

ORDINANCE NO. 419

AN ORDINANCE OF THE CITY OF MESQUITE, TEXAS, REGULATING THE ERECTION, CONSTRUCTION, ALTERATION, INSTALLATION AND MATERIALS USED FOR THE INSTALLATION OF PLUMBING, GAS PIPING AND GAS-FIRED APPLIANCES IN THE CITY OF MESQUITE, TEXAS, PROVIDING FOR MINIMUM STANDARDS, PROVISIONS AND REQUIREMENTS FOR THE SAFE INSTALLATION OF GAS PIPING AND GAS-FIRED APPLIANCES; PROVIDING FOR THE ISSUANCE OF PERMITS AND THE COLLECTION OF FEES, ESTABLISHING A BOARD OF PLUMBERS AND PRESCRIBING THE DUTIES OF SAID BOARD; PROVIDING FOR THE INSPECTION OF PLUMBING AND GAS FIXTURES AND THE OBTAINING OF APPROVAL THEREOF PRIOR TO USING THE SAME, REQUIRING REGISTRATION OF PLUMBING CONTRACTORS, PROVIDING FOR INSPECTIONS OF THE INSTALLATION OF ALL GAS FIXTURES AND GAS PIPING AND GAS-FIRED APPLIANCES, DESIGNATING THE ORDINANCE AS THE MESQUITE PLUMBING CODE AND THE MESQUITE GAS CODE, PROVIDING FOR A PENALTY OF TWO HUNDRED DOLLARS (\$200.00) FOR EACH OFFENSE, PROVIDING FOR A SAVINGS CLAUSE AND DECLARING AN EMERGENCY.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MESQUITE,
TEXAS:

ARTICLE I. GENERAL

Section 1.

SHORT TITLE

This ordinance shall be known as "THE MESQUITE PLUMBING CODE", may be cited as such, and is referred to in this ordinance as "this code".

Section 2.

PURPOSE

(a) The purpose and intent of this Code is to provide certain minimum standards, provisions, and requirements for safe, sanitary, and suitable design, materials, and methods of construction in "PLUMBING" hereafter constructed, enlarged, altered, moved, replaced, repaired, converted or maintained.

(b) Further, it is the intent of this Code to assure that "PLUMBING" be kept in a safe and sanitary condition, and shall not become a menace to public health, safety, or welfare.

(c) This chapter is hereby declared to be remedial and shall be construed to secure the beneficial interests and purposes thereof, which are public health, safety, or welfare.

Section 3.

SCOPE

(a) The scope of this Code is to provide minimum safety and health requirements for design, installation, inspection and performance of plumbing equipment and systems, including water-supply and distribution, gas, drainage and venting systems.

(b) Existing "PLUMBING" hereafter altered, moved or converted to a new use or connected to the waterworks or sewage systems of the City of Mesquite shall be made sanitary and safe according to the standards set forth in this Code.

(c) Existing "PLUMBING" that has been damaged by fire or has become unsafe or insanitary to such an extent as to be deemed a nuisance shall be removed, abated, or repaired to conform to the standards of this Code.

(d) All "plumbing work shall be done by competent persons working under the authority of permits and proper license as provided by Article 624-101 of Vernon's Annotated Civil Statutes of Texas, Senate Bill #188, known as "The Plumbing License Law of 1947".

Section 4
STRUCTURES AFFECTED

The provisions of this Code shall apply with equal force to all buildings, structures, and premises, whether public or private, within the corporate limits of the City of Mesquite and shall also apply to buildings, structures, and premises located outside the corporate limits when connected to the waterworks or sewage system of the City of Mesquite. The various departments and buildings of the City of Mesquite, the Mesquite Independent School District, County of Dallas and State of Texas, and all churches, shall be subject to the provisions of this Code insofar as the same may be applicable, but shall be exempt from the requirements of fees as provided herein.

Section 5
RESPONSIBILITY FOR SAFE WORK

This Code shall not be construed to relieve from or lessen the responsibility or liability of any person owning, operating, controlling, or installing any plumbing or for damages to persons or property caused by any defect therein, nor shall the City of Mesquite be held as assuming any such liability by reason of the inspection or reinspection authorized herein; or by reason of the approval or disapproval of any plumbing equipment or fixtures.

Section 5
INTERFERENCE

It shall be unlawful for any unauthorized person to, in any manner, change or alter plumbing fixtures, pipes, or other plumbing elements in or on any building or premises.

ARTICLE II. BOARD OF PLUMBERS

Section 7
CREATION

There is hereby created the "Board of Plumbers", consisting of five (5) members. Two (2) members of the Board shall be appointed by the City Manager with the advice and consent of the City Council. The three (3) remaining members shall be the City Health Officer, the Director of Public Works, and the Chief Plumbing Inspector. The Director of Public Works and the representative of the City Health Office shall designate one (1) employee of his respective department who may act for him by proxy, but said proxy shall not vote with the Board at such time as the Board may be hearing appeals.

Section 8
QUALIFICATIONS OF APPOINTIVE MEMBERS

The appointive members of the Board of Plumbers shall be qualified as follows:

- (a) One shall be a Master Plumber of not less than ten (10) years' active and continuous experience as a plumber and gas fitter.
- (b) One shall be a Journeyman Plumber of not less than five (5) years' active and continuous experience as a plumber and gas fitter.

Section 9
TENURE OF OFFICE

The appointive members of the Board of Plumbers shall hold office from the date of their appointment and qualification until their successors have been appointed and qualified. The appointment or re-appointment of members of the Board of Plumbers shall be such that the Master Plumber member shall be appointed on or about January 1 of odd-numbered years for a term of two years, and the Journeyman Plumber member shall be appointed on or about January 1 of even-numbered years for a term of two years. Any appointive member of the Board of Plumbers may be removed by the governing body of the City of Mesquite for cause. Vacancies within the Board shall be filled by appointment for the unexpired term.

Section 10
COMPENSATION

The appointive members of the Board of Plumbers shall serve without compensation.

Section 11
POWERS AND DUTIES

(a) The Board of Plumbers shall select a chairman and shall prescribe a procedure and order of business for the performance of its duties as set out in Section 13 of this Code. The Chief Plumbing Inspector shall act or designate a suitable employee of the Division of Building Inspection of this City who shall act as Secretary to the Board of Plumbers.

(b) Three (3) members of the Board of Plumbers present at any meeting shall constitute a quorum for the transaction of business and action taken by the quorum shall constitute an official action of the Board.

Section 12
RECORDS

The Board of Plumbers shall keep a minute book in which shall be recorded all transactions and business of the Board. Said minute book and other records shall be kept in a manner and in a form satisfactory to the City Manager.

Section 13

APPEAL FROM DECISION OF CHIEF PLUMBING INSPECTOR

(a) Any person, firm or corporation aggrieved by any interpretation of this Code or by any decision or ruling by the Chief Plumbing Inspector under this Code shall have the right to make an appeal to the Board of Plumbers. Said appeal shall be made in writing and shall be duly verified by the person or persons familiar with the facts therein charged and three (3) written copies of the same shall be filed with the City Secretary within thirty (30) days of the date of the decision appealed from. A certified check for the amount of ten (\$10.00) dollars payable to the City of Mesquite shall accompany such appeal to cover the cost of processing the appeal. The City Secretary shall retain one copy of such appeal for the official records of the City and shall refer two (2) copies of the appeal to the Chief of the Division of Building Inspection, who shall investigate the facts and report the appeal and the facts to the Board of Plumbers.

(b) The Board of Plumbers shall, within a period of thirty (30) days, hear the appeal and the facts. The Chief Plumbing Inspector shall not sit as a member of the Board of Plumbers at any time when the Board is hearing an appeal from the decision of the Chief Plumbing Inspector.

(c) In hearing such an appeal, the Board of Plumbers shall not have the power to waive or set aside the requirements of this Code but shall have the power to interpret the provisions of this Code and in the case of alternate types of construction or material shall determine whether or not such alternate type of construction or material is in fact equal to the standards of this Code, considering adequacy, stability, strength, sanitation, and safety to the public health and welfare.

(d) The Board of Plumbers shall render a decision which shall be final with respect to the matter presented in the appeal. Such decision shall be filed with the City Secretary.

(e) The Chief Plumbing Inspector or the Board of Plumbers at their own volition shall have the authority to consider alternate materials and methods and approve the use of same as equal to the standards set out in this Code. All such approvals and conditions under which they are approved shall be specific, shall be reasonable, shall not create an injustice and shall be made a matter of public record.

Section 14

APPEALS TO THE COURTS

(a) Any person who may feel himself aggrieved by any action or decision of the Board of Plumbers, after exhausting the remedies provided in Section 13 of this Code, may file a suit within thirty (30) days after receiving notice of the Board of Plumbers' final order, in a District Court of Dallas County, to annul or vacate the said order of the Board of Plumbers. Such suit shall be filed against the Board of Plumbers as defendant and service or process may be done through the City Secretary. The suit shall be tried as other civil cases, the burden of proof devolving upon the plaintiff assailing the order of the Board of Plumbers.

(b) In such suits the Board of Plumbers shall be defended by the City Attorney until final determination of the proceedings contained therein.

ARTICLE III. PLUMBING INSPECTORS

Section 15

GENERAL

The administration and enforcement of the Mesquite Plumbing Code is hereby assigned to and shall be the responsibility of the Division of Building Inspection, City of Mesquite.

Section 16

DUTIES OF THE CHIEF PLUMBING INSPECTOR

It shall be the duty of the Chief Plumbing Inspector and the Plumbing Inspectors under the supervision of the Chief of the Division of the Building Inspection to administer, and enforce, the provisions of this Code. The Chief Plumbing Inspector shall be responsible for granting plumbing permits and the making of inspections as provided in this Code. He shall keep such records of permits issued, inspections and reinspections made, and other official work performed as is required by the City Manager.

Section 17

LIABILITY OF INSPECTORS

Where action is taken by the Chief Plumbing Inspector or any Plumbing Inspector to enforce the provisions of this Code, such action shall be in the name of, and on behalf of, the City of Mesquite, and the inspectors in so acting for the City shall not render themselves personally liable for any damage which may accrue to persons or property as a result of an action committed in good faith in the discharge of their duties, and any suit brought against any inspector by reason thereof shall be defended by the City Attorney until final determination of the proceedings contained therein.

Section 18

AUTHORITY OF THE PLUMBING INSPECTORS

(a) The Plumbing Inspectors shall have police power and shall have the right to arrest any person who violates any of the provisions of this Code.

(b) Whenever a Plumbing Inspector shall call upon the Police Department for aid and assistance in making an arrest or stopping work, he shall have the authority to do so, and it shall be the duty of each member of the Police Department to act immediately in giving the required assistance.

(c) Plumbing Inspectors shall have the right to enter any building or premises in the discharge of their official duties, or for the purpose of making any inspection, reinspection, or test required by this Code.

(d) Each Plumbing Inspector shall have the power to inspect and reinspect plumbing; to prevent the connection of plumbing to City mains and sewers; to prevent the covering up of plumbing which has not been approved; to issue notices or affix them to plumbing or structures; and to condemn plumbing and shall have such other powers as are provided in this Code.

Section 19

PROHIBITED INTERESTS

It shall be unlawful for the Chief Plumbing Inspector or any Plumbing Inspector to engage in the business of selling, installing or maintenance of plumbing fixtures, devices, equipment or materials, and they shall have no financial interest in any concern engaged in such business at any time while employed by the City.

Section 20

SERVICE OF NOTICE

When any order or notice is issued pursuant to the provisions of this Code to any person who cannot be found after reasonable search, then such order or notice may be served by posting it in a conspicuous place upon the premises occupied by him or upon the premises where the defects are alleged to exist. Such posting of the order or notice shall be considered equivalent to personal service of such order or notice. An order or notice sent by mail in a sealed envelope with postage prepaid and directed to the address of the Plumbing Contractor, owner, lessee, or the occupant of the premises shall be equivalent to personal service of such order or notice.

ARTICLE IV. REGISTRATION AND LICENSING

Section 21

REGISTRATION OF PLUMBING CONTRACTORS REQUIRED

(a) It shall be unlawful for any person, firm or corporation who is not registered by the City of Mesquite as a plumbing contractor to secure permits as provided herein.

(b) Each applicant for registration as a plumbing contractor shall have an established place of business or shop, location of which complies, if within the City, with the requirement of the City zoning ordinance.

Section 22

METHOD OF REGISTRATION OF PLUMBING CONTRACTORS

(a) To register with the City of Mesquite as a plumbing contractor, application shall be made in writing on forms furnished for the purpose and filed with the Chief Plumbing Inspector. The application shall show the plumbing contractor's name, local address and telephone number, and such other information as may reasonably be required to properly identify the plumbing contractor.

(b) It shall be unlawful for any person, firm, or corporation to represent himself or themselves as a registered and licensed plumber, or to use falsely the words "Plumbing Contractor", "Master Plumber", "Journeyman Plumber" or cards, stationery, or by any other misleading manner whatsoever within the City of Mesquite, unless said person, firm or corporation is, in fact, registered and holds a valid license within the meaning of the words used and as provided in this Code.

Section 23

SUPERVISION

(a) The Plumbing Inspector shall have reasonable control and supervision of the methods and materials used in installing any part of a plumbing or drainage system.

(b) The actual work of installing, maintaining, altering or repairing of plumbing for which a permit is required by this Code shall have supervision by a licensed Master Plumber as provided by the Texas Plumbing Licensing Law and this Code. The owner of a plumbing contracting business who is not a licensed Master Plumber shall have constantly in his employ a licensed Master Plumber. Such Master Plumber shall be designated by the owner of such place of business to the Chief Plumbing Inspector as the person responsible for, and supervising, the plumbing work done by such Plumbing Contractor. Such designated Master Plumber shall be the supervisory plumber of only one Plumbing Contractor within the City of Mesquite at any one time. Should such supervision not be constantly provided, the Plumbing Inspector may order the work being done by such Plumbing Contractor to be discontinued until proper supervision and control has been provided and the name of the new Master Plumber disclosed to the Chief Plumbing Inspector.

(c) When contracts to install plumbing have been obtained by persons who are not registered as Plumbing Contractors, the contract shall be assigned or sublet to a registered Plumbing Contractor.

Section 24

LICENSE REQUIRED

(a) It shall be unlawful for any person who is not licensed as a plumber in accordance with the provisions of the Laws of the State of Texas to install plumbing work or supervise plumbing as defined herein.

(b) Nothing herein shall be construed as prohibiting the employment of a Journeyman Plumber to engage in, and work at the actual installation, alteration, repairing and renovating of plumbing, or the employment of a Plumber's Apprentice who, as his principal occupation, is engaged in the learning and assisting in the installation of plumbing, or the employment of unskilled laborers to handle, haul, or carry materials when working under the immediate supervision of a Master Plumber.

Section 25

EVIDENCE OF LICENSE

(a) Each holder of a license as a Master Plumber shall display his license in a conspicuous place in his principal place of business.

(b) Each holder of a Master or Journeyman Plumber's license shall carry evidence of proper registration on his person at all times while doing plumbing work and shall produce and exhibit same when requested by any inspector or officer of the City of Mesquite.

Section 26

PLUMBING PERMITS REQUIRED

(a) It shall be unlawful to construct, install or cause to be installed any plumbing as defined herein without first securing a plumbing permit therefor from the Chief Plumbing Inspector of the City of Mesquite except as otherwise provided in Section 28.

(b) It shall be unlawful for any person to make any extension to any lines or pipes, using water from the City of Mesquite water mains, whether within or without the Corporate Limits of the City of Mesquite, or to add any such pipes or to change any pipes or lines from a water line, apartment, house, premises, or meter without first securing a permit from the City for such changes except as otherwise provided in Section 28.

(c) It shall be unlawful for any person to lend, rent or transfer a plumbing permit or permit a person without a proper license to do the work or for any person to make use of such permit which is not actually his own, and any such permit obtained under these conditions is hereby declared null and void.

(d) The term "unlawful" as used in this Section shall mean unlawful insofar as the City of Mesquite has lawful jurisdiction within its police powers.

(e) In case any work is begun for which a permit is required and without a permit being first secured therefor, or if the installations are being made in violation of this Code, the Chief Plumbing Inspector is empowered to stop further work at once and order all persons engaged therein to cease and desist therefrom until the proper permit is secured and the work is made to comply with this Code. Such action shall not defer any other penalties which may be applicable under this Code.

(f) In case any unauthorized connections are found to have been made, or plumbing or fixtures added, and no permit has been obtained for same, the Chief Plumbing Inspector may order the water or gas to be disconnected from such premises until approved corrections have been made and all permit fees have been paid.

Section 27

OTHER REQUIREMENTS

(a) WATER AND SEWER CONNECTIONS. Connections with, or openings into, the sewer or water mains or laterals of the City of Mesquite shall be done by authorization of, and in the method prescribed by, the Mesquite Public Works Department.

(b) PAVEMENT CUTS. Excavations in the street, alley or other public property and cuts of curb or pavement on public property shall be done under the authority of, and in the method prescribed by, the Director of Public Works of the City of Mesquite.

Section 28

PLUMBING PERMITS NOT REQUIRED

No plumbing permit is required to do the work specified in the following paragraphs:

(a) The maintenance, repair or replacement in kind of: (1) yard hydrants and house spigots; (2) gravity flush valves and float-balls in water closet tanks; (3) accessible traps on lavatories or sinks; and, (4) replacing of plumbing fixtures where no change in "Roughing-in" is involved.

(b) The removal of plumbing from a building or structure or portion thereof being razed, when the water supply and drainage lines have been disconnected under a permit in an approved manner.

(c) Work involved in the manufacture of plumbing supplies, plumbing fixtures, plumbing apparatus such as repair, adjusting, or testing of the same in the course of manufacture.

(d) Work involved in the setting up for display of plumbing or plumbing fixtures when not connected to supply or drainage lines in plumbing sales establishments.

(e) The installation of storm water drains provided, however, that such installation conforms to the requirements of this Code.

Section 29

APPLICATION FOR PERMITS

(a) An application for a plumbing permit, describing the work to be done, shall be made to the office of the Chief Plumbing Inspector by the registered Plumbing Contractor who proposes to do the plumbing work. The application shall be accompanied by such information as may be required to determine whether the installation as described will conform with the requirements of this Code.

(b) When the installation as described conforms with the legal requirements and the applicant has complied with the provisions of this Code, a permit for such installation shall be issued upon receipt of the required fee.

(c) No permit shall be issued or be valid for the installation of any plumbing or plumbing system which causes a violation of the Minimum Housing Ordinance, Building Code, or Zoning Ordinance.

(d) When required by the Chief Plumbing Inspector, the applicant shall furnish plans and information relative to the sizes of water supply lines, waste lines, and vents, together with the area, number and type of fixtures to be served, so that the Chief Plumbing Inspector shall have complete information for checking the required sizes of all such plumbing elements.

(e) No deviation shall be made from the installation described in the application and permit without permission from the Chief Plumbing Inspector, as provided herein. The issuance of a permit shall not be construed as permission to violate any of the requirements of this Code.

(f) When, in the course of the work, it is found necessary to make a change from the approved plans, amended plans shall be submitted to the Chief Plumbing Inspector and a supplementary permit shall be obtained to cover such changes.

Section 30

SPECIFIC PERMITS

Permits shall apply to a specific installation, alteration, addition, or replacement of plumbing or plumbing system to be done within a specific single building, structure or premises.

Section 31**RECORD OF PERMITS AND INSPECTIONS**

The Chief Plumbing Inspector shall keep a record of all permits issued and inspections made.

Section 32**PERMIT AND INSPECTION FEES**

(a) Any person, firm, or corporation granted a plumbing permit shall pay to the City of Mesquite for each permit an inspection fee in the amount specified herein.

(b) The plumbing permit fee shall be calculated from and shall be based upon the number of "plumbing fixture outlets" to be placed in the work described in the application according to the following schedule:

One (\$1.00) dollar for the first "plumbing fixture outlet" plus fifty (50¢) cents for each additional "plumbing fixture outlet".

(c) By the term "plumbing fixture outlet", as used for permit fee purposes, is meant each water closet, sink, water heater, lavatory or basin, laundry or wash tray, bath tub, shower, grease trap, drinking fountain, urinal, sand trap, floor drain, beer or soda fountain bar, washing machine, hose cabinet or hose rack, fire pump, cooling tower and any other plumbing element commonly known as a "plumbing fixture". Each such "plumbing fixture outlet" shall include the necessary faucets and accessories customarily included with the plumbing fixture. If fixtures are grouped together, then each unit ordinarily usable by an individual person shall be counted as a separate "plumbing fixture outlet" for the purpose of determining permit fees. Each water service and house sewer, if connected to City mains, shall be counted as a separate "plumbing fixture outlet" and shall be included in the permit fee calculation. Each gas service, including liquefied petroleum gas, and each permanently located gas-fired appliance shall be counted as a "fixture outlet" as set out in the gas code.

(d) No plumbing permit fee shall be required for plumbing installed or repaired in any building or structure, the title to which is directly vested in the State of Texas, County of Dallas, the City of Mesquite, the Mesquite Independent School District or any church. When a request for a permit is made this exemption shall be claimed in writing.

Section 33**PAYMENT OF PERMIT AND INSPECTION FEES**

Permit and inspection fees shall be due when the permit is issued.

Section 34**LIMITATION OF PERMITS**

Each specific permit issued shall expire by limitation and become null and void, if the work authorized by such permit has not been started within six (6) months from the date of such permit or if the work authorized by such permit is suspended or abandoned at any time for a period of six months. Before such work is started again a new permit shall be obtained.

**Section 35
REVOCATION OF PERMITS**

The Chief Plumbing Inspector is authorized to revoke any permit obtained by fraud, misrepresentation, or in any way contrary to the requirements of this Code.

**Section 36
FEES AND INSPECTIONS FOR CIRCUSES, CARNIVALS, ETC.**

Circuses, carnivals, fairs, and similar temporary uses having portable equipment involving the use of water from the Mesquite City Waterworks system, or requiring connection to the City of Mesquite sewer lines, shall employ a registered Plumbing Contractor to be responsible for the plumbing work. Such Plumbing Contractor shall obtain the necessary permits and pay the required fees.

Section 37

GENERAL

New plumbing work and portions of existing plumbing systems which are affected by new work or are changed, and work for which a plumbing permit is obtained, shall be inspected to insure compliance with the requirements of this Code, and the required tests shall be applied.

Section 38

REQUEST FOR INSPECTION AND TESTS

(a) Plumbing Contractors shall give 24-hour notice, exclusive of Saturdays, Sundays, and holidays, to the Chief Plumbing Inspector that plumbing work is ready for inspection.

(b) The Plumbing Contractor shall make sure that the work will stand inspection and the test prescribed before giving the above notification.

(c) When the Plumbing Inspector finds that the work does not pass the required inspection and test, the corrections shall be made and the Plumbing Contractor shall request a new inspection.

Section 39

INSPECTION AND TESTS REQUIRED

(a) There shall be not less than two requests for inspection on all plumbing installed in any building.

(b) When "rough-in" is completed, the piping of the plumbing system shall be inspected and given a water, smoke or air test, as required.

(c) After the plumbing fixtures have been set and their traps filled with water, the entire drainage system shall be inspected and when required by the Plumbing Inspector, shall be given a final test.

(d) The Plumbing Inspector may require the removal of any clean-outs or plugs on any tests to ascertain if the pressure has reached all parts of the system.

(e) The equipment, material, power, and labor necessary for required inspections and tests shall be furnished by the plumber.

(f) When an installation is found not to be fully in compliance with the provisions of this Code, the Plumbing Inspector shall cause notice of the defects or deficiencies to be given to the person, firm, or corporation making the installation. Where necessary, notice may be served as provided in Section 20.

Section 40

TESTING OF DRAINAGE SYSTEM

(a) WATER TEST. The water test may be applied to the drainage system in its entirety or in sections. If applied to the entire system, all openings

in the piping shall be tightly closed, except the highest opening above the roof, and the system filled with water to the point of overflow above the roof. If the system is tested in sections, each opening shall be tightly plugged, except the highest opening of the section under test, and each section shall be filled with water, but no section shall be tested with less than a five (5) foot head of water. In testing successive sections, at least the upper five (5) feet of the next preceding section shall be re-tested, so that no joint or pipe in the building shall have been submitted to a test of less than five (5) foot head of water. The water shall be kept in the system, or the portion under test, for at least fifteen (15) minutes before inspection starts; and the system shall then be tight at all points.

(b) AIR TEST. The air test shall be made by attaching an air compressor or testing apparatus to any suitable opening after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gage pressure of two and one-half (2 1/2) pounds per square inch or sufficient to balance a column of mercury five (5) inches in height. This pressure shall be held without the introduction of additional air for a period of at least fifteen (15) minutes.

(c) SMOKE TEST. After all fixtures have been set and when required by the Plumbing Inspector the entire drainage system shall be proved tight by filling with smoke under pressure equal to one (1) inch of water. The smoke shall not be produced by chemical mixtures.

Section 41

TEST OF WATER-SUPPLY SYSTEMS

(a) Upon the completion of the water-supply and distribution system of a building or premises or of a separate portion thereof, it shall be tested and proved tight under a water pressure not less than the working pressure under which it is to be used. The water used for the test shall be obtained from the normal source of supply or as directed by the Plumbing Inspector. Jumpers, when used, shall be used for test purposes only by the plumber and in the manner specified by the City of Mesquite and shall be removed immediately by the plumber after the test has been completed and inspected.

(b) Whenever such plumber shall use City water in testing pipes or repairing fixtures, he shall, in each instance, before leaving the premises, make sure that the curb cock of the water service is left in the position in which found when the meter box was first opened. Such plumber shall notify the City of Mesquite in each instance where he finds, or has reason to believe, that any water meter, meter box, or other water-works equipment has been tampered with illegally.

Section 42

TURNING ON WATER INTO CUSTOMER'S SERVICE

(a) Except as provided above, no person, other than a licensed plumber operating under proper permits, or an authorized agent of the City of

Mesquite, shall connect any water supply or service pipes to the water meter or to any other water distribution pipes of the City.

(b) No permanent water service shall be made to any building or premises until a final inspection has been made of the plumbing system and a Certificate of Approval has been issued by the Plumbing Inspector.

(c) A temporary water service for construction purposes may be obtained, subject to the rules and regulations of the City of Mesquite. Such service shall be installed under a plumbing permit and the City of Mesquite shall be notified by the user to disconnect such service immediately upon completion of the construction on the premises.

Section 43
COVERING THE WORK

(a) No plumbing system or part thereof shall be covered so that it is not readily accessible in its entirety for purposes of inspection until it has been inspected, tested, and approved as herein prescribed.

Inspectors may refuse to approve the connection of water service or sewers to any plumbing that is concealed in such a manner that it cannot be fully determined that the plumbing has been done in compliance with this Code.

(b) When any plumbing system or part thereof is covered before being regularly inspected, tested, and approved, as herein provided, it shall be uncovered upon the direction of the Plumbing Inspector. The Plumbing Inspector is hereby authorized to require building contractors to open or expose work which in any manner conceals plumbing that has been covered without the inspector's approval, and in no case shall inspectors approve such plumbing until satisfied that the work is in accordance with the provisions of this Code.

Section 44
LEADER PIPES

Storm water leader pipes and branches shall be tested, when required by the Plumbing Inspector.

Section 45
CERTIFICATE OF APPROVAL

(a) When the Plumbing Inspector determines the installation to be in conformity with the provisions of this Code, he shall issue to the person, firm, or corporation making the installation a "Certificate of Approval", with duplicate copy for delivery to the owner, authorizing the use of such installation and the connecting to the City of Mesquite Water and Sewerage System and shall send written notice of such authorization to the Mesquite City Waterworks Department.

(b) A temporary "Certificate of Approval" for a part or parts of a plumbing installation may be issued for a specific period of time pending completion of the entire installation. Such certificate, and any preliminary connection which may be authorized thereby, may be revoked for cause by the Chief Plumbing Inspector.

**Section 46
REINSPECTION**

The Plumbing Inspector is hereby authorized to inspect existing installations of plumbing, when necessary in his opinion, to ascertain if unsafe or insanitary conditions may exist. When plumbing, plumbing devices or fixtures or the plumbing system is found by the Plumbing Inspector to be in a dangerous or unsafe condition, the person, firm or corporation owning or having control of said plumbing shall be notified in writing and shall have the necessary changes or repairs made to place such plumbing in safe condition according to the standards set out in this Code.

**Section 47
CONDEMNATION**

(a) If the conditions mentioned in Section 46 are not remedied or abated after proper notification, the Chief Plumbing Inspector may declare such plumbing hazardous and unsafe and disconnect or order the disconnection of the said gas or water service or plumbing from the gas mains. Thereafter, it shall be unlawful for any person to cause or permit reconnection of such plumbing to the gas or water mains or the sewers until the defects have been remedied and the Plumbing Inspector shall have issued a "Certificate of Approval" as provided in this Code.

(b) In cases of emergency, when necessary for safety to persons or property, or when plumbing or gas connections may interfere with the work of the Fire Department, the senior officer of the Fire Department at the site at the time shall have the authority to immediately disconnect any plumbing, water service, or gas service.

(c) The Chief Plumbing Inspector shall have the authority to cause unused insanitary plumbing to be removed from a building or premises or be placed in a sanitary and safe condition.

**Section 48
APPEAL FROM CONDEMNATION BY PLUMBING INSPECTOR**

When a plumbing inspector condemns a plumbing installation, any party who may be aggrieved by such action may, within ten (10) days after receiving written notice thereof, file with the Chief Plumbing Inspector a petition in writing, requesting a review of the Plumbing Inspector's decision. Upon receipt of such request, the Chief Plumbing Inspector shall personally determine the facts, and within a reasonable period thereafter he shall make a ruling in accordance with his findings. His ruling shall be final and binding upon all parties, provided, however, that appeal may be taken to the Board of Plumbers, as provided in this Code.

**Section 49
TAGS AND SEALS**

Plumbing Inspectors are hereby empowered to attach to plumbing fixtures, equipment, pipes, and other parts of the plumbing system, or premises, any official notice or seal, and it shall be unlawful for any other person to place or attach notice, tag, or seal or to break, change, destroy, tear, mutilate, cover, or otherwise deface or injure any such official notice or seal.

ARTICLE VI. VARIANCES

Section 50

ALTERNATE MATERIALS AND METHODS

(a) The provisions of this Code are not intended to prevent the use of types of construction or materials offered as an alternate for the types of construction or materials specifically required by this Code, but such alternate types of construction or materials to be given consideration shall be offered for approval as sufficient, safe, sanitary, and equal to the standards set out in this Code.

(b) Any person desiring to use types of construction or materials not specifically authorized by this Code shall file with the Chief Plumbing Inspector authentic proof in support of claims that may be made regarding the sufficiency of such types of construction and materials and request approval and permission for their use.

(c) Whenever the Chief Plumbing Inspector finds that any material or method of construction does not conform to the requirements of this Code, or that there is not sufficient evidence to substantiate claims for alternate materials or methods of construction, he may require tests by an approved agency as proof of compliance or equality as provided herein.

(d) Tests shall be made in accordance with generally recognized standards for the material or construction in question; but in the absence of such standards, the Chief Plumbing Inspector shall specify the test procedure. Duly authenticated tests by a competent person or laboratory may be accepted by him in lieu of such tests under his own supervision. Copies of the results of all such tests shall be kept on file in the office of the Chief Plumbing Inspector for a period of not less than two (2) years after acceptance.

(e) Materials and construction which have been approved shall be used and installed in accordance with the terms of approval. All such approvals and the conditions under which they are issued shall be specific, shall be reasonable, shall not create an injustice, and shall be made a matter of public record.

Section 51

SPECIAL RULING

Special ruling necessary to cover future construction or installation not specifically covered by this Code shall be made by the Chief Plumbing Inspector and future construction shall conform to such ruling. The ruling shall be effective after approval by the Board of Plumbers. A copy shall be posted in the office of the Division of Building Inspection for thirty (30) days and then filed in the permanent records of the Chief Plumbing Inspector.

Section 52

SPECIAL PERMISSION

Specific variances to cope with unusual construction problems may be

made by the Chief Plumbing Inspector in the following particular cases:

- (a) To reconstruct existing plumbing.
- (b) To install new plumbing in old buildings.

The variances shall be specific, shall be reasonable and shall not create an injustice and shall be in keeping with the purpose and intent of this Code. Such variances shall be obtained in writing from the Chief Plumbing Inspector prior to the starting of the work.

ARTICLE VII. PLUMBING DEFINITIONS

Section 53

GENERAL

(a) For the purpose of this Code, certain terms, phrases, words, and their derivatives which are subject to variations of meaning shall be construed as defined below, and as explained under specific Sections of this Code.

(b) Words related to buildings and structures and the use of buildings and structures when not otherwise separately defined, and when used in this Code shall be construed to conform to the meaning set out in the Building Code and Zoning Ordinance, if set out, and, if such definition is not in express conflict with the context of the word as written; otherwise they shall have their usual meaning.

Section 54

DEFINITIONS

Accepted Standards - are the standards cited in this Code, but may include additional standards approved by the Board of Plumbers, with the concurrence of the Chief Plumbing Inspector.

Air Gap - in a plumbing or water supply system is the unobstructed vertical distance through the free atmosphere from the lowest opening of any pipe or faucet to the flood level rim of a tank, plumbing fixture or receptacle.

Apprentice Plumber - shall mean a natural person who is undergoing an apprenticeship or source of training for the purpose of learning the trade of plumbing.

Approved - shall mean approved by the Chief Plumbing Inspector as acceptable under the standards of this chapter.

Area Drain - is a drain installed to collect surface or rain water from an open area.

Authorized Person - any individual, firm, or corporation who or which is licensed under the provisions of this Code to do the work as permitted under the specific provisions of this Code.

Backflow - the flow of water or other liquids into the distributing pipes of a potable supply of water from any source or sources other than its intended source.

Backflow Connection - is any connection or arrangement whereby backflow can occur.

Back Pressure - a pressure which causes a trap seal loss and is experienced usually in large plumbing installations where fixtures are located close to the base of soil stacks or where a soil pipe changes its direction abruptly.

Back-Siphonage - the flowing back of used, contaminated or polluted water from a plumbing fixture or vessel into a water supply pipe due to a negative pressure in such pipe.

Back Vent - (See Individual Vent)

Backflow Preventer (sometimes called vacuum breaker) - a device for installation in a water supply pipe to prevent backflow of water into the water-supply system.

Boiler Blow-Off - An outlet on a boiler to permit emptying or discharge of sediment.

Branch - any part of a piping system other than the main, riser or stack

Branch Interval - a length of soil or waste stack corresponding in general to a story height, but in no case less than eight (8) feet, within which horizontal branches from one floor or story of the building are connected to the stack

Branch Vent - a vent connecting one or more individual vents with a vent stack or a stack vent.

Building (House) Drain - that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer which begins three (3) feet outside the building wall or foundation.

Building (House) Sewer (or sewer lateral) - the extension from the building drain to the sewer lateral at the property line or other lawful place of disposal

Building (House) Storm Drain - a building drain used for conveying rain water, ground water, subsurface water, condensate, cooling water, non-septic floor drainage, or other similar discharge, either to a building storm sewer beginning three (3) feet outside the building, or to another lawful place of disposal.

Building (House) Storm Sewer - the extension from the building storm drain to the public storm sewer or other lawful place of disposal.

Building (House) Subdrain - (See Subsoil drain)

Catch Basin - a tank, pit or basin provided to catch non-septic waste water.

Cesspool - an excavation in the ground which receives the discharge of a drainage system.

Circuit Vent - a branch vent that functions for two or more traps and extends to the vent stack from in front of the last fixture connection of a horizontal branch.

City - shall mean the territory within the Corporate Limits of the City of Mesquite or shall mean the legally constituted governing body thereof, its agents and its officers, depending upon the use of the word. Where plumbing is to be connected to water and sewage lines owned by the City of Mesquite, whether inside or outside the Corporate Limits, the term "City" shall be construed broadly where the context indicates, to include the regulation of such plumbing or such water or sewage systems.

Combination Fixture - as used herein, a term designating an integral combination of two sinks or laundry trays, or one sink and one tray, in one fixture.

Common Vent - is a vent serving two (2) fixture drains on the same floor level connected at different levels in the same stack.

Conductor - (See Leader)

Continuous Vent - a vent that is practically a straight line continuation of the waste line or drain to which it connects.

Continuous Waste - a waste from two or more fixtures connected to a single trap.

Cross Connection - a physical connection, arrangement, or condition by or through which a supply of potable water could be contaminated, polluted, or infected.

Dead-End - an unused branch leading from a soil, waste, vent, building drain, or building sewer, which is terminated at a developed distance of two (2) feet or more by means of a cap, plug, or other closed fitting.

Developed Length - of a pipe, is its length along the center line of the pipe and fitting.

Diameter - when referring to pipe size means the nominal diameter of the pipe as designated commercially.

Direct Waste - a waste which has a terminal solidly joined to the plumbing system.

Downspout - (See Leader)

Drain (or drain pipe) - any pipe which carries waste water or water-borne wastes in a building-drainage system.

Drainage System (or drainage piping) - shall mean and include all the piping within public or private premises, which conveys sewage, rain water, or other liquid wastes, to a lawful point of disposal, but shall not include the mains or laterals of the public sewer system.

Drain (House)(Building) - See Building (House) Drain.

Dual Vent - a vent connecting at the junction of two fixture drains and serving as an individual vent for both fixtures.

Effective Opening - when it refers to plumbing fixtures or water supply outlets, shall mean the minimum cross-sectional area at the point of water discharge measured or expressed in terms of (a) the diameter of a circle or (b) if the opening is not circular, the diameter of a circle of equivalent cross-sectional area.

Ejector - a pump or other device which lifts waste water or sewage containing solids to the level of the building drain or sewer from a sump or lower level.

Fixture - (See Plumbing Fixture)

Fixture Branch - the water supply pipe between a fixture and the water-distributing pipe.

Fixture Drain - the drain from the trap of a fixture to the junction of that drain with any other drain pipe.

Fixture Unit - a design factor used for determining drainage piping sizes and represents a rate of discharge into the drainage piping of 7.5 gallons per minute.

Fixture Unit - when used for fee determination, see Section 32.

Flat Vent - where permitted by the Chief Plumbing Inspector is a relief or individual vent which is run at approximately the same elevation as the waste line which it serves, until it can rise gradually and connect to a vent stack or stack vent at a point either four (4) feet higher than the horizontal portion of the vent or six (6) inches higher than the flood level rim of the fixture it serves, whichever is the higher point of connection.

Flood Level - in reference to a plumbing fixture is the level at which water begins to overflow the top or rim of the fixture.

Flush Valve - a valve for flushing water closets and similar fixtures.

Gas Fitting - the installation, repair, replacement, and/or relocation of pipes, appliances and other apparatus for distributing or utilizing a gas supply for illuminating or fuel purposes as defined in this Code and shall include the installation of wall heaters, floor furnaces, water heaters, stoves, and any other type of gas burning appliance. This Code shall not cover nor shall it apply to the installation, inspection, maintenance, repair or replacement of any part of the distribution system of any gas distributing company furnishing gas service to the general public in the City of Mesquite, under a franchise granted by the City of Mesquite, or any work performed by such gas distributing company on any piping or connection up to and including the outlet connections of the service meter.

Grade (Slope) - of a line of pipe is its slope in reference to a horizontal plane.

Grease Interceptor (or trap) - an interceptor designed for the removal of grease from waste water.

Horizontal Branch - a branch drain extending laterally from a soil or waste stack of a building drain, whether with or without vertical sections or branches, and which receives the discharge from one or more fixture drains and conducts such discharge to the soil or waste stack or to the building (house) drain.

Horizontal Pipe - a pipe or fitting which is installed in a horizontal position or which makes an angle of less than 45° with the horizontal.

Indirect Waste Pipe - a waste pipe which does not connect directly with the drainage system, but discharges through an air gap into a properly trapped fixture, or receptacle.

Individual Vent - a pipe installed to individually vent a trap, soil or waste pipe and which connects with the vent system above the fixture served or terminates in the open air.

Industrial Waste - a liquid waste resulting from processes in industrial establishments.

Insanitary - the term "insanitary" shall apply to any of the following conditions:

- a. a trap not maintaining the proper seal.
- b. any opening in a drainage system, except where lawful, which is not provided with a liquid-sealed trap.
- c. a plumbing fixture, or other waste discharging receptacle or device, which is not supplied with water sufficient to flush it and maintain it in a clean condition.
- d. a leaky or otherwise defective fixture, trap or pipe.
- e. a trap, except where exempted by this ordinance, which is not protected against siphonage and back pressure.
- f. any connection, cross-connection, construction or condition, temporary or permanent, which would permit or make possible by any means whatsoever for any unapproved foreign matter to enter a water distributing system used for domestic purposes.
- g. any of the conditions enumerated above shall not preclude the application of the term "insanitary" when the conditions in fact are insanitary.

Interceptor - a receptacle designed and constructed to intercept or separate and prevent the passage into the drainage system to which it is directly or indirectly connected of oil, grease, sand, plaster, hair, or other materials which might be harmful to or apt to clog the drainage system.

Journeyman Plumber - shall mean a natural person who possesses the necessary qualifications and knowledge to install, alter and/or repair plumbing systems, drainage systems and gas fitting and is licensed as such in accordance with "The Plumbing License Law of 1947" of the State of Texas.

Leader (Or Downspout) - is the water conductor from the roof of a building or structure to the storm drain or other lawful place of disposal.

License - as used in this Code, shall mean the Certificate issued by the State Board of Plumbing Examiners to a plumber as evidence that the holder has paid the license fee required for the period for which he is licensed.

Local Vent - a vent that has no direct connection with the sanitary vent, but is used to ventilate a plumbing fixture to the outer air.

Loop Vent - a horizontal vent that loops back and connects with a soil or waste stack vent.

Main, The - of any system of continuous piping is the principal part of the system to which branches may be connected.

Main Sewer - (See Public Sewer)

Main Vent - (See Vent Stack)

Master Plumber - shall mean a natural person who possesses the necessary qualifications to plan, lay out and supervise the installation, alteration and/or repair of plumbing, plumbing systems and equipment, and gas fitting and is licensed as such in accordance with "The Plumbing License Law of 1947" of the State of Texas.

May - means permissive

Offset - in a line of piping is a combination of elbows or bends which brings one section of a line of pipe out of line with, but into a line parallel with, another section of that line of pipe.

Outlet - is the discharge opening for water or gas to (1) a fixture; (2) the atmosphere; (3) a boiler or heating system; (4) any device or equipment requiring water or gas to operate, but which is not a part of the plumbing system.

Owner - shall mean a natural person, firm or corporation, owning or controlling the building or property, including a duly authorized agent. Executors, administrators, guardians, conservators, or trustees may also be regarded as owners.

Person - shall mean a natural person, his heirs, executors, administrators, or assigns, and, where the context permits, it also includes a firm, partnership, association, or corporation, its or their successors or assigns, or the agent of any of the aforesaid.

Plumber - shall mean a person who is engaged in the trade or business of plumbing and gas fitting.

Plumbing - shall mean and include the necessary materials, installation, alteration, and/or repair of all systems of piping, fixtures, appurtenances, appliances or other apparatus for supplying water or gas for all personal, domestic, commercial and industrial purposes and also

For the removal of liquid and water borne wastes either inside or outside of buildings within the property lines of the premises where persons live, work, or assemble; further, plumbing shall also include pipes for special purposes, such as air, petroleum products, chemicals, water treating or using equipment and other special purpose pipes generally recognized as plumbing pipes.

Plumbing Contractor - any person, firm, partnership or corporation engaged in the business of installing, altering, or repairing, by contract or by acceptance of plumbing, plumbing systems, plumbing fixtures or equipment or gas fitting.

Plumbing Fixture - a receptacle or device which is designed and intended to receive water, liquids, or other water borne wastes and may or may not discharge them into a plumbing drainage system.

Plumbing Inspector - is the Chief Plumbing Inspector of the City of Mesquite or his authorized assistants or such other person as may be designated by the City Manager but shall be construed to include any employee of the Division of Building Inspection of the City when such person has been authorized to act for the Chief Plumbing Inspector.

Pool - a water receptacle used for swimming or as a plunge or other bath, designed to accommodate more than one bather at a time.

Potable Water - water that is suitable for domestic use and is approved as safe for human consumption as drinking water by the Health Department of the County of Dallas.

Public Sewer - the main line sewer, usually located in a street, alley, easement or right-of-way dedicated to public use, and under the jurisdiction of the City of Mesquite.

Registered - when used with the words "Plumbing Contractor" shall mean that the person or firm is registered with the Chief Plumbing Inspector; and that the Master Plumber is licensed in accordance with the State of Texas Plumbing License Law.

Relief Vent - a vent, the primary function of which is to provide circulation of air between drainage and vent systems.

Return Offset - a double offset installed so as to return the pipe to its original alignment.

Rim - is the unobstructed open edge of a fixture.

Riser - a water supply pipe which extends vertically to convey water to water supply branches or to fixtures.

Sand Interceptor or Sand Trap - a watertight receptacle designed and constructed to intercept and prevent the passage of sand or other solids into the drainage system to which it is directly or indirectly connected. (see interceptor.)

Sanitary Sewer - a sewer which receives the discharge of sanitary and domestic wastes only and excludes storm, surface and ground water.

Second Hand - a material or plumbing equipment that has been installed and has been removed.

Separator - (See Interceptor)

Septic Tank - a watertight receptacle which receives the discharge of a drainage system or part thereof, designed and constructed so as to retain solids, digest organic matter through a period of detention, and allow the liquids to discharge into the soil outside of the tank through a system of open joint piping meeting the requirements of this Ordinance.

Sewage - any liquid waste containing animal or vegetable matter in suspension or solution, and may include liquids from laboratories or industrial institutions, containing minerals in solution.

Sewer (House)(Building) - (See Building (House) Sewer)

Shall - the word "shall" is a mandatory term.

Siphonage - when referring to fixture trap seals, the word siphonage means (1) a condition where the velocity of discharge of a fixture is so rapid that all waste liquids pass through the respective trap by momentum, leaving none to refill or form the required trap seal, or (2) where a below-atmospheric pressure condition develops in a system of soil and waste lines sufficient to draw outside air through a trap seal or to draw enough liquid from the trap seal to destroy its effectiveness.

Size of Piping or Tubing - unless otherwise stated, is the nominal size by which pipe or tubing is commercially designated.

Slope - (See Grade)

Soil Pipe - is pipe which conveys the discharge of water closets, clinic sinks, or fixtures having similar functions, with or without the discharge from other fixtures to the House Drain or House Sewer.

Soil Stack - (See Soil Pipe)

Stack - is a general term for the vertical line of a system of soil, waste, or vent piping.

Stack-Vent - the extension of a soil or waste stack above the highest horizontal or fixture branch connected to the stack.

Storm Drain (House)(Building) - See Building (House) Storm Drain.

Storm Sewer (House)(Building) - See Building (House) Storm Sewer.

Subdrain (House)(Building) - See Building (House) Subdrain.

Subsoil Drain - a drain installed for collecting subsurface or seepage water and conveying it to a lawful place of disposal.

Sump - a tank or pit which receives the discharge from subdrains and from which the discharge is pumped or ejected into a drainage system.

Supervisory Plumber - the licensed Master Plumber designated by a Plumbing Contractor and registered with the Chief Plumbing Inspector as the person responsible for, and supervising the plumbing work done by a Plumbing Contractor. When the Plumbing Contractor is a Master Plumber, he may serve as his own supervisory plumber.

Trap - is a fitting or device which provides a liquid seal to prevent the passage of air or gas without materially affecting the flow of sewage or liquid wastes through it.

Trap-Seal - is the vertical distance between the overflow and the dip of the trap.

Vent - is a pipe installed to provide a flow of air within a drainage system.

Vent Stack - sometimes called a main vent, is a vertical pipe installed for the movement of air in the drainage system.

Vertical pipe - means any pipe or fitting which is installed in a vertical position or which makes an angle of not more than forty-five (45) degrees with the vertical.

Waste Pipe - is any pipe which receives the discharge of any fixture, except water closets, clinic sinks, or similar fixtures, and conveys the same to the house drain or sub-drain or to a soil or waste stack.

Waste Stack - a stack which is a waste pipe.

Water Distributing Pipe - in a building is a pipe which conveys water from the water service pipe to the plumbing fixtures and other water outlets.

Water Main - is a water-supply pipe for public or community use which is under the jurisdiction of the City of Mesquite.

Water Service Pipe - is the pipe from the water main or other source of water supply to the building or premises served.

Water Supply System - consists of the water-service pipe, the water distributing pipes, and the necessary connecting pipes, fittings, control valves, and all appurtenances in or adjacent to the building or premises.

Wet Vent - is a soil or waste pipe that serves also as a vent.

Yoke Vent - is a relief vent connection upward from a soil or waste stack to a vent stack for the purpose of preventing pressure changes in the stacks.

ARTICLE VIII BASIC INSTALLATION REGULATIONS

Section 55

GENERAL

All plumbing, plumbing fixtures, gas-piping, gas-fired appliances, and all piping or other elements of plumbing systems, shall be installed so as to provide: (1) protection of potable water, (2) disposal of water borne wastes in such a manner as to insure protection against hazards to health, (3) installation of gas-piping and gas-fired appliances in a manner that will insure protection to life and property, (4) successful operation and performance, and (5) conformance to the minimum standards as set out herein.

Section 56

PROTECTION OF MESQUITE WATERWORKS SYSTEM

(a) All meters, curb cocks, valves, and meter boxes connected with the City waterworks mains and service pipes, including those furnished at the expense of the consumers or property owners, shall remain under the direct control of the City of Mesquite, and it shall be unlawful for any person or persons other than those licensed to do plumbing or those with special permission from the City of Mesquite to connect, disconnect, move, or tamper with any such meter, or to turn on or off the water at the curb cock, valve or meter box in any way except with a regulation meter box key.

(b) No by-pass or connection between the meter and the main shall be made, maintained or permitted except upon written permission from the City of Mesquite.

(c) The rules and regulations of the City of Mesquite relating to water service, and connection to and tapping of sewers, insofar as they are applicable, shall govern the installation of plumbing, in the same manner as if such regulations were a part of this Code.

Section 57

OTHER CITY ORDINANCES

Ordinances dealing with building construction, standards of housing, and other Mesquite City Ordinances, insofar as they apply, shall govern the installation of plumbing in the same manner as if such regulations were a part of this Code.

Section 58

CONFORMANCE TO PLANS

The installation of plumbing, within or on buildings or premises, shall be done in accordance with the plans and specifications submitted to and approved by the Chief Plumbing Inspector. Complete description of proposed work may be required by the Chief Plumbing Inspector. When drawings are requested, they shall be drawn to a definite scale.

Section 59
WORKMANSHIP

Workmanship shall be of a character to fully secure the results sought in all of the Sections of this Code and be done in a workmanlike manner.

Section 60
DEAD ENDS AND OLD PLUMBING

(a) In the installation or removal of any part of a drainage system, dead ends shall be avoided except where necessary to extend a clean-out so as to be accessible.

(b) Old house plumbing shall be connected with the City sewer only when it is found on inspection by the Plumbing Inspector to conform to the standards established by this Code.

Section 61
PROTECTION OF PIPES

(a) Pipes passing under or through walls shall be protected from physical damage.

(b) No water supply pipe shall be installed or permitted outside a building or in an exterior wall unless provided with shut-offs and drains for protection from freezing.

Section 62
PROTECTION OF ELECTRICAL MACHINERY

No water or drainage piping shall be located over electrical machinery or equipment which is readily susceptible to water damage, unless adequate protection is provided against drip caused by condensation on the piping.

Section 63
PROTECTION OF WATER TANKS AND FOOD SUPPLY

Drainage piping shall not pass over water supply tanks or reservoirs, unless such tanks or reservoirs are watertight; nor shall drainage piping pass directly over food processing areas, unless protection is provided against drip from such piping. Piping which is in such position or condition that there exists a possibility that potable water or food, medical or surgical supplies or equipment may be contaminated shall be relocated.

Section 64
INDUSTRIAL WASTES

Wastes which are detrimental to the public sewer system or are detrimental to the functioning of the sewage treatment plant, shall be treated as provided by Ordinance No. 292 and by such amendments as may hereafter be made to Ordinance No. 292.

Section 65**CERTAIN WATER NOT PERMITTED IN SANITARY SEWERS**

(a) It shall be unlawful to allow any surface water, or rain water, from the ground or roof of a building, to enter into a sewer connected with a sanitary sewer, except as provided in Section 157 (b).

(b) The following connections with the sanitary sewer system shall not be permitted: downspouts, yard drains, yard fountains, ponds, and swimming pools.

(c) Boiler drains, blow-off pipes and cooling water from various types of equipment shall not discharge into sanitary sewers except as an indirect waste and where such discharge is cooled and flows into the sanitary sewer at a rate not in excess of three (3) gallons per minute.

ARTICLE IX. PLUMBING FIXTURES

Section 66

GENERAL

(a) All plumbing fixtures shall be made of materials having smooth, impervious surfaces, except as permitted in this Section.

(b) Special use fixtures may be made of soapstone, copper, stainless steel, metal alloys, or other materials especially suited to the use for which the fixture is intended.

Section 67

LOCATION OF FIXTURES

(a) Water closet, urinals and baths shall be located in a compartment or room which contains a window in an exterior wall which opens upon a yard, court or other open place, except where mechanical ventilation and artificial illumination is provided.

(b) No water heater shall hereafter be installed in a bathroom or in any sleeping room or be installed in such manner that it will not receive sufficient air for proper combustion.

(c) Water heaters shall be readily accessible from the floor or by a permanent ladder or stairway. No gas-fired water heater shall be installed so that there will be a vertical opening between one floor and the next floor or attic above. Where a water heater is elevated so that the top of the heater extends into an attic space, the top of the heater shall be enclosed by means of a tight bulkhead having the same cross-sectional area as the water heater closet. The gas burner shall in no case be higher than five (5) feet, six (6) inches above the floor.

(d) Where provision has been made for forced attic ventilation, the water heater shall be enclosed and secondary air for combustion shall be provided from the outside air.

Section 68

INSTALLATION.

(a) All plumbing fixtures shall be installed in a manner which affords easy access for cleaning. Where practical, all pipes from fixtures shall be run to the vertical pipes in a wall.

(b) The supply lines, fittings, or faucets for each plumbing fixture shall be installed so as to provide an air gap or shall be equipped with back flow preventers.

Section 69

SECOND-HAND PLUMBING FIXTURES

Second-hand plumbing fixtures shall not be used unless they meet the requirements of this Code and are in satisfactory physical and sanitary condition.

Section 70

WATER CLOSET COMBINATIONS

(a) Water closet bowls shall be siphon jet, washdown, reverse trap, or blowout type with floor outlet or siphon jet or blowout type with wall outlet. Water closet bowls and traps shall be made in one piece and shall be provided with integral flushing rims constructed so as to flush the entire interior of the bowl. Rest rooms in public buildings shall have closet bowls of the elongated type with open front seats. However, in public rest rooms and small store buildings with not more than two water closets, such water closets shall not be required to be of the elongated type.

(b) Wall-hung water closet bowls shall be rigidly supported by a metal supporting-member which shall be concealed. Where lead pipe is used to connect the soil pipe and water closet bowl, a chair support shall be used to carry the full load so that no strain is transmitted to the piping.

Section 71

WATER CLOSET TANKS

(a) A water closet tank shall have a flushing capacity sufficient to properly flush the water closet bowl to which it is connected. The flush valve seat in close-coupled integral water closet combinations shall be one (1) inch or more above the rim of the bowl, so that the flush valve will close when the closet trap-way is clogged.

(b) Float valves for water closet tanks shall automatically close tight and shall provide sufficient refill to properly seal the trap in the bowl.

(c) Flush valves for water closet tanks shall close tight and shall be provided with an overflow except when the tank is provided with an overflow, which shall be as specified in this Code.

(d) Flush valves for low tanks shall have two (2) inch shanks. Flush valves for high tanks may be of the gooseneck type and shall have one and one-half (1 1/2) inch shanks.

(e) Flush pipes shall be two (2) inch for low-tank and one and one-fourth (1 1/4) inch for high tank combinations.

Section 72

FROST PROOF CLOSETS

Frost proof or hopper type closets are not permitted.

Section 73

DIRECT FLUSH VALVES

Direct flush valves shall be equipped with a siphon breaker and shall be installed in a manner which is readily accessible for repairing. When the valve is operated, it shall complete its cycle of operation automatically, opening fully and closing positively under the service pressure. At each operation the valve shall deliver water in sufficient volume and at a rate that will thoroughly flush the fixture and refill the fixture trap. Means shall be provided for regulating the flow to flush valves.

Section 74

URINALS

(a) Siphon jet, washout, blowout, and pedestal urinals shall have integral flushing rims and integral traps except that washout urinals may have exposed traps.

(b) Trough urinals shall not hereafter be installed except in stadiums, parks, factory buildings, shops or other buildings which are of temporary or occasional occupancy. They shall be made of material as specified in Section 66 and be made of one piece of material. They shall be not less than six (6) inches deep nor more than five (5) feet long and shall be furnished with a strainer and not less than a one and one-half (1 1/2) inch waste outlet and with a trap and waste of not less than two (2) inches. The perforated washdown pipe shall be of brass, copper or other non-rusting metal and shall be securely clamped to the back of the urinal. Trough urinals shall be flushed by a continuous and adequate flow of water or may be furnished with automatic flushing tanks having a flushing capacity of not less than one and one-half (1 1/2) gallons for each two (2) feet of urinal length and shall be regulated so that the interval between flushing does not exceed ten (10) minutes.

(c) Floor gutters shall not hereafter be installed except in schools, stadiums, parks, or buildings of temporary or occasional occupancy. Where floor gutters are permitted or have heretofore been installed, the backs shall be kept constantly moist when in use to a height of three and one-half (3 1/2) feet above the floor. Floor gutters shall be constructed of watertight, impervious materials, suitable for the purpose.

(d) Stall urinals shall be set preferably with the bottom rim above floor level so that the urinal cannot be used as a floor drain. If set flush with the floor, a trap of at least three (3) inches in diameter shall be provided.

Section 75

URINAL TANKS

(a) Urinal tanks may be automatic or provided with a chain and pull. Flushing capacity of tanks shall be adequate for the type of urinal used.

(b) Automatic urinal tanks shall discharge when the water in the tank reaches a predetermined height. Supply to tanks shall be provided with means of adjusting the flow so that a discharge at not more than ten (10) minute intervals is obtained. Groups of five (5) or less urinals, when located in one room for constant use, may be supplied from one automatic tank.

(c) Urinal tanks shall be provided with flush valves, operating levers, chain and pulls. Each urinal tank with a chain and pull shall be used for not more than one urinal. Flush valves may be of the gooseneck siphon type. Float valves shall automatically close tight.

(d) Direct flush valves shall not be used to flush more than three urinals.

(e) Urinals shall be installed with extra heavy lead trap arms only.

Section 76

LAVATORIES

Lavatories shall be provided with wastes with not less than one and one-fourth (1 1/4) inch outlets. When provided with mechanical stoppers, they shall be so arranged that the standing water in the fixture cannot rise in the overflow when stoppers are closed or remain in the overflow when fixtures are empty.

Section 77

SHOWER BATHS

(a) Each shower compartment shall have a waste outlet not less than two (2) inches in diameter complete with not less than a two (2) inch trap and removable strainer. Such shower bath shall comply with one of the following:

- (1) When a seamless non-rusting and non-corrosive leak-proof receptor is used, it shall be connected to the waste line by a watertight joint. A deep-seal "P" trap shall be used with such installation.
- (2) When a porous or semi-porous flooring such as concrete or cement with tile topping is used, the shower drain shall be of the double drainage type provided with a clamping ring and provided with a nine and one-quarter (9 1/4) inch flange. Such drain shall have an integral deep-seal trap or a deep-seal "P" trap. Each shower so installed shall be provided with a lead asphalt-coated or copper, leak-proof pan connected at the drain with the clamping ring with a water tight joint.
- (3) When a shower on a concrete slab on fill is used, it shall be provided with a double-drainage shower drain and a leak-proof pan shall not be required if shower floor is recessed 1 1/2 inch minimum. A cast iron deep-seal "P" trap shall be used with such installation.

(b) Public showers shall be drained in such a manner that the waste water from shower heads shall not pass over areas to be occupied by other bathers.

Section 78

SINKS

Sinks shall be provided with waste outlets of a size not less than that of the traps to which they are connected and in no case less than one and one-half (1 1/2) inches in diameter.

Section 79

LAUNDRY TUBS

(a) Each compartment of a laundry tub shall be provided with a waste outlet not less than one and one-half (1 1/2) inches in diameter and with stoppers.

(b) When provided with an overflow, the waste shall be arranged so that the standing water in the fixture cannot rise in the overflow when the stopper is closed or remain in the overflow when the fixture is empty.

Section 80

BATHTUBS

(a) Bathtubs shall be provided with waste and overflow fittings with not less than one and one-half (1 1/2) inch outlets and with stoppers arranged so that the standing water in the tubs cannot rise in the overflow when stoppers are closed. All water shall drain from the overflow fitting when the tub is empty.

(b) Concrete and/or plastic bathtubs are prohibited.

Section 81

DRINKING FOUNTAINS

(a) Drinking fountains shall be provided with "P" traps or with indirect wastes as described in Section 153.

(b) Stream projectors shall be assembled so as to provide an orifice elevation as provided in ASA-Z4.2-1942, Orifice Elevation for Stream Projectors on Drinking Fountains, American Standard Air Caps in Plumbing Systems, ASA-A40.4-1942, and American Standard Backflow Preventers in Plumbing Systems, ASA-A40.6-1943.

Section 82

FLOOR DRAINS

(a) Floor drains shall be made of metal and shall be provided with a strainer, and sized according to floor area.

(b) Special purpose drains shall be installed in accordance with instructions or plans and specifications approved by the Chief Plumbing Inspector.

**Section 83
WATER HEATERS**

Water heaters shall have temperature and pressure relief valves to comply with the requirements of Section 171f and when using gas as fuel shall be connected to a flue as provided in the flue connection details of the Mesquite Gas Code of the types which are specified in types of flues and vents in the Mesquite Gas Code. Where vent pipe is not carried above the high point of roof, a pullman type or equal vent cap shall be used. Such water heater shall be located as provided in Section 67.

**Section 84
SPECIAL FIXTURES**

(a) Fixtures for soda fountains, restaurant counters and bars shall be connected below the floor to floor drains having a large receiving hood and hub inlet. All branches from the fixtures to the floor drain shall be not less than two (2) inch; except accessible branches which may be one and one-half (1 1/2) inch. Small bars having only one (1) combination sink for washing glasses only, or two (2) unit novelty boxes or beer containers shall have lead drum or deep seal "P" traps as provided in Section 89, paragraph (a).

(b) Special fixtures for dental, medical, surgical, special process or for industrial purposes shall be adequate, safe and sanitary and shall be approved for such use by the Chief Plumbing Inspector.

(c) Baptisteries shall be provided with a drain with strainer, an overflow, and a gate valve installed between the drain and overflow. Such drain and overflow shall be connected to a properly vented deep seal "P" trap and the drainage piping and fittings shall be two (2) inch minimum. The water supply shall be above the overflow line (rim) or be provided with a vacuum breaker.

**Section 85
REQUIRED FACILITIES**

Minimum facilities shall be provided in accordance with the following table:

MINIMUM REQUIREMENTS FOR PLUMBING FACILITIES - Table 1

Type of Building	Water Closet	Urinal	Lavatory	Drink. Count.	Shower	Bath Tub	Laundry Tub	Kitchen Sink
Dwellings & Apart. Houses	1 each family	--	*1 each family (not mandatory)	--	--	*1 each family (or shower)	--	*1 each family
Rooming and Board Houses	8 persons	--	*8 persons	--	--	*1 for each 8 pers. (or showers)	--	See Note D
Places of employment such as mercantile & off. bldgs., wshps & factories where 5 or more persons work	25 males 20 females	25 males	15 persons	75 persons	--	--	--	--
Foundries, mines & places where exposed to dirty or skin irritating materials where 5 or more persons work	25 males 20 females	25 males	5 persons	75 persons	15 males 15 females	--	--	--
Schools	20 males 15 females 10	25 males	20 persons	75 persons	--	--	--	--
Dormitories	10 males 8 females	25 males	6 persons	50 persons	8 males 10 females	40 mls. 35 femls. (not mandatory)	40 mls. 35 femls. (not mandatory)	--
Convalescent and Nursing Homes	8 Patients	---	8 Patients	--	--	1 each 20 patients (or shower)	--	1 slop sink each bldg. for 8 patients or more

*Fixture shall be provided with an adequate amount of water at a temperature of not less than 120° F.

NOTE:

- A. The figures as shown are based on one fixture being the minimum required for that number of people or fraction thereof. The Chief Plumbing Inspector may require a certified statement of the number of male and female persons who will occupy or use a premise.
- B. Toilet facilities shall be available to all persons either on the floor where they normally work or are situated or on the floor immediately below or above, and separate facilities shall be provided for both white and colored.
- C. Where specific requirements are set out in other ordinances such as the ordinance governing tourist courts and camps the requirements of such ordinances shall govern, provided, however, that this exception shall not apply to the Mesquite Building Code. The requirements of the Mesquite Building Code and this Code shall be considered cumulative.
- D. Kitchen facilities for boarding houses shall meet the Health Department requirements for public food service establishments.

ARTICLE X. TRAPS, INTERCEPTORS AND CLEAN-OUTS

Section 86

MATERIALS FOR TRAPS

Traps shall be made of cast iron, copper, bronze, cast brass, drawn brass tubing or lead, drum traps including inlet and outlet shall be made of lead or copper.

Section 87

TRAPS - WHERE REQUIRED

(a) Each fixture shall be separately trapped by a water-seal trap, except that:

- (1) A two compartment laundry tray or two compartment sink or a combination sink and tray may connect with a single trap.
- (2) Where no fixture other than floor drains are connected to a common horizontal branch drain, a floor drain connected to such branch drain need not be individually vented unless it is more than five (5) feet from the branch drain, and provided that said branch drain is vented, as required in this Code.
- (3) Traps may be omitted from indirect wastes except as provided in Section 164.
- (4) Other special drains which handle non-septic wastes and where such omission is permitted by the Chief Plumbing Inspector.

(b) Each trap shall be placed as near to its fixture as possible. In no case shall a trap be more than two (2) feet from the waste outlet of the fixture.

Section 88

TYPES AND SIZES OF TRAPS AND FIXTURE DRAINS

(a) Each trap shall not be smaller than the fixture outlet tailpiece to which it is connected.

(b) The size (nominal diameter) of trap and fixture outlet connection or tailpiece for a given fixture shall be sufficient to drain the fixture rapidly and shall not be less than specified below:

MINIMUM SIZE OF TRAP AND OUTLET - Table 2

FIXTURE...Size of Trap and Fixture Outlet Connection	FIXTURE...Size of Trap and Fixture Outlet Connection
Bathtub 1 1/2" or 2" "P" Trap	Laundry Tray.....1 1/2"
Combination sink and Laundry Tray.....1 1/2"	Lavatory.....1 1/4"
Drinking Fountain.....1 1/4"	Shower Stall.....2"
Floor Drain (Kitchens, restaurants, hotels or schools).....3"	Double Compartment Laundry Tray.....1 1/2"
Floor Drain (Small Toilets and Baths).....2"	Sink (Kitchen, Residence)...1 1/2"
Floor Drain (Food and beverage bars and soda fountains).....3"	Sink (Hotel or Public).....2"
Island Sink.....4" x 9" Drum Trap with 1 1/2" inlet and 2" outlet	Sink (Pantry or Bar).....1 1/2"
	Sink (Dishwasher).....1 1/2"
	Sink (Slop and Service).....3"
	Urinal (Trough).....2"
	Urinal (Stall).....2"
	Urinal (Wall).....1 1/2"
	Washing Machine, domestic....1 1/3" (to be extended four (4") inches above floor)

(c) The fixture drains for water closets and other fixtures with integral traps shall not be smaller than the fixture outlet, except that a water closet may connect to a three (3") inch soil and waste line with a 4" x 3" connection.

Section 89

TRAPS - GENERAL REQUIREMENTS

(a) TRAP SEAL. Each fixture trap shall have a water seal of not less than one and one-half (1 1/2) inches and not more than four (4) inches. Cast iron "P" traps for floor drains shall have not less than a four inch water seal. Drum traps shall be not less than 4" x 9" and shall have not less than three (3) inch seal on both inlet and outlet with plumbers wiped joints.

(b) TRAP LEVELS AND PROTECTION. All traps shall be set true with respect to their water seals.

(c) VISIBLE TRAP SEAL. All water closets, urinals or slop sinks with integral traps shall have visible trap seal.

(d) SHOWER TRAP. Each shower bath shall be provided with a two (2) inch integral "P" trap or with a safety waste double drainage trap except as otherwise provided. Such traps shall be installed as provided in Section 77.

(e) DISPOSAL UNIT. Where a disposal unit is installed in combination with a dish washer, a separate trap should be installed on each unit.

(f) TRAP CLEAN-OUTS. Each fixture trap, except those in combination with fixtures in which the trap seal is readily accessible from the floor on which the fixture is set, shall have an accessible brass trap screw of ample size, protected by the water seal, except that when a portion of a trap can be completely removed for cleaning purposes no trap screw is required.

Section 90

PROHIBITED TRAPS

(a) No form of trap which depends for its seal upon the action of movable parts shall be used. No form of trap with partitions shall be used, except where approved as an interceptor.

(b) No fixture shall be double-trapped, except where such double trapping results from the use of an interceptor, sump, or catch basin.

(c) No crown vented trap shall be installed.

(d) No "S" traps shall be installed.

(e) Building drainage and running traps shall not be used.

Section 100

PIPE CLEAN-OUTS - WHERE REQUIRED

(a) LOCATION. An accessible clean-out shall be provided at or near the foot of each vertical waste or soil stack and at each change or direction greater than 45° in such line. Where slab floors are laid on fill and the clean-out cannot be made accessible, a clean-out with test tee shall be provided within three feet of the building to center of the plug in the connection between the building (house) drain and the building (house) sewer.

(b) DISTANCE APART. Cleanouts in horizontal drainage lines on pipe of four (4) inches nominal diameter or less shall not be more than fifty (50) feet apart and not more than ninety-five (95) feet apart for larger size pipes.

Section 101

PIPE CLEAN-OUTS - GENERAL REQUIREMENTS

(a) The bodies of clean-out ferrules shall conform in thickness to that required for pipe and fittings of the same metal, and shall extend not less than one-quarter (1/4) inch above the hub. The clean-out plug shall be of heavy brass not less than one-eighth (1/8) inch thick, and shall be provided with a raised nut or recessed socket for removal. Both ferrule and plug shall have American Standard Tapered Pipe threads.

(b) Clean-outs shall be of the same nominal size as the pipes up to four (4) inches and not less than four (4) inches for larger pipes.

(c) The opening of all underground clean-outs in a building shall be flush with or above the floor. Exterior underground clean-outs shall be extended to the surface of the ground or otherwise made accessible. Sink waste clean-outs shall be run to the outside of the building where possible or shall be located in a well above the base board. In multi-story buildings having a public access space of at least eighteen (18) inches under the first floor, sink clean-outs may be installed at the base of the stack so as to be accessible from the access space. Where a sink waste drops vertically into a three (3) inch or larger waste line and the vertical waste does not exceed five (5) feet in length, the clean-out may be omitted.

Section 102

BACKWATER VALVES

(a) Backwater valves may be installed in drainage lines only by special permission of the Chief Plumbing Inspector. When backwater valves are installed, a gate valve shall be installed on the outlet side of backwater valve.

(b) Backwater valves, when permitted, shall have all bearing parts of corrosion-resistant material and shall be so constructed as to ensure a positive mechanical seal against backflow.

(c) Backwater valves shall be located so as to be readily accessible for inspection and cleaning.

Section 103

GREASE INTERCEPTORS

(a) Each waste pipe from kitchen floor drains, kitchen sinks, and dish washers in hotels, restaurants, boarding houses or public cooking places shall be run into grease interceptors of a type in which separation is accomplished by differential gravity methods and which is approved by the Mesquite City Waterworks Department.

(b) Other waste waters which do or may carry grease into the City sewers shall be run through approved grease interceptors, when required by the Chief Plumbing Inspector or the Mesquite City Waterworks Department.

(c) A grease interceptor, when required, shall be located as near as possible to the fixture or fixtures which it serves, and when these fixtures are separately trapped, provision shall be made for a local vent on the inlet side of interceptor to the open air.

(d) Water jacket grease interceptors shall not hereafter be installed.

Section 104

OIL INTERCEPTORS

Oil interceptors shall be installed where required by the Mesquite City Waterworks Department and shall meet the requirements of the Chief Plumbing Inspector as to design and efficiency.

Section 105

SAND TRAPS

(a) Approved sand traps shall be installed in all service stations, public garages and commercial buildings where the washing or steam cleaning of automobiles, trucks, machinery or similar items is done. Such sand traps shall be considered approved when constructed in accordance with this Code.

(b) Sand traps for private garages shall be of cast iron, not less than twelve (12) inches in diameter and thirteen (13) inches deep with removable receptacle and bar grating.

Section 106

SPECIAL INTERCEPTORS AND TRAPS

Interceptors and traps for special wastes, such as for dental, medical or surgical purposes, shall be installed where needed and shall be approved by the Chief Plumbing Inspector for the use before installation.

Section 107

NEUTRALIZING INTERCEPTORS OR COLLECTORS

Waste waters which contain acids, alkalies, or other chemicals in solution, suspension, or otherwise, or which contain volatile, flammable or hazardous liquids or vapors, which, in the opinion of the Mesquite City Waterworks Department or Chief Plumbing Inspector, would be detrimental or hazardous to the sewer mains or to the Sewage Disposal Plant or its operation, shall not be discharged, directly or indirectly, into a plumbing system leading to a City sewer until such water has been separated, rectified and otherwise made neutral and acceptable to the Mesquite City Waterworks Department or Chief Plumbing Inspector.

Section 108

BACKWATER TRAPS

Backwater traps shall be provided in all floor drains serving the lowest floor of multiple-story buildings.

ARTICLE XI. SOIL AND WASTE PIPING

Section 109

MATERIALS

(a) Soil and waste piping for drainage systems within a building shall be either of the following: extra heavy cast iron soil pipe and fittings; lead with plumbers' wiped joints; copper type L or brass with either recessed drainage fittings, cast brass, or copper sweat fittings, except that copper shall not be used for the connecting of urinals. D.W.V. copper will be permitted from six inches above ground or cement slab only.

(b) The building (house) sewer beginning three (3) feet outside of the building wall or foundation shall be vitrified clay pipe, cast iron or transite sewer pipe.

(c) Where there is a discharge of industrial wastes with a high acid, alkali or other chemical content which is or may be injurious to drainage pipe materials, such drainage shall be through pipe of suitable resistant material up to the point where treated, as required by Section 107.

Section 110

INSTALLATION OF DRAINAGE PIPING AND SEWERS.

(a) Fixture drains and horizontal branches of three (3) inch diameter and less, shall be installed with a slope downstream as required by Table 4 of this Code and in no case shall such fall be less than one-quarter (1/4) inch per foot.

(b) Horizontal drainage piping larger than three (3) inch diameter shall be installed with a slope downstream as required by Table 4 of this code.

(c) Building (house) sewers shall be laid in a trench with the pipe barrel on solid ground, or otherwise be effectively supported, at a uniform grade in as direct a line as possible from property line to the terminus of the building (house) drain near the building wall or foundation. The fall required shall be as determined from Table 4, except that for residential work the fall shall never be less than one-quarter (1/4) inch per foot of sewer. Building (house) sewers shall have not less than twelve (12) inches of cover or pipes shall be of cast iron soil pipe. There shall be no traps or any manner of obstruction to the free flow of air through the whole course of the building drain and building sewer.

(d) Each building, other than accessory buildings, shall be served by an individual building (house) sewer. Where conditions make compliance with this requirement impossible, deviation therefrom shall be by written permission of the Chief Plumbing Inspector.

(e) Where a disposal unit is installed in one of the compartments of a two-compartment sink, the disposal unit shall discharge directly into the trap and a continuous waste may be used for the other compartment.

(f) An island sink when connected as a continuous waste shall be provided with a drum trap or "P" trap of the size given in Table 2, Section 88

(g) A two (2) inch waste line may enter a water closet branch before entering the stack when the fixture served is vented.

Section 111

CHANGES IN DIRECTION OF DRAINAGE PIPING

(a) GENERAL. Changes in direction of drainage piping shall be made by the appropriate use of approved fittings and shall be of the angles presented by one-sixteenth ($1/16$) bends, one-eighth ($1/8$) bends, one-sixth ($1/6$) bends, wyes, combination of wyes and one-eighth ($1/8$) bends, long sweep bends or combination of these fittings or other approved fittings of equivalent sweep. No change in direction greater than ninety (90) degrees in a single turn shall be permitted.

(b) HORIZONTAL TO VERTICAL. Horizontal drainage lines connecting with a vertical stack shall enter the stack through forty-five (45) degree wyes, combination wye and one-eighth ($1/8$) bends, sanitary tees or short quarter bends.

Sanitary tapped tees may be used in vertical waste lines provided the tapped branch is not larger than three (3) inch diameter iron pipe size and the length of such tapped branch is not longer than five (5) feet and provided further that the tapped branch is protected against angular stresses.

(c) HORIZONTAL TO HORIZONTAL. Horizontal drainage lines connecting with other horizontal drainage lines shall enter through forty-five (45) degree wyes, combination wye and one-eighth ($1/8$) bends or sanitary tees provided the side inlet of such sanitary tee is smaller than the body of the fitting.

(d) VERTICAL TO HORIZONTAL. Vertical drainage lines connecting with horizontal drainage lines shall enter through forty-five (45) degree wyes and one-eighth ($1/8$) bends, combination wye and one-eighth ($1/8$) bends, a combination of two one-eighth ($1/8$) bends or long sweep quarter bends.

At the foot of tub, lavatory or washing machine stacks, short quarter bends may be used.

Section 112

FIXTURE UNITS

(a) The following table of fixture unit values shall be employed when determining the relative load factors of different kinds of plumbing fixtures and in estimating the total load carried by soil and waste pipes. It shall be used in connection with the tables in this Code in which the permissible load is given in terms of fixture units for determining the required sizes of soil and waste pipes.

TABLE OF FIXTURE UNIT VALUES - Table 3

FIXTURE	FIXTURE UNIT VALUE	FIXTURE	FIXTURE UNIT VALUE
Lavatory with 1 1/4" waste	1	Combination Laundry tub and Sink with 1 1/2" waste	3
Lavatory with 1 1/2" waste	2	Combination Laundry Tub and Sink with 2" waste	4
Bathtub with 1 1/2" waste	3	Service Sink (slop sink)	4
Bathtub with 2" waste	4	Service Sink with flush valve	6
Showers (group) per head	3	Drinking Fountain	1/2
Shower stall with 2" waste	3	Urinal, Stall, Washout and Wall-hung	5
Shower stall with 3" waste	4	Floor drain with 4" outlet	6
Water Closet	6	Floor drain with 3" outlet	4
Kitchen Sink (residence) with 1 1/2" waste	3	Floor drain with 2" outlet	3
Dishwasher (domestic combination sink)	4	Washing Machines (domestic)	2
Kitchen Sink (hotel) with 2" waste	4	Sink (bar or fountain) with 1 1/2" waste	3
Laundry Tub with 1 1/2" waste	3	Sink (factory wash-up) with 2" waste	4
Dental Cuspidor with 1 1/4" waste	1	Urinal, pedestal, siphon jet and blowout	4
Sink (glass or silver) with 1 1/2" waste	3		
Sink (Surgeon's) with 1 1/2" waste	3		
Sterilizer (Instrument) with 1 1/4" waste	1		

(b) To assign fixture unit values for waste outlets for plumbing fixtures operating intermittently and for waste outlets other than those mentioned in the above list, the number of fixture units shall be computed by dividing the rate of discharge into the waste line in gallons per minute by 7 1/2.

(c) For flow into a sanitary drainage system, from a pump or sump ejector, fifty (50) fixture units shall be assumed for each twenty-five (25) gallons per minute pump capacity.

Section 113

SIZES OF SOIL AND WASTE PIPE.

(a) The maximum number of fixture units which shall be connected to any given size of building drain, soil or waste line, or building sewer if given in Table 4 except as otherwise provided.

DRAINAGE LINE SIZES - Table 4
MAXIMUM NUMBER OF FIXTURE UNITS WHICH MAY BE CONNECTED TO

Pipe Size (in.)	Vertical	Horizontal Branch			House Drains Receiving			
	Soil and Waste Stack	Drains Receiving Discharge from One "Branch Interval"			Discharge from more than one "Branch Interval"			
Total	1/8" Fall	1/4" Fall	1/2" Fall	1/8" Fall	1/4" Fall	1/2" Fall	#1/16" Fall	
1 1/4	1	---	1	1	----	----	----	----
1 1/2	3	---	3	3	----	----	----	----
2	15	---	6	9	----	8	12	----
2 1/2	35	---	13	18	----	18	25	----
3	75	---	32	45	10	46	64	----
4	400	110	150	225	150	200	300	----
5	1000	250	350	490	360	500	700	250
6	2200	460	700	950	625	950	1300	500
8	6000	1400	2000	2800	1950	2800	3900	1200
10	12000	3600	5000	6500	5000	7000	9000	2400
12	18000	6300	8400	10500	9000	12000	15000	3600
15	----	---	---	---	14000	20000	28000	4800

*Building (House) Sewer Laterals and Mains only.

(b) Soil stacks more than one story in height shall continue through the roof full size.

(c) The main stack of vertical soil and waste stacks shall extend full size through the roof except as otherwise specifically provided in Section 138.

(d) Water closets shall be connected to pipes of four (4) inch diameter or larger except that in buildings for single family, duplex, and multi-family dwelling use, three (3) inch service weight piping may be used, provided not more than twelve (12) of the permitted fixture units are water closets, and when such piping is connected to a building (house) sewer not less than four (4) inches in diameter. In such cases the vent stacks from the water closets shall extend full size through the roof.

(e) No soil or waste stack shall be smaller than the largest horizontal branch connected thereto, except as provided in Section 138.

(f) Building (house) laterals and mains when at least six (6) inches in diameter, where located outside of buildings and accessible for excavation, need not be larger than the city sewer main to which connected.

(g) Where necessary to meet the elevations of the City sewer main, the fall required herein may be reduced provided the plans and specifications for such installations are approved by the Chief Plumbing Inspector.

Section 114

SOIL AND WASTE LINES FOR FUTURE FIXTURES

When provision is made for future installation of fixtures, they shall be considered as having been actually connected when determining the required size of drainage pipes, and shall be "rough-in" in their entirety, or the openings shall be capped at the waste and vent stack.

Section 115

SUMPS AND RECEIVING TANKS.

(a) All building subdrains which receive and carry sewage or any septic wastes shall discharge into a tight sump or receiving tank, so located as to receive such sewage or waste by gravity. Such sewage and waste waters shall be lifted therefrom and discharge into the building sanitary drain or sewer by pumps or ejectors. All such sumps and tanks shall be locally vented.

(b) Building subdrains which do not and cannot receive sewage or septic wastes may discharge into sumps or tanks which are not air tight and which are not vented. These wastes shall be lifted therefrom and discharged into the building storm drain or storm sewer by suitable sump or bilge pumps. Where the pump discharge does not exceed one and one-half (1 1/2) inch diameter, the wastes may be discharged into the sanitary sewer when approved by the Chief Plumbing Inspector.

(c) Sumps and receiving tanks shall be either automatically discharged or shall be of sufficient capacity to hold the maximum accumulated sewage and waste for a period of not less than forth-eight (48) hours.

Section 116

CONDENSATE AND BLOW-OFF CONNECTIONS

Blow-off exhaust systems and drip pipes shall not be directly connected with the sanitary drainage system but shall have an indirect waste as provided in Section 153 and shall be discharged as provided in Section 171f.

Section 117

PERMISSIBLE RATES OF DISCHARGE INTO CITY SEWERS

(a) No liquids shall be discharged into City sewers at rates of flow greater than the rates of flow tabulated in Table 5 for each size of City sewers.

MAXIMUM ALLOWABLE RATE OF DISCHARGE INTO CITY SEWERS - Table 5

Diameter of City Sewer	MAXIMUM RATE OF FLOW IN GALLONS PER MINUTE PERMITTED TO DISCHARGE INTO SEWER
6"	50 gallons per minute
8"	75 gallons per minute
10"	125 gallons per minute
12"	180 gallons per minute
15"	290 gallons per minute
18"	400 gallons per minute
21"	525 gallons per minute
24"	690 gallons per minute

(b) If the instantaneous or rapid emptying of any device, receptacle, or fixture can result in flows exceeding the rates set out in Table 5 then such discharge shall first be into a receiving tank or sump fitted with an outlet orifice of such size as to limit the rate of flow therefrom into the sewer to the values shown in the table for the corresponding diameter of the City sewer to which connected.

(c) All such flow control receivers and appurtenances shall be of a design approved by the Chief Plumbing Inspector.

Section 118

AUTOMATIC LAUNDRIES AND WASHATERIAS

Any type of washing machine used in an automatic laundry or washateria may drain through either a soil pipe or trough which shall terminate in a catch basin as an indirect waste. When a soil pipe is used, it shall have a local vent the same size as the drain. The sewer outlet from the catch basin shall be trapped and vented with a vent of the same size as the drain.

Section 119

DOMESTIC WASHING MACHINE DRAINS

A domestic washing machine drain shall be trapped and vented as provided herein or shall be installed as an indirect waste as provided in Section 153, paragraph (b).

Section 120

TRAILER PARKS

(a) SEWER CONNECTIONS. Horizontal branches and traps for trailer sewer connections shall be of cast iron, not less than four inches in diameter, on a continuous waste and vent system. Such traps shall be not more than five feet from the sewer and shall be extended above the grade with sanitary crosses and accommodating not more than four trailers on each branch and trap. The openings of such sanitary crosses shall be closed by cleanouts with brass screws. The vent pipe and sewer connections shall be adequately supported and protected against physical damage.

(b) WATER CONNECTIONS. Water supply piping shall be three-quarters inch minimum with a shut-off and drain valve and back-flow preventer for each riser.

(c) GAS CONNECTIONS. Gas supply piping shall be three-quarters inch minimum with a round way lock-key gas stop valve equipped opening for each trailer to be connected.

ARTICLE XII. VENTS AND VENTING

Section 121

MATERIAL

(a) Vent pipes shall be of either of the following: cast iron, galvanized wrought iron, galvanized steel with either cast iron recessed drainage fittings or galvanized malleable iron fittings, copper with either brass or copper fittings, brass pipe and fitting, or lead with wiped joints.

(b) Vent pipes which may be subject to receiving liquid wastes such as flat vents for floor drains, shall be of the same material as the waste pipes.

Section 122

PROTECTION OF TRAP SEALS.

The seal of each fixture trap in a plumbing system shall be protected against siphonage and back pressure by a properly installed vent as provided in this Code.

Section 123

STACK VENTS

(a) Each soil or waste stack shall be extended vertically as a stack vent to at least six (6) inches above the flood level rim of the highest fixture connected to such stack, and then to the open air, or the respective stack vent and a vent stack may be connected together within the building with a single vent extension from such junction to open air.

(b) A vent stack or a main vent shall be installed and used with soil or waste stacks where back vents, relief vents, or other branch vents are required for two (2) or more branch intervals of such stack. Such vent stack shall terminate independently in the open air outside the building or it may be connected with the stack vent as permitted by paragraph (a) of this Section. A vent stack or main vent shall connect with the soil or waste stack served either through, at, or below the lowest horizontal waste branch or with the building drain; provided that this shall not be required in buildings of less than three (3) stories in height, and that such connection shall not be of smaller size than the so connected vent.

Section 124

LOCATION OF VENT TERMINALS.

(a) No vent terminal from a sanitary drainage system shall be directly beneath or within fifteen (15) feet measured horizontally, or any door, window, or other ventilating opening of any building unless the vent terminal is two (2) feet above the top of such opening.

(b) Each extension of a vent pipe through a pitched roof shall be terminated at least one (1) foot above such roof. Each flat roof vent shall extend to at least six (6) inches above the parapet or fire walls. Where a roof is habitable, the vent shall be extended to a height of at least seven (7) feet above the roof and the open end shall be effectively screened. All such vent pipes shall be properly flashed at the roof line

with lead or copper. Flashing sleeves shall be not less than six (6) inches long and counter-flashings shall be turned down at least one (1) inch into top of pipe.

(c) Vent terminals shall not extend through the side wall of a building except where a vent is added within an existing building and where it would otherwise be necessary to extend it through more than two existing stories of the building. In such case the vent may be extended through a side wall to outdoors and shall terminate at least fifteen (15) feet, measured horizontally from any adjacent building, and shall be turned downward and shall be screened.

Section 125

DISTANCE OF TRAPS FROM VENT

Each vent protecting a fixture trap shall be located so that the developed length of the respective drain from the trap overflow to the vent is not more than five (5) feet except that for water closets, pedestal urinals, trap standard service sinks, and other fixtures which depend on siphon action for the proper functioning of the fixture shall not be more than three (3) feet. Each vent protecting a fixture trap shall be located so that the total fall in the fixture drain from the trap overflow to the vent is not more than one pipe diameter. No vent shall be installed closer than two pipe diameters to the trap overflow.

Section 126

DUAL VENT

An individual vent or a stack vent installed vertically may be used as a common vent for three (3) fixture traps when all fixture drains connect with the same vertical drain or stack at the same level and when the developed length of each of the drains is within the limits established under Section 125. When so connected, additional vents for the traps are not required.

Section 127

COMMON VENT

A common vent may be used for a sink and dishwasher set on the same floor level by connecting at different levels in the stack provided the inlets into the stack are not more than ten (10) inches center to center, and any vents are 3" or larger.

Section 128

FLAT VENTS

Flat vents may be used for continuous horizontal vents, and individual flat vents shall be permitted where serving only one (1) floor drain each which cannot be otherwise vented as required in this Code.

Section 129

CONTINUOUS VENTS

(a) Series of floor drains may have continuous vents, provided that the branch drain to which such floor drains are connected shall not serve fixtures other than floor drains.

(b) Special purpose drains which do not receive or handle septic wastes and which discharge into a catch basin or bilge pump may have continuous vents.

Section 130

CIRCUIT AND LOOP VENTS

(a) INSTALLATION. Loop venting shall be permitted only on the ground floor and shall be installed as follows: branch soil or waste pipe to which two (2) but not more than eight (8) water closets (except blow-out type), pedestal urinals, trap standard service sinks, lavatories, shower stalls or floor drains are connected in batteries, may be vented by a circuit or loop vent which shall be taken off in front of the last fixture connection; provided, however, that floor drains shall not be so connected into lines which serve fixtures other than floor drains. When other fixtures discharge into a stack above the junction of such branch and the stack, the branch shall be provided with a relief vent taken off in front of the first fixture connection. The branch waste and fittings serving said fixtures shall be laid flat to provide passage of air in the upper part of the waste line and in no case shall fixtures be set farther than two (2) feet from the horizontal waste line. The diameter of such circuit or loop vent shall be at least equal to the diameter of the horizontal soil or waste branch served.

(b) DUAL RELIEF VENTS. Two circuit or loop vented horizontal branches, each serving a total of not more than eight (8) fixtures as set out in paragraph (a) of this article, when located within the same "Branch Interval", may have dual vents. Where the vents are joined, the point of joining shall be not less than six (6) inches above the flood level rim of the highest fixture connected to either branch.

(c) PROHIBITED INSTALLATION. Two lines of fixtures back-to-back (double battery) shall not be installed on the same circuit or loop vented horizontal branch, but shall be installed on different branches with dual vents as provided in paragraph (b) of this Section.

Section 131

STACK VENTING

(a) FIXTURES TOPMOST ON STACK BRANCH. Any fixture except a water closet installed within the top usable branch interval of a stack shall be within five (5) feet of the soil stack, and when so connected to such stack shall be considered individually vented.

(b) WATER CLOSETS. A water closet shall be considered as individually vented when not over three (3) feet horizontally from the soil stack and not more than two (2) feet vertically from the horizontal line to the fixture outlet and where there are not more than eight (8) fixture units connected to the vent stack above it, none of which fixtures may be another water closet.

Section 132

SUMP VENTS

(a) Each sump or receiving tank from a pump or ejector (except pneumatic ejector), which receives sewage or other septic wastes, shall be provided with a local vent of the size required by Table 6.

(b) Each pneumatic ejector shall be provided with a vent as specified by the manufacturer of the equipment. Such vent shall be a local vent.

Section 133

VENTING OF OFFSETS

Offsets having an angle greater than 45° from the vertical, in soil or waste stacks serving fixtures below and on two or more stack branch intervals above the offset, shall be provided with a relief vent, equal in diameter to either the vent stack or the soil stack, whichever is smaller. The lower end of such relief vent shall connect to the soil or waste stack through a wye at a point which is above the offset but not less than eight (8) feet below the junction of the lowest horizontal branch which is above the offset. The upper end of such vent shall (1) connect as yoke vent to the vent stack through a wye not less than one stack branch interval above its lower end or (2) be individually vented to open air.

Section 134

YOKE VENT

Soil or waste stacks in buildings more than three (3) stories in height shall be provided with stack relief vents, hereafter called yoke vents, at each five (5) floor interval, measured from the top floor down. The size of a yoke vent shall be equal to the size of the vent stack to which it connects. The lower end of the yoke vent shall connect to the soil or waste stack through a wye located below the lowest horizontal branch serving the respective floor level and the upper end of the yoke vent shall connect to the vent stack through a wye not less than three (3) feet six inches above such floor level.

Section 135

VENT HEADERS

Stack vents and vent stacks may be connected into a common vent header at the top of such stacks and may be extended from such junction to the open air through a common vertical vent. Such header and common vent shall be sized in accordance with the requirements of Table 6, wherein the number of fixture units connected shall be the sum of all the units of all stacks connected thereto, and the developed length shall be the developed length of the longest vent, measured from its intersection at the base of the stack or lowest main building drain to which connected, to the terminal of the common header vent in the open air.

Section 136

VENT PIPE GRADES AND CONNECTIONS

(a) Vent and branch vent pipes shall be free from drops or sags and shall be graded and connected so as to drip back to the soil or waste pipe or vent stack by gravity.

(b) Where vent pipes connect to a horizontal soil or waste pipe, the vent shall be taken off above the center line of the soil pipe and the vent pipe shall be of the same material as the soil pipe and, except as provided otherwise for flat vents in Section 128, shall rise vertically, or at an angle of not more than 45° from the vertical, to a point at least six (6) inches above the flood-level rim of the fixture it vents before offsetting horizontally or before connecting to a branch vent.

(c) Each connection between a vent pipe and vent stack and horizontal portions of vent pipes forming branch vents, relief vents, circuit vents, or loop vents, shall be elevated at least six (6) inches above the flood-level rim of the highest fixture served by said vents, except where specifically provided otherwise in this Code.

Section 137

SIZE AND LENGTH OF MAIN VENTS

(a) The length of a vent stack or main vent shall be its developed length measured from the lowest connection of the vent stack terminal.

(b) Each vent stack or main vent shall have a diameter determined in accordance with Table 6 based upon its developed length and the number of fixture units connected to the soil or waste stack vented by it; provided that such vent size shall never be reduced, except as where permitted in Section 138(a).

REQUIRED SIZE AND PERMISSIBLE LENGTH OF VENTS - Table 6

Size of stack Served in Inches	Fixture Units Connected	Maximum Permissible Developed Length of Vent in Feet for the Respective Vent Size												
		Minimum Diameter of Vent in Inches												
		1 1/4	1 1/2	2	2 1/2	3	4	5	6	8				
1 1/4	1	75												
1 1/2	8		150											
2	12		75	310										
2	24		70	300										
2 1/2	42		35	140	450									
3	30		20	80	260	650								
3	60		18	75	240	600								
4	100	---	---	35	100	260	1100							
4	250	---	---	30	95	240	1000							
4	500	---	---	22	70	180	750							
5	550	---	---	---	28	70	320	1000						
5	1100	---	---	---	20	50	240	750						
6	950	---	---	---	---	20	95	240	1000					
6	1900	---	---	---	---	18	70	180	750					
8	1800	---	---	---	---	---	30	80	350	1100				
8	3600	---	---	---	---	---	25	60	250	800				
10	2800	---	---	---	---	---	---	30	80	350				
10	5000	---	---	---	---	---	---	25	60	250				

(c) A stack vent shall be a continuation of and shall be the same diameter as the soil or waste stack, except as noted in Section 138(a).

Section 138

SIZE AND LENGTH OF BRANCH AND INDIVIDUAL VENTS

(a) Individual and relief vents shall not be less than one and one-fourth (1 1/4) inches in diameter. For one and one-fourth (1 1/4) and one and one-half (1 1/2) inch wastes, the vent shall be of the same diameter as the waste pipe. For two (2) inch or larger vents, the vent shall not be reduced; except where there are not more than three (3) water closets on a four (4) inch branch waste, or not more than two (2) water closets on a three (3) inch branch waste, neither over twenty-five (25) feet in length, a two (2) inch vent may be used.

(b) The length of an individual or relief vent shall not exceed the length permitted for a vent serving the same size soil or waste stack as established by Table 6. The length of an individual or relief vent shall be its developed length from its junction with the fixture drain or soil or waste branch, served by the vent, to its connection with the vent stack or stack vent.

Section 139

VENTS NOT REQUIRED

Vents shall not be required for drains which do not and cannot receive and carry sewage or septic wastes, provided such drains do not discharge into a sanitary drainage system or the sanitary sewer, except as provided in Section 153.

Section 140

VENTS FOR FUTURE FIXTURES

Where vents are required and installed to provide for the future installation of fixtures as set out in Section 114 they shall be vented, tested and be subject to the same rules as if intended for immediate use, and all openings closed airtight. Where such vents terminate they shall not create a horizontal or downward dead-end which can catch and pocket waste water or matter.

Section 141

VENTING OF SEWER LATERALS

Each building (house) sewer shall have a main vent of not less than three (3) inch diameter pipe to the open air above the main building on the premises served.

ARTICLE XIII. WATER SUPPLY AND DISTRIBUTION

Section 142

QUALITY OF WATER SUPPLY

(a) Potable water shall be defined as in Section 54 and shall be approved by the Department of Public Health of the City of Mesquite as suited for human consumption.

(b) Non-potable water may be used for flushing water closets and urinals and other purposes not requiring potable water provided, however, that such water shall not be accessible for drinking or culinary purposes. Piping within a building conveying non-potable water shall be adequately and durably identified by a distinctively yellow colored paint so that it is readily distinguished from piping carrying potable water.

Section 143

PROTECTION OF POTABLE WATER SUPPLY

(a) CROSS-CONNECTIONS. Potable and non-potable water supplies shall be distributed through systems entirely independent of each other, and any cross-connection between such supplies is prohibited. Further, no connection shall be made between pipes containing city water and any other pipes, whether or not such other pipes contain water considered potable.

(b) BACK-FLOW. Each fixture supply pipe shall be protected from back-flow by having all outlets from which potable water flows spaced a sufficient distance above the flood level rim of the receptacle into which the water flows to provide a "minimum required air gap", except that where it is not possible to provide a minimum air gap, the fixture shall be equipped with an accessibly located back-flow preventer installed beyond the manual control valve. In special cases where it is not possible to provide either the minimum air gap or a suitable back-flow preventer in connections to cooling jackets, condensers, or other industrial or special appliances, the Chief Plumbing Inspector shall approve such installations.

(c) WATER PIPES & TRENCHES. Water service and water distribution pipes laid underground shall not be closer to sanitary drains and sewers than five (5) feet where possible, and when laid in approximate alignment with each other, the water pipes shall be laid at an elevation above all sanitary drains and sewers. In cases where buildings are located less than five (5) feet from property lines the above distance may be reduced accordingly. Where cast iron sewers are used, water pipe may be permitted in the same trench.

(d) WATER SUPPLY TANK. Potable water pumps, non-pressure water supply tanks, wells, filters, softeners, appliances, and devices shall be protected by approved covers, curbs, walls, copings, or casings to prevent entrance into the water supply of foreign matter, superficial ground or surface water, and other contamination.

(e) PROTECTION AGAINST FREEZING. Water pipes, tanks, appliances and devices subject to freezing temperatures shall be effectively protected against freezing.

(f) COVERAGE OF PIPING. Water pipes which are connected directly or indirectly with the Mesquite City Waterworks system and which are not under the jurisdiction of the Mesquite City Waterworks Department shall, when laid outdoors, be laid at least twelve (12) inches below the surface of the ground. Water pipe run under a dwelling shall not be less than six (6) inches underground except for vertical risers and except where such pipe pass through basements or crawl spaces which are not subject to freezing temperatures.

(g) FIRE PROTECTION CONNECTIONS. All connections to City water service pipes for fire protection purposes shall be made only at points designated by the Mesquite City Waterworks Department.

Section 144

MATERIAL FOR WATER PIPES

Material for water pipes and tubing shall be of brass, copper, lead, cast iron, wrought iron, open-hearth iron, or steel, with appropriate approved fittings. All ferrous pipe and fittings shall be galvanized (zinc-coated) or cement lined. The welding of ferrous pipes for potable water is prohibited. No ferrous pipe shall be connected to copper pipe in a building water system.

Section 145

WATER PIPING AND SHUT-OFF VALVES

WATER PIPING. The water-service pipe from the street main to the water distribution system for the building shall be of sufficient size to furnish an adequate flow of water to meet the requirements of the building at peak demand, and in no case shall it be less than three-quarter (3/4) inch diameter for one and two family dwellings, and not less than one (1) inch diameter for multi-family dwellings. If flush valves or other devices requiring relatively high rates of flow of water are used, the water service pipe shall be designated to supply this flow, and in no case shall it be less than one (1) inch diameter for one (1) flush valve nor less than one and one-quarter (1 1/4) inch diameter for two (2) or more flush valves.

SHUT-OFF VALVES

(a) Water pipes shall be graded with no traps or sags and shall be provided with stop-and-drain cocks or shut-off and drain valves so that the entire system and parts thereof are drained.

(b) A separate, accessible stop-and-drain cock or shut-off and drain valve shall be provided with each sill cock, yard hydrant, and each group of fixtures serving one tenant. The yard hydrants, with their shut-off and drain valves, shall be taken off the supply line between such house shut-off and drain and the meter.

(c) Separate, accessible stop-and-drain cocks or shut-off and drain valves shall be placed at the foot of each water riser line in multi-family dwellings and commercial buildings. The water service for each group of fixtures serving one tenant in multi-family dwellings shall be provided with a stop-and-drain cock or shut-off and drain valve to control and drain the cold water pipes and one to drain the hot water pipes, except in those cases where water is furnished by the management in hotels or apartment houses.

(d) Hot water pipes shall be provided with a drain which shall run to a point where the drain is visible when being emptied.

(e) Supply lines taken from pressure or gravity tanks shall have shut-off valves at or near their source.

Section 146

WATER SUPPLY TANKS (HOUSE TANKS)

(a) When the water pressure from the City mains is insufficient to supply all fixtures freely and continuously, the rate of supply shall be supplemented by a gravity house tank or booster system.

(b) Water-supply tanks shall be covered to prevent contamination. Structural frames and supports shall be designed in accordance with the provisions of the Mesquite Building Code.

(c) Adequate overflow and drain pipes shall be provided for gravity tanks. Such pipes shall not be connected directly to any drainage system, but shall discharge through an approved air gap above and within six (6) inches of a roof or supplied sink. Each such tank drain shall be located so that it will drain the lowest point of such tank.

Section 147

WATER SUPPLY TO FIXTURES

(a) Plumbing fixtures shall be provided with a supply of water for flushing sufficient to keep them in a sanitary condition. The main water supply pipe to any bathroom shall not be smaller than three-quarter ($3/4$) inch pipe, and not more than two (2) fixtures shall be supplied by one-half ($1/2$) inch pipe except that ledge type sinks may be connected by a length of three-eighth ($3/8$) inch outside diameter pipe or tubing not over eighteen (18) inches in length and having ground joint connections at the fixture.

(b) The water supply pipe to each fixture located in any building other than a dwelling shall be provided with a separate compression stopcock on each supply to each fixture and slip joints shall not be installed on any supply except at connection of cock to fixture.

(c) The minimum size of water-supply pipes to fixtures shall be as follows:

WATER SUPPLY PIPES - Table 7

Fixtures	Pipe Size Inches	Fixtures	Pipe Size Inches
Sill Cocks	1/2	Water closet and urinal tank	3/8
Hot-water heaters	3/4	Flush valves for water closets (siphon jets, blowout) and pedestal urinals	1
Laundry tubs	1/2	Flush valves for stall and washout urinals	3/4
Sinks	1/2*		
Lavatories	3/8		
Bathtubs	1/2		
Showers	1/2		

*See Section 147, paragraph (a)

Section 148

HOT WATER SUPPLY

A hot water return circulation system shall be installed in all buildings of more than four (4) stories in height supplied with hot water, and in all other buildings except dwellings where the developed length of hot water piping exceeds one hundred (100) feet measured from the source of hot water supply to the extreme fixture supplied.

Section 149

SAFETY PRECAUTIONS

(a) Suitable pressure and temperature relief valves shall be installed on all hot water storage tanks.

(b) Check valves or stop cocks shall not be installed in the cold water supply pipes leading to a water heater or heating system unless a suitable pressure relief valve equipped with an extension conducted to within six (6) inches of the floor is installed.

(c) When the relief outlets of pressure, temperature, or other relief valves are connected by piping to the drainage system, such piping shall not be connected directly to the drainage system but shall be connected as an indirect waste.

Section 150

PRESSURE BOILERS

Pressure steam boilers may be supplied with water direct from Mesquite City water mains, but when so connected shall have a check valve installed between the control valve and the meter.

Section 151

LAWN SPRINKLERS

The materials and installation of lawn sprinkling systems from the water meter or other source of supply, up to and including the master shut-off valve, shall be as herein provided.

(a) The water supply piping for a lawn sprinkling system shall be provided with:

1. A master shut-off valve installed in a cast iron box with a removable cover.
2. A horizontal swing, 45° seat, check valve installed between the master shut-off valve and the water meter or other source of supply.
3. A back flow preventer shall be installed.
4. A means of draining the system.

Such control valve, water supply piping, and drain shall be not less than twelve (12) inches underground.

(b) Nothing in this article shall prohibit the installation of a lawn sprinkling system in the public parkway between the sidewalk and the street. However, the City of Mesquite shall not be held liable for any damage to such system which results from the installation or repair of sewer or water mains, or from the widening or improvement of any street.

(c) Where spray heads are placed adjacent to sidewalks and curbs, quarter-heads and half-heads shall be used so as to direct the spray away from the street, sidewalk, or adjoining property. Any owner who installs a lawn sprinkling system between the curb and sidewalk shall likewise hold the City of Mesquite whole and harmless against any claim or injury to person, or damage to property that any member of the public may suffer by reason of the installation of said lawn sprinkling system between said curb and sidewalk in the parkway.

ARTICLE XIV. INDIRECT WASTES

Section 152

MATERIALS

Indirect waste piping from refrigerators, safe waste, or special devices shall be of galvanized steel, wrought iron, open-hearth iron, extra heavy cast iron, lead, copper or brass except that all piping underneath the ground shall be either of cast iron, copper, lead or brass.

Section 153

INDIRECT WASTES

(a) Wastes from the following shall not discharge directly into any building drain, soil or waste pipe: a refrigerator, icebox or other receptacle, appliance, device or apparatus which is used for the storage, preparation or processing of food or drink and which is not water connected; an appliance, device, cooling tower or apparatus using water as a cooling or heating medium, a sterilizer, a water still, a water treatment device or a water operated device.

(b) Condensate drains from an air conditioning system and domestic washing machine drains may discharge as an indirect waste into a line with a two (2) inch deep-seal "P" trap located at least twelve (12) inches outside of a building. Such trap shall be extended at least twelve (12) inches above the grade and when within five (5) feet of the (house) sewer or (house) drain to which connected, need not be vented.

(c) Drinking fountains may be installed with indirect wastes.

Section 154

INDIRECT WASTE PIPES

(a) Indirect waste pipes shall be installed in accordance with provisions of Section 110.

(b) The waste pipes for refrigerator or air conditioning units shall not be reduced below the size of the outlet supplied by the manufacturer of the unit.

(c) Indirect waste pipes shall discharge into a trapped and vented water-supplied open sink or device other than a water closet, which open sink or device shall be in an accessible, ventilated location approved by the Chief Plumbing Inspector. An air gap equal to or greater than the nominal diameter of the waste pipe shall be provided between the outlet end of the waste pipe and the flood level rim of the receiving sink or device. Water lifts, expansion tanks, cooling jackets, sprinkler systems, drip or overflow pans or similar devices which waste clear water only, may discharge into a sump or into a trapped fixture.

(d) Indirect waste pipes receiving the discharge from drinking fountains or refrigerators on three (3) or more floors shall be vented by being extended through the roof.

(e) Water shall not be discharged upon roofs unless the storm water leaders serving the roof are connected to the City storm sewers or storm drainage systems. Any such discharge which results in water reaching a street or street gutter in dry weather is prohibited.

ARTICLE XV. JOINTS AND CONNECTIONS

Section 155

TIGHTNESS

Joints and connections shall be made sufficiently tight and shall have adequate strength so that an efficient, durable, sanitary and safe plumbing system will result.

Section 156

TYPES OF JOINTS

(a) CAULKED JOINTS. Caulked joints for cast-iron soil pipe shall be firmly packed with oakum or hemp and shall be secured only with soft molten caulking lead, not less than one (1) inch deep. No paint, varnish, or putty shall be permitted on the jointing material until after the joint has been inspected and tested.

(b) SCREWED JOINTS. Screw joints shall conform to the requirements of this Code. Pipe ends shall be reamed or filed out to size of bore, and all chips, burs, and cuttings shall be removed. Pipe joint cement and paint shall be permitted on male threads only.

(c) WIPED JOINTS. Wiped joints on lead pipe, or lead pipe and brass or copper pipe, ferrules, solder nipples, or traps shall be full wiped joints when located on the sewer side of traps. The solder shall have an exposed surface on each side of the joint not less than three-fourths (3/4) inch and a minimum thickness at the thickest part of the joint of not less than one-eighth (1/8) inch.

(d) SWEATED JOINTS. Soldered or sweated joints on tubing shall be made with standard fittings. Surfaces to be soldered shall be of material suitable for soldering and shall be cleaned bright. The joints shall be properly fluxed and made with suitable solder.

(e) FLARED JOINTS. Flared joints for soft copper water tubing shall be made with suitable fittings. The tubing shall be expanded with a proper flaring tool.

(f) HOT-POURED JOINTS. Hot-poured joints for clay or concrete sewer pipe shall first be firmly packed with oakum or hemp and shall be secured with hot-poured compound.

(g) BRAZED JOINTS. Brazed joints shall be made in accordance with the provisions of this Code.

(h) BITUMINIZED FIBER JOINTS. (Prohibited)

(i) ASBESTOS CEMENT PIPE JOINTS. Joints in asbestos cement pipe shall be made as specified in manufacturer's instructions. Joints between asbestos cement pipe and metal pipe shall be made by means of an adapter coupling caulked as required in Paragraph (a) of this Section.

Section 157

USE OF JOINTS

(a) SLIP JOINTS. Slip joints, other than required expansion joints, shall not be used in drainage piping except in the waste pipe between a trap seal and its fixture.

(b) UNIONS. Ground joint unions may be used in water piping. Unions shall be permitted in drainage lines only in trap seals or on the inlet side of traps.

(c) EXPANSION JOINTS. Expansion joints may be used where necessary to allow for thermal expansion or movement of structure or pipes.

(d) CLAY OR CONCRETE PIPE - SEWER PIPE. Joints in vitrified clay or concrete sewer pipes or between such pipes and metal pipes shall be made with hot-poured jointing compound material. Cement mortar joints for such purposes are prohibited.

(e) CAST-IRON PIPE. Cast-iron pipe joints shall be either caulked or screwed joints.

(f) LEAD PIPE TO OTHER MATERIALS. Joints between lead and cast-iron, wrought iron, or steel pipe shall be made by means of wiped joints to a caulking ferrule or soldering nipple.

(g) FIXTURE CONNECTION TO PIPING. The connection between drainage pipes and water closets, floor outlet slop sinks, pedestal urinals, and earthenware trap standards shall be made by means of brass or iron flanges, caulked or soldered to the drainage pipe. The connection shall be bolted to the earthenware by means of brass bolts with an approved gasket or washer, or setting compound between the earthenware and the connection. The floor flange shall be set on a firm base. Wall-hung water closets shall be installed as provided in Section 70.

(h) COPPER WATER TUBING. Joints for copper water tubing shall be soldered sweated joints.

Section 158

PROHIBITED FITTINGS AND CONNECTIONS

(a) DOUBLE-HUB FITTINGS. No double hub pipe or fittings shall be used on soil or waste piping but may be used on vents.

(b) DRILLING, WELDING OR USE OF SADDLE HUBS. The drilling, tapping, or welding of building drains, soil, waste, or vent pipes, and the use of saddle hubs or bands, are prohibited.

(c) DRAINAGE SYSTEM OBSTRUCTIONS. Any fitting or connection which has an enlargement, chamber or recess with a ledge, shoulder or reduction of the pipe area, which offers an obstruction to flow through the drain, is prohibited, except that a four (4) inch by three (3) inch water closet connection shall not be considered as an obstruction.

- (d) SANITARY PIPE FITTINGS REQUIRED. Tees and 90° branch fittings shall not be used in soil or waste lines unless they are of the sanitary type and the side outlet is smaller than the body of the fitting.
- (e) BULL-HEAD CONNECTIONS. No bull-head waste connections shall be used.
- (f) PIPE FOR SINK AND LAVATORY WASTES. No steel pipe shall be used for fixture drains in any type buildings.
- (g) BRASS HUB FERRULES. Brass hub ferrules shall not be permitted on waste lines but may be used on vents when properly supported.
- (h) CESS POOL DRAINS. No cess pool shall be permitted.
- (i) HEXAGONAL BUSHINGS. No hexagonal bushings shall be used in gas piping.
- (j) PROHIBITED CONNECTIONS TO LOCAL VENTS. No local vent shall be connected to a sanitary vent.

Section 159

WATERPROOFING OF OPENINGS

Where pipes pass through a roof or exterior wall, the opening around the pipe shall be made water-tight.

ARTICLE XVI. HANGERS AND SUPPORTS

Section 160
GENERAL

Piping shall be installed without undue stresses or strains and provisions shall be made for expansion, contraction and structural settlement.

Section 161
DAMAGE TO STRUCTURE

No structural member shall be weakened or impaired beyond a safe limit by cutting, notching, or otherwise unless provision is made for carrying the structural load. Structural members shall not be overloaded by the weight of piping or the plumbing system, nor shall such weight endanger the structural stability of any structural member, floor or wall.

Section 162
PIPE HANGERS

Hangers and supports for pipes shall be made of malleable iron, wrought iron, galvanized iron or steel consisting of straps, rods, rings, or clamps. Attachment to the building structure shall be made without the use of wooden plugs.

Section 163
VERTICAL PIPING

(a) Vertical piping shall be supported at sufficiently close intervals to keep the pipe in alignment and carry the weight of the pipe and contents. In multiple-story buildings such piping shall be supported at least every other floor.

(b) Vertical drainage piping shall also be supported at the base of the stack.

(c) Each vertical stack shall be permanently held in position just below the roof line.

Section 164
HORIZONTAL PIPING

Horizontal soil and waste piping shall be supported at intervals of not less than seven and one-half (7 1/2) feet, to keep it in alignment and prevent sagging. Horizontal water piping shall be supported at intervals not exceeding ten (10) feet. Lead piping shall be continuously supported to prevent sagging.

Section 165
UNDERGROUND PIPES

Underground piping shall be supported in such manner that undue stress on pipe and joints is prevented.

Section 166
STUBS

Each vent, waste, or water supply stub, run through a floor or wall shall be adequately held in its proper position. Each such stub shall be at right angles to the floor or wall through which it runs.

ARTICLE XVII. STORM DRAINS

Section 167-
GENERAL

(a) Paved areas, yards, courts, courtyards, public garage drainage areas and all other areas not having natural drainage, and building roofs as required by the Mesquite Building Code, shall be drained into the storm sewer systems where such systems are available; otherwise, they shall be drained to a lawful place of disposal. When rain water from any roof is conducted underneath the sidewalk to the street curb, the pipes under the sidewalk shall be of cast iron with an area equal to twice that of the downspout or a concrete trough may be used which shall be fitted with a cast iron cover held in place with non-corrodible screws and such covers shall be made preferably in one piece and shall be set flush with the surface of the sidewalk.

(b) Storm water shall not be drained into sewers intended for sanitary sewage except by special permission of the Chief Plumbing Inspector.

(c) When subsoil drains are placed under cellar floors or are used to encircle the outer building walls, they shall be made of open-jointed tile pipe, not less than four (4) inches in diameter. Subsoil drains may discharge into a properly trapped storm water drain or storm water sump and under no circumstance shall they be connected to sanitary sewers. When the building is subject to back-water, the subsoil drain shall be protected by the use of a sump and pump suitable for lifting the water to an elevation which is safe from backflow.

(d) Drains for wash racks and steam cleaning pits shall be constructed as provided in Section 105 paragraph (a), and shall drain into a storm sewer where available; in all other cases, they may drain into a sanitary sewer when permitted by the Chief Plumbing Inspector.

Section 168
STORM WATER

All owners or occupants of any real estate in the City are hereby forbidden to permit the storm water falling upon the building situated on the premises owned or occupied by any such person, to be conveyed, received or discharged upon any property belonging to another or adjacent to such premises.

Section 169
MATERIALS

(a) Leaders when placed within a building, or when run in a vent or pipe shaft, shall be of cast iron, galvanized steel, black or galvanized wrought iron, galvanized open-hearth iron, cement lined ferrous, brass, copper, or lead pipe, and shall comply with the regulations given in this Code.

(b) Outside leaders may be of sheet metal but when connected with a building storm drain or storm sewer, they shall be connected through a cast iron boot which extends above the finish grade at least five (5) feet.

(c) Building storm drains and building storm sewers shall be of vitrified clay pipe, asbestos-cement pipe, concrete pipe, or cast iron pipe, except that such drains and sewers, fifteen (15) inches in diameter or smaller, when within a building, shall be of cast iron pipe. Such drains and sewers larger than fifteen (15) inches diameter, when within a building, shall be of material approved by the Chief Plumbing Inspector for such use.

Section 170
 SIZE OF LEADERS AND STORM DRAINS

(a) The size of a vertical leader shall be as given in Table 8 based upon the maximum projected roof area.

MINIMUM SIZE OF VERTICAL LEADER - Table 8

Diameter Inches	Maximum Projected Roof Area in Square Feet
2	500
3	1,500
4	3,100
5	5,400
6	8,400
8	17,400

(b) The minimum size of a building storm sewer, main storm drain or any of its branches shall be as given in Table 9 based upon the maximum roof area to be drained.

MAXIMUM PROJECTED ROOF AREA FOR HORIZONTAL STORM DRAINS AT VARIOUS SLOPES OF ROOFS - Table 9

Diameter Inches	1/8 Inch Fall per Foot	1/4 Inch Fall per Foot	1/2 Inch Fall per Foot
3	875	1,225	1,825
4	1,850	2,600	4,100
5	3,325	4,700	7,500
6	5,300	7,500	11,800
8	11,000	15,750	24,750
10	19,500	27,500	43,500
12	31,000	44,000	67,750

(c) Where there is a continuous or semi-continuous discharge into the building storm drain, as from a pump, air conditioning plant, or similar installation, each gallon per minute of such discharge shall be computed as being equivalent to twenty-five (25) square feet area for use with the tables. No such discharge shall be permitted to flow into any street or gutter when such street or gutter would otherwise be dry.

Section 171

COMBINED SANITARY DRAINS AND STORM DRAINS PROHIBITED.

The sanitary and storm drainage system of a building shall be entirely separate.

Table 10 - continued

	A.S.A.	A.S.T.M.	F. S.	Other
Galvanized iron and steel sheet	G8.8-1937	A163-39 (Sections 3, 5, 6) A33-59T A120-47	(Section D-6) QQ-I-716(1948)	
Galvanized pipe and fittings			(Section D-7) WW-P-406(1945)	
Cement lining	A21.4-1939			AWWA 7A.6-1940
Coal tar enamel protective coating			QQ-S-571b(1947) SH-C-536(1936)	
Soft solder		B32-49		
Fixture setting compound				

MATERIALS FOR PLUMBING AND GAS INSTALLATIONS - Table 10

	A.S.A.	A.S.T.M.	F.S.	Other
Nonmetallic pipe:				
Asbestos cement bldg. sewer pipe				WPOA-55 ACSP (2000 lb/linear ft crushing strength)
Clay sewer pipe (extra strength)		C-200, C-278		
Combined pre-molded and rubber gasket		425		AWWA-C-302
Concrete sewer pipe (extra strength)		C-14 extra strength		
Misc. rubber gasket for sewer pipe		425		AWWA-C-302
Premolded joints for sewer pipe				
Ferrous pipe and fittings:				
Cast-iron soil pipe and fittings	A40.1-1935	A74-42	WW-P-401 (1937)	
Cast-iron water pipe	A21.201939	A44-41	WW-P-421 (1940)	AWWA May 12, 1908
Cast-iron screwed pipe	A40.5-1943		WW-P-356 (1936)	
Cast-iron screwed drainage fittings	B16.12-1942		WW-P-501b(1945)	
Cast-iron drainage fittings			WW-P-491a(1946)	MSS SP-8
Wrought-iron pipe	B36.2-1950	A72-52	WW-P-441a(1943)	
Steel pipe	B36-20-1951	A120-47	(Types I and II) WW-P-406(1945)	
Open hearth iron pipe		A253-51T	(Type III only) WW-P-406(1945) WW-P-351(1930)	CS 7-30
Malleable iron screwed fittings	B16.3-1951			
Nonferrous pipe and fittings:				
Brass tubing and brass pipe (I.P.S. only)		B135-52		
Copper pipe (types K&L in drains)		B43-52	WW-P-377(1932)	
Rough brass screwed fittings		B42-52	WW-P-460(1945)	MSS SP-10 CS 5-40
Seamless copper tubing		B88-51	WW-T-797(1933)	
Copper water tube	H23.1-1951	B75-52	WW-T-799a(1946)	
Soldered fittings (for copper water tube)	B16.22-1951			
Flared fittings (for copper water tube)	A40.2-1936			
Lead pipe				CS 95-41
Lead traps and bends				CS 96-41
Miscellaneous:				
Caulking lead			QQ-L-156(1946)	CS 94-41
Sheet lead			(Grade A only) QQ-L-201(1950)	
Sheet brass		B121-52		
Sheet copper:		B36-52	QQ-B-611a(1944)	
		B152-52	QQ-C-501a(1950)	

ARTICLE XVIII. MATERIALS GENERALLY

Section 171

GENERAL

(a) USE OF MATERIALS. Materials listed in the standards of this section conform to the requirements of this chapter when used in the manner provided in this chapter.

Materials for special conditions and materials not listed in these standards may be used only in the manner specifically provided in this chapter.

(b) SPECIFICATIONS FOR MATERIALS. Standard specifications for materials for plumbing installation are listed in Table 10. Products conforming to any of the specifications listed for a given material shall be considered acceptable.

Note 1. Abbreviations used in this section refer to standards or specifications as identified below:

A.S.A. American Standards approved by the American Standards Association, 29 West 39th Street, New York, New York

A.S.T.M. Standards and Tentative Standards published by the American Society for Testing Materials, 260 South Broad Street, Philadelphia, Pa.

F.S. Federal Specifications published by the Federal Specifications Executive Committee and obtainable from the Superintendent of Documents, Government Printing Office, Washington, D. C.

A.W.W.A. Standards and Tentative Standards published by the American Waterworks Association, 22 East 40th Street, New York, N. Y.

C.S. Commercial Standards representing recorded voluntary standards of the trade promulgated by the United States Department of Commerce through the National Bureau of Standards and obtainable from the Superintendent of Documents, Government Printing Office, Washington, D. C.

M.S.S. Standards published by the Manufacturers Standardization Society of the Valve and Fittings Industry, 420 Lexington Avenue, New York, New York

Note 2. A.S.T.M. Standards are issued under fixed designations: The final number indicates the year of original adoption, or in the case of revision, the year of last revision, "T" indicates Tentative. In the "C.S." series of standards also the final number indicates the year of issue. For Federal Specifications, the year indicated in Table 10 is that of the date of issue or that of the latest revision or amendment.

(c) SECONDHAND MATERIALS. Secondhand materials are prohibited except as specifically permitted in Section 69.

(d) IDENTIFICATION OF MATERIALS. Each length of pipe, and each pipe fitting, trap, fixture and device used in a plumbing system shall have cast, stamped, or indelibly marked on it the maker's mark or name, the weight, and the quality of the product, when such marking is required by the approved standard that applies.

(e) MATERIALS; SPECIAL REQUIREMENTS

1. Sheet Lead. Sheet lead shall weigh not less than two and one-half (2 1/2) pounds per square foot.
2. Sheet copper. Sheet copper shall be not less than twenty-six (26) Brown and Sharpe gage.

Dimensions and Weights of XL Lead Soil and Waste Pipe - Table 11

Size of pipe (inches)	Pounds per foot
1	2.00
1 1/4	2.50
1 1/2	3.50
2	4.75
2 1/2	5.00
3	6.00
4	8.00
5	10.00
6	11.75

3. Caulking ferrules. Brass caulking ferrules shall conform in quality to brass pipe alloy of A.S.T.M. Specifications B 43-52, with weights and dimensions in accordance with the following table:

Size of Brass Caulking Ferrules and Soldering Nipples - Table 12

Size	Weight
4" x 4 1/2" ferrule	40 oz.
3" x 4 1/2" ferrule	28 oz.
2" x 4 1/2" ferrule	20 oz.
2" x 1 1/2" x 4 1/2" tapered ferrule	20 oz.
2" x 1 1/4" x 4 1/2" tapered ferrule	20 oz.
2" male soldering nipple	14 oz.
2" female soldering nipple	14 oz.
1 1/2" male soldering nipple	8 oz.
1 1/2" female soldering nipple	8 oz.
1 1/4" male soldering nipple	6 oz.
1 1/4" female soldering nipple	6 oz.

4. Soldering nipples. Soldering nipples shall be of brass pipe, standard size, of A.S.T.M. Specification B 43-52, or of heavy cast brass.

5. Closet floor flanges. Closet floor flanges for plumbing fixtures shall be not less than three-sixteenths (3/16) inch thick, and of brass where connections are made to lead. Cast iron floor flanges with slip-ring type collars shall be used in connection with drainage type screwed fittings.

6. Hot poured joint compound. Compounds for hot poured joints in clay or concrete sewer pipe shall be the same as approved by the City in its general specifications for main line sewer construction, as same now exist or as they may hereafter be amended from time to time.

7. Screw joints. Screw joints shall conform to the American Standard Taper Thread, A.S.A. B2.1-1945.

8. Brazed joints. Brazed joints shall conform to the requirements of this chapter for Pressure Piping, A.S.A. B31.1-1951.

9. Copper pipe. Copper pipe for drains shall be Type K or L only.

(f) PLUMBING FIXTURES AND FITTINGS

Plumbing fixtures and fittings shall conform in quality and design to one of the following standards:

Staple porcelain plumbing fixtures, NBS Commercial Standard CS4-29.

Staple vitreous china plumbing fixtures, NBS Commercial Standard CS20-47.

Sanitary cast iron enamelware, NBS Commercial Standard CS77-48.

Earthenware (vitreous glazed) plumbing fixtures, NBS Commercial Standard CS111-43.

Formed steel enameled sanitary ware, FS-WW-P-542a.

Hospital plumbing fixtures, NBS Simplified Practice Recommendations, R106-41.

Plumbing fixtures, land use, FS-WW-P-541b.

Drinking fountains: American Standard Specifications for drinking fountains, ASA-Z4.2-1942. Orifice elevation for stream projectors on drinking fountains, American Standard air gaps in plumbing systems, ASA-A40.4-1942, and American Standard backflow preventers in plumbing systems, ASA-A40.6-1943.

Water heaters: American Standard approved requirements for gas water heaters, Z21.10-1950. (Compliance with these specifications shall be determined by tests and examinations conducted by either the American Gas Association Testing Laboratories, the Underwriters' Laboratories, Inc., or an approved testing laboratory maintaining equal standards, and certified tests results shall be furnished to the Chief Plumbing Inspector when requested. The cost of necessary tests shall be provided by the manufacturer or his agent.)

Water closet tanks, overflows on flush valves or when integral with the tank, American Standard air gaps in plumbing systems, ASA-A40.4-1942 and American Standard backflow preventers in plumbing systems, ASA-A40.6-1943.

Supply lines, fittings and faucets, ASA-A40.4-1942 and ASA-A40.6-1943.

(a) GREASE INTERCEPTORS

The grease retaining capacity of each grease interceptor, in pounds of grease, shall be equal to twice the rate of flow capacity in gallons per minute of waste water so that the interceptor shall remove and retain

ninety (90%) per cent of the grease discharged into it up to its required capacity of accumulated grease. For calculating the required size of grease interceptors the rates of discharge from each fixture connected to the interceptor shall be based upon the rates shown in the following table:

Minimum Rates of Flow for Design of Grease Interceptors

Type of Fixture	Rate of Flow G.P.M.
Restaurant sink	15
Single compartment scullery sink	20
Double compartment scullery sink	25
Two single compartment sink	25
Two double compartment sinks	35
Restaurant dishwashers:	
Up to 30 gallons water capacity	15
Up to 50 gallons water capacity	25
Up to 100 gallons water capacity	40

Unless otherwise approved by the Chief Plumbing Inspector, grease interceptors shall separate grease while it is in the liquid state; that is, a separation shall be accomplished by differential gravity methods, assuming temperatures of waste at one hundred and fifty (150°) degrees Fahrenheit and a rate of rise of grease at five one hundredths feet per second reduced to twenty-five thousandths feet per second to allow for turbulence. The Chief Plumbing Inspector shall establish detailed formulas for further determining the effectiveness of grease interceptors submitted for approval under these regulations and shall prepare and maintain a list of the interceptors which he approves.

CITY OF MESQUITE

ARTICLE XIX. GAS CODE

Division 1 General

Section 172

SHORT TITLE

This Ordinance shall be known as "The Mesquite Gas Code", may be cited as such and will be referred to in this Ordinance as "this Code."

Section 173

PURPOSE

The purpose and intent of this Code is to provide minimum standards, provisions and requirements for the safe installation of gas-piping and gas-fired appliances. This Code is hereby declared to be remedial, and shall be construed to secure the beneficial interests and purposes thereof, which are public health, safety and welfare, through provisions for safety to life and property from fire and other hazards arising from the installation of gas-piping and gas-fired appliances.

Section 174

SCOPE

Installation of gas-piping and its fittings and appliances in new buildings and structures hereafter erected in the City of Mesquite, buildings or structures moved into or within the City of Mesquite, additions, alterations, repairs and changes of gas-piping or gas-fired appliance installations, existing piping and appliance installations that have been damaged or have become unsafe shall be made to conform to the requirements of this Code and other applicable ordinances.

Section 175

RESPONSIBILITY FOR SAFE WORK

This Code shall not be construed to relieve from or lessen the responsibility or liability of any party owning, operating, controlling, or installing gas-piping or gas-fired appliances for damages to persons or property caused by any defect therein, nor shall the City of Mesquite be held as assuming any such liability by reason of the inspection or reinspection authorized herein or by reason of any Certificate of Approval which is issued.

Section 176

ADMINISTRATIVE DEFINITIONS

For the purpose of this Code, certain terms, phrases, words, and their derivatives shall be construed as defined herein. All other words shall have their usual meanings. Whenever a Section is referred to by number, it shall be understood to refer to a Section of this Code. Whenever a public official is referred to by only the title of his office, such reference shall be construed as if followed by the words "of the City of Mesquite", unless the context indicates otherwise.

(a) APPROVAL - shall mean approved by the Chief Plumbing Inspector or the person authorized by the City Manager as acceptable under the standards of this Code.

(b) AUTHORIZED PERSON - shall mean an individual, firm or corporation who is licensed under the provisions of this Code to install gas-piping and/or gas-fired appliances as provided under this Code.

(c) CITY - shall mean the territory within the corporate limits of the City of Mesquite, or the legally constituted governing body thereof, its agents and its officers.

(d) GAS FITTING OR GAS PIPING - means the installation, repair, replacement and/or relocation of pipes, appliances and other apparatus for distributing or utilizing a gas supply for illuminating or fuel purposes as defined in this Code and shall include the installation of wall heaters, floor furnaces, water heaters, stoves, and any other type of gas-burning appliance. This Code shall not cover nor shall it apply to the installation, inspection, maintenance, repair or replacement of any part of the distribution system of any gas distributing company furnishing gas service to the general public in the City of Mesquite, under a franchise granted by the City of Mesquite, or any work performed by such gas distributing company on any piping or connection up to and including the outlet connections of the service meter.

(e) OWNER - shall mean any person, firm or corporation, owning or controlling the building or property, including a duly authorized agent. Executors, administrators, guardians, conservators, or trustees may also be regarded as owners.

(f) PERSON - shall mean a human being, his heirs, executors, administrators or assigns, and where the context permits, it also includes a firm, partnership, association or corporation, its or their successors or assigns, or the agent of any of the aforesaid.

(g) PLUMBING CONTRACTOR - shall be any person who is licensed as a plumber in accordance with the provisions of the Laws of the State of Texas to install plumbing work or supervise plumbing as defined herein.

(h) REGISTERED - when used with the words "Plumbing Contractor" shall mean that the person or firm is registered with the Chief Plumbing Inspector; and that the Master Plumber is licensed in accordance with the State of Texas Plumbing License Law.

(i) SHALL - The word "shall" is mandatory.

Section 177

ADMINISTRATION AND ENFORCEMENT

The administration and enforcement of this Code is hereby assigned to and shall be the responsibility of the Division of Building Inspection, Plumbing Section, of the Department of Public Works of the City of Mesquite.

Section 178

DUTIES OF THE CHIEF PLUMBING INSPECTOR

The Chief Plumbing Inspector and his assistants are hereby authorized, empowered and directed to inspect all installations of gas piping, gas-fired appliances, fixtures and apparatus. The Chief Plumbing Inspector shall also receive all applications and collect all fees for permits for

the installation of gas-piping and gas-fired appliances and shall keep a record of such permits issued, inspections and reinspections made, and any other official work as may be required by the City Manager.

Section 179

GAS-FITTING PERMITS REQUIRED

(a) It shall be unlawful to install gas-piping and gas-fired appliances without first securing a permit therefor from the Chief Plumbing Inspector of the City of Mesquite except as otherwise provided in this Code.

(b) It shall be unlawful for any unauthorized person to install, alter, or repair any gas-piping installation or appliances for which a permit is required.

(c) In any case where work is begun for which a permit is required and without a permit being first secured therefor, or if installations are being made in violation of this Code, the Chief Plumbing Inspector is empowered to stop further work at once and order all persons engaged therein to stop and desist therefrom until a permit is secured and the work is made to comply with this Code.

Section 180

GAS-FITTING PERMITS NOT REQUIRED

Gas-fitting permits shall not be required for:

(a) installation, replacement, or repair of gas-fired appliances except those permanently located as a part of the structure

(b) removal of gas-piping from a building, structure, or portion thereof, which is being razed, provided such lines have been disconnected and terminated from the distribution system by a licensed plumber

(c) any work involved in setting up for display of gas-piping or gas-fired appliances when not connected to a gas distribution system

(d) work involved in the manufacture of gas-fired appliances or heaters such as repair, adjusting or testing of such appliances.

Section 181

APPLICATION FOR GAS-FITTING PERMITS

(a) An application for a gas-piping and/or an appliance installation permit, describing the work to be done, shall be made to the office of the Chief Plumbing Inspector by the authorized person who proposes to do the work.

(b) No permit shall be issued or be valid for the installation of any gas piping, which, if installed, causes a violation of the Building Code or Zoning Ordinance.

Section 182

GAS-FITTING PERMIT AND INSPECTION FEES

(a) Any person, firm or corporation granted a gas-fitting permit shall pay to the City of Mesquite an inspection fee according to the following schedule: One Dollar (\$1.00) for each fixture outlet and twenty-five cents (25¢) for each additional "fixture outlet".

(b) By the term "fixture outlet" as used for permit fee purposes, is meant any and all gas-fired fixtures which are permanently located such as gas-steam radiators, water heaters, recessed wall heaters, floor furnaces, gas-fired unit heaters, gas-fired boilers, incinerators, etc., and a gas service shall also be counted as a separate fixture unit.

(c) In addition to the above charges for fees, an additional fee of five (\$5.00) dollars shall be charged for each inspection made of plumbing work under this Code where more than two inspections of the rough-in work are required and where more than two inspections of the final work are required. The additional inspection fees provided for herein shall be paid prior to the time such inspections are to be made, it being the intention of this Section to provide for the paying of additional fees where more than two plumbing inspections are required before the approval of plumbing installations.

Section 183

LIMITATION OF PERMITS

Each specific permit issued by the Chief Plumbing Inspector under the provisions of this Code shall expire and become null and void, if the work authorized by such permit has not been started within six (6) months from the date of such permit.

Section 184

REVOCAION OF PERMITS

(a) The Chief Plumbing Inspector is hereby authorized to declare a permit null and void if there has been misrepresentation of facts or any violation of the provisions of this Code.

(b) It shall be unlawful for any person to lend, rent or transfer his gas-fitting or plumbing permit to install gas-fired appliances, or to permit a person without proper license to do the work or for any person to make use of any such permit which is not actually his own and any such permit obtained under these conditions is hereby declared null and void.

Section 185

WITHHOLDING ISSUANCE OF PERMITS

Upon failure on the part of any licensed plumber to correct any defect, error or deficiency in any work installed under the authority of a plumbing permit issued to him within ten calendar days after written notification thereof from the office of the Chief Plumbing Inspector, the Chief Plumbing Inspector shall, without further notice, stop the issuance of permits to such licensed plumber until such corrections have been made, inspected and approved. The failure of such licensed plumber to correct such defect, error or deficiency within ten days after written notification thereof from the office of the Chief Plumbing Inspector shall constitute a misdemeanor and, upon conviction in the Corporation Court, such licensed plumber shall be subject to a fine as provided herein, and each and every day that such violation shall be permitted to continue shall constitute a separate offense.

Section 186

INSPECTION, APPROVAL AND CONDEMNATION

Installations of gas-piping and gas-fired appliances consisting of either new work or alterations, additions or repairs shall be inspected to insure compliance with the requirements of this Code. Variances from the requirements of this Code shall be as provided by authorization of the Chief Plumbing Inspector.

Section 187

REQUESTS FOR INSPECTION AND TESTS

The Plumber shall give twenty-four (24) hours' notice, exclusive of Saturdays, Sundays and holidays, to the Chief Plumbing Inspector when installations are ready for inspection or test.

The Plumber shall make sure that the work will pass the inspection and test prescribed before giving the above notification.

If the work will not pass the required inspection and test, the Plumber shall make the necessary corrections after which a new request for inspection and/or test shall be made as above.

The Plumbing Inspector may require the removal of any plugs or caps on any tests to ascertain if pressure has reached all parts of the system.

Equipment and labor necessary for making the required tests and inspections shall be furnished by the Plumber.

Section 188

TESTS

When gas-piping installations are completed, the system shall be tested for tightness by means of either a spring or mercury gage. The test shall be to the entire satisfaction of the Plumbing Inspector. The piping shall be tight under a pressure of not less than fifteen (15) pounds on a spring gauge calibrated for not more than thirty (30) pounds per square inch or ten (10) inches of mercury column.

The Plumbing Inspector, after ascertaining that the installations and appliances comply with this Code, shall certify these facts to the Gas Company and upon request shall issue a Certificate of Compliance to the Plumber.

Section 189

COVERING THE WORK

No part of a gas-fitting installation shall be covered so that it is not readily accessible for inspection until it has been inspected, tested and approved as prescribed in this Code.

Section 190

REINSPECTION AND CONDEMNATION

(a) The Plumbing Inspector is hereby authorized to reinspect existing installations of gas piping and appliances when necessary in his opinion to ascertain if unsafe conditions exist. If, after inspection, in the opinion of the Plumbing Inspector, unsafe conditions do exist, the person, firm or corporation owning or having control of said installation shall be notified in writing and shall have the necessary changes or repairs made to place such installation in a safe condition according to the standards set out in this Code. If such conditions are not remedied or abated after proper notification, the Chief Plumbing Inspector shall have the authority to declare such installation hazardous and to disconnect or order disconnection of the service from the Gas Company mains. Thereafter, it shall be unlawful for any person to cause or permit reconnection of the gas-piping installation to the Gas Company's mains until the defects have been remedied as provided in this Code.

(b) In cases of emergency, when necessary for safety to persons or property, or when gas connections may interfere with the work of the Fire Department, the senior officer of the Fire Department at the site at the time shall have the authority to disconnect such gas service.

Section 191

APPEAL

The Plumbing Inspector's decision may be appealed as follows: When a Plumbing Inspector condemns a plumbing installation, any party who may be aggrieved by such action may, within ten (10) days after receiving written notice thereof, file with the Chief Plumbing Inspector a petition in writing, requesting a review of the Plumbing Inspector's decision. Upon receipt of such request, the Chief Plumbing Inspector shall personally determine the facts, and within a reasonable period thereafter he shall make a ruling in accordance with his findings. His ruling shall be final and binding upon all parties, provided, however, that appeal may be taken to the Board of Plumbers, as provided in this Code.

Section 192

TAGS AND SEALS

Tags and seals may be attached by the Plumbing Inspector to any gas-fitting installation or gas-fired appliance giving official notice concerning its use, and it shall be unlawful for any person other than a plumbing inspector to attach or remove, or to break, change, destroy, tear, mutilate, cover or otherwise deface or injure such official notice or seal posted by a Plumbing Inspector.

Section 193

GAS-FITTING DEFINITIONS

For the purposes of this Code, and in addition to the more general terms defined in Administrative Definitions of this Code, certain terms, phrases, words and their derivatives shall be construed as defined herein.

1. Appliance - a gas-burning device which utilizes gas fuel to produce light, heat, power, or refrigeration.
2. Branch Lines (or Branches) - those pipes which convey gas from a supply line to appliances.
3. Concealed Gas-Piping - piping which, when in place in the finished building, is hidden from view by the structure.
4. Curb Cock - a service cock which is placed at or near the curb, outside of the building.
5. Drop - any vertical pipe or nipple which conducts the gas downward.
6. Exposed Gas-Piping - piping which, when in place in the finished structure, is in view.
7. Gas Under Pressure - gas in piping or appliances which is under pressure imparted from the source of gas supply, usually by the Gas Company from outside the building.
8. House Piping - the system of piping within a building, either exposed or concealed, which conveys gas from the outlet of the service meter to appliances at various places throughout the building. Any piping underground which contains measured gas is also considered house piping.
9. Lighting Fixture - an appliance which supplies gas to one or more lighting burners.
10. Line Cock - a shut-off installed in the house piping system to control the supply of gas to any section of the piping system.
11. Meter Connection - any form of pipe, combination of fittings, or any device used to connect the service meter to the service extension.
12. Outlet - a threaded connection in a piping system to which a gas-fired appliance is or may be attached.
13. Riser - any vertical pipe which conducts the gas upward.
14. Service Cock - any shut-off on a service extension between the main and the meter cock.
15. Service Extension - all of the pipe and fittings which are installed inside of the premises between the end of the Gas Company's service and the meter installation and which contains unmeasured gas.
16. Service Meter (or meter) - means the instrument installed on the customer's premises by the Gas Company for measuring the gas supplied to the customer.

17. Street Main (or main) - a portion of the system used for distributing gas, generally located entirely outside of the customer's premises, and which is designated to supply gas to the service pipes of one or more customers.

18. Unmeasured Gas (or unmetered gas) - gas which has not passed through a customer's service meter.

Division 2 Basic Installation Regulations

Section 194

GENERAL

(a) Piping shall be constructed and installed in a manner which produces a durable, substantial and gas-tight system and shall be either screwed or welded joints except as provided in the paragraph on Materials for Gas Pipe and Fittings.

(b) Welding of gas-piping shall be done only by welders certified by an approved testing laboratory.

(c) Piping shall be of a size and so installed as to provide a supply of gas sufficient to meet the maximum demand without undue loss of pressure between the street service and the appliance or appliances.

(d) Cutting of wood girders, beams or joists shall be limited to cuts and bore holes not deeper than one-fifth of the beam depth below its top and located not farther from the beam end than three times the beam depth. Cuts in excess of the above or bore holes with a diameter of more than two inches shall not be permitted without special provisions for framing the beams and such provisions shall be approved by the Building Inspector.

(e) The system shall be left by the gas fitter in a safe and satisfactory condition for use by an unskilled person.

(f) All underground piping and fittings shall be mill wrapped or asphalt covered and wrapped a minimum of six inches above ground.

(g) All gas service lines shall enter a building above foundation.

Section 195

WORK WITH GAS OFF

Gas-fitting, appliance installation and repair work shall be done with the gas turned off except as provided in the following Section.

Section 196

WORKING ON PIPES FILLED WITH GAS

Work which involves removal of an appliance or unscrewing of a cap, plug or pipe which will permit the escape of gas shall never be done without shutting off the gas, except in emergency cases where interruption of the service is impracticable.

Section 197

ONE MAN SHALL NOT WORK ALONE

One man shall not work alone in any situation where the nature of the work is such as to expose him to danger of asphyxiation.

Section 198

USE OF MATCHES, CANDLES AND FLAMES

No matches, candles or flame or other sources of ignition shall be used by a Plumber or his helper when working on meters, piping or appliances filled with gas.

Section 200

SAFETY LIGHTS TO BE PROVIDED

Artificial lighting for use in connection with searching for leaks or work in gassy atmospheres shall be restricted to approved electric hand flash lights or other electric lights controlled only by switches located outside the gassy area.

Section 201

CONFORMANCE TO PLANS

The installation of gas-piping and/or appliances, within or on buildings or premises, shall be done in accordance with plans and specifications submitted to and approved by the Chief Plumbing Inspector when so requested.

Section 202

INTERCONNECTION OF PIPING INSTALLATIONS

Piping systems which are supplied by separate meters shall not be interconnected.

Section 203

SERVICE METERS

Where one or more service meters are required for any building or premises, all such meters shall be grouped in one location as determined by the Gas Company.

Section 204

MATERIALS FOR GAS PIPE AND FITTINGS

Materials for gas pipes or tubing, where laid underneath floors or slabs which are laid on fill, shall be asphalt covered and wrapped black iron or steel pipe with malleable iron fittings. All other gas-piping installations may be of black steel or wrought iron with malleable iron fittings.

Copper or other approved metal tubing with flared joints or flared compression fittings shall be used only for the connecting of appliances, and such tubing shall be of the minimum practicable length. Extending tubing from one room to another is prohibited.

No second-hand pipe shall be used except when it is in perfect condition and approved by the Plumbing Inspector.

Section 205
SUPPORTING PIPE

Piping shall be installed so that it is not subjected to any unnecessary strain. All horizontal branches of piping shall be supported by perforated iron hangers or any other type of hanger approved by the Plumbing Inspector and located at intervals not exceeding ten (10) feet.

Section 206
RELATION TO ELECTRIC WIRING

The installation of piping in relation to electric wiring shall conform to the requirements of the City of Mesquite Electrical Code.

Section 207
GAS ENGINES OR OTHER LARGE APPLIANCES

(a) The supply pipe to a gas engine or other appliance of large consumption or high momentary demand, shall be carried back independent of other piping far enough to insure that the pressure at other appliances shall not be disturbed when all are in operation.

(b) The exhaust pipe of a gas engine shall be run to the outside air, preferably above the roof, and shall terminate at least fifteen (15) feet from any window or door opening.

Section 208
CLOSING OUTLETS

Outlets for appliances shall be closed gas-tight with a threaded iron plug or cap or by any approved method and left closed. When an appliance is removed from an outlet, it shall be re-closed gas-tight with a threaded iron plug or cap.

Section 209
APPLIANCES

(a) No appliance or device shall be installed unless it has been approved by the American Gas Association Testing Laboratories, Underwriters' Laboratories or other approved laboratory.

(b) Gas appliances shall be located so that they will be readily accessible for operation, repair and adjustment.

(c) No appliance shall be installed in a bathroom or in any room designed for sleeping purposes, or in a private garage or public rest room, nor shall an appliance be located in a closet less than fifty (50) square feet in floor area, if such closet has a door opening directly into such rooms or spaces unless approved by the Plumbing Inspector.

Section 210
APPLIANCE CONNECTIONS

(a) Gas supply to pilot lights on all appliances shall be on the live side of the gas cock.

(b) Appliances which are necessarily portable or which may be moved from place to place or which require a vibration joint when connected with non-rigid tubing shall be provided with a stop-cock at the termination of the rigid gas supply line at the wall or floor.

(c) Gas supply outlet shall not be less than one-half (1/2) inch through the floor or wall.

Section 211

ELECTRIC IGNITION AND CONTROL DEVICES

Devices employing an electrical current to ignite or control a gas supply shall not be used if of such a character that failure of the electric current might result in the escape of unburned gas, or in failure to reduce the supply of gas which it is designed to reduce, unless other means are provided to prevent the development of excessive temperatures, pressures, or the escape of gas.

Section 212

VENTILATION

Appliances shall not be installed in any manner in which they will not receive sufficient air for combustion.

Section 213

CONVENIENT SHUT-OFF DURING LIGHTING

A gas cock shall be accessible and within convenient reaching distance when lighting any burner.

Section 214

AIR UNDER PRESSURE

When air or oxygen under pressure is used in connection with a gas supply, means shall be provided to prevent the air or oxygen from backing up into the gas piping.

Section 215

WATER HEATERS

(a) Appliance men may install water heaters as provided in this Code only when the water and gas pipes have been previously roughed-in and tested by a licensed plumber.

(b) No water heater shall be installed (1) in a bathroom or sleeping room; (2) in a closed system of water piping unless a water pressure relief valve is provided.

(c) When a water heater is enclosed and elevated so that the top of the heater extends into an attic space, the top of the heater shall be enclosed by means of a tight bulkhead of the same cross-sectional areas as the water heater closet, which closet shall have not less than six (6) inches clearance from the top and sides of the water heater. The access door to the gas burner shall not be higher than five (5) feet, six (6) inches above the floor.

(d) When forced attic ventilation is used, adequate provision shall be made against the possibility of back draft being induced through a water heater when such attic ventilation is in operation.

Section 216

GAS-FIRED FLOOR FURNACES

The bottoms of floor furnaces shall have at least six (6) inches clearance from the ground. Where the ground must be excavated to provide this clearance, the excavation shall extend at least twelve (12) inches beyond the furnace on all sides and a water-tight corrosion resistant metal pan, or a waterproof concrete pit shall be provided under the furnace, and shall extend not less than four (4) inches above the ground. Provision shall be made for proper air supply for combustion.

Section 217

GAS-FIRED BOILERS AND FURNACES

The following safety devices shall be provided on each gas-fired hot water or steam boiler or furnace, both high and low pressure:

(a) A flame conductivity or other approved safety pilot light constructed and adjusted so that no gas can flow through the main burner unless the pilot light is burning, except when such boiler or furnace is under constant attendance and except when such boiler or furnace is a factory assembled unit which is equipped with the manufacturer's standard safety pilot and the assembled unit bears the label of the American Gas Association.

(b) A safety device which limits steam pressure or water temperature or air temperature in the case of a warm-air furnace equipped with a blower.

(c) A safety device which automatically prevents firing of the boiler when the water level in the boiler is below a predetermined point. In plants where the boiler or furnace is constantly under attendance, a device which sounds an alarm when the water level in the boiler or furnace drops below a predetermined point may be used in lieu of such safety device.

(d) Safety devices operated electrically shall not depend upon the closing of the circuit to shut off the main gas supply.

(e) An approved gas pressure regulator shall be installed in the gas line leading to the appliance unless the burner is equipped with such regulator as an integral part of the burner.

Section 218

FLUE CONNECTIONS REQUIRED

The following types of gas-fired appliances shall be connected to an effective flue extending to the outer air:

(a) Domestic appliances with an input rating in excess of 5,000 BTU per hour, except domestic gas ranges.

(b) Automatically controlled appliances with input rating in excess of 5,000 BTU per hour, except automatic instantaneous water heaters of the single faucet type, where the single faucet is attached to and made a part of the appliance.

(c) Automatically controlled appliances with input rating less than 5,000 BTU per hour, unless equipped with an automatic device to prevent the escape of unburned gas at the main burner or burners.

The term "automatically controlled appliance" used in paragraphs (b) and (c) refers to appliances to which the gas supply is automatically turned on and off in accordance with the demand for heat, but does not include appliances equipped with devices or controls governing the supply of gas to the main burner or burners which cannot automatically reduce the gas supply below thirty per cent of the input rating.

(d) Each of several appliances, except domestic gas ranges, installed in the same room, which in the aggregate have an input rating as great as 30 BTU per hour per cubic foot of room content.

(e) Water heaters.

(f) Space heaters in sleeping quarters available for public hire or rental.

(g) House heating steam and hot water boilers and warm-air furnaces including floor furnaces.

Section 219

FLUE CONNECTION DETAILS

Flue connection appliances except incinerators shall be equipped with an effective draft hood which shall be either a part of the appliance or attached to the flue collar as near to the appliance as possible.

Flue connections shall not be smaller than the size of the vent collar of the appliance.

Flue connections and vent pipes shall have a pitch or rise of not less than one-quarter (1/4) inch per foot where possible toward the flue or chimney.

No damper shall be placed in any flue connection which is equipped with a draft hood.

Section 220

TYPES OF FLUES AND VENTS

Where gas appliances are required to be vented by this Code, they shall be connected to one of the following types of flues or vents:

(a) Lined chimneys of masonry or reinforced concrete, and metal smokestacks.

(b) Any vent piping approved by the National Board of Fire Underwriters, and made of non-combustible, corrosion-resistant material of adequate strength and heat insulating value, and having bell and spigot joints,

or other approved joints. Type B vent piping shall be used only with American Gas Association approved gas appliances which are not required to be vented to Type A flues.

Vent pipes shall be of sheet copper of not less than 24 B. & S. Gage, or of galvanized iron of not less than 20 U. S. Gage, or of other approved corrosion-resistant material. Such vent pipes shall not pass through any attic or concealed space, nor through any floor or partitions, but may extend directly from the space in which the appliance is located through a roof or exterior wall to the open air.

Where vent piping other than approved Type B vent piping passes through a combustible wall, partition or roof, the point of passage shall be protected by a double metal ventilated thimble not less than twice the diameter of the vent pipe with free circulation of air through the thimble.

Section 221
PIPE SIZES

Each gas-piping system shall be designed so that the system of piping as a whole, and in each of its branches, shall provide gas at peak demand for all appliances to be connected to such system with a pressure drop of not more than 0.3 inches.

(a) SPECIAL SIZE REQUIREMENTS. The minimum size and maximum length of gas piping shall be determined as set out in either Table 14 or 15 depending on the information available; however, for the following appliances, the piping shall not be smaller than:

- Kitchen range, 3/4 inch
- Room or space heater, 1/2 inch
- Circulating water heater, 1/2 inch
- Instantaneous water heater, 3/4 inch

(b) Minimum size where the number of outlets and maximum lengths are known:

Table 14

Maximum Length of Pipe in Feet	Diameter of Pipe in Inches				
	1/2	3/4	1	1 1/4	1 1/2
	Number of Outlets				
10	1	3	6	14	16
20	1	3	5	12	14
30		2	4	10	14
40		1	4	9	12
50			4	8	11
60			3	7	10
70			3	7	10
80			2	7	10
90				7	10
100				7	10

(c) Minimum size where the demand and maximum length are known:

Table 15

Length of pipe in feet	Diameter of Pipe in Inches										
	1/2	3/4	1	1 1/4	1 1/2	2	3	4	6	8	
	Demand in Cubic Feet Per Hour										
15	76	172	345	750	1220	2480	6500	13880	38700	79000	
30	55	120	241	535	850	1780	4700	9700	27370	55850	
45	44	99	199	435	700	1475	3900	7900	23350	45600	
60	38	86	173	380	610	1290	3450	6800	19330	39500	
75		77	155	345	545	1120	3000	6000	17310	35300	
90		70	141	310	490	1000	2700	5500	15800	32250	
105		65	131	285	450	920	2450	5100	14620	29850	
120			120	270	420	860	2300	4800	13680	27920	
150			109	242	380	780	2090	4350	12240	25000	
180			100	225	350	720	1950	4000	11160	22800	
210			92	205	320	660	1780	3700	10330	21100	
240				190	300	620	1680	3490	9600	19740	
270				178	285	580	1580	3250	9000	18610	
300				170	270	545	1490	3000	8500	17660	
450				140	226	450	1230	2500	7000	14420	
600				119	192	390	1030	2130	6000	12480	

Such demand shall be determined in cubic feet per hour from the manufacturers' BTU input rating of the appliances whenever possible and, in case the rating is not known, the capacity given in the following table shall be used.

APPROXIMATE INPUT RATINGS OF COMMON GAS APPLIANCES - Table 16

Appliance	Input Rtg. in thsd. BTU per hr.	Input Rtg. in Cu. Ft. per hr. (1,000 BTU gas)
Domestic range (4 burner top)	62.5	62.5
Domestic range with oven (six burner top)	107.5	107.5
Domestic hot plates or laundry stove (per burner)	12.5	12.5
Automatic storage water heater		
Slow Recovery	2.5-10	2.5-10
Quick Recovery	15-70	15-70
Instantaneous water heaters (per each 2 gals. per minute capacity)	75	75
Gas boilers	65-5000	65-5000
Gas steam radiators (per section)	2	2
Domestic Room Heaters		
Per single radiant	2	2
Per double radiant	4	4
Conversion burners	80-400	80-400
Unit Heaters	50-900	50-900
Refrigerators	1.9-3.9	1.9-3.9
Warm air furnaces	40-500	40-500
Floor furnaces	15-80	15-80
Domestic circulating water heater	25-37.5	25-37.5

(d) For gas engines, pipe sizes and maximum length of run to meter shall be as follows:

Table 17

H.P. of engine	Diameter of Pipe in Inches					3"
	1"	1 1/4"	1 1/2"	2"	2 1/2"	
Length of Run in Feet						
5	100	200				
10		100	250			
15		50	150			
20			50	300		
30			50	150	600	
40				50	150	600
50					50	300

ARTICLE XX. IN GENERAL

Section 222

VIOLATION AND PENALTY

Any person, firm or corporation violating any of the terms or provisions of this Code, or who may aid or assist in such violation shall be guilty of a misdemeanor, and upon conviction in Corporation Court shall be fined in any sum not to exceed Two Hundred (\$200.00) Dollars, and each and every day of continuance of such violation shall constitute a distinct and separate offense.

Section 223

VALIDITY

Should any provision, Section or subsection of any portion thereof of this Ordinance be inconsistent with any law or any rule or regulation adopted or prescribed by the Texas State Board of Plumbing Examiners or be declared by a court of competent jurisdiction to be void or unenforceable, such holding or decision shall not be construed to operate as invalidating any other provision, section or subsection of this Ordinance. It is further provided that if any provision contained in this Code should conflict with any state law affecting examinations, registration and licensing of plumbers, said provisions shall be inoperative and of no effect insofar as same conflicts with said law.

00128

Section 224. EMERGENCY CLAUSE: The fact that the present Plumbing Code and Gas Code of the City of Mesquite is inadequate and obsolete and needs to be revised and amended creates an urgency and emergency for the protection of public health, safety and welfare and requires that this ordinance shall take effect immediately following and after its passage as the Charter and Law in such cases provides and it is accordingly so ordained.

DULY PASSED BY THE CITY COUNCIL of the City of Mesquite, Texas, on the 7th day of May, 1962.

APPROVED:

Mayor

ATTEST:

City Secretary

APPROVED AS TO FORM:

Attorney