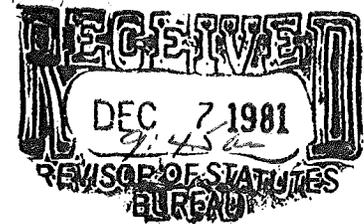


Ind 51 to 64

RULES CERTIFICATE

STATE OF WISCONSIN)
) SS
DEPT. OF INDUSTRY,)
LABOR & HUMAN RELATIONS)



TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Lowell B. Jackson, Secretary of the Department of Industry, Labor and Human Relations, and custodian of the official records of said department, do hereby certify that the annexed rule(s) relating to Chs. Ind 50-64 Bldg. & Htg., Ventilating & Air Conditioning Code
Solid Fuel & Waste Oil Burning Equipment were duly approved and adopted by this department on Dec 4 1981.
(Subject) (Date)

I further certify that said copy has been compared by me with the original on file in this 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 and affixed the official seal of the department at Jan in the city of Madison, this 4th day of Dec A.D. 1981.

Lowell B. Jackson
Secretary

1-1-82

ORDER OF ADOPTION

Pursuant to authority vested in the Department of Industry, Labor and Human Relations by section(s) 101.02(1), 101.02(15)(h)-(j), Stats., the Department of Industry, Labor and Human Relations hereby creates; amends; repeals and recreates; and repeals and adopts rules of Wisconsin Administrative Code chapter(s):

Ind. 50-64 Bldg. & Heating, Ventilating & Air Conditioning Code
(Number) Solid Fuel & Waste Burning Equipment
(Title)

The attached rules shall take effect on The First Day Following Publication
in the Wisconsin Administrative Register, pursuant to section
227.026, Stats.

Adopted at Madison, Wisconsin, this 1st
day of December, A.D., 1981.

DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS

Lawell S. Jants
Secretary



RULES in FINAL DRAFT FORM

Rule: Ch. Ind 50-64

Relating to: Building and Heating, Ventilating and Air Conditioning
Code-Solid Fuel and Waste Oil Burning Equipment and Systems

Administrative rules to repeal ss. Ind 51.01 (123), Ind 52.07, Ind 52.16, Ind 52.17, Ind 54.14 (3) (a), Ind 63.21 (3), Ind 64.49; to renumber and amend s. Ind 64.50 to be s. Ind 64.49; to amend ss. Ind 51.27 (7a), Ind 64.03 (2), Ind 64.09 (intro), (1) (a) and (d), (2) (a), (5), (7) and Table 64.09, Ind 64.17, Ind 64.20 (1), Ind 64.20 (3) Note, Ind 64.48 (2) (d), Ind 64.51 (4), Ind 64.52 (1), Appendix A 64.20; to repeal and recreate ss. Ind 51.01 (120), Ind 64.21 Table 64.21, Ind 64.22 (3) (intro), Ind 64.22 (7); to create ss. Ind 51.01 (119c), Ind 51.25 (19a), Ind 51.25 (24a), Ind 64.50, relating to solid fuel burning devices.

* * * * *

ANALYSIS OF RULES

The Division of Safety and Buildings of the Department of Industry, Labor and Human Relations, is responsible for the promulgation of the Building and Heating, Ventilating and Air Conditioning Code, chapters Ind 50-64. Sections of this code are being revised to establish minimum standards for the design, installation, use and maintenance of solid fuel and waste oil burning equipment and systems for use in public buildings and places of employment.

The proposed rules for solid fuel and waste oil burning equipment and systems include provisions for adoption of national standards, thermostats and safety control, combustion air, rating of equipment, allowance to use such equipment as the primary heat source, occupancies where equipment can be used, listing of equipment, clearance to combustibles, chimneys and vents to serve equipment and maintenance of the equipment and systems. The proposal also includes rules for fireplaces and fireplace stoves.

The proposed rules are generally based upon nationally recognized standards, but have been modified to reflect conditions prevalent to the state. Input from equipment manufacturers and testing laboratories within the state was obtained during development of the proposed rules.

* * * * *

Pursuant to the authority vested in the state of Wisconsin's Department of Industry, Labor and Human Relations by s. 101.02 (1), ss. 101.02 (15) (h) through (j), Stats., the department hereby creates, amends, repeals and recreates and repeals rules interpreting s. 101.02 (1) and ss. 101.02 (15) (h) through (j), Stats., as follows:

SECTION 1. Ind 51.01 (119c) is created to read:

Ind 51.01 (119c) "Solid-fuel equipment" means equipment burning solid rather than gas or liquid fuel.

Note: Typical solid fuels are coal and wood.

SECTION 2. Ind 51.01 (120) is repealed and recreated to read:

Ind 51.01 (120) "Space heater" means a vented, self-contained free-standing or wall recessed heating appliance.

SECTION 3. Ind 51.01 (123) is repealed.

SECTION 4. Ind 51.25 (19a) is created to read:

Ind 51.25 (19a) REFRACTORIES FOR INCINERATORS AND BOILERS. Part 17 ASTM Designation C64-72 (1977).

SECTION 5. Ind 51.25 (24a) is created to read:

Ind 51.25 (24a) GROUND FIRE CLAY AS A REFRACTORY MORTAR FOR LAYING-UP FIRECLAY BRICK. Part 17 ASTM Designation C 105-47 (1976).

SECTION 6. Ind 51.27 (7a) is amended to read:

Ind 51.27 (7a) National Fire Protection Association, ~~470 Atlantic Avenue, Boston, Battery~~ Batterymarch Park, Quincy, Mass. 02240 02269; STANDARD FOR PORTABLE FIRE EXTINGUISHERS, NFPA No. 10-1978; STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, NFPA No. 13-1980; STANDARD FOR THE CARE AND MAINTENANCE OF SPRINKLER SYSTEMS, NFPA No. 13A-1978; STANDARD FOR THE INSTALLATION OF CENTRIFUGAL FIRE PUMPS, NFPA No. 20-1980; STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION, NFPA No. 22-1978; STANDARD FOR OUTSIDE PROTECTION, NFPA No. 24-1977; STANDARD FOR THE INSTALLATION OF OIL-BURNING EQUIPMENT, NFPA No. 31-1978; NATIONAL FUEL GAS CODE, NFPA No. 54-1974; STANDARD FOR CENTRAL STATION PROTECTIVE SIGNALING SYSTEMS, NFPA No. 71-1977; STANDARD FOR AUXILIARY PROTECTIVE SIGNALING SYSTEMS, NFPA No. 72B-1979; STANDARD FOR REMOTE STATION PROTECTIVE SIGNALING SYSTEMS, NFPA No. 72C-1975; STANDARD FOR PROPRIETARY PROTECTIVE SIGNALING SYSTEMS, NFPA No. 72D-1979; STANDARD ON AUTOMATIC FIRE DETECTORS, NFPA No. 72E-1978; STANDARD FOR HOUSEHOLD FIRE WARNING EQUIPMENT, NFPA No. 74-1980; MANUAL ON CLEARANCES FOR HEAT PRODUCING APPLIANCES, NFPA No. 89M-1976; STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS, NFPA No. 90A-1981; STANDARD FOR CHIMNEYS, FIREPLACES AND VENTS, NFPA No. 211-1980.

SECTION 7. Ind 52.07 is repealed.

SECTION 8. Ind 52.16 is repealed.

SECTION 9. Ind 52.17 is repealed.

SECTION 10. Ind 54.14 (3) (a) is repealed.

SECTION 11. Ind 63.21 (3) is repealed.

SECTION 12. Ind 64.03 (2) is amended to read:

Ind 64.03 (2) HEATING SYSTEM DESIGN. The primary heating system intended to maintain the inside design temperature of s. Ind 64.05 (1) shall be designed on the basis of the losses determined by par. (a) or (b) below, whichever is greater to equalize building transmission losses and infiltration or ventilation losses during occupied periods. Credit will be given for internal heat gains against the total design loss of the heating system, provided the heat gains are demonstrated by the designer.

~~(a) Occupied Periods. The heating system shall be designed to equal building transmission losses and infiltration or ventilation losses during occupied periods, or~~

~~(b) Unoccupied Periods. The heating system shall be designed to equal building transmission losses and infiltration losses during unoccupied periods.~~

SECTION 13. Ind 64.09 (intro), (1) (a) and (d), (2) (a), (5), (7) and Table 64.09 are amended to read:

Ind 64.09 COMBUSTION AIR INTAKES. Any room in which ~~burners~~ fuel-burning equipment, including fireplaces and process equipment, is located shall be supplied with combustion air for ~~proper burner~~ safe operation.

(1) COMBUSTION AIR FOR BURNERS. ~~All burners~~ Combustion air shall be provided ~~with combustion air~~ by one of the following methods:

(a) Combustion Air by Gravitational Means. Where combustion air is introduced by gravitational means, the minimum free area for combustion air intakes shall be calculated in square inches as indicated in Table 64.09. The values for gas- and oil-fired equipment are based on the fuel input of the ~~heating~~ equipment. The value for solid-fuel equipment and fireplaces is based on the fuel input of the equipment, the area of the chimney connector or the listing for the specific piece of equipment. (See Table 64.09).

TABLE 64.09

<u>Atmospheric burners</u> <u>Combustion</u>	Combustion Air Intakes Ducted from the Outside to an Interior Room or <u>Fireplace</u>	Combustion Air Intakes Located at the Outside Wall of an Exterior Room
Gas-fired, all occupancies except industrial	1 sq. in./1000 Btu/hr.	1 sq. in./2000 Btu/hr.
Gas-fired, indus- trial occupancies	1 sq. in./1000 Btu/hr.	1 sq. in./5000 Btu/hr.
Oil-fired, all occupancies	1 sq. in./1000 Btu/hr.	1 sq. in./2000 Btu/hr.
<u>Solid-fuel fired</u> <u>equipment and</u> <u>fireplaces, all</u> <u>occupancies</u>	<u>1 sq. in./1000 Btu/hr for furnace type units.</u> <u>1/2 of the chimney connector area for free standing and</u> <u>fireplace type units.</u> <u>In accordance with equipment listing, if listing inclu-</u> <u>des combustion air provisions.</u>	

(d) Combustion Air by Infiltration. If the heating equipment is not required to be located in a fire-resistive room, combustion air may be provided by means of infiltration where the total area of outdoor openings is greater than 3% of the floor area in which the burner equipment is located, or where 150% of the air required for theoretical complete combustion is no greater than 1/4 air change per hour.

Note: See ~~section~~ s. Ind 64.22 for special conditions.

(2) DAMPERS. (a) Manually operated dampers are prohibited in combustion air intakes, except for manually fired solid-fuel fired equipment, where the combustion air is connected directly to the equipment.

(5) ~~BURNERS IN NEGATIVE PRESSURE LOCATIONS. An atmospheric burner shall not be installed where the space in which the burner is located is under negative pressure due to an exhaust system.~~ Atmospheric combustion shall be prohibited in a space under negative pressure.

(7) AIR-HANDLING EQUIPMENT LOCATED IN A BOILER OR FURNACE ROOM. If the fuel input ~~to the burner~~ rating of the fuel-burning equipment exceeds 400,000 Btu per hour, the air-handling equipment and the ~~burner~~ fuel-burning equipment shall be interlocked to shut off the ~~burner~~ fuel-burning equipment and the ~~blower~~ air-handling equipment when any service door to the air-handling equipment is opened, unless an air barrier separation is provided between the ~~burner~~ fuel-burning equipment and the air-handling equipment.

SECTION 14. Ind 64.17 is amended to read:

Ind 64.17 AUTOMATIC CONTROLS. (1) GENERAL. Except as provided in sub. (2), automatic controls shall be provided to maintain design temperature, control ventilation to provide a continuous air movement of not less than the minimum required by this ~~code~~ chapter, and to provide a continuous supply of outside air and exhaust ~~as~~ determined by the provisions of s. Ind 64.05, Table 1, during periods of occupancy.

(2) EXCEPTION. Manual control of solid-fuel fired equipment to maintain inside design temperature is permitted.

SECTION 15. Ind 64.20 (1) is amended to read:

Ind 64.20 EQUIPMENT RATINGS AND SAFETY CONTROLS. (1)* TEST AND INSTALLATION STANDARDS. ~~Oil~~ All oil- and gas-fired heating equipment, electric heating equipment, solid-fuel heating equipment and accessory equipment or devices shall be tested and installed in accordance with standards recognized by the department. Department review and approval of input or output ratings or both are required when ratings are needed to satisfy ss. Ind 64.03 or Ind 64.09.

SECTION 16. Ind 64.20 (3) Note is amended to read:

Ind 64.20 (3) Note: The department accepts heating equipment listed by American Gas Association (AGA), ~~and~~ Underwriters' Laboratories (UL) and PFS Corporation.

SECTION 17. Table 64.21 is repealed and recreated to read:

*See Appendix A for further explanatory material.

TABLE 64.21--LOCATION OF EQUIPMENT

Location and Type of Occupancy	VENTED UNITS						UNVENTED UNITS		ELECTRIC Furnaces, Unit Heaters, Heat Pumps, Baseboard Heaters, etc.	WASTE STEAM Unit Ventilator Heater Makeup Units, Baseboard Heater etc.
	Gas or Oil or Solid Fuel Boilers	Gas or Oil or Solid Fuel Furnaces		Gas or Oil Unit Heater	Gas or Oil Infrared	Gas or Oil Space Heater	Solid Fuel Space Heater or Fireplace ¹	Gas Dir. Fired Makeup Air ¹		
	Rated Enclosure	Rated Enclosure	Suspended or Guarded ²	Suspended or Guarded ²	Suspended or Guarded ²			Suspended or Guarded ²	Suspended or Guarded ²	
Type of Occupancy										
Factories	Yes	Yes ²	Yes	Yes	Yes	Yes	Yes	Yes	Yes	PERMITTED IN ALL OCCUPANCIES
Wholesale buildings	Yes	Yes	Yes	Yes	Yes	N.P. ³	N.P. ³	N.P.	N.P.	
Office Buildings	Yes	Yes	Yes	Yes	N.P.	Yes	Yes	N.P.	N.P.	
Places of assembly, entertainment, recreation, worship or dining (100 persons or less)	Yes	Yes	Yes	Yes	Yes	N.P. ³	N.P. ³	N.P. ⁴	N.P.	
Tennis facilities (court areas only)	Yes	Yes	Yes	Yes	Yes	N.P.	N.P.	N.P.	N.P.	
Tennis facilities (all other areas)	Yes	Yes	N.P. ⁵	N.P. ⁵	N.P.	N.P.	Yes	N.P.	N.P.	
Restaurants & places of assembly, entertainment, recreation, worship or dining (more than 100 persons)	Yes	Yes	N.P.	N.P.	N.P.	N.P.	N.P. ³	N.P.	N.P.	
Restaurants	Yes	Yes	N.P.	N.P.	N.P.	N.P.	N.P. ³	N.P. ⁵	N.P.	
Tennis facilities (court areas only)	Yes	Yes	Yes	Yes	Yes	N.P.	N.P.	N.P.	N.P.	
Tennis facilities (all other areas)	Yes	Yes	N.P. ⁵	N.P. ⁵	N.P.	N.P.	Yes	N.P.	N.P.	
Schools & other places of instruction	Yes	Yes	N.P. ⁶	N.P. ⁶	N.P.	N.P.	N.P.	N.P. ⁶	N.P.	
Hospitals, nursing homes & penal institutions	Yes	Yes	N.P.	N.P.	N.P.	N.P.	N.P. ⁷	N.P.	N.P.	
Residential occupancies	Yes	Yes	N.P.	N.P.	N.P.	N.P.	N.P. ⁸	N.P.	N.P.	
Hazardous Occupancies										
Garages	Yes	Yes	Yes ⁹	Yes ⁹	Yes ⁹	N.P. ¹¹	N.P. ¹⁴	Yes ⁹	Yes ⁹	
Aircraft hangars	Yes	Yes	Yes ¹⁰	Yes ¹⁰	Yes ¹⁰	N.P.	N.P.	Yes ¹⁰	Yes ¹⁰	
Day care centers	Yes ¹⁵	Yes ¹²	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	
Community Based Residential Facilities ¹⁶	Yes	Yes	N.P.	N.P.	N.P.	N.P.	Yes	N.P.	N.P.	

N.P. = Not Permitted

Listed occupancies - Use the listed occupancy in the table that is most similar to the subject occupancy.

Clearances - Equipment shall be installed in accordance with the clearance from combustibles indicated in the name plate of the unit.

- 1 Direct-fired makeup air units shall be mechanically exhausted in the range of 90% to 110% of the air supplied.
- 2 Where permitted, such equipment shall be located in an occupied space (see s. Ind 64.22 (3)) and suspended at least 7 feet above the floor or guarded to maintain clearances to combustibles and prevent accidental damage. Suspension of solid-fuel fired equipment is not permitted. Central furnaces with 400,000 Btu/hr or greater fuel rating must be enclosed. See s. Ind 54.14 (3) for additional requirements.
- 3 Permitted in occupancies less than 1500 square feet gross area with combustion air ducted to unit.
- 4 Permitted in kitchens to provide makeup air for kitchen exhaust systems if located outside building or in a rated enclosure.
- 5 Spectator areas in tennis facilities may be served by suspended equipment located in court areas.
- 6 Permitted only in shops with a 4-hour separation from other parts of the building.
- 7 Fireplaces may be installed and used only in areas other than patient sleeping areas provided those areas are separated from the patient sleeping areas by construction having at least a one-hour fire-resistive rating. The fireplace shall be equipped with safety screens and a heat tempered glass fireplace enclosure capable of withstanding temperatures up to 650° F.
- 8 Gas-fired, direct-vent wall furnaces are permitted in apartments and motels.
- 9 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.
- 10 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.
- 11 All solid-fuel fired space heaters and fireplaces 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.
- 12 Solid-fuel fired space heaters and fireplaces are permitted in rowhouse units. Masonry fireplaces with or without inserts and built-in factory-built fireplace-type only are permitted in all other residential occupancies.
- 13 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.
- 14 Solid-fuel burning devices 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.
- 15 See s. Ind 60.25 for smoke detector alternative.
- 16 See s. Ind 61.24 for requirements.

SECTION 18. Ind 64.22 (3) (intro) is repealed and recreated to read:

Ind 64.22 (3) SUSPENDED AND GUARDED EQUIPMENT. Equipment suspended or guarded as specified in s. Ind 64.21 shall be installed in an occupied space. The equipment shall be visible to persons within the room.

SECTION 19. Ind 64.22 (7) is repealed and recreated to read:

Ind 64.22 (7) FIREPLACES AND FIREPLACE STOVES. Masonry fireplaces, factory-built fireplaces and factory-built fireplace stoves shall be constructed and installed in accordance with the NFPA standard No. 211 - 1980 Standard for Chimneys, Fireplaces and Vents.

(a) Masonry Fireplaces. 1. Masonry fireplaces shall be constructed of solid masonry units, stone or reinforced portland or refractory cement concrete.

a. Where a lining of low-duty firebrick complying with the provisions of ASTM C64-72 (1977), or the equivalent, at least 2 inches thick laid-in fire-clay mortar complying with the provisions of ASTM C105-47 (1976), or the equivalent, or other approved lining is provided, the total thickness of back and sides, including the lining, shall be not less than 8 inches.

b. Where the lining described in subpar. a. is not provided, the thickness of back and sides shall be not less than 12 inches.

2. Steel fireplace units incorporating a firebox liner of not less than 1/4-inch thick steel and an air chamber shall be installed with masonry to provide a total thickness at the back and sides of not less than 8 inches, not less than 4 inches of which shall be solid masonry.

3. Warm air ducts employed with steel fireplace units of the circulating air type shall be constructed of metal or masonry.

4. Fireplace hearth extensions of approved noncombustible material for all fireplaces shall be provided.

a. Where the fireplace opening is less than 6 square feet, the hearth extension shall extend at least 16 inches in front of, and at least 8 inches beyond each side of the fireplace opening.

b. Where the fireplace opening is 6 square feet or larger, the hearth extension shall extend at least 20 inches in front of, and at least 12 inches beyond each side of the fireplace opening.

c. Where a fireplace is elevated above or overhangs a floor, the hearth extension shall also extend over the area under the fireplace.

d. Fireplaces constructed of masonry or reinforced portland or refractory cement concrete shall have hearth extensions of brick, concrete, stone, tile or other approved noncombustible material properly supported and with no combustible material against the underside thereof. Wooden forms or centers used during the construction of hearth and hearth extension shall be removed when the construction is completed.

5. All wood beams, joists and studs shall be trimmed away from fireplaces. Headers supporting trimmer arches at fireplaces shall be not less than 20 inches from the face of the chimney breast. Trimmers shall be not less than 6 inches from the inside face of the nearest flue lining.

6. Woodwork shall not be placed within 4 inches of the back face of a fireplace.

7. Woodwork shall not be placed within 6 inches of a fireplace opening. Woodwork above and projecting more than 1-1/2 inches from a fireplace opening shall not be placed less than 12 inches from the top of a fireplace opening.

(b) Factory-Built Fireplaces and Fireplace Stoves. Factory-built fireplaces and fireplace stoves shall be installed according to the requirements of the approval as specified in s. Ind 64.20.

(c) Hearth Opening Protection. Fireplaces and fireplace stoves shall be equipped with safety screens or glass doors to prevent the escape of sparks and embers.

SECTION 20. Ind 64.48 (2) (d) is amended to read:

Ind 64.48 (2) (d) Single Wall Vent Pipe. An approved single wall vent pipe may be used with gas-fired, low-heat appliances (low-pressure boilers, furnaces and space heaters). The vent shall be not less than No. 20 standard gauge galvanized iron, No. 24 Brown and Sharpe gauge sheet copper, or other approved corrosion-resistant material. The installation shall conform to the requirements of ~~section Ind 64.49~~ s. Ind 64.50.

SECTION 21. Ind 64.49 is repealed.

SECTION 22. Ind 64.50 is renumbered to be Ind 64.49 and amended to read:

Ind ~~64.50~~ 64.49 GAS VENTS. All gas ranges (except those ~~for domestic use designed as unvented~~), water heaters and other gas-fired equipment shall be provided with vent pipes conforming to the requirements for gas vents as specified in ~~section s.~~ Ind 64.48 and for ~~smoke pipes connectors~~ as specified in ~~section s.~~ Ind ~~64.49~~ 64.50. Commercial kitchen appliances ~~(including but not limited to ranges, ovens, booster heaters and similar equipment)~~ may be vented into the kitchen hood exhaust system.

SECTION 23. Ind 64:50 is created to read:

Ind 64.50 CHIMNEY AND VENT CONNECTORS. (1) CONSTRUCTION AND INSTALLATION. The construction and installation of chimney connectors shall conform with the following requirements:

(a) Concealed Space. No chimney connector shall pass through any outside window, door or combustible outside wall, nor be concealed in any closet, attic or similar space;

(b) Combustible Partitions and Walls. Connectors for appliances shall not pass through interior walls or partitions constructed of combustible material unless they are guarded at the point of passage by:

1. Metal ventilated thimbles not less than 12 inches larger in diameter than the connector, or

2. Metal or burned fireclay thimbles built in brickwork or other approved fireproofing materials extending not less than 8 inches beyond all sides of the thimble;

(c) Distance from Materials. Connectors shall be installed with clearance to combustibles specified in par. (b) or Table 64.51-D, unless reduced according to Table 64.51-B;

(d) Multiple Appliance Venting. Two or more appliances using the same type of fuel may be connected to a common gravity-type chimney or vent, provided the appliances are equipped with primary safety controls and listed shutoff devices and comply with the following requirements:

1. The appliances shall be located in the same story, except for engineered venting systems,

2. The appliances shall be joined at a manifold or Y-type fitting as close to the chimney or vent as possible, unless the connector from each appliance enters a separate chimney or vent inlet and the inlets are offset at least 12 inches vertically or are at right angles to each other,

3. The connector and chimney or vent shall be sized to accommodate the total volume of flue gases. For gas-burning appliances, the venting area shall be at least equal to the size of the largest vent connector plus at least 50% of the area of the other vent connectors, or

4. A chimney serving a fireplace or other piece of solid-fuel equipment shall not be used to vent any other appliance;

(e) Pitch and Length. Chimney or vent connectors shall have no more than two 45° offsets with the vertical. The horizontal length shall not exceed 75% of the total vertical height of the total venting system measured from the appliance outlet. Chimney or vent connectors shall be pitched up at least 1/4 inch per foot from the appliance outlet collar to the chimney or vent inlet;

(f) Dampers. A manual cast iron or equivalent damper to control the draft shall be provided in the chimney connector next to solid-fuel fired equipment. Manually operated dampers shall be prohibited in chimney or vent connectors of all other appliances. When used, listed automatically operated dampers interlocked with the heating appliance shall be installed in accordance with the approved listing; and

(g) Materials and Thickness. 1. Except as specified in subd. 2, chimney or vent connectors shall be listed or conform to the type of material and thickness indicated in Table 64.50 or equivalent.

2. 'Exception'. Connectors serving listed residential-type gas appliances shall be not less than .016 inch (28 gage) galvanized steel.

TABLE 64.50

MINIMUM CHIMNEY CONNECTOR METAL THICKNESS

Diameter of Connector	<u>Galvanized Steel</u>	
	Min. thickness (inch)	Gage
Less than 6 inches	.019	26
6 inches to less than 10 inches	.024	24
10 inches to 13 inches	.030	22
14 inches to 16 inches	.036	20
Greater than 16 inches	.058	16

SECTION 24. Ind 64.51 (4) is amended to read:

Ind 64.51 (4) FIRE PROTECTION. All installations under this chapter shall comply with the precautionary requirements of the department to reduce fire hazards. Heat-producing appliances and their chimney or vent connectors shall be installed with clearances to combustible material as shown in Tables 64.51 - A, B, C, and D and NFPA Manual No. 89M-1976 and NFPA Standard No. 211-1980 unless listed for installation at other clearances. Clearances shall be measured from the outer surface of the appliance or connector to the combustible material, disregarding any intervening protection applied to the combustible material. Appliances shall not be installed in alcoves or closets unless approved for such installations.

Table 64.51-A
Standard Installation Clearances, Inches, for Heat Producing Appliances
(See Note 1.)

These clearances apply unless otherwise shown on listed appliances. Appliances shall not be installed in alcoves or closets unless so listed. For installation on combustible floors, see note 2.

Residential-Type Appliances ¹¹ For Installation in Rooms Which Are Large (See Note 3)		APPLIANCE				
		Above Top of Casing or Appliance	From Top and Sides of Warm-Air Bonnet or Plenum	From Front See Note 4	From Back	From Sides
Boilers & Water Heaters	Automatic Oil	6	--	24	6	6
Steam Boilers-15 psi	or	6	--	18	6	6
Water Boilers-250° F.	Comb. Gas-Oil	6	--	48	6	6
Water Heaters-200° F.	Automatic Gas	6	--	18	6	6
All Water Walled or Jacketed	Solid	6	--	48	6	6
	Electric	6	--	18	6	6
Furnaces-Central	Automatic Oil	6 ⁵	6 ⁵	24	6	6
Gravity, Upflow, Downflow, Horizontal and Duct.	or	6 ⁵	6 ⁵	18	6	6
Warm-Air--250° F. Max.	Comb. Gas-Oil	18 ⁶	18 ⁶	48	18	18
	Automatic Gas	6 ⁵	6 ⁵	18	6	6
	Solid	18 ⁶	18 ⁶	48	18	18
	Electric	6 ⁵	6 ⁵	18	6	6
Furnaces-Floor	Automatic Oil	36	--	12	12	12
For Mounting in Combustible Floors	or	36	--	12	12	12
	Comb. Gas-Oil	36	--	12	12	12
	Automatic Gas	36	--	12	12	12
	Electric	36	--	12	12	12
Heat Exchanger	-----	1	1	1	1	1
Steam-15 psi Max.						
Hot Water-250° F. Max.						
Room Heaters						
Circulating Type	Oil or Solid	36	--	24	12	12
Vented or Unvented	Gas	36	--	24	12	12
	Oil or Solid	36	--	36	36	36
	Gas	36	--	36	18	18
Radiant or Other Type	Gas With Double	36	--	36	12	18
Vented or Unvented	Metal or Ceramic Back					
Radiators						
Steam or Hot Water	Gas	36	--	6	6	6
		See Note 7				Firing Opp Side Side
Ranges-Cooking Stoves	Oil	30	--	--	9	24 18
	Gas	30	--	--	6	6 6
	Solid-Clay	30	--	--	24	24 18
	Lined Firepot	30	--	--	36	36 18
Vented or Unvented	Solid-Clay	30	--	--	6	6 6
	Unlined Firepot	30	--	--	6	6 6
	Electric	30	--	--	6	6 6
Clothes Dryers	Gas	6	--	24	6	6
Listed	Electric	6	--	24	0	0
Incinerators	-----	See Note 10				
Residential Type		36	--	48	36	36
Building Heating ¹² and Low Heat ¹³ Appliances						
Any and All Physical Sizes Except as Noted		See Note 8	From Top and Sides of Warm-Air Bonnet or Plenum	From Front	From Back See Note 8	From Sides See Note 8
Boilers & Water Heaters						
100 cu ft or less						
Any psi Steam	All Fuels	18	--	48	18	18
50 psi or less						
Any Size	All Fuels	18	--	48	18	18
Unit Heaters						
Floor Mounted or Suspended-Any Size	Steam or Hot Water	1	--	--	1	1
Suspended-	Oil or Comb. Gas-Oil	6	--	24	18	18
100 cu ft or less						
Suspended-	Gas	6	--	18	18	18
100 cu ft or less						
Suspended-	All Fuels	18	--	48	18	18
over 100 cu ft						
Floor Mounted-Any Size	All Fuels	18	--	48	18	18
Ranges--Restaurant Type						
Floor Mounted	All Fuels	48	--	48	18	18
Other Low-Heat Appliances						
Floor Mounted or Suspended	All Fuels	18	18	48	18	18
Commercial Industrial Type Medium-Heat Appliances						
Boilers & Water Heaters						
over 50 psi						
Over 100 cu ft	All Fuels	48	--	96	36	36
Other Med.-Heat Industrial Appliances						
All Sizes	All Fuels	48	36	96	36	36
Incinerators						
All Sizes	-----	48	--	96	36	36
Industrial Type High-Heat Appliances						
High-Heat Industrial Appliances						
All Sizes	All Fuels	180	--	360	120	120

Footnotes to Table 64.51-A

1. Standard clearances may be reduced with protection for combustibile material according to Table 64.51-B.
2. An appliance may be mounted on a combustibile floor if the appliance is listed for installation on a combustibile floor, or if the floor is protected according to Table 64.51-C.
3. Rooms which are large in comparison to the size of the appliance are those having a volume equal to at least 12 times the total volume of a furnace and at least 16 times the total volume of a boiler. If the actual ceiling height of a room is greater than 8 ft., the volume of a room shall be figured on the basis of a ceiling height of 8 ft.
4. The minimum dimension should be that necessary for servicing the appliance including access for cleaning and normal care, tube removal, etc.
5. For a listed oil, combination gas-oil, gas, or electric furnace this dimension may be 2 in. if the furnace limit control cannot be set higher than 250° F. or this dimension may be 1 in. if the limit control cannot be set higher than 200° F.
6. The dimension may be 6 in. for an automatically stoker-fired forced warm-air furnace equipped with 250° F. limit control and with barometric draft control operated by draft intensity and permanently set to limit draft to a maximum intensity of 0.13 in. water gauge.
7. To combustibile material or metal cabinets. If the underside of such combustibile material or metal cabinet is protected with asbestos millboard at least 1/4 in. thick covered with sheet metal of not less than No. 28 gauge the distance may be not less than 24 in.
8. If the appliance is encased in brick, the 18 in. clearance above and at sides and rear may be reduced to not less than 12 in.
9. Clearance above charging door shall be not less than 48 in.
10. Residential-type appliances are fuel-burning and electric appliances (except high pressure boilers for generating steam in excess of 15 psig or for heating water in excess of 250° F. or above 160 psig), for heating building spaces having a volume of not more than 25,000 cubic feet, and other heat-producing appliances of the type mainly used in residences, but which may be used in other buildings, such as cooking stoves and ranges, clothes dryers, fireplace stoves, domestic incinerators, laundry stoves, water heaters, and heat pumps.
11. Building heating appliances are fuel-burning and electric boilers, operating at not over 50 psig pressure, central furnaces, and heaters intended primarily for heating spaces having a volume exceeding 250,000 cubic feet.
12. A low heat appliance such as a commercial cooking range, bake oven, drying and curing appliance, and other process appliances in which materials are heated or melted at temperatures (excluding flue-gas temperatures) not exceeding 600° F.

TABLE 64.51-B
CLEARANCES, INCHES, WITH SPECIFIED FORMS OF PROTEC

Type of Protection Applied to the combustible material unless otherwise specified and covering all surfaces within the distance specified as the required clearance with no protection. Thicknesses are minimum.	Where required clearance with no prote						
	36 inches			18 inches			12 i
	Above	Sides & Rear	Chimney or Vent Con- nector	Above	Sides & Rear	Chimney or Vent Con- nector	Above
(a) 0.013 in. (28 gage) sheet metal spaced out 1 in . .	18	12	18	9	6	9	6
(b) 0.027 in (22 gage) sheet metal on 1 in. mineral fiber batts reinforced with wire or equivalent . . .	18	12	12	4	3	3	2
(c) 3-1/2 in (actual) solid masonry spaced out 1 in. and attached as specified in s. Ind 53.36	18	18	18	9	9	9	6
(d) Other products and systems as approved by the depart- ment (see s. Ind 50.19) .				----- Subject to the conditions of			

- ¹ All clearances should be measured from the outer surface of the appliance to the combusti- tion applied to the combustible material.
- ² This table is based upon Table 2-2.1 of NFPA Manual 89M-1976; however, all references to policy changes approved by NFPA.
- ³ If a table heading is not available for a specific required clearance without protection,

TABLE 64.51-C
FLOOR PROTECTION¹

APPLIANCE LEG LENGTH	PROTECTION REQUIRED
6 inches or more	No. 24 U.S. Gage (0.025 in.) sheet metal
Less than 6 inches	No. 24 U.S. Gage (0.025 in.) sheet metal over 4 inches of hollow masonry laid to provide air circulation through the masonry.

¹ This protection is required over floors containing combustible construction, including noncombustible flooring over combustible joists. The amount or type of floor protection depends on the appliance leg length. The floor protection shall extend at least 12 inches to the sides and rear of the appliance and 18 inches beyond sides having a door or similar opening.

TABLE 64.51-D
 CHIMNEY CONNECTOR AND VENT CONNECTOR CLEARANCES
 FROM COMBUSTIBLE MATERIALS (See Note 3)

Description of Appliance	Minimum Clearance Inches
Single-Wall Metal Pipe Connectors	
Gas Appliances Without Draft Hoods	18
Electric, Gas, and Oil Incinerators	18
Oil- and Solid-fuel Appliances	18
Unlisted Gas Appliances With Draft Hoods	9
Boilers and Furnaces Equipped With Listed Gas Burners and With Draft Hoods	9
Oil Appliances Listed as Suitable for Use with Type L Venting Systems, but Only When Connected to Chimneys	9
Listed Gas Appliances with Draft Hoods (See Note 2)	6
Type L Vent Piping Connectors	
Gas Appliances Without Draft Hoods	9
Electric, Gas and Oil Incinerators	9
Oil- and Solid-Fuel Appliances	9
Unlisted Gas Appliances With Draft Hoods	6
Boilers and Furnaces Equipped With Listed Gas Burners and With Draft Hoods	6
Oil Appliances Listed as Suitable for Use With Type L Vents	(See Note 1)
Listed Gas Appliances With Draft Hoods	(See Note 2)
Type B Gas Vent Piping Connectors	
Listed Gas Appliances With Draft Hoods	(See Note 2)

- ¹ If listed type L venting system piping is used, the clearance may be in accordance with the venting system listed.
- ² If listed type B or type L venting system piping is used, the clearance may be in accordance with the venting system listing.
- ³ The clearances from connectors to combustible materials may be reduced if the combustible material is protected in accordance with Table 64.51-B or s. Ind 64.50 (1) (b).

SECTION 25. Ind 64.52 (1) is amended to read:

Ind 64.52 (1) MAINTENANCE. All heating, ventilating, exhaust and air conditioning systems shall be maintained in good working order and shall be kept clean and sanitary. Chimneys or vents and connectors serving solid-fuel burning appliances shall be cleaned and inspected for damage annually. Chimneys and vents, which have been subjected to a chimney fire, shall not be reused until inspected and approved by the department or authorized deputy.

SECTION 26. A-64.20 is amended to read as follows:

A-64.20. EQUIPMENT RATINGS AND SAFETY CONTROLS. The department recognizes the following reference standards for the testing and installation of heating and ventilating equipment:

~~(1) National Fire Protection Association, 470 Atlantic Ave., Boston, Mass. 02210.~~

~~(a) OIL BURNING EQUIPMENT, NFPA No. 31.~~

~~(b) NATIONAL FUEL GAS CODE, NFPA No. 54.~~

~~(2) (1) American National Standards Institute, Inc., 1430 Broadway, New York, N.Y. 10018:~~

(a) GAS-FIRED ROOM HEATERS, Vol. 1, ANSI Z21.11.1;

(b) GAS-FIRED LOW PRESSURE STEAM AND HOT WATER BOILERS, ANSI Z21.13;

(c) GAS UNIT HEATERS, ANSI Z21.16;

(d) DOMESTIC GAS CONVERSION BURNERS, ANSI Z21.17;

(e) GAS APPLIANCE PRESSURE REGULATORS, ANSI Z21.18;

(f) AUTOMATIC GAS IGNITION SYSTEMS AND COMPONENTS, ANSI Z21.20;

(g) AUTOMATIC GAS VALVES, ANSI Z21.21;

(h) RELIEF VALVES AND AUTOMATIC GAS SHUTOFF DEVICES FOR HOT WATER SYSTEMS, ANSI Z21.22;

(i) GAS APPLIANCE THERMOSTATS, ANSI Z21.23;

(j) GAS-FIRED DUCT FURNACES, ANSI Z21.34;

(k) GAS FILTERS ON APPLIANCES, ANSI Z21.35;

(l) GAS-FIRED GRAVITY AND FAN TYPE DIRECT VENT WALL FURNACES, ANSI Z21.44;

(m) GAS-FIRED GRAVITY AND FORCED AIR CENTRAL FURNACES, ANSI Z21.47;

(n) GAS-FIRED GRAVITY AND FAN TYPE FLOOR FURNACES, ANSI Z21.48;

(o) GAS-FIRED GRAVITY AND FAN TYPE VENTED WALL FURNACES, ANSI Z21.49;

(p) VENTED DECORATIVE GAS APPLIANCES, ANSI Z21.50;

(q) GAS-FIRED SINGLE FIREBOX BOILERS, ANSI Z21.52;

(r) GAS-FIRED HIGH PRESSURE STEAM AND HOT WATER BOILERS (Inputs not over 400,000 Btu/hour), ANSI Z21.59;

(s) DECORATIVE GAS APPLIANCES FOR INSTALLATION IN VENTED FIREPLACES, ANSI Z21.60;

(t) DIRECT GAS-FIRED MAKEUP AIR HEATERS, ANSI Z83.4;

(u) GAS-FIRED HEAVY DUTY FORCED-AIR HEATERS, ANSI Z83.5;

(v) GAS-FIRED INFRARED HEATERS, ANSI Z83.6.

(2) Canadian Standards Association, Certification Division, Rexdale, Ontario Canada, M9W IR3:

(a) Solid-Fuel Fired Appliances for Residential Use, CSAB 366M.

(3) Energy Testing Laboratory of Maine, South Maine Vocational Technical Institute, South Portland, Maine 04106.

(a) Testing for Safety - Requirements and Test Procedures for Solid-Fuel Burning Central Heating Appliances and Combination Oil- and Solid-Fuel Burning Central Heating Appliances, ETLM Standard #78-1.

(4) International Conference of Building Officials, Inc., 5360 South Workman Mill Road, Whittier, California 90601:

(a) Research Committee Acceptance Criteria for Fireplace Heat Exchangers.

~~(3)~~ (5) Underwriters' Laboratories, Inc., 207 East Ohio Street, Chicago, Illinois 60611:

(a) CHIMNEYS, FACTORY-BUILT, RESIDENTIAL TYPE AND BUILDING HEATING APPLIANCES, UL 103;

(b) FACTORY BUILT FIREPLACES, UL 127;

~~(a)~~ (c) OIL BURNERS, UL 296;

~~(b)~~ (d) CONTROLS, PRIMARY SAFETY FOR GAS- AND OIL-FIRED APPLIANCES, UL 372;

(e) Solid-Fuel Fired Central Furnaces, UL 391.

(f) GAS VENTS, UL 441;

~~(e)~~ (g) HEATING APPLIANCES, ELECTRIC, UL 499;

~~(d)~~ (h) HEAT PUMPS, UL 559;

(i) TYPE L LOW-TEMPERATURE VENTING SYSTEMS, UL 641;

~~(e)~~ (j) OIL-FIRED BOILER ASSEMBLIES, UL 726;

~~(f)~~ (k) OIL-FIRED CENTRAL FURNACES, UL 727;

(l) OIL-FIRED FLOOR FURNACES, UL 729;

(m) OIL-FIRED WALL FURNACES, UL 730;

(n) OIL-FIRED UNIT HEATERS, UL 731;

~~(g)~~ (o) HEATERS, AIR AND DIRECT-FIRED HEATERS, OIL-FIRED, UL 733;

(p) FIREPLACE STOVES, UL 737;

~~(h)~~ (q) COMMERCIAL-INDUSTRIAL GAS HEATING EQUIPMENT (Inputs over 400,000 Btu/hour), UL 795;

~~(i)~~ (r) HEATERS, ELECTRIC, FOR USE IN HAZARDOUS LOCATIONS; Class I, Groups A, B, C and D, and Class II, Groups E, F and G, UL 823;

~~(j)~~ (s) ELECTRIC BOILERS, UL 834;

~~(k)~~ (t) HEATERS, ELECTRIC DRY BATH, UL 875;

~~(l)~~ (u) FAN COIL UNITS AND ROOM FAN HEATER UNITS, UL 883;

(v) OIL-BURNING STOVES, UL 896;

~~(m)~~ (w) HEATERS, ELECTRIC AIR, UL 1025;

~~(n)~~ (x) HEATING EQUIPMENT, ELECTRIC BASEBOARD, UL 1042;

~~(o)~~ (y) HEATING EQUIPMENT, ELECTRIC CENTRAL AIR, UL 1096;

(z) ROOM HEATERS, SOLID-FUEL TYPE, UL 1482.

Note: The Table on the following page is a tabular summary of UL 296 and UL 795.

* * * * *

EFFECTIVE DATE

Pursuant to s. 227.026 (1), Intro., Stats., these rules shall take effect on the first day of the month following publication in the Wisconsin Administrative Register.

* * * * *

Nonsubstantive Changes to
Wisconsin Administrative Code Chapters Ind 50-64
Building & Heating, Ventilating & Air-Conditioning Code

SECTION 1. Chapter Ind 50 - Part I Special Note is amended to read as follows:

SPECIAL NOTE #1

AN ASTERISK (*) FOLLOWING THE SECTION OR SUBSECTION NUMBER INDICATES EXPLANATORY MATERIAL ON THAT PARAGRAPH MAY BE FOUND IN APPENDIX A. EXAMPLE s. Ind 51.01 (16)* - SEE A-51.01 (16) IN APPENDIX A.

SPECIAL NOTE #2

THE OVERALL ENFORCEMENT RESPONSIBILITY FOR ALL OF THE PROVISIONS OF THIS CODE IS EQUALLY SHARED BY THE BUILDING INSPECTOR AND THE FIRE INSPECTOR. NORMALLY, THE BUILDING INSPECTOR HAS PRIMARY RESPONSIBILITY DURING CONSTRUCTION OF THE BUILDING WHILE THE FIRE INSPECTOR HAS PRIMARY RESPONSIBILITY AFTER THE BUILDING IS COMPLETED. THE ENFORCEMENT OF MANY OF THE PROVISIONS OF THE CODE IS THE PRIMARY RESPONSIBILITY OF THE FIRE INSPECTOR AND COMPLIANCE WITH THESE PROVISIONS SHOULD BE OF PRIMARY CONCERN WHILE CONDUCTING THE FIRE PREVENTION INSPECTIONS MANDATED BY SECTION 101.14, STATS. A GUIDELINE FOR THIS TOPIC HAS BEEN PREPARED. THE LETTERS "FP" MEANING FIRE PREVENTION AND APPEARING IN THE MARGIN ADJACENT TO A RULE INDICATES THE PRIMARY ENFORCEMENT RESPONSIBILITY FOR THE RULE IS THAT OF THE FIRE INSPECTOR. FURTHER EXPLANATORY MATERIAL FOR THE INDICATED RULES MAY BE FOUND IN APPENDIX B. EXAMPLE: SEE S. IND 51.20 AND APPENDIX B.

SECTION 2. Ind 50.07 (1) should read as follows:

Ind 50.07 (1) BUILDINGS CONTAINING NOT MORE THAN 50,000 CUBIC FEET TOTAL VOLUME. The plans and specifications for every new building, or alteration to a building, containing not more than 50,000 cubic feet total volume, or addition to a building in which the volume of the addition results in the entire building containing not more than 50,000 cubic feet total volume, may be prepared by a registered architect, engineer, designer, contractor or owner or ~~his (her)~~ an authorized agent.

SECTION 3. Ind 50.10 (2) should read as follows:

Ind 50.10 (2) NAME OF SUPERVISING ARCHITECT, ENGINEER OR DESIGNER. Prior to the start of construction, the owner of the building or structure, whose name must be a part of, or accompany, all plans submitted for approval, as specified in s. Ind 50.12 or ~~his (her)~~ an authorized agent, shall designate to the department, in writing, the name and registration number of the architect, engineer or designer retained to supervise construction of the building or structure.

SECTION 4. Ind 50.10 (3) should read as follows:

Ind 50.10 (3)* COMPLETION STATEMENT. Upon completion of the construction, the supervising architect, engineer or designer shall file a written statement with the department certifying that, to the best of ~~his/her~~ his or her knowledge and belief, construction has been performed in substantial compliance with the approved plans and specifications.

SECTION 5. Ind 50.20 should read as follows:

Ind 50.20 FEES. Fees for petitions for modification, material approval, plan examination and approval, and for inspection of buildings, structures, and heating and ventilating shall be submitted in accordance with the provisions of ~~Wis. Adm. Code section Ind 69.09, ch. Ind 69, Wis. Adm. Code.~~ Fees shall be submitted at the time the application for approval is submitted. No plan examinations, approvals or inspections will be made until the fees are received.

~~Note: See Appendix A, reprint of section Ind 69.09, for determination of fees.~~

SECTION 6. Ind 51.01 (intro) Note is created to read:

Ind 51.01 (intro) Note: The definitions of words and phrases not defined in this section should be taken from the current edition of Webster's New International Dictionary.

[Note to Revisor: This note should be placed immediately after the title of s. Ind 51.01 and before the first definition.]

SECTION 7. Ind 51.20 (8) (b) should read as follows:

Ind 51.20 (8) (b) All outside railings which are more than 60 feet' above grade shall be at least 6 feet high, measuring vertically from floor of platform or from nose of step. Such railings shall be of special design approved by the department ~~of industry, labor and human relations~~, having not less than 4 longitudinal rails, and vertical lattice bars not more than 8 inches apart, and proper stiffening braces or brackets.

SECTION 8. Ind 51.24 (6) should read as follows:

Ind 51.24 (6) Existing fire alarm systems that are effective in operation will be accepted if approved by the department ~~of industry, labor and human relations~~.

SECTION 9. Ind 51.24 (9) should read as follows:

Ind 51.24 (9) Tubing in connection with noncombustible, nontoxic gas activated fire alarm systems shall be installed in rigid metal conduit, flexible metal conduit, or surface metal raceways where subject to mechanical injury. Noncorrosive metallic tubing not less than 3/16" in diameter which will withstand a bursting pressure of not less than 500 pounds per square inch shall be used. The maximum length of 3/16" tubing shall not exceed 300 feet between charged cylinders. All tubing and other component parts shall be installed by skilled ~~workmen~~ workers as specified in chs. Ind 50-64.

Note: See ~~Electrical Code, Volume 2~~ ch. ILHR 16, Wis. Adm. Code.

SECTION 10. Ind 52.03 (1) (a) should read as follows:

Ind 52.03 (1) (a) Approved attachments for window cleaner safety belts to which belts may be fastened at each end. ~~Said~~ The attachments shall be permanent devices that shall be firmly attached to the window frame, or to the building proper, and so designed that a standard safety belt may be attached thereto; or

SECTION 11. Ind 52.03 (3) should read as follows:

Ind 52.03 (3) All equipment, including building parts and attachments, used in connection with window cleaning, shall be maintained in reasonably safe condition while in use and shall be inspected at least once each month while in use, and within 30 days before their use. It shall be the responsibility of the owner of the individual safety devices or equipment to inspect and maintain the devices or equipment belonging to ~~him~~ the owner so that each will comply with the requirements of this section.

SECTION 12. Ind 52.03 (4) should read as follows:

Ind 52.03 (4) Where the attachments specified in ~~section~~ sub. (1) (a) are relied upon for compliance with the provisions of ~~this rule, said~~ sub. (1), the employer shall furnish or see that there is provided, an approved suitable safety belt for each employe while cleaning windows.

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(b) *Single-fixture toilet rooms.* Single-fixture toilet rooms containing one water closet and one lavatory shall be designed to provide the minimum space requirements as shown in diagram A, diagram B, or as approved by the department.

~~10 Grab bars, special lavatories, water closets, mirrors, or special bathing facilities are not required.~~

~~14 Accessible bathtubs or showers shall be provided and shall comply with section Ind 57.26 (3) (a) or (b). Self-rising toilet seats and sliding-door tub enclosures are prohibited.~~

~~Subsection Ind 52.04 (5) (b) is amended to read:~~

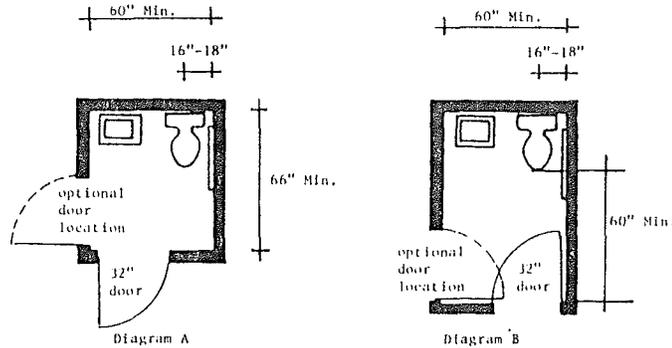
~~(b) Buildings of 20,000 square feet or less. Multiple-use buildings with a total gross area of 20,000 square feet or less, including all floors, shall be provided with a means of access to and throughout at least 2/3 of the total area of the primary and to the toilet facilities on the primary floor. Government-owned buildings and dental and medical clinics and offices shall comply with the criteria established in Table 52.04 for each specific use.~~

~~Note: Floors used entirely for storage or mechanical purposes need not be included in determining the total gross area.~~

~~Subsection Ind 52.04 (8) is repeated and recreated to read:~~

~~(8)* Toilet facility details. (a) Accessible toilet rooms and compartments. Accessible toilet rooms and toilet compartments shall be sized to provide ease of access, usability and uninterrupted mobility. Fixtures, doors and other obstructions shall be arranged to ensure accessibility.~~

~~(b) Single-fixture toilet rooms. Single-fixture toilet rooms containing one water-closet and one lavatory shall be designed to provide the minimum space requirements as shown in diagram A, diagram B, or as approved by the department.~~



(c) *Water closet compartments.* Accessible water closet compartments shall be designed in accordance with the minimum design standards as established in Table 52.04-A, or as approved by the department. Sufficient clearance must be maintained to permit the door to the toilet room compartment to open at least 95°.

Note: The water closet compartment specifications contained in Table 52.04-A do not apply to toilet rooms containing one water closet and one lavatory; or to bathrooms containing a water-closet, a lavatory and a bathing facility. See the appendix for examples of accessible toilet room and bathroom arrangements.

SECTION 14. Ind 52.06 should read as follows:

Ind 52.06 VENTILATION OF COURTS. At the bottom of every shaft or inner court there shall be sufficient access to such shaft or court to enable it to be properly cleaned out. Every inner court which is required under ~~Wis. Adm. Code section s.~~ Ind 52.02, and which is more than one story in height, shall have an intake for fresh air, leading from the street or other open space. The area of such intake in square feet shall equal at least .002 of the number of cubic feet contained in ~~said~~ the court, but such area need not be more than 50 square feet. Every intake shall be of not less than 2-hour fire-resistive construction and unless ~~said~~ the intake is used as a passageway for persons, there shall be no openings into the same other than the inlet and outlet.

SECTION 15. Ind 52.53 (4) (intro) should read as follows:

Ind 52.53 (4) Every toilet room having more than one fixture including closets and urinals shall be ventilated in accordance with the provisions of ~~section s.~~ Ind 64.65, except that this requirement shall not apply to chemical or septic toilets which are installed in accordance with the provisions of the chemical toilet code or the septic toilet code issued by the ~~state~~ department of health and social services.

SECTION 16. Ind 54.21 should read as follows:

Ind 54.21 TENTS. All tents used for sales or storage purposes shall conform to the requirements specified ~~for tents~~ in ~~section ss.~~ Ind 62.42 - 62.51 ~~of this code.~~

SECTION 17. Ind 61.24 (1) (d) 2. should read as follows:

Ind 61.24 (1) (d) 2. New ~~combustible~~ combustible construction, such as partitions, shelving or storage lockers, shall not encroach upon the required clearance.

SECTION 18. Ind 62.001 should read as follows:

Ind 62.001 SCOPE. This classification includes all specialty occupancies as indicated in the scope of each ~~subpart~~ subchapter of this ~~code~~ chapter.

SECTION 19. Ind 62 Part I title should read as follows:

~~Part~~ Subchapter I Open Parking Structures

SECTION 20. Ind 62 Part II title should read as follows:

~~Part~~ Subchapter II Television and Radio Antenna

SECTION 21. Ind 62 Part III title should read as follows:

~~Part~~ Subchapter III Tents

SECTION 22. Ind 62 Part IV title should read as follows:

~~Part~~ Subchapter IV Outdoor Theaters

[Note to Revisor: Please print Table 51.03-A, 51.045 Table 2 and Table 2 Cont., Table 52.04, Table 64.05 (both pages) as fold-outs rather than on regular code size pages. (See 1979 code for example.)]

SECTION 23. Ind 64.67 (4) (f) should read as follows:

Ind 64.67 (4) (f) Exposed Hood Surfaces. Hood surfaces and exposed exhaust ducts within 18 inches of combustible material shall be protected ~~in accordance with the requirements of section~~ as specified in s. Ind 64.67 ~~(6)~~ (5) (f).

SECTION 24. Ind 64.67 (4) (g) should read as follows:

Ind 64.67 (4) (g) Concealed Hood Surfaces. Hood surfaces that are concealed by or recessed into adjoining construction shall be protected ~~in accordance with the requirements of~~ as specified in s. Ind 64.67 ~~(6)~~ (5) (f).