

RULES CERTIFICATE

Department of Commerce

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Brenda J. Blanchard, Secretary of the Department of Commerce,

and custodian of the official records of said department, do hereby certify that the annexed rule(s) relating to

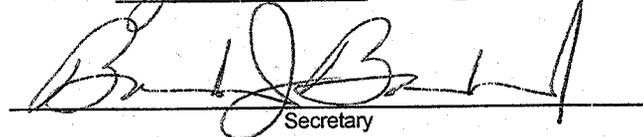
Fire Safety Requirements in the Commercial Building Code

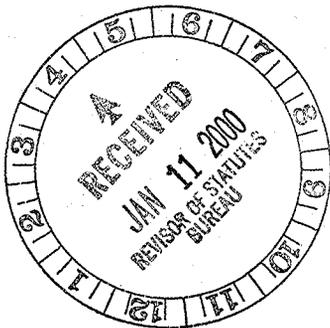
(Subject)

were duly approved and adopted by this department.

I further certify that said copy has been compared by me with the original on file in the department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set
my hand at 201 West Washington Avenue
in the city of Madison, this 10th
day of Jan. A.D. 2000


Secretary



ORDER OF ADOPTION

Department of Commerce

Pursuant to authority vested in the Department of Commerce by section(s) 101.02 (1) and (15), and

101.14 (4) Stats., the Department of Commerce creates; amends;

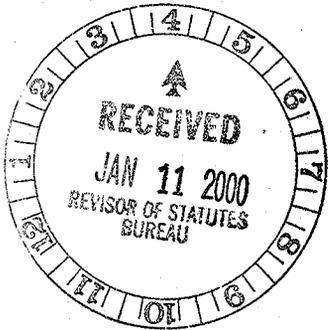
repeals and recreates; repeals and adopts rules of Wisconsin Administrative Code chapter(s):

Comm 50-64
(number)

Building and Heating, Ventilating & Air Conditioning
(Title)

The attached rules shall take effect on the first day of the month following publication in the

Wisconsin Administrative Register pursuant to section 227.22, Stats.



Adopted at Madison, Wisconsin this

date: 1/10/00

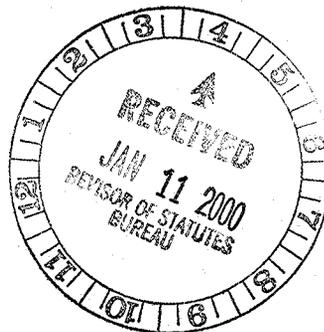
DEPARTMENT OF COMMERCE


Secretary



State of Wisconsin \ Department of Commerce

RULES in FINAL DRAFT FORM



Rule No.: Chapters Comm 50-64

Relating to: Fire Safety Requirements

Clearinghouse Rule No.: 99-120

The Wisconsin Department of Commerce proposes an order to repeal ss. Comm 51.01 (60), Table 51.03-B, 51.042 (1) (d), 51.044, 51.047 (3), 51.047 (5), 51.06 (6) (a) 3. b., 51.167 (1) (Note), 51.21 (1) (Note), 51.21 (3) (i), 51.23 (7) (d) (Note), 51.23 (8), Table 51.25-10 lines 59 and 60, 52.01 (1) (c) and Notes, 52.013 (6) (b) 2., 53.63 (1), 54.01 (2) (c), 57.16 (2), 58.22, and 64.67 (6) (intro.);

to renumber ss. Comm 51.01 (56a), 51.01 (119c), Table 51.02, 51.047 (2), 51.047 (6), 51.245 (3) (a) to (d), Table 51.25-10 lines 61 to 64, 52.013 (6) (b) 1., and 64.67 (6) (a) to (e);

to renumber and amend ss. Comm 51.06 (6) (a) 3. a., 51.08 (3), 51.22 (3), 51.24 (10), and 51.245 (3) (intro.);

to amend ss. Comm 51.01 (7), 51.01 (47), 51.02 (4) (c) 1., 51.02 (5) (a) 1., 51.02 (15), 51.02 (19) (a) (intro.), 51.03 (1) (d), 51.03 (2) (e), 51.043 (1) (a), 51.047 (5) (intro.), 51.048 (1) (a), 51.049 (2) (Note), 51.049 (5) (b) 4. (intro.), 51.22 (1), 51.23 (2) (a), 51.23 (2) (b), 51.23 (6) (a), 51.23 (6) (b), 51.23 (7) (b), 51.24 (intro.), Table 51.25-17, 52.011 (4), 52.013 (7) (b), 55.09 (title), 57.01 (2) (a), 57.16 (1) (d), Table 59.12-1 Footnote, Table 59.12-2 Footnote, 64.22 (8), 64.51 (4) (a), 64.67 (1), 64.67 (6) (e), and 66.32 (5) (c) 1.;

to repeal and recreate ss. Comm 51.047 (1), 51.048 (1) (b), 51.049 (5) (b) 4. a., 51.08 (2), Table 51.08-2, 51.20 (1), 51.21 (1), 51.21 (8), 51.23 (1) (a), 51.245 (2), 52.013 (6) (c), 62.93, Table 64.21, 64.42, and 64.67 (5) (f);

and to create ss. Comm 51.01 (119e), 51.02 (4) (d) and Table 51.02-B, 51.02 (19) (a) 3., 51.02 (24), 51.02 (25), 51.047 (2), 51.048 (1) (c), 51.0485, 51.049 (5) (b) 4. b., 51.049 (6), 51.08 (3) (b), 51.22 (3) (a) 2. and Note, 51.22 (3) (b), 51.235, 51.236, 51.24 (10) (b), 51.245 (3) (f), 55.09 (4), 57.16 (1) (b) 5., 64.67 (6) (a), 64.67 (6) (b) (title), 64.67 (6) (c) (title), 64.67 (6) (d) (title), 64.67 (6) (f) (title), 64.67 (6) (g) and (h), 64.67 (8) and 64.67 (9).

Analysis of Proposed Rules

Statutory Authority: ss. 101.02 (1) and (15), and 101.14 (4)

Statutes Interpreted: ss. 101.02 (1) and (15), 101.14 (4), and 101.145

Under ss. 101.02 and 101.14, Stats., the Department of Commerce has the responsibility to supervise every public building and place of employment, including the fire safety aspects, in order to protect the life, health, safety and welfare of every employe, frequenter, tenant and firefighter. The proposed changes in this package are intended to update code requirements and adopted national standards relating to building construction, building equipment, commodity

storage and isolation, fire prevention, fire detection, and fire suppression as one part of that responsibility.

The proposed rule change updates the currently adopted National Fire Protection Association (NFPA) standards in the Building and Heating, Ventilating and Air Conditioning Code, chapters Comm 50-64. Twenty-two additional NFPA standards are proposed for adoption by reference. Most of these new standards relate to alternate methods of fire suppression or to storage and isolation requirements for various hazardous commodities.

Minor wording changes have been made to the text to clarify ambiguous requirements or to promote consistency within the code as well as consistency with national standards and national model codes. Several changes are proposed that will coincide with requirements in the International Building Code (IBC). Proposed requirements for fireblocking in building construction, using listed joint assemblies in fire-resistive construction, and fire isolation and suppression in commercial cooking facilities follow requirements from the IBC.

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SECTION 1. Comm 51.01 (7) is amended to read:

Comm 51.01 (7) "Automatic" means ~~functions~~ a function that occurs without human intervention. ~~Automatic as applied to a fire protective device is one which functions without human intervention and is actuated as a result of the predetermined temperature rise, rate of rise of temperature, combustion product or smoke density, such as an automatic fire sprinkler system, automatic fire door, automatic fire shutter, or automatic fire vent.~~

SECTION 2. Comm 51.01 (47) is amended to read:

Comm 51.01 (47) FIRE-RESISTIVE CLASSIFICATION. Fire-resistive classification is the time in hours during which a material or assembly continues to exhibit fire resistance under specific conditions of tests and performance ~~as specified in ASTM E-119, ASTM E-152, and ASTM E-163.~~

SECTION 3. Comm 51.01 (56a) is renumbered (56m).

SECTION 4 Comm 51.01 (60) is repealed.

SECTION 5. Comm 51.01 (119c) is renumbered (119m).

SECTION 6. Comm 51.01 (119e) is created to read:

Comm 51.01 (119e) "Smokeless propellant" means a solid propellant used in small arms ammunition, cannons, rockets or propellant - actuated devices that emits a minimal amount of smoke when ignited.

SECTION 7. Comm 51.02 (4) (c) 1. is amended to read:

Comm 51.02 (4) (c) 1. Except as provided in subd. 2., fenestration in-fill panels in the exterior walls of existing buildings of types 1, 2, 3, 5A and 5B construction meeting the percentage of openings requirements of ~~Table 51.03-B~~ Table 51.02-B shall be of noncombustible construction.

SECTION 8. Comm 51.02 (4) (d) and Table 51.02-B are created to read:

Table 51.02-B

Maximum Total Area Of Windows Or Other Openings In Percent Of Total Exposed Wall Surface

Setback from Property Line or Other Walls on same property	CLASS OF CONSTRUCTION					
	1. Fire Resistive "A" 2. Fire Resistive "B" 3. Metal Frame Prot.		4. Heavy Timber 5A Ext. Masonry 5B Ext. Masonry	6. Metal Frame Unprotected	7. Wood Frame Protected	8. Wood Frame Unprotected
	Bearing Wall	Nonbearing wall				
Less than 5'	No openings	No openings	No openings	No openings	No openings	
5' to less than 10'	20% A Fire Window is Required	30% A Fire Window is Required	30%	No openings	No openings	
10' to less than 30'	30%	40%	40%	40%	40%	
30' or over	No limit	No limit	No limit	No limit	No limit	

Comm 51.02 (4) (d) 1. Except as allowed under subd. 6, the maximum area of windows or other openings shall be as required by Table 51.02-B.

2. Table 51.02-B does not apply to property lines along streets.

3. The maximum percentage of openings in Table 51.02-B shall be calculated for each 100 lineal feet of wall measured in the plane of the wall. Wing walls, parapets or similar structures may not be used to increase the exposed wall area.

4. Fire windows required by Table 51.02-B shall comply with s. Comm 51.048.

5. Setbacks specified in Table 51.02-B shall be measured as specified in s. Comm 51.01 (115).

6. Where openings are permitted, and Table 51.02-B shows a numerical percentage of allowed openings, openings are allowed in excess of the given percentage, provided the excess openings are protected with automatic closing, 3-hour fire resistive door or shutter assemblies.

SECTION 9. Comm 51.02 (5) (a) 1. is amended to read:

Comm 51.02 (5) (a) 1. Openings shall be protected by approved fire door or fire window assemblies as specified in ss. Comm 51.047 and 51.048, or fire damper or fire curtain door assemblies as specified in s. Comm ~~64.42~~ 51.0485.

SECTION 10. Comm 51.02 (15) is amended to read:

Comm 51.02 (15) DECORATIVE COMBUSTIBLE MATERIALS. Any combustible materials applied to a required noncombustible exterior surface of "0" hourly rated construction or better shall not exceed the surface area percentage specified in ~~Table 51.02~~ Table 51.02-A within any 100 lineal feet of the building.

SECTION 11. Comm 51.02, Table 51.02 is renumbered Table 51.02-A.

SECTION 12 Comm 51.02 (19) (a) (intro.) is amended to read:

Comm 51.02 (19) (a) (intro.) Except as provided in par. (b), attics of combustible construction shall be divided into areas not greater than 3,200 square feet ~~by firestopping~~ as specified in ~~s. ILHR 53.63 (1)(d)~~ this section.

SECTION 13. Comm 51.02 (19) (a) 3. is created to read:

Comm 51.02 (19) (a) 3. Materials used for attic compartmentalization shall be as specified in s. Comm 51.02 (24) (c).

SECTION 14. Comm 51.02 (24) is created to read:

Comm 51.02 (24) FIREBLOCKING OF CONCEALED SPACES. (a) General. 1. Fireblocking shall be installed in combustible concealed locations in accordance with this section.

2. Fireblocking shall be provided across the full width of intersections of interior and exterior walls with floors, ceilings and roof in order to cut off communication by fire through hollow concealed spaces and prevent both vertical and horizontal drafts.

3. Fireblocking shall be provided at openings around wires, vents, pipes, ducts and other penetrations in floors and ceilings at all levels to prevent vertical drafts.

4. Fireblocking shall be provided at openings around wires, vents, pipes, ducts and other penetrations in walls separating adjacent tenant spaces to prevent horizontal drafts.

5. Noncombustible fireblocking shall be provided between chimneys and wood framing at all floor levels.

6. Fireblocking shall be installed to remain securely in place when exposed to fire conditions.

7. The integrity of fireblocking shall be maintained.

(b) Specific locations. 1. Concealed spaces in stud walls or furred walls shall have fireblocking placed immediately above and below the junction of any floor construction with the walls, or shall be fireblocked the full depth of the joist.

2. Concealed spaces between vertical stud walls or partitions and the spaces created by soffits, dropped ceilings, cove ceilings and similar areas shall be fireblocked.

3. All concealed spaces between stair stringers at the top and bottom of the stair run shall be fireblocked.

4. All spaces between chimney and wood framing shall be solidly filled with noncombustible material at floor levels.

5. a. Except as provided in subd. 5. b. and c., wood floors laid on noncombustible construction with sleepers or furring strips shall be fireblocked so that no open space under the flooring will exceed 100 square feet.

b. Fireblocking is required only at the ends of each lane in a bowling facility.

c. Fireblocking is not required for slab-on-grade floors in gymnasiums unless the floor is partitioned into separate rooms or areas by permanent stud wall or furred wall construction.

Note: Subd. 1 still requires fireblocking under permanent walls that serve to subdivide the gymnasium floor.

(c) Fireblocking materials. Where combustible material is allowed under this section, fireblocking shall consist of one of the following:

1. Lumber with a nominal thickness of at least 2 inches.

2. Two layers of lumber, each with a nominal thickness of one inch, with staggered lap joints.

3. Wood structural panel or particle board with a nominal thickness of 3/4 inch thick with joints backed.

4. Gypsum board with a minimum thickness of 1/2 inch.

5. Cement fiber board.

6. Fiberglass or mineral wool batts or blankets.

7. Caulk, putty or drywall compound.

8. Other noncombustible materials.

SECTION 15. Comm 51.02 (25) is created to read:

Comm 51.02 (25) COMBUSTIBLE STORAGE. Combustible materials covered under the scope of NFPA 230 shall be stored in accordance with the requirements of NFPA 230.

Note: NFPA 230, Standard for the Fire Protection of Storage, is intended to apply to a broad range of combustible materials stored indoors and outdoors. Examples include plastics, rubber tires, baled cotton and roll paper. Configurations include palletized, solid piled, in bin boxes, on racks or on shelves. Exemptions include high-hazard materials, such as flammable liquids and unpackaged bulk material, such as grain or coal.

SECTION 16. Comm 51.03 (1) (d) is amended to read:

Comm 51.03 (1) (d) Doors and windows may be of wood except as otherwise specified in s. Comm 51.02 (5), ~~Table 51.03-B~~, ~~Table 51.02-B~~, ss. Comm 51.17, 51.18, 51.19 and 51.20, or in the occupancy chapters of this code.

SECTION 17. Comm 51.03 (2) (e) is amended to read:

Comm 51.03 (2) (e) Doors and windows may be of wood except as otherwise specified in s. Comm 51.02 (5), ~~Table 51.03-B~~, ~~Table 51.02-B~~, ss. Comm 51.17, 51.18, 51.19 and 51.20, or in the occupancy chapters of this code.

SECTION 18. Comm 51.03, Table 51.03-B is repealed.

SECTION 19. Comm 51.042 (1) (d) is repealed.

SECTION 20. Comm 51.043 (1) (a) is amended to read:

Comm 51.043 (1) (a) Test by approved testing laboratories (~~see s. ILHR 51.044~~).

SECTION 21. Comm 51.044 is repealed.

SECTION 22. Comm 51.047 (1) is repealed and recreated to read:

Comm 51.047 (1) GENERAL. (a) Except as provided in pars. (b) and (c) and ss. Comm 51.048, Comm 51.049, an opening, where permitted in a fire-resistive rated assembly, shall be protected by means of a fire-resistive rated door assembly installed and maintained in accordance with NFPA 80.

(b) Where a fire-resistive wall assembly is used only as an interior bearing wall as specified in line 17 of Table 51.03-A, and is not also used for separation purposes, the opening does not require protection with a fire-resistive rated door assembly, provided all parts of the opening maintain the fire-resistive rating of the wall assembly.

(c) Openings in fire-resistive rated assemblies to accommodate conveyor systems shall be protected with one of the following: 1. A fire-resistive rated door assembly installed and maintained in accordance with NFPA 80.

2. A water spray system installed in accordance with NFPA 15 and all of the following:

a. Initiating devices shall be installed on both sides of the penetrated assembly.

b. Nozzles shall protect the entire opening on both sides of the assembly.

c. The conveyor shall be constructed such that it stops running when the spray system is activated.

d. The minimum design density of the water spray shall be 0.50 gallons per minute per square foot of protected opening.

e. The minimum water supply duration shall be 120 minutes.

SECTION 23. Comm 51.047 (3) is repealed.

SECTION 24. Comm 51.047 (2) is renumbered (3).

SECTION 25. Comm 51.047 (2) is created to read:

Comm 51.047 (2) The fire-resistive rated door assembly shall be tested in accordance with NFPA 252 or UL 10B and listed and labeled as having the fire-resistive rating required by Table 51.047.

[NOTE TO REVISOR: Please place Table 51.047 after the created subsection (2).]

SECTION 26. Comm 51.047 (5) is repealed.

SECTION 27. Comm 51.047 (6) is renumbered (5).

SECTION 28. Comm 51.047 (5) (intro.), as renumbered, is amended to read:

Comm 51.047 (5) (intro.) All labeled fire doors, where required, shall be equipped with an approved automatic or self-closing device as defined in s. Comm 51.01 (17). A fusible link may not be used to activate an automatic closing device.

SECTION 29. Comm 51.048 (1) (a) is amended to read:

Comm 51.048 (1) WINDOW OPENINGS. (a) Except as allowed under par. (b), window openings, where permitted in fire-resistive rated walls assemblies, shall be protected with fire window or glass block assemblies installed and maintained in accordance with NFPA 80 and rated as 3/4-hour when tested in accordance with NFPA 257 or UL 9 by an approved laboratory ~~and tested in accordance with standard method ASTM E-162.~~

SECTION 30. Comm 51.048 (1) (b) is repealed and recreated to read:

Comm 51.048 (1) (b) Where a fire-resistive wall assembly is used only as an interior bearing wall as specified in line 17 of Table 51.03-A, and is not also used for separation purposes, the opening does not require protection with a fire-resistive window assembly, provided all parts of the opening maintain the fire-resistive rating of the wall assembly.

SECTION 31. Comm 51.048 (1) (c) is created to read:

Comm 51.048 (1) (c) Windows are not permitted in fire-resistive rated assemblies required to have a fire-resistive rating greater than one hour unless specifically permitted elsewhere in this code.

SECTION 32. Comm 51.0485 is created to read:

Comm 51.0485 Fire dampers, smoke dampers and ceiling dampers. (1) Except as provided under sub. (2), ducts that terminate at or pierce a code-required, fire-resistive rated assembly shall be protected with a listed fire damper, smoke damper or ceiling damper installed and maintained in accordance with the requirements of NFPA 90A.

(2) Kitchen exhaust ducts serving a hood may not have a damper installed, except under one of the following conditions:

(a) The damper is listed for such use or is part of a listed device or system.

(b) A carbon dioxide extinguishing system is installed.

Note 1: See s. Comm 64.67 (6) (g) for requirements on carbon dioxide extinguishing systems, in addition to the requirements of NFPA 12.

Note 2: See s. Comm 64.67 (5) (f) for duct enclosure requirements.

SECTION 33. Comm 51.049 (2) Note is amended to read:

Comm 51.049(2) Note: See s. Comm ~~64.42~~ 51.0485 for fire damper and fire curtain door requirements.

SECTION 34. Comm 51.049 (5) (b) 4. (intro.) is amended to read:

Comm 51.049 (5) (b) 4. (intro.) Where boxes are located on opposite sides of a non-staggered stud wall or partition, the boxes shall be separated by a minimum horizontal distance of 24 inches, unless installed in accordance with all one of the following:

SECTION 35. Comm 51.049 (5) (b) 4. a. is repealed and recreated to read:

Comm 51.049 (5) (b) 4. a. The boxes shall be protected with a listed wall opening protective material installed in accordance with the listing.

SECTION 36. Comm 51.049 (5) (b) 4. b. is repealed and recreated to read:

Comm 51.049 (5) (b) 4. b. The boxes shall be separated by solid fire blocking in accordance with s. Comm 51.02 (24).

SECTION 37. Comm 51.049 (6) is created to read:

Comm 51.049 (6) CONSTRUCTION JOINTS. (a) *General*. Except as allowed under par. (b), all joints between adjacent fire-resistive rated assemblies, such as between floor and wall assemblies, shall be designed and installed to maintain the hourly rating of the assembly.

(b) *Exceptions*. Fire-resistive construction joint systems are not required for joints in the following locations:

1. Floors within a single dwelling unit.
2. Floors where the joint is protected with a fire-resistive shaft enclosure in accordance with s. Comm 51.02 (11) (a).
3. Floors within atriums where the adjacent space is included in the volume of the atrium for smoke control purposes.
4. Floors within malls.
5. Floors within open parking structures.
6. Mezzanine floors.
7. Walls that are permitted to have unprotected openings.
8. Roofs where openings are permitted.
9. Control joints tested in accordance with ASTM E 119 that have a maximum joint width of 5/8 inch.
10. Joints that were tested as an integral part of the fire-resistive rated assembly.

(c) *Classification and testing*. 1. Except as allowed under subd. 2., construction joints under par. (a) shall be classified by an independent testing laboratory based on testing in accordance with UL 2079.

2. Voids at the intersection of fire-resistive rated assemblies and exterior curtain walls shall be protected with materials tested in accordance with ASTM E 119.

SECTION 38. Comm 51.06 (6) (a) 3. a. is renumbered (6) (a) 3. and amended to read:

Comm 51.06 (6) (a) 3. Foam plastics may be used in a thickness up to 4 inches in freestanding coolers or freezers having an aggregate floor area of 400 square feet without a thermal barrier and without an automatic fire sprinkler system; ~~or~~.

SECTION 39. Comm 51.06 (6) (a) 3. b. is repealed.

SECTION 40. Comm 51.08 (2) is repealed and recreated to read:

Comm 51.08 (2) HAZARD ISOLATION. (a) *General*. 1. Fire hazards shall be stored or isolated in accordance with this section.

2. Fire-resistive rated construction specified in Table 51.08-2 and this section shall comply with ss. Comm 51.04 to 51.049.

3. Fire detection, prevention, suppression and isolation features required under an adopted NFPA standard referenced in this section shall be provided as specified in the standard.

4. a. Except as required under subd. 4. b., fuel-fired equipment that is used for processes directly related to the business and is normally in view of employees and under the control of employees while in operation is not required to be isolated.

b. If the adopted NFPA standard has isolation requirements, those requirements shall be followed.

Note: Examples of processes directly related to the business include cooking equipment at a restaurant, manufacturing process equipment, dryers at a commercial laundry, etc.

(b) *Fuel-fired heating equipment*. 1. Except as provided in subd. 2. and 3., fuel-fired heating equipment shall be provided with a fire-resistive rated enclosure as follows:

a. Gas- and oil-fired boilers, furnaces and water heaters shall be provided with a one-hour fire-resistive rated enclosure.

b. Solid fuel-fired boilers, furnaces and water heaters shall be provided with a two-hour fire-resistive rated enclosure.

c. For occupancies under ch. Comm 59, no openings other than self-closing doors are allowed within 18 inches of the floor in a required enclosure for fuel-fired heating equipment

2. Fuel-fired heating equipment may be used without a fire-resistive rated enclosure as follows:

a. For occupancies under chs. Comm 54, 55, 56, 57, 59, 60, 61, 62 and 66, a direct vent sealed combustion chamber appliance may be used without a rated enclosure.

b. Suspended equipment, where allowed under ss. Comm 64.21 and 64.22 may be used without a rated enclosure.

c. For occupancies under chs. Comm 54, 55, 56 and 58, gas-fired booster water heaters used exclusively for sanitizing dishes and cooking utensils may be used without a rated enclosure.

3. For occupancies under ch. Comm 56, the following equipment may be used without a rated enclosure in the shop area provided the shop area is separated from other areas of the building by 3-hour fire-resistive construction:

a. Vented gas or oil open flame infrared equipment with surface temperatures that exceed 1500 °F.

b. Unvented gas direct-fired make-up air units.

(c) *Clothes dryers.* 1. Except as allowed in subd. 2, all gas, oil or electric clothes dryers shall be isolated by 2-hour fire-resistive rated construction.

2. The following exceptions apply to occupancies under chs. 54, 55, 56, 57, 59 and 60:

a. The 2-hour fire-resistive rating is not required for the isolation of clothes dryers where the entire room containing the dryers is provided with automatic fire sprinkler protection and, for gas-fired dryers, each dryer is protected with an automatic shut-off valve that stops the gas flow if there is a sudden pressure drop in the fuel supply system.

b. The 2-hour fire-resistive rating is not required for the isolation of clothes dryers where no more than two dryers with a maximum rating of 37,000 Btu each are contained in the room, and for gas-fired dryers, each is protected with an automatic shut-off valve that stops the gas flow if there is a sudden pressure drop in the fuel supply system.

(d) *Generators.* 1. Fuel-fired generators shall be isolated with fire-resistive construction with hourly ratings in accordance with the fire enclosure requirements of Table 51.03-A, line 20.

2. Emergency generators required by ch. Comm 16, Table 16.46, shall be isolated as required in subd. 1, with no other equipment allowed in the room that is not an integral part of a required emergency power supply system.

(e) *Fire pumps.* Fire pumps shall be isolated with fire resistive construction with hourly ratings in accordance with the fire enclosure requirements of line 20, Table 51.03-A.

(f) *Flammable and combustible liquids.* Flammable and combustible liquids shall be stored and isolated in accordance with NFPA 30 and 30A.

(g) *Aerosols.* Aerosols shall be stored and isolated in accordance NFPA 30B.

(h) *Smokeless propellants.* Smokeless propellants shall be stored and isolated in accordance with NFPA 495.

(i) *Fireworks, black powder and explosive materials.* Fireworks, black powder and explosive materials shall be stored and isolated in accordance with ch. Comm 7.

(j) *Flammable and combustible gases.* 1. 'Liquefied petroleum gas.' Liquefied petroleum gas shall be stored and isolated in accordance with ch. Comm 40.

2. 'Gases for welding, cutting and allied processes.' Gases for welding, cutting and allied processes shall be stored and isolated in accordance with NFPA 51.

(k) *Spray applications.* Flammable or combustible materials used in spray applications shall be isolated and protected in accordance with NFPA 33.

(L) *Coating or dipping applications.* Flammable or combustible materials used in coating or dipping applications shall be stored and isolated in accordance with NFPA 34.

(m) *Liquid and solid oxidizers.* Liquid and solid oxidizers shall be stored and isolated in accordance with NFPA 430.

(n) *Organic peroxides.* Organic peroxides shall be stored and isolated in accordance with NFPA 432.

(o) *Laboratory chemicals.* Laboratory chemicals falling under the scope of NFPA 45 shall be stored and isolated in accordance with NFPA 45.

(p) *Hazardous areas.* Hazardous areas, including trash collection rooms, recycling areas, woodworking areas, maintenance shops and similar areas determined by the department shall be isolated in accordance with Table 51.08-2.

SECTION 41. Comm 51.08-2, Table 51.08-2 is repealed and recreated to read:

Table 51.08-2

HAZARD ISOLATION

Occupancy	Minimum Fire -Resistive Rating In Hours ¹		Exceptions
	< 3 stories	> 3 stories	
Ch 54	2	2	1-hour isolation permitted for 1-story bldgs <3,000 ft ²
Ch 55	3	3	2-hour isolation permitted for bldgs with a capacity of < 300 people
Ch 56	4	4	2-hour isolation permitted for 1-story bldg
Ch 57	1	2	
Ch 58	2	3	
Ch 59	2	2	
Ch 60	1	2	
Ch 61	Not Applicable	Not Applicable	
Ch 62 Open parking structures & assembly seating facilities	2	2	
Ch 62 Greenhouses	1	Not Applicable	
Ch 62 Mini-storage Buildings	2	2	1-hour isolation permitted for 1-story bldgs <3,000 ft ²

¹Fire-resistive ratings may be reduced in accordance with s. Comm 51.02 (22).

SECTION 42. Comm 51.08 (3) is renumbered (3) (a) and amended to read:

Comm 51.08 (3) (a) Openings in occupancy separations ~~or hazard enclosures~~ shall be protected by fire-door assemblies as specified in s. Comm 51.047 or by fire-window assemblies as specified in s. Comm 51.048 or as specified in s. Comm 51.049.

SECTION 43. Comm 51.08 (3) (b) is created to read:

Comm 51.08 (3) (b) Openings in hazard enclosures shall be protected with self-closing fire door assemblies as specified in s. Comm 51.047 or by fire-window assemblies as specified in s. Comm 51.048 or as specified in s. Comm 51.049.

SECTION 44. Comm 51.167 (1) Note is repealed.

SECTION 45. Comm 51.20 (1) is repealed and recreated to read:

Comm 51.20 (1) GENERAL. (a) Location. Fire escapes shall lead directly to a street, alley or open court connected with a street.

(b) Adjacent openings. All openings within 6 feet horizontally of any tread, landing or platform of the fire escape shall be protected with a fire-resistive rated door assembly complying with s. Comm 51.047 or a fire window assembly complying with s. Comm 51.048 as follows:

1. Buildings of 3 stories or less, shall use either a door or window assembly having a minimum fire-resistive rating of 3/4 hour.
2. Buildings of more than 3 stories shall use a door having a minimum fire-resistive rating of 1 1/2 hours.

SECTION 46. Comm 51.21 (1) Note is repealed.

SECTION 47. Comm 51.21(1) is repealed and recreated to read:

Comm 51.21 (1) All standpipe and hose systems shall meet the requirements of NFPA 14 and the requirements of this section.

SECTION 48. Comm 51.21 (3) (i) is repealed.

SECTION 49. Comm 51.21 (8) is repealed and recreated to read:

Comm 51.21 (8) MAINTENANCE. (a) All standpipe and hose systems shall be inspected, tested and maintained in accordance with NFPA 25.

(b) The requirements of par. (a) shall also apply to all systems in existence on the effective date of this section.

SECTION 50. Comm 51.22 (1) is amended to read:

Comm 51.22 (1) GENERAL. All ~~required~~ fire extinguishers shall comply with the provisions of NFPA ~~No.~~ 10.

SECTION 51. Comm 51.22 (3) is renumbered (3) (a) 1. and amended to read:

Comm 51.22 (3) (title) MAINTENANCE AND REPLACEMENT. (a) 1. All portable fire extinguishers, ~~whether required by chs. Comm 54 to 62 or not,~~ shall be inspected, tested, maintained in operable condition, and replaced as specified in NFPA ~~No.~~ 10.

SECTION 52. Comm 51.22 (3) (a) 2. and Note are created to read:

Comm 51.22 (3) (a) 2. For fire extinguishers that are first installed after **[the effective date of this section REVISOR INSERTS DATE]** and anytime a fire extinguisher is replaced thereafter, the new or replacement extinguisher shall comply with NFPA 10.

Note: NFPA 10 requires portable fire extinguishers that serve commercial cooking equipment, such as deep fat fryers, to be classified as Type K.

SECTION 53. Comm 51.22 (3) (b) is created to read:

Comm 51.22 (3) (b) The requirements of par. (a) shall also apply to all buildings in existence on the effective date of this section.

SECTION 54. Comm 51.23 (1) (a) is repealed and recreated to read:

Comm 51.23 (1) (a) 1. Unless otherwise specifically permitted in this code, where a sprinkler as defined in NFPA 13 is installed to provide fire protection, the system that all sprinklers are connected to shall comply with NFPA 13 or NFPA 13R as applicable, in accordance with the scope of the standard or rule.

2. The water supply for all systems that supply sprinklers shall comply with either sub. (2) or s. Comm 51.236 as applicable.

SECTION 55. Comm 51.23 (2) (a) is amended to read:

Comm 51.23 (2) (a) An approved water supply shall be provided for all automatic fire sprinkler systems. Approved ~~automatic~~ water supplies as recognized by the department are listed below:

1. ~~City water main;~~ Municipal water system.
2. Gravity or pressure tank~~;~~
3. Ground storage reservoir~~;~~ ~~or~~

4. Natural bodies of water approved by the department (~~lakes, rivers, streams, etc.~~).

5. Indoor swimming pools as approved by the department.

SECTION 56. Comm 51.23 (2) (b) is amended to read:

Comm 51.23 (2) (b) ~~If the water supply has inadequate pressure, an approved fire pump or tank shall be provided.~~ The design and installation of water supply facilities for gravity tanks, fire pumps, reservoirs or pressure tanks, and underground piping shall conform to NFPA No. 22, NFPA No. 20, and NFPA No. 24.

SECTION 57. Comm 51.23 (6) (a) is amended to read:

Comm 51.23 (6) (a) *Maintenance*. All installed automatic sprinkler systems, ~~whether required by this code or not,~~ shall be ~~properly~~ inspected, tested and maintained ~~for efficient service pursuant to~~ in accordance with NFPA 25. Owners or operators shall be responsible for the condition of their sprinkler system and shall ~~use due diligence in keeping~~ maintain the system in good operating condition. Records of inspections, tests, and maintenance as specified in NFPA 25 shall be kept and shall be made available, upon request, to the department or its authorized deputies. The local fire department shall be notified whenever the automatic fire sprinkler system is shut down or impaired and when it is placed back in service. The owner shall arrange for immediate and continual servicing or repair of the automatic fire sprinkler system until it is placed back in operation.

SECTION 58. Comm 51.23 (6) (b) is amended to read:

Comm 51.23 (6) (b) The requirements of par. (a) shall also apply to all buildings systems in existence on the effective date of this section ~~and to those buildings constructed thereafter.~~

SECTION 59. Comm 51.23 (7) (b) is amended to read:

Comm 51.23 (7) (b) The connection is equipped with an approved indicating valve with a monitor or an approved locking device ~~and a check valve;~~

SECTION 60. Comm 51.23 (7) (d) Note is repealed.

SECTION 61. Comm 51.23 (8) is repealed.

SECTION 62. Comm 51.235 is created to read:

Comm 51.235 Alternate fire suppression systems. (1) Where approved by the department, alternate fire suppression systems may be used in lieu of an automatic fire sprinkler system in areas where the use of water would have limited effect, could create a hazard or could cause unusual damage to property.

(2) Where an alternate fire suppression system is installed, it shall comply with the appropriate national standard as follows:

- (a) NFPA 11, Standard for Low-Expansion Foam.
 - (b) NFPA 11A, Standard for Medium- and High-Expansion Foam Systems.
 - (c) NFPA 12, Standard on Carbon Dioxide Extinguishing Systems.
 - (d) NFPA 12A, Standard on Halon 1301 Fire Extinguishing Systems.
 - (e) NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection.
 - (f) NFPA 16, Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems.
 - (g) NFPA 17, Standard for Dry Chemical Extinguishing Systems.
 - (h) NFPA 17A, Standard for Wet Chemical Extinguishing Systems.
 - (i) NFPA 750, Standard on Water Mist Fire Protection Systems.
 - (j) NFPA 2001, Standard on Clean Agent Fire Extinguishing Systems.
- (3) Inspection, testing and maintenance requirements in the standards listed in sub. (2) apply to all new alternate fire suppression systems and to all alternate fire suppression systems in existence on the effective date of this section.

SECTION 63. Comm 51.236 is created to read:

Comm 51.236 Manual-wet sprinkler system. (1) WHERE ALLOWED. A manual-wet sprinkler system may not be installed in a building unless all of the following conditions are met:

- (a) There is no municipal water system available to serve the property.
- (b) There is no provision under this code that requires the building to have an automatic fire sprinkler system.

(c) The municipality where the building is to be located has an adopted ordinance that requires the installation of manual-wet sprinkler systems and requires these systems to meet the provisions of this subsection.

(2) GENERAL REQUIREMENTS. (a) A building protected with a manual-wet sprinkler system shall be considered unsprinklered regarding all other code provisions.

(b) Each manual-wet sprinkler system shall be provided with a fire department connection. The fire department connection shall be installed in an accessible location acceptable to the fire chief.

(c) All above ground system piping throughout the building shall be labeled as a "manual-wet sprinkler system". Labels shall be placed at all of the following locations:

1. On the piping at intervals of not more than 25 feet and at each side where the piping passes through a wall, floor or roof.
2. At the fire department connection.
3. At all valves and hose outlets.

(d) The manual-wet sprinkler system design and installation shall comply with the automatic fire sprinkler system requirements of the adopted edition of NFPA 13, or NFPA 13R as applicable, except that the system comprised of the pilot line, fire department connection and fire department apparatus is considered as the approved water supply for the system.

(e) A manual-wet sprinkler system shall be supplied with water through the fire department connection using fire department apparatus.

(f) The plumbing well, water service and pressure tank shall be of a size and capacity to supply the hydraulically most remote sprinkler with the required waterflow and pressure for a minimum of 10 minutes.

(g) A pilot line shall be connected from the manual-wet sprinkler system to the plumbing water supply system at the well pressure tank. The pilot line shall be of a size that is adequate to supply the hydraulically most remote sprinkler in the system.

(h) The connection of a manual-wet sprinkler system to a plumbing water supply system shall be protected against backflow conditions in accordance with s. Comm 82.41.

(i) The actuation of any sprinkler in the system shall operate the waterflow indicating device, which shall initiate a fire alarm within the building.

(j) Upon actuation of the building fire alarm, a fire alarm signal shall be sent automatically to the fire department providing fire protection to the building.

(3) INSTALLER QUALIFICATIONS. The installation of a manual-wet sprinkler system shall be performed by a licensed individual as specified for the installation of an automatic fire sprinkler system in Ch. Comm 5, Subchapter V.

(4) INSPECTION, TESTING AND MAINTENANCE. All manual-wet sprinkler systems shall be inspected, tested and maintained as specified for an automatic fire sprinkler system in NFPA 25, except the quarterly main drain test is not required.

Note: This section does not limit the owners options for providing other means of fire protection. See s. Comm 50.02 for additional information.

SECTION 64. Comm 51.24 (intro.) is amended to read:

Comm 51.24 (intro.) ~~Interior~~ All fire alarm systems ~~required under ss. 54.17, 56.19, and 57.17~~ shall be designed and constructed in conformity accordance with NFPA 72 and the following requirements:

SECTION 65. Comm 51.24 (10) is renumbered (10) (a) and amended to read:

Comm 51.24 (10) MAINTENANCE. (a) All fire alarm systems shall be inspected, tested and maintained in accordance with NFPA 72.

SECTION 66. Comm 51.24 (10) (b) is created to read:

Comm 51.24 (10) (b) The requirements of par. (a) shall also apply to all systems in existence on the effective date of this section.

SECTION 67. Comm 51.245 (2) is repealed and recreated to read:

Comm 51.245 (2) INSTALLATION. (a) Unless otherwise specified in this code, all smoke detectors and smoke alarms shall be installed in accordance with NFPA 72.

(b) Smoke detectors installed in ducts shall follow the provisions of NFPA 72 and NFPA 90A.

SECTION 68. Comm 51.245 (3) (a) to (d) are renumbered (3) (b) to (e).

SECTION 69. Comm 51.245 (3) (intro.) is renumbered (3) (a) and amended to read:

Comm 51.245 (3) MAINTENANCE. (a) ~~Smoke~~ All smoke detectors and system components shall be inspected, tested and maintained in accordance with NFPA 72 and all of the following requirements :

SECTION 70. Comm 51.245 (3) (f) is created to read:

Comm 51.245 (3) (f) The requirements of pars. (a) to (e) also apply to all buildings in existence on the effective date of this section.

SECTION 71. Comm 51.25, Table 51.25-10, lines 59. and 60. are repealed.

SECTION 72. Comm 51.25, Table 51.25-10, lines 61. to 64. are renumbered 59. to 62.

SECTION 73. Comm 51.25, Table 51.25-17 is amended to read:

Table 51.25-17

NFPA National Fire Protection Association
 One Batterymarch Park
 P.O. Box 9101
 Quincy Massachusetts 02269 - 9101

Standard Reference Number	Title
1. 10 - 1998	Standard for Portable Fire Extinguishers.
2. 11 - 1998	<u>Standard for Low-Expansion Foam.</u>
3. 11A - 1999	<u>Standard for Medium- and High-Expansion Foam Systems.</u>
4. 12 - 1998	<u>Standard on Carbon Dioxide Extinguishing Systems.</u>
5. 12A - 1997	<u>Standard on Halon 1301 Fire Extinguishing Systems.</u>
2. 6. 13 - 1996 1999	Standard for the Installation of Sprinkler Systems.
3. 7. 13R - 1996 1999	Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height.

8. 14 - 1996 Standard for the Installation of Standpipe and Hose Systems.
- ~~4.~~ 9. 15 -- 1996 Standard for Water Spray Fixed Systems for Fire Protection.
10. 16 - 1999 Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems.
11. 17 - 1998 Standard for Dry Chemical Extinguishing Systems.
12. 17A - 1998 Standard for Wet Chemical Extinguishing Systems.
- ~~5.~~ 13. 20 -- ~~1996~~ 1999 Standard for the Installation of Centrifugal Fire Pumps.
- ~~6.~~ 14. 22 -- 1998 Standard for Water Tanks for Private Fire Protection.
- ~~7.~~ 15. 24 -- 1995 Standard for the Installation of Private Fire Service Mains and Their Appurtenances.
8. 16. 25 -- 1998 Standard for the Inspection, Testing, and Maintenance of Water Based Fire Protection Systems.
17. 30 - 1996 Flammable and Combustible Liquids Code.
18. 30A - 1996 Automotive and Marine Service Station Code.
19. 30B - 1998 Manufacture and Storage of Aerosol Products.
- ~~9.~~ 20. 31 -- 1997 Standard for the Installation of Oil-Burning Equipment.
21. 33 - 1995 Standard for Spray Application Using Flammable or Combustible Materials.
22. 34 - 1995 Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids.
23. 45 - 1996 Fire Protection for Laboratories Using Chemicals.
24. 51 - 1997 Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes.
- ~~10.~~ 25. 54 -- ~~1996~~ 1999 National Fuel Gas Code.
- ~~11.~~ 26. 72 -- ~~1996~~ 1999 National Fire Alarm Code.
27. 80 - 1999 Standard for Fire Doors and Fire Windows.

- ~~12.~~ 28. 90A – ~~1996~~ 1999 Standard for the Installation of Air Conditioning and Ventilating Systems
- ~~13.~~ 29. 96 – 1998 Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment.
- ~~14.~~ 30. 211 – 1996 Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances.
31. 230 - 1999 Standard for the Fire Protection of Storage.
- ~~15.~~ ~~231 – 1998~~ ~~Standard for General Storage.~~
- ~~16.~~ ~~231C – 1998~~ ~~Standard for Rack Storage of Materials.~~
32. 430 - 1995 Code for the Storage of Liquid and Solid Oxidizers.
33. 432 - 1997 Code for the Storage of Organic Peroxide Formulations.
34. 495 - 1996 Explosive Materials Code.
35. 750 - 1996 Standard on Water Mist Fire Protection Systems.
36. 2001 - 1996 Standard on Clean Agent Fire Extinguishing Systems.
-

SECTION 74. Comm 52.01 (1) (c) and Notes are repealed.

SECTION 75. Comm 52.011 (4) is amended to read:

Comm 52.011 (4) SYSTEM DEFINITION AND STANDARD. The automatic fire sprinkler systems specified in this subchapter shall conform to the definition specified in s. Comm 51.01 (7a) and shall comply with the requirements specified in the applicable standards listed in s. ~~Comm 51.27 (7) (b), (c), (cm), (d), (e), (f), (r) and (s)~~ Table 51.25-17.

SECTION 76. Comm 52.013 (6) (b) 1. is renumbered (6) (b).

SECTION 77. Comm 52.013 (6) (b) 2. and Note are repealed.

SECTION 78. Comm 52.013 (6) (c) is repealed and recreated to read:

Comm 52.013 (6) (c) The automatic fire sprinkler system protection required under this subsection shall be in accordance with NFPA 13 and NFPA 230.

SECTION 79. Comm 52.013 (7) (b) is amended to read:

Comm 52.013 (7) (b) When approved by the department, alternate ~~types of fire protection or suppression systems as may be~~ appropriate for the particular hazard may be provided.

SECTION 80. Comm 53.63 (1) is repealed.

SECTION 81. Comm 54.01 (2) (c) is repealed.

SECTION 82. Comm 55.09 (title) is amended to read:

Comm 55.09 (title) Stairways and shafts.

SECTION 83. Comm 55.09 (4) is created to read:

Comm 55.09 (4) Except as provided in sub. (1), stairways, shafts and other vertical openings shall be enclosed as specified in s. Comm 51.02 (11).

SECTION 84. Comm 57.01 (2) (a) is amended to read:

Comm 57.01 (2) (a) Each living unit, except rowhouse units as specified in s. Comm ~~51.01 (114a)~~ 57.19, shall be separated from other living units, common use areas and from the exit access by construction protected with at least the equivalent of one layer of 5/8-inch Type X gypsum wallboard with taped joints.

SECTION 85. Comm 57.16 (1) (b) 5. is created to read:

Comm 57.16 (1) (b) 5. Inside each individual bedroom or sleeping room.

SECTION 86. Comm 57.16 (1) (d) is amended to read:

Comm 57.16 (1) (d) Smoke detectors shall be installed and maintained in accordance with ~~s. 101.145 (2), Stats.~~ this section and s. Comm 51.245.

[NOTE TO REVISOR: Please number the existing note after s. Comm 57.16 (1) (d) as Note 1. Please add Note 2 as follows:] Note 2: Section 101.145 (4), Stats., addresses retroactivity requirements for buildings constructed prior to the effective date of this section. This statute section states: *"The owner of a residential building the initial construction of which is commenced before, on or after May 23, 1978, shall install and maintain a functional smoke detector in the basement and at the head of any stairway on each floor level of the building and shall install a functional smoke detector either in each sleeping room of each unit or elsewhere in the unit within 6 feet of each sleeping area and not in a kitchen."*

SECTION 87. Comm 57.16 (2) is repealed.

SECTION 88. Comm 58.22 is repealed.

SECTION 89. Comm 59.12, Table 59.12-1 Footnote is amended to read:

Comm 59.12, Table 59.12-1 Footnote * Streets shall be within 50 feet of the adjacent building side with no obstructions between the street and the building that will impede fire fighting efforts. A 4-hour fire division wall may be considered as a street for the purpose of computing the area limitations for this table provided that no subdivided portion of the building has more streets than the entire building has.

SECTION 90. Comm 59.12, Table 59.12-2 Footnote is amended to read:

Comm 59.12, Table 59.12-2 Footnote * Streets shall be within 50 feet of the adjacent building side with no obstructions between the street and the building that will impede fire fighting efforts. A 4-hour fire division wall may be considered as a street for the purpose of computing the area limitations for this table provided that no subdivided portion of the building has more streets than the entire building has.

SECTION 91. Comm 62.93 is repealed and recreated to read:

Comm 62.93 Hazard enclosures and separations. (1) HAZARD ENCLOSURES. Hazards shall be enclosed in accordance with s. Comm 51.08.

(2) NONCOMBUSTIBLE CONSTRUCTION. Greenhouses of noncombustible construction do not require separation from any other occupancy or from any building of a different class of construction

(3) COMBUSTIBLE CONSTRUCTION. (a) Greenhouses of combustible construction shall be separated from any other occupancy or from all buildings of a different class of construction by at least 2-hour fire resistive construction in accordance with ss. Comm 51.04 to 51.049.

(b) All openings in the fire-resistive construction shall be protected by self-closing fire-resistive doors in accordance with s. Comm 51.047.

SECTION 92. Comm 64.21 Table 64.21 is repealed and recreated to read:

TABLE 64.21 - LOCATION OF EQUIPMENT¹⁹

Location and Type of Occupancy	Vented Units							Unvented Units		Electric	Water or Steam	
	Gas or Oil or Solid Fuel Boilers	Gas or Oil or Solid Fuel Furnaces and Water Heaters		Gas or Oil Unit Heaters	Gas or Oil Infrared		Gas or Oil Space Heater ¹	Solid Fuel Space Heater ^{1,2}	Gas Direct Fired Make-up Air ^{3,4}	Gas Infrared	Furnaces, Unit Heaters, Heat Pumps, Baseboard Heaters, etc.	Unit Ventilators, Heaters, Make-Up Air Units, Baseboard Heaters, etc.
			Suspended ⁵		Suspended ⁵	Closed Combustion Infrared Equipment with Surface Temperatures not Exceeding 1500°F						
<u>Type of Occupancy</u>												
Factories	Yes ⁵	Yes ⁵	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Mercantile Buildings	Yes ⁵	Yes	Yes	Yes	Yes	Yes	N.P. ^{5,6}	N.P. ⁶	N.P.	N.P.		
Office Buildings	Yes ⁵	Yes	Yes	Yes	Yes	N.P.	N.P. ^{5,6}	N.P. ⁶	N.P.	N.P.		
Places of assembly, entertainment, recreation, worship or dining (100 persons or less)	Yes ⁵	Yes	Yes	Yes	Yes	Yes	N.P. ^{5,6}	N.P. ⁶	N.P. ⁷	N.P.		
Tennis Facilities (court areas only)	Yes ⁵	Yes	Yes	Yes	Yes	Yes	N.P. ^{5,6}	N.P. ⁶	N.P.	N.P.		
Tennis Facilities (all other areas)	Yes ⁵	Yes	Yes	Yes	Yes	N.P.	N.P. ^{5,6}	N.P. ⁶	N.P.	N.P.		
Theaters and places of assembly, entertainment, recreation, worship or dining (more than 100 persons)	Yes	Yes	Yes	Yes	Yes	N.P.	N.P.	N.P.	N.P.	N.P.	Permitted in all Occupancies	Permitted in all Occupancies
Restaurants	Yes	Yes	Yes	Yes	Yes	N.P.	N.P.	N.P.	N.P. ⁷	N.P.		
<u>Type of Occupancy</u>												
Tennis Facilities (court areas only)	Yes	Yes	Yes	Yes	Yes	Yes	N.P.	N.P.	N.P.	N.P.		
Tennis Facilities (all other areas)	Yes	Yes	Yes	Yes	Yes	N.P.	N.P.	N.P.	N.P.	N.P.		

TABLE 64.21 - LOCATION OF EQUIPMENT(cont.)

Location and Type of Occupancy	Vented Units							Unvented Units		Electric	Water or Steam	
	Gas or Oil or Solid Fuel Boilers	Gas or Oil or Solid Fuel Furnaces and Water Heaters		Gas or Oil Unit Heaters	Gas or Oil Infrared		Gas or Oil Space Heater ¹	Solid Fuel Space Heater ^{1,2}	Gas Direct Fired Make-up Air ^{3,4}			Gas Infrared
						Closed Combustion Infrared Equipment with Surface Temperatures not Exceeding 1500°F				Open Flame Infrared Equipment with Surface Temperatures Exceeding 1500°F		
			Suspended ⁵	Suspended ⁵	Suspended ⁵				Suspended ⁵	Suspended ⁵		
Schools and other places of Instruction	Yes	Yes ²⁰	Yes	Yes	Yes	N.P. ¹⁰	N.P.	N.P.	N.P. ⁹	N.P.		
Hospitals, Nursing Homes and Penal Institutions	Yes	Yes ²⁰	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	Permitted in all Occupancies	Permitted in all Occupancies
Residential Occupancies	Yes	Yes	N.P.	N.P.	N.P.	N.P.	N.P. ¹¹	N.P. ¹⁴	N.P.	N.P.		
Hazardous Occupancies												
Garages	Yes	Yes	Yes ¹²	Yes ¹²	Yes	Yes	N.P. ¹⁵	N.P.	Yes ¹²	Yes ¹²		
Aircraft Hangers	Yes	Yes	Yes ¹³	Yes ¹³	Yes ¹³	Yes ¹³	N.P.	N.P.	Yes ¹³	Yes ¹³		
Day Care Centers	Yes	Yes	Yes	Yes	Yes	N.P.	N.P. ⁶	N.P. ⁶	N.P.	N.P.		
Community-Based Residential Facilities ¹⁷	Yes	Yes	N.P.	N.P.	N.P.	N.P.	N.P. ⁶	N.P. ⁶	N.P.	N.P.		

Footnotes on next page

N.P. = Not Permitted

Unlisted Occupancies - Use the listed occupancy in the table that is most similar to the subject occupancy.

Clearance to combustibles and combustible construction. 1. Heating equipment shall be installed in accordance with the manufacturer's recommendations to provide minimum clearance. In the absence of manufacturer's recommendations, a minimum clearance of 36 inches shall be provided. 2. Combustible construction, such as partitions, shelving or storage lockers, shall not encroach upon the required clearance.

Note: Electrical Code clearances specified in ch. COMM 16 apply. Electrical components and burners may be required to be at least 18 inches from the floor in "Class I" areas including garages.

¹ See s. COMM 64.22 (7) (d) for fireplace requirements.

² All solid-fuel fired space heaters shall be located in occupied space or in a space provided with approved smoke detectors and located or guarded to maintain clearances to combustibles and prevent accidental damage or contact with hot surfaces. Solid-fuel burning stoves are limited to 150,000 Btu/hr output.

³ Except as provided in Footnote 4, direct-fired make-up air units shall be mechanically exhausted in the range of 90% to 110% of the air supplied.

⁴ See s. COMM 64.22 (4) for other permitted uses of direct-fired unvented natural gas heaters.

⁵ Boilers, water heaters, gas and liquid fuel-fired space heaters, suspended furnaces, vented and unvented unit heaters may be suspended where approved by the department. Except in factories, suspended boilers and water heaters shall be limited to up to 200,000 Btu input. All such units shall be located in an occupied space and suspended at least 7 feet above the floor. The blow-off pipe for suspended boilers and water heaters shall be extended down to within 6 inches of the floor. Infrared equipment shall be located at least 8 feet above the floor. Suspension of solid-fuel fired equipment is not permitted. See ss. COMM 51.08 and 64.22 (3) for additional requirements.

⁶ Permitted with combustion air ducted to unit in occupancies less than 3,000 square feet gross area and with occupant load less than 100 persons.

⁷ Permitted in kitchens to provide make-up air for kitchen exhaust systems if located outside building or in a rated enclosure.

⁹ Permitted only in shops with a 3-hour separation from other areas of the school building. See s. Comm 51.08

¹⁰ Permitted only in shops with a 3-hour separation from other areas of the school building. See s. Comm 51.08.

¹¹ Gas-fired, direct-vent wall furnaces are permitted in apartments and motels. Space heaters fired with liquid fuel may be used without an enclosure in motels and apartment buildings not more than one story in height.

¹² Suspended heating units are allowed in garages if located at least 8 feet off the floor. Suspension of solid-fuel fired equipment is not permitted.

¹³ Suspended heating units are allowed if located at least 10 feet above the upper surface of the wings or engine enclosure of the aircraft. Suspension of solid-fuel fired equipment is not permitted.

¹⁴ Solid-fuel fired space heaters are permitted in rowhouse units only.

¹⁵ Waste oil burners are permitted provided they are installed on mezzanines or service platforms located at least 8'-0" above the main floor, are visible from the main floor and are guarded as specified in this section.

¹⁷ See s. COMM 61.24 for requirements.

¹⁹ See s. COMM 51.08 for hazard enclosure requirements.

²¹ Includes water heaters used for space heating and for plumbing system supply.

SECTION 93. Comm 64.22 (8) is amended to read:

Comm 64.22 (8) FLOOR-STANDING VENTED OR UNVENTED EQUIPMENT. Floor-standing, vented or unvented unit heaters, furnaces and boilers in metal fabricating plants, foundries and machine shops are exempt from the requirements of s. Comm ~~54.14~~ 51.08.

SECTION 94. Comm 64.42 is repealed.

SECTION 95. Comm 64.51 (4) (a) is amended to read:

Comm 64.51 (4) FIRE PROTECTION. (a) ~~1. Heat-producing appliances and their chimney or vent connectors shall be installed with clearances to combustible material as specified in NFPA Manual No. 211 unless listed for installation at other clearances.~~

~~2. Clearance to combustible materials shall be as specified in NFPA Standard No. 211 or as specified by a nationally recommended testing laboratory, whichever is greater.~~

SECTION 96. Comm 64.67 (1) is amended to read:

Comm 64.67 (1) SCOPE. This section applies to all areas where food is prepared, except in domestic science educational facilities from grades kindergarten through 12, and single unit apartments in hotels, motels and apartment buildings within individual dwelling units of buildings under the scope of chs. Comm 57 and Comm 66.

SECTION 97. Comm 64.67 (5) (f) is repealed and recreated to read:

Comm 64.67 (5) (f) *Duct enclosure*. 1. A grease duct that penetrates or passes through any ceiling, wall or floor shall be completely enclosed from the point of penetration to the outlet terminal.

2. The duct enclosure shall meet one of the following requirements:

- a. The duct shall be enclosed in a noncombustible 2-hour rated fire-resistive enclosure.
- b. The duct shall be completely covered on all sides with a material classified and labeled for such purpose and the penetration shall be protected with a classified through-penetration firestop system with F and T ratings at least equal to the rating of the assembly being penetrated.

SECTION 98. Comm 64.67 (6) (intro.) is repealed.

SECTION 99. Comm 64.67 (6) (a) to (e) are renumbered (b) to (f).

SECTION 100. Comm 64.67 (6) (a) is created to read:

Comm 64.67 (6) AUTOMATIC SUPPRESSION SYSTEMS. (a) *General*. 1. Exhaust hood and duct systems in commercial kitchen applications shall be protected with an automatic fire suppression system.

2. The type of automatic fire suppression system used shall be recognized by a national standard as being appropriate for use in commercial kitchen applications.

3. Manufactured fire suppression systems shall be listed and labeled for use in commercial kitchen applications or shall comply with one of the applicable standards listed in s. Comm 51.235.

4. Alternate suppression systems shall comply with the applicable standard listed in s. Comm 51.235.

5. Automatic fire sprinkler systems shall comply with s. Comm 51.23.

SECTION 101. Comm 64.67 (6) (b), as renumbered, (title) is created to read:

Comm 64.67 (6) (b) (title) *System interconnection*.

SECTION 102. Comm 64.67 (6) (c), as renumbered, (title) is created to read:

Comm 64.67 (6) (c) (title) *Actuation*.

SECTION 103. Comm 64.67 (6) (d), as renumbered, (title) is created to read:

Comm 64.67 (6) (d) (title) *Manual actuator location*.

SECTION 104. Comm 64.67 (6) (e), as renumbered, is amended to read:

Comm 64.67 (6) (e) *Maintenance*. The automatic fire suppression system shall be maintained at full operating capacity by the owner and shall be serviced every 6 months; and in accordance with its listing, the manufacturer's instructions and the maintenance requirements of ss. Comm 51.23 or 51.235.

SECTION 105. Comm 64.67 (6) (f), as renumbered, (title) is created to read:

Comm 64.67 (6) (f) (title) *Service accessibility*.

SECTION 106. Comm 64.67 (6) (g) and (h) are created to read:

Comm 64.67 (6) (g) *Carbon dioxide systems*. Carbon dioxide systems protecting commercial cooking equipment shall be installed in accordance with NFPA 12 and the following provisions:

1. A nozzle shall be provided at the top of the duct.
2. Where ducts exceed 20 feet of vertical distance or 50 feet of horizontal distance, additional nozzles shall be installed within the duct in a symmetrical pattern to give uniform distribution of carbon dioxide.
3. a. Dampers shall be installed at either the top or the bottom of the duct and shall operate automatically upon activation of the carbon dioxide system.
b. Where the damper is located at the top of the duct, the top nozzle shall be immediately below the damper.
4. The carbon dioxide system shall be sized to protect all hazards venting through a common duct simultaneously.

(h) *Automatic fire sprinkler systems*. Automatic fire sprinkler systems protecting commercial cooking equipment shall be installed in accordance with NFPA 13 and the following provisions:

1. Automatic sprinkler systems protecting commercial cooking equipment shall be provided with a separate, readily-accessible indicating-type control valve that is clearly identified.
2. Sprinklers used to protect fryers shall be listed for such use and shall be installed in accordance with the listing.

SECTION 107. Comm 64.67 (8) is created to read:

Comm 64.67 (8) MAINTENANCE OF DUCT AND HOOD SYSTEMS. Duct and hood systems shall be maintained in accordance with NFPA 96.

SECTION 108. Comm 64.67 (9) is created to read:

Comm 64.67 (9) PORTABLE FIRE EXTINGUISHERS. (a) Portable fire extinguishers shall be provided in accordance with s. Comm 51.22.

(b) The extinguishing agent in the portable fire extinguisher shall be compatible with the extinguishing agent in the automatic suppression system as determined by the manufacturers.

SECTION 109. Comm 66.32(5)(c)1.a. is amended to read:

Comm 66.32(5)(c)1.a. A fire damper as specified in s. Comm ~~64.42~~ 51.0485.

**[NOTE TO REVISOR: Please insert the following note after s. Comm 66.47 (3) (b).
"Note: See s. Comm 66.32 (4) (c) for an isolation exemption relating to gasoline-fired
equipment stored in garages."]**

(END)

EFFECTIVE DATE

Pursuant to s. 227.22 (2) (intro.), Stats., these rules shall take effect on the first day of the month following publication in the Wisconsin Administrative Register.

January 11, 2000

Gary Poulson
Assistant Revisor of Statutes
Suite 800
131 West Wilson Street
Madison, Wisconsin 53703-3233

Douglas LaFollette
Secretary of State
10th Floor
30 West Mifflin Street
Madison, Wisconsin 53703

Dear Messrs. Poulson and LaFollette:

TRANSMITTAL OF RULE ADOPTION

CLEARINGHOUSE RULE NO.: 99-120

RULE NO.: Chs. Comm 50-64

RELATING TO: Fire Safety Requirements in the Commercial Building Code

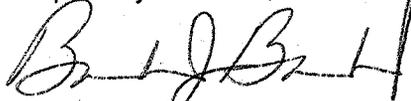
Pursuant to section 227.20, Stats., agencies are required to file a certified copy of every rule adopted by the agency with the offices of the Secretary of State and the Revisor of Statutes.

At this time, the following material is being submitted to you:

1. Order of Adoption.
2. Rules Certificate Form.
3. Rules in Final Draft Form.

Pursuant to section 227.114, Stats., a summary of the final regulatory flexibility analysis is also included.

Respectfully submitted,



Brenda J. Blanchard
Secretary

