

1 **BOARD BILL NO. 526** **INTRODUCED BY ALDERMAN TERRY KENNEDY**

2 An ordinance pertaining to the Mechanical Code of the City of Saint Louis; repealing
3 Ordinance 65021 and Ordinance 65926; adopting the International Mechanical Code,
4 2006 Edition with Changes, as the Mechanical Code of the City of Saint Louis; and
5 containing a penalty clause, a severability clause and an emergency clause.

6 **BE IT ORDAINED BY THE CITY OF SAINT LOUIS AS FOLLOWS:**

7 **SECTION ONE.**, Ordinance 65021, approved August 2, 2000, and Ordinance 65926,
8 approved June 26, 2003, pertaining to the 2000 *International Mechanical Code* are
9 hereby repealed.

10 **SECTION TWO.** The *International Mechanical Code*, 2006 Edition as published by the
11 International Code Council, Inc., three copies of which are on file in the Office of the
12 Register of the City of Saint Louis, is hereby adopted as "The Mechanical Code of the
13 City of Saint Louis, in the State of Missouri", pursuant to this Ordinance and in
14 conformity with Section 71.943 RSMo, for the governing of the design, installation,
15 construction and maintenance of mechanical systems, by providing reasonable safeguards
16 to protect the public health and safety against the hazards of inadequate, defective or
17 unsafe mechanical systems and installations as herein provided; and that each and all of
18 the regulations, provisions, penalties, conditions and terms of said *International*
19 *Mechanical Code* are hereby referred to, adopted and made a part hereto, as if set out in
20 this ordinance with the additions, insertions, deletions and changes prescribed in Section
21 Three of this Ordinance.

22 **SECTION THREE.** The 2006 International Mechanical Code is amended and changed
23 in the following respects:

1 *Change Chapter One to read as follows:*

2 **CHAPTER 1**

3 **ADMINISTRATION**

4 **SECTION 101**

5 **GENERAL**

6 **101.1 Title.** These regulations shall be known as the Mechanical Code of the City of
7 Saint Louis, hereinafter referred to as "this code".

8 **101.2 Scope.** This code shall regulate the design, installation, maintenance, alteration,
9 relocation and inspection of mechanical systems that are installed and utilized to provide
10 control of environmental conditions and related processes within buildings. This code
11 shall also regulate those mechanical systems, system components, equipment and
12 appliances specifically addressed in this code.

13 **101.2.1 Appendices.** Provisions in the appendices shall not apply unless specifically
14 adopted. Appendix A is hereby adopted for use by the City of Saint Louis.

15 **101.3 Intent.** The purpose of this code is to provide minimum standards to safeguard
16 life and limb, health, property and public welfare by regulating and controlling the
17 design, construction, installation, quality of materials, location, operation, and
18 maintenance or use of mechanical systems. This code shall be construed to secure its
19 expressed intent, which is to insure public health, safety and welfare insofar as they are
20 affected by the installation and maintenance of mechanical systems.

21 **101.4 Severability.** If a section, subsection, sentence, clause or phrase of this code is, for
22 any reason, held to be unconstitutional, such decision shall not affect the validity of the
23 remaining portions of this code.

1 **SECTION 102**

2 **APPLICABILITY**

3 **102.1 General.** The provisions of this code shall apply to all matters affecting or
4 relating to structures and premises as set forth in Section 101. Where, in a specific case,
5 different sections of this code specify different materials, methods of construction or
6 other requirements, the most restrictive sections shall govern.

7 **102.2 Existing installations.** Except as otherwise provided for in this chapter, a
8 provision in this code shall not require the removal, alteration or abandonment of, nor
9 prevent the continued utilization and maintenance of, an existing mechanical system
10 lawfully in existence at the time of adoption of this code.

11 **102.3 Maintenance.** Mechanical systems, both existing and new, and parts thereof shall
12 be maintained in proper operating condition in accordance with the original design and in
13 a safe and sanitary condition. Devices or safeguards which are required by this code shall
14 be maintained in compliance with the code edition under which installed. The owner or
15 the owner’s designated agent shall be responsible for maintenance of mechanical
16 systems. To determine compliance with this provision, the code official shall have the
17 authority to require a mechanical system to be reinspected.

18 **102.4 Additions, alterations or repairs.** Additions, alterations, renovations or repairs
19 to a mechanical system shall conform to that required for a new mechanical system
20 without requiring the existing mechanical system to comply with all the requirements of
21 this code. Additions, alterations or repairs shall not cause an existing mechanical systems
22 to become unsafe, hazardous or overloaded. Minor additions, alterations, renovations
23 and repairs to existing mechanical systems shall meet the provisions for new

1 construction, unless such work is done in the same manner and arrangement as was in the
2 existing system, is not hazardous and is approved.

3 **102.5 Change in occupancy.** It shall be unlawful to make a change in the occupancy of
4 any structure which will subject the structure to any special provision of this code
5 applicable to the new occupancy without approval. The code official shall certify that
6 such structure meets the intent of the provisions of law governing building construction
7 for the proposed new occupancy and that such change of occupancy does not result in
8 any hazard to public health, safety or welfare.

9 **102.6 Historic buildings.** The provisions of this code relating to the construction,
10 alteration, repair, enlargement, restoration, relocation or moving of building or structures
11 shall not be mandatory for existing buildings or structures identified and classified by the
12 state or City of Saint Louis as historic buildings when such buildings or structures are
13 judged by the code official to be safe and in the public interest of health, safety and
14 welfare regarding any proposed construction, alteration, repair, enlargement, restoration,
15 relocation or moving of buildings.

16 **102.7 Moved buildings.** Except as determined by Section 102.2, mechanical systems
17 that are a part of buildings or structures moved into or within the City of Saint Louis shall
18 comply with the provisions of this code for new installations.

19 **102.8 Referenced codes and standards.** The codes and standards referenced in this
20 code shall be those that are listed in Chapter 15 and considered part of the requirements
21 of this code to the prescribed extent of each such reference. Where differences occur
22 between provisions of this code and the referenced standards, the most stringent
23 provision shall apply.

1 **102.9 Requirements not covered by code.** Requirements necessary for the strength,
2 stability or proper operation of an existing or proposed mechanical system, or for the
3 public safety, health and general welfare, not specifically covered by this code, shall be
4 determined by the code official.

5 **102.10 Workmanship.** All work shall be conducted, installed and completed in a
6 workmanlike and approved manner so as to secure the results intended by this code.

7 **SECTION 103**

8 **SECTION OF MECHANICAL EQUIPMENT INSPECTION**

9 **103.1 General.** There is hereby created the Section of Mechanical Equipment
10 Inspection within the Division of Building and Inspection which shall have control and
11 enforce all codes, regulations and ordinances pertaining to mechanical installations and
12 systems in accordance with this code. The head of this section shall be known as the
13 Mechanical Equipment Inspection Supervisor, who shall be appointed by the Building
14 Commissioner. Throughout this code, the Mechanical Equipment Inspection Supervisor,
15 the Chief Mechanical Engineer, the Building Commissioner and their authorized
16 employees shall be referred to as the code official.

17 **103.2 Mechanical equipment inspection supervisor.** There shall be appointed by the
18 Building Commissioner a Mechanical Equipment Inspection Supervisor. The Supervisor
19 shall have a minimum of five years experience as a Mechanical Inspector and possess the
20 qualifications established by the Department of Personnel.

21 **103.3 Deputies.** There shall be appointed by the code official a sufficient number of
22 Mechanical Equipment Inspectors to adequately perform all inspection duties and enforce
23 all ordinances pertaining to the Mechanical Equipment Inspection Section in accordance

1 with subsequent sections of this code and City of Saint Louis budgetary constraints. All
2 Mechanical Inspectors shall have had at least three years experience and possess the
3 qualifications set forth by the Department of Personnel.

4 **103.3.1 Assistant to the supervisor.** One such inspector shall assist the Mechanical
5 Equipment Inspection Supervisor. The assistant shall assume the responsibilities of the
6 Mechanical Equipment Inspection Supervisor in the Supervisor's absence or disability.

7 **103.3.2 Restriction of employees.** An official or employee connected with the
8 Mechanical Equipment Inspection Section, except one whose only connection is that of a
9 member of the Board of Stationary Engineers, shall not be engaged in, or directly or
10 indirectly connected with the furnishing of labor, materials or appliances for the
11 construction, alteration or maintenance of a building in the City of saint Louis, or the
12 preparation of construction documents thereof, unless that person is the owner of the
13 building; nor shall such code official or employee engage in any work that conflicts with
14 official duties or with the interests of the department.

15 **103.4 Liability.** The code official and employees charged with the enforcement of this
16 code, while acting for the City of Saint Louis, shall not thereby be rendered liable
17 personally, and are hereby relieved from all personal liability for any damage accruing to
18 persons or property as a result of any act required or permitted in the discharge of official
19 duties.

20 Any suit instituted against any code official or employee because of an act performed in
21 the lawful discharge of duties and under the provisions of this code shall be defended by
22 the legal representative of the City of Saint Louis until the final termination of the
23 proceedings. The code official or any employees shall not be liable for any cost in or

1 arising from any action, suit or proceeding that is instituted in pursuance of the provisions
2 of this code. Any code official or employee of the Division of Building and Inspection,
3 Department of Public Safety, acting in good faith and without malice, shall be free from
4 liability for acts performed under any of its provisions or by reason of any act or omission
5 in the performance of official duties in connection therewith.

6 The above protection shall also extend to former employees for work performed during
7 their period of employment with the City of Saint Louis.

8 **SECTION 104**

9 **DUTIES AND POWERS OF THE CODE OFFICIAL**

10 **104.1 General.** The code official shall enforce all of the provisions of this code and
11 shall act on any question relative to the installation, alteration, repair, maintenance or
12 operation of all mechanical systems, devices and equipment, except as otherwise
13 specifically provided for by statutory requirements or as provided for in Sections 104.1.1
14 through 104.8.

15 **104.1.1 Emergency condemnation.** Whenever the code official shall find any building,
16 structure, premises or portion thereof no matter for what purpose used, to be in an unsafe
17 or dangerous condition and that there is an actual and potential danger to the occupants or
18 those in the proximity of any building, structure or premises which poses an immediate
19 danger to public safety or welfare, the code official shall order the immediate evacuation
20 of said building, structure or premises. All of the occupants so notified shall immediately
21 vacate the building, structure, or premises and no person shall re-enter until authorized to
22 do so by the code official. Any person who refuses to leave, interferes with the
23 evacuation of other occupants, or continues any operation after having been given an

1 evacuation order by the code official, except such person(s) directed to perform work to
2 remove a violation or unsafe condition shall be deemed in violation of this section
3 whereupon it shall be the duty of the Police Department to immediately remove such
4 person(s) from said building, structure, or premises and prevent anyone from re-entering
5 the building, structure or premises until such time that the Police Department shall have
6 been notified by the Building Division that the same is in a safe condition. Any person
7 who shall violate any provisions of this section shall, upon conviction thereof, be
8 penalized as set forth in **SECTION FOUR**.

9 **104.1.2 Authority to placard.** The code official has the authority to post a placard in a
10 conspicuous place on a building or premises where the mechanical system has been
11 found to be unsafe or inadequate.

12 **104.1.3 Placarded building.** Placards shall remain on said building until the required
13 repairs, replacements or improvements have been made and accepted by the code official,
14 and it shall be unlawful to deface or willfully remove any such placard that has been
15 posted on a building without first obtaining consent of the code official. It shall be
16 unlawful for any person to reside in, use, rent, lease or occupy such building for any
17 purpose while so placarded and no person shall remove said placards without the consent
18 of the code official.

19 **104.2 Rule making authority.** The code official shall have authority as necessary in the
20 interest of public health, safety and general welfare, to adopt and promulgate rules and
21 regulations; to interpret and implement the provisions of this code; to secure the intent
22 thereof; and to designate requirements applicable because of local climatic or other
23 conditions. Such rules shall not have the effect of waiving structural or fire performance

1 requirements specifically provided for in this code, or of violating accepted engineering
2 practice involving public safety.

3 **104.2.1 Accepted engineering practice.** In the absence of provisions not specifically
4 contained in this code or approved rules, the regulations, specifications and standards
5 listed in Chapter 15 shall be deemed to represent accepted engineering practice in respect
6 to the material, equipment, system or method of construction therein specified.

7 **104.3 Applications and permits.** The code official shall receive applications for and
8 issue permits for the installation, replacement, relocation and alteration of mechanical
9 systems and equipment, and inspect the premises for which such permits have been
10 issued and enforce compliance with the provisions of this code. Such application shall
11 describe in detail the nature of the work and the location thereof by street and number.
12 No person shall begin such work unless and until they shall have submitted a proper
13 application and received a permit. In the case of an emergency, work may begin upon the
14 verbal request of the applicant and verbal permission of the code official, upon the
15 condition that such written application shall be filed in the office of the code official
16 without delay.

17 **Exception:** Buildings, structures or premises owned and occupied by the United States
18 of America or the State of Missouri.

19 **104.4 Inspections.** The code official shall make all of the required inspections, or the
20 code official may accept reports of inspection by authoritative and recognized services or
21 individuals. All reports of such inspections shall be in writing and certified by a
22 responsible officer of such authoritative service or by the responsible individual. The
23 code official is authorized to engage such expert opinion as deemed necessary to report

1 upon unusual technical issues that arise subject to the approval of the appointing
2 authority.

3 **104.4.1 Dangerous, hazardous, unsanitary, or unapproved installations.** The code
4 official shall have the authority to seal out of service mechanical equipment, devices, and
5 appurtenances covered by the Building and Mechanical Codes when, in the code official's
6 opinion, any of these items are in an unsafe, hazardous, or unsanitary condition, or if the
7 installation was made without obtaining the necessary permit or permits, or if the
8 installation violates the provisions of these codes.

9 **104.4.2 Notice of sealing out of service.** Before sealing any device out of service, the
10 code official shall, except in cases of emergency, serve ten calendar days written notice
11 upon the building owner, occupant or collector of rent either directly or by United States
12 mail, stating intention to seal the equipment out of service and the reasons therefore.

13 **104.4.3 Unlawful to remove seal.** Any device sealed out of service by the code official
14 shall be plainly marked with a sign or tag indicating such sealing, and any defacing or
15 removal of the sign or tag, or any tampering with or removal of the seal without approval
16 of the code official, or operation of the sealed unit, shall constitute a violation of this
17 code. The penalty for violation of this section shall be as set forth in **SECTION FOUR**.

18 **104.4.4 Utility disconnect.** Whenever the code official determines that there is an
19 eminent danger to public safety, the code official may request that the public utilities be
20 disconnected to that structure or premises.

21 **104.5 Right of entry.** Whenever it is necessary to make an inspection to enforce the
22 provisions of this code, or whenever the code official has reasonable cause to believe that
23 there exists in a building or upon any premises any condition or violation of this code

1 which makes the building or premises unsafe, insanitary, dangerous or hazardous, the
2 code official shall have the authority to enter the building or premises at all reasonable
3 times to inspect or to perform the duties imposed upon the code official by this code. If
4 such building or premises is occupied, the code official shall present credentials to the
5 occupant and request entry. If such building is unoccupied, the code official shall first
6 make a reasonable effort to locate the owner or other person having charge or control of
7 the building or premises and request entry. If entry is refused, the code official has
8 recourse to every remedy provided by law to secure entry.

9 When the code official has first obtained a proper inspection warrant or other remedy
10 provided by law to secure entry, an owner or occupant or person having charge, care or
11 control of the building or premises shall not fail or neglect, after proper request is made
12 as herein provided, to promptly permit entry therein by the code official for the purpose
13 of inspection and examination pursuant to this code.

14 **104.6 Identification.** The code official shall carry proper identification when inspecting
15 structures or premises in the performance of duties under this code.

16 **104.7 Notices and orders.** The code official shall issue all necessary notices or orders
17 to assure compliance with this code.

18 **104.8 Department records.** The code official shall keep official records of mechanical
19 applications received, permits issued, fees collected, reports of inspections, and notices
20 and orders issued. Such records shall be retained in the official records for three years,
21 except notices and orders which have been complied need not be kept.

22 **SECTION 105**

23 **APPROVAL**

1 **105.1 Modifications.** Whenever there are practical difficulties involved in carrying out
2 the provisions of this code, the code official shall have the authority to grant
3 modifications for individual cases, provided the code official shall first find that the
4 special individual reason makes the strict letter of this code impractical and the
5 modification is in compliance with the intent and purpose of this code and that such
6 modification does not lessen health, life and fire safety requirements.

7 **105.2 Alternative materials, methods and equipment.** The provisions of this code are
8 not intended to prevent the installation of any material or to prohibit any method of
9 construction not specifically prescribed by this code, provided that any such alternative
10 has been approved. An alternative material or method of construction shall be approved
11 where the code official finds that the proposed design is satisfactory and complies with
12 the intent of the provisions of this code, and that the material, method or work offered is,
13 for the purpose intended, at least the equivalent of that prescribed in this code for quality,
14 strength, effectiveness, fire resistance, durability and safety.

15 **105.2.1 Approved materials and equipment.** All materials, equipment and devices not
16 covered by this code and approved by the code official shall be constructed and installed
17 in accordance with such approval.

18 **105.3 Required testing.** Whenever there is insufficient evidence of compliance with the
19 provisions of this code, or evidence that a material or method does not conform to the
20 requirements of this code, or in order to substantiate claims for alternative materials or
21 methods, the code official shall have the authority to require tests as evidence of
22 compliance to be made at no expense to the City of Saint Louis.

23 **105.3.1 Test methods.** Test methods shall be as specified in this code or by other

1 recognized and accepted test standards. In the absence of recognized and accepted test
2 methods, the code official shall approve the testing procedures.

3 **105.3.2 Testing agency.** All tests shall be performed by an approved independent
4 testing agency.

5 **105.3.3 Test reports.** Reports of tests shall be retained by the code official for the
6 period required for retention of public records.

7 **105.4 Material and equipment reuse.** Materials, equipment and devices shall not be
8 reused unless such elements have been reconditioned, tested and placed in good and
9 proper working condition and approved by the code official.

10 **SECTION 106**

11 **PERMITS**

12 **106.1 When required.** No person shall commence any mechanical work until a permit
13 for such work has been issued by the code official. The fees for said permits shall be
14 paid to the City of Saint Louis for each permit herein required. All work shall be done by
15 the person or corporation in whose name the permit or permits required by this section
16 are issued, or any other qualified person or corporation designated by the permit holder.

17 Any person who shall fail to comply with or who shall violate any of the provisions of
18 this section shall be subject to the penalty provisions of **SECTION FOUR**.

19 **Exception:** When equipment replacements and repairs must be performed in an
20 emergency situation, the permit application shall be submitted within the next working
21 business day of the section of mechanical equipment inspection.

22 **106.2 Permits not required.** Permits shall not be required for any of the following:

23 1. Any portable heating appliance.

- 1 2. Any portable ventilation equipment.
- 2 3. Any portable cooking unit.
- 3 4. Replacement of any minor part which does not alter approval of equipment or make
- 4 such equipment unsafe.
- 5 5. Any portable evaporation cooler; and
- 6 6. Any self-contained refrigeration system containing 3 pounds (1.36 kg) or less of
- 7 refrigerant, or actuated by motors of 1 horsepower (0.75 kW) or less.

8 Exemption from the permit requirements of this code shall not be deemed to grant
9 authorization for work to be done in violation of the provisions of this code or other laws
10 or ordinance of the City of Saint Louis.

11 **106.3 Application for permit.** Each application for a permit, with the required fee,
12 shall be filed with the code official in such written form as the code official prescribes
13 and shall be accompanied by an adequate written description of the proposed mechanical
14 work and its location. The application shall be made by the owner or lessee of a
15 structure, or the agent of either, or by the registered design professional employed in
16 connection with the proposed work or the contractor employed in connection with the
17 proposed work. The full names, addresses and telephone numbers of the owner, lessee,
18 applicant and the responsible officers, if the owner or lessee is a corporate body, shall be
19 stated in the application.

20 **106.3.1 Construction documents.** The code official is authorized to require the
21 submission and approval of a set of construction documents showing the nature and
22 extent of the proposed work before a permit is issued. If, in the course of the work, it is
23 found necessary to make any change from the approved construction documents on

1 which a permit has been issued, amended construction documents shall be submitted, and
2 if approved, a supplementary permit shall be issued, after payment of any additional fees,
3 to cover the change after the same conditions required to secure the original permit have
4 been satisfied. The code official is permitted to waive the requirements for filing
5 construction documents where the work involved is of a minor nature. When the quality
6 of the materials is essential for conformity to this code, specific information shall be
7 given to establish such quality, and this code shall not be cited, or the term "legal" or its
8 equivalent used as a substitute for specific information.

9 The code official is authorized to require the submission of specific information in order
10 to determine compliance with this code

11 All construction documents prepared by a registered design professional shall bear the
12 original seal, signature and date in ink of that person. Construction documents for
13 structures more than two stories in height shall indicate how required structural and fire
14 resistance rating integrity will be maintained, and where penetrations will be made for
15 electrical, mechanical, plumbing and communication conduits, pipes and systems.

16 **106.3.2 Seismic installations.** Construction documents for installations which must
17 meet the seismic requirements of the Building Code listed in Chapter 15 of this code shall
18 show the details of all pertinent anchorage and bracing and shall bear the original seal,
19 signature and date in ink of a registered design professional licensed to practice in the
20 State of Missouri.

21 **106.3.3 Amendments to application.** Subject to the time limitations of Section 106.3.4,
22 amendments to the construction documents, application or other records accompanying
23 the same shall be filed at any time before completion of the work for which the permit is

1 sought or issued. Such amendments shall be deemed part of the original application and
2 shall be filed in the same manner as the original.

3 **106.3.4 Time limitation of application.** An application for a permit for any proposed
4 work shall be deemed to have been abandoned six months after the date of filing, unless
5 such application has been diligently prosecuted or a permit shall have been issued. The
6 code official may grant one or more extensions of time for additional periods not
7 exceeding one hundred eighty days each, if there is reasonable cause.

8 **106.4 Permit issuance.** The application, construction documents and other data filed by
9 an applicant for a permit shall be reviewed by the code official. If the code official finds
10 that the proposed work conforms to the requirements of this code and all laws and
11 ordinances applicable thereto, and that the fees specified in Section 106.5 have been paid,
12 a permit shall be issued to the applicant. A mechanical permit shall not be transferable.
13 If the application or the construction documents do not conform to the requirements of all
14 pertinent ordinances of the City of Saint Louis, the code official shall reject such
15 application in writing, stating the reasons therefore.

16 **106.4.1 Approved construction documents.** When the code official issues a permit
17 where construction documents are required, such approved construction documents shall
18 not be changed, modified or altered without authorization from the design professional
19 and the code official. Work shall be done in accordance with the approved construction
20 documents.

21 The code official is authorized to issue a permit for the installation of part of a
22 mechanical system before the application for the whole system has been submitted or
23 approved, provided adequate information and detailed statements have been filed

1 complying with all the pertinent requirements of this code. The holder of such permit
2 shall proceed at their own risk without assurance that the permit for the entire mechanical
3 system will be granted.

4 Except for unsafe mechanical systems or installations, this code shall not require changes
5 in the construction documents or mechanical work for which a lawful permit has been
6 heretofore issued or otherwise lawfully authorized, and the installation of which shall
7 have been actively prosecuted within ninety days after the effective date of this code and
8 is completed with dispatch.

9 **106.4.2 Validity.** The issuance of a permit or approval of construction documents shall
10 not be construed to be a permit for, or an approval of, any violation of any of the
11 provisions of this code or of other ordinances of the City of Saint Louis. A permit
12 presuming to give authority to violate or cancel the provisions of this code shall be
13 invalid.

14 The issuance of a permit based upon construction documents and other data shall not
15 prevent the code official from thereafter requiring the correction of errors in said
16 construction documents and other data or from preventing building operations from being
17 carried on thereunder when in violation of this code or of other ordinances of the City of
18 Saint Louis

19 **106.4.3 Expiration.** Every permit issued by the code official under the provisions of
20 this code shall expire by limitation and become null and void if the work authorized by
21 such permit is not commenced within one hundred eighty days from the date of such
22 permit, or if the work authorized by such permit is suspended or abandoned at any time
23 after the work is commenced for a period of one hundred eighty days. The code official

1 may grant one or more extensions of time for an additional period the total not to exceed
2 six months if there is reasonable cause. Before such work recommences, a new permit
3 shall be first obtained and a new fee paid.

4 **106.4.4 Extensions.** A permittee holding an unexpired permit shall have the right to
5 apply for an extension of the time within which the permittee will commence work under
6 that permit when work is unable to be commenced within the time required by this
7 section for good and satisfactory reasons. The code official shall extend the time for
8 action by the permittee for a period not exceeding one hundred eighty days if there is
9 reasonable cause.

10 **106.4.5 Suspension or revocation of permit.** The code official shall suspend or revoke
11 a permit or approval issued under the provisions of this code in case of any false
12 statement or misrepresentation of fact in the application or on the construction documents
13 upon which the permit or approval was based. A permit shall also be considered for
14 revocation under the following provisions:

15 1. The owner of the property or the contractor shall request cancellation in writing stating
16 the reasons for the request for cancellation. No refund of fees shall be made.

17 2. The code official may revoke the permit for fraud, for non-compliance with the code or
18 for failure to pay the prescribed fees.

19 Should the mechanical contractor install work that is not in compliance with the
20 mechanical, fire or building code, the contractor shall be directed by the code official to
21 make necessary corrections to assure code compliance and no other permits shall be
22 issued to said contractor until such work is corrected and approved by the code official.

23 **106.4.6 Retention of construction documents.** One set of construction documents shall

1 be retained by the code official until final approval of the work covered therein. One set
2 of construction documents shall be returned to the applicant and said set shall be kept at
3 the site of the building or work at all times during which the work authorized thereby is
4 in progress.

5 **106.4.7 Posting of permit.** A true copy of the permit shall be kept on the site of
6 operations, open to public inspection during the entire time of prosecution of the work
7 and until the completion of the same.

8 **106.5 Fees.** A permit shall not be issued until the fees prescribed in Table 106.5.2 have
9 been paid, nor shall an amendment to a permit necessitating an additional fee because of
10 the additional work involved be released until the additional fee has been paid. Fees for
11 the inspections herein prescribed shall be paid to and collected by the City of Saint
12 Louis. A permit may be revoked if payment is returned for insufficient funds.

13 **106.5.1 Work commencing before permit issuance surcharge.** In case any work for
14 which a permit required by this code is started or proceeded with prior to the permit being
15 issued, the total normal fees applicable shall be increased by the amount as set forth in
16 Table 106.5.1. The payment of said surcharge shall not relieve any persons from fully
17 complying with the requirements of this code for performance or execution of the work,
18 nor from other penalties prescribed by law.

TABLE 106.5.1	
SCHEDULE FOR SURCHARGE	
PERMIT FEE	SURCHARGE

\$ 0 TO \$ 50	\$ 30.00
\$ 51 TO \$ 200	\$ 90.00
\$ 201 TO \$ 500	\$ 240.00
\$ 501 TO \$ 2,000	\$ 360.00
\$ 2,001 TO \$ 10,000	\$ 480.00
OVER \$ 10,000	\$1000.00

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2 **106.5.2 Fee schedule.** The fees for all mechanical work shall be as indicated in Table
3 106.5.2. Mechanical permit fees shall not be waived for contractors working in facilities
4 owned and operated by the City of Saint Louis.

TABLE 106.5.2	
FEES FOR MECHANICAL PERMITS AND INSPECTIONS	
ITEM	FEE
APPLICATION FEE	\$25.00
AMUSEMENT RIDES -each	\$10.00
AUTO LIFTS - Per Unit	\$ 80.00
BOILERS-HIGH PRESSURE - per boiler	
<1,000,000 BTU/HR	\$60.00
≥1,000,000 BTU/HR	\$80.00
BOILERS-LOW PRESSURE - per boiler	

<1,000,000 BTU/HR	\$50.00
≥1,000,000 BTU/HR	\$70.00
UNFIRED PRESSURE VESSELS - Per unit	\$40.00
RESIDENTIAL (1 & 2 Family) PERMITS	
Furnaces, each	\$40.00
Condensing Units, each	\$40.00
Combination Furnace & Condensing Unit, each	\$40.00
Application Fee	\$ 9.00
Re-inspection (See Note 2.)	\$25.00
AIR CONDITIONING/ REFRIGERATION SYSTEM (See NOTE	
1) -each	\$60.00
Up to 15 tons	\$85.00 + \$1.00/ton
15 tons or greater	
COOLING TOWERS -each	\$180.00
VENTILATION SYSTEMS -each	
500 cfm up to 2,000 cfm	\$ 80.00

2,000 cfm to 15,000 cfm	\$ 140.00
Over 15,000 cfm	\$ 180.00
EXHAUST HOODS/SYSTEMS	
Up to 5,000 cfm	\$ 80.00
Over 5,000 cfm	\$ 140.00
FIRE/ SMOKE DAMPERS - Per Unit	\$40.00
PROCESS PIPING -each	\$20.00
SPECIAL INSPECTION -each	\$ 40.00
REINSPECTION -each. (See NOTE 2)	\$ 25.00

NOTES: 1. All installations of refrigeration and/or air conditioning equipment require a permit except the following:

- a. Portable equipment (window units)
- b. Units of less than 12,000 BTU per hour capacity.
- c. Incremental (through the wall) cooling or heating/cooling units.

2. Reinspections - Faulty or Incomplete work - Where a reinspection is required to be made due to faulty workmanship or work not completed at the time of a requested inspection, a reinspection charge of \$25.00 shall be levied.

1 **106.5.4 Fees for abandoned work or revoked permit.** Fees shall not be waived or
2 refunded for any mechanical permit that has been abandoned, canceled or revoked.

3 **SECTION 107**

4 **INSPECTIONS AND TESTING**

5 **107.1 Required inspections and testing.** All equipment for which a permit is obtained
6 under this code shall be inspected and approved.

7 1. Underground inspection shall be made after trenches or ditches are excavated and
8 bedded, piping installed, and before backfill is put in place. When excavated soil contains
9 rocks, broken concrete, frozen chunks and other rubble that would damage or break the
10 piping or cause corrosive action, clean backfill shall be on the job site.

11 2. Rough-in inspection shall be made after the roof, framing, fireblocking and bracing
12 are in place and all ducting and other components to be concealed are complete, and prior
13 to the installation of wall or ceiling membranes.

14 Any portion of equipment intended to be concealed by any permanent portion of the
15 structure shall not be concealed until inspected. The code official shall have the authority
16 to require any concealment to be removed. Failure to comply with this order of the code
17 official may result in condemnation of the structure or any part thereof and prohibition of
18 occupancy. When installation of any equipment is complete, a final inspection shall be
19 made. Equipment regulated by this code shall not be connected to the fuel or power
20 supply and placed in normal operation until such equipment complies with all applicable
21 requirements of this code, and a final inspection has been completed.

22 The requirements above shall not be considered to prohibit the operation of any heating
23 equipment installed to replace existing heating equipment serving an occupied portion of

1 a structure in the event a request for inspection of such heating equipment has been filed
2 with the department not more than 48 hours after replacement work is completed, and
3 before any portion of such equipment is concealed by any permanent portion of the
4 structure.

5 Upon completion of the mechanical work and before final approval is given, a final
6 inspection shall be made. All violations of any code, any approved construction
7 document or the mechanical permit shall be noted, and the holder of the mechanical
8 permit shall be notified of the discrepancies. All violations shall be abated before final
9 approval.

10 **107.1.1 Approved inspection agencies.** The code official shall accept reports of
11 approved inspection agencies, provided such agencies satisfy the requirements as to
12 qualification and reliability.

13 **107.1.2 Evaluation and follow-up inspection services.** Prior to the approval of a
14 closed, prefabricated mechanical system and the issuance of a mechanical permit, the
15 code official, if deemed necessary, shall require the submittal of an evaluation report on
16 each prefabricated mechanical system, indicating the complete details of the mechanical
17 system, including a description of the mechanical system and its components, the basis
18 upon which the mechanical system is being evaluated, test results and similar
19 information, and other data as necessary for the code official to determine conformance
20 to this code.

21 **107.1.2.1 Evaluation service.** The code official shall designate the evaluation service of
22 an approved agency as the evaluation agency, and review such agency's evaluation report
23 for adequacy and conformance to this code.

1 **107.1.2.2 Follow-up inspection.** Except where ready access is provided to mechanical
2 systems, service equipment and accessories for complete inspection at the site without
3 disassembly or dismantling, the code official shall conduct the in-plant inspections as
4 frequently as necessary to assure conformance to the approved evaluation report or shall
5 designate an independent, approved inspection agency to conduct such inspections. The
6 inspection agency shall furnish the code official with the follow-up inspection manual
7 and a report of inspections upon request, and the mechanical system shall have an
8 identifying label permanently affixed to the system indicating that factory inspections
9 have been performed.

10 **107.1.2.3 Test and inspection records.** All required test and inspection records shall be
11 available to the code official at all times during the fabrication of the mechanical system
12 and the erection of the building; or such records as the code official designates shall be
13 filed.

14 **107.2 Testing.** Mechanical systems shall be tested as required in this code and in
15 accordance with Sections 107.2.1 through 107.2.3. Tests shall be made by the permit
16 holder and observed by the code official.

17 **107.2.1 New, altered, extended or repaired systems.** New mechanical systems and
18 parts of existing systems, which have been altered, extended or repaired shall be tested as
19 prescribed herein to disclose leaks and defects.

20 **107.2.2 Equipment, material and labor for tests.** Equipment, material and labor
21 required for testing a mechanical system or part thereof shall be furnished by the permit
22 holder.

23 **107.2.3 Reinspection and testing.** Where any work or installation does not pass an

1 initial test or inspection, the necessary corrections shall be made so as to achieve
2 compliance with this code. The work or installation shall then be resubmitted to the code
3 official for inspection and testing.

4 **107.3 Contractor's responsibilities.** It shall be the responsibility of every contractor
5 who enters into contracts for the installation or repair of mechanical systems for which a
6 permit is required to comply with adopted federal, state and local rules and regulations
7 concerning certification and licensing.

8 **107.4 Coordination of inspections.** Whenever in the enforcement of this code or
9 another code or ordinance, the responsibility of more than one code official is involved, it
10 shall be the duty of the code officials involved to coordinate their inspections and
11 administrative orders as fully as practicable so that the owners and occupants of the
12 structure shall not be subjected to visits by numerous inspectors or multiple or conflicting
13 orders. Whenever an inspector from any agency or department observes an apparent or
14 actual violation of some provision of some law, ordinance or code not within the
15 inspector's authority to enforce, the inspector shall report the findings to the code official
16 having jurisdiction.

17 **107.4.1 Legal compliance.** All legal assistance necessary to effect compliance of the
18 mechanical systems of such premises with this section shall be supplied to the code
19 official by the City Counselor and other City of Saint Louis agencies. The Fire and
20 Police Departments of the City of Saint Louis shall, upon request, assist the code official
21 in the enforcement of this code.

22 **107.5 Approval.** After the prescribed tests and inspections indicate that the work
23 complies in all respects with this code, all equipment subject to annual inspection shall be

1 identified by a tag bearing the city identification number and, where applicable, a sticker
2 denoting approval shall be applied to all other equipment.

3 **107.6 Temporary connection.** The code official shall have the authority to authorize
4 the temporary connection of a mechanical system to the sources of energy for the purpose
5 of testing mechanical systems or for use under a temporary certificate of occupancy.

6 **107.7 Moved structures.** Before any structure that has been moved within or into the
7 City of Saint Louis is occupied, all mechanical equipment and devices shall be inspected
8 and tested for safe operation and compliance with the requirements of this code.

9 **Exception:** Mechanical systems within manufactured units bearing certification of the
10 Missouri Public Service Commission.

11 **SECTION 108**

12 **VIOLATIONS**

13 **108.1 Unlawful acts.** It shall be unlawful for any person, firm or corporation to erect,
14 construct, alter, repair, remove, demolish or operate mechanical equipment regulated by
15 this code, or cause same to be done, in conflict with or in violation of any of the
16 provisions of this code. All work shall be conducted, installed and completed in a
17 workmanlike and approved manner so as to secure the results intended by this code.

18 **108.2 Notice of violation.** The code official shall serve a written notice of violation or
19 order to the person, firm or corporation responsible for the erection, installation,
20 alteration, extension, repair, removal, demolition or operation of mechanical equipment
21 or systems in violation of the provisions of this code, or in violation of a detailed
22 statement, or the approved construction documents thereunder, or in violation of a permit
23 issued under the provisions of this code. Such order shall direct the discontinuance of the

1 illegal action or condition and the abatement of the violation.

2 **108.3 Prosecution of violation.** If the notice of violation is not complied within the
3 time stated in the Notice of Violation, but no longer than thirty days, the code official
4 shall request the legal counsel of the City of Saint Louis to institute the appropriate
5 proceedings at law or in equity to restrain, correct or abate such violation, or to require
6 the removal or termination of the unlawful occupancy of the structure in violation of the
7 provisions of this code or of the order or direction made pursuant thereto. The time for
8 compliance may be extended by the code official, upon written request, if there are
9 extenuating circumstances.

10 **108.4 Violation penalties.** Any person, partnership or corporation who shall violate a
11 provision of this code or shall fail to comply with any of the requirements thereof or who
12 shall erect, construct, alter or repair mechanical equipment or systems in violation of the
13 approve construction documents or directive of the code official, or of a permit or license
14 issued under the provisions of this code, shall, upon conviction thereof, be penalized as
15 set forth in *SECTION FOUR*.

16 **108.5 Stop work orders.** Upon notice from the code official that mechanical work is
17 being done contrary to the provisions of this code or in a dangerous or unsafe manner, or
18 without permit, such work shall immediately cease. Such notice shall be in writing and
19 shall be given to the owner of the property involved, or to the owner's agent, or to the
20 person doing the work. The stop work order shall state the conditions under which work
21 is authorized to resume. Where an emergency exists, the code official shall not be
22 required to give a written notice prior to stopping the work. Any person who shall
23 continue any work on the system after having been served with a stop work order, except

1 such work as that person is directed to perform to remove a violation or unsafe
2 conditions, shall be subject to immediate arrest and, upon convicted thereof, be penalized
3 as set forth in **SECTION FOUR**.

4 **108.6 Abatement of violation.** The imposition of the penalties herein prescribed shall
5 not preclude the legal officer of the City of Saint Louis from instituting appropriate action
6 to prevent unlawful construction or to restrain, correct or abate a violation, or to prevent
7 illegal occupancy of a building, structure or premises, or to stop an illegal act, the
8 conduct of business or operation of mechanical equipment or systems on or about any
9 premises.

10 **108.7 Unsafe mechanical systems.** A mechanical system that is unsafe, constitutes a
11 fire hazard, or is otherwise dangerous to human life, as regulated by this code, is hereby
12 declared as an unsafe mechanical system. Use of a mechanical system regulated by this
13 code constituting a hazard to health, safety or welfare by reason of inadequate
14 maintenance, dilapidation, fire hazard, disaster, damage or abandonment is hereby
15 declared an unsafe use. Such unsafe equipment is hereby declared to be a public
16 nuisance and shall be abated by repair, rehabilitation, demolition or removal.

17 **108.7.1 Authority to condemn mechanical systems.** Whenever the code official
18 determines that any mechanical system, or portion thereof, regulated by this code has
19 become hazardous to life, health, property, or has become insanitary, the code official
20 shall order in writing that such system either be removed or restored to a safe condition.
21 A time limit for compliance with such order shall be specified in the written notice. A
22 person shall not use or maintain a defective mechanical system after receiving such
23 notice.

1 When such mechanical system is to be disconnected, written notice as prescribed in
2 Section 108.2 shall be given. In cases of immediate danger to life or property, such
3 disconnection shall be made immediately without such notice.

4 Fuel-fired or electrically supplied heating or cooling appliances or equipment shall not be
5 removed from any structure to be demolished until the service supplied to the structure
6 for such equipment has been terminated by the utility company.

7 **108.7.2 Authority to order disconnection of energy sources.** The code official shall
8 have the authority to order disconnection of energy sources supplied to a building,
9 structure or mechanical system regulated by this code, when it is determined that the
10 mechanical system or any portion thereof has become hazardous or unsafe. Written
11 notice of such order to disconnect service and the causes therefor shall be given within
12 twenty-four hours to the owner and occupant of such building, structure, or premises,
13 provided, however, that in cases of immediate danger to life or property, such
14 disconnection shall be made immediately without such notice. Where energy sources are
15 provided by a public utility, the code official shall immediately notify the serving utility
16 in writing of the issuance of such order to disconnect.

17 **108.7.3 Connection after order to disconnect.** A person shall not make energy source
18 connections to mechanical systems regulated by this code which have been disconnected
19 or ordered to be disconnected by the code official until the code official, or the use of
20 which has been ordered to be discontinued by the code official until the code official
21 authorizes the re-connection and use of such mechanical systems.

22 When a mechanical system is maintained in violation of this code, and in violation of a
23 notice issued pursuant to the provisions of this section, the code official shall institute

1 appropriate action to prevent, restrain, correct or abate the violation.

2 **SECTION 109**

3 **MEANS OF APPEAL**

4 **109.1 Appeals.** Any person aggrieved by the decision of the code official, or any Board
5 hereunder, may appeal said decision to the Board of Building Appeals in the manner
6 prescribed in Section 121.0 of the Building Code. The fee for said appeal is as prescribed
7 in said Building Code.

8 **SECTION 110**

9 **BOARD OF STATIONARY ENGINEERS**

10 **110.1 General.** There is hereby established a Board of Stationary Engineers. The Board
11 shall act in an advisory capacity to the code official in the preparation of rules and
12 regulations regarding installation, use and operation of boilers, steam generators and
13 pressure vessels consistent with the provisions of this code.

14 **110.1.1 Composition of board.** The Board of Stationary Engineers shall be composed
15 of three members, one member who shall be the code official or duly authorized
16 representative and two other members who shall be appointed by the Director of Public
17 Safety.

18 The two members appointed by the Director of Public Safety shall be engineers licensed
19 by the City of Saint Louis under the provisions of this section as Class I licensed
20 Stationary Engineers, with a minimum of five years experience in the operation and
21 maintenance of steam engines, steam boilers or steam turbines. The Board shall elect
22 their own chairman.

23 **110.1.2 Duties of the board.** The Board of Stationary Engineers shall give

1 examinations to all applicants for Stationary Engineer's licenses, issue Boiler Operator
2 Certificates of Competency or Stationary Engineer's Licenses to those who pass their
3 respective tests, suspend or revoke such certificate or license for failure to maintain the
4 standards imposed by this section of the code, and may order the reinspection of any
5 boiler, steam generator or pressure vessel whenever deemed necessary for public safety.

6 **110.2 Board sessions.** The Board of Stationary Engineers shall provide for regular
7 meetings and the code official shall act as the secretary to the Board and shall keep the
8 minutes of all proceedings. The Board shall convene for business at least once a month,
9 and at such additional times as the chairman shall designate, to conduct the business of
10 the Board. A majority of the members of the Board of Stationary Engineers shall
11 constitute a quorum. The Secretary shall keep a register of the names and addresses of all
12 successful applicants designating those found to be qualified for the various classes
13 provided herein.

14 **110.3 Rules and regulations.** The Board of Stationary Engineers shall have the power
15 to adopt such rules and regulations consistent with this section as it may deem necessary
16 for the application of the provisions of this section. Such rules and regulations shall
17 become effective upon approval by the majority of the Board, and shall be on file in the
18 office of the code official, and shall be available to the public upon request.

19 **110.4 Boiler operator certificate of competency.** The operation of boilers or steam
20 generators which are generating saturated steam in a pressure range of fifteen psig
21 minimum to one hundred and fifty psig maximum each of which boilers has not more
22 than one hundred square feet of rated heating surface shall be at all times in the charge of
23 a certified Boiler Operator. Application for a Boiler Operator's Certificate of Competency

1 is to be made to the code official or duly authorized representative. The code official
2 upon finding that the applicant is thoroughly familiar with the operational principles
3 which concern the safety and care of the boiler or steam generator, shall issue to such
4 applicant a Boiler Operator Certificate of Competency. The certificate is issued for work
5 at a single specific location as designated on the application and is not transferable. The
6 fee for the examination shall be as listed in Table 110.9.

7 **110.5 Licensing of stationary engineers required.** All Stationary Engineers shall be
8 licensed as to the class as set forth in sections 110.5.1 through 110.5.4.

9 **110.5.1 Licensing of operators of boilers or steam generators, less than 1500 square**
10 **foot of heating surface.** Any boiler or steam generator which has not more than 1500
11 square feet of rated heating surface, and which is rated to generate steam at pressures
12 between fifteen psig and three hundred psig maximum or which is rated to generate hot
13 water above 160 psig and 250°F to 300 psig, and associated equipment, shall be in the
14 charge of an attending Class II or a Class I licensed Stationary Engineer, whenever in
15 operation. Square footage shall be determined by the total input to a single header.

16 **110.5.2 Licensing of operators of boilers or steam generators in excess of 1500**
17 **square feet of heating surface.** Any boiler or steam generator producing saturated or
18 superheated steam above 212°F in excess of fifteen psig having a rated heating surface in
19 excess of one thousand five hundred square feet of hot water or any other liquid as
20 defined in this code, or any boiler or steam generator producing saturated or superheated
21 steam or any high temperature liquid above 212°F in excess of three hundred psig,
22 regardless of rated heating surface, and any steam engine or steam turbine, associated
23 with either of the said boilers or steam generators shall be in the charge of an attending

1 Class I licensed Stationary Engineer, whenever in operation. Square footage shall be
2 determined by the total input to a single header.

3 **110.5.3 Licensing of operators of ammonia systems from 50 to 100 tons.** Any
4 ammonia system totaling between fifty tons and one hundred tons rated capacity shall be
5 in the charge of an attending Class I or Class II licensed Stationary Engineer where
6 located in any and all buildings, whenever in operation.

7 **110.5.4 Licensing of operators of ammonia systems 100 tons and over.** Any
8 ammonia system totaling one hundred tons or more rated capacity shall be in the charge
9 of an attending Class I licensed Stationary Engineer where located in any and all
10 buildings, whenever in operation.

11 **110.6 Stationary engineer's license applications.** The application for all classes of
12 licenses shall be filed with the Secretary of the Board on the form prescribed by the
13 Board of Stationary Engineers. Within a reasonable time, the Board shall examine all
14 applicants who meet qualifications under Sections 110.6.1 thru 110.6.3 for the various
15 classes of licenses in order to ascertain whether the applicants possess the knowledge,
16 skill, ability and competency required for the class of license applied for, and for safe
17 operation of various equipment. The Board shall issue to such applicants a license upon
18 the Board finding that the applicant possesses the necessary qualifications and has
19 successfully passed the required examination for the type of license sought.

20 **110.6.1 Qualifications for stationary engineer, class I.** All applicants for a Class I
21 Stationary Engineer's License shall be a citizen of the United States, shall have made
22 application for such citizenship, or shall be authorized to hold employment by the
23 Immigration and Naturalization Service. The applicant shall be at least twenty-one years

1 of age and shall have had at least two years of training under a Class I licensed Stationary
2 Engineer or equivalent training, or shall be registered with the Missouri State Board of
3 Registration for Architects and Professional Engineers as an Engineer or as an Engineer
4 in Training, and shall have been actually employed in the engineering or research
5 division of a power generating plant in an engineering capacity for a minimum of twelve
6 months. The Board may accept twelve months of formal training by a nationally
7 recognized agency in lieu of experience. The applicant shall demonstrate their
8 knowledge, skill, ability and competency to the Board to operate boilers or steam
9 generators of any size or capacity rating which are generating saturated or superheated
10 steam at any pressure in excess of fifteen psig, or hot water or any other liquid as defined
11 in this code, and ammonia systems in excess of one hundred tons capacity, and to operate
12 associated power plant components and auxiliaries, such as steam turbines, engines, air
13 compressors, ammonia systems, pumps, and feed water heaters, electric generators and
14 other equipment.

15 **110.6.2 Qualifications for stationary engineer, class II.** All applicants for a Class II
16 Stationary Engineer's License shall be a citizen of the United States, shall have made
17 application for such citizenship, or shall be authorized to hold employment by the
18 Immigration and Naturalization Service and shall be at least nineteen years of age. The
19 applicant shall have had at least one year's experience in the operations of steam boilers
20 or steam generators under the supervision of a Class I or Class II Stationary Engineer or
21 equivalent training, or shall have had one year's experience in maintenance work on
22 steam boilers, steam generators and/or steam engines or steam turbines and/or ammonia
23 systems in excess of fifty tons capacity or shall be registered with the Missouri State

1 Board of Registration for Architects and Professional Engineers as an Engineer or as an
2 Engineer in Training. The Board may accept twelve months of formal training by a
3 nationally recognized agency in lieu of experience. The applicant shall demonstrate their
4 knowledge, skill, ability and competency to the Board to operate boilers or steam
5 generators which have not more than one thousand five hundred square feet of rated
6 heating surface and which are generating saturated or superheated steam in a pressure
7 range of fifteen psig minimum to three hundred psig maximum, or hot water or any other
8 liquid as defined in this code and to operate associated compressors, ammonia
9 compressors, pumps, and feed water heaters, electric generators and other equipment.

10 **110.6.3 Qualifications for Stationary Engineer, Class II Restricted.** The Board of
11 Stationary Engineers shall be permitted to license applicants for a Stationary Engineer's
12 License as Class II Restricted Stationary Engineers upon finding that the applicant is
13 thoroughly familiar with the operating principals which concern the safety and care of the
14 boiler or steam generator. The Class II Restricted Stationary Engineer's License is issued
15 for work at a specific location as designated on the application and is not transferable.

16 **110.7 Examination (all classes) for stationary engineers.** The examination for a Class
17 II Stationary Engineer's License shall be oral. The examination for Class I Stationary
18 Engineer's License shall be both oral and written, provided that the applicant shall attain
19 a predetermined percentage as set by the Board of Stationary Engineers in the written
20 examination before the applicant becomes eligible for the oral examination. The written
21 examination must be completed within six months from the date of application. If the
22 applicant does not pass either the oral or written examination the applicant shall wait
23 ninety days before filing a new application.

1 **110.8 Temporary operation by unlicensed persons.** In cases of emergency, and with
2 the approval of the code official, an owner or steam user may appoint a trustworthy
3 experienced person, familiar with the operation of the plant, as a temporary operator in
4 plants where licensed operators are required by this code.

5 **110.8.1 Permit to operate.** Before a designated person can operate the plant, the code
6 official or duly appointed representative, shall be notified. An inspection of the plant
7 shall be made to determine the fitness of the appointed operator. If such person is found
8 to be fit, a permit shall be issued by the code official for such person to operate the plant
9 on a temporary basis; such permit shall be issued for no longer than thirty days. After
10 issuance of the permit, inspection of the plant thereafter shall be on a daily basis as long
11 as the operator remains in the temporary classification. An inspection fee shall be
12 charged per inspection to the owner or steam user payable upon receipt of bill; total cost
13 to be determined at the conclusion of the daily inspections. See Table 110.9 for fee
14 schedule.

15 **110.8.2 Application for license.** Within three working days after permission is granted,
16 the designated operator shall make application to the Board of Stationary Engineers for
17 examination for the class license required for the plant. Application and examination
18 shall be in accordance with the provisions of section 110.6. In the case of a Class I
19 examination the applicant shall complete the written portion of the examination within
20 fourteen days. Both written and oral parts of the examination shall be completed so that
21 the applicant's qualifications for licensing shall be determined within the thirty day period
22 of emergency operation. If the Board of Stationary Engineers determine that the
23 applicant has failed the examination, the applicant's permit to operate on a temporary

1 basis shall be revoked immediately and such person shall not be eligible for
 2 reappointment as a temporary operator until the examination has been passed.

3 **110.9 Licenses and fees.** At the time of the filing of the application, each applicant for a
 4 Boiler Operator Certificate of Competency or Stationary Engineer’s License, shall pay to
 5 the Secretary of the Board of Stationary Engineers a filing fee as set forth in Table 110.9,
 6 to cover the cost of the examination given under the provisions of this section. Provided,
 7 further, that under no conditions shall said sum, or any part thereof, be refunded if the
 8 applicant fails to pass the examination or if the applicant fails to complete the written
 9 examination within the prescribed time limit as set by the Board of Stationary Engineers.

10 All monies received by the secretary shall be paid to the City Treasurer. All applicants
 11 passing the examination for a Class I or Class II Stationary Engineer’s License shall be
 12 presented, upon the passage of such examination, with a Stationary Engineer’s License
 13 for the class for which they have been licensed. All licenses shall be issued for a period
 14 of one year from the date of issuance and shall be renewed each year. The fee for
 15 licenses renewal shall be as specified in Table 110.9.

TABLE 110.9			
LICENSE FEES			
BOARD OF STATIONARY ENGINEERS			
ITEM	FEE	DURATION	REMARKS AND REQUIREMENTS
STATIONARY ENGINEER’S			

LICENSE			
Examination and Application Fee	\$ 15.00		
Class I	\$ 15.00	1 year	
Class II	\$ 10.00	1 year	
Renewal Fee			
Class I			
Class II			
BOILER OPERATORS CERTIFICATE OF COMPETENCY	\$ 8.00		Includes initial certification
Examination Fee	\$ 8.00	1 year	Issued for one year from date
Renewal			
TEMPORARY BOILER PLANT OPERATOR	\$100.00		Issued for up to 30 days
Permit - per day			

1

2 **110.9.1 License to be displayed.** At all times when boilers, steam generators or

1 associated equipment are in use and are operating, there shall be in charge and attendance
2 a licensed Stationary Engineer of the class designated in Sections 110.5.1 thru 110.5.4.
3 The license shall be displayed in some prominent place where the boilers, steam
4 generators and associated equipment are in use and any licensed Stationary Engineer
5 shall be negligent in the performance of their duties, should they fail to display the
6 license or have an invalid license on display while in attendance of boilers, steam
7 generators and associated equipment in their charge and in operation.

8 **110.9.2 Renewal.** Boiler Operator Certificates of Competency and Stationary
9 Engineer's Licenses shall be renewed annually by the Board of Stationary Engineers
10 upon payment of an annual renewal fee. The Board of Stationary Engineers shall have
11 the power to revoke such certificate or license for cause.

12 **110.9.3 Notice of change of employment.** Every Stationary Engineer or Boiler
13 Operator regulated under the provisions of this section is required to notify the Secretary
14 of the Board of Stationary Engineers, within forty-eight hours thereafter, when they
15 accept or leave employment as a Stationary Engineer or Boiler Operator and to submit
16 the name of their new employer.

17 **110.10 Penalty.** Any owner or steam user of a boiler, steam generator or associated
18 equipment who shall neglect or refuse to employ a licensed Stationary Engineer of the
19 class designated in Section 110.5, or who allows any unlicensed person to be in charge
20 and attendance of boilers, steam generator or associated equipment requiring a licensed
21 Stationary Engineer, except as provided for in section 110.8, shall, upon conviction
22 thereof, be penalized as set forth in **SECTION FOUR**.

23 **110.10.1 Penalty for violation by operators.** Any licensed Class II Stationary Engineer

1 or certified Boiler Operator who shall be in charge and attending the operation of a boiler,
2 steam generator or associated equipment in excess of the legal size and capacity, shall.
3 upon conviction thereof, be penalized as set forth in **SECTION FOUR**. In addition to
4 such fine, the License of such Stationary Engineer or the Certificate of Competency of
5 the Boiler Operator shall be suspended for a period not to exceed ninety days or revoked
6 as determined by the Board of Stationary Engineers.

7 **110.10.2 Suspension of license.** The Board of Stationary Engineers shall order the
8 suspension for not exceeding ninety days, or revocation of a Stationary Engineer License
9 or Boiler Operator Certificate of Competency of any person regulated under the
10 provisions of this section where the Board, after a public hearing, finds that the licensee
11 is addicted to drugs or alcohol, or was under the undue influence of drugs or alcohol
12 while in attendance and performing their duties as a licensed Stationary Engineer or
13 certified Boiler Operator, or has been negligent in the performance of their duties while
14 in attendance of the equipment for which they are licensed so as to endanger the lives and
15 property of persons in the immediate area of such equipment; provided further that such
16 person shall be given a ten day notice of the time and place of such hearing. Such person
17 may be represented by counsel at such hearing before such Board. The Board of
18 Stationary Engineers, at their discretion, may order a new examination for applicants for
19 reinstatement of a license or certificate suspended or revoked under the provisions of this
20 section.

21 The Board of Stationary Engineers shall also order the suspension for a period not to
22 exceed thirty days, of the Stationary Engineer's License or Boiler Operator Certificate of
23 Competency of any person licensed under the provisions of this section, where the Board,

1 after a public hearing, shall find that the licensee has failed to comply with the provisions
2 of this section. Such person shall be given a ten day notice of such hearing and may be
3 represented by counsel at such hearing.

4 **110.11 Failure to comply.** Any owner or steam user who fails to comply with the above
5 provisions of this code shall be in violation of this code and the code official shall and is
6 hereby directed to consider the plant unsafe and officially seal the plant out of service.

7 *Change Section 201.3 to read as follows:*

8 **201.3 Terms defined in other codes.** Where terms are not defined in this code and are
9 defined in the building code, electrical code, fire code, *International Fuel Gas Code* or
10 the plumbing code, such terms shall have meanings ascribed to them as in those codes.

11 *Modify Section 202 by the alteration of the following definitions:*

12 **BASE FLOOD ELEVATION.** A reference point, determined in accordance with the
13 building code, based on the depth or peak elevation of flooding, including wave height,
14 which has a 1 percent (100-year flood) or greater chance of occurring in any given year.

15 **BUILDING CODE.** The building code adopted by the City of St. Louis.

16 **ELECTRICAL CODE.** The electrical code adopted by the City of St. Louis.

17 **FIRE CODE.** The fire code adopted by the City of St. Louis.

18 **FLEXIBLE AIR CONNECTOR.** A flexible air duct not having certain flame
19 penetration, puncture and impact tests.

20 **FLEXIBLE AIR DUCT.** A flexible air duct tested in accordance with Underwriters
21 Laboratory's *Standard for Factory made Duct Materials*, UL-181, and installed in
22 accordance with the conditions of its UL listing. Separate installation limitations for
23 flexible air connectors and flexible air ducts are identified in NFPA Standard 90A.

1 **HAZARDOUS LOCATION.** Any location considered to be a fire hazard for
2 flammable vapors, dust, combustible fibers or other highly combustible substances. The
3 location is not necessarily categorized in the building code as a high-hazard use group
4 classification.

5 **PLUMBING CODE.** The plumbing code adopted by the City of St. Louis.

6 **PORTABLE COOKING APPLIANCE.** A single non-permanent cooking appliance
7 (not attached with screws, clamps or other fastening devices) which is electrically cord
8 and plug connected and/or gas-fired using listed and labeled gas convenience outlets used
9 in conjunction with listed and labeled gas appliance connectors. A portable cooking
10 appliance shall be counter- or table-top mounted; shall be less than 2 feet (610 mm) in
11 any dimension; and shall weigh less than 100 pounds (454 kg). The owner or operator of
12 a portable cooking appliance shall be able to provide the Mechanical Inspection Section
13 with manufacturer's information documenting the above information.

14 **SAFETY VALVE.** A valve that relieves pressure in a closed system by opening fully at
15 the rated discharge pressure. The valve is of the spring-pop type.

16 **WORKMANLIKE.** Executed in a skilled manner, e.g., generally plumb, level, square,
17 in line, undamaged and without marring adjacent work.

18 *Change Sections 301.7 and 301.8 to read as follows:*

19 **301.7 Electrical.** Electrical wiring, controls and connections to equipment and
20 appliances regulated by this code shall be in accordance with the electrical code.

21 **301.8 Plumbing connection.** Potable water supply and building drainage system
22 connections to equipment and appliances regulated by this code shall be in accordance

1 with the plumbing code.

2 *Add Section 301.16 to read as follows:*

3 **301.16 Annual Inspections.** All mechanical equipment shall be inspected annually by
4 the code official. Satisfactory conditions shall be denoted by the attachment of an
5 approval sticker to the equipment.

6 **Exceptions:**

- 7 1. Mechanical equipment in Use Group R-3,
- 8 2. Refrigeration equipment of less than 15 tons capacity
- 9 3. Kitchen exhaust equipment.

10 *Add Section 302.6 to read as follows:*

11 **302.6 Stud Guards.** When the edge of bored holes is less than one inch (25 mm) from
12 the edge of a stud or joist, and when notched studs or joists are covered, stud guards shall
13 be installed to protect service lines from fastener damage.

14 *Change Section 303.5 to read as follows:*

15 **303.5 Indoor locations.** Fuel fired furnaces and boilers installed in closets and alcoves
16 shall be listed for such installation. For purposes of this section, a closet or alcove shall
17 be defined as a room or space having a volume less than 12 times the total volume of
18 fuel-fired appliances other than boilers and less than 16 times the total volume of boilers.
19 Room volume shall be computed using the gross floor area and the actual ceiling height
20 up to a maximum computation height of 8 feet (2438 mm). Closets used for the
21 installation of fuel-fired appliances shall not be used for storage.

22 *Change Section 303.7 to read as follows:*

23 **303.7 Pit locations.** Appliances installed in pits or excavations shall not come in direct

1 contact with the surrounding soil. The sides of the pit or excavation shall be held back a
2 minimum of 12 inches (305 mm) from the appliance except where additional space is
3 required for servicing or maintenance. Where the depth exceeds 12 inches (305 mm)
4 below adjoining grade, the walls of the pit or excavation shall be lined with concrete or
5 masonry extending a minimum of 4 inches (102 mm) above adjoining grade having
6 sufficient lateral load bearing capacity to resist collapse. The appliance shall be protected
7 from flooding in an approved manner.

8 *Change Section 304.6 to read as follows:*

9 **304.6 Private garages.** Appliances located in private garages shall be installed with a
10 minimum clearance of 8 feet (2439 mm) above the finish floor.

11 **Exception:** The requirements of this section shall not apply where the appliances are
12 protected from motor vehicle impact and installed in accordance with Section 304.3 and
13 NFPA 88B.

14 *Add Section 304.12 to read as follows:*

15 **304.12 Equipment guards.** Pulleys, belts, gears and similar equipment shall be
16 protected by an approved guard.

17 *Change Section 306.1.1 to read as follows:*

18 **306.1.1 Central furnaces.** Central furnaces within compartments or alcoves shall have
19 a minimum working space clearance as specified by the manufacturer but not less than 3
20 inches (76 mm) along the sides, back and top with a total width of the enclosing space
21 being at least 12 inches (305 mm) wider than the furnace. Furnaces having a firebox
22 open to the atmosphere shall have at least 6 inches (152 mm) working space along the
23 front combustion chamber side. Combustion air openings at the rear or side of the

1 compartment shall comply with the requirements of Chapter 7.

2 **Exception:** This section shall not apply to appliances installed in existing compartments
3 and alcoves where the working space clearances are in accordance with the equipment or
4 appliance manufacturer's installation instructions.

5 *Change Section 306.3 to read as follows:*

6 **306.3 Appliances in attics.** Attics containing appliances requiring access shall be
7 provided with an opening and unobstructed passageway large enough to allow removal of
8 the largest appliance, but not less than 30 inches (762 mm) high and 30 inches (762 mm)
9 wide and not more than 20 feet (6096 mm) in length when measured along the centerline
10 of the passageway from the opening to the appliance. The passageway shall have
11 continuous solid flooring not less than 24 inches (610 mm) wide. A continuous level
12 service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be
13 present at the front or service side of the appliance. The clear access opening dimensions
14 shall be a minimum of 22 inches by 30 inches (559 mm by 762 mm), where such
15 dimensions are large enough to allow removal of the largest appliance.

16 **Exception:** The passageway and level service space are not required where the appliance
17 is capable of being serviced and removed through the required opening.

18 *Change Section 306.3.1 to read as follows:*

19 **306.3.1 Electrical requirements.** A lighting fixture controlled by a switch located at
20 the required passageway opening and a receptacle outlet shall be provided at or near the
21 appliance location in accordance with the electrical code.

22 *Change Section 306.4 to read as follows:*

23 **306.4 Appliances under floors.** Underfloor spaces containing appliances requiring

1 access shall be provided with an access opening and unobstructed passageway large
2 enough to remove the largest appliance. The passageway shall not be less than 30 inches
3 (762 mm) high and 30 inches (762 mm) wide and not more than 20 feet (6096 mm) in
4 length when measured along the centerline of the passageway from the opening to the
5 appliance. A level service space not less than 30 inches (762 mm) deep and 30 inches
6 (762 mm) wide shall be present at the front or service side of the appliance. If the depth
7 of the passageway or the service space exceeds 12 inches (305 mm) below the adjoining
8 grade, the walls of the passageway shall be lined with concrete or masonry. Such
9 concrete or masonry shall extend a minimum of 4 inches (102 mm) above the adjoining
10 grade and shall have sufficient lateral-bearing capacity to resist collapse. The clear
11 access opening dimensions shall be a minimum of 22 inches by 30 inches (559 mm by
12 762 mm), where such dimensions are large enough to allow removal of the largest
13 appliance.

14 **Exception:** The passageway is not required where the level service space is present when
15 the access is open and the appliance is capable of being serviced and removed through
16 the required opening.

17 *Change Section 306.4.1 to read as follows:*

18 **306.4.1 Electrical requirements.** A lighting fixture controlled by a switch located at the
19 required passageway opening and a receptacle outlet shall be provided at or near the
20 appliance location in accordance with the electrical code.

21 *Add Sections 306.5.3 thru 306.5.5.*

22 **306.5.3 Outside ladders.** Permanent or portable outside ladders may be provided on the
23 inside or outside of single story buildings not over twenty feet in height. All other means

1 of access shall be a permanent or fold-away inside stairway or ladder with railings,
2 terminating in an enclosure, scuttle or trap door. Such scuttles or trap doors shall be at
3 least thirty inches in the smallest dimension and shall open easily and safely under all
4 conditions, especially snow, and shall be constructed so as to permit access from the roof
5 side, unless deliberately locked from the inside. At least six feet clearance shall be
6 available between the access opening and the edge of a roof or similar hazard. Otherwise
7 rigidly fixed rails or guards at least three feet in height shall be provided on the exposed
8 side, except that parapets at least three feet in height may be utilized in lieu of guards or
9 rails.

10 **306.5.4 Catwalks.** For elevated structures, level catwalks not less than twenty-four
11 inches wide shall be provided from the roof access to every required working platform at
12 the appliance. Catwalks with slope greater than three inches to twelve inches shall be
13 provided with substantial cleats spaced not more than sixteen inches apart. The down
14 slope side of catwalks on pitched roofs shall be provided with minimum thirty-six inch
15 high handrails.

16 **306.5.5 Electrical requirements.** A receptacle outlet shall be provided at or near the
17 appliance location in accordance with the electrical code.

18 *Change Section 306.6 to read as follows*

19 **306.6 Roof access.** Every appliance located on a roof of a building shall be installed on
20 a level platform. Whenever the roof has a slope greater than three units measured
21 vertically to twelve units measured horizontally, a level working platform not less than
22 thirty inches (762 mm) in depth shall be provided on each down slope side of the
23 appliance. All sides of any working platform shall be protected by a substantial railing

1 thirty-six inches (914 mm) in height with vertical rails not more than twenty-one inches
2 (533 mm) apart, except that parapets at least thirty-six inches (914 mm) in height may be
3 utilized in lieu of rails or guards. Scuttles located on other than the roof incline side of
4 the equipment unit shall have their lids or trap doors hinged on the low side of the
5 scuttle. Such lids or trap doors shall be equipped with means to ensure an opening radius
6 of not less than ninety degrees nor more than one hundred (100) degrees from the closed
7 position. Scuttle lids or trap doors and hardware, when opened, shall be capable of
8 withstanding a three hundred pound lateral load from the roof incline side.

9 *Change Section 307.2.3 to read as follows:*

10 **307.2.3 Auxiliary and secondary drain systems.** In addition to the requirements of
11 Section 307.2.1, a secondary or auxiliary drain pan shall be required for each cooling or
12 evaporator coil where damage to any building components will occur as a result of
13 overflow from the equipment drain pan or stoppage in the condensate drain piping. One
14 of the following methods shall be used:

15 1. An auxiliary drain pan with a separate drain shall be provided under the coils on
16 which condensation will occur. The auxiliary pan drain shall discharge to a non-
17 concealed point of disposal to alert occupants in the event of a stoppage of the primary
18 drain. The pan shall have a minimum depth of 1½ inches (38 mm), shall not be less than
19 3 inches larger than the unit or the coil dimensions in width and length and shall be
20 constructed of corrosion-resistant material. Metallic pans shall have a minimum
21 thickness of not less than 0.0276-inch (0.7 mm) galvanized sheet metal. Non-metallic
22 pans shall have a minimum thickness of not less than 0.0625 inch (1.6 mm). Pans shall
23 be supported to ensure proper drainage.

1 2. A separate overflow drain line shall be connected to the drain pan provided with the
2 equipment. Such overflow drain shall discharge to a conspicuous point of disposal to
3 alert occupants in the event of a stoppage of the primary drain. The overflow drain line
4 shall connect to the drain pan at a higher level than the primary drain connection.

5 3. An auxiliary drain pan without a separate drain line shall be provided under the coils
6 on which condensate will occur. Such pan shall be equipped with a water-level detection
7 device that will shut off the equipment served prior to overflow of the pan. The auxiliary
8 drain pan shall be constructed in accordance with Item 1 of this section.

9 *Change Section 307.2.4 to read as follows:*

10 **307.2.4 Traps.** Primary condensate drains shall be trapped as required by the equipment
11 or appliance manufacturer. An air gap shall be provided between the drain line and the
12 sewer.

13 *Change Section 310.1 to read as follows:*

14 **310.1 Required.** Structures occupied for purposes involving explosion hazards shall be
15 provided with explosion venting where required by the fire code. Explosion venting
16 systems shall be designed and installed in accordance with the fire code.

17 *Change Section 311.1 to read as follows:*

18 **311.1 Required.** Approved smoke and heat vents shall be installed in the roofs of one-
19 story buildings where required by the fire prevention code. Smoke and heat vents shall
20 be designed and installed in accordance with the fire code.

21 *Change Section 312 to read as follows:*

22 **SECTION 313**

23 **MEDICAL GASES**

1 **313.1 Nonflammable medical gases.** Nonflammable medical gas systems shall be
2 designed and installed in accordance with Chapter 4 of NFPA 99 listed in Chapter 16.

3 **313.2 Anesthetic systems.** Inhalation anesthetic systems shall be designed and installed
4 in accordance with Chapters 3 and 4 of NFPA 99 listed in Chapter 16.

5 **313.3 Oxygen systems.** Non-medical oxygen systems shall be designed and installed in
6 accordance with NFPA 50 and NFPA 51 listed in Chapter 16.

7 *Change Section 401.3 to read as follows*

8 **401.3 Where required.** Ventilation shall be provided during the periods that the room
9 or space is occupied. Spaces containing fuel burning appliances shall be ventilated per
10 Chapter 7.

11 *Change Section 401.4 to read as follows:*

12 **401.4 Opening location.** Outside air exhaust and intake openings shall be located a
13 minimum of 10 feet (3048 mm) from lot lines or buildings on the same lot. In multi-story
14 structures the location of intake and exhaust openings shall be approved by the code
15 official.

16 **Exception:** Use Group R-3.

17 *Change Section 401.4.4 to read as follows:*

18 **401.4.4 Exhaust openings.** Outside exhaust openings shall be located so as to not create
19 a nuisance. Exhaust air shall not be directed onto walkways. Exhaust openings above
20 driveways and alleys shall be located fourteen feet above grade measured to the bottom
21 of the opening or equipment if the exhaust equipment protrudes beyond the wall.

22 *Change Section 403.3 to read as follows:*

23 **403.3 Ventilation rate.** Ventilation systems shall be designed to have the capacity to

1 supply the minimum outdoor air flow rate determined in accordance with Table 403.3
2 based on the occupancy of the space and the occupant load or other parameter as stated
3 therein. The occupant load utilized for design of the ventilation system shall not be less
4 than the number determined from the estimated maximum occupant load indicated in
5 Table 403.3. Ventilation rates for occupancies not represented in Table 403.3 shall be
6 determined by an approved engineering analysis. The ventilation system shall be
7 designed to supply the required rate of ventilation air continuously during the period the
8 building is occupied, except as otherwise stated in other provisions of the code.

9 **Exception:** The occupant load shall not be required to be determined by Table 403.3,
10 where alternate occupant load is determined and approved by the Fire Marshal.

11 *Change Section 406.1 to read as follows:*

12 **406.1 General.** Uninhabited spaces, such as crawl spaces and attics, shall be provided
13 with natural ventilation openings as required by the building code or shall be provided
14 with a mechanical exhaust and supply air system. The mechanical exhaust rate shall not
15 be less than 0.02 cfm per square foot ($0.00001 \text{ m}^3/\text{s} \cdot \text{m}^2$) of horizontal area and shall be
16 automatically controlled to operate when the relative humidity in the space served
17 exceeds 60 percent.

18 *Add Section 501.2.1.5 To read as follows:*

19 **501.2.1.5 Energy recovery wheels.** Energy recovery wheels, enthalpy wheels or
20 regenerative heat exchangers shall not be installed on any single or combined
21 mechanical exhaust system from bath, toilet, urinal, locker, service sink closet and similar
22 room. Energy recovery wheels, enthalpy wheels or regenerative heat exchangers shall
23 not be installed on any Type I or Type II exhaust system for food-processing operations.

1 *Change Section 502.7.2 to read as follows:*

2 **502.7.2 Limited spraying spaces.** Positive mechanical ventilation which provides a
3 minimum of six complete air changes per hour shall be installed in limited spraying
4 spaces. Such system shall meet the requirements of the fire code for handling flammable
5 vapors. Explosion venting is not required.

6 *Change Section 502.8.1 to read as follows:*

7 **502.8.1 Storage in excess of the maximum allowable quantities.** Indoor storage areas
8 and storage buildings for hazardous materials in amounts exceeding the maximum
9 allowable quantity per control area shall be provided with mechanical exhaust ventilation
10 or natural ventilation where natural ventilation can be shown to be acceptable for the
11 materials stored

12 **Exception:** Storage areas for flammable solids complying with the fire code.

13 *Change Section 502.9.5 to read as follows:*

14 **502.9.5 Flammable and combustible liquids.** Exhaust ventilation systems shall be
15 provided as required by Sections 502.9.5.1 through 502.9.5.5 for the storage, use,
16 dispensing, mixing and handling of flammable and combustible liquids. Unless
17 otherwise specified, this section shall apply to any quantity of flammable and
18 combustible liquids.

19 **Exception:** This section shall not apply to flammable and combustible liquids that are
20 exempt from the fire code.

21 *Change Sections 502.9.5.2 and 502.9.5.3 to read as follows:*

22 **502.9.5.2 Storage rooms and warehouses.** Liquid storage rooms and liquid storage
23 warehouses for quantities of liquids exceeding those specified in the fire code shall be

1 vented in accordance with Section 502.8.1

2 **502.9.5.3 Cleaning machines.** Areas in which machines used for parts cleaning in
3 accordance with the fire code are located shall be adequately ventilated to prevent
4 accumulation of vapors.

5 *Change Sections 502.9.5.2 and 502.9.5.3 to read as follows:*

6 **502.9.5.2 Local exhaust for portable tanks.** A means of local exhaust shall be provided
7 to capture leakage from indoor and outdoor portable tanks. The local exhaust shall
8 consist of portable ducts or collection systems designed to be applied to the site of a leak
9 in a valve or fitting on the tank. The local exhaust system shall be located in a gas room.
10 Exhaust shall be directed to a treatment system where required by the fire code.

11 **502.9.5.3 Piping and controls - stationary tanks.** Filling or dispensing connections on
12 indoor stationary tanks shall be provided with a means of local exhaust. Such exhaust
13 shall be designed to capture fumes and vapors. The exhaust shall be directed to a
14 treatment system where required by the fire code.

15 *Change Sections 502.9.8.5 and 502.9.8.6 to read as follows:*

16 **502.8.8.5 Treatment system.** The exhaust ventilation from gas cabinets, exhausted
17 enclosures and gas rooms, and local exhaust systems required by Sections 502.9.8.2 and
18 802.9.8.3 shall be directed to a treatment system where required by the fire code.

19 **502.9.8.6 Process equipment.** Effluent from indoor and outdoor process equipment
20 containing highly toxic or toxic compressed gases which could be discharged to the
21 atmosphere shall be processed through an exhaust scrubber or other processing system.
22 Such systems shall be in accordance with the fire code.

23 *Change Section 502.10 to read as follows:*

1 **502.9 Hazardous production materials (HPM).** Exhaust ventilation systems and
2 materials for ducts utilized for the exhaust of HPM shall comply with this section, other
3 applicable provisions of this code, the *International Building Code* and the fire code.

4 *Change Section 502.10.3 to read as follows:*

5 **502.10.3 Treatment systems.** Treatment systems for highly toxic and toxic gases shall
6 comply with the fire code.

7 *Change Section 502.16.2 to read as follows:*

8 **502.16.2 Operation.** The mechanical ventilation system shall operate continuously.

9 **Exceptions:**

- 10 1. Mechanical ventilation systems that are interlocked with a gas detection system
11 designed in accordance with the fire code.
- 12 2. Mechanical ventilation systems in garages that are used only for the repair of vehicles
13 fueled by liquid fuels or odorized gases, such as CNG, where the ventilation system is
14 electrically interlocked with the lighting circuit.

15 *Change Section 506.1 to read as follows*

16 **506.1 General.** Commercial kitchen grease ducts and exhaust equipment shall comply
17 with the requirements of this section. Commercial kitchen grease ducts shall be designed
18 for the type of cooking appliances and hood served. Commercial systems shall comply
19 with Sections 506, 507, 508 and 509 of this code and NFPA 96 listed in Chapter 15.

20 *Change Section 506.3 to read as follows:*

21 **506.3 Ducts serving Type I hoods.** Commercial kitchen exhaust systems serving Type
22 I hoods shall be liquid-tight, designed, constructed and installed in accordance with
23 Sections 506.3.1 through 506.13.3 and NFPA 96.

1 *Change Section 506.3.3 to read as follows:*

2 **506.3.3 Grease duct support.** Grease duct bracing and supports shall be of
3 noncombustible material securely attached to the structure and designed to carry gravity
4 and seismic loads within the stress limitations of the building code. Bolts, screws, rivets
5 and other mechanical fasteners shall not penetrate duct walls.

6 *Add Sections 506.6 and 506.7 to read as follows:*

7 **506.6 Cleaning Schedule.** A cleaning schedule shall be maintained by the owner or
8 occupant for every commercial kitchen exhaust system. The schedule shall indicate the
9 methods of cleaning and the time interval between cleanings.

10 **506.7. Existing Equipment.** Existing commercial kitchen exhaust equipment shall be
11 made of copper, steel or stainless steel, shall be of liquid tight construction throughout the
12 head and associated exhaust duct(s) shall incorporate an approved fire suppression
13 system and shall successfully pass a capture test.

14 *Change Section 507.2 to read as follows:*

15 **507.2 Where required.** A Type I or Type II hood shall be installed at or above all
16 commercial food heat-producing appliances. A Type II hood shall be installed above
17 commercial dishwashing machines and pizza ovens.

18 **Exceptions:**

- 19 1. Food heat-processing appliances installed within a dwelling unit.
20 2. Under-counter-type commercial dishwashing machines.
21 3. Portable cooking appliances. Any portable cooking appliance which the manufacturer
22 recommends venting must be vented according to Sections 506 and 507.

23 *Add Section 507.9.1 to read as follows:*

1 **507.9.1 Flashing.** Hoods located less than 12 inches (305 mm) from a ceiling or wall
2 shall be flashed solidly with materials specified in section 507.4 or noncombustible
3 materials having a minimum 1-hour fire-resistance rating.

4 *Add Sections 507.17.1 and 507.17.2 to read as follows:*

5 **507.17.1 Pizza oven.** The exhaust air requirements for a chamber type oven shall be 10
6 cfm/lineal foot of door opening or 500 cfm, whichever is more. For conveyor type ovens
7 the exhaust air shall be 50 cfm times the total area of the end openings or 500 cfm
8 whichever is more. The hood shall effectively capture the vapors from the air.

9 **507.17.2 Dishwashing equipment hoods.** The total quantity of air (Q) to be exhausted
10 from dishwashing equipment hoods shall be determined by the following formula:

11 Pantleg Hoods: $Q = 150 \text{ cfm/square foot of door area each end.}$

12 Exhausted Vestibules: $Q = 15 \text{ cfm/square foot of entrance and exit area.}$ When duct
13 takeoffs are an integral part of the unit, follow manufacturer's recommendations for
14 exhaust rate.

15 *Change Section 508.1 to read as follows:*

16 **508.1 Makeup air.** Makeup air shall be supplied during the operation of the commercial
17 kitchen exhaust system that is provided for commercial food heat-processing appliances
18 whenever the volume of air exceeds 1500 cfm. Makeup air must be all outside air equal
19 in volume to the amount exhausted with a minimum of eighty percent supplied to the
20 kitchen proper. The makeup air shall not reduce the effectiveness of the exhaust system.
21 Makeup air shall be provided by gravity or mechanical means or both. For mechanical
22 makeup air systems, the exhaust and makeup air systems shall be electrically interlocked
23 to insure that makeup air is provided whenever the exhaust system is in operation.

1 **Exception:** This section shall not apply to dwelling units.

2 *Change Section 509.1 to read as follows:*

3 **509.1 Where required.** Commercial food heat-processing appliances required by Section
4 507.2.1 to have a Type I hood shall be provided with an approved automatic fire
5 suppression system complying with the *International Building Code* and the fire code.

6 *Add Sections 509.2 thru 509.2.6.5 to read as follows:*

7 **509.2 Commercial cooking systems.** The automatic fire-extinguishing system for
8 commercial cooking systems shall be of a type recognized for protection of commercial
9 cooking equipment and exhaust systems of the type and arrangement protected.

10 Preengineered automatic dry- and wet-chemical extinguishing systems shall be tested in
11 accordance with UL 300 and listed and labeled for the intended application. Other types
12 of automatic fire-extinguishing systems shall be listed and labeled for specific use as
13 protection for commercial cooking operations. The system shall be installed in
14 accordance with this code, its listing and the manufacturer's installation instructions.

15 Automatic fire-extinguishing systems of the following types shall be installed in
16 accordance with NFPA 96 and the referenced standard indicated, as follows:

- 17 1. Carbon dioxide extinguishing systems, NFPA 12.
- 18 2. Automatic sprinkler system, NFPA 13.
- 19 3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
- 20 4. Dry-chemical extinguishing systems, NFPA 17.
- 21 5. Wet-chemical extinguishing systems, NFPA 17A.

22 **509.2.1 Manual system operation.** A manual actuation device shall be located at or
23 near a means of egress from the cooking area, a minimum of 10 feet (3048 mm) and a

1 maximum of 20 feet (6096 mm) from the kitchen exhaust system. The manual actuation
2 device shall be located a minimum of 4.5 feet (1372 mm) and a maximum of 5 feet (1524
3 mm) above the floor. The manual actuation shall require a maximum force of 40 pounds
4 (178 N) and a maximum movement of 14 inches (356 mm) to actuate the fire suppression
5 system.

6 **Exception:** Automatic sprinkler systems shall not be required to be equipped with
7 manual actuation means.

8 **509.2.2 System interconnection.** The actuation of the fire suppression system shall
9 automatically shut down the fuel or electrical power supply to the cooking equipment.
10 The fuel and electrical supply reset shall be manual.

11 **509.2.3 Carbon dioxide systems.** When carbon dioxide systems are used, there shall be
12 a nozzle at the top of the ventilating duct. Additional nozzles that are symmetrically
13 arranged to give uniform distribution shall be installed within vertical ducts exceeding 20
14 feet (6096 mm) and horizontal ducts exceeding 50 feet (15,240 mm). Dampers shall be
15 installed at either the top or the bottom of the duct and shall be arranged to operate
16 automatically upon activation of the fire-extinguishing system. When the damper is
17 installed at the top of the duct, the top nozzle shall be immediately below the damper.
18 Automatic carbon dioxide fire-extinguishing systems shall be sufficiently sized to protect
19 all hazards venting through a common duct simultaneously.

20 **509.2.3.1 Ventilation system.** Commercial-type cooking equipment protected by an
21 automatic carbon dioxide extinguishing system shall be arranged to shut off the
22 ventilation system upon activation.

23 **509.2.4 Special provisions for automatic sprinkler systems.** Automatic sprinkler

1 systems protecting commercial-type cooking equipment shall be supplied from a
2 separate, readily accessible, indicating-type control valve that is identified.

3 **509.2.4.1 Listed sprinklers.** Sprinklers used for the protection of fryers shall be listed
4 for that application installed in accordance with their listing.

5 **509.2.5 Commercial cooking equipment.** Portable fire extinguishers shall be provided
6 within a 30-foot (9144 mm) travel distance of commercial-type cooking equipment.

7 Cooking equipment involving vegetable or animal oils and fats shall be protected by a
8 Class K rated portable extinguisher.

9 **509.2.6 Operations and maintenance.** Commercial cooking systems shall be operated
10 and maintained in accordance with this section.

11 **509.2.6.1 Ventilation system.** The ventilation system in connection with hoods shall be
12 operated at the required rate of air movement, and classified grease filters shall be in
13 place when equipment under a kitchen grease hood is used.

14 **509.2.6.2 Grease extractors.** When grease extractors are installed, they shall be
15 operated when the commercial-type cooking equipment is used.

16 **509.2.6.3 Cleaning.** Hoods, grease-removal devices, fans, ducts and other appurtenances
17 shall be cleaned at intervals necessary to prevent the accumulation of grease. Cleanings
18 shall be recorded, and records shall state the extent, time and date of cleaning. Such
19 records shall be maintained on the premises.

20 **509.2.6.4 Extinguishing system service.** Automatic fire-extinguishing systems shall be
21 serviced at least every 6 months and after activation of the system. Inspection shall be by
22 qualified individuals, and a certificate of inspection shall be forwarded to the code
23 official upon completion.

1 **509.2.6.5 Fusible link and sprinkler head replacement.** Fusible links and automatic
2 sprinkler heads shall be replaced at least annually, and other protection devices shall be
3 serviced or replaced in accordance with the manufacturer's instructions.

4 **Exception:** Frangible bulbs are not required to be replaced annually.

5 *Change Sections 510.2.1 and 510.2.2 to read as follows:*

6 **510.2.1 Lumber yards and woodworking facilities.** Equipment or machinery located
7 inside buildings at lumber yards and woodworking facilities which generates or emits
8 combustible dust shall be provided with an approved dust-collection and exhaust system
9 installed in conformance with this section and the fire code. Equipment and systems that
10 are used to collect, process or convey combustible dusts shall be provided with an
11 approved explosion-control system.

12 **510.2.2 Combustible fibers.** Equipment or machinery within a building which generates
13 or emits combustible fibers shall be provided with an approved dust-collecting and
14 exhaust system. Such systems shall comply with this code and the fire code.

15 *Change Section 510.4 to read as follows:*

16 **510.4 Independent system.** Hazardous exhaust systems shall be independent of other
17 types of exhaust systems. Incompatible materials, as defined in the fire code, shall not be
18 exhausted through the same hazardous exhaust system. Hazardous exhaust systems shall
19 not share common shafts with other duct systems, except where such systems are
20 hazardous exhaust systems originating in the same fire area.

21 Contaminated air shall not be recirculated to occupied areas unless the contaminants have
22 been removed. Air contaminated with explosive or flammable vapors, fumes or dusts;
23 flammable or toxic gases; or radioactive material shall not be recirculated.

1 *Add Section 511.3 to read as follows:*

2 **511.3 Equipment in airstream.** Fans and mechanical equipment shall not be located
3 within the airstream unless specifically approved for such installation.

4 *Change Section 512.2 to read as follows:*

5 **512.2 Materials.** Subslab soil exhaust system duct material shall be air duct material
6 listed and abeled to the requirements of UL 181 for Class O air ducts, or any of the
7 following piping materials that comply with the plumbing code as building sanitary
8 drainage and vent pipe: cast iron; galvanized steel; brass or copper pipe; copper tube of a
9 weight not less than that of copper drainage tube, Type DWV; and plastic piping.

10 *Change Section 513.11 to read as follows:*

11 **513.11 Power systems.** The smoke control system shall be supplied with two sources of
12 power. Primary power shall be the normal building power system. Secondary power
13 shall be from an approved standby source complying with the electrical code. The
14 standby power source and its transfer switches shall be in a separate room from the
15 normal power transformers and switch gear and shall be enclosed in a room of not less
16 than 1-hour fire-resistance-rated construction, ventilated directly to and from the
17 exterior. Power distribution from the two sources shall be by independent routes.
18 Transfer to full standby power shall be automatic and within 60 seconds of failure of the
19 primary power. The systems shall comply with the electrical code.

20 *Change Sections 513.12 thru 513.12.2 to read as follows:*

21 **513.12 Detection and control systems.** Fire detection systems providing control input
22 or output signals to mechanical smoke control systems or elements thereof shall comply
23 with the requirements of Chapter 9 of the building code and NFPA 72. Such systems

1 shall be equipped with a control unit complying with UL 864 and listed as smoke control
2 equipment.

3 Control systems for mechanical smoke control systems shall include provisions for
4 verification. Verification shall include positive confirmation of actuation, testing, manual
5 override, the presence of power downstream of all disconnects and, through a
6 preprogrammed weekly test sequence report, abnormal conditions audibly, visually and
7 by printed report.

8 **513.12.1 Wiring.** In addition to meeting the requirements of the electrical code, all
9 wiring, regardless of voltage, shall be fully enclosed within continuous raceways.

10 **513.12.2 Activation:** The smoke control system shall be activated by actuation of the
11 following

- 12 1. Automatic sprinkler system.
- 13 2. Smoke detectors required by this section that comply with NFPA 72 listed in Chapter
14 15.
- 15 3. Manual controls provided for fire department use.

16 The system shall not be activated by a manual fire alarm system.

17 *Add Sections 513.12.2.1 and 513.12.2.2 to read as follows:*

18 **513.12.2.1 Manual control:** Manual controls shall be provided at a location approved by
19 the fire department.

20 **513.12.2.2 Smoke detector activation:** Where the height of the ceiling of the space
21 required to be provided with smoke control exceeds 30 feet (9144 mm) above the floor of
22 the space, approved smoke detectors shall be provided to detect smoke above the highest
23 floor open to an atrium or at the highest point of another space required to be provided

1 with smoke control. The installation of smoke detectors shall comply with Section 919.0
2 of the building code.

3 *Change Section 513.15 and 513.16 to read as follows:*

4 **513.15 Control diagrams.** Identical control diagrams showing all devices in the system
5 and identifying their location and function shall be maintained current and kept on file
6 with the code official, the fire department and in the fire command center in format and
7 manner approved by the fire chief.

8 **513.16 Fire-fighter's smoke control panel.** A fire-fighter's smoke control panel for fire
9 department emergency response purposes only shall be provided and shall include
10 manual control or override of automatic control for mechanical smoke control systems.
11 The panel shall be located in a fire command center complying with Sections 513.16.1
12 through 513.16.4.

13 *Add Section 513.16.1 through 513.16.4 as follows:*

14 **513.16.1 Fire command center.** The fire command center should be located at or near
15 an entrance to the building. The location and accessibility of the fire command center
16 shall be approved by the fire department. The fire command center shall be separated
17 from the remainder of the building by not less than a 1-hour fire-resistance-rated fire
18 barrier. The room shall be a minimum of 96 square feet (9 m²) with a minimum
19 dimension of 8 feet (2438 mm). A layout of the fire command center and all features
20 required by this section to be contained therein shall be submitted for approval prior to
21 installation. The fire command center shall comply with NFPA 72 and shall contain the
22 following features when required by this code, the building code, or the fire code:

23 1. The emergency voice/alarm communication system unit.

- 1 2. The fire department communications system.
- 2 3. Fire-detection and alarm system annunciator system.
- 3 4. Annunciator visually indicating the location of the elevators and whether they are
- 4 operational.
- 5 5. Status indicators and controls for air-handling systems.
- 6 6. The fire-fighter's control panel required by Section 909.16 for smoke control systems
- 7 installed in the building.
- 8 7. Controls for unlocking stairway doors simultaneously.
- 9 8. Sprinkler valve and water-flow detector display panels.
- 10 9. Emergency and standby power status indicators.
- 11 10. A telephone for fire department use with controlled access to the public telephone
- 12 system.
- 13 11. Fire pump status indicators.
- 14 12. Schematic building plans indicating the typical floor plan and detailing the building
- 15 core, means of egress, fire protection systems, fire-fighting equipment and fire
- 16 department access.
- 17 13. Work table.
- 18 14. Generator supervision devices, manual star and transfer features.
- 19 15. Public address system, where specifically required by other sections of this code.
- 20 **513.16.2 Smoke control systems.** Fans within the building shall be shown on the fire-
- 21 fighter's control panel. A clear indication of the direction of airflow and the relationship
- 22 of components shall be displayed. Status indicators shall be provided for all smoke
- 23 ontrol equipment, annunciated by fan and zone and by pilot-lamp-type indicators as

1 follows:

- 2 1. Fans, dampers and other operating equipment in their normal status - WHITE.
- 3 2. Fans, dampers and other operating equipment in their off or closed status - RED.
- 4 3. Fans, dampers and other operating equipment in their on or open status - GREEN.
- 5 4. Fans, dampers and other operating equipment in a fault status - YELLOW/AMBER.

6 **513.16.3 Smoke control panel.** The fire-fighter's control panel shall provide control
7 capability over the complete smoke-control system equipment within the building as
8 follows:

- 9 1. ON - AUTO - OFF control over each individual piece of operating smoke control
10 equipment that can also be controlled from other sources within the building. This
11 includes stairway pressurization fans; smoke exhaust fans; supply, return and exhaust
12 fans; elevator shaft fans; and other operating equipment used or intended for smoke
13 control purposes.
- 14 2. OPEN - AUTO - CLOSE control over individual dampers relating to smoke control
15 and that are also controlled from other sources within the building.
- 16 3. ON - OFF or OPEN - CLOSE control over smoke control and other critical equipment
17 associated with a fire or smoke emergency and that can only be controlled from the fire-
18 fighter's control panel.

19 **Exceptions:**

- 20 1. Complex systems, where approved, where the controls and indicators are combined to
21 control and indicate all elements of a single smoke zone as a unit.
- 22 2. Complex systems, where approved, where the control is accomplished by computer
23 interface using approved, plain English commands.

1 **513.16.4 Control action and priorities.** The fire-fighter's control panel actions shall be
2 as follows:

3 1. ON - OFF, OPEN - CLOSE control actions shall have the highest priority of any
4 control point within the building. Once issued from the fire-fighter's control panel, no
5 automatic or manual control from any other control point within the building shall
6 contradict the control action. Where automatic means are provided to interrupt normal,
7 non-emergency equipment operation or produce a specific result to safeguard the
8 building or equipment (i.e., duct freezestats, duct smoke detectors, high-temperature
9 cutouts, temperature-actuated linkage and similar devices), such means shall be capable
10 of being overridden by the fire-fighter's control panel. The last control action as
11 indicated by each fire-fighter's control panel switch position shall prevail. In no case
12 shall control actions require the smoke control system to assume more than one
13 configuration at any one time.

14 **Exception:** Power disconnects required by the electrical code.

15 2. Only the AUTO position of each three-position fire-fighter's control panel switch
16 shall allow automatic or manual control action from other control points within the
17 building. The AUTO position shall be the NORMAL, non-emergency, building control
18 position. Where a fire-fighter's control panel is in the AUTO position, the actual status
19 of the device (on, off, open, closed) shall continue to be indicated by the status indicator
20 described above. When directed by an automatic signal to assume an emergency
21 condition, the NORMAL position shall become the emergency condition for that device
22 or group of devices within the zone. In no case shall control actions require the smoke
23 control system to assume more than one configuration at any one time.

1 *Change Section 513.17 and 513.18 to read as follows:*

2 **513.17 System response time.** Smoke-control system activation shall be initiated
3 immediately after receipt of an appropriate automatic or manual activation command.
4 Smoke control systems shall activate individual components (such as dampers and fans)
5 in the sequence necessary to prevent physical damage to the fans, dampers, ducts and
6 other equipment. For purposes of smoke control, the fire-fighter's control panel response
7 time shall be the same for automatic or manual smoke control action initiated from any
8 other building control point. The total response time, including that necessary for
9 detection, shut down or operating equipment and smoke control system startup, shall
10 allow for full operation mode to be achieved before the conditions in the space exceed the
11 design smoke condition. In all cases this shall be two minutes or less. The system
12 response time for each component and their sequential relationships shall be detailed in
13 the required rational analysis and verification of their installed condition reported in the
14 required final report.

15 **.513.18 Acceptance testing.** Devices, equipment, components and sequences shall be
16 individually tested. These tests, in addition to those required by other provisions of this
17 code, shall consist of determination of function, sequence and, where applicable, capacity
18 of their installed condition.

19 *Add Section 513.18.1 through 513.18.10 as follows:*

20 **513.18.1 System operation report.** Prior to acceptance testing, a report of the required
21 system operation shall be provided to and approved by the code official. The following
22 items shall be included in the report if part of the required system:

23 1. Identify type(s) of smoke control activation signal(s) such as sprinkler waterflow,

1 smoke detection, manual, etc., and associated smoke control system operation(s) that are
2 activated by the signals.

3 2. Identify building area(s) where maximum mechanical exhaust to the outside is
4 implemented and supply air is not provided.

5 3. Identify building area(s) where maximum air supply is implemented and exhaust to
6 the outside is not provided.

7 4. Identify fan(s) which shall be "On" as required to implement the smoke control
8 system. If multiple-speed fans are used, the capacity at which the fans shall operate in
9 the smoke control mode shall be identified.

10 5. Identify fan(s) which shall be "Off" as required to implement the smoke control
11 system.

12 6. Identify damper(s) which shall be "Open" to implement the smoke control system.

13 7. Identify damper(s) which shall be "Closed" to implement the smoke control system.

14 8. Identify other functions are required to implement the smoke control system.

15 9. Identify building areas with smoke and heat vents and method of operation of vents.

16 10. If required, identify the type(s) of standby power and the equipment that is served.

17 **513.18.2 Detection devices.** Smoke or fire detectors that are a part of a smoke control
18 system shall be tested in accordance with Chapter 9 of the fire code in their installed
19 condition. When applicable, this testing shall include verification of airflow in both
20 minimum and maximum conditions.

21 **513.18.3 Ducts.** Ducts that are part of a smoke control system shall be traversed using
22 generally accepted practices to determine actual air quantities.

23 **513.18.4 Dampers.** Dampers shall be tested for function in their installed condition.

1 **513.18.5 Inlets and outlets.** Inlets and outlets shall be read using generally accepted
2 practices to determine air quantities.

3 **513.18.6 Fans.** Fan shall be examined for correct rotation. Measurements of voltage,
4 amperage, revolutions per minute and belt tension shall be made.

5 **513.18.7 Smoke barriers.** Measurements using inclined manometers or other approved
6 calibrated measuring devices shall be made of the pressure differences across smoke
7 barriers. Such measurements shall be conducted for each possible smoke control
8 condition.

9 **513.18.8 Controls.** Each smoke zone, equipped with an automatic-initiation device, shall
10 be put into operation by the actuation of one such device. Each additional device within
11 the zone shall be verified to cause the same sequence without requiring the operation of
12 fan motors in order to prevent damage. Control sequences shall be verified throughout
13 the system, including verification of override from the fire-fighter's control panel and
14 simulation of standby power conditions.

15 **513.18.9 Special inspections for smoke control.** Smoke control systems shall be tested
16 by a special inspector.

17 **513.18.9.1 Scope of testing.** Special inspections shall be conducted in accordance with
18 the following:

19 1. During erection of ductwork and prior to concealment for the purposes of leakage
20 testing and recording of device location.

21 2. Prior to occupancy and after sufficient completion for the purposes of pressure-
22 difference testing, flow measurements, and detection and control verification.

23 **513.18.9.2 Qualifications.** Special inspection agencies for smoke control shall have

1 expertise in fire protection engineering, mechanical engineering and certification as air
2 balancers.

3 **513.18.9.3 Reports.** A complete report of testing shall be prepared by the special
4 inspector or special inspection agency. The report shall include identification of all
5 devices by manufacturer nameplate data, design values, measured values and
6 identification tag or mark. The report shall be reviewed by the responsible registered
7 design professional and, when satisfied that the design intent has been achieved, the
8 responsible registered design professional shall seal, sign and date the report.

9 **513.18.9.3.1 Report filing.** A copy of the final report shall be filed with the code official
10 and an identical copy shall be maintained in an approved location at the building.

11 **513.18.10 Identification and documentation.** Charts, drawings and other documents
12 identifying and locating each component of the smoke control system, and describing
13 their proper function and maintenance requirements shall be maintained on file at the
14 building as an attachment to the report required by Section 909.18.9.3. Devices shall
15 have an approved identifying tag or mark on them consistent with the other required
16 documentation and shall be dated indicating the last time they were successfully tested
17 and by whom.

18 *Change Sections 513.19 and 513.20 to read as follows:*

19 **513.19 System acceptance.** Buildings, or portions thereof, required by this code to
20 comply with this section shall not be issued a certificate of occupancy until such time that
21 the code official determines that the provisions of this section have been fully complied
22 with, and that the fire department has received satisfactory instruction on the operation,
23 both automatic and manual, of the system.

1 **Exception:** In buildings of phased construction, a temporary certificate of occupancy, as
2 approved by the code official, shall be permitted provided that those portions of the
3 building to be occupied meet the requirements of this section and that the remainder does
4 not pose a significant hazard to the safety of the proposed occupants or adjacent
5 buildings.

6 **513.20 Underground building smoke exhaust system.** Where required by the building
7 code for underground buildings, a smoke exhaust system shall be provided in accordance
8 with this section.

9 *Change Sections 513.20.2 and 513.20.3 to read as follows:*

10 **513.20.2 Operation.** The smoke exhaust system shall be operated in the compartment of
11 origin by the following, independently of each other:

- 12 1. Two cross-zoned smoke detectors within a single protected area or a single smoke
13 detector monitored by an alarm verification zone or an approved equivalent method.
- 14 2. The automatic sprinkler system.
- 15 3. Manual controls that are readily accessible to the fire department.

16 **513.20.3 Alarm required.** Activation of the smoke exhaust system shall activate an
17 audible alarm at a constantly attended location in accordance with the fire code.

18 *Change Section 602.2.1 thru 602.2.1.1 to read as follows:*

19 **602.2.1 Materials exposed within plenums.** Except as required by Sections 602.2.1.1
20 through 602.2.1.5, materials exposed within plenums shall be noncombustible or shall
21 have a flame spread index of not more than 25 and a smoke-developed index of not more
22 than 50 when tested in accordance with ASTM E 84.

23 **Exceptions:**

- 1 1. Rigid and flexible ducts and connectors shall conform to Section 603.
- 2 2. Duct coverings, linings, tape and connectors shall conform to Sections 603 and 604.
- 3 3. This section shall not apply to materials exposed within plenums in one- and two-
- 4 family dwellings.
- 5 4. This section shall not apply to smoke detectors.

6 **602.2.1.1 Wiring.** Combustible electrical or electronic wiring methods and materials,
7 optical fiber cable, and optical fiber raceway exposed within a plenum shall have a peak
8 optical density not greater than 0.50, an average optical density not greater than 0.15, and
9 a flame spread not greater than 5 feet (1524 mm) when tested in accordance with UL
10 910. Only type OFNP (plenum-rated non-conductive optical fiber cable) shall be
11 installed in plenum-rated optical fiber raceways. Wiring, cable, and raceways addressed
12 in this section shall be listed and labeled as plenum-rated and shall be installed in
13 accordance with the electrical code.

14 *Change Section 602.2.1.5 to read as follows:*

15 **602.2.1.5 Pipe.** Pipe shall be noncombustible or insulated if combustible. All insulation
16 shall have a flame spread of 25 or less and a smoke-developed rating of 50 or less when
17 tested in accordance with ASTM E 84 listed in Chapter 15. Piping and insulation shall
18 bear the label of an approved agency.

19 *Change Section 603.9 to read as follows:*

20 **603.9 Joints, seams and connections.** All joints, longitudinal and transverse seams and
21 connections shall be securely fastened and sealed with welds, gaskets, mastics
22 (adhesives), mastic-plus-embedded-fabric systems or tapes. Tapes and mastics used with
23 rigid fibrous glass ducts shall be listed and labeled in accordance with UL 181A. Tapes

1 and mastics used with flexible air ducts and air connectors shall be listed and labeled in
2 accordance with UL 181B. Duct connections to sheet metal fittings or flanges of air
3 distribution system equipment and appliances shall be mechanically fastened.

4 *Add Section 603.16 as follows:*

5 **603.16 Visual duct openings.** Duct openings in bathrooms, toilet rooms and changing
6 rooms shall prevent visual observation from adjoining rooms.

7 *Add Section 608.1 to read as follows:*

8 **608.1 Standards.** Boilers shall be listed in accordance with the requirements of ANSI
9 Z21.13 or UL 795. The boiler shall be designed and constructed in accordance with the
10 requirements of ASME CSD-1 and, as applicable, the ASME Boiler and Pressure Vessel
11 Code, sections I, II, IV and IX, NFPA 8501, NFPA 8502 and NFPA 8504.

12 *Change Section 804.3.3 to read as follows:*

13 **804.3.3 Termination.** The termination of chimneys or vents equipped with power
14 exhausters shall be in accordance with the approved specifications of the manufacturer of
15 the appliance except that they shall not exhaust over public ways or walkways. The
16 exhaust shall be directed away from the building.

17 *Change Section 804.3.9 to read as follows:*

18 **804.3.9 Connections to exhauster.** All appliance connections to a chimney or vent
19 equipped with a power exhauster shall be made on the inlet side of the exhauster unless
20 the exhauster is an integral part of the appliance. All joints on the positive pressure side
21 of the exhauster shall be sealed to prevent flue gas leakage.

22 **908.5 Water supply.** Water supplies and protection shall be as required by the plumbing
23 code.

1 *Change Section 908.7 to read as follows:*

2 **908.7 Refrigerants and hazardous fluids.** Heat exchange equipment that contains a
3 refrigerant and that is part of a closed refrigeration system shall comply with Chapter 11.
4 Heat exchange equipment containing heat transfer fluids which are flammable,
5 combustible or hazardous shall comply with the fire code.

6 *Change Section 1001 to read as follows:*

7 **SECTION 1001**

8 **GENERAL**

9 **1001.1 Scope.** In addition to the other provisions of this code, this chapter shall govern
10 the installation, alteration, and repair of water heaters, boilers and pressure vessels. The
11 provisions of the ASME Code for Boilers and Pressure Vessels as listed in Chapter 15
12 shall apply.

13 **Exceptions:**

- 14 1. Pressure vessels used for unheated water supply.
- 15 2. Portable pressure vessels and Interstate Commerce Commission containers.
- 16 3. Containers for liquefied petroleum gases, bulk oxygen and medical gas.
- 17 4. Pressure vessels having a volume of 5 cubic feet (0.14 m³) or less operating at
18 pressures not exceeding 250 psi (1724 kPa) and located within occupancies of Use
19 Groups B, F, H, M, R, S and U.
- 20 5. Pressure vessels used in refrigeration systems that are regulated by Chapter 11 of this
21 code.
- 22 6. Pressure tanks used in connection with coaxial cables, telephone cables, power cables
23 and other similar humidity control systems.

1 7. Any boiler or pressure vessel subjected to inspection by federal or state inspectors.

2 **1001.2 Periodic inspections.** All boilers, steam generators and pressure vessels subject
3 to the provisions of this code shall be inspected annually by the code official or
4 representative. The inspection shall be as thorough as circumstances permit.

5 **Exception:** Heating boilers or pressure vessels which are located in buildings of Use
6 Group R-3 or Use Group R-2 having six dwelling units or less.

7 **1001.3 Certificate of inspection.** A boiler, steam generator or pressure vessel subject to
8 the provisions of this code shall not be placed in operation until a sticker denoting
9 inspection and approval has been applied to the vessel.

10 **1001.4 Major repairs.** Welded repairs to boilers, steam generators and pressure vessels
11 subject to the provisions of this code shall be performed only by those organizations
12 which possess the appropriate ASME Certificate of Authority with extension to field
13 work or an "R" Certificate of Authority issued by the National Board of Boiler and
14 Pressure Vessel Inspectors. A permit shall be required for such work. The fee shall be
15 the same as the fee for installation of the vessel as set forth in Table 106.5.2. A
16 hydrostatic test shall be performed on the vessel before it is returned to service.

17 **1001.5 Condemnation.** Any boiler or pressure vessel which, in the opinion of the code
18 official, constitutes a hazard shall be deemed unsafe and sealed out of service.

19 *Change Sections 1002.1 thru 1002.3 to read as follows:*

20 **1002.1 General.** Potable water heaters and hot water storage tanks shall be listed and
21 labeled and installed in accordance with the manufacturer's installation instructions, the
22 plumbing code and this code. All water heaters shall be capable of being removed
23 without first removing a permanent portion of the building structure. The potable water

1 connections and relief valves for all water heaters shall conform to the requirements of
2 the plumbing code. Domestic electric water heaters shall comply with UL 174 or UL
3 1453. Commercial electric water heaters shall comply with UL 1453. Oil-fired water
4 heaters shall comply with UL 732.

5 **1002.2 Water heaters utilized for space heating.** Water heaters utilized both to supply
6 potable hot water and provide hot water for space-heating applications shall be listed and
7 labeled for such applications by the manufacturer and shall be installed in accordance
8 with the manufacturer's installation instructions and the plumbing code.

9 **1002.3 Supplemental water-heating devices.** Potable water-heating devices that utilize
10 refrigerant-to-water heat exchangers shall be approved and installed in accordance with
11 the plumbing code and the manufacturer's installation instructions.

12 *Change Section 1004.6 to read as follows:*

13 **1004.6 Boiler rooms and enclosures.** Boiler rooms and enclosures and access thereto
14 shall comply with the building code and Chapter 3 of this code. Boiler rooms shall be
15 equipped with a floor drain or other approved means for disposing of liquid waste. In
16 addition, except for one- and two- family dwellings or when the boiler is entirely within a
17 dwelling unit, all other boilers or combination boilers shall be installed in a room
18 protected by an enclosure designed to prevent unauthorized entry. Storage or living
19 quarters shall not be permitted in any boiler or similar heating equipment room.

20 *Change Sections 1005.1 and 1005.2 to read as follows:*

21 **1005.1 Valves.** Every boiler or modular boiler shall have shutoff valve in the supply and
22 return piping. For multiple boiler or multiple modular boiler installations, every boiler or
23 modular boiler shall have individual shutoff valves in the supply and return piping.

1 **1005.2 Potable water supply.** The water supply to all boilers shall be connected in
2 accordance with the plumbing code.

3 *Change Section 1006.1 to read as follows:*

4 **1006.1 Safety valves for steam boilers.** All steam boilers shall be protected by safety
5 valves as required by the ASME Code for Boiler and Pressure Vessels listed in Chapter
6 15.

7 *Change Section 1006.6 to read as follows:*

8 **1006.6 Safety and relief valve discharge.** Safety and relief valve discharge pipes shall
9 be of rigid pipe that is approved for the temperature of the system. The discharge pipe
10 shall be the same diameter as the safety or relief valve outlet. Safety and relief valves
11 shall not discharge so as to be a hazard, a potential cause of damage or otherwise a
12 nuisance. High-pressure-steam safety valves shall be vented to the outside of the
13 structure. Where a low-pressure safety valve or a relief valve discharges to the drainage
14 system, the installation shall conform to the plumbing code.

15 *Change Sections 1008.1 and 1008.2 to read as follows:*

16 **1008.1 General.** Every steam boiler shall be equipped with one gate valve and one
17 quick-opening blow-off valve in series in each blow-down line. The valves shall be
18 installed in the opening provided on the boiler. The minimum size of the valve shall be
19 the size specified by the boiler manufacturer or the size of the boiler blow-off-valve
20 opening.

21 **1008.2 Discharge.** Blow-off valves shall discharge to a safe place of disposal. Where
22 discharging to the drainage system, the installation shall conform to the plumbing code.

23 *Change Section 1009.3 to read as follows:*

1 **1009.3 Open-type expansion tanks.** Open-type expansion tanks shall be located a
2 minimum of 4 feet (1219 mm) above the highest heating element. The tank shall be
3 adequately sized for the hot water system. An overflow with a minimum diameter of 1
4 inch (25.4 mm) shall be installed at the top of the tank. The overflow shall discharge to
5 the drainage system in accordance with the plumbing code.

6 *Add Section 1011.1.1 to read as follows:*

7 **1011.1.1 Test of existing vessels.** The pressure for vessels previously in service shall be
8 as specified in the National Board Inspection Code listed in Chapter 15.

9 *Add Section 1012 to read as follows:*

10 **SECTION 1012**

11 **BLOWOFF TANKS**

12 **1012.1 General.** Blowoff tanks shall be designed and fabricated in accordance with
13 Section VIII of the ASME Boiler Code as listed in Chapter 15 and shall be so stamped.

14 **1012.1.1 Boilers less than 100 psi.** For boilers carrying one hundred psi steam pressure
15 or less, the heads and shell shall be constructed of not less than one-fourth inch steel or
16 equivalent strength material.

17 **1012.1.2 Boilers greater than 100 psi.** For boilers carrying in excess of one hundred
18 psi pressure, tanks shall be fabricated of materials designed for the pressures carried.

19 **1012.2 Size.** The size of the tank shall be indicated by the blow down requirements, and
20 the tank installed shall be large enough to blow down one gauge glass of water from one
21 boiler or from any one of a battery of boilers interconnected. The size of the tank shall be
22 of sufficient capacity so the blow down water from the boiler will only fill one-half the
23 capacity of the tank, and the remaining volume of the tank will be available for the vapor

1 displacement.

2 **1012.3 Discharge.** The discharge from the boiler or boilers shall enter the tank above
3 the high water level or surface of the water in such tank. A baffle plate shall be installed
4 in the tank in line with the inlet pipe from the boiler and shall be at least twelve inches
5 from the discharge opening from the boiler into the tank. The outlet opening or discharge
6 from the tank shall be at least two times the area of the inlet pipe, and such outlet pipe
7 shall have an internal pipe built into the tank, extending downward to within four inches
8 of the bottom of the tank. The discharge pipe shall be connected to a sewer through a
9 running trap or to an approved leaching well.

10 **1012.4 Venting.**

11 **1012.4.1 Vent pipe size.** All blow-off tanks shall be properly vented to the outside
12 atmosphere. Such vent pipes shall be at least four times the area of the inlet pipe from
13 the boiler, and such pipe shall not be less than two inch iron pipe size.

14 **1012.4.2 Pipe discharge.** The vent pipe shall be run as directly as possible to the
15 outside atmosphere and in a suitable location so that any steam or water discharged by
16 the blow down of the boiler would not be dangerous or injurious to life.

17 **1012.4.3 Vent obstructions.** The vent shall be free of any pockets or sags that might
18 collect or hold water or cause an obstruction of the pipe and pressure buildup in the tank.
19 The end of the vent pipe shall be protected from the possibility of any obstruction.

20 **1012.5 Manhole.** Each blow down tank shall be provided with a suitable manhole for
21 the inspection and cleaning of the tank.

22 *Add Section 1013 to read as follows:*

23 **SECTION 1013**

1 **RETURN CONDENSATE**

2 **1013.1 Maximum temperature.** The return condensate from a building heated by a
3 central steam supply shall be permitted to be discharged either into a condensate return
4 system or wasted into a sewer drain connection or approved leaching well. This
5 condensate when discharging into a sanitary sewer system shall not be in excess of one
6 hundred forty degrees Fahrenheit (140°F) and shall discharge into an open floor drain or a
7 special drain connection or approved receptor. If the floor drain or drain connection to
8 the sewer is above the level of the return piping so that it cannot flow by gravity, an
9 automatic sump pump shall be installed to pump the condensate from the sump to the
10 sewer drain.

11 *Add Section 1014 to read as follows:*

12 **SECTION 1014**

13 **FIELD ASSEMBLY**

14 **1014.1 Welding.** Any welding required during assembly shall be performed by welders
15 employed and qualified by companies in possession of the appropriate ASME Certificate
16 of Authorization.

17 *Change Section 1101.4 to read as follows:*

18 **1101.4 Water connection.** Water supply and discharge connections associated with
19 refrigeration systems shall be made in accordance with this code and the plumbing code.

20 *Change Section 1101.9 to read as follows:*

21 **1101.9 Refrigerant discharge.** Fire department shall be notified immediately upon the
22 automatic or manual discharge of refrigerant from systems having a refrigerant circuit
23 contain more than 220 pounds (100 kg) of group A1 or 30 pounds (14 kg) of any other

1 group refrigerant. Refrigerant shall not be discharged except in an emergency.

2 **Exception:** Notification is not required for any of the following conditions:

- 3 1. Refrigeration systems operating at pressures below atmospheric and incorporating
4 automatic purge systems.
- 5 2. Incidental operation of automatic pressure relief valves resulting in minor release of
6 the refrigerant charge.
- 7 3. Incidental minor releases associated with service operations after system pump-down
8 has been accomplished.

9 *Change Section 1105.3 to read as follows:*

10 **1105.3 Refrigerant detector.** Machinery rooms shall contain a refrigerant detector with
11 an audible and visual alarm. The detector, or sampling tube that draws air to the detector,
12 shall be located in an area where the refrigerant from a leak will concentrate. The alarm
13 shall be actuated at a value not greater than the corresponding TLV-TWA values shown
14 in Table 1103.1 for the refrigerant classification. Detectors and alarms shall be placed in
15 approved locations.

16 **Exception:** Detectors are not required for ammonia systems where the machinery room
17 complies with section 1106.3.

18 *Change Sections 1106.5 thru 1106.5.3.5 to read as follows:*

19 **1106.5 Remote controls.** Remote control of the mechanical equipment and appliances
20 located in the machinery room shall be provided at an approved location immediately
21 outside the machinery room and adjacent to its principal entrance.

22 **1106.5.1 Refrigeration system.** A clearly identified switch of the break-glass type shall
23 provide off-only control of electrically energized equipment and appliances in the

1 machinery room, other than refrigerant leak detectors and machinery room ventilation.

2 **1106.5.2 Ventilation system.** A clearly identified switch of the break- glass type shall
3 provide on-only control of the machinery room ventilation fans.

4 **1106.5.3 Emergency control box.** Emergency control boxes shall be provided for
5 refrigeration systems required to be equipped with a treatment system, flaring system or
6 ammonia diffusion system.

7 **1106.5.3.1 Location.** Emergency control boxes shall be located outside of the building at
8 an approved accessible location. All portions of the emergency control box shall be 6
9 feet (1829 mm) or less above the adjoining grade.

10 **1106.5.3.2 Construction.** Emergency control boxes shall be of iron or steel not less than
11 0.055 inch (1.4 mm) in thickness and provided with a hinged cover and lock.

12 **1106.5.3.3 Operational procedure.** Valves and switches shall be identified in an
13 approved manner as to the sequential procedure to be followed in the event of an
14 emergency.

15 **1106.5.3.4 Identification.** Emergency control boxes shall be provided with a permanent
16 label on the outside cover reading: FIRE DEPARTMENT USE ONLY -
17 REFRIGERANT CONTROL BOX, and including the name of the refrigerant in the
18 system. Hazard identification in accordance with NFPA 704 shall be posted inside and
19 outside of the control box.

20 **1106.5.3.5 Instructions.** Written instructions and information shall be provided and
21 located in the emergency control box designating the following information:

- 22 1. Instructions for suspending operation of the system in the event of an emergency.
- 23 2. The name, address and emergency telephone numbers to obtain emergency service.

1 3. The location and operation of emergency discharge systems.

2 *Change Section 1106.6 to read as follows:*

3 **1106.6 Emergency signs.** Refrigeration units or systems having a refrigerant circuit
4 containing more than 220 pounds (100 kg) of Group A1 or 30 pounds (14 kg) of any
5 other group refrigerant shall be provided with approved emergency signs, charts and
6 labels in accordance with NFPA 704. Hazard signs shall be in accordance with Table
7 1103.1 for the classification of refrigerants listed therein.

8 *Add Section 1110 to read as follows:*

9 **SECTION 1110**

10 **RESIDENTIAL AIR CONDITIONERS**

11 **1110.1 Permits.** Mechanical permits shall be required for residential air conditioning
12 units.

13 **1110.2 Residential split systems.** When a condensing unit for residential uses (R-1, R-2
14 or R-3) is to be located on grade, it shall not be located in front of the building.

15 **1110.3 Condenser foundations.** All condensing units mounted on grade must be
16 located on a level, four inch (4") thick concrete pad or other foundation approved by the
17 code official prior to installation.

18 **1110.4 Protection of refrigerant lines.** All piping installed above grade, or
19 underground, shall be protected from damage and corrosion in keeping with recognized
20 standard practice and the recommendations of the manufacturer.

21 **1110.5 Units in areaways.** Where areaways less than four feet in width exist between
22 buildings, all window units shall be installed not less than seven feet above grade.

23 *Change Section 1201.1 to read as follows:*

1 **1201.1 Scope.** The provisions of this chapter shall govern the construction, installation,
2 alteration and repair of hydronic piping systems. This chapter shall apply to hydronic
3 piping systems that are parts of heating, ventilation and air-conditioning systems. Such
4 piping systems shall include steam, hot water, chilled water, steam condensate and
5 ground source heat pump loop systems. Potable cold and hot water distribution systems
6 shall be installed in accordance with the plumbing code.

7 *Add Section 1201.3 to read as follows:*

8 **1201.3 Ground source heat pump loop systems.** Ground source heat pump loop
9 systems shall be installed a minimum of 10 feet (3048 mm) from the property line

10 *Change Section 1204.1 to read as follows:*

11 **1204.1 Insulation characteristics.** Pipe insulation shall be tested in accordance with
12 ASTM E 84 and shall have a maximum flame spread index of 25 and a smoke-developed
13 index not exceeding 450. Insulation installed in an air plenum shall comply with Section
14 602.2.1.

15 **Exception:** The maximum flame spread index and smoke-developed index shall not
16 apply to one- and two-family dwellings.

17 *Delete Section 1204.2.*

18 *Change Section 1206.2 to read as follows:*

19 **1206.2 System drain down.** Hydronic piping systems shall be designed and installed to
20 permit the system to be drained. Where the system drains to the plumbing drainage
21 system, the installation shall conform to the requirements of the plumbing code.

22 *Change Sections 1206.3 and 1206.4 to read as follows:*

23 **1206.3 Protection of potable water.** The potable water system shall be protected from

1 backflow in accordance with the plumbing code.

2 **1206.4 Pipe penetrations.** Openings for pipe penetrations in walls, floors or ceilings
3 shall be larger than the penetrating pipe. Openings through concrete or masonry building
4 elements shall be sleeved. The annular space surrounding pipe penetrations shall be
5 protected in accordance with the building code.

6 *Change Section 1301.1 to read as follow:*

7 **1301.1 Scope.** This chapter shall govern the design, installation, construction and repair
8 of fuel oil storage and piping systems. The storage of fuel oil exceeding the limitation of
9 this chapter and flammable and combustibile liquids shall be in accordance with the fire
10 code.

11 *Change Section 1301.2 to read as follows:*

12 **1301.2 Storage systems.** Fuel-oil storage systems shall comply with the fire code. Fuel-
13 oil piping systems shall comply with the requirements of this code.

14 *Change Section 1401.2 to read as follows:*

15 **1401.2 Potable water supply.** Potable water systems shall be protected against
16 contamination in accordance with the plumbing code.

17 *Modify Chapter 15 by adding the following:*

18 **ANSI**

19 NB-23 National Board Inspection Code.....1011.1.1

20 **ASME**

21 ASME-98 Boiler & Pressure Vessel Code

22 Sections I thru X1001.1, 1001.4, 1004.1, 1006.1

1 1011.1, 1012.1

2 **CODES**

3 BNFPC-99 BOCA National Fire Prevention Code

4 **NFPA**

5 50-1990 Bulk Oxygen Systems on Consumer Sites.....313.3

6 51-1992 Oxygen - Fuel Gas Systems for Welding, Cutting and Allied Processes.....313.3

7 54-1992 National Fuel Gas Code1301.8, 1304.18

8 70-1999 National Electrical Code

9 90A-1993 Standard for the Installation of Air Conditioning and Ventilating Systems...202

10 96-1994 Cooking Equipment, Vapor Removal506.1, 506.3

11 99C-93 Gas and Vacuum Systems.....313.1, 313.2

12 704-1990 Fire Hazards of Materials, Identification.....

13 **SECTION FOUR.**

14 Any person who shall violate a provision of this code or shall fail to comply with any of
15 the requirements thereof, or who shall erect, construct, alter, extend, repair, remove,
16 demolish, use or occupy any building, structure or premises or equipment regulated by
17 this code in violation of an approved construction document or directive of the code
18 official or the Board of Building Appeals, or of a permit, license or certificate issued
19 under the provisions of this code, shall, upon conviction thereof, be punished by a fine of
20 not more than five hundred dollars , or by imprisonment not exceeding ninety days, or
21 both such fine and imprisonment. Each day that a violation continues shall constitute a
22 separate and distinct offense.

23 **SECTION FIVE.**

1 That nothing in this Ordinance or in the Mechanical Code hereby adopted shall be
2 construed to affect any suit or proceeding impending in any court, or any rights acquired,
3 or liability incurred, or any cause or causes of action acquired or existing, under any act
4 or ordinance hereby repealed as cited in Section One of this Ordinance; nor shall any just
5 or legal right or remedy of any character be lost, impaired or affected by this Ordinance.

6 ***SECTION SIX.***

7 If a section, subsection, sentence, clause or phrase of this code is, for any reason held to
8 be unconstitutional, such decision shall not affect the validity of the remaining portions of
9 this code.

10 ***SECTION SEVEN.***

11 This being an ordinance necessary for the immediate preservation of the public safety, it
12 is hereby declared to be an emergency measure and shall become effective immediately
13 upon its approval by the mayor, but the provisions shall not be enforced until September 8,
14 2000.

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