

**Recommended Amendments to the
1996 International Mechanical Code and the
1997 Supplement to the International Mechanical Code**
(Requires the adoption of two books.)

****Section 201.3; changed to read as follows:**

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the building, electrical, fire prevention or plumbing codes, such terms shall have meanings ascribed to them as in those codes.

REASON: Added since the electrical code is referred to in this code.

****Section 202; the definitions of “Code Official” and “Hazardous Location” are changed and new definitions are added to read as follows:**

BUILDING CODE shall mean the Building Code as adopted by this jurisdiction.

CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative. For the purpose of this code, the Code Official shall be the {fill in the applicable official per city}.

ELECTRICAL CODE shall mean the National Electrical Code as adopted by this jurisdiction. For the purpose of this code, all references to NFPA 70 shall be assumed to mean the electrical code as defined herein.

FIRE PREVENTION CODE (FIRE CODE) shall mean the Fire Code as adopted by this jurisdiction.

HAZARDOUS LOCATION. As used in this code, any location considered to be a fire hazard for flammable vapors, dust, combustible fibers or other highly combustible substances. The location is not necessarily categorized in the building code as a high-hazard use group classification.

MECHANICAL CODE shall mean this code as adopted by this jurisdiction.

PLUMBING CODE shall mean the Plumbing Code as adopted by this jurisdiction.

REASON: To add clarity and define terms undefined in the code.

****Section 301.1; changed to read as follows:**

301.1 Scope. This chapter shall govern the approval and installation of all equipment and appliances that comprise parts of the building mechanical systems regulated by this code ~~in accordance with Section 101.2.~~

REASON: Administrative issues are left to each jurisdiction to formulate.

****Section 301.6; changed to read as follows:**

301.6 Conflicts. Where conflicts between this code and the conditions of listing or the manufacturer's installation instructions occur, the provisions of this code shall apply unless in the opinion of the Code Official the conditions of listing or the manufacturer's installation instructions when taken as a whole provide a higher level of protection.

REASON: This change gives the code official more flexibility.

****Sections 302.2, 302.3, 302.3.1 and 302.3.1.1; delete and replace with the following:**

302.2 Cutting, notching and boring holes. All cutting, notching and boring of wood framing members shall be in accordance with the Building Code.

REASON: These items are more appropriately addressed by the building code.

****Section 304.7; changed to read as follows:**

304.7 Clearances from grade. Equipment installed at grade level shall be supported on a level concrete slab or other approved material extending above adjoining grade a minimum of 3 inches (76 mm) or it shall be suspended a minimum of 6 inches (152 mm) above adjoining grade.

REASON: To be more consistent with current local practice in the region.

****Section 306.3.1; changed to read as follows:**

306.3.1 Electrical requirements: A lighting fixture controlled by a switch located at the required passageway opening and a receptacle outlet shall be provided at or near the equipment location in accordance with NFPA 70. Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

REASON: To provide protection of wiring not addressed in the NEC.

****Section 306.4.1; changed to read as follows:**

306.4.1 Electrical requirements: A lighting fixture controlled by a switch located at the required passageway opening and a receptacle outlet shall be provided at or near the equipment location in accordance with NFPA 70. Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

REASON: To provide protection of wiring not addressed in the NEC.

****Section 306.5; changed to read as follows:**

306.5 Equipment on roofs or elevated structures. Where equipment and appliances requiring access are installed on roofs or elevated structures at a height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access, ~~the extent of which shall be from Permanent exterior ladders providing roof access need not extend closer than 8 feet (2438 mm) to the finish grade or floor level below and shall extend to the equipment's level service space. Such access shall . . . {bulk of section to read the same}. . . on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope).~~

A receptacle outlet shall be provided at or near the equipment location in accordance with the Electrical Code. Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

REASON: To provide a better means of safe access at the same time addressing building security concerns. Also, to provide access to electricity for maintenance of equipment.

****Section 306.6; add a second paragraph to read as follows:**

A receptacle outlet shall be provided at or near the equipment location in accordance with the Electrical Code. Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

REASON: To provide access to electricity for maintenance of equipment.

****Section 306.6.1 added to read as follows:**

306.6.1 Catwalk. On roofs having slopes greater than 4 in 12, a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof access to the working platform at the appliance.

REASON: Item not addressed by the code. To provide a safe means of access.

****Section 307.2.2; add a second paragraph to read as follows:**

Condensate waste pipes from air-cooling coils shall be sized in accordance with equipment capacity as follows:

<u>Equipment Capacity in tons of refrigeration</u>	<u>Condensate Pipe Minimum Inside Diameter</u>
<u>Up to 20 tons</u>	<u>3/4 inch</u>
<u>Over 20 to 40 tons</u>	<u>1 inch</u>
<u>Over 40 to 90 tons</u>	<u>1 1/4 inch</u>
<u>Over 90 to 125 tons</u>	<u>1 1/2 inch</u>

Over 125 to 250 tons	2 inch
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The size of condensate waste pipes may be for one unit or a combination of units, or as recommended by the manufacturer. The capacity of waste pipes assumes a 1/8-inch-per-foot slope, with the pipe running three-quarters full.

REASON: To provide pipe sizing requirements not found in the code.

**Any section or table not reprinted herein, shall be assumed to be deleted. Chapter 4 is changed to only read as follows:*

CHAPTER 4 VENTILATION

SECTION 401 - GENERAL

401.1 Scope. This chapter shall govern the ventilation of spaces within a building intended to be occupied. This chapter does not govern the requirements for smoke control systems. Should any conflict occur between this chapter and the Building Code, the Building Code shall take precedence.

401.2 Ventilation required. Every occupied space shall be ventilated by natural means ~~in accordance with Section 402~~ or by mechanical means in accordance with the Building Code Section 403.

401.3 When required. Ventilation shall be provided during the periods that the room or space is occupied.

401.4 Vestibule ventilation. Vestibule ventilation for smokeproof enclosures shall be in accordance with the building code.

401.7 Opening location. Outside air exhaust and intake openings shall be located a minimum of 10 feet (3048 mm) from lot lines or buildings on the same lot. Where openings front on a street or public way, the distance shall be measured to the centerline of the street or public way.

Exception: Use Group R-3.

401.7.1 Intake openings. Mechanical and gravity outside air intake openings shall be located a minimum of 10 feet (3048 mm) from any hazardous or noxious containment, such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks, except as otherwise specified in this code. Where a source of contaminant is located within 10 feet (3048 mm) of an intake opening, such opening shall be located a minimum of ~~2~~ 3 feet (~~610~~ 915 mm) below the contaminant source.

401.7.2 Exhaust openings. Outside exhaust openings shall be located so as not to create a nuisance. Exhaust air shall not be directed onto walkways. For Type I and II hood exhaust outlets, see Sections 506.17 and 506.18.

401.8 Outside opening protection. Air exhaust and intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles having a minimum opening size of 1/4 inch

(6.4 mm) and a maximum opening size of ½ inch (12.7 mm), in any dimension. Openings shall be protected against local weather conditions. Outdoor air exhaust and intake openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with the building code.

401.9 Contaminant sources. Stationary local sources producing air-borne particulates, heat, odors, fumes, spray, vapors, smoke or gases in such quantities as to be irritating or injurious to health shall be provided with an exhaust system in accordance with Chapter 5 or a means of collection and removal of the contaminants. Exhaust required by this section shall discharge directly to an approved location at the exterior of the building.

SECTION 403 - MECHANICAL VENTILATION

403.1 Ventilation system. Mechanical ventilation shall be provided by a method of supply air and return or exhaust air. The amount of supply air shall be approximately equal to the amount of return and exhaust air. The system shall not be prohibited from producing a negative or positive pressure. The system to convey the ventilation air shall be designed and installed in accordance with Chapter 6.

Ventilation supply systems shall be designed to deliver the required rate of supply air to the zone within the occupied space between 3 inches (76 mm) and 72 inches (1829 mm) above the floor and more than 2 feet (610 mm) from the enclosing walls.

403.2.1 Recirculation of air. The amount of outside air required by the Building Code Section 403.3 shall not be recirculated. Air in excess of the outside air ~~that~~ required by the Building Code Section 403.3 shall not be prohibited from being recirculated as a component of supply air to building spaces, except that:

1. Ventilation air shall not be recirculated from one dwelling to another or to dissimilar occupancies.
2. Supply air to a swimming pool and associated deck areas shall not be recirculated unless such air is dehumidified to maintain the relative humidity of the area at 60 percent or less and such recirculation is in accordance with Section 401.9. Air from this area shall not be recirculated to other spaces.

REASON: To make these provisions compatible with the building code.

****Section 501; add a second paragraph to read as follows:**

Where differences occur between the provisions of this chapter and the building or fire codes, the provisions of the building or fire codes shall apply.

REASON: To provide clarity on which codes govern when conflicts arise.

****Section 502.4; changed to read as follows:**

502.4 Spray-painting and dipping rooms. Rooms or booths utilized for spray painting or dipping shall have a mechanical exhaust system that complies with the fire prevention code and ~~NFPA 33~~ Building Code for spray painting or NFPA 34 for dipping. The exhaust system shall have automatic

controls to ensure its operation while spray painting or dipping is being conducted.

REASON: To require compliance with applicable provisions in the building code instead of NFPA documents, which may be difficult to access and enforce.

****Section 502.7; changed to read as follows:**

502.7 LP-gas distribution facilities. LP-gas distribution facilities shall be ventilated in accordance with ~~NFPA 58~~ the applicable provisions of the Fire Code, Building Code and this code.

REASON: To require compliance with applicable provisions in the building and fire code instead of NFPA documents, which may be difficult to access and enforce.

****Section 502.10; changed to read as follows:**

502.10 Public garages. Mechanical exhaust systems for public garages, ~~as required in Chapter 4,~~ shall ~~operate continuously~~ or shall operate in accordance with ~~Section 403.5~~ the Building Code.

REASON: These items are more appropriately addressed by the building code.

****Section 502.12; changed to read as follows:**

502.12 Tire rebuilding or recapping. Each room where rubber cement is used or mixed, or where flammable or combustible solvents are applied, shall be ventilated in accordance with the applicable provisions of ~~NFPA 91~~ the Fire Code, Building Code and this code.

REASON: To require compliance with applicable provisions in the building, mechanical, and fire code instead of NFPA documents, which may be difficult to access.

****Section 502.13; changed to read as follows:**

502.13 Specific rooms. Specific rooms, including bathrooms, locker rooms, smoking lounges and toilet rooms, shall be exhausted in accordance with the ventilation requirements of ~~Chapter 4~~ the Building Code and this code.

REASON: This item is more appropriately addressed by the building code.

****Section 504.6; changed to read as follows:**

504.6 Domestic clothes dryer ducts. Ducts shall have a smooth interior finish with joints running in the direction of the airflow. The maximum length shall not exceed 25 feet (7620 mm) from the dryer location to the outlet terminal with not more than two bends. When extra bends are installed, the

maximum length of the duct shall be reduced 2 ½ feet (762 mm) for each 45-degree (0.79 rad) bend and 5 feet (1524 mm) for each 90-degree (1.6 rad) bend that occur after the first two, measuring in the direction of airflow. The exhaust duct shall be a minimum nominal size of 4 inches (102 mm) in diameter. The size of duct shall not be reduced along it's developed length nor at the point of termination.

The entire exhaust system shall be supported and secured in place. Flexible duct connectors used in connection with domestic dryer exhausts shall be ~~metallic~~, not more than 6 feet (1829 mm) in length and an approved type. Flexible duct connectors shall not be concealed within construction.

REASON: To make more consistent with regional practice. Dryer technology has improved to the point where they should be capable of handling this.

****Section 505.1; add an exception to read as follows:**

Exception: Ducts for domestic kitchen downdraft grill-range ventilation installed under a concrete slab floor may be of approved Scheduled 40 PVC provided:

1. The under-floor trench in which the duct is installed shall be completely backfilled with sand or gravel.
2. Not more than 1 inch (25.4 mm) of 6 inch diameter (152 mm) PVC coupling may protrude above the concrete floor surface.
3. PVC pipe joints shall be solvent cemented to provided an air- and grease-tight duct.
4. The duct shall terminate above grade outside the building and shall be equipped with a backdraft damper.

REASON: To allow continued use of PVC ducts in this region.

****Section 506.12; changed to read as follows:**

506.12 Duct enclosure. A grease duct serving a Type I hood that penetrates a ceiling, wall or floor shall be enclosed ...*{bulk of paragraph unchanged}*... through the use of weather-protected openings. The enclosure shall be separated from the duct by a minimum of ~~6~~ 3 inches (~~152~~ 76 mm) and a maximum of 12 inches (305 mm) and shall serve a single grease exhaust duct system.

Exception: The shaft enclosure provisions of Section 506.12 shall not be required where a duct penetration is protected with a through-penetration protection system tested in accordance with ~~ASTM E814~~ the Building Code having an "F" and "T" rating equal ...*{remainder of section to remain unchanged}*... construction or product.

REASON: To remain consistent with common practice in this region.

****Section 508.1; changed to read as follows:**

508.1 Makeup air. Makeup air shall be supplied during the operation of the kitchen exhaust system. The exhaust and makeup air systems shall be connected by an electrical interlocking switch to insure that makeup air is provided whenever the exhaust system is in operation. The amount of makeup air supplied shall be approximately equal to the amount of exhaust air. The makeup air shall not reduce the

effectiveness of the exhaust system. Makeup air shall be provided by gravity or mechanical means or both. Compensating hoods shall extract at least 20 percent of their required exhaust airflow from the kitchen area.

Exception: This section shall not apply to dwelling units.

REASON: To remain consistent with common practice in this region.

****Section 509.1; change the exception to read as follows:**

Exception: Steam kettles, steam tables and equipment that as used does not create grease-laden vapors are not required to be protected by an automatic fire-extinguishing system.

REASON: Improper use of equipment can be hazardous and should be monitored.

****Section 509.2; changed to read as follows:**

509.2 Type of system. The automatic fire suppression system shall be of a type recognized for protection of commercial cooking ... *{bulk of paragraph unchanged}*... operations. The system shall be installed in accordance with this code, its listing and the manufacturer's installation instructions. Other Automatic fire suppression systems shall be of an approved design and shall be one of the following types shall be installed in accordance with the referenced standard indicated.:

3. Carbon-dioxide extinguishing system, ~~NFPA 12.~~
4. Automatic sprinkler system, ~~NFPA 13.~~
5. Foam-water sprinkler system or foam-water spray systems, ~~NFPA 16.~~
6. Dry-chemical extinguishing systems, ~~NFPA 17.~~
7. Wet-chemical extinguishing systems, ~~NFPA 17A.~~

REASON: NFPA Standards are deleted to eliminate the need for the code official to enforce them.

****Section 510.1; changed to read as follows:**

510.1 General. This section shall govern the design and construction of duct systems for hazardous exhaust and shall determine ... *{bulk of paragraph unchanged}* ... posing a health hazard, such as toxic or corrosive materials. For the purposes of this section, the health-hazard rating of materials shall be as specified in NFPA 704 or other approved standards.

REASON: Design is covered in the building code.

****Section 510.6; changed to read as follows:**

510.6 Penetrations. Penetrations of structural elements by a hazardous exhaust system shall conform to Sections 510.6.1 through 510.6.4.

510.6.1 Floors. Hazardous exhaust systems that penetrate a floor/ceiling assembly shall be enclosed in a fire-resistance-rated shaft constructed in accordance with the building code.

510.6.2 Wall assemblies. Hazardous exhaust duct systems that penetrate fire-resistance-rated wall

assemblies shall be enclosed in fire-resistance-rated construction from the point of penetration to the outlet terminal, ~~except where the interior of the duct is equipped with an approved automatic fire suppression system.~~ Ducts shall be enclosed in accordance with the building code requirements for shaft construction and such enclosure shall have a minimum fire-resistance-rating of not less than the highest fire-resistance-rated wall assembly penetrated.

510.6.3 Fire walls. Ducts shall not penetrate a any area separation fire wall or any four hour rated occupancy separation fire wall as defined in the Building Code.

510.6.4 Fire dampers. Fire dampers are not ~~required~~ permitted at penetrations of fire-resistance-rated assemblies. An approved automatic fire suppression system shall be installed in the duct at the point of penetration of the assembly as noted in Section 510.7.

REASON: Design is covered in the building code.

****Section 510.7; changed to read as follows:**

510.7 Suppression required. Ducts shall be protected with an approved automatic fire suppression system, installed in accordance with the building code, at the entrance point of the duct and at the penetration point of fire-rated-assemblies as noted in Section 510.6.4.

Exception: An approved automatic fire suppression system shall not be required in ducts conveying materials, fumes, mists and vapors that are nonflammable and noncombustible.

REASON: Design is covered in the building code.

****Section 510.8.3; changed to read as follows:**

510.8.3 Explosion relief. Systems exhausting potentially explosive mixtures shall be protected with an approved explosion relief system or by an approved explosion prevention system ~~designed and installed in accordance with NFPA-69.~~ An explosion relief system shall be designed to minimize the structural and mechanical damage resulting from an explosion or deflagration within the exhaust system. An explosion prevention system shall be designed to prevent an explosion or deflagration from occurring.

REASON: NFPA Standards are deleted to eliminate the need for the code official to enforce them.

****Section 601.1; delete the exception.**

REASON: NFPA Standards are deleted to eliminate the need for the code official to enforce them.

****Section 603.17; changed to read as follows:**

603.17 Location. Ducts shall not be installed in or within 6 4 inches (152 101 mm) of the earth, except where such ducts comply with Section 603.12.

REASON: To remain consistent with common practice in this region.

****Section 604.1; changed to read as follows:**

604.1 General. Duct insulation shall conform to the requirements of Sections 604.2 through 604.11 and Table No. 604.1. Should there be any conflicts between this section and the energy code, when adopted, the energy code shall take precedent.

REASON: Most cities in this region have not adopted an energy code that would have these provisions.

****Table No. 604.1 added to read as follows:**

Table 604.1 - Insulation of Ducts

<u>DUCT LOCATION</u>	<u>INSULATION TYPES MECHANICALLY COOLED</u>	<u>HEATING ZONE¹</u>	<u>INSULATION TYPES HEATING ONLY</u>
<u>On roof on exterior of building</u>	<u>C, V² and W</u>	<u>I</u>	<u>A and W</u>
		<u>II</u>	<u>B and W</u>
		<u>III</u>	<u>C and W</u>
<u>Attics, garages and crawl spaces</u>	<u>A and V²</u>	<u>I</u>	<u>A</u>
		<u>II</u>	<u>A</u>
		<u>III</u>	<u>B</u>
<u>In walls,³ within floor-ceiling spaces³</u>	<u>A and V²</u>	<u>I</u>	<u>A</u>
		<u>II</u>	<u>A</u>
		<u>III</u>	<u>B</u>
<u>Within the conditioned space or in basements; return ducts in air plenums</u>	<u>None required</u>		<u>None required</u>
<u>Cement slab or within ground</u>	<u>None required</u>		<u>None required</u>

NOTE: Where ducts are used for both heating and cooling, the minimum insulation shall be as required for the most restrictive condition.

¹Heating Degree Days:

<u>Zone I</u>	<u>below 4,500 D.D.</u>
<u>Zone II</u>	<u>4,501 to 8,000 D.D.</u>
<u>Zone III</u>	<u>over 8,001 D.D.</u>

²Vapor retarders shall be installed on supply ducts in spaces vented to the outside in geographic areas where the summer dew point temperature based on the 2½ percent column of dry-bulb and mean coincident wet-bulb temperature exceeds 60 degrees F (15.4 degrees C).

³Insulation may be omitted on that portion of a duct which is located within a wall- or a floor-ceiling space where:

^{3.1} Both sides of the space are exposed to conditioned air.

^{3.2} The space is not ventilated.

^{3.3} The space is not used as a return plenum.

^{3.4} The space is not exposed to unconditioned air.

Ceilings which form plenums need not be insulated.

INSULATION TYPES⁴:

A - A material with an installed conductance of 0.48 [2.72 W/(m*K)] or the equivalent thermal resistance of 2.1 [0.367 (m*K)/W].

Example of materials capable of meeting the above requirements:

1-inch (25 mm), 0.60 lb./cu. ft. (9.6 kg/m³) mineral fiber, rock, slag or glass blankets.

½-inch (13 mm), 1.5 to 3 lb./cu. ft. (24 to 48 kg/m³) mineral fiber blanket duct liner.

½-inch (13 mm), 3 to 10 lb./cu. ft. (48 to 160 kg/m³) mineral fiber board.

B - A material with an installed conductance of 0.24 [1.36 W/(m*K)] or the equivalent thermal resistance of 4.2 [0.735 (m*K)/W].

Example of materials capable of meeting the above requirements:

2-inch (51 mm), 0.60 lb./cu. ft. (9.6 kg/m³) mineral fiber, rock, slag or glass blankets.

1-inch (25 mm), 1.5 to 3 lb./cu. ft. (24 to 48 kg/m³) mineral fiber blanket duct liner.

1-inch (25 mm), 3 to 10 lb./cu. ft. (48 to 160 kg/m³) mineral fiber board.

C - A material with an installed conductance of 0.16 [0.9 W/(m*K)] or the equivalent thermal resistance of 6.3 [1.1 (m*K)/W].

Example of materials capable of meeting the above requirements:

3-inch (76 mm), 0.60 lb./cu. ft. (9.6 kg/m³) mineral fiber, rock, slag or glass blankets.

1½-inch (38 mm), 1.5 to 3 lb./cu. ft. (24 to 48 kg/m³) mineral fiber blanket duct liner.

1½-inch (38 mm), 3 to 10 lb./cu. ft. (48 to 160 kg/m³) mineral fiber board.

V - Vapor Retarders: Material with a perm rating not exceeding 0.5 perm [29 ng/(Pa*s*m²)]. All joints to be sealed.

W - Approved weatherproof barrier.

⁴The example of materials listed under each type is not meant to limit other available thickness and density combinations with the equivalent installed conductance or resistance based on the insulation only.

REASON: Most cities in this region have not adopted an energy code that would have these provisions.

****Section 604.11 is deleted.**

REASON: Most cities in this region have not adopted an energy code and do not enforce this provision.

****Section 606.3; changed to read as follows:**

606.3 Installation. Smoke detectors required by this section shall be installed in accordance with NFPA 72 the manufacturer's installation instructions and as required by the code official. The required smoke detectors shall be installed to monitor the entire airflow conveyed by the system including return air and exhaust or relief air. Access shall be provided to smoke detectors for inspection and maintenance.

REASON: To provide other options for installation requirements.

****Section 607.2; changed to read as follows:**

607.2 Smoke dampers. Smoke dampers shall be installed where required by the building code, shall be listed and labeled, shall ... *{bulk of paragraph unchanged}* ... or a single-station, spot-type detector installed at the point of penetration and listed for releasing service. ~~Smoke detection shall be in accordance with NFPA 72.~~ Smoke dampers shall also close whenever the fan serving the duct system is shut off.

REASON: To provide other options for installation requirements.

****Section 805.4.1; add a sentence to read as follows:**

The ventilating system shall be installed in a manner that will avoid penetrating any fire rated assemblies which would require a damper as required by the Building Code.

REASON: To avoid penetration of the fire wall.

****Section 909; changed to read as follows:**

VENTED AND UNVENTED GAS-FIRED DECORATIVE APPLIANCES

909.1 Vented Appliances General. Vented gas-fired decorative appliances shall be listed and labeled and shall be installed in accordance with the manufacturer's installation instructions. Such appliances shall be tested in accordance with ANSI Z21.50 and shall be designed and equipped as specified in Section 907.2.

909.2 Unvented Appliances. Unvented gas-fired decorative appliances shall be listed and labeled and shall be installed in accordance with the manufacturer's installation instructions. Such appliances shall be equipped with an oxygen-depletion-sensitive safety shutoff system as described in Section 926.5.

This appliance shall not be installed in a bedroom or bathroom.

REASON: To provide code provisions for unvented appliances.

****Sections 920.1 and 920.2; changed to read as follows:**

920.1 General. The installation of gas-fueled and liquid-fueled stationary internal combustion engines and gas turbines, including fuel storage and piping, shall meet the requirements of ~~NFPA 37~~ this code, the Building Code and the Fire Code.

920.2 Powered equipment. Permanently installed equipment powered by internal combustion engines and turbines shall be installed in accordance with the manufacturer's installation instructions and in accordance with ~~NFPA 37~~ this code, the Building Code and the Fire Code.

REASON: To require compliance with applicable provisions in the building, mechanical, and fire code instead of NFPA documents, which may be difficult to access and enforce.

****Section 926.2; changed to read as follows:**

926.2.1 Prohibited use. An unvented room heater shall not be used as the sole source of comfort heating in a dwelling unit.

Exception: Existing approved unvented heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when approved by the Code Official unless an unsafe condition is determined to exist as described in Section 108.7.

926.2.2 Unvented room heaters shall not be installed in bathrooms or bedrooms.

Exceptions: 1. Where approved by the code official, one listed wall-mounted unvented room heater equipped with an oxygen depletion safety shutoff system shall be permitted to be installed in a bathroom provided that the input rating shall not exceed 6000 Btu per hour (1760 W/hr) and combustion and ventilation air is provided as specified in accordance with the manufacturer's installation instructions.

2. Where approved by the Code Official, one listed wall-mounted unvented room heater equipped with an oxygen depletion safety shutoff system shall be permitted to be installed in a bedroom provided that the input rating shall not exceed 10,000 Btu per hour (2930 W/hr) and combustion and ventilation air is provided in accordance with the manufacturer's installation instructions.

REASON: To allow the continued use of existing heaters.

****Section 928.1; changed to read as follows:**

928.1 General. Kerosene and oil-fired stoves shall be listed and labeled and shall be installed in accordance with the conditions of the listing and the manufacturer's installation instructions. Kerosene and oil-fired stoves shall comply with ~~NFPA 31~~ this code, the Fire Code and the Building Code. Oil-

fired stoves shall be tested in accordance with UL 896.

REASON: To require compliance with applicable provisions in the building, mechanical, and fire code instead of NFPA documents, which may be difficult to access and enforce.

****Section 1204.1 and 1204.2; changed to read as follows:**

1204.1 Insulation characteristics. Pipe insulation installed in buildings shall conform to the requirements of the energy code, when adopted, shall be tested in accordance with ASTM E 84 and shall have a maximum flame spread rating of 25 and a smoke-developed rating not exceeding 450. Insulation installed in an air plenum shall comply with Section 602.2.1.

Exception: This section shall not apply to one- and two-dwellings.

1204.2 Required thickness. Hydronic piping shall be insulated to the thickness required by the energy code, when adopted.

REASON: Most cities in this region have not adopted an energy code and do not enforce this provision.

****Sections 1304.18 and 1304.18.1; changed to read as follows:**

1304.18 Testing of piping. Before any system of gas piping is finally put in service, it shall be tested to ensure that it is gas tight. Where any part of the system is to be enclosed or concealed, this test shall precede the work of closing in. To test for tightness, the piping shall be filled with air or inert gas, but not with any other gas or liquid. ~~Testing, inspection and purging of gas piping systems shall comply with NFPA 54.~~

The gas piping shall stand a pressure of not less than ten (10) pounds per square inch (68.9 kPa) gauge pressure, or at the discretion of the Administrative Authority, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge. Test pressures shall be held for a length of time satisfactory to the Administrative Authority, but in no case for less than fifteen (15) minutes, with no perceptible drop in pressure. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test pressure shall not be less than sixty (60) pounds per square inch (413.4 kPa) and shall be continued for a length of time satisfactory to the Administrative Authority, but in no case for less than thirty (30) minutes.

1304.18.1 Test instruments. Test pressure shall be measured with an approved instrument. All necessary apparatus for conducting tests shall be furnished by the permit holder.

REASON: To provide a specific testing method.

****Section 1401.1 add a second paragraph to read as follows:**

Should there be any conflict between this chapter and the Plumbing Code, the Plumbing Code shall take precedence.

REASON: To provide clarity on which codes govern when conflicts arise.

****Section 1401.2 is changed to read as follows:**

1401.2 Storage systems. Fuel oil storage and piping systems shall be installed in accordance with the requirements of this code, and the fire prevention code ~~and NFPA 31~~.

REASON: To require compliance with applicable provisions in the mechanical and fire prevention code instead of NFPA documents, which may be difficult to access and enforce.

****Sections 1401.2.1, 1401.2.2 and 1401.2.3 are deleted.**

REASON: For compatibility with other code changes.

****Any section or table not reprinted herein shall be assumed to be deleted. Chapter 15 is changed to only read as follows:**

CHAPTER 15

SECTION 1501 - GENERAL

1501.1 Scope. This chapter shall govern the construction, installation, alteration and repair of systems and equipment intended to utilize solar energy for space heating or cooling, domestic hot water heating, swimming pool heating or process heating.

1501.2 Potable water supply. Potable water systems shall be protected against contamination in accordance with the plumbing code.

1501.3 Heat exchangers. Heat exchangers used in domestic water-heating systems shall be approved for the intended use. The system shall have adequate protection to ensure that the potability of the water supply and distribution system is properly safeguarded.

1501.5 Ducts. Ducts utilized in solar heating and cooling systems shall be constructed and installed in accordance with Chapter 6 of this code.

REASON: To make these provisions easier to enforce since most cities in this region do not adopt the energy code.

****NFPA 70-96 is changed to read as follows:**

70 - 96 National Electrical Code as adopted by this jurisdiction
 301.7, 602.2.1, 911.7, 1106.8, 1106.9

REASON: To recognize local amendments to the electrical code.

END