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The following document represents proposed changes to Chapter 40, Omaha Municipal Code. The changes to Article I are recommended by the Permits & Inspections Division. The changes to Article IX were developed by the Mechanical Code Review Committee with the support and recommendation of the Permits & Inspections Division.

ARTICLE I. ~~IN GENERAL~~ ADMINISTRATION AND ENFORCEMENT

Sec. 40-1. ~~Uniform Mechanical Code and International Mechanical Code--Adopted.~~ Purpose and scope.

~~There is hereby adopted by the city for the purpose of establishing rules and regulations for the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of any heating, ventilating, cooling, refrigeration systems, incinerators or other miscellaneous heat-producing appliances within this jurisdiction, including permits and penalties, that certain mechanical code known as the Uniform Mechanical Code, published by the International Conference of Building Officials being particularly the 2000 edition and the International Mechanical Code 2000 edition, published by the International Code Council thereof, save and except such portions as are hereinafter deleted, modified or amended, of which not less than three copies have been and now are filed in the office of the city clerk; and the same is hereby adopted and incorporated as fully as if set out at length herein; and the provisions thereof shall be controlling in the design, construction, installation, quality of materials, location, operation, and maintenance or use of heating, ventilating, cooling, refrigeration systems, incinerators and other miscellaneous heat-producing appliances and other subjects therein contained within the corporate limits and within the jurisdictional area outside the city limit.~~

(Ord. No. 36424, § 1, 10-21-03)

The purpose of this chapter is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of mechanical systems.

This chapter is intended to provide minimum standards for:

- a) a) The design, installation, maintenance, alteration and repair of mechanical systems that are permanently or temporarily installed for the control of environmental conditions and related processes within buildings;
- b) b) The regulation of mechanical systems, system components, equipment and appliances;
- c) c) The licensing and registration of qualified persons as provided herein; and
- d) d) The administration and enforcement of this chapter and the codes adopted herein.

The provisions of this chapter shall apply to all new installations, alterations, repairs and operation of mechanical systems and equipment.

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Unless otherwise provided for, a provision in this code shall not require the removal, alteration or abandonment of a mechanical system lawfully in existence at the time of the adoption of this code. Such lawfully existing systems may continue to be used and maintained provided they are in proper operating condition and are maintained in a safe and sanitary condition. The owner or the owner's designated agent shall be responsible for maintenance of mechanical systems. To determine compliance with this code, the mechanical inspector shall have the authority to require a mechanical system to be reinspected.

Additions, alterations, renovations or repairs to a mechanical system shall conform to that required for a new mechanical system without requiring the existing mechanical system to comply with all of the requirements of this code. Additions, alterations or repairs shall not cause an existing mechanical system to become unsafe, hazardous or overloaded. Minor additions, alterations, renovations and repairs to existing mechanical systems shall meet the provision for new construction, unless such work is done in the same manner and arrangement as was in the existing system, is not hazardous and is approved.

Sec. 40-2. ~~Same--Adoption of subsequent editions-~~ Enforcement and right of entry.

~~Subsequent editions or revisions of the code adopted by the provisions or revisions of this article shall be considered adopted and of full force and effect within the city upon the approval thereof by the council and the filing of three copies thereof in the office of the city clerk.~~

(Ord. No. 36424, § 1, 10-21-03)

The director of the planning department and his/her duly authorized representatives shall be authorized and directed to enforce the provisions of this chapter and the codes adopted herein. The superintendent of the permits and inspections division shall be known as the building official for the purposes of this chapter and the codes adopted herein. The building official and his/her designees shall have the power to render interpretations of this chapter and to adopt and enforce rules and supplemental regulations in order to clarify the application of its provisions. Such interpretations, rules and regulations shall be in conformance with the intent and purpose of this chapter.

The director of the planning department and the superintendent of the permits and inspections division shall have the authority to hire inspectors and other employees as shall be necessary to carry out the functions of this chapter and the codes adopted herein.

Upon presentation of the proper credentials, the director of the planning department and his/her duly authorized representatives may enter at reasonable times any building, structure or premises within the jurisdictional area of the city whenever it is necessary to make an inspection to enforce the provisions of this chapter and the codes adopted herein, or whenever the building official has reasonable cause to believe that there exists any conditions or violations of this chapter or the codes adopted herein which make the building or premises unsafe, unsanitary, dangerous or hazardous. If such building or premises is unoccupied, the authorized representative shall first make a reasonable effort to locate the owner or other person having charge or control of the building or premises and request entry. If entry is refused, the authorized representative shall have full recourse to the remedies provided by law to secure entry.

Sec. 40-3. ~~Same--~~Conflicting provisions and alternate materials.

~~In the event of any conflict between the provisions of the mechanical code adopted by the provisions of this article and any other provisions of this Code or other city ordinances, the provision, which imposes or requires a higher standard shall prevail or be controlling.~~

~~(Ord. No. 36424, § 1, 10-21-03)~~

a) When, in any specific case, different sections of the mechanical code or of this chapter specify different materials, methods or designs of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

b) In the event of a conflict between the provisions of this chapter and the mechanical code or any other city ordinance, the provisions which impose the highest standard shall prevail.

c) The provisions of this chapter are not intended to prevent the use of any material, alternate design or method of construction not specifically prescribed by the chapter or the codes adopted herein, provided an alternate has been approved and its use authorized by the building board of review as set forth in Chapter 43, Division 5 of this Code.

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Sec. 40-4. Violations and stop work orders.

The building official or his/her duly authorized representative shall, upon substantiated evidence of violation of any provision of this chapter or code adopted herein, issue written notice to the owner, contractor, lessee, firm, corporation or other individual(s) responsible for the violation to correct same within a specific time period.

Such notice shall be given to the person causing the work to be done, the property owner or the owner's agent. Where an emergency exists, the notice need not be given in writing.

All work must cease until approved by the authorized representative to resume. Any person who continues to perform work not approved by the authorized representative shall be in violation of the stop work order and shall be subject to the penalties prescribed by law.

If the owner, contractor, lessee, firm, corporation or other individual(s) responsible for the violation shall fail to make such changes, alterations or repairs within the time set forth in the notice of violation, and no extension of such time has been procured, the building official or his/her authorized representative shall pursue all remedies as prescribed by law.

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~~Sec. 40-4-5. Penalty for violations. Penalties and appeals.~~

~~a) Any person who violates any of the provisions of this chapter shall, upon conviction thereof, be punished as provided in section 1-10 of this Code. Every such person, persons, firm(s) or corporation shall be deemed guilty of a separate offense for every day on which such violation shall continue.~~

~~b) Any person shall have the right to appeal the decision of the building official or his/her duly authorized representative regarding matters regulated by this chapter. Appeals of this chapter shall be made to the Building Board of Review as provided in Chapter 43, Division 5 of this Code.~~

~~(Ord. No. 36424, § 1, 10-21-03)~~

~~Sec. 40-5-6. Exceptions to quadrupling fees.~~

~~No quadruple fee penalty set forth in this chapter shall be imposed if: (a) The work is ~~on~~ of an emergency nature where a delay in performing the work may cause a risk to life or health or will significantly increase the risk of property damage, provided a permit is applied for within 48 hours of completion of the work, in which case no penalty shall be imposed; ~~or,~~~~

~~(b) An applicant applies for a permit after the work has begun, but before the work is observed and recorded by a city inspector, in which case a double fee shall be imposed.~~

~~(Ord. No. 36424, § 1, 10-21-03)~~

~~Sec. 40-6. Reserved.~~

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ARTICLE IX. ~~AMENDMENTS TO UNIFORM MECHANICAL CODE 2000 AND AMENDMENTS TO INTERNATIONAL MECHANICAL CODE (2000)~~ MECHANICAL CODE AND AMENDEMENTS

- Delete Section 40-591 in its entirety. Replace with the following.

Sec. 40-591. International Mechanical Code – Adopted.

There is hereby adopted by the city the International Mechanical Code, 2006 edition, as published by the International Code Council. This code shall establish rules and regulations for the design, installation, maintenance, alteration, repair, relocation, replacement and inspection of mechanical systems that are installed or utilized to provide control of environmental conditions and regulated processes within buildings.

- Sections of this code are modified, amended or deleted elsewhere in this article. Two copies of the International Mechanical Code are to be retained on file with the city clerk. This code shall be in effect within the limits of the city and its three-mile jurisdictional limit.

- Sec. 40-592. Amendments to the International Mechanical Code.

- The International Mechanical Code, 2006 edition, is hereby amended, altered, modified and changed in the following respects:

- Amend Section 101.2 as follows:

101.2 Scope. This code shall regulate the design, installation, maintenance, alteration and inspection of mechanical systems that are permanently or temporarily installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate those mechanical systems, system components, equipment and appliances specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be regulated by the ~~International~~ National Fuel Gas Code. (remainder of the section remains the same as written)

Amend Section 101.2.1 as follows:

101.2.1 *Appendices. Provisions in the appendices shall not apply unless specifically adopted.

Amend Section 102.4 as follows:

Delete the second paragraph.

- Amend Section 102.5 as follows:

102.5 Change in occupancy. It shall be unlawful to make a change in the occupancy of any structure which will subject the structure to any special provision of this code applicable to the new occupancy without approval. Changes in occupancy shall be made in accordance with the provisions of the city's building code. ~~The code official shall certify that such structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare.~~

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Amend Section 102.8 as follows:

102.8 Referenced codes and standards. The codes and standards referenced herein shall be those that are listed in Chapter 15 of this code and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference. Standards listed elsewhere in Chapter 40 of the Omaha Municipal Code shall also be considered part of the requirements of this code to the prescribed extent of their reference. Where differences occur between provision of this code and the referenced standards, the provisions of this code shall apply.

Amend Section 103.2 and 103.3 as follows:

Delete Sections 103.2 and 103.3 in their entirety.

Amend Section 104.2 as follows:

104.2 ~~Rule-making authority.~~ Interpretation authority. The code official shall have authority as necessary in the interest of public health, safety and general welfare, ~~to adopt and promulgate rules and regulation;~~ to interpret and implement the provisions of this code; to secure the intent thereof; and to designate requirements applicable because of local climatic or other conditions. ~~Such rules shall not have the effect of waiving structural or fire performance requirements specifically provided for in this code, or of violating accepted engineering methods involving public safety.~~

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Amend Section 106.3 as follows:

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106.3 Application for permit. Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by ~~the owner or an authorized agent~~ a licensed contractor. ~~The permit application shall indicate information required by the code official. The permit application shall indicate the proposed occupancy of all parts of the building and of that portion of the site or lot, if any, not covered by the building or structure and shall contain such other information required by the code official.~~

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Amend Section 106.4.1 as follows:

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106.4.1 ~~Approved~~ Reviewed construction documents. When the code official issues the permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "~~APPROVED~~" "REVIEWED". Such ~~approved~~ endorsed construction documents shall not be changed, modified or altered without authorization from the code official. Work shall be done in accordance with the ~~approved~~ reviewed construction documents.

The code official shall have the authority to issue a permit for the construction of part of a mechanical system before the construction documents for the entire system have been submitted or ~~approved~~ reviewed, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holder of such permit shall proceed at his or her own risk without assurance that the permit for the entire mechanical system will be granted.

Amend Section 106.4.2, first paragraph, as follows:

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106.4.2 Validity. The issuance of a permit or ~~approval~~ review of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of other ordinances of the jurisdiction. A permit presuming to give authority to violate or cancel the provisions of this code shall be invalid.

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Amend Section 106.4.3 as follows:

- 106.4.3 Expiration. Every permit issued by the code official under the provisions of this code shall expire by limitation and become null and void if the work authorized by such permit is not commenced within 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work recommences, a new permit shall be first obtained and the fee, therefore, shall be ~~one-half~~ the full amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year.

If the work has commenced and been inspected by the code official or his/her designee within 180 days of the date of permit issuance, the permit shall be valid for a period of 30 months from the date of issuance.

Amend Section 106.4.4 as follows:

- Delete this section in its entirety.

Amend Section 106.4.6 as follows:

- 106.4.6 Retention of construction documents. One set of construction documents shall be retained by the code official until final approval of the work covered therein. One set of ~~approved~~ reviewed construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or job at all times during which the work authorized thereby is in progress.

Amend Section 106.5 as follows:

Delete this section in its entirety.

Amend Section 107.1 as follows:

Delete the exception in its entirety.

Amend Section 108.4 as follows:

108.4 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair mechanical work in violation of the reviewed ~~approved~~ construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code shall be ~~guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment~~ punished under the provisions of the Omaha Municipal Code. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

Amend Section 108.5, the last sentence, as follows:

- 108.5 ... Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be ~~liable for a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars~~ punished under the provisions of the Omaha Municipal Code.

Amend Section 109 as follows:

Delete this section in its entirety.

Amend Section 201.3 as follows:

Delete this section in its entirety.

Amend Section 301.3 as follows:

301.3 Fuel gas appliances and equipment. The approval and installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be in accordance with the ~~International~~ National Fuel Gas Code.

Amend Section 301.7 as follows:

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301.7 Electrical. Electrical wiring, controls and connections to equipment and appliances regulated by this code shall be in accordance with the ~~ICC Electrical Code~~ Chapter 44, Omaha Municipal Code and the National Electric Code adopted therein. Chapter 44, Omaha Municipal Code and the National Electric Code adopted therein shall be substituted for any and all references in this code to the ICC Electrical Code.

Amend Section 301.8 as follows:

301.8 Plumbing connections. Potable water supply and building drainage system connections to equipment and appliances regulated by this code shall be in accordance with the ~~International Plumbing Code~~ Chapter 49 - Plumbing, Omaha Municipal Code. Chapter 49 - Plumbing, Omaha Municipal Code shall be substituted for any and all references in this code to the International Plumbing Code.

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Amend Section 303.1 as follows:

Add the following exception:

Exception: Natural gas-fired equipment and appliances shall be located as required by NFPA 54, the Metropolitan Utilities District Rules and Regulations and the conditions of the equipment and appliance listing.

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Amend Section 304.1 as follows:

Add the following exception:

Exception: Natural gas-fired equipment and appliances shall be located as required by NFPA 54, the Metropolitan Utilities District Rules and Regulations and the conditions of the equipment and appliance listing.

Amend Section 307.2.1 as follows:

307.2.1 Condensate disposal. Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal including roof drains, service sinks, floor sinks, floor drains, grade and other approved devices. Condensate shall not discharge into a street, alley, walkway, sidewalk, deck or other area so as to cause a nuisance.

Amend Section 403.2 as follows:

403.2 Outdoor air required. The minimum ventilation rate of outdoor air shall be determined in accordance with Section 403.3

Exceptions:

(1) Where the registered design professional demonstrates that an engineered ventilation system design will prevent the maximum concentration of contaminants from exceeding that obtainable by the rate of outdoor air ventilation determined in accordance with Section 403.3, the minimum required rate of outdoor air shall be reduced in accordance with such engineered system design.

(2) Where the ventilation system is designed in accordance with ANSI/ASHRAE 62.1.

Amend Section 404.1 as follows:

404.1 Enclosed parking garages. Mechanical ventilation systems for enclosed parking garages shall be permitted to operate intermittently where the system is arranged to operate automatically ~~upon detection of vehicle operation or the presence of occupants by approved automatic detection devices~~ by carbon monoxide detection not to exceed 50 ppm and nitrous dioxide detection at 0.5 ppm.

Amend Section 504.6.1 as follows:

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Change and add exceptions to read:

Exceptions:

1. Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for such dryer are provided to the code official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions.

2. In Group B and R occupancies, clothes dryer exhaust ducts may terminate in a vertical duct enclosed by a shaft that complies with Section 607.5.5 Exceptions 1 and 2 that will exhaust heat and moisture out of the building. The following requirements apply:

2.1. The clothes dryer exhaust must be contained in a duct within the shaft. The duct must be constructed of corrosion resistant metal and shall have a smooth interior.

2.2. Duct openings into the shaft enclosure(s) shall be protected per Section 607.5.5 Exceptions 1 and 2.

2.3. Duct offsets within the shaft are prohibited.

2.4. Accessible cleanouts shall be provided at the lowest point of the shaft. Cleanout access doors shall have the same fire rating as the shaft.

2.5. The vertical dryer exhaust duct shall be protected by an automatic fire sprinkler system per NFPA 13.

2.6. Upward airflow in the vertical dryer duct shall be maintained according to Section 607.5.5 Exception 2.

2.6.1. The fan may be sized at a constant airflow equal to 50% of the sum of the listed airflows of the dryers connected to the vertical duct, OR

2.6.2. The airflow of the fan may vary based on the number of dryers operating.

2.6.3. In no case shall airflow be less than the rated airflow of the smallest connected dryer.

2.7. Dryer duct exhaust fans must allow for removal of lint and debris from both the fan and the vertical duct.

2.8. Dryer duct exhaust fans must convey lint and operate at the temperatures encountered.

2.9. Dryer duct exhaust fan motors must be located outside the air stream.

Amend Section 506.1 as follows:

506.1 General. Commercial kitchen hood ventilation ducts and exhaust equipment shall comply with the requirements of this section. Type I hoods shall comply with the requirements of NFPA 96 and this section. Commercial kitchen grease ducts shall be designed for the type of cooking appliance and hood served.

Amend Section 507.1 as follows:

507.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of this section. Type I hoods shall comply with the requirements of NFPA 96 and this section. Hoods shall be Type I or Type II and shall be designed to capture and confine cooking vapors and residues. Commercial kitchen exhaust hood systems shall operate during the cooking operation.

Amend Section 509.1 as follows:

509.1 Where required. Commercial cooking appliances required by Section 507.2.1 to have a Type I hood shall be provided with an approved automatic fire suppression system complying with NFPA, the *International Building Code* and the *International Fire Code*.

Amend Section 512.2 as follows:

512.2 Materials. Subslab soil exhaust system duct material shall be air duct material listed and labeled to the requirements of UL 181 for Class 0 air ducts, or any of the following ~~pipng materials that comply with the *International Plumbing Code* as~~ building sanitary drainage and vent pipe: cast iron; galvanized steel; brass or copper pipe; copper tube of a weight not less than that of copper drainage tube; Type DWV; and plastic piping.

Amend Section 603.6.1.1 as follows:

603.6.1.1 Duct length. Flexible air ducts shall not be ~~limited in length~~ permitted except as final connectors to equipment or outlets.

Amend Section 603.6.2.1 as follows:

603.6.2.1 Connector length. Flexible air connectors shall be limited in length to ~~14 feet (4267 mm)~~ 6 feet with no change in direction greater than 45 degrees.

Amend Section 603.17 as follows:

Amend the last sentence to read: Each volume damper or other means of supply air adjustment used in balancing shall be provided with access for adjustment.

Amend Section 606.2.1 as follows:

~~Delete Section 606.2.1, including the exception, in its entirety and substitute the following:~~

606.2.1 Supply air systems. Smoke detectors shall be installed in supply air systems with a design capacity greater than 2000 cfm (0.9m³/sec), in the supply air duct or plenum downstream of any filters, exhaust air connections, outdoor air connections or decontamination equipment and appliances.

Amend Section 701.1 as follows:

701.1 Scope. The provisions of this chapter shall govern the requirements for combustion and dilution air for fuel-burning appliances other than gas-fired appliances. The requirements for combustion and dilution air for gas-fired appliances shall be in accordance with the ~~International~~ National Fuel Gas Code, NFPA and Metropolitan Utilities District Rules and Regulations.

Amend Section 801.1 as follows:

801.1 Scope. This chapter shall govern the installation, maintenance, repair and approval of factory-built chimneys, chimney liners, vents and connectors. This chapter shall also govern the utilization of masonry chimneys. Gas-fired appliances shall be vented in accordance with the ~~International~~ National Fuel Gas Code, NFPA and Metropolitan Utilities District Rules and Regulations.

Amend 804.3.3 as follows:

804.3.3 Termination. The termination of chimneys or vents equipped with power exhausters shall be located a minimum of 10 feet (3048 mm) from the ~~lot line or property line of a lot that can be built upon~~ and from adjacent buildings. The exhaust shall be directed away from the building.

Amend Section 901.1 as follows:

901.1 Scope. This chapter shall govern the approval, design, installation, construction, maintenance, alteration and repair of the appliances and equipment specifically identified herein and factory-built fireplaces. The approval, design, installation, construction, maintenance, alteration and repair of gas-fired appliances shall be regulated by the ~~International~~ National Fuel Gas Code, NFPA and Metropolitan Utilities District Rules and Regulations.

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Amend Section 906.1 as follows:

906.1 General. Factory-built barbecue appliances shall be of an approved type and shall be installed in accordance with the manufacturer's installation instructions, this chapter and Chapters 3, 5, 7, 8, ~~and~~ the ~~International~~ National Fuel Gas Code, NFPA and Metropolitan Utilities District Rules and Regulations.

Amend Section 908.7 as follows:

908.7 Refrigerants and hazardous fluids. Heat exchange equipment that contains a refrigerant and that is part of a closed refrigeration system shall comply with Chapter 11. Heat exchange equipment containing heat transfer fluids which are flammable, combustible or hazardous shall comply with NFPA and the International Fire Code.

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Amend Section 916.1 as follows:

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916.1 General. Pool and spa heaters shall be installed in accordance with Chapter 49, Omaha Municipal Code, the Nebraska Boiler Act and the manufacturer's installation instructions. Oil-fired pool and spa heaters shall be tested in accordance with UL 726. Electric pool and spa heaters shall be tested in accordance with UL 1261.

Amend Section 918.3 as follows:

Add the following exception at the end of Section 918.3:

Exception: The total area of the supply air ducts and outdoor and return air ducts shall not be required to be larger than the minimum size required by the heat pump manufacturer's installation instructions.

Amend Section 926.1 as follows:

926.1 Installation. The installation of gaseous hydrogen systems shall be in accordance with the applicable requirements of this code, the *International Fire Code*, the ~~*International National Fuel Gas Code*~~, *NFPA*, *Metropolitan Utilities District Rules and Regulations*, and the *International Building Code*.

Amend Section 1001.1 as follows:

Delete all exceptions to Section 1001.1

Amend Section 1002.1 as follows:

1002.1 General. Potable water heaters and hot water storage tanks shall be listed and labeled and installed in accordance with the Nebraska Boiler Act, ASME Sections 4 or 8, the manufacturer's installation instructions, ~~the International Code~~ and this code. All water heaters shall be capable of be removed without first removing a permanent portion of the building structure or in-service mechanical equipment. The potable water connections and relief valves shall conform to the requirements of the Nebraska Boiler Act, ASME Sections 4 or 8 ~~International Code~~. Domestic electric water heaters shall comply with the Nebraska Boiler Act, ASME Section 4, NFPA 70 and UL 174 or UL 1453. Commercial electric water heaters shall comply with the Nebraska Boiler Act, ASME Section 4, NFPA 70 and UL 1453. Domestic electric water heaters shall comply the Nebraska Boiler Act, ASME Section 4, NFPA 31 and 30 and UL 732.

Exception: Listed and approved potable water heaters operating:

- 1) Under 200,000 Btu/hr input or,
- 2) Under 150 psi or
- 3) Under 210 degrees F or,
- 4) Under 120 gallons.

~~Amend Section 1002.2 as follows:~~

~~1002.2 Water heaters utilized for space heating. Water heaters utilized both to supply potable hot water and provide hot water for space heating applications shall be listed and labeled for such applications by the manufacturer and shall be installed in accordance with the manufacturer's instructions and the International Plumbing Code.~~

~~1002.2.1 Sizing. Water heaters utilized for both potable water heating and space heating applications shall be sized to prevent the space-heating load from diminishing the required potable water-heating capacity.~~

~~1002.2.2 Temperature limitation: Where a combination potable water heating and space heating system requires water for space heating at temperatures higher than 140°F (60°C), a tempering valve shall be~~

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~~provided to temper the water supplied to the potable hot water distribution system to temperature of 140°F (60°C) or less.~~

1002.2 Water heaters utilized for space heating. All vessels used for space heating will be constructed to the minimum standards of ASME. The vessel must bear an ASME "H" or "S" stamping

Amend Section 1002.3 as follows:

~~1002.3. Supplemental water-heating devices. Potable water-heating devices that utilize refrigerant-to-water heat exchangers shall be approved and installed in accordance with the Nebraska Boiler Act, ASME Sections 4 or 8, International Plumbing Code and the manufacturer's installation instructions.~~

Amend Section 1003.1 as follows:

~~1003.1 General. All pressure vessels shall bear the ASME Code stamping and be manufactured to the requirements of label of an approved agency of ASME Section 8 Divisions 1, 2, and 3 or Section 10, and shall be installed in accordance with the State Boiler Act and the manufacturer's installation instructions.~~

Amend Section 1003.3 as follows:

~~1003.3 Welding. Welding on pressure vessels shall be performed by approved welders in compliance with nationally recognized standards~~ a current holder of a National Board "R" Stamp certificate.

Amend Section 1004.1 as follows:

~~1004.1 Standards. Oil-fired boilers and their control systems shall be listed and labeled in accordance with UL 726, the Nebraska Boiler Act, ASME Section 1, or Section 4, ASME CSD-1, NFPA 30, and 31. Electric boilers and their control systems shall be listed and labeled in accordance with UL 834 the Nebraska Boiler Act, ASME Section 1, or Section 4, ASME CSD-1, NFPA 70. All B boilers shall be designed and constructed in accordance with the requirements of ASME CSD-1, and as applicable ASME Boiler and Pressure Vessels Code, Sections I, II, IV, V, and IX; NFPA 8501; NFPA 8502 or NFPA 8504~~

Amend Section 1004.2 as follows:

~~1004.2 Installation. In addition to the requirements of this code, the installation of boilers shall conform to the Nebraska Boiler Act, ASME Sections 1 and 4, the authority having jurisdiction and the manufacturer's installation instructions. Operating instructions of a permanent type shall be attached to the boiler. Boilers shall have all controls set, adjusted and tested by the installer. The manufacturer's rating data reports, CSD-1 reports, and the nameplate shall be attached to the boiler.~~

Amend Section 1004.3 as follows:

~~1004.3 Working clearance. Clearances shall be maintained around boilers, generators, heaters, tanks, and related equipment and appliances so as to permit inspection, servicing, repair, replacement and visibility of all gauges. When boilers are installed or replaced, clearance shall be provided to allow access for inspection, maintenance and repair. Passageways around all sides of boilers have an unobstructed width of not less the 18 inches (457mm) unless otherwise approved by the Nebraska Boiler Act or allowed by the authority having jurisdiction.~~

Amend Section 1004.4 as follows:

~~1004.4 Mounting. Equipment shall be set or mounted on a level base capable of supporting and distributing the weight contained thereon. Boilers, tanks and equipment shall be secured in accordance~~

with the Nebraska Boiler Act, ASME, the authority having jurisdiction and the manufacturer's installation instructions.

Amend Section 1005.1 as follows:

1005.1 Valves. Every boiler or modular boiler shall have a positive shutoff valve in the supply and return piping. For multiple boiler or multiple modular boiler installations, each boiler or modular boiler shall have individual shutoff valves in the supply and return piping.

~~Exception: Shutoff valves are not required in a system having a single low-pressure steam boiler~~

Amend Section 1005.2 as follows:

~~1005.2 Potable water supply. The water supply to all boilers shall be connected in accordance with the Omaha International Plumbing Code and the rules and regulations of the Metropolitan Utilities District.~~

Amend Section 1006.6 as follows:

~~1006.6 Safety and relief valves discharge. Safety and relief valve discharge pipes shall be of rigid pipe that is approved for the temperature of the system. The discharge pipe shall be the same diameter as the safety or relief valve outlet. Safety and relief valves shall not be a hazard, a potential cause of damage or otherwise a nuisance. High-pressure-steam safety valves shall discharge to the outside of the structure. Where a low-pressure safety valve or a relief valve discharges to drainage system, the installation shall comply to the Omaha International Plumbing Code~~

*Amend Section 1006.9 as follows:

~~1006.9 Safety and pressure relief valves and controls. All safety valves, safety relief valves, boiler safety devices, controls, and electrical requirements shall be listed and labeled for their appropriate use and conditions. The installation of all safety and pressure relief valves, and controls shall comply with the Nebraska Boiler Act, ASME Boiler and Pressure Code Sections: I, VI, VIII Div. 1, 2, 3, X, CSD-1, the authority having jurisdiction and the manufacturer's installation instructions~~

Amend Section 1007.1 as follows:

~~1007.1 General. All steam and hot water boilers shall be protected with a low-water cutoff control as required by the Nebraska Boiler Act, ASME Sections I, IV, and CSD-1.~~

Amend Section 1008.2 as follows:

~~1008.2 Discharge. Blow off or blow down valves shall discharge to a safe place of disposal. Where discharging to the drainage system, the installation shall conform to the Omaha International Plumbing Code.~~

Amend Section 1009.3 as follows:

~~1009.3 Open-type expansion tanks. Open-type expansion tanks shall be located a minimum of 4 feet (1219mm) above the highest heating element. The tank shall be adequately sized for the hot water systems. An overflow with a minimum diameter of 1 inch (25mm) shall be installed at the top of the tank. The overflow shall discharge to the drainage system in accordance with the Omaha International Plumbing Code~~

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Amend Section 1104.2.2, Condition 6 as follows:

6. All electrical equipment and appliances conform to Class 1, Division 2, hazardous location classification requirements of NFPA 70 where the quantity of any Group A2, B2, A3 or B3 refrigerant, other than ammonia, in a single independent circuit would exceed 25 percent of the lower flammability limit (LFL) upon release to the space.

Amend Section 1201.1 as follows:

1201.1 Scope. The provisions of this chapter shall govern the construction, installation, alteration and repair of hydronic piping systems. This chapter shall apply to hydronic piping systems that are part of heating, ventilation and air-conditioning systems. Such piping systems shall include steam, hot water chilled water, steam condensate, condenser water, and ground source heat pump loop systems. Potable cold and hot water distribution systems shall be installed in accordance with the ~~International~~ Omaha Plumbing Code.

Amend Section 1202.4 as follows:

1202.4 Piping materials and standards: Hydronic piping shall conform to the standards listed in Table 1202.4 and Table 1202.5 as amended by this section. The exterior of the pipe shall be protected from corrosion and degradation. Approved piping, valves, fittings and connections shall be installed in accordance with the installations instructions. Pipe and fittings shall be rated for use at the operating temperature and pressure of the hydronic system. Acrylonitrile butadiene styrene pipe, tubing, and fittings (ABS), Chlorinated poly vinyl chloride (CPVC) pipe, tubing and fittings, Cross-linked polyethylene (PEX) pipe, tubing and fittings, Cross-linked polyethylene/aluminum/ cross-linked polyethylene (PEX-AL-PEX) pipe, tubing and fittings, Polybutylene (PB) pipe, tubing and fittings, Polyethylene (PE) pipe, tubing and fittings and Polypropylene (PP) pipe, tubing and fittings Polyvinyl chloride (PVC) pipe, tubing and fittings, will not be permitted for above ground use in a hydronic heating or cooling system. Except as otherwise acceptable to the authority having jurisdiction.

Amend Section 1205.2 as follows:

1205.2 Reduced pressure. A pressure relief valve shall be installed on the low-pressure side of a hydronic piping system that has been reduced in pressure. The relief valve shall be set at ~~the maximum pressure of the system design~~ no greater than the lowest rated design pressure of any component installed downstream of the pressure reducing valve. The valve shall be installed in accordance with Section 1006.

Amend Section 1208.1.1 as follows:

1208.1.1 Ground source heat pump loop systems. Before connection (header) trenches are backfilled, the assembled loop system shall be pressure tested with water at 100 psi (689kPa) for 30 minutes with no observed leaks. ~~Flow and pressure loss testing shall be performed and the actual flow rates and pressure drops shall be compared to the calculated design values. If actual flow rate or pressure drop values differ from calculated design values by more than 10 percent, the problem shall be identified and corrected.~~

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*Amend Section 1209.5 as follows:

1209.5 Termination: Final termination of all embedded piping systems are required to terminate to listed and labeled equipment or to a piping manifold. The maximum length from piping system entering the structure to equipment or manifold is 48 inches (1219mm).

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Amend Chapter 15 as follows:

Add the following ASHRAE Standard:

62.1 – 2004 Ventilation for Acceptable Air Quality