



E-MAKING ORDER
(RCW 34.05.360)

CR-103 (4/25/96)

Agency: Washington State Building Code Council

- Permanent Rule
- Emergency Rule
- Expedited Repeal

(1) Date of adoption: November 14, 1997

(2) Purpose: To adopt WAC 51-44 and 51-45, the State Adoption and Amendment of the 1997 Uniform Fire Code and Standards; and to repeal WAC 51-34 and 51-35, State Adoption and Amendment of the 1994 Uniform Fire Code and Standards.

(3) Citation of existing rules affected by this order:

- Repealed: WAC 51-34 and 51-35
- Amended:
- Suspended:

(4) Statutory authority for adoption: RCW 19.27.031 and 19.27.074
Other authority:

PERMANENT RULE ONLY

Adopted under notice filed as WSR 97-16-113 on August 6, 1997 (date).
Describe any changes other than editing from proposed to adopted version:

None

EMERGENCY RULE ONLY

Under RCW 34.05.350 the agency for good cause finds:

- (a) That immediate adoption, amendment, or repeal of a rule is necessary for the preservation of the public health, safety, or general welfare, and that observing the time requirements of notice and opportunity to comment upon adoption of a permanent rule would be contrary to the public interest.
- (b) That state or federal law or federal rule or a federal deadline for state receipt of federal funds requires immediate adoption of a rule.

Reasons for this finding:

EXPEDITED REPEAL ONLY

Under Preproposal Statement of Inquiry filed as WSR _____ on _____ (date).

(5.3) Any other findings required by other provisions of law as precondition to adoption or effectiveness of rule?

- Yes
 - No
- If Yes, explain:

(6) Effective date of rule:

- | | |
|---|--|
| Permanent Rules
or Expedited Repeal
<input type="checkbox"/> 31 days after filing
<input checked="" type="checkbox"/> Other (specify) 7/1/98 * | Emergency Rules
<input type="checkbox"/> Immediately
<input type="checkbox"/> Later (specify) _____ |
|---|--|

*(If less than 31 days after filing, specific finding in 5.3 under RCW 34.05.380(3) is required)

NAME (TYPE OR PRINT) Mike McEnaney

SIGNATURE *Mike McEnaney*

TITLE Council Chair DATE 1/5/98

CODE REVISER USE ONLY

CODE REVISER'S OFFICE
STATE OF WASHINGTON
FILED

JAN 6 1998

TIME 11:55 AM
PM

WSR 98 02 053

**Note: If any category is left blank, it will be calculated as zero.
No descriptive text.**

Count by whole WAC sections only, from the WAC number through the history note.
A section may be counted in more than one category.

The number of sections adopted in order to comply with:

Federal statute:	New	_____	Amended	_____	Repealed	_____
Federal rules or standards:	New	_____	Amended	_____	Repealed	_____
Recently enacted state statutes:	New	<u>1</u>	Amended	_____	Repealed	_____

The number of sections adopted at the request of a nongovernmental entity:

New	<u>13</u>	Amended	_____	Repealed	_____
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The number of sections adopted on the agency's own initiative:

New	_____	Amended	_____	Repealed	<u>89</u>
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The number of sections adopted in order to clarify, streamline, or reform agency procedures:

New	_____	Amended	_____	Repealed	_____
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The number of sections adopted using:

Negotiated rule making:	New	<u>13</u>	Amended	_____	Repealed	<u>89</u>
Pilot rule making:	New	_____	Amended	_____	Repealed	_____
Other alternative rule making:	New	_____	Amended	_____	Repealed	_____

Chapter 51-44 WAC

STATE BUILDING CODE ADOPTION AND AMENDMENT
OF THE 1997 EDITION OF THE UNIFORM FIRE CODE

NEW SECTION

WAC 51-44-001 Authority. These rules are adopted under the authority of chapter 19.27 RCW.

NEW SECTION

WAC 51-44-002 Purpose. The purpose of these rules is to implement the provisions of chapter 19.27 RCW, which provides that the State Building Code council shall maintain the State Building Code in a status which is consistent with the purpose as set forth in RCW 19.27.020. In maintaining the codes the council shall regularly review updated versions of the codes adopted under the act, and other pertinent information, and shall amend the codes as deemed appropriate by the council.

NEW SECTION

WAC 51-44-003 Uniform Fire Code. The 1997 edition of the Uniform Fire Code, including Appendix II-F, Protected Aboveground Tanks For Motor Vehicle Fuel-Dispensing Stations Outside Buildings, and Appendix II-J, Storage of Flammable and Combustible Liquids in Tanks Located Within Below-Grade Vaults, published by the International Fire Code Institute is hereby adopted by reference with the following additions, deletions, and exceptions.

NEW SECTION

WAC 51-44-007 Exceptions. The exceptions and amendments to the Uniform Fire Code contained in the provisions of chapter 19.27

RCW shall appl, in case of conflict with al, of the provisions of these rules.

The provisions of this code do not apply to temporary growing structures used solely for the commercial production of horticultural plants including ornamental plants, flowers, vegetables, and fruits. "Temporary growing structure" means a structure that has the sides and roof covered with polyethylene, polyvinyl, or similar flexible synthetic material and is used to provide plants with either frost protection or increased heat retention. A temporary growing structure is not considered a building for purposes of this code.

NEW SECTION

WAC 51-44-008 Implementation. The Uniform Fire Code adopted by chapter 51-44 Washington Administrative Code (WAC) shall become effective in all counties and cities of this state on July 1, 1998.

NEW SECTION

WAC 51-44-0103 Section 103--Inspection and enforcement.

103.2.1.1 General. The chief is authorized to administer and enforce this code. (Exception: Medical Gas Systems, Section 7404.2.3) Under the chief's direction, the fire department is authorized to enforce all ordinances of the jurisdiction pertaining to:

1. The prevention of fires,
2. The suppression or extinguishment of dangerous or hazardous fires,
3. The storage, use and handling of hazardous materials,
4. The installation and maintenance of automatic, manual and other private fire alarm systems and fire-extinguishing equipment,
5. The maintenance and regulation of fire escapes,
6. The maintenance of fire protection and the elimination of fire hazards on land and in buildings, structures and other property, including those under construction,
7. The maintenance of means of egress, and
8. The investigation of the cause, origin and circumstances of fire and unauthorized releases of hazardous materials.

For authority related to control and investigation of emergency scenes, see Section 104.

NEW SECTION

WAC 51-44-0200 Article 2--Definitions and abbreviations.

SECTION 206 - E.

ELECTRICAL CODE is the National Electrical Code, promulgated by the National Fire Protection Association, as adopted in chapter 296-46 WAC, or the locally adopted Electrical Code.

SECTION 216 - O.

Group E Occupancies:

Group E Occupancies shall be:

Division 1. Any building used for educational purposes through the 12th grade by 50 or more persons for more than 12 hours per week or four hours in any one day.

Division 2. Any building used for educational purposes through the 12th grade by less than 50 persons for more than 12 hours per week or four hours in any one day.

Division 3. Any building or portion thereof used for day-care purposes for more than six persons.

EXCEPTION: Family child day care homes as defined in chapter 51-40 WAC, Uniform Building Code, shall be considered Group R, Division 3 Occupancies.

Group LC Occupancies:

Group LC Occupancies shall be:

Group LC Occupancies shall include buildings, structures, or portions thereof, used for the business of providing licensed care to clients in one of the following categories regulated by either the Washington Department of Health or the Department of Social and Health Services:

1. Adult family home.
2. Adult residential rehabilitation facility.
3. Alcoholism intensive inpatient treatment service.
4. Alcoholism detoxification service.
5. Alcoholism long term treatment service.
6. Alcoholism recovery house service.
7. Boarding home.
8. Group care facility.
9. Group care facility for severely and multiple handicapped children.
10. Residential treatment facility for psychiatrically impaired children and youth.

EXCEPTION: Where the care provided at an alcoholism detoxification service is acute care similar to that provided in a hospital, the facility shall be classified as a Group I, Division 1.1 hospital.

Group R Occupancies:

Group R Occupancies shall be:

Division 1. Hotels and apartment houses. Congregate residences (each accommodating more than 10 persons).

Division 2. Not used.

Division 3. Dwellings, family child day care homes as defined in chapter 51-40 WAC, Uniform Building Code, and lodging houses. Congregate residences (each accommodating 10 persons or less).

OPEN BURNING is the burning of a bonfire, rubbish fire or other fire in an outdoor location where fuel being burned is not contained in an incinerator, outdoor fireplace, barbecue grill or barbecue pit. See chapter 173-425 WAC.

SECTION 219 - R.

RECREATIONAL FIRE is the burning of materials other than rubbish where fuel being burned is not contained in an incinerator, outdoor fireplace, barbecue grill or barbecue pit and with a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height for pleasure, religious, ceremonial, cooking or similar purposes. See chapter 173-425 WAC.

NEW SECTION

WAC 51-44-0900 Article 9--Fire department access and water supply.

901.2.2.1 Fire apparatus access, is not adopted.

901.4.2 Fire apparatus access roads, is not adopted.

902.1 General. Fire apparatus access roads shall be provided and maintained in accordance with locally adopted street, road, and access standards.

902.2 through 902.2.4.1, are not adopted.

NEW SECTION

WAC 51-44-1003 Section 1003--Fire-extinguishing systems.

1003.2.4.1 General. An automatic fire-extinguishing system shall be installed in all newly constructed buildings classified as Group E, Division 1 Occupancy. A minimum water supply meeting the requirements of UBC Standard 9-1 shall be required. The Chief may reduce fire flow requirements for buildings protected by an approved automatic sprinkler system.

For the purpose of this section, additions exceeding 60 percent of the value of such building or structure, or alterations and repairs to any portion of a building or structure within a twelve month period that exceeds 100 percent of the value of such building or structure shall be considered new construction. In the case of additions, area separation walls shall define separate buildings.

EXCEPTION: Portable school classrooms, provided:

1. Aggregate area of clusters of portable school classrooms does not exceed 5,000 square feet (465 m²); and
2. Clusters of portable school classrooms separated as required in Chapter 5 of the Building Code.

When not required by other provisions of this chapter, a fire-extinguishing system installed in accordance with UBC Standard 9-1

may be used for increases and substitutions allowed in Sections 505, 506, and 508 of the building code.

NEW SECTION

WAC 51-44-1007 Section 1007--Fire alarm systems.

1007.1.3 Where new construction or modification is to be in compliance with adopted chapter 51-40 WAC, Chapter 11, alarm modifications shall be designed to be compatible with the requirements of UFC Article 10.

1007.2.12.10 Accessible buildings.

1007.2.12.10.1 General. Alarm systems in buildings which are required to have accessible building facilities shall include both audible and visible alarms. All devices shall be listed or approved. The alarm devices shall be located in all accessible sleeping accommodations and common use areas, including toilet rooms and bathing facilities, hallways, and lobbies.

- EXCEPTIONS:
1. Alarm systems in Group I, Division 1.1 and 1.2 Occupancies may be modified to suit standard health care design practice.
 2. Visible alarms are not required in Group R, Division 1 apartment buildings.

1007.2.12.10.2 Alarms.

1007.2.12.10.2.1 Audible alarms. Audible alarms shall produce a sound in accordance with UFC Standard 10-2. Audible alarms shall exceed the prevailing equivalent sound level in the room or space by at least 15 decibels, or shall exceed any maximum sound level with a duration of 30 seconds by 5 decibels, whichever is louder. Sound levels for alarm signals shall not exceed 120 decibels.

1007.2.12.10.2.2 Visible alarms. Visible alarm signal appliances shall be integrated into the building or facility alarm system. All devices shall be listed or approved. Where single-station audible alarms are provided, single-station visible alarm signals shall be provided.

- EXCEPTION: Visible alarms are not required in Group R, Division 1 apartment buildings.

Visible alarms shall be located per nationally recognized standards. NFPA 72, 1993 edition, and ANSI 117.1, 1992, shall be considered equivalent facilitation.

1007.2.12.10.2.3 Access to manual fire alarm systems. Manual fire alarm devices shall be mounted at least 36 inches (914.4 mm) and not more than 54 inches (1371.6 mm) above the floor where a parallel approach is provided. Where a parallel approach cannot be provided the height shall not exceed 48 inches (1219.2 mm).

1007.3.3.3.4 Visual alarms. Alarm systems shall include both audible and visual alarms. Alarm devices shall be located in hotel guest rooms as required by the building code (see UBC Washington State Amendments, Section 1105.4.9); accessible public- and common-use areas, including toilet rooms and bathing facilities; hallways; and lobbies. (See UBC Washington State Amendments, Section 1106.15.2, for additional information about visual signals.)

NEW SECTION

WAC 51-44-10210 Appendix II-J--Storage of flammable and combustible liquids in tanks located within below-grade vaults.

5.4 Arrangement. Each vault may contain a maximum of three tanks. Compartmentalized tanks are allowed and shall be considered as a single tank.

NEW SECTION

WAC 51-44-1109 Section 1109--Control of sources of ignition.

1109.8.3 Religious ceremonies. Participants in religious ceremonies shall not be precluded from carrying hand-held candles.

NEW SECTION

WAC 51-44-2500 Article 25--Places of assembly.

2501.9.3 Width with Fixed Seats. Aisles in assembly occupancies with fixed seats shall comply with Section 2501.9.3. The clear width of aisles shall be based on the number of occupants within the portion of the seating areas served by the aisle.

The clear width of an aisle in inches shall not be less than the occupant load served by the aisle multiplied by 0.3 for aisles with slopes greater than 1 unit vertical to 8 units horizontal (12.5% slope) and not less than 0.2 for aisles with a slope of 1 unit vertical to 8 units horizontal (12.5% slope) or less. In addition, when the rise of steps in aisles exceeds 7 inches (178 mm), the aisle clear width shall be increased by 1¼ inches (32 mm) for each 100 occupants or fraction thereof served for each ¼ inch (6.35 mm) of riser height above 7 inches (178 mm).

EXCEPTION: For buildings with smoke-protected assembly seating and for which an approved life-safety evaluation is conducted, the minimum clear width of aisles and other means of egress may be in accordance with Table 2501-B. For Table 2501-B, the number of seats specified must be within a single assembly area, and interpolation shall be permitted between the specified values shown. If Table 2501-B is used the minimum clear widths shown shall be modified in accordance with the following:

1. **Factor A:** If risers exceed 7 inches (178 mm) in height, multiply the stair width in the tables by factor *A*, where:

$$A = 1 + \frac{(\text{riser height} - 7.0 \text{ inches})}{5}$$

For SI:

$$A = 1 + \frac{(\text{riser height} - 178 \text{ mm})}{127}$$

2. **Factor B:** Stairs not having a handrail within a 30-inch (760 mm) horizontal distance shall be 25 percent wider than otherwise calculated. Multiply by factor *B*, where *B* = 1.25.

3. **Factor C:** Ramps steeper than 1 unit vertical in 10 units horizontal (10% slope) where used in ascent shall be 10 percent wider than otherwise calculated. Multiply by factor *C*, where *C* = 1.10.

Where egress is possible in two directions, the width of such aisles shall be uniform throughout their length.

When aisles converge to form a single path of exit travel, the aisle width shall not be less than the combined required width of the converging aisles.

In assembly rooms with fixed seats arranged in rows, the clear width of aisles shall not be less than set forth above and not less than the following:

Forty-eight inches (1219 mm) for stairs having seating on both sides.

Thirty-six inches (914 mm) for stairs having seating on one side.

Twenty-three inches (584 mm) between a stair handrail and seating when the aisles are subdivided by the handrail.

Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.

Thirty-six inches (914 mm) for level or ramped aisles having seating on one side.

Twenty-three inches (584 mm) between a stair handrail and seating when an aisle does not serve more than five rows on one side.

2501.9.5 Ramp slope. The slope of ramped aisles shall not be more than 1 unit vertical in 8 units horizontal (12.5 percent slope). Ramped aisles shall have a slip-resistant surface.

EXCEPTION: When provided with fixed seating, theaters may have a slope not steeper than 1 unit vertical to 5 units horizontal (20 percent slope).

2501.9.6.2 When required. Aisles with a slope steeper than 1 unit vertical to 8 units horizontal (12.5 percent slope) shall consist of a series of risers and treads extending across the entire width of the aisle, except as provided in subsection 2501.9.5.

The height of risers shall not be more than 7 inches (178 mm) or less than 4 inches (102 mm) and the tread run shall not be less than 11 inches (279 mm). The riser height shall be uniform within each flight and the tread run shall be uniform throughout the aisle. Variations in run or height between adjacent treads or risers shall not exceed 3/16 inch (4.8 mm). A contrasting marking

stripe or other approved marking shall be provided on each tread at the nosing or leading edge such that the location of each tread is readily apparent when viewed in descent. Such stripe shall be a minimum of 1 inch (25.4 mm) wide and a maximum of 2 inches (51 mm) wide.

EXCEPTION: When the slope of aisle steps and the adjoining seating area is the same, the riser heights may be increased to a maximum of 9 inches (229 mm) and may be nonuniform but only to the extent necessitated by changes in the slope of the adjoining seating area to maintain adequate sightlines. Variations may exceed 3/16 inch (4.8 mm) between adjacent risers provided the exact location of such variations is identified with a marking stripe on each tread at the nosing or leading edge adjacent to the nonuniform riser. The marking stripe shall be distinctively different from the contrasting marking stripe.

2501.17 Candles and other open-flame devices. Candles and other open-flame devices shall not be used in places of assembly or in drinking or dining establishments.

- EXCEPTIONS:
1. When used in conjunction with approved heating or cooking appliances in areas not accessible to the public.
 2. When used in conformance with Section 1109.8.
 3. When used in conformance with Section 8203.2.1.8.
 4. Hand-held candles carried by participants in religious ceremonies. (See RCW 19.27.031(3).)

NEW SECTION

WAC 51-44-5200 Article 52--Motor vehicle fuel-dispensing stations.

5201.1 Scope. Automotive, marine and aircraft motor vehicle fuel-dispensing stations shall be in accordance with Article 52 and UFC Standard 52-1. Such operations shall include both public accessible and private operations. Flammable and combustible liquids and LP-gas shall also be in accordance with Articles 79 and 82.

- EXCEPTION: Class II or III liquids may be transferred from tank vehicles into fuel tanks of motor vehicles when approved by the chief, and under the following conditions:
1. Only diesel fuel will be allowed and each premises shall require a separate permit issued in accordance with Section 105,
 2. Tank vehicles shall meet the requirements of the U.S. Department of Transportation (DOT) and UFC Standard 79-4 and as approved by the chief,
 3. The tank vehicle, while in service, shall not be left unattended. Tank vehicles with fuel in the cargo tank shall not be left unattended,
 4. A fire extinguisher with a classification of 2A-20BC shall be readily available at the fueling site,
 5. There shall be signs stating "NO SMOKING OR OPEN FLAME WITHIN 25 FEET (7620 mm)" readily visible at the fueling site,
 6. There shall be adequate lighting for night time operations,
 7. For other than marine motor vehicles, the fuel hose shall not exceed 50 feet (15 240 mm) in length,
 8. Approved automatic closing nozzles without a latch open device shall be used,
 9. Communication devices shall be available in accordance with Section 5201.6.3,
 10. Tank vehicles shall have emergency shut off valves as approved by the chief,
 11. Dispensing shall be done in accordance with Section 7903.3.3.
 12. At least 20 feet (6096 mm) from any source of ignition,
 13. The applicant shall comply with all applicable federal, state and local environmental laws and regulations as a condition of permit,

14. The fueling area shall be located on an area graded in a manner to direct the spill away from buildings, storage and property lines.

NEW SECTION

WAC 51-44-6100 Article 61--Oil-burning equipment.

SECTION 6102 - GENERAL.

The design, construction and installation of oil-burning equipment shall be in accordance with the Mechanical Code. Oil-burning equipment shall be of an approved type. Tanks and piping serving oil-burning equipment which has been out of service for a period of one year shall be removed from the ground or property or abandoned in place in accordance with Section 7902.1.7 of this code.

SECTION 6103 - PERMITS.

A permit is required to remove, abandon, place temporarily out of service or otherwise dispose of a combustible liquids tank. See Section 105.8, permit f.3. Such a permit may be issued without an inspection of the tank or premises as otherwise required in Section 105.4.

SECTION 6106 - PORTABLE UNVENTED OIL-BURNING HEATING APPLIANCES AND UNVENTED DECORATIVE GAS LOGS AND FIREPLACES.

6106.1 General. The design, construction and use of portable unvented oil-burning heating appliances shall be in accordance with Section 6106 and other applicable provisions of this code.

6106.2 Equipment. Portable unvented oil-burning heating appliances shall be listed and shall be limited to a fuel tank capacity of 2 gallons (7.6 L).

EXCEPTION: Appliances approved for temporary use during construction processes are allowed to have a greater fuel tank capacity, provided such capacity does not exceed the terms of the listing of the appliance.

6106.3 Location. The use of listed portable unvented oil-burning heating appliances shall be limited to supplemental heating in Groups S, Divisions 3, 4, and 5 and Group U Occupancies.

- EXCEPTIONS:**
1. When approved, portable unvented oil-burning heating appliances may be used in any occupancy during construction processes when such use is necessary for the construction and the use does not represent a hazard to life or property.
 2. Approved, unvented portable oil-fueled heaters may be used as a supplemental heat source in any Group B, F-2, M, R or U Occupancy provided that such heaters shall not be located in any sleeping room or bathroom, and shall comply with RCW 19.27A.080, 19.27A.090, 19.27A.100, 19.27A.110, and 19.27A.120.
 3. Approved, unvented decorative gas logs and decorative fireplaces may be installed, used, maintained and permitted to exist in any Group I or R Occupancy, except bathrooms and bedrooms. An unvented decorative gas log is a listed natural or liquefied petroleum gas burning log with an open flame consisting of a metal frame or base supporting simulated logs which is designed so that its primary function lies in the aesthetic effect of the logs and flame. An unvented decorative fireplace is a listed unvented gas log permanently installed in a freestanding enclosure or zero clearance enclosure designed and approved for installation in walls or other building structures. Unvented decorative gas logs and fireplaces shall:
 1. Be equipped with an approved oxygen-depletion sensor,
 2. Be listed,
 3. Not be installed in any room which does not have an alternative primary source of heat,
 4. Have free air volume of at least 50 cubic feet (1.4 m³) for each 1,000 Btu (2.2 mm²/W) of thermal output, and
 5. Be permanently installed.

6106.4 Fuel. The grade and type of fuel shall be in accordance with the listing for the appliance. Storage and handling of fuel shall be in accordance with Article 79.

NEW SECTION

WAC 51-44-6300 Article 63--Refrigeration.

SECTION 6301 - SCOPE.

6301.1 This article shall govern the design, installation, construction and repair of refrigeration systems that vaporize and liquefy a fluid during the refrigerating cycle. Refrigerant piping design and installation, including pressure vessels and pressure relief devices, shall conform to this code. Permanently installed refrigerant storage systems and other components shall be considered as part of the refrigeration system to which they are attached.

6301.2 Refrigeration unit and system installations having a refrigerant circuit containing more than 220 pounds (100 kg) of Group A1 or 30 pounds (13.6 kg) of any other group refrigerant shall be in accordance with Article 63 and the Mechanical Code. See the Mechanical Code for refrigerant group descriptions. See also Sections 8001.1.2 and 8002.

EXCEPTION: The chief is authorized to exempt temporary or portable installations.

6301.3 Refrigeration systems shall comply with the requirements of this code and, except as modified by this code, ASHRAE 15 - 1994. Ammonia refrigerating systems shall comply with this code and, except as modified by this code, ASHRAE 15 - 1994 and IIAR 2 - 1992.

SECTION 6309 - AMMONIA DISCHARGE.

Ammonia refrigeration systems shall be designed and installed in accordance with ASHRAE 15 - 1994 Section 9.7.8.2, Ammonia Discharge.

EXCEPTION: An emergency discharge is not required for ammonia-water absorption unit systems installed outdoors provided that the discharge is shielded and dispersed.

SECTION 6310 - REFRIGERATION MACHINERY ROOMS.

6310.1 When Required. Where required by UMC Table 1104.2(1), a machinery room shall be provided to enclose refrigeration systems located indoors. Access to the machinery room shall be restricted to authorized personnel. For rooms where occupational exposure could occur, see WAC 269-62-07515 and 296-62-3112.

6310.2 Dimensions. A machinery room shall be dimensioned so as to provide clearances required by UMC Chapter 3. There shall be clear head room of not less than 7 feet 3 inches (2210 mm).

6310.3 Means of egress. Means of egress shall comply with Uniform Building Code Section 1020 - Special Hazards.

Each machinery room shall be provided with a minimum of one exit door that opens directly to the outside.

EXCEPTION: Self-closing, tight-fitting doors opening into a vestibule leading directly outside.

6310.4 Refrigerant-vapor Alarms. Machinery rooms shall contain a refrigerant vapor detector with an audible and visual alarm. The detector, or a sampling tube that draws air to the detector, shall be located in an area where refrigerant vapor from a leak will concentrate. The alarm shall be actuated at a value not greater than the corresponding TLV - TWA values shown in UMC Table 1104.1. Detectors and alarms shall be placed in approved locations.

EXCEPTION: Detectors are not required for ammonia systems complying with UMC Section 1106.8.

6310.7 Special Requirements. Open flames that use combustion air from the machinery room shall not be installed in a machinery room.

EXCEPTIONS:

1. Matches, lighters, halide leak detectors and similar devices.
2. Where the refrigerant is carbon dioxide or water.
3. Fuel burning equipment shall not be prohibited in the same machinery room with refrigerant - containing equipment where combustion air is ducted from outside the machinery room and sealed in such a manner as to prevent any refrigerant leakage from entering the combustion chamber, or where a refrigerant vapor detector is employed to automatically shut off the combustion process in the event of refrigerant leakage.

SECTION 6311 - REFRIGERATION MACHINERY ROOM VENTILATION.

6311.1 General. Machinery rooms shall be mechanically ventilated to the outdoors. Mechanical ventilation shall be capable of exhausting the minimum quantity of air both at the normal operating and emergency conditions. Multiple fans or multispeed fans shall be allowed in order to produce the emergency ventilation rate to obtain a reduced airflow for normal ventilation.

EXCEPTION: Where a refrigerating system is located outdoors more than 20 feet (6096 mm) from any building opening and is enclosed by a penthouse, lean - to or other structure, natural or mechanical ventilation shall be provided in accordance with UMC Section 1105.9.

6311.2 Distribution of Ventilation. Provisions shall be made for supply air to replace that being exhausted. Openings for supply air shall be located to avoid intake of exhaust air. Air supply and exhaust ducts to the machinery room shall comply with the provisions of UMC Section 1105.9.

6311.3 Intermittent Control of Ventilation Systems. Fans providing refrigeration machinery room temperature control or automatic response to refrigerant vapor are allowed to be automatically controlled to provide intermittent ventilation as conditions require.

6311.4 Emergency Control of Ventilation Systems. Fans providing emergency purge ventilation for refrigerant escape shall have a clearly identified switch of the break-glass type providing on-only control immediately adjacent to and outside of each refrigerant machinery room exit. Purge fans shall also respond automatically to the refrigerant concentration detection system set to activate the ventilation system at values not greater than the corresponding TLV - TWA values shown in UMC Table 1104.1. Ventilation equipment in ammonia machinery rooms equipped with a refrigerant vapor detector that will automatically start the ventilation system and actuate an alarm may be set at detection levels which exceed those in UMC Table 1104.1 but such detection level setting shall not exceed 1,000 ppm. An emergency purge control shall be provided with a manual reset only.

6311.6 Ventilation Discharge. Exhaust from mechanical ventilation systems shall be discharged 20 feet (6096 mm) or more from a property line or openings into buildings. Also see Section 6308.

6311.7 Fans. Fans and associated equipment intended to operate the emergency purge of other than Group A1 or Group B1 refrigerants shall meet the requirements for a Class I, Division 1 hazardous location as specified in the Electrical Code.

EXCEPTION: Ammonia machinery rooms.

SECTION 6313 - DETECTION AND ALARM SYSTEMS.

6313.2.1 Alarm. Refrigerant vapor alarms shall be activated at a value not greater than the corresponding TLV - TWA values shown in UMC Table 1104.1.

EXCEPTION: Alarms in ammonia machinery rooms may be activated by a detector setting not to exceed 1,000 ppm when the activation of the detector will automatically start the ventilation system.

6313.2.2 Automatic shutdown, is not adopted.

SECTION 6314 - REFRIGERATION MACHINERY ROOM EQUIPMENT AND CONTROLS.

6314.4 Emergency Control. A clearly identified switch of the break-glass type providing off-only control of electrically energized equipment and devices within the refrigeration machinery room shall be provided immediately adjacent to and outside of each refrigeration machinery room means of egress.

SECTION 6315 - REFRIGERANT CONTROL VALVES.

6315.2 Support. Stop valves installed in copper refrigerant lines of 7/8 inch (22 mm) or less outside diameter shall be securely supported independently of the tubing or piping.

SECTION 6318 - INSTRUCTIONS.

The person in charge of premises on which a refrigeration unit or system is installed shall provide an approved card located in the emergency control box designating:

1. Instructions for suspending operation of the system in the event of an emergency,
2. The name, address, and emergency telephone numbers to obtain emergency service,
3. The name, address, and telephone number of the fire department with instructions to notify the fire department in the event of an emergency,
4. The names, addresses, and telephone numbers of all corporate, local, state, and federal agencies to be contacted as required in the event of a reportable incident, and,
5. The location and operation of emergency discharge systems when such systems are required by Article 63.

NEW SECTION

WAC 51-44-7404 Section 7404--Medical gas systems.

7404.1 General. Compressed gases at hospitals and similar facilities intended for inhalation or sedation including, but not limited to, analgesia systems for dentistry, podiatry, veterinary

and similar uses shall be in accordance with Section 7404 in addition to other requirements of Article 74.

EXCEPTION: All distribution piping, supply manifolds, connections, regulators, valves, alarms, sensors and associated equipment shall be in accordance with the plumbing code.

7404.2.3 - Medical gas systems, is not adopted.

NEW SECTION

WAC 51-44-7802 Section 7802--Fireworks.

7802.1 General. Storage, use and handling of fireworks shall be in accordance with chapter 70.77 RCW and local ordinances consistent with chapter 70.77 RCW.

7802.2 Seizure of Fireworks, through 7802.4.9.8.10 Record, is not adopted.

NEW SECTION

WAC 51-44-7900 Article 79--Flammable and combustible liquids.

SECTION 7902 - STORAGE.

7902.1.7.2.4 Tanks abandoned in place. 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,

EXCEPTION: Residential heating oil tanks of 1,100 gallons (4,164 L) or less, provided the fill line is permanently capped or plugged, below grade, to prevent refilling of the tank.

4. Remaining underground piping shall be capped or plugged, and
5. A record of the tank size, location and date of abandonment shall be retained.

7902.6.8 Leaking tanks. Leaking tanks shall be handled in accordance with WAC 173-360-325.

7902.6.10 Tank lining. Steel tanks are allowed to be lined only for the purpose of protecting the interior from corrosion or providing compatibility with a material to be stored. Only those liquids tested for compatibility with the lining material are allowed to be stored in lined tanks. Lining of leaking underground storage tanks shall be done in accordance with the provisions of WAC 173-360-325.

7902.6.15.2 Cathodic protection. Cathodic protection systems provided for corrosion protection shall be in accordance with recognized standards. See WAC 173-360-320.

SECTION 7903 - DISPENSING, USE, MIXING AND HANDLING.

7903.4 Solvent Distillation Units.

7903.4.1 General. Solvent distillation units used to recycle Class I, II or III-A liquids having a distillation chamber capacity of 60 gallons (227.1 L) or less shall be listed, labeled and installed in accordance with Section 7903.4 and nationally recognized standards. See Article 90, Standard u.1.17.

- EXCEPTIONS:**
1. Solvent distillation units installed in dry-cleaning plants in accordance with Section 3603.
 2. Solvent distillation units used in continuous throughput industrial processes where the source of heat is remotely supplied using steam, hot water, oil or other heat-transfer fluids, the temperature of which is below the auto-ignition point of the solvent(s).
 3. Approved research, testing and experimental processes.

Solvent-distillation units used to recycle Class I, II or III-A liquids, having a distillation chamber capacity exceeding 60 gallons (227.1 L) shall be used in locations that comply with the use and mixing requirements of Section 7903 and other applicable provisions in Article 79.

Classes I, II and III-A liquids also classified as unstable (reactive) shall not be processed in solvent-distillation units.

EXCEPTION: Appliances listed for the distillation of unstable (reactive) solvents.

SECTION 7904 - SPECIAL OPERATIONS.

7904.5.4.2.2 Marine craft and special equipment. Liquids intended for use as motor fuels are allowed to be transferred from tank vehicles into the fuel tanks of marine craft and special equipment under the following conditions and when approved, and when:

1. The tank vehicle's specific function is that of supplying fuel to fuel tanks and each premises shall require a separate permit issued in accordance with Section 105,
2. The operation shall be performed only where the general public has no access or where there is no unusual exposure to life and property,
3. The dispensing line shall not exceed 50 feet (15 240 mm) in length, and
4. The dispensing nozzle is approved.

7904.5.4.2.2.1 Vehicle fueling. When approved by the chief, dispensing of motor vehicle fuel from tank vehicles into the fuel tanks of motor vehicles is allowed in accordance with Article 52 and Sections 7904.2 and 7904.5.4.2.2.

NEW SECTION

WAC 51-44-8000 Article 80--Hazardous materials.

SECTION 8001 - GENERAL.

8001.3.2 Hazardous materials management plan. When required by the chief, each application for a permit shall include a hazardous materials management plan (HMMP). The location of the HMMP shall be posted adjacent to permits when an HMMP is provided. The HMMP shall include a facility site plan designating the following:

1. Storage and use areas,
2. Maximum amount of each material stored or used in each area,
3. Range of container sizes,
4. Locations of emergency isolation and mitigation valves and devices,
5. Product conveying piping containing liquids or gases, other than utility-owned fuel gas lines and low-pressure fuel gas lines,
6. On and off positions of valves for valves which are of the self-indicating type, and
7. Storage plan showing the intended storage arrangement, including the location of aisles.

The plans shall be legible and approximately to scale. Separate distribution systems are allowed to be shown on separate pages.

See also Appendix II-E.

SECTION 8003 - STORAGE.

8003.3.2.3 Canopies. Portable tanks and cylinders stored outside of buildings shall be stored under a canopy of noncombustible construction. Such storage shall not be considered indoor storage. See also Section 8003.1.14.

EXCEPTION: Portable tanks and cylinders used for storing anhydrous ammonia (fertilizer grade).

An automatic fire-sprinkler system shall be provided for canopies used for storage of highly toxic or toxic compressed gases.

EXCEPTION: Where water is incompatible with the hazardous material stored, the chief may approve alternate fire suppression methods to an automatic sprinkler system.

Chapter 51-45 WAC

STATE BUILDING CODE ADOPTION AND AMENDMENT
OF THE 1997 EDITION OF THE UNIFORM FIRE CODE STANDARDS

NEW SECTION

WAC 51-45-001 Authority. These rules are adopted under the authority of chapter 19.27 RCW.

NEW SECTION

WAC 51-45-002 Purpose. The purpose of these rules is to implement the provisions of chapter 19.27 RCW, which provides that the State Building Code council shall maintain the State Building Code in a status which is consistent with the purpose as set forth in RCW 19.27.020. In maintaining the codes the council shall regularly review updated versions of the codes adopted under the act, and other pertinent information, and shall amend the codes as deemed appropriate by the council.

NEW SECTION

WAC 51-45-003 Uniform fire code standards. The 1997 edition of the Uniform Fire Code Standards as published by the International Fire Code Institute is hereby adopted by reference with the following additions, deletions, and exceptions.

NEW SECTION

WAC 51-45-007 Exceptions. The exceptions and amendments to the Uniform Fire Code Standards contained in the provisions of chapter 19.27 RCW shall apply in case of conflict with any of the provisions of these rules.

NEW SECTION

WAC 51-45-008 Implementation. The Uniform Fire Code Standards adopted by chapter 51-45 Washington Administrative Code (WAC) shall become effective in all counties and cities of this state on July 1, 1998.

NEW SECTION

WAC 51-45-80400 Standard 80-4 - Inert cryogenic fluid systems at consumer sites.

Section 5.2.1.2 When bulk inert gas systems are installed in a building of other than Type I or II construction, an approved, supervised automatic sprinkler system shall be provided in the room or area in which the system is installed. Activation of the automatic sprinkler system shall initiate a local alarm and transmit a signal to a constantly attended control station.