

TITLE 59**MECHANICAL CODE**

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CHAPTER 1**ICC INTERNATIONAL MECHANICAL CODE, 2006 EDITION**

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SECTION 100. ADOPTION OF THE ICC INTERNATIONAL MECHANICAL CODE, 2006 EDITION

A certain document, three (3) copies of which are on file in the Office of the City Clerk of the City of Tulsa, Oklahoma, being marked and designated as the *ICC International Mechanical Code, 2006 Edition*, as published by the International Code Council (ICC), is hereby adopted as a part of the Tulsa Revised Ordinances, hereinafter the "Mechanical Code," for the control of mechanical equipment located in buildings and structures in the City of Tulsa. Each and all of the terms, conditions, regulations, provisions, and penalties of the *ICC International Mechanical Code, 2006 Edition*, are hereby referred to, adopted and made a part of the Tulsa Revised Ordinances as if fully set out in this chapter, with its amendments, if any, as prescribed in Section 101 of this chapter and, as used in this Chapter 1, may be referred to as the "code."

Ord. Nos. 18095, 18887, 20572, 21206, 21991

SECTION 101. AMENDMENTS TO THE ICC INTERNATIONAL MECHANICAL CODE, 2006 EDITION

The following provisions of the *ICC International Mechanical Code, 2006 Edition*, are hereby added, deleted, or amended to read as follows:

101.1 Title-Amendatory. This code shall be known as the "Mechanical Code of the City of Tulsa," and may be cited as the "Mechanical Code," or in this title as "this code."

Section 103.0 Office of Mechanical Inspection-Amendatory

103.1 Authority Having Jurisdiction-Amendatory. Pursuant to Title 11, Tulsa Revised Ordinances, Chapter 2, the Director of Economic Development, or the Director's designated representative shall supervise and direct the administration of the Mechanical Code of the City of Tulsa.

103.2 Code Official and the Office of Mechanical Inspection-Amendatory. The Office of Mechanical Inspection shall consist of the Chief Mechanical Inspector, a mechanical inspector who is designated by the authority having jurisdiction and is responsible for administering the requirements of this code, hereafter referred to as the "code official" as used in this title, and such assistants as may be duly employed. The code official and such assistants shall be qualified, to serve under the provisions of the Charter of the City of Tulsa.

103.2.1 Qualifications of Code Officials-Added. The code official and each assistant code official, as referred to in this title, shall have at least five (5) years' experience in mechanical work, be a mechanical journeyman or contractor licensed by the state of Oklahoma or possess a First Class Engineer's Certificate of Competency as issued by the City of Tulsa, be licensed as a Mechanical Inspector by the state of Oklahoma, and have successfully completed the International Code Council (ICC) National Certification Program for Mechanical Inspectors.

106.1 When Required-Amendatory. A contractor who desires to erect, install, enlarge, alter, repair, remove, convert, or replace a mechanical system, the installation of which is regulated by this code, or to cause such work to be done, shall first make application to the code official and obtain the required permit for the work.

Exception. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day of the Office of Mechanical Inspection.

106.1.1 Air Compressor and Tank Permits-Added. Permits for air compressors and tanks only, excluding piping for air distribution, may be issued to the owner or lessee, or the agent of either, of a building or structure in which the air compressors or tanks are to be installed, or to the contractor or material supplier employed to perform the work. Permits shall be issued on a cash basis only.

106.1.2 Separate Permit Required-Added. A separate permit shall be required for each building within a complex and for each gas meter, when there is a multi-meter installation on a single building.

106.1.3 Regulatory Flood Plain-Added. Regardless of the design flood elevation as defined in this code, for structure located within the regulatory flood plain, mechanical systems, equipment and appliances shall be located one (1) foot above the City of Tulsa regulatory floodplain elevation.

106.3 By Whom Application is Made-Amendatory. No mechanical permit shall be issued to any person, firm, limited liability company, or corporation until such person, firm, limited liability company, or corporation has received a Certificate of Registration appropriate for the work contemplated.

106.5.1 Work Commencing Before Permit Issuance-Deleted. Section 106.5.1 of the *ICC International Mechanical Code*, 2006 Edition is intentionally deleted from this code.

106.5.2 Fee Schedule-Amendatory. Permit and inspection fees for all mechanical work shall be in accordance with the schedule established in Title 49, Tulsa Revised Ordinances.

106.5.2.1 Payment of Fees and Contractor's Accounts-Added. No permits shall be issued nor inspections made until all fees for such have been paid in full. Contractors may deposit with the City of Tulsa a sum of money to be determined by such contractor, to cover their anticipated costs for permits and inspections. Such deposit, when made, authorizes the City of Tulsa to use the funds for the payment of any and all permit and inspection fees. Such funds shall be held in trust on behalf of the contractor in a non-interest bearing account. When requested, a monthly statement showing all deposits, withdrawals and the account balance shall be made available to the contractor.

107.1.2.4 Time of Inspection-Added. The code official shall make an inspection within forty-eight (48) hours after it is called for by a contractor. Weekends and legal holidays shall be excluded in computing the forty-eight (48) hours.

107.1.2.5 Work Open for Approval-Added. All mechanical work shall remain exposed for view and be readily accessible until approved by the code official.

107.1.2.6 Notices and Certificates of Inspection-Added. Upon passing inspection, the code official shall issue a Certificate of Inspection indicating approval of the work. Such work may then be concealed. In the event the work does not pass inspection the code official shall leave a written notice identifying the deficiencies. Appropriate corrections and reinspection shall be made and approval shall be given by the code official prior to concealing such work. The owner, user, or operator of equipment or apparatus, subject to the terms of this code, shall post the Certificate of Inspection within sight of such equipment or apparatus at all times while it is in operation. No utility company shall supply gas, water, or electrical service, except as may be authorized on a temporary basis, to any equipment covered by this code, until a final Certificate of Inspection has been issued. No utility company shall refuse to discontinue service when ordered in writing to do so by the code official.

107.1.2.7 Testing Equipment-Added. It shall be the responsibility of the owner, in all cases of annual inspection where tests are required by the code official, and the

responsibility of the contractor in all other instances where tests are required by this code, to furnish all necessary plugs, gauges, meters, and other apparatus for such testing, and to have the system to be tested ready when calling for such inspection.

107.1.2.8 Carbon Monoxide Testing-Added. When tests for carbon monoxide are required, tests shall be performed by an approved testing agency. The test results and other data necessary, shall be furnished to the code official and the code official shall determine conformance with this code.

108.3 Prosecution-Amendatory. If a violation is not corrected within seven (7) days of notice being given by the code official, or within any extension granted in writing by the code official, the code official shall file a written complaint in Municipal Court or shall request the City Attorney to institute the appropriate proceeding at law or in equity to restrain, correct, or abate such violation or to require the removal or termination of the unlawful use of the building or structure in violation of the provisions of this code or of the order or direction made pursuant to this code. The notice requirements of this section shall not apply to violations for work done or being done without the required permits nor to violations of this code involving imminent danger to life or health. Violations involving imminent danger are governed by Section 108.7.2 of this chapter.

108.4 Violation Penalties-Amendatory. Any person violating any of the provisions of this code shall be guilty of a misdemeanor offense and, upon conviction thereof, shall be punished by a fine of not more than Five Hundred Dollars (\$500.00), excluding cost, fees, and assessments or by imprisonment in the City Jail for a period not exceeding ninety (90) days, or by both such fine and imprisonment. Each day that a violation continues shall be deemed a separate offense.

Section 108.7 Equipment or Apparatus not in Compliance with the Code-Amendatory.

108.7.1 General-Amendatory. Whenever any mechanical equipment or apparatus within the City of Tulsa is found by the code official to be in violation of any of the requirements of this code, the code official shall notify the owner or permit holder or persons in control, in writing, to repair, alter, or replace such equipment or apparatus, as may be necessary. Upon the failure of such individual(s) to comply with the notice within seven (7) days, or within any extension granted in writing by the code official, the code official may cause any utility service connected to such equipment or apparatus to be disconnected.

If utility service is ordered disconnected by the code official, the code official shall attach a tag or notice to such equipment stating, "This equipment does not comply with the requirements of the Tulsa Mechanical Code and its use has been prohibited by the Tulsa Mechanical Inspector." It shall be unlawful for any person, firm, limited liability

company, or corporation, or their agents or servants, to remove such notice until all required repairs have been made and approval has been given by the code official.

108.7.2 Unsafe Equipment-Amendatory. Whenever the use of any mechanical equipment or apparatus within the City of Tulsa is determined by the code official to be imminently hazardous to life and safety, the code official shall give the owner or agent or permit holder or person in control of such equipment or apparatus written notice stating the defects of such equipment, and the code official shall immediately order that all utility service connected to such equipment or apparatus be disconnected. The code official shall immediately attach to such equipment or apparatus a tag or notice stating, "This equipment is imminently hazardous and its use has been prohibited by the Tulsa Mechanical Inspector." It shall be unlawful for any person, firm, limited liability company, or corporation, or their agents or servants, to remove such notice until the imminent hazard has been removed and approval has been given by the code official.

The decisions of the code official prohibiting the use of such equipment and ordering the immediate disconnection of any utility services attached to such equipment shall not be stayed during the pendency of any appeal from the code official's determination.

108.7.4 Fine Not Exclusive Penalty-Added. The penalties prescribed in this code shall not be exclusive or prevent independent action by the Mechanical Examiners and Appeals Board, acting under authority of this code, to suspend or revoke the Certificate of Registration of any person subject to this code, and shall not prevent the City of Tulsa, or its authorized officials, from taking other action authorized by law to remedy the violation.

109.2 Mechanical Examiners and Appeals Board-Amendatory. There is hereby created a Mechanical Examiners and Appeals Board, hereinafter referred to as "the Board."

109.2.1 Membership of Board-Amendatory. The Board shall consist of the following seven (7) members appointed by the Mayor and confirmed by the City Council.

1. Two (2) First Class Stationary Engineers,
2. A Mechanical Contractor (commercial),
3. A Mechanical Contractor (residential),
4. A Registered Professional Engineer,
5. A Mechanical Journeyman,

6. A representative of the Building Owners and Managers Association.

Appointments to the Board shall be for terms of three (3) years and commence on July 1. Upon death, removal, or resignation of any member, a new member shall be appointed to complete the unexpired term of such member. Members shall serve until replaced by appointment.

Four (4) members of the Board shall constitute a quorum.

109.2.2 Officers-Amendatory. At the July meeting of each year, the Board shall elect one of its members as chairman and one as vice-chairman, both to serve for the ensuing year. The code official shall serve, *ex officio*, as secretary of the Board.

109.2.3 Powers and Duties-Amendatory. The Board shall have the following powers and duties.

1. The Board shall examine and test stationary engineer applicants as provided in this code and issue each passing applicant a Certificate of Competency.

2. The Board shall hear all appeals from decisions of the code official and shall interpret the provisions of this code whenever a dispute arises as to the meaning or intent of any provision. In the event of a dispute between interested parties, the code official may, as necessary, order part or all of the mechanical work to cease; provided that within twenty (20) days after an order has been issued by the code official, the contractor may file a written notice of appeal with the Board and, pending determination of the appeal, may then proceed with the work at the contractor's own risk.

3. The Board shall serve as an advisory board to the Council with respect to technological advances in mechanical equipment standards, installation, and performance and other related matters.

4. The Board may deny, suspend, revoke, or cancel any Certificate of Registration issued pursuant to this code if it has reason to believe or finds that the holder of the registration has:

- a. Made a material misstatement in the application for any certificate or renewal thereof;
- b. Loaned or illegally used the certificate; or
- c. Violated any provisions of this code.

5. The Board shall adopt rules of procedure for the transaction of its business.

6. The Board shall recommend to the City Council for adoption a list of approved schools, which shall be filed as a public record in the Office of the City Clerk of the City of Tulsa for review by the public.

The satisfactory completion of courses at schools approved by the Council may be credited as experience necessary for pre-examination certification; provided that not more than one (1) year of academic credit at any school so approved shall be considered as an equivalent amount of experience.

109.2.5 Meetings-Amendatory. The Board shall meet at the call of the chairman or three (3) members of the Board. Insofar as possible, all business meetings shall be conducted in accordance with the parliamentary rules set forth in *Robert's Rules of Order*. Prior to each meeting, an agenda and the minutes of the previous meeting shall be sent to all Board members.

109.2.6 Record of Proceedings-Amendatory. The Office of Mechanical Inspection shall keep records of all proceedings and shall maintain a roster of persons currently registered with the Board.

109.2.8 Attendance-Added. Each member of the Board is responsible for attending all Board meetings except for reasons beyond the member's control. Any member who misses three (3) consecutive meetings of the Board shall be recommended to the Mayor for dismissal and replacement.

Section 109.3 Appeals Hearings-Amendatory.

109.3.1 Appeals from Decisions of Code Official-Added. Any aggrieved person may appeal a decision of the code official to the Board.

A. **Application for Appeal.** An appeal shall be in writing and filed with the Board within twenty (20) days after the notice was served. Such application shall:

1. Set forth in detail the precise decision or requirement being appealed;
2. State precisely why the decision or requirement is in error;
3. Designate the section(s) of the Mechanical Code, the statute(s) or the ordinance(s) which support(s) the appellant's position; and
4. Be accompanied by a fee in accordance with the fee schedule established in Title 49, Tulsa Revised Ordinances.

B. **Notice of Hearing.** The Board shall meet upon notice from the chairman within thirty (30) days of the filing of an appeal, or at a stated periodic meeting. The

aggrieved party shall be notified by regular mail of the date, time, and place of the hearing.

C. **Board Decision.** The Board shall affirm, modify, or reverse the decision of the code official by a concurring vote of at least four (4) members.

1. A decision of the Board on a technical dispute shall be *res judicata* and the Board may, at its discretion, refuse to hear appeals involving interpretation of codes, statutes, or ordinance provisions upon which a decision by the Board has been previously made. When the Board discerns that a decision made by it has industry-wide implications, the Board may direct its secretary to advise all registered contractors by letter of such decision.

2. Any rulings, requirements, decisions, or interpretations of the Board shall be final and binding upon all parties unless appealed to the City Council.

D. **Enforcement Stayed.** If an appeal of the Board's decision is made to the City Council, enforcement of any ruling or decision by the Board shall be stayed until the City Council has rendered its decision.

Section 109.3.2 Suspension or Revocation of Certificates of Registration-Added.

A. **Written Complaint.** Upon receipt of a written complaint to the Board, filed by the code official or any aggrieved person, or upon the Board's own motion, the Board shall make any investigation into the complaint which it may deem necessary and thereafter shall conduct a hearing upon such complaint.

B. **Notice of Hearing.** Within ten (10) days after the filing of a written complaint, the Board shall serve written notice of the complaint upon the certificate holder. The notice shall be served either personally or by certified mail, return receipt requested, at least ten (10) days prior to any scheduled hearing and shall include:

1. A statement of the time, place, and nature of the hearing;
2. A statement of the legal authority and jurisdiction under which the hearing is to be held;
3. A reference to the particular section(s) of the code and rules involved;
4. A short, plain statement of the complaint and a statement of the issues before the Board;

5. A statement that the nature of the proceeding before the Board will be an informal inquiry into the complaint, at which time an opportunity will be afforded the individual to respond to the allegations in the complaint by the testimony of witnesses, or by documentary evidence;

6. A statement that the individual has a right to be represented by legal counsel; and

7. A statement that, based upon the evidence presented at the hearing, the Board may deny, suspend, revoke, or cancel the individual's Certificate of Registration.

C. **Determining Vote.** A decision to deny, suspend, revoke, or cancel a Certificate of Registration shall require the concurring vote of at least four (4) members of the Board.

D. **Decisions of Board Final Unless Appealed.** All rulings or decisions of the Board shall be final and binding upon all parties unless appealed to the City Council.

E. **Enforcement Stayed.** If the decision of the Board is appealed to the City Council, enforcement of any ruling or decision by the Board shall be stayed until the City Council has rendered its decision.

109.6 Board Decision Issuance-Deleted. Section 109.6 of the *ICC International Mechanical Code*, 2006 Edition, is intentionally deleted from this code.

109.6.1 Resolution-Deleted. Section 109.6.1 of the *ICC International Mechanical Code*, 2006 Edition, is intentionally deleted from this code.

109.6.2 Administration-Deleted. Section 109.6.2 of the *ICC International Mechanical Code*, 2006 Edition, is intentionally deleted from this code.

109.7 Appeals to City Council-Amendatory. Any person aggrieved by a decision of the Board may perfect an appeal to the City Council by filing a written notice of appeal with the City Clerk and the Board within ten (10) days from the date of the Board's action. Such notice shall specify the grounds for the appeal. A hearing on the appeal shall be heard by the Council not later than thirty (30) days from the date of filing the notice of appeal.

109.8 Court Review-Added. Appeals from decisions of the Council shall be as provided by the laws of the state of Oklahoma.

109.9 Computation of Time-Added. In computing any period of time prescribed or allowed by this title, the day of the act, event, or default from which the designated period of time begins to run shall not be included. The last day of the period computed

shall be included, unless it is a legal holiday as recognized by the City of Tulsa, or any other day when the office of the City Clerk does not remain open for public business until its regularly scheduled closing time, in which event the period shall run until the end of the next day which is not a legal holiday or a day when the office of the City Clerk does not remain open for public business until its regularly scheduled closing time. Unless the context of a period of time clearly indicates otherwise, a period of time prescribed in days shall be calendar days, including holidays and any other day when the office of the City Clerk is not open for public business until its regularly scheduled closing time.

Section 110.0 Registration of Mechanical Contractors, Journeymen and Apprentices-Added.

110.1 General-Added. No person, firm, limited liability company, or corporation shall be issued a permit, engage or offer to engage in, by advertisement or otherwise, any mechanical work in the City of Tulsa as a journeyman or contractor unless such person, firm, limited liability company, or corporation has properly registered with the Board. All contractors, journeymen, and apprentices shall carry their state license and City Certificate of Registration on their person at all times while performing mechanical work within the City of Tulsa and shall display the same upon request from the code official or a police officer of the City of Tulsa.

No person issued a contractor's license shall employ or supervise persons performing mechanical work unless those person(s) are licensed and registered, or allow any apprentice to perform mechanical work unless the apprentice shall have direct supervision by a person licensed and registered.

Section 110.2 Requirements for Registration-Added.

A. State Licensees. Any person, firm, limited liability company, or corporation holding a current state of Oklahoma license or registration issued under the provisions of 59 O.S.Supp.2007, §§ 1850.1, *et seq.*, as amended, shall be issued a Certificate of Registration after paying the fees required by this code.

B. City of Tulsa Licensees. Any person, firm, or corporation holding a current City of Tulsa License or registration issued under the provisions of City of Tulsa Ordinance No. 16881 (The Mechanical Code, 1987 ed.), shall be issued a Certificate of Registration after paying the fees as set forth in Title 49, Tulsa Revised Ordinances.

C. Boiler Repair Contractor. No person, firm, limited liability company, or corporation shall be registered as a Boiler Repair Contractor unless he shall have furnished proof of the issuance of a current State Department of Labor Boiler Repair Contractor's License issued under the provisions of the *Oklahoma Boiler and Pressure*

Vessel Safety Act, 40 O.S.Supp.2007, §§ 141.1, *et seq.* as amended, and shall have paid the required fees as set forth in Title 49, Tulsa Revised Ordinances.

D. **Work Authorized.** Certificates of Registration shall be issued by the Board for those classifications of contractors, journeymen, and apprentices authorized by the laws referenced in Subsections 110.2.A through C, above, and shall authorize the holders to perform only such work and acts as authorized by such laws.

110.3 Expiration of Registration-Added. Registration of contractors and journeymen shall expire on the last day of their birth month of each year. Apprentice registration shall expire four (4) years after the date of registration with the state of Oklahoma, at which time the apprentice may re-register.

Certificates of Registration, issued without state examination, that have not been renewed thirty (30) days after expiration, shall not be renewed until the applicant possesses the state license referenced in Subsection 110.2.A of this code.

110.4 Transfer of Registration Prohibited-Added. Certificates of Registration shall be nontransferable.

110.5 Registration after Revocation-Added. No person, firm, limited liability company, or corporation shall be permitted to obtain a new registration within one (1) year from the date of revocation of any prior registration.

110.6 Identification of Service Vehicles-Added. Every contractor shall identify all service vehicles used in the contractor's business with the company name and contractor's license number. Such letters and numbers shall be not less than two (2) inches high, shall be of a contrasting color, and shall be placed on both sides of all vehicles.

Section 111.0 Exemptions-Added.

A. The following buildings and classes of equipment shall be exempt from the provisions of this code:

1. Buildings owned, occupied, and maintained by the Federal government;
2. Railroad locomotives;
3. Buses, cars, and trucks;
4. Scientific laboratory and medical equipment and, in the case of scientific laboratory buildings, research centers and medical centers, the equipment, machinery, conduits, piping, and appliances which are furnishing services to laboratory experiments

or tests; provided that this exception shall not apply to the annual or other periodic inspections nor to the erection of scientific laboratory buildings and research centers;

5. Industrial testing equipment;
6. Oxygen systems;
7. All laundry and dry-cleaning process equipment except steam pressure boilers and air compressors; and
8. The factory-assembled internal gas piping and heating systems of mobile homes and travel trailers constructed in conformance with the *Code of Federal Regulations, Manufactured Home Construction and Safety Standards*, 24 CFR Part 3280.

B. None of the technical provisions of this code shall apply to internal systems of factory-assembled package units as have been examined and rated by an approved testing laboratory or industry standards association, listed in *ICC International Mechanical Code*, 2006 Edition, Chapter 15, "Referenced Standards," as being suitable for their intended use. Alteration of any portion of such units subsequent to the aforementioned approval shall subject the entire unit to inspections by the code official and such further alteration as he may require to secure compliance with the intent of this code. Factory-assembled "plug-in" appliances are hereby exempted from the provisions of this code. Installation of gas lights or gas grills shall require a permit and the payment of the fee specified for gas-fired appliances to enable the inspector to check the location where installed for compliance with setback and other zoning requirements.

C. The licensing requirements of this code shall not apply to public utilities, public service corporations, rural electric associations or municipal utilities and their subsidiaries doing work on their own facilities or during the performance of energy audits, operational inspections, minor maintenance, or minor repairs on their own equipment.

D. Buildings and structures owned by the City of Tulsa which are located inside or outside the corporate limits of the City, shall comply with the requirements of this code.

Section 202.0 General Definitions-Amendatory.

In addition to the definitions contained in Section 202 of the *ICC International Mechanical Code*, 2006 Edition, the following words and terms shall, for the purposes of this title, have the meanings indicated in this Section 202.0:

Apprentice. Any person engaged in the work of installing, altering, or repairing equipment or apparatus regulated within the City of Tulsa, who is not registered, but

who is working under the direct personal supervision of a contractor or journeyman and subject to the limitations provided in this code.

Combustible Material. Materials adjacent to or in contact with heat-producing appliances, vent connectors, gas vents, chimneys, steam and hot water pipes, and warm air ducts made of or surfaced with wood, compressed paper, plant fibers, or other materials that are capable of being ignited and burned. Such material shall be considered combustible even though flameproofed, fire-retardant treated, or plastered.

Installation. The initial physical placement of a system at a given location and the readying of same for use or service.

Maintenance. Wherever in this code any person is authorized to maintain any mechanical equipment, such authority shall be limited to the performance of repairs designed to avoid shut-downs. In regard to any installations incidental to maintaining such equipment in a running condition, such installations shall be confined to the replacement of parts broken, worn or defective, of a nature contained in or upon major units, and shall not permit the operator to install units, compressors, or any major portion of such equipment, nor shall such persons be permitted to perform any work in or upon such equipment which would by reason of the extent of such repairs, in fact, constitute a reinstallation.

Mechanical Equipment and Apparatus. All types of air conditioning, including heating equipment and refrigeration equipment, including but not limited to furnaces, boilers, gas-fired appliances and piping, ventilating apparatus, incinerators, pressure vessels, and all related fittings, vents, duct work, and safety or regulating devices.

Mobile Home. Mobile home shall mean any manufactured home designed and constructed in accordance with the *National Manufactured Housing Construction and Safety Standards Act of 1974*, 42 U.S.C. §§ 5401, *et seq.*, as amended. For mobile homes built prior to June 15, 1976, a label certifying compliance to the *Standard for Mobile Homes*, *National Fire Protection Association* (NFPA) Standard Reference Number 50 and *American National Standards Institute* (ANSI) Standard, Reference Number 119.1 in effect at the time of manufacture is required.

Public Occupancy. Public occupancy shall mean open to public use by license or invitation. The term shall not mean:

1. Occupancy by custodial, building maintenance, or security personnel; or
2. Occasional occupancy by employees, tenants, and their invitees after normal working hours.

301.7 Electrical-Amendatory. Electrical wiring, controls, and connections to equipment and appliances regulated by this code shall be in accordance with *National Fire Protection Association (NFPA) Standard Reference Number 70*.

306.3.1 Electrical Requirements for Appliances in Attic Rooms--Amendatory. A lighting fixture controlled by a switch at the required passageway opening and a receptacle outlet shall be provided at or near the appliance location in accordance with *National Fire Protection Association (NFPA) Standard Reference Number 70*.

306.4.1 Electrical Requirements for Appliances Under Floors-Amendatory. A lighting fixture controlled by a switch at the required passageway opening and a receptacle outlet shall be provided at or near the appliance location in accordance with *National Fire Protection Association (NFPA) Standard Reference Number 70*.

504.6 Domestic Clothes Dryer Ducts-Amendatory. Exhaust ducts for domestic clothes dryers shall be constructed of metal and shall have a smooth interior finish. The exhaust duct shall be a minimum nominal size of four (4) inches (102 mm) in diameter. The entire exhaust system shall be supported and secured in place. The male end of the duct at overlapped duct joints shall extend in the direction of airflow. Clothes dryer transition ducts used to connect the appliance to the exhaust duct system shall be limited to single lengths not to exceed eight (8) feet (2438mm) and shall be listed and labeled for the application. Transition ducts shall not be concealed within construction.

Exception. In one- and two-family construction, polyvinyl chloride (PVC) pipe conforming to *American Society for Testing and Materials International (ASTM International or ASTM) Standards, Reference Number D1785 SCH 40* may be used when placed in concrete slabs.

513.12.1 Exhaust System Wiring-Amendatory. In addition to meeting the requirements of *National Fire Protection Association (NFPA) Standard Reference Number 70*, all wiring, regardless of voltage, shall be fully enclosed within continuous raceways.

602.2.1.1 Duct System Plenum Wiring-Amendatory. Combustible electrical or electronic wiring methods and materials, optical fiber cable, and optical fiber raceway exposed within a plenum shall have a peak optical density not greater than 0.50, an average optical density not greater than 0.15, and a flame spread not greater than five (5) feet (1524 millimeters) when tested in accordance with *National Fire Protection Association (NFPA) Standard Reference Number 262*. Only type OFNP cable (plenum-rated, non-conductive, optical fiber cable) shall be installed in plenum-rated optical fiber raceways. Wiring, cable, and raceways addressed in this section shall be listed and labeled as plenum rated and shall be installed in accordance with *NFPA Standard Reference Number 70*.

603.8.4 Underground Ducts Required to be Waterproof-Added. When the bottom of the duct work will be below exterior finish grade at completion, the duct system wholly or partly below such grade shall be constructed of polyvinyl chloride (PVC) coated galvanized steel spiral pipe, ceramic tile pipe, or concrete pipe, except as noted below. Joints which are wholly or partly below exterior grade shall be watertight. Watertight joints shall be one of the following:

1. On ceramic tile pipe—PVC joint coupling conforming to C-425-60T; or
2. On concrete pipe or polyvinyl chloride coated galvanized steel spiral pipe, a combination of two to three layers of a mineral-treated fiber cloth impregnated with gypsum hardite and an aqueous copolymer adhesive forming a hard and durable coat, brushed with a generous coat of aqueous asphaltic emulsion after it is set.

Exception. Galvanized duct systems may be installed where the duct is below the exterior grade, provided that a footing drainage system is installed around the perimeter of the entire structure and carried to a free outlet and the installation complies with all other applicable portions of this code.

605.2.1 Air Filter Location-Added. Access to filters shall be provided. Filters shall be installed in a location so as to readily removable.

801.16.2 Chimney and Vent Opening Location-Added. Chimney or vent termination openings shall be located a minimum of five (5) feet (1524 millimeters) from any lot line unless otherwise approved.

1003.2.1 Piping Standards-Amendatory. Air compressor pipe shall be steel and conform to *American Society for Testing and Materials International* (ASTM International or ASTM) Standards, Reference Numbers A53, ASTM A106, and ASTM A120 or Type L hard copper conforming to ASTM 75 listed in *ICC International Mechanical Code*, 2006 Edition, Chapter 15, entitled "Referenced Standards."

1003.2.2 Brazed Joints for Copper-Added. All joint surfaces shall be cleaned. An approved flux shall be applied when required. The joint shall be brazed with a filler metal conforming to *American Welding Society* (AWS) Standard Reference Number A5.8 listed in *ICC International Mechanical Code*, 2006 Edition, Chapter 15, entitled "Referenced Standards."

1004.1 Boiler Standards-Amendatory. Boilers and their control systems shall be designed and constructed in accordance with the requirements of one or more of the following standards: *American National Standards Institute* (ANSI) Standard, Reference Number Z21.13, *American Society of Mechanical Engineers* (ASME) Boiler and Pressure Vessel Code Sections 1, 4, 6, 7, 8 (Divisions 1 and 2), and 9, ASME CSD-1, the *Oklahoma Boiler and Pressure Vessel Safety Act*, 40 O.S.Supp.2007, §§ 141.1, *et seq.*, *National Fire*

Protection Association (NFPA) Standard Reference Number 8501, NFPA 8502, NFPA 8504, Underwriters Laboratories (UL) 726, UL 795 or UL 834, as amended.

1012.0 Periodic Inspection-Added. All boilers and unfired pressure vessels subject to the provisions of this code shall be inspected at least once annually by the code official or by an agency acceptable to the code official.

Exception. Heating boilers or pressure vessels which are located in one- and two-family dwelling units.

Chapter 15 Referenced Standards-Amendatory. *ICC International Mechanical Code, 2006 Edition, Chapter 15, entitled "Referenced Standards" is amended to delete International Code Council (ICC) Standard Reference Number EC-2006 and to add National Fire Protection Association (NFPA) Standard Reference Number 70, as amended, in substitution of EC-2006.*

Ord. Nos. 18095, 18887, 20572, 21206, 21991

CHAPTER 2**STATIONARY ENGINEERS**

Section 200. Examination and Licensing of Stationary Engineers and Process Steam Boiler Operators.

Section 201. Mechanical Equipment Requiring Licensed Operators.

SECTION 200. EXAMINATION AND LICENSING OF STATIONARY ENGINEERS AND PROCESS STEAM BOILER OPERATORS

A. **Examination of Stationary Engineers; Qualifications.** The Mechanical Examiners and Appeals Board shall administer written examinations to all eligible Stationary Engineer and Process Steam Boiler Operator applicants. Examinations shall be appropriate to the license sought and shall reflect the knowledge and experience required to perform the work of the particular class. The examination for Process Steam Boiler Operators shall be limited to questions on the safe operating practices of process steam boilers.

B. **Examination Fees.** Examinations for each class of stationary engineer license shall be prepared by an independent testing agency.

C. **Experience.** Applicants for the following classes of licenses shall have the minimum experience designated for such class of license as follows:

1. **First Class Engineer's License.** All applicants for a First Class Engineer's License shall:

- a. Have at least three (3) years' experience in the operation or assisting in the operation of boilers exceeding 15 psig steam or 160 psig water pressure or 250° water temperature and refrigeration or air conditioning units exceeding 150 tons; or
- b. Be a currently licensed Mechanical Journeyman who has worked for a Mechanical Contractor for at least three (3) consecutive years installing the equipment described in Subsection 200.C.1.a., above; or
- c. Have a First Class Limited License and have served three (3) or more years operating or assisting in the operation of the equipment described in Subsection 200.C.1.a., above.

2. **First Class Limited Engineer's License.** All applicants for a First Class Limited Engineer's License shall have at least one (1) year's experience in the operation or assisting in the operation of low or high pressure boilers and at least three (3) years' experience in the operation or assisting in the operation of refrigeration or air conditioning units exceeding 150 tons.

3. **Third Class Engineer's License.** All applicants for a Third Class Engineer's License shall have at least one (1) year's experience in the operation or assisting in the operation of low or high pressure boilers.

4. **Steam Special Engineer's License.** All applicants for a Steam Special Engineer's License shall have a least three (3) years' experience in the operation or assisting in the operation of boilers exceeding 15 psig steam or 160 psig water pressure.

5. **Refrigeration Special Engineer's License.** All applicants for a Refrigeration Special Engineer's License shall have at least three (3) years' experience in the operation or assisting in the operation of refrigeration or air conditioning units exceeding 150 tons.

6. **Process Steam Boiler Operator's License.** All applicants for a Process Steam Boiler Operator's License shall:

- a. Have a minimum of three (3) months' experience in the operation or assisting in the operation of Process Steam Boilers of over ten (10) horsepower (334,750 BTU/Hour) input; or
- b. Have successfully completed a short course approved by the Mechanical Examiners and Appeals Board on the safe and proper operating practices for high pressure steam process application boilers; and
- c. Pass a written examination.

When the operating experience of applicants for the Process Steam Boiler Operator's license is limited to process steam boilers of fifty (50) horsepower (1,673,750 BTU/Hour) input or less and subject to an operating pressure of 150 psig or less, that experience can only be used toward the experience required for a Third Class license. All experience required for any of the aforementioned classes of license defined in this section and so claimed by an applicant for such class of license shall be proven by a notarized certification from former and present employers concerning the examinee's experience and qualifications. Only experience on the equipment itemized in Section 201 of this code shall be considered.

D. **Retesting.** An applicant shall be permitted to retest in accordance with the following:

First Failure: Two (2) months to retest.
All Failures thereafter: Four (4) months to retest.

Retaking of examination shall be limited to three (3) times a year.

E. Issuance of Certificates of Competency. Stationary Engineer applicants and Process Steam Boiler Operator applicants receiving a grade of seventy-five percent (75%) or higher on a required written examination shall be issued a Certificate of Competency appropriate to the examination administered by the Mechanical Examiners and Appeals Board. All Certificates of Competency shall display the date of passage of the examination or, if issued without examination as provided in this chapter, the basis for the applicant's qualification. Such certificates shall be consecutively numbered and the Office of Mechanical Inspection shall keep a record of all certificates issued. Should a certificate be lost or destroyed, a duplicate may be obtained under a new registration number by submitting a signed, written request and payment of a replacement fee in accordance with the fee schedule in Title 49, Tulsa Revised Ordinances. Once replaced, the certificate which was lost or destroyed and its registration number shall be invalid.

F. Issuance and Renewal of Stationary Engineer and Process Steam Boiler Operator Licenses. Every holder of a current Stationary Engineer or Process Steam Boiler Operator Certificate of Competency shall be issued an annual license appropriate to such certificate by the Mechanical Examiners and Appeals Board upon payment of a license fee in accordance with the fee schedule in Title 49, Tulsa Revised Ordinances.

G. Annual License Registration. All Stationary Engineer and Process Steam Boiler Operator licenses shall expire on December 31 and shall be renewed annually. Failure to renew within thirty (30) days of expiration shall subject the former licensee to a penalty fee in accordance with the fee schedule in Title 49, Tulsa Revised Ordinances, per month, until renewal. When any operator's license has been expired for one (1) year or more, the former licensee shall be examined by the Board as to the qualifications of the operator before the license may be renewed.

H. Stationary Engineer License and Process Steam Boiler Operator Classifications Established and Work for Which Qualified Defined. Stationary Engineer and Process Steam Boiler Operator licenses shall be issued to qualified applicants divided into the following categories:

1. **First Class Engineer's License.** Any person holding a First Class Engineer's License shall be qualified to operate and maintain all steam generating boilers, pressure vessels, superheaters, refrigeration plants, and air conditioning units of unlimited tonnage, horsepower, and pressures, and all of their related pumps and apparatus.

2. **First Class Limited Engineer's License.** Any person holding a First Class Limited License shall be qualified to operate and maintain all boilers with an operating

temperature of less than 250° F. and subject to a pressure not exceeding 15 psig steam or 160 psig water and refrigeration and air conditioning units of unlimited tonnage including all related pumps and apparatus.

3. **Third Class Engineer's License.** Any person holding a Third Class Engineer's License shall be qualified to operate and maintain heating boilers with an operating temperature of less than 250° F. and subject to a pressure not to exceed 15 psig steam or 160 psig water and all related pumps and apparatus.

4. **Steam Special License.** Any person holding a Steam Special License may operate and maintain all boilers, engines, pumps, and related apparatus of unlimited size and pressure.

5. **Refrigeration Special License.** Any person holding a Refrigeration Special License may operate and maintain refrigeration plants and units of unlimited tonnage or horsepower.

6. **Process Steam Boiler Operator.** Any person holding a Process Steam Boiler Operator license may operate high pressure process steam boilers of fifty (50) horsepower (1,673,750 BTU/Hour) input or less and subject to an operating pressure not to exceed 150 psig. Seventy-five percent (75%) of the total boiler capacity must be used for the process system operation.

I. **Display of Certificates and Licenses Required.** Licensees shall keep Certificates of Competency and current licenses displayed at all times in the place where they are employed so that same may be readily seen. In case a copy should be used, it must show the address where the original is displayed.

J. **Revocation and Suspension of Stationary Engineer and Process Steam Boiler Operator Licenses and Certificates of Competency.** Subject to the procedures governing the Mechanical Examiners and Appeals Board, Stationary Engineer and Process Steam Boiler Operator Certificates of Competency or Stationary Engineer and Process Steam Boiler Operator Licenses may be denied, revoked, suspended, or canceled by the Board for incompetence, gross carelessness in the maintenance or operation of equipment, or intoxication while on duty.

K. **Appeals.** Any person aggrieved by any decision of the Board shall have a right of appeal to the City Council in accordance with the procedures in Chapter 1, of this title.

Ord. Nos. 18095, 18172, 18438, 18887, 20572, 21206, 21991

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| 2. | Use Group B,
Business Buildings | At all times during public occupancy while regulated equipment is in operation; |
| 3. | Use Group E,
Educational Buildings | At all times during public occupancy while regulated equipment is in operation; |
| 4. | Use Group F,
Industrial Buildings | During each shift of work of the occupying industry; |
| | | EXCEPTION: In facilities when the mechanical equipment is being operated by a Process Steam Boiler Operator, the operator shall be on the premises in accordance with Subsection 201.E. |
| 5. | Use Group H,
High Hazard | At all times while regulated equipment is in operation; |
| 6. | Use Group I,
Institutional Buildings | At all times while regulated equipment is in operation; |
| 7. | Use Group M,
Mercantile Buildings | During public occupancy while regulated equipment is in operation; |
| 8. | Use Group R,
Residential Buildings: | |
| a. | R-1 Structures less than 4 stories | At start-up and shut-down; |
| b. | R-1 Structures of 4 stories or more | At all times while regulated equipment is in operation; |
| c. | R-2 Structures | At start-up and shut-down; |
| d. | R-3 Structures | None; |
| 9. | Use Group S, Storage | At start-up and shut-down; |

10. Use Group U, Utility
and Miscellaneous

Mechanical Board shall determine which of the above rules shall apply. Such determination shall be based upon the Use Group that the building or structure most nearly resembles.

"Public occupancy" shall mean open to public use by license or invitation. The term shall not mean occupancy by custodial, building maintenance, or security personnel, or occasional occupancy by employees, tenants, and their invitees after normal working hours.

C. Daily Operator Log Required. A daily log shall be kept by all operators, showing the date and time each operator arrives on the job, with signature or initials. The log shall be kept in full view with certificate and license.

D. Use of Apprentice Operators. Operators may use assistants who have registered as apprentice operators. An apprentice operator shall not change any settings, make any adjustment, start, stop, work on, or repair equipment except in the presence of and under the direct supervision of a licensed operator. The licensed operator shall be directly responsible for the safe and lawful operation of any equipment where the operator's certificate and license are posted.

E. Operating Procedures for Process Steam Boilers. Start-up and shut-down procedures shall be posted in the boiler room. The certificate holder shall record in a log the operating conditions of the boiler at a minimum frequency at each day's start-up, at the mid-point of the daily operation and at the shut-down of the process steam boiler. The maximum time period between any two log entries by the certificate holder for a boiler in operation shall be six hours. Each log entry shall include as a minimum the date and time of the entry, the certificate holder's signature, and a checklist of the status of the safety features of the boiler to include as a minimum the boiler operating pressure and the water level in the sight glass. The low water cut-off shall be cycled a minimum of once each operator's shift, and the pressure relief valve shall be lift tested monthly.
Ord. Nos. 18095, 18438, 18887, 20572, 21206, 21991

CHAPTER 3**ICC INTERNATIONAL FUEL GAS CODE, 2006 EDITION**

Section 300 Adoption of the International Fuel Gas Code, 2006 Edition.

Section 301 Amendments to the ICC International Fuel Gas Code 2006.

SECTION 300. ADOPTION OF THE INTERNATIONAL FUEL GAS CODE

A certain document, three (3) copies of which are on file in the office of the City Clerk of the City of Tulsa, Oklahoma, being marked and designated as the *ICC International Fuel Gas Code, 2006 Edition*, as published by the International Code Council, Inc. (ICC), is hereby adopted as an amendment to the Tulsa Revised Ordinances, hereinafter the "Mechanical Code," for the control of fuel gas piping systems, fuel gas utilization equipment, and related accessories located in buildings and structures in the City of Tulsa. Each and all of the terms, conditions, regulations, provisions, and penalties of the *ICC International Fuel Gas Code, 2006 Edition*, are hereby referred to, adopted and made a part of the Tulsa Revised Ordinances as if fully set out in this chapter, with its amendments, if any, as prescribed in Section 301 of this chapter and, as used in this Chapter 3, may be referred to as the "code."

Ord. Nos. 20572, 21206, 21991

SECTION 301. AMENDMENTS TO THE ICC INTERNATIONAL FUEL GAS CODE, 2006 EDITION

The following provisions of the *ICC International Fuel Gas Code, 2006 Edition*, are hereby added, deleted, or amended to read as follows:

106.1 When Required-Amendatory. A contractor who desires to erect, install, enlarge, alter, repair, remove, convert, or replace a mechanical system, the installation of which is regulated by this code, or to cause such work to be done, shall first make application to the code official and obtain the required permit for the work.

Exception. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day of the Office of Mechanical Inspection.

106.3 By Whom Application is Made-Amendatory. No mechanical permit shall be issued to any person, firm, limited liability company, or corporation until such person, firm, limited liability company, or corporation has received a Certificate of Registration appropriate for the work contemplated.

106.5.1 Work Commencing Before Permit Issuance-Deleted. Section 106.5.1 of the *ICC International Fuel Gas Code, 2006 Edition*, is intentionally deleted from this code.

106.5.2 Fee Schedule-Amendatory. Permit and inspection fees for all mechanical work shall be the same as set forth in Chapters 1 and 5 of Title 49, Tulsa Revised Ordinances.

108.3 Prosecution-Amendatory. If a violation is not corrected within seven (7) days of notice being given by the code official, or within any extension granted in writing by the code official, the code official shall file a written complaint in Municipal Court or shall request the City Attorney to institute the appropriate proceeding at law or in equity to restrain, correct, or abate such violation or to require the removal or termination of the unlawful use of the building or structure in violation of the provisions of this code or of the order or direction made pursuant to this code. The notice requirements of this section shall not apply to violations for work done or being done without the required permits nor to violations of this code involving imminent danger to life or health. Violations involving imminent danger are governed by Section 108.7.2 of this chapter.

108.4 Violation Penalties-Amendatory. Any person violating any of the provisions of this code shall be guilty of a misdemeanor offense and, upon conviction thereof, shall be punished by a fine of not more than Five Hundred Dollars (\$500.00), excluding costs, fees, and assessments or by imprisonment in the City Jail for a period not exceeding ninety (90) days, or by both such fine and imprisonment. Each day that a violation continues shall be deemed a separate offense.

Section 108.7 Equipment or Apparatus not in Compliance with the Code-Amendatory.

108.7.1 General-Amendatory. Whenever any mechanical equipment or apparatus within the City of Tulsa is found by the code official to be in violation of any of the requirements of this code, the code official shall notify the owner or permit holder or persons in control, in writing, to repair, alter, or replace such equipment or apparatus, as may be necessary. Upon the failure of such individual(s) to comply with the notice within seven (7) days, or within any extension granted in writing by the code official, the code official may cause any utility service connected to such equipment or apparatus to be disconnected.

If utility service is ordered disconnected by the code official, the code official shall attach a tag or notice to such equipment stating, "This equipment does not comply with the requirements of the Tulsa Mechanical Code and its use has been prohibited by the Tulsa Mechanical Inspector." It shall be unlawful for any person, firm, limited liability company, or corporation, or their agents or servants, to remove such notice until all required repairs have been made and approval has been given by the code official.

108.7.2 Unsafe Equipment-Amendatory. Whenever the use of any mechanical equipment or apparatus within the City of Tulsa is determined by the code official to

be imminently hazardous to life and safety, the code official shall give the owner or agent or permit holder or person in control of such equipment or apparatus written notice stating the defects of such equipment, and the code official shall immediately order that all utility service connected to such equipment or apparatus be disconnected. The code official shall immediately attach to such equipment or apparatus a tag or notice stating, "This equipment is imminently hazardous and its use has been prohibited by the Tulsa Mechanical Inspector." It shall be unlawful for any person, firm, limited liability company, or corporation, or their agents or servants, to remove such notice until the imminent hazard has been removed and approval has been given by the code official.

The decisions of the code official prohibiting the use of such equipment and ordering the immediate disconnection of any utility services attached to such equipment shall not be stayed during the pendency of any appeal from the code official's determination.

109.0 Means of Appeal-Amendatory. Any aggrieved person may appeal a decision of the code official to the Mechanical Examining and Appeals Board under the procedures specified in Title 59, Tulsa Revised Ordinances, Chapter 1. An appeal shall be in writing and filed with the Board within twenty (20) days after the notice was served. Such application shall:

- A. Set forth in detail the precise decision or requirement being appealed;
- B. State precisely why the decision or requirement is in error;
- C. Designate the section(s) of the Mechanical Code, the statute(s) or the ordinance(s) which support(s) the appellant's position; and
- D. Be accompanied by a fee in accordance with the fee schedule in Title 49, Tulsa Revised Ordinances.

306.3.1 Electrical requirements-Amendatory. A lighting fixture controlled by a switch at the required passageway opening and a receptacle outlet shall be provided at or near the appliance location in accordance with *National Fire Protection Association (NFPA) Standard Reference Number 70*.

401.1.2 Size Established; Point of Delivery Defined-Added. All consumer gas piping from the point of delivery to the first connecting appliance inside a building or structure shall be one and one-fourth (1-1/4) inch inside diameter or greater. Piping to a mobile home site from the point of delivery shall be one (1) inch inside diameter or greater.

403.4.3 Copper and Brass-Deleted. Section 403.4.3 of the *ICC International Fuel Gas Code, 2006 Edition*, is intentionally deleted from this code.

403.4.4 Aluminum-Deleted. Section 403.4.4 of the *ICC International Fuel Gas Code*, 2006 Edition, is intentionally deleted from this code.

403.5.3 Aluminum Tubing-Deleted. Section 403.5.3 of the *ICC International Fuel Gas Code*, 2006 Edition, is intentionally deleted from this code.

404.8.3 Underground Piping-Added.

1. All steel piping shall be cleaned by an approved method prior to the application of a coating.
2. All coatings shall be applied in strict accordance with the manufacturer's recommendations as to film thickness, drying time, etc.
3. Gas piping shall not be field wrapped without prior approval of the code official.
4. If any coated pipe appears to be damaged or poorly coated as laid, the code official shall cause it to be removed.
5. All wrappings and coating shall extend six (6) inches above grade level.

404.8.4 Coating Materials for Buried Piping-Added. All buried metal piping shall be coated with one of the following materials:

1. Extruded plastic;
2. Plastic applied as a dry resin;
3. Hot applied bituminous materials, either asphalt or coal tar;
4. Preformed plastic films or pipeline tapes having a suitable backing and adhesive; or
5. Preformed bituminous films or tapes having a suitable reinforcement backing, which may be applied either hot or cold.

404.8.4.1 Application of Pipe Coatings-Added.

1. **Extruded Plastics.** The coating shall be a minimum of twenty-five (25) millimeters thick and have a bonding adhesive between the pipe and the plastic.
2. **Plastic Applied as Dry Resins.** The resin may be applied by spray or fluidized bed techniques to the heated pipe. The pipe shall be heated to fuse the plastic

into a continuous holiday-free, bonded coating having a film thickness not less than ten (10) millimeters.

3. Hot Applied Bituminous Enamels.

- a. A primer shall be applied in an even coat immediately after cleaning. The primer shall be compatible to the particular coating to be applied later. Primers shall not be wet or dead when the hot enamel is applied.
- b. A flood coat of the hot enamel shall be applied to an average thickness of three thirty-seconds (3/32) of an inch. Glass reinforcements shall be pulled into the molten enamel.
- c. Spirally wrapped eight (8) pound pipeline felt, perforated and reinforced, shall be applied to the hot enamel. The saturant in the felt shall be compatible with the enamel.
- d. Electrical Holiday Inspection between 8,000 and 12,000 volts shall be made to insure that a pinhole (holiday) free coating is obtained.

4. Preformed Plastic Films or Tapes.

- a. The pipe shall be coated with a primer compatible with the adhesive mass on the plastic film.
- b. The plastic tape shall be spirally applied in such a manner as to give a minimum of one-fourth (1/4) inch overlap with no wrinkles or voids in the material.
- c. In rocky areas, an eight (8) pound felt shall be applied over the tape to protect the tape from abrasion damage.

5. Bituminous Films or Tapes.

- a. The primer shall be compatible with the coating and applied in an even coat.
- b. Hot applied tapes shall be heated to a temperature that will allow the system to conform to the pipe in a continuous film, free of wrinkles and sags. Excessive heating which will allow the reinforcing material to "pull through" the bituminous layer shall be good cause for rejection. A minimum of one-fourth (1/4) inch overlap of the spirally wrapped tape shall be required.

404.8.4.2 Pipe Joints and Fittings-Added.

1. The coating system on all straight run pipe shall be cut back a minimum of six (6) inches from the end. After joining, the fitting surface shall be cleaned, free of all grease, pipe dope, soap, moisture, dust, rust, loose mill scale, or dirt, and shall be coated with a coating material authorized by this code.

2. A minimum thickness of fifty (50) millimeters of mastic protective coating, compatible with the system on the pipe, shall be applied to a clean surface. Where the mastic has cured prior to burial, no over wrapping shall be required. When immediate burial is desired or required, a compatible overwrap shall be used.

3. Hot or cold applied bituminous tapes shall be spirally applied over the primer in such a manner as to give a minimum one-fourth (1/4) inch overlap with no wrinkles or voids in the material. The primer shall be the one recommended by the manufacturer of the tape.

4. Steel piping exposed above ground shall be painted with a coating compatible with the piping and resistant to moisture.

404.8.4.3 Pipe Insulation-Added.**1. General.**

- a. No piping system shall be allowed to contact electrically any other metallic structure or object.
- b. Where piping goes through concrete walls or floors, it shall be protected by a nonmetallic sleeve.

2. Underground Piping.

- a. Dielectric insulation shall be installed at the meter or distribution line, whichever will isolate all of the underground gas distribution system.
- b. The steel gas service shall be isolated by a dielectric fitting above ground level where it enters the building.

404.8.4.4 Cathodic Protection Requirements-Added.

1. All underground service and distribution lines shall be protected by maintaining a minimum negative voltage of 0.85 to a copper-copper sulfate reference electrode.

2. Cathodic protection current sources shall be five (5) pound magnesium or zinc sacrificial anodes packaged in suitable anode backfill manufactured for this specific service.
3. The anode shall be buried deeper than the piping to be protected.
4. Anode lead wires shall be attached to the piping at a suitable above-ground location by one of the following methods:
 - a. Thermite welding-limited to a fifteen 15 gram cartridge. Brazing by any other method shall be prohibited;
 - b. Soldering;
 - c. Conventional ground-water connections; or
 - d. The property owner shall be notified in writing as to the type and amount of protection which has been installed and that future maintenance of the protection system will be the responsibility of the property owner.

Any dielectric fitting removed during repair or modification of the system shall be reinstalled in new condition.

404.9 Minimum Burial Depth-Amendatory. Underground piping systems shall be installed a minimum depth of eighteen (18) inches (305 millimeters) below grade, except as provided for in Section 404.9.1.

404.9.2 Work on Consumer's Gas Piping Containing Unmeasured Gas-Added. Repair, alterations, relocations, or any other work conducted on any portion of a consumer's gas piping, containing unmeasured gas, shall only be performed by a qualified person or installation agency authorized to do such work. When such work is done, the gas utility company shall be notified. The movement, connection, or disconnection of gas meters shall only be performed by gas utility company employees or others authorized by the gas utility company.

404.9.3 Gas Piping for Unmeasured Gas-Added. If the pressure exceeds thirty-two (32) ounces, the pipe must be welded steel. For gas pressure above three (3) psig, the line shall be tested at ninety (90) psig.

404.10.1 Gas Piping and Other Piping in Same Excavation-Added. A twelve (12) inch minimum separation shall be maintained between the gas piping and any drainage, sewer, or water pipe when installed in the same excavation.

406.1 General-Amendatory. The gas piping system shall be tested prior to connecting any appliances. Portions of the gas piping system installed in concealed locations shall be tested before the piping is completely concealed. At least one appliance shall be connected prior to final release of the gas meter.

406.1.1 Test Criteria-Amendatory. The gas piping system shall be tested with air or inert gas. The system shall be tested to a pressure of one and one-half (1-1/2) times the system working pressure, but not less than three (3) psi (20-69 kpa) on a five (5) psi (34.47 kpa) gauge registered in one-tenth (0.10) pound increments or ten (10) psi (68.95 kpa) on a thirty (30) psi (206.85 kpa) gauge registered in one (1) pound increments. An undiluted liquefied petroleum gas system operating at a pressure less than five-tenths (0.5) psi (3.45 kpa) shall be tested at a pressure of eighteen (18) inches water column (4479 p). The gas piping system shall maintain the full test pressure for a period of ten (10) minutes.

409.3.4 Exterior Shutoff-Added. An exterior shutoff valve shall be provided for each building, on the demand side of the meter, above ground, and before entering the building.

Section 409.6 Gas Piping in Mobile Home and Travel Trailer Parks-Added.

409.6.1 General-Added. Gas piping systems in mobile home and travel trailer parks, extending from the outlet of a meter set assembly or the outlet of a service regulator, when a meter is not provided, to the terminal of the gas riser at each trailer site, shall only be done by a licensed heating or mechanical contractor and shall comply with provisions of this code.

409.6.2 Prohibited Location-Added. Piping shall not be installed under trailer sites and adjacent patio slabs, when an enclosed foundation is used beneath the site.

409.6.3 Location, Protection and Sizing of Riser-Added. The gas riser to each trailer site shall be placed in the rear one-third (1/3) section of the site, within eighteen (18) inches of the roadside wall of the trailer (i.e., the right side of the trailer when viewing the tongue of the trailer). It shall be located and protected or supported so as to minimize the likelihood of damage by moving vehicles. The minimum size of the gas piping outlet at such a site shall be three-fourths (3/4) inch for other than undiluted, liquefied petroleum gases.

409.6.4 Location of Shut-off Valves-Added.

A. Outlets for the individual trailers and gas piping to any building supplied by the system shall be provided with a readily accessible, approved valve which cannot be locked in the open position.

B. A readily accessible valve shall be provided near the point of gas delivery for shutting off the entire trailer park system. The valve provided by the serving gas supplier may be considered acceptable for this purpose, provided it is readily accessible.

409.6.5 Demand Factors-Added.

A. The hourly volume of gas required for any trailer site gas outlet, or any section of a trailer park gas piping system, shall be computed from Table 409.6.6.

B. Other gas equipment or appliances, other than trailer site outlets, shall be computed at the manufacturer's maximum cubic feet per hour input rating and shall be added to the figures provided in the following table:

TABLE 409.6.6. DEMAND FACTORS FOR CALCULATING GAS PIPING SYSTEMS IN MOBILE HOME OR TRAILER PARKS

No. of Trailer Sites	BTU per Hour-per Trailer Sites
1	125,000
2	117,000
3	104,000
4	96,000
5	92,000
6	87,000
7	83,000
8	81,000
9	79,000
10	77,000
11-20	66,000
21-30	62,000
31-40	58,000
41-60	55,000
Over 60	50,000

409.6.7 Connection of Gas Service Piping-Added.

A. Connection of mobile home gas service piping shall be made by a Mobile Home Contractor I, Mobile Home Contractor II, Heating Contractor or Mechanical Contractor from the readily accessible shutoff valve.

B. Mobile homes shall be connected to the gas piping system with rigid pipe or semi-rigid tubing. The connection between the gas riser and the mobile home shall be a minimum of three-quarters (3/4) inch inside diameter.

501.12.1 Location-Added. Chimney or vent termination openings shall be located a minimum of five (5) feet (1524 millimeters) from the lot line unless otherwise approved.

631.1 Boiler Standards-Amendatory. Boilers and their control systems shall be designed and constructed in accordance with the requirements of one or more of the following standards: *American National Standards Institute (ANSI) Standard, Reference Number Z21.13, American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Sections 1, 4, 6, 7, 8 (Divisions 1 and 2), and 9, ASME CSD-1, the Oklahoma Boiler and Pressure Vessel Safety Act, 40 O.S.Supp.2007, §§ 141.1, et seq., as amended, and National Fire Protection Association (NFPA) Standard Reference Numbers 8501, NFPA 8502, NFPA 8504, UL 726, UL 795 or UL 834, as amended.*

631.4 Brazed Joints for Copper-Added. All joint surfaces shall be cleaned. An approved flux shall be applied when required. The Joint shall be brazed with a filler metal conforming to *American Welding Society (AWS) Standard Reference Number A5.8 listed in ICC International Fuel Gas Code, 2006 Edition, Chapter 8, entitled "Referenced Standards."*

631.5 Periodic Inspection-Added. All boilers and unfired pressure vessels subject to the provisions of this code shall be inspected at least once annually by the code official or by an agency acceptable to the code official.

Exception. Heating boilers or pressure vessels which are located in one- and two-family dwelling units.

Chapter 7 Referenced Standards-Amendatory. *ICC International Fuel Gas Code, 2003 Edition, IFGC/IFGS Chapter 8, entitled "Referenced Standards" is amended to delete International Code Council (ICC) Standard Reference Number EC-2006 and National Fire Protection Association (NFPA) Standard Reference Number 70, as amended, shall be added in substitution of EC-2006.*

Ord. Nos. 20572, 21206, 21991