniform Fire Code.

"Article" means an article of the UFC.

"Building code" means the currently adopted, respective county building code.

"NFPA" means the National Fire Protection Association.

"Section" means a section of an article of the UFC.

"Supplement" means the Accumulative Supplement to the Uniform Fire Code as copyrighted by the International Fire Code Institute.

"UBC" means the Uniform Building Code, as copyrighted by the International Conference of

Building Officials.

"UFC" means the Uniform Fire Code, 1997 edition, as copyrighted by the International Conference of Building Officials and the Western Fire Chiefs Association and published by the International Fire Code Institute. [Eff _____](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-4 Adoption of the Uniform Fire Code.

The UFC, as amended by the 1998 and 1999 Supplements, is made a part of this chapter, subject to the amendments provided in this chapter. The appendices to the UFC are not adopted except as provided in this chapter. [Eff _____] (Auth: HRS §132-3) (Imp: HRS §132-3)]

§12-45.1-5 Adoption of and amendments to UFC Appendix I-C, "Stairway Identification". Appendix I-C is adopted. Section 2 of Appendix I-C is amended to read: "Standardized signs shall be provided in new buildings that are four or more stories in height. Such signs shall be installed in stairways to identify each stair landing and indicate the upper and lower termination of the stairway." [Eff _____] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-6 Adoption of UFC Appendix III-C, "Inspection, Testing and Maintenance of Water-Based Fire-Protection Systems". Appendix III-C is adopted. [Eff _____] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-7 Adoption of UFC Appendix VI-A, "Hazardous Materials Classifications". Appendix VI-A

is adopted. [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-8 **Adoption of UFC Appendix VI-B, "Hazard Ranking"**. Appendix VI-B is adopted. [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-9 **Permit authorization.** Each county may, by ordinance, require that a permit be obtained from the chief for any area regulated by this chapter. [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

SUBCHAPTER 2

AMENDMENTS TO THE UFC AND THE 1998 AND 1999

SUPPLEMENTS

§12-45.1-10 **Title.** Section 101.1 is amended to read: "This code shall be known as the state fire code, may be cited as such, and will be referred to in this chapter as this code." [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-11 **Appeals.** Section 103.1.4 is amended to read: "Each county shall establish, by ordinance, a county fire appeals board, hereinafter called the board, as required by section 132-6(f), HRS." [Eff](Auth: HRS §132-6)(Imp: HRS §132-3)

§12-45.1-12 **General.** Section 103.2.1.1 is amended to read: "The general powers and duties of the chief are set forth in chapter 132, HRS." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-13 **Fire prevention bureau personnel and police.** Section 103.2.1.2 is deleted. [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-14 **Authority to inspect.** Section 103.3.1.1 is amended to read: "Inspections are authorized by and shall be made in accordance with sections 132-5 and 132-6, HRS." [Eff] (Auth: HRS §§132-3, 132-5, 132-6) (Imp: HRS §§132-3, 132-5, 132-6)

§12-45.1-15 **Unsafe buildings.** The last sentence of section 103.4.5 is amended to read: "See the applicable sections of the building code." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-16 **Investigations.** The first paragraph of section 104.2 is amended to read: "The chief is authorized to investigate the origin, cause, and circumstances of each and every fire occurring in the county involving loss of life or injury to person or destruction or damage to property and if deemed necessary the chief is authorized to take immediate charge of all physical evidence relating to the cause of the fire and to pursue the investigation to its conclusion." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-17 **Adjuster's report.** Section 104.3.3 is added to read: "Upon the chief's request, every company or agent transacting the business of fire insurance in this State shall be required to file with the chief in each county a monthly record of fire losses paid or incurred on forms prescribed, permitted, or furnished by the chief. These forms shall contain information on each fire loss such as the name of the insured, name of the adjuster, date and time of fire, construction of building or structure burned, amount of insurance paid, and apportionment of the loss where more than one company insured the risk.

The current National Fire Incident Reporting System (NFIRS) report forms may be used." [Eff
] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-18 **Permit required.** Section 105.8 is deleted. [Eff
(Imp: HRS §132-3)] (Auth: HRS §132-3)

§12-45.1-19 **Definitions and abbreviations.** Section 217-P is amended by adding the following definition to read: "**modified positive alarm sequence** is an automatic sequence that results in an alarm signal in designated portions of the building or facility." [Eff
(Imp: HRS §132-3)] (Auth: HRS §132-3)

§12-45.1-20 **Permits and plans.** Section 901.2 is deleted. [Eff
(Imp: HRS §132-3)] (Auth: HRS §132-3)

§12-45.1-21 **Dimensions.** The first paragraph of section 902.2.2.1 is amended to read: "The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements." [Eff _____](Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-22 **Turning radius.** Section 902.2.2.3 is amended to read: "The turning radius of a fire apparatus access road shall meet county requirements." [Eff _____] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-23 **Dead ends.** Section 902.2.2.4 is amended to read: "Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with approved turn arounds that meet county requirements." [Eff _____](Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-24 **Bridges.** The first paragraph of section 902.2.2.5 is amended to read: "When a bridge is required to be used as part of a fire apparatus access road, the bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus and shall meet all other county requirements." [Eff _____](Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-25 **Grade.** Section 902.2.2.6 is amended to read: "The gradient for a fire apparatus access road shall meet county requirements." [Eff _____](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-26 **Required water supply for fire protection.** Section 903.2 is amended to read: "A water supply approved by the county, capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the chief. For on-site fire hydrant requirements see section 903.4 of the UFC.

EXCEPTIONS: 1. When facilities or buildings, or portions thereof, are completely protected with an approved automatic fire sprinkler system, the provisions of section 903.2 may be modified by the chief.

2. When water supply requirements cannot be installed due to topography or other conditions, the chief may require additional fire protection as specified in section 1001.9, as amended in this code.

3. When there are not more than two Group R, Division 3, or two Group U Occupancies, the requirements of section 903.2 may be modified by the chief." [Eff (Auth: HRS §132-3) (Imp: HRS §132-3)]

§12-45.1-27 **Testing and maintenance.** The second paragraph of section 903.4.1.2 is amended to read: "The chief shall be notified whenever any fire hydrant is placed out of service or returned to service. Owners of private property required to have hydrants shall maintain hydrant records of approval, testing, and maintenance, in accordance with the respective county water requirements. Records shall be made available for review by the chief upon request."

[Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-28 **Required installations.** The first paragraph of section 903.4.2 is amended to read: "The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be provided on a fire apparatus access road or on the site of the premises or both, in accordance with the appropriate county water requirements." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-29 **Installation acceptance testing.** The first paragraph of section 1001.4 is amended to read: "Fire alarm systems; fire hydrant systems; fire-extinguishing systems; standpipes; and other fire-protection systems and appurtenances required by this code shall be approved by the chief as to installation and location and shall be subject to acceptance tests required by the appropriate county agency." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-30 **Inspection and testing.** The third paragraph of section 1001.5.2 is amended to read: "A copy of the system's inspection and maintenance test report shall be submitted to the chief within five (5) working days after the completion of the test. A written record shall be maintained on the premises and shall be made available to the chief, upon the chief's request."

Section 1001.5.2 is also amended by adding a fourth paragraph to read: "The building or facility owner shall be responsible for the maintenance of fire sprinkler systems, private fire hydrant systems, standpipe systems, fire alarm systems, portable fire

extinguishers, smoke and heat ventilators, smoke-removal systems and other fire-protection or fire-extinguishing systems." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-31 **Systems in high-rise buildings.**

Section 1001.5.4 is amended to read: "The owner of a high-rise building shall be responsible for assuring that the fire- and life-safety systems required by the building code are maintained in an operable condition at all times. A written record of the test reports verifying the operational status of these types of systems shall be maintained and shall be made available to the chief, upon request. For high-rise systems requirements see UBC section 403 and UFC section 1007.2.12.2." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-32 **Smoke-control systems.**

Section 1001.5.5 is amended to read: "Mechanical smoke-control systems, such as those in high-rise buildings, buildings containing atria, covered mall buildings and mechanical ventilation systems utilized in smokeproof enclosures and for smoke-removal systems utilized in high-piled combustible storage occupancies, shall be maintained in an operable condition at all times. A written record of the test reports verifying the operational status of these types of systems shall be maintained and shall be made available to the chief, upon request." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-33 **Special hazards.**

The first sentence of section 1001.9 is amended to read: "For occupancies of an especially hazardous nature, or where special hazards exist in addition to the normal hazard of the

occupancy, or where access for fire apparatus is unduly difficult, or areas where there is an inadequate fire flow, or inadequate fire hydrant spacing, the chief may require additional safeguards including, but not limited to, additional fire appliance units, more than one type of appliance, or special systems suitable for the protection of the hazard involved." [Eff _____](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-34 **General.** The third paragraph of section 1003.1.1 is amended to read: "Fire department hose connections shall be located within 20 feet of a fire apparatus access road, not less than 18 inches and not more than 4 feet above grade, or as approved by the chief. Appropriate identification signs shall be provided in a location(s) approved by the chief."

Section 1003.1.1 is also amended by adding a fifth paragraph to read: "Fire protection equipment and systems shall be installed and maintained in buildings under construction in accordance with article 87."

Section 1003.1.1 is also amended by adding a sixth paragraph to read: "An automatic fire extinguishing system shall be installed in the occupancies and locations as set forth in this section. Where an automatic fire extinguishing system is required, proper types of spare sprinkler heads shall be provided and stored in a cabinet in a location approved by the chief as follows:

1. 1 to 300 sprinklers 6 heads
2. 301 to 1,000 sprinklers 12 heads
3. Over 1,000 sprinklers 24 heads"

Section 1003.1.1 is also amended by adding a seventh paragraph to read: "In addition, three sprinkler stoppers and a special sprinkler wrench shall also be provided and kept in the cabinet to be used in the removal and installation of sprinkler heads." [Eff _____] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-35 **All occupancies except Group R, Division 3 and Group U occupancies.** The paragraph numbered 1 of section 1003.2.2 is amended to read:

"1. In every story or basement of all buildings when the floor area exceeds 1,500 square feet and there is not provided at least 20 square feet of opening entirely above the adjoining ground level in each 50 lineal feet or fraction thereof of exterior wall in the story or basement on at least one side of the building. Each of the required 20 square feet of opening shall have at least one opening with minimum dimensions of 3 feet by 4 feet. Such required openings shall be unobstructed by sunshades, louvers, grillwork, or other construction on the exterior wall which will prevent or hinder access to the openings by the fire department personnel." [Eff]
(Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-36 **Amusement buildings.** Section 1003.2.3.6 is amended to read: "An automatic sprinkler system shall be installed in all permanent and portable amusement buildings. The main water-flow switch shall be electrically supervised. The sprinkler main cutoff valve shall be supervised. When the amusement building is portable, the sprinkler water-supply system may be a temporary type, as approved by the chief.

EXCEPTION: An automatic sprinkler system need not be provided when the floor area of a portable amusement building is less than 1,000 square feet and the exit travel distance from any point is less than 50 feet." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-37 **Group M occupancies.** Section 1003.2.8 is amended by adding a second paragraph to read: "In a one-story building for Group M or S Occupancies requiring an automatic sprinkler system, a

metal plate sign stating the maximum storage height allowable for the installed sprinkler system shall be placed next to the main shutoff valve of the automatic sprinkler riser." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-38 **Group R, Division 1 occupancies.** Section 1003.2.9 is amended to read: "An automatic sprinkler system shall be installed throughout every apartment house over one story and containing 17 or more dwelling units, every congregate residence over one story and having an occupant load of 50 or more, and every hotel over one story and containing 20 or more guest rooms. Residential or quick-response standard sprinkler heads shall be used in the dwelling unit and guest room portions of the building." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-39 **General.** The third paragraph of section 1004.1.1 is amended to read: "Fire department hose connections shall be located within 20 feet of a fire apparatus access road, not less than 18 inches and not more than 4 feet above grade, or as approved by the chief. Appropriate identification signs shall be provided as required by the chief." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-40 **Required installations.** Section 1004.2 is amended to read: "Standpipe systems shall be provided as set forth in the building code." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-41 **Location of Class I standpipe hose connections.** The third paragraph of section 1004.3 is amended to read: "There shall be at least one two-way, 2 ½-inch outlet above the roof line when the roof has a slope of less than 4 units vertical in 12 units horizontal (33.3% slope)."

The fourth paragraph of section 1004.3 is amended to read: "In buildings where more than one standpipe is provided, the standpipes shall be interconnected at the bottom. Control (isolation) valves shall be provided for each riser in a location approved by the chief. The control valves shall be installed not more than 4 feet and not less than 2 feet above floor level and shall be secured in the open position by locking or sealing the valve." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-42 **Location of Class III standpipe hose connections.** The third paragraph of section 1004.5 is amended to read: "In buildings where more than one standpipe is provided, the standpipes shall be interconnected at the bottom. Control (isolation) valves shall be provided for each riser in a location approved by the chief. The control valves shall be installed not more than 4 feet and not less than 2 feet above floor level and shall be secured in the open position by locking or sealing the valve." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-43 **Operations and maintenance.** The fourth paragraph of section 1006.2.8 is amended to read: "Extinguishing systems shall be serviced at least every six months or after activation of the system. Inspections shall be conducted by a qualified individual as approved by the chief. A copy of the inspection test report shall be kept on the premises

and a copy of the inspection report shall be forwarded to the chief within five (5) working days of completion of the required servicing and testing."

Section 1006.2.8 is also amended by adding a sixth paragraph to read: "The chief shall be notified a minimum of four (4) working days prior to the service date by the company conducting the test. The chief shall be informed of the name of the business being serviced, date and time of servicing, and the company and the individual conducting the servicing." [Eff
](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-44 **General.** Section 1007.2.4.1 is amended by adding a second paragraph to read: "Fire alarm systems shall be tested and logged monthly."

Section 1007.2.4.1 is also amended by adding a third paragraph to read: "An annunciator panel shall be provided in the office of each school." [Eff
](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-45 **General.** Section 1007.2.9.1.1 is amended by deleting exception number 2. [Eff
] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-46 **Existing Group R occupancies.**
Section 1007.2.9.2 is deleted. [Eff
(Auth: HRS §132-3) (Imp: HRS §132-3)]

§12-45.1-47 **Fire department communication system.** Section 1007.2.12.2.4 is amended to read: "A two-way, fire department communication system approved by the chief shall be provided for fire department use. A jack or plug receptacle shall be located at the following locations:

1. The central control station or the central location approved by the chief.
2. The designated fire service elevator(s).
3. Each elevator lobby on each floor of the building.
4. Emergency and standby power rooms.
5. The stairwell side of each exit into each required stairway.

The height of the jack or plug receptacle shall be not more than 5 feet and not less than 3 feet above floor level. Portable hand sets in compliance with the following provisions shall be provided by the building owner or management for fire department use:

1. Not less than 10 approved-type portable hand sets shall be stored and maintained in the central control station.
2. Length of cord for portable hand sets shall be provided as recommended and approved by the chief.
3. Hand sets approved by the chief shall be maintained in an operative condition at all times and shall be replaced or repaired when found to be defective." [Eff _____] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-48 **Central control station.** Section 1007.2.12.2.5 is added to read: "A central control station room for fire department operations shall be provided. The location and accessibility of the central control station room shall be approved by the chief. The room shall be accessible from the exterior of the building. The central control station room shall be separated from the remainder of the building by not less than a one-hour fire-resistive occupancy separation. The room shall be a minimum of 96 (9 m²) square feet with a minimum dimension of 8 feet (2438 mm). It shall contain the following as a minimum:

1. The voice alarm and public address system panels.
2. The fire department communications panel.

3. Fire-detection and alarm system annunciator panels.
4. Annunciator visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air handling systems.
6. Controls for unlocking all stairway doors simultaneously.
7. Sprinkler valve and water-flow detector display panels.
8. Emergency and standby power status indicators.
9. A telephone for fire department use with controlled access to the public telephone system.
10. Fire pump status indicators.
11. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire-protection systems, firefighting equipment and fire department access.
12. Work table.

Control panels in the central control station shall be permanently identified as to function.

Alarm, supervisory and trouble signals as required by Items 3 and 7 above shall be annunciated in compliance with the fire code in the central control station by means of an audible and visual indicator." [Eff](Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-49 **Manual fire alarm boxes.** Number 1 of section 1007.3.3.1 is amended to read: "1. At every required exit from every level." [Eff]
(Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-50 **Annunciator panel.** Section 1007.3.3.2.1 is added to read: "An annunciator panel shall be provided on the first floor lobby area or other areas designated by the chief in any new fire

alarm installation for buildings four stories or more." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-51 **General.** Section 1007.3.3.3.1 is amended by numbering the exception as number 1 and by adding a second exception to read:

"EXCEPTION: 2. Modified positive alarm sequence when approved by the chief." [Eff]
(Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-52 **Fire alarm system modified positive alarm sequence.** Section 1007.3.3.3.1.1 is added to read: "Buildings or facilities shall meet all of the following requirements for a positive alarm sequence:

1. An automatic fire sprinkler system installed in conformance with the building code shall be provided throughout the building or facility.
2. Written fire emergency procedures and an evacuation plan for the building or facility shall be reviewed by the chief prior to approval testing. The procedures and plan shall include, but not be limited to, immediate notification to the fire department, use of primary and secondary exits, use of fire protection appliances for the building(s) or facility(ies).
3. Trained personnel shall respond to emergencies on a 24-hour basis. The staff shall be instructed in fire emergency procedures and the use and operation of in-house fire appliances. Documentation of such training shall be maintained and filed on the premises.
4. Immediate notification of the fire department shall take place upon activation of any fire alarm initiating device.
5. If an initiating device of the fire alarm system is activated, acknowledgement at the control unit by trained personnel shall be

accomplished within 15 seconds in order to initiate the alarm investigation phase. If the signal is not acknowledged within 15 seconds, all building or facility and remote signals shall be activated immediately and automatically (general alarm).

6. If an initiating device of the fire alarm system is activated, all notification devices in that zone shall be activated. The zone notification shall include the floor of, the floor above and the floor below the activated device. The zone notification areas may be modified with the approval of the chief. This zone notification shall be for a maximum of three (3) minutes, during which trained personnel shall initiate the alarm investigation phase, communicate their findings immediately to the fire department, and reset the system if appropriate. After three (3) minutes, or an activation of any other initiating device(s), the fire alarm system shall be activated immediately and automatically for the entire building or facility (general alarm). At no time shall the fire alarm system be silenced until verification of the alarm is accomplished.

7. The fire alarm system shall provide a means to bypass the positive alarm sequence and immediately activate the general alarm for the entire building or facility.

8. The chief shall conduct a test of the positive alarm sequence prior to implementation.

9. The chief may disapprove or rescind approval of the positive alarm sequence of the fire alarm system if all of the above requirements are not met and shall require the fire alarm system to be reprogrammed to meet a general alarm notification at the owners expense." [Eff]
(Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-53 **Audibility.** Section 1007.3.3.3.3 is amended to read: "The alarm signal shall be a distinctive sound, which is not used for any other purpose other than the fire alarm. Alarm-signaling devices shall produce a sound that exceeds the prevailing equivalent sound level in the room or space by 15 decibels minimum, or exceeds any maximum sound level with a duration of 60 seconds minimum by 5 decibels minimum, whichever is louder. Sound levels for alarm signals shall be 120 decibels maximum."
 [Eff _____](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-54 **Permits and plans.** Section 1101.3 is deleted. [Eff _____] (Auth: HRS §132-3)
 (Imp: HRS §132-3)

§12-45.1-55 **Incinerators.** Section 1102.2 is deleted. [Eff _____](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-56 **General.** Section 1102.3.1 is amended to read: "Control of the following fires shall be established by each county:

1. Fires for cooking of food.
2. Fires for recreational, decorative, or ceremonial purposes.
3. Fires to abate a fire hazard.
4. Fires for prevention or control of disease or pests.
5. Fires for training of fire fighting personnel.
6. Fires for disposal of dangerous materials.
7. Fires for residential bathing purposes.

Except for closed incinerators approved by the state health department, private incineration is prohibited by state health laws. Clearance by the state health department for and notification of all agricultural fires either by telephone or written notice shall be on file with the chief before these

§12-45.1-56

fires are permitted." [Eff](Auth: HRS
§132-3)(Imp: HRS §132-3)

§12-45.1-57 **Material restrictions.** Section
1102.3.3 is deleted. [Eff](Auth: HRS
§132-3)(Imp: HRS §132-3)

§12-45.1-58 **Nonmetallic containers.** Section
1103.2.1.4.2 is amended by adding an exception to
read: "**EXCEPTION:** Containers used by private
residences for refuse pickup." [Eff]
(Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-59 **Textile and film materials.** The
last sentence of section 1103.3.3.2 is amended to
read: "See article 90, section 9003, standard n.2.6."
[Eff](Auth: HRS §132-3) (Imp: HRS §132-
3)

§12-45.1-60 **Wood.** The last sentence of section
1103.3.3.3 is amended to read: "See article 90,
section 9003, standard n.2.7." [Eff]
(Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-61 **Foam plastics.** Section 1103.3.3.4
is amended to read: "Foam plastics and materials
containing foam plastics shall be in accordance with
the following:

1. Exhibit booth construction shall have a
maximum heat-release rate of 100 kilowatts when
tested in accordance with nationally recognized
standards. See article 90, section 9003,

standard u.1.16.

2. Decorative objects including but not limited to mannequins, murals and signs, shall have a maximum heat-release rate of 150 kilowatts when tested in accordance with nationally recognized standards. See article 90, section 9003, standard u.1.16.

EXCEPTION: When the aggregate area of murals, signs or similar decorative objects occupies less than 10 percent of the floor or wall area, this requirement may be waived by the chief.

3. Theater, motion picture and television stage settings with or without horizontal projections and simulated caves or caverns shall have a maximum heat-release rate of 100 kilowatts when tested in accordance with nationally recognized standards. See article 90, section 9003, standard u.1.16." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-62 **Parade floats.** Section 1104 is deleted. [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-63 **No smoking signs.** Section 1109.4.1.1 is added to read: "The size, color and location of legally required no smoking signs shall be subject to the approval of the chief. Lettering shall be at least 4-inches high with ½-inch stroke." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-64 **Theatrical performances.** Section 1109.8.4 is amended by adding a second sentence to read: "For requirements and exceptions see section 2501.17, 'Candles and other open-flame devices' as amended in this code." [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-65 **Identification.** Section 1111.2.3 is amended to read: "When required by the chief, a sign shall be displayed permanently near or on each required fire door in letters not less than 1 inch (25.4 mm) high to read as follows:

**FIRE DOOR
DO NOT OBSTRUCT**

or

**FIRE DOOR
KEEP CLOSED"**

[Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-66 **Additional doors.** Section 1207.7 is amended by adding an exception to read:

"EXCEPTION: Double-acting screen doors used in conjunction with exit doors having panic hardware in school cafeteriums." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-67 **Latch.** Section 1208.2 is amended by numbering the exception as number 1 and by adding a second exception to read:

"EXCEPTIONS: 2. In accordance with the building code, security gates may be permitted across corridors or passageways in school buildings if there is a readily visible durable sign on or adjacent to the gate, stating 'THIS GATE IS TO REMAIN SECURED IN THE OPEN POSITION WHENEVER THIS BUILDING IS IN USE'. The sign shall be in letters not less than one inch high on a contrasting background. The use of this exception may be revoked by the building official for due cause." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-68 **Elevator identification.** Section 1214 is added to read: "At all elevator locations on each floor level above and below the floor of exit discharge, there shall be displayed in a conspicuous location a sign reading: 'IN CASE OF FIRE USE EXIT STAIRWAYS. DO NOT USE ELEVATORS'. Lettering shall be not less than 5/8-inch high.

EXCEPTION: Signs at least 2-3/4-inches X 2-1/4-inches in overall size with legible wording and approved by the chief, may be used as an alternate and shall be affixed at each elevator call button assembly.

Elevator service companies shall have their name and telephone number in the elevator key box." [Eff
](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-69 **Fire drills.** Section 1303.3.3.2 is amended by numbering the exception as number 1 and adding a second exception to read:

EXCEPTION: 2. Fire drills at high schools, middle schools and intermediate schools shall be conducted at least quarterly during school sessions." [Eff
](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-70 **Permits.** Section 2401.2 renumbered as section 2401.3 in the 1999 Supplement is deleted. [Eff
]Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-71 **Permits and plans.** Section 2501.3 is deleted. [Eff
](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-72 **Decorative materials.** Section 2501.5 is amended by adding a second sentence to read: "A record of fire-resistant treatment shall be kept on the premises for review by the chief." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-73 **Plan of exit ways and aisles.** Section 2501.14 is amended to read: "A floor plan indicating the seating arrangements, location and width of exit ways and aisles shall be submitted to the chief for review for places of assembly with an occupant load of 300 or more persons. A copy of the plan shall be kept on display on the premises.

An exit plan shall also be posted in a conspicuous location near the main entrance and shall be maintained in a legible condition by the owner or an authorized agent.

Management of the event or business shall be responsible for the inspection before each show or event of all required means of egress from each part of the building, including stairways, egress doors and any panic hardware installed thereon, aisles and corridors. Passageways and similar elements of the means of egress shall be available for immediate use and free of all obstructions before each show or event. Management shall inform all patrons of all required exit locations before each show or event in places of assembly with an occupant load of 300 or more persons." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-74 **Determination of occupant load.** Section 2501.16.2 is amended to read: "The number of persons in a building or portion thereof shall not exceed the amounts determined as specified in the building code." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-75 **Candles and other open-flame devices.** Section 2501.17 is amended by adding a fourth exception to read:

"EXCEPTION: 4. When approved by the chief, open-flame devices may be used on stages or platforms, provided adequate precautions are taken to prevent ignition of combustible materials. So-called flaming sword or other like equipment shall not be used except in areas protected by an automatic sprinkler system. This shall be construed to mean that stages, platforms, dressing and storage rooms or areas used as places for the performance of flaming sword or other dance performances using fire or flame, shall be sprinklered. In addition, a suitable non-combustible net shall be erected to prevent accidental release onto the viewing audience." [Eff]
(Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-76 **Portable heating equipment.** Section 2501.17.1 is added to read: "Portable heating equipment, not flue-connected, shall be permitted only as follows: Equipment fueled by small heat sources which can be readily extinguished by water, such as candles or alcohol-burning equipment (including solid alcohol) may be used provided adequate precautions satisfactory to the chief are taken to prevent ignition of any combustible materials.

No person shall use or allow to be used any open flame device or burning candle or candles in any building or place in such a manner as to create a fire hazard." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-77 **Permits.** Section 2703 is deleted.
[Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-78 **Permits.** Section 2803 is deleted.
[Eff] (Auth: HRS §132-3) (Imp: HRS
§132-3)

§12-45.1-79 **Permits.** Section 2901.2 is deleted.
[Eff](Auth: HRS §132-3)(Imp: HRS §132-
3)

§12-45.1-80 **Permits.** Section 3003 is deleted.
[Eff](Auth: HRS §132-3)(Imp: HRS §132-
3)

§12-45.1-81 **Scope.** Section 3201 is amended to
read: "Tents and canopies having an area in excess of
2100 square feet shall comply with article 32.
Temporary membrane structures shall comply with the
county building code." [Eff](Auth: HRS
§132-3)(Imp: HRS §132-3)

§12-45.1-82 **Permits.** Section 3203 is deleted.
[Eff](Auth: HRS §132-3)(Imp: HRS §132-
3)

§12-45.1-83 **Permits.** Section 3302 is deleted.
[Eff](Auth: HRS §132-3) (Imp: HRS
§132-3)

§12-45.1-84 **Permits.** Section 3403 is deleted.
[Eff] (Auth: HRS §132-3)(Imp: HRS
§132-3)

§12-45.1-85 **Permits.** Section 3503 is deleted.
 [Eff](Auth: HRS §132-3) (Imp: HRS
 §132-3)

§12-45.1-86 **Permits.** Section 3601.3 is deleted.
 [Eff](Auth: HRS §132-3) (Imp: HRS
 §132-3)

§12-45.1-87 **Permits.** Section 4501.3 is deleted.
 [Eff](Auth: HRS §132-3) (Imp: HRS
 §132-3)

§12-45.1-88 **Permits.** Section 4602 is deleted.
 [Eff](Auth: HRS §132-3)(Imp: HRS §132-
 3)

§12-45.1-89 **Fumigation and thermal insecticide fogging.** Article 47 is deleted. [Eff]
 (Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-90 **Permits.** Section 4802 is deleted.
 [Eff](Auth: HRS §132-3)(Imp: HRS §132-
 3)

§12-45.1-91 **Permits.** Section 4901.3 is deleted.
 [Eff](Auth: HRS §132-3)(Imp: HRS §132-
 3)

§12-45.1-92

§12-45.1-92 **Permits.** Section 5003 is deleted.
[Eff](Auth: HRS §132-3) (Imp: HRS §132-3)
3)

§12-45.1-93 **Permits.** Section 5101.5 is deleted.
[Eff](Auth: HRS §132-3) (Imp: HRS §132-3)
3)

§12-45.1-94 **Permits and plans.** Section 5201.3
is deleted. [Eff](Auth: HRS §132-3)
3)(Imp: HRS §132-3)

§12-45.1-95 **Permits.** Section 6103 is deleted.
[Eff](Auth: HRS §132-3)(Imp: HRS §132-3)
3)

§12-45.1-96 **Permits and plans.** Section 6202 is
deleted. [Eff](Auth: HRS §132-3) (Imp:
HRS §132-3)

§12-45.1-97 **Permits and plans.** Section 6304 is
deleted. [Eff](Auth: HRS §132-3)(Imp:
HRS §132-3)

§12-45.1-98 **Permits.** Section 6403 is deleted.
[Eff](Auth: HRS §132-3) (Imp: HRS §132-3)
3)

§12-45.1-99 **Permits.** Section 7401.3 is deleted.
[Eff](Auth: HRS §132-3) (Imp: HRS §132-3)
3)

§12-45.1-100 **Permits.** Section 7501.3 is
deleted. [Eff](Auth: HRS §132-3)(Imp:
HRS §132-3)

§12-45.1-101 **Tank vehicles.** Section 7503.4.2.1
is added to read: "Tank vehicles transporting
cryogenic fluids shall not be left unattended on any
residential street or within 500 feet of any
residential area, apartment or hotel complex,
educational, hospital or care facility at any time; or
at any other place or location that would present a
hazard to persons or property from fire loss.

EXCEPTION: When unattendance is necessary in
connection with unloading the vehicle or servicing
tanks; or when in case of accident or other emergency,
the operator must leave the vehicle to obtain
assistance." [Eff](Auth: HRS §132-
3)(Imp: HRS §132-3)

§12-45.1-102 **Permits.** Section 7601.3 is
deleted. [Eff] (Auth: HRS §132-3) (Imp:
HRS §132-3)

§12-45.1-103 **Explosive materials.** Article 77 is
amended by only adopting section 7702 of article 77.
[Eff](Auth: HRS §132-3)(Imp: HRS §132-
3)

§12-45.1-104

§12-45.1-104 **Permits.** Section 7801.3, of the 1999 Supplement is deleted. [Eff]
(Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-105 **Seizure of fireworks.** Section 7802.2 of the 1999 Supplement is amended to read: "The chief is authorized to require the owner to remove at the expense of the owner, all fireworks offered for sale, stored, or possessed in violation of article 78, or other applicable state or county laws or rules." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-106 **Prohibition.** Exception number 1 of section 7802.3 of the 1999 Supplement is deleted. Exception number 4 of section 7802.3 of the UFC, 1999 Supplement, is amended to read: "Importation, storage, possession, sale, purchase, transfer and discharge of fireworks, shall be in accordance with chapter 132D, HRS." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

12-45.1-107 **General.** Section 7802.4.1 of the 1999 Supplement is amended by deleting the last sentence. [Eff] (Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-108 **Display of fireworks for retail sales.** Section 7804 is added to the 1999 Supplement to read: "The display of fireworks designated by the United States Department of Transportation as UN 0336 1.4G, for retail sales shall be in accordance with the following:

1. Displays accessible to the public shall not

exceed 2% of the total square footage of the sales area of the store.

EXCEPTION: Retail stores or booths used exclusively for the sale of fireworks may exceed 2%, but shall not exceed 25%.

2. The location of displays shall not render any required exit unusable or that will present a hazardous condition.

3. Displays shall not exceed 6 feet above the finished floor.

4. Display areas shall be separated from sources of heat or ignition by a minimum 4 feet.

5. A clear aisle width of 44 inches shall be maintained.

6. Unless otherwise prohibited by county ordinance, no smoking signs shall be provided on all approachable sides of the display.

7. A minimum of two (2) 2A10BC portable fire extinguishers within 75 feet travel distance shall be provided." [Eff]

(Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-109 **Permits and plans.** Section 7901.3 is deleted. [Eff] (Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-110 **General.** Section 7901.9.1 is amended by adding a second sentence to read: "In addition to the sign style identified in section 7901.9.2, placards shall be mounted or affixed in accordance with article 90, section 9002, UFC Standard 79-3." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-111 **Label or placard.** The first paragraph of section 7902.1.3.2 is amended to read:

"Tanks over 60 gallons in capacity permanently installed or mounted and used for the storage of Class I, II or III-A liquids shall bear a label or placard identifying the material therein in accordance with article 90, section 9002, UFC Standard 79-3."
[Eff _____] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-112 **Tanks abandoned in place.** Section 7902.1.7.2.4 is amended to read: "Tanks may be abandoned in place only if a certified structural engineer confirms that the removal of the tank will jeopardize the structural integrity of the existing building. An affidavit attesting to this determination shall be submitted to the chief prior to taking abandonment measures. Tanks abandoned in place shall be abandoned as follows:

1. Flammable and combustible liquids shall be removed from the tank and connected piping,
2. The suction, inlet, gage, vapor return and vapor lines shall be disconnected,
3. The tank shall be filled completely with an approved, inert solid material,
4. Remaining underground piping shall be capped or plugged, and
5. A record of tank size, location and date of abandonment shall be retained by the owner and a copy submitted to the chief." [Eff _____]

(Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-113 **General.** Section 8001.3.1 is amended to read: "Permits are not required."
[Eff _____](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-114 **Hazardous materials management plan.** The first sentence of section 8001.3.2 is amended to read: "When required by the chief, the owner of buildings or facilities shall have a hazardous materials management plan (HMMP) posted on site. An example of a HMMP can be found in UFC Appendix II-E."

The second sentence of section 8001.3.2 is deleted. [Eff _____](Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-115 **Hazardous materials inventory statement.** The first sentence of section 8001.3.3 is amended to read: "When required by the chief, a hazardous materials inventory statement (HMIS) shall be made a part of the hazardous materials management plan. An example of a HMIS can be found in UFC Appendix II-E." [Eff _____](Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-116 **Protection from vehicles.** The paragraph numbered 2 of section 8001.11.3 is amended to read:

"2. Spaced not more than 3 feet (914 mm) between posts on center,"

The paragraph numbered 5 of section 8001.11.3 is amended to read:

"5. Located not less than 3 feet (914 mm) from the tank." [Eff _____](Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-117 **Permits and plan submittal.** Section 8101.3 is deleted. [Eff _____](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-118 **PERMITS, PLANS AND RECORDS.**
Section 8202 is deleted. [Eff] (Auth:
HRS §132-3) (Imp: HRS §132-3)

§12-45.1-119 **General.** Section 8203.1 is amended
by adding a second paragraph to read: "Hazard
identification signage shall be provided and affixed
to all approachable sides of the tank or tank
enclosure in conformance with article 90, section
9002, UFC Standard 79-3." [Eff] (Auth:
HRS §132-3) (Imp: HRS §132-3)

§12-45.1-120 **Permits.** Section 8702 is deleted.
[Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

§12-45.1-121 **Asbestos removal.** Section 8707 is
deleted. [Eff](Auth: HRS §132-3) (Imp:
HRS §132-3)

§12-45.1-122 **Permits.** Section 8801.3 is
deleted. [Eff] (Auth: HRS §132-3)
(Imp: HRS §132-3)

§12-45.1-123 **Recognized standards.** Section 9003
is amended by adding a new standard to read:
"a.7. AMERICAN SOCIETY OF HEATING, REFRIGERATION AND
AIR-CONDITIONING ENGINEERS
1791 Tullie Circle, NE, Atlanta, GA 30329
ANSI/ASHRAE Standard 15-1994, Safety Code for
Mechanical Refrigeration." [Eff]
(Auth: HRS §132-3) (Imp: HRS §132-3)