Indiana
Mechanical Code

2008 Edition
Title 675 IAC 18-1.5

Indiana Mechanical Code Amendments

Rule 1.5. Indiana Mechanical Code, 2008 Edition

675 IAC 18-1.5-1 Adoption by reference

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 1. (a) That certain document being titled the International Mechanical Code, 2006 Edition, first printing, as published by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois 60478-5795, is hereby adopted by reference as if fully set out in this rule save and except those revisions made in this rule.

(b) This rule and incorporated documents therein are available to review and as reference at the Department of Homeland Security, Code Services Section, Indiana Government Center-South, 302 West Washington Street, Room W246, Indianapolis, Indiana 46204. *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-1; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-2 Chapter 1; administration

Authority: IC 22-13-2-2
Affected: IC 4-21.5; IC 4-22-7-7; IC 22-12-7; IC 22-13-2-7; IC 22-13-5; IC 22-14; IC 36-8-17

Sec. 2. Amend Chapter 1 by deleting it in its entirety and substituting to read as follows:

101.1 Title; Availability. This rule shall be known as the Indiana Mechanical Code, 2008 edition and shall be published, except incorporated documents, by the Department of Homeland Security for general distribution and use under that title. Wherever the term "this code" is used throughout this rule, it shall mean the Indiana Mechanical Code, 2007 edition.

101.2 Scope and Purpose. (a) The scope and purpose of this code is to establish the minimum requirements for the following:

1. Construction, addition, alteration, erection, or assembly of any part of a Class 1 structure at the site where the structure will be used.
2. Installation of any part of the permanent heating, ventilating, air conditioning, electrical, plumbing, sanitary, emergency detection, emergency communication, or fire or explosion suppression systems for a Class 1 structure at the site where it will be used.
3. Work undertaken to alter, remodel, rehabilitate, or add to any part of a Class 1 structure.
4. Safeguarding life or property from the hazards of fire and explosion for Class 1 structures.
5. Fabrication of any part of a Class 1 industrialized building system for installation, assembly, or use at another site, except mobile structures.
6. Work undertaken to relocate any part of a Class 1 structure, except a mobile structure.
7. Assembly of a Class 1 industrialized building system that is not covered by subdivision (5), except mobile structures.

(b) Detached one and two family dwellings and townhouses not more than three stories high and their accessory structures shall comply with the Indiana Residential Code, 675 IAC 14.

101.3 Intent. The intent of this code is to prescribe maintenance, new construction requirements, and operational rules for the safeguarding to a reasonable degree of life and property from the hazards of fire or explosion arising from the storage, handling, or use of substances, materials, and devices.

101.4 Referenced Codes and Standards. The codes and standards referenced in this code shall be those that are listed in Chapter 15, and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of Chapter 15 and the standards directly adopted by the Commission, the standards adopted by the Commission shall govern.

101.5 Appendices and Standards. Provisions in the appendices are not enforceable unless specifically adopted. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

Exception: Where enforcement of a code provision would violate the conditions of the listing, labeling, or

manufacturer's installation instructions of the equipment or appliance, the conditions of the listing, labeling, or manufacturer's instructions shall apply.

101.6 Appeals and Interpretations. Appeals from orders issued by the Fire Prevention and Building Safety Commission or the Division of Fire and Building Safety are governed by IC 4-21.5 and IC 22-12-7. Appeals from orders by a local unit of government are governed by IC 22-13-2-7 and local ordinance. Upon the written request of an interested person who has a dispute with a county or municipal government concerning a building rule, the building law compliance officer may issue a written interpretation of a building law. The written interpretation as issued under IC 22-13-5 binds the interested person and the county or municipality with whom the interested person has the dispute until overruled in a proceeding under IC 4-21.5. A written interpretation of a building law binds all counties and municipalities if the office of the state building commissioner publishes the written interpretation of the building law in the Indiana Register under IC 4-22-7-7(b).

101.7 Plans. Plans shall be submitted for Class 1 structures as required by the General Administrative Rules (675 IAC 12) and the rules for Industrialized Building Systems (675 IAC 15).

101.8 Existing Construction. For existing Class 1 structures, see the General Administrative Rules (675 IAC 12) and local ordinance.

101.9 Additions and Alterations. Additions and alterations to any Class 1 structure shall conform to that required of a new structure without requiring the existing structure to comply with all the requirements of this code. Additions or alterations shall not cause an existing structure to become unsafe (see the General Administrative Rules (675 IAC 12-4)).

101.10 Alternate Materials, Methods, and Equipment. Alternate materials, methods, equipment, and design shall be as required by the General Administrative Rules (675 IAC 12-6-11) and the rules for Industrialized Building Systems (675 IAC 15). *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-2; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-3 Chapter 2; definitions

Authority: IC 22-13-2-2

Affected: IC 10-19-2; IC 22-12-2-1; IC 22-12-7; IC 22-13; IC 22-14; IC 25-4; IC 25-31; IC 36-7-2-9; IC 36-8-17-9

Sec. 3. In Chapter 2, make the following changes:

(1) Delete the text of Section 201.3 in its entirety and substitute as follows: Where terms are not defined in this code and are defined in the Indiana Building Code (675 IAC 13), Indiana Electrical Code (675 IAC 17), Indiana Fire Code (675 IAC 22), Indiana Fuel Gas Code (675 IAC 25), or Indiana Plumbing Code (675 IAC 16), such terms shall have the meanings ascribed to them as in those codes.

(2) Insert Section 201.3.1 to read as follows: 201.3.1. Terms defined in other codes.

ICC ELECTRICAL CODE refers to the INDIANA ELECTRICAL CODE (675 IAC 17).

INTERNATIONAL BUILDING CODE refers to the INDIANA BUILDING CODE (675 IAC 13).

INTERNATIONAL ENERGY CONSERVATION CODE refers to the INDIANA ENERGY CONSERVATION CODE (675 IAC 19).

INTERNATIONAL FIRE CODE refers to the INDIANA FIRE CODE (675 IAC 22).

INTERNATIONAL FUEL GAS CODE refers to the INDIANA FUEL GAS CODE (675 IAC 25).

INTERNATIONAL PLUMBING CODE refers to the INDIANA PLUMBING CODE (675 IAC 16).

(3) Amend the definition of APPLIANCE, EXISTING to read as follows: APPLIANCE, EXISTING. Any appliance regulated by this code which was legally installed prior to the effective date of this code.

(4) Amend the definition of APPROVED to read as follows: APPROVED. As to materials, equipment, design, and types of construction, acceptance by the code official by one (1) of the following methods:

(1) Investigation or tests conducted by recognized authorities; or

(2) Investigation or tests conducted by technical or scientific organizations; or

(3) Accepted principles.

The investigation, tests, or principles shall establish that the materials, equipment, and types of construction are safe for the intended purpose.

(5) Insert the definition for BUILDING CODE to read as follows: BUILDING CODE means the Indiana Building Code.
(6) Delete the definition of CODE.
(7) Amend the definition of CODE OFFICIAL to read as follows: CODE OFFICIAL means the Division of Fire and Building Safety; the local building official as authorized under IC 36-7-2-9 and local ordinance; or the fire department as authorized under IC 36-8-17-9.
(8) Delete the definition of COMMERCIAL COOKING APPLIANCES and substitute to read as follows: COMMERCIAL COOKING APPLIANCES. Commercial and residential appliances used for heating or cooking food that produces grease, grease-laden vapors, steam, fumes, smoke, or odors that are required to be removed through a Type I or Type II exhaust ventilation system. Such appliances include: deep fat fryers; upright broilers; griddles; broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (char broilers); ovens; barbecues; rotisseries; and similar appliances.
(9) Insert the definition for COMMISSION to read as follows: COMMISSION is the Indiana Fire Prevention and Building Safety Commission as set forth at IC 22-12-2-1.
(10) Delete the definition of COMPENSATING HOODS.
(11) Amend the definition of CONSTRUCTION DOCUMENTS to read as follows: CONSTRUCTION DOCUMENTS. Documents required to obtain a design release in accordance with the General Administrative Rules (675 IAC 12-6) and the rules for Industrialized Building Systems (675 IAC 15).
(12) Insert the definition for DIVISION OF FIRE AND BUILDING SAFETY to read as follows: DIVISION OF FIRE AND BUILDING SAFETY means the Division of Fire and Building Safety of the Indiana Department of Homeland Security created pursuant to IC 10-19-2.
(13) Amend the definition of DWELLING UNIT to read as follows: DWELLING UNIT is any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking, and sanitation, as required by this code, for not more than one (1) family, or congregate resident for sixteen (16) or fewer persons.
(14) Insert the definition for ELECTRICAL CODE to read as follows: ELECTRICAL CODE means the Indiana Electrical Code in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.
(15) Amend the definition of EQUIPMENT, EXISTING to read as follows: EQUIPMENT, EXISTING. Any equipment regulated by this code which was legally installed prior to the effective date of this code.
(16) Insert the definition for FIRE CODE to read as follows: FIRE CODE means the Indiana Fire Code.
(17) Insert the definition for FIRE PREVENTION CODE to read as follows: FIRE PREVENTION CODE. Refer to the INDIANA BUILDING CODE (675 IAC 13) and the INDIANA FIRE CODE (675 IAC 22).
(18) Insert the definition for INDIANA BUILDING CODE to read as follows: INDIANA BUILDING CODE means the rules adopted at 675 IAC 13 in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.
(19) Insert the definition for INDIANA ELECTRICAL CODE to read as follows: INDIANA ELECTRICAL CODE means the rules adopted at 675 IAC 17 in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.
(20) Insert the definition for INDIANA ENERGY CONSERVATION CODE to read as follows: INDIANA ENERGY CONSERVATION CODE means the rules adopted at 675 IAC 19 in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.
(21) Insert the definition for INDIANA FIRE CODE to read as follows: INDIANA FIRE CODE means the rules adopted at 675 IAC 22 in effect in Indiana at the time of inspection by the code official or, with respect to construction required to be filed under 675 IAC 12-6, 675 IAC 22 in effect at the time of construction, remodeling, alteration, addition, or repair of the structure.
(22) Insert the definition for INDIANA FUEL GAS CODE to read as follows: INDIANA FUEL GAS CODE means the rules adopted at 675 IAC 25 in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.
(23) Insert the definition for INDIANA PLUMBING CODE to read as follows: INDIANA PLUMBING CODE means the rules adopted at 675 IAC 16 (or the applicable rules of the predecessor to the commission) in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the

structure.
(24) Insert the definition for INSPECTION AUTHORITY to read as follows: INSPECTION AUTHORITY. See CODE OFFICIAL.
(25) Amend the definition for LABELED to read as follows: LABELED means equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization engaged in product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.
(26) Amend the definition for LIGHT-DUTY COOKING APPLIANCE to read as follows: LIGHT-DUTY COOKING APPLIANCE. Light-duty cooking appliances include gas and electric ovens (including standard, bake, roasting, revolving, retherm, convection, combination convection/steamer, conveyor, deck or deck-style pizza, and pastry), electric and gas steam-jacketed kettles, electric and gas pasta cookers, electric and gas compartment steamers (both pressure and atmospheric), and electric and gas cheesemelters.
(27) Amend the definition for LISTED to read as follows: LISTED means equipment or materials included in a list published by an organization engaged in product evaluation, that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets appropriate standards or has been tested and found suitable for use in a specified manner.
(28) Insert the definition for MECHANICAL CODE to read as follows: MECHANICAL CODE means the Indiana Mechanical Code.
(29) Amend the definition for MECHANICAL JOINT to read as follows: MECHANICAL JOINT. A connection between pipes, fittings, or pipes and fittings, which is neither screwed, caulked, threaded, soldered, solvent cemented, brazed, nor welded. Also, a joint in which compression is applied along the centerline of the pieces being joined. Some joints are part of a coupling, fitting, or adapter. These joints include both the press-type and push-fit joining system.
(30) Amend the definition for MEDIUM-DUTY COOKING APPLIANCE to read as follows: MEDIUM-DUTY COOKING APPLIANCE. Medium-duty cooking appliances include electric discrete element ranges (with or without oven), electric and gas hot-top ranges, electric and gas griddles, electric and gas double-sided griddles, electric and gas fryers (including open deep fat fryers, donut fryers, kettle fryers, and pressure fryers), electric and gas conveyor pizza ovens, electric and gas tilting skillets (braising pans), and electric and gas rotisseries.
(31) Insert the definition for NFPA 70 to read as follows: NFPA 70, National Electrical Code means the Indiana Electrical Code (675 IAC 17).
(32) Amend the definition of OCCUPANCY to read as follows: OCCUPANCY CLASSIFICATION. Occupancy classification shall be as specified in the Building Code in effect at the time of construction, alteration, or change of occupancy.
(33) Insert the definition for PLUMBING CODE to read as follows: PLUMBING CODE means the Indiana Plumbing Code.
(34) Insert the definition for PUSH-FIT JOINTS to read as follows: PUSH-FIT JOINTS. A type of mechanical joint consisting of elastometric seals and corrosion resistant tube grippers. Such joints are permanent or removable depending on the design.
(35) Insert the definition for QUALIFIED INDIVIDUAL to read as follows: QUALIFIED INDIVIDUAL is a person who has documentation evidencing that he/she successfully completed instruction related to the equipment being installed, serviced, or repaired, and has provided such documentation to the Code Official upon request.
(36) Amend the definition of REGISTERED DESIGN PROFESSIONAL to read as follows: REGISTERED DESIGN PROFESSIONAL. An architect who is registered under IC 25-4 or professional engineer registered under IC 25-31. If a registered design professional is not required by 675 IAC 12-6 or 675 IAC 15, then it means the owner.

(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-3; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)

675 IAC 18-1.5-4 Chapter 3; general regulations

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 4. (a) In Section 301.2, Energy utilization, delete "all structures" and insert "all Class 1 structures".

(b) In Section 301.4, Listed and labeled, delete "in accordance with Section 105".

(c) Delete Section 301.5, Labeling.

(d) In item 4 of Section 301.6, Information, delete "approval" and insert "acceptance".

(e) Delete Section 301.13, Flood hazard, and substitute "See local ordinance".

(f) Delete Section 301.14, Rodent proofing.

(g) In Section 303.5, insert ", water heaters" after "furnaces".

(h) Amend Section 304.1, General, to read as follows: Equipment and appliances shall be installed in accordance with the conditions of the listing, the manufacturer's installation instructions, and this code unless otherwise approved.

(i) In Section 304.5, delete "fueling" and insert "fuel".

(j) In Section 306.1, delete the entire text and substitute as follows: Access for maintenance and replacement. Appliances shall be accessible for inspection, service, repair, and replacement appliances, venting systems or any other piping or ducts not connected to the appliance being inspected, serviced, repaired, or replaced. A level working space at least 30 inches deep and 30 inches wide (762 mm by 762 mm) shall be provided in front of the control side to service an appliance.

(k) In Section 306.5, insert the following text at the end of the first paragraph: Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

(l) In Section 306.5, insert the following text at the end of item 6: Landing dimensions shall be not less than 18" and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.

(m) In Section 306.5.1, amend to read as follows: 306.5.1 Sloped roofs. Where appliances, equipment, fans, or other components that require service are installed on a roof having a slope of three units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a level platform shall be provided on each side of the appliance or equipment to which access is required for service, repair, or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1,067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere, and shall comply with the loading requirements for guards specified in the International Building Code. Access shall not require walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Where access involves obstructions greater than 30 inches in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or stairs installed in accordance with the requirements specified in the International Building Code in the path of travel to and from appliances, fans, or equipment requiring service.

(n) In Section 307.2.1, insert the following text after the first sentence: Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

(o) In Section 307.2.2, insert the following text after the second sentence: Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the Indiana Plumbing Code (675 IAC 16) relative to the material type.

(p) In Section 307.2.2, delete "an approved method. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope" and insert "Table 307.2.2".

(q) Insert Table 307.2.2 to read as follows:

TABLE 307.2.2
CONDENSATE DRAIN SIZING

EQUIPMENT CAPACITY	MINIMUM CONDENSATE PIPE DIAMETER
Up to 20 tons (70.3 kw) of refrigeration	¾ inch (19 mm)
Over 20 tons (70.3 kw) to 40 tons (141 kw) of refrigeration	1 inch (25 mm)
Over 40 tons (141 kw) to 90 tons (317 kw) of refrigeration	1¼ inch (32 mm)

Over 90 tons (317 kw) to 125 tons (440 kw) of refrigeration	1½ inch (38 mm)
Over 125 tons (440 kw) to 250 tons (879 kw) of refrigeration	2 inch (51 mm)

(r) In Section 307.2.3, delete, in item 1, "0.0276-inch" and insert "24 gage (nominal 0.0276)".

(s) In Section 307.2.3.1, amend text to read as follows: 307.2.3.1 Water level monitoring devices. On down-flow units and all other coils that have no secondary drain or provisions to install a secondary or auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the equipment served in the event that the primary drain becomes restricted. Devices installed in the drain line shall not be permitted.

(t) Insert Section 307.2.3.2 to read as follows: 307.2.3.2 Appliance, equipment, and insulation in pans. Where appliances, equipment, or insulation are subject to water damage when auxiliary drain pans fill, such portions of the appliances, equipment, and insulation shall be installed above the flood level rim of the pan. Supports located inside of the pan to support the appliance or equipment shall be water resistant and approved. *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-4; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-5 Chapter 4; ventilation

Authority: IC 22-13-2-2

Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 5. (a) Delete Section 401.6, Contaminant sources.

(b) In Section 401.1, amend to read as follows: 401.1 Scope. This chapter shall govern the ventilation of spaces within a building intended to be occupied. Mechanical exhaust systems, including exhaust systems serving clothes dryers and cooking appliances; hazardous exhaust systems; dust, stock, and refuse conveyor systems; subslab soil exhaust systems; smoke control systems; energy recover ventilation systems; and other systems specified in Section 502 shall comply with Chapter 5.

(c) In Section 401.4.1, delete "The exhaust from a bathroom or kitchen in" and insert "Environmental air exhausted from".

(d) Delete Section 406.1, General, and insert the following: Uninhabited spaces, such as crawl spaces and attics, shall be provided with natural ventilation openings as required by the Indiana Building Code (675 IAC 13).

(e) In Section 406.1, delete "be automatically controlled to operate when the relative humidity in the space served exceeds 60 percent" and insert "operate continuously". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-5; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-6 Chapter 5; exhaust systems

Authority: IC 22-13-2-2

Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 6. (a) In Section 501.2.1, amend items 3 and 4 to read as follows:

3. Environmental air duct exhaust terminations shall comply with Section 401.4.

   Exception: Exhaust from bathrooms and kitchens in residential dwellings complying with Section 401.4.1.

4. For specific systems see the following sections:

   4.1 Clothes dryer exhaust, Section 504.4;

   4.2 Kitchen hoods and other kitchen exhaust equipment, Sections 506.3.12, 506.4, and 506.5;

   4.3 Dust, stock, and refuse conveying systems, Section 511.2;

   4.4 Subslab soil exhaust systems, Section 512.4; and

   4.5 Smoke control systems, Section 513.10.3.

(b) In Section 504.6.1, insert, after the last sentence in the exception, "Where exhaust ducts are installed in concealed locations, the developed length of the exhaust duct system shall be indicated by permanent labels or tags installed in an observable location.".

(c) In Section 505.1, Exception 2, insert "and fittings" after "pipe".

(d) Insert Section 505.2 to read as follows: 505.2 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cfm shall be provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

(e) Amend Section 506.3.1.1 exception to read as follows: Exception: Factory-built commercial kitchen grease ducts listed and labeled in accordance with UL 1978 and installed in accordance with Section 304.1.

(f) Amend Section 506.3.6 exception to read as follows: Exception: Factory-built commercial kitchen grease ducts listed and labeled in accordance with UL 1978 and listed and labeled exhaust equipment installed in accordance with Section 304.1.

(g) Delete Section 506.3.10 and substitute as follows: 506.3.10 Grease duct enclosure. A grease duct serving a Type I hood that penetrates a ceiling, wall, or floor shall be enclosed from the point of penetration to the outlet terminal. A duct shall penetrate exterior walls only at locations where unprotected openings are permitted by the International Building Code. The duct enclosure shall serve a single grease exhaust duct system and shall not contain any other ducts, piping, wiring, or systems.

(h) Insert Section 506.3.10.1 as follows: 506.3.10.1. Grease duct protection. Where the surface of the duct is continuously covered on all sides with a grease duct protection system from the point at which the duct penetrates a ceiling, wall, or floor to the outlet terminal, such grease duct protection systems shall be a classified and labeled material, system, method of construction, or product specifically evaluated for such purpose and approved by the code official.

Exceptions:

1. Prefabricated grease duct enclosure assemblies, which incorporate protection on all sides from the point at which the duct penetrates a ceiling, wall, or floor to the outlet terminal with a classified and labeled prefabricated system specifically evaluated for such purposes in accordance with UL 2221.
2. Ducts enclosed in accordance with the International Building Code requirements for shaft construction, provided such duct enclosures are sealed around the duct at the point of penetration and vented to the outside of the building through the use of weather-protected openings. Clearance from the duct to the interior surface of enclosures of combustible construction shall be not less than 18 inches (457 mm). Clearance from the duct to the interior surface of enclosures of noncombustible construction or gypsum wallboard attached to noncombustible structures shall be not less than 6 inches (152 mm).

(i) Insert Section 506.3.10.2 as follows: 506.3.10.2. Grease duct penetrations. Duct penetrations shall be protected with a through-penetration firestop system classified in accordance with ASTM E814 and having an "F" and "T" rating equal to the fire-resistance rating of the assembly being penetrated.

(j) Insert Section 506.3.10.3 as follows: 506.3.10.3. Protection of duct wrap systems. Exposed duct wrap systems shall be protected where subject to physical damage.

(k) Insert Section 506.3.10.4 as follows: 506.3.10.4. Penetrations of nonfire-resistance-rated assemblies. A duct enclosure shall not be required for a grease duct that penetrates only a nonfire-resistance-rated roof/ceiling assembly.

(l) Amend Section 506.3.12.3 by deleting "and air intake openings into any building" and inserting at the end of the paragraph "Exhaust outlets shall be located not less than 10 feet (3,048 mm) horizontally from or not less than 3 feet (910 mm) above air intake openings into any building. Exhaust outlet terminations shall not be directed towards nor impinge on any structure.".

(m) Amend Section 507.2 by deleting "and 507.2.2" and inserting ", 507.2.2, and Table 507.2" after "507.2.1"; and inserting an exception to read as follows: Exception: This section does not apply to dwelling units in multi-family dwellings.

(n) Insert Table 507.2 as follows:

Table 507.2
Exhaust Hoods - When Required
TYPE OF COOKING

COMMERCIAL GRADE APPLIANCE	FREQUENCY	WARMING	COOKING [a, b]	FRYING [d]	DISHWASHING[a]
Restaurants, schools, hospitals, nursing homes, and other similar facilities.	once a week or less	N/A	Type II or Type I [c]	Type I	Type II
	more than once a week	N/A	Type II or Type I [c]	Type I	Type II
Churches and day cares.	once a week or less	N/A	N/A	Type I	Type II
	more than once a week	N/A	Type II or Type I [c]	Type I	Type II

RESIDENTIAL GRADE APPLIANCE					
Restaurants, schools, hospitals, nursing homes, and other similar facilities.	once a week or less	N/A	Type II or Type I [c]	Type I	N/A
	more than once a week	N/A	Type II or Type I [c]	Type I	N/A
Churches, day cares, and breakrooms.	once a week or less	N/A	N/A	N/A	N/A
	more than once a week	N/A	Type II or Type I [c]	Type I	N/A

N/A Not applicable

[a]A Type II hood is not required where the additional heat, steam, and products of combustion are accounted for in the design of the HVAC system (See Section 507.2.2.).

[b]Cooking that produces steam, fumes, smoke, or odors.

[c]Cooking that produces grease or grease-laden vapors.

[d]Frying that produces grease or grease-laden vapors.

(o) Amend Section 507.2.1 by inserting "grease-laden vapors," between "grease," and "or".

(p) Delete Exception 4 in Section 507.2.2 and substitute as follows: 4. A Type II hood is not required for countertop electrically heated appliances such as: toasters, steam tables, popcorn poppers, hot dog cookers, coffee makers, rice cookers, egg cookers, and holding/warming ovens. The additional heat and moisture loads generated by such appliances shall be accounted for in the design of the HVAC system.

(q) Amend Section 507.2.2 by inserting Exception 5 as follows: 5. A Type II hood is not required where the additional heat, steam, and products of combustion are accounted for in the design of the HVAC system.

(r) Delete Section 507.2.3 without substitution.

(s) Amend Section 508.1 by deleting "exhaust and makeup air systems shall be electrically interlocked to ensure that makeup air is provided whenever the exhaust system is in operation." and substituting "makeup air system shall be automatically controlled to start and operate simultaneously with the exhaust system.".

(t) Amend Section 508.2 by inserting an exception as follows: Exception: Compensating hoods with makeup air supplied only from front face discharge and side face discharge openings shall not be required to be labeled with the maximum makeup airflow.

(u) Amend Section 509 by inserting the following:

509.2 Approved fire-extinguishing equipment shall be provided for the protection of all Type I hoods. Portable fire extinguishers shall be provided in the kitchen for the protection of the cooking equipment.

509.3 Approved fire-extinguishing equipment shall be provided to protect cooking appliances, such as deep fat fryers, griddles, upright broilers, char broilers, grease-burning char broilers, range tops, and grills. Protection shall also be provided for the enclosed plenum space within the hood above the filters and in the exhaust ducts serving the hood.

509.4 See Section 903.2.12.2 of the Indiana Building Code.

(v) Amend Section 510.4 by deleting "Contaminated air shall not be recirculated to occupied areas, unless

the contaminants have been removed. Air contaminated with explosives or flammable vapors, fumes or dusts; flammable, highly toxic or toxic gases; or radioactive material shall not be recirculated." and substituting "Contaminated air shall not be recirculated to occupiable areas. Air containing explosive or flammable vapors, fumes or dusts; flammable, highly toxic or toxic gases; or radioactive material shall be considered to be contaminated.". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-6; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-7 Chapter 6; duct systems

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 7. (a) Amend Section 602.2.1, Exception 5, to read as follows: 5. Combustible materials fully enclosed within continuous noncombustible raceways or enclosures, approved gypsum board assemblies or within materials listed and labeled for such application.

(b) Insert Section 603.4.1 to read as follows: 603.4.1 Minimum fasteners. Round metallic ducts shall be mechanically fastened by means of at least three sheet metal screws or rivets spaced in approximately uniform intervals along the circumference of the duct.

(c) Amend Section 603.9 by inserting ", liquid sealants," after "mastic-plus-embedded-fabric systems".

(d) Delete Exception 2 and replace with ""Smoke dampers shall not be required in duct penetrations of smoke barriers in fully ducted heating, ventilating, and air conditioning systems" in smoke compartments protected throughout with quick response sprinklers.".

(e) Delete in third line the words "and smoke" without substitution. Delete Exception 2 without substitution. Delete "3" and replace with "2". Delete "4" and replace with "3". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-7; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-8 Chapter 8; chimneys and vents

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 8. (a) Delete Section 801.20 and substitute as follows: 801.20 Plastic vent joints. Plastic pipe and fittings used to vent appliances shall be installed in accordance with the appliance manufacturer's installation instructions.

(b) In TABLE 803.10.6, CONNECTOR CLEARANCES TO COMBUSTIBLES, amend, at the bottom of the MINIMUM CLEARANCE (inches) column, "(As determined by the code official)" to read "(as approved by the code official)". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-8; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-9 Chapter 9; specific appliances, fireplaces, and solid fuel-burning equipment

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 9. (a) Amend the last sentence of Section 901.1, Scope, to read as follows: The approval, design, installation, construction, and alteration of gas-fired appliances that are within the scope of Section 101.2 shall be regulated by the Indiana Fuel Gas Code (675 IAC 25).

(b) Amend the title to Section 914, Sauna heaters, to read as follows: Sauna heaters within the scope of Section 101.2.

(c) Amend Section 915.1, General, to read as follows: The installation of liquid-fueled stationary internal combustion engines and gas turbines, including storage and piping that are within the scope of Section 101.2, shall meet the requirements of NFPA 37 (675 IAC 28-1-15).

(d) Amend Section 916.1, General, to read as follows: Pool and spa heaters that are within the scope of Section 101.2 shall be installed in accordance with the manufacturer's instructions. Oil-fired pool heaters shall be

tested in accordance with UL 726.

(e) Amend Section 917.1 to read as follows: Cooking appliances that are within the scope of Section 101.2 and that are designed for permanent installation and are part of a Class 1 structure shall be listed, labeled, and installed in accordance with the manufacturer's installation instructions. Oil-burning stoves shall be listed and labeled in accordance with UL 896. Solid fuel-fired ovens shall be listed and labeled in accordance with UL 2162.

(f) Amend the second line of Section 923.1, General, to read as follows: "kilns that are within the scope of Section 101.2 and that are used for ceramics, have a maximum interior vol-".

(g) Amend the first line of Section 924.1, General, to read as follows: "Stationary fuel cell power plants that are within the scope of Section 101.2 and having a". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-9; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-10 Chapter 10; boilers, water heaters, and pressure vessels

Authority: IC 22-13-2-2

Affected: IC 22-12-7; IC 22-13-2-9; IC 22-14; IC 36-8-17

Sec. 10. (a) Amend Section 1001.1, Scope, as follows:

(1) Amend the first sentence of Section 1001.1, Scope, to read as follows: This chapter shall govern the installation and alteration of boilers, water heaters, and pressure vessels that are within the scope of Section 101.2.

(2) Insert Exception 8 to read as follows: 8. Boilers, water heaters, and pressure vessels regulated by the Boiler and Pressure Vessel Board (680 IAC) under IC 22-13-2-9 are not regulated by this code.

(b) Amend Section 1003.3, Welding, by inserting "approved" before "nationally". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-10; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-11 Chapter 11; refrigeration

Authority: IC 22-13-2-2

Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 11. (a) Amend Section 1101.6, General, to read as follows: Refrigeration systems within the scope of Section 101.2 shall comply with the requirements of this code and, except as modified by this code, ASHRAE 15. Ammonia-refrigerating systems shall comply with this code and, except as modified by this code, ASHRAE 15.

(b) Amend Section 1102.2.2, Purity, to read as follows: Refrigerants used in refrigeration systems shall be new, recovered, or reclaimed refrigerants in accordance with Section 1102.2.2.1, Section 1102.2.2.2, or Section 1102.2.2.3. The installer shall furnish to the owner or the owner's representative a signed declaration that the refrigerant used meets the requirements of Section 1102.2.2.1, Section 1102.2.2.2, or Section 1102.2.2.3.

(c) In Table 1103.1, amend row R-717 to read as follows:

R-717	NH3	Ammonia	CG,C,F,OHH	B2	3-3-0[d]	0.014	320	0.22	25

(d) In Table 1103.1, insert, after row R-417A, the following rows:

R-418A	zeotrope	R-290/22/152a (1.5/96.0/2.5)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-419A	zeotrope	R-125/134a/E170 (77.0/19.0/4.0)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-420A	zeotrope	R-134a/142b (88.0/12.0)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-421A	zeotrope	R-125/134a (58.0/42.0)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-421B	zeotrope	R-125/134a (85.0/15.0)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-	zeotrope	R-125/134a/600a (85.1/11.5/3.4)	CG,OHH	A1	2-0-0[c]	---	---	---	---

422A									
R-422B	zeotrope	R-125/134a/600a (55.0/42.0/3.0)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-422C	zeotrope	R-125/134a/600a (82.0/15.0/3.0)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-422C	zeotrope	R-125/134a/600a (65.1/31.5/3.4)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-423A	zeotrope	R-134a/227ea (52.5/47.5)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-424A	zeotrope	R-125/134a/600a/600/601a (50.5/57.0/0.9/1.0/0.6)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-425A	zeotrope	R-32/134a/227ca (18.5/69.5/12.0)	CG,OHH	A1	2-0-0[c]	---	---	---	---
R-426A	zeotrope	R-125/134a/600a/601a (5.1/93.0/1.3/0.6)	CG,OHH	A1	2-0-0[c]	---	---	---	---

(e) Amend the third line of Section 1109.1, Testing required, to read as follows: "manufacturer's instructions and local ordinance:". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-11; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-12 Chapter 12; hydronic piping

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 12. (a) Insert Section 1203.8.2 to read as follows: 1203.8.2 Push-fit joints. Push-fit joints shall be installed in accordance with the manufacturer's instructions.

(b) Insert Section 1203.16 to read as follows: 1203.16 Mechanical and compression sleeve joints. Mechanical and compression sleeve joints shall be installed in accordance with the manufacturer's instructions.

(c) Delete Section 1206.1.1 without substitution.

(d) Amend Section 1206.2 by inserting an exception to read as follows: Exception: The buried portions of systems embedded underground or under floors.

(e) Delete Section 1206.9.1, Flood hazard, and insert "See local ordinance.". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-12; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-13 Chapter 13; fuel oil piping and storage

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 13. Delete Section 1305.2.1, Flood hazard, and insert "See local ordinance.". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-13; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-14 Chapter 14; solar systems

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 14. Amend Section 1401.1, Scope, to read as follows: This chapter shall govern the construction, installation, and alteration of systems, equipment, and appliances intended to utilize solar energy for space heating or cooling, or domestic hot water heating. *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-14; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*

675 IAC 18-1.5-15 Chapter 15; referenced standards

Authority: IC 22-13-2-2
Affected: IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17

Sec. 15. (a) Amend, in the third sentence of Chapter 15, "Section 102.8" to "Section 101.4".

(b) Delete the following standards: NFPA 37-02, NFPA 58-04, and NFPA 72-03.

(c) Amend Chapter 15 by inserting ", 506.3.10.2" as a "Referenced in code section number" for standard "ASTM E814".

(d) Amend Chapter 15 by inserting "506.3.1.1," and ", 506.3.6" as "Referenced in code section number" for standard "UL 1978".

(e) Amend Chapter 15 by inserting ", 506.3.10.1" as a "Referenced in code section number" for standard "UL 2221". *(Fire Prevention and Building Safety Commission; 675 IAC 18-1.5-15; filed Mar 18, 2008, 2:22 p.m.: 20080423-IR-675070477FRA, eff 90 days after filing with the Publisher)*