

Chapter 19

PLUMBING CODE

Articles:

1. **General Provisions**
2. **Administration and Enforcement**
3. **Qualification of Performers of Work Under Plumbing Code**
4. **Installation Requirements**
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Article 1. General Provisions

Sections:

19-1.1 Title and purpose.

19-1.2 Scope.

19-1.3 Existing installations.

Sec. 19-1.1 Title and purpose.

- (a) Title. This chapter shall be known as the "plumbing code," may be cited as such, and will be referred to herein as "this code."
- (b) Purpose. The purpose of this code is to provide for the protection of the public health and safety by establishing minimum regulations for the design, installation, alteration or repair of plumbing and drainage systems and the inspection thereof.

(Added by Ord. 99-73)

Sec. 19-1.2 Scope.

The provisions of this code shall apply to all new construction, relocated buildings, and to any alterations, repairs or reconstruction within the property lines of the premises, except as provided for otherwise in this code.

(Added by Ord. 99-73)

Sec. 19-1.3 Existing installations.

- (a) Any plumbing system lawfully installed prior to February 14, 2000* may have its existing use, maintenance or repair continued if the use, maintenance or repair is in accordance with the original design and location and no hazard to the public health, safety or welfare has been created by such system; provided, that showerheads, kitchen faucets, lavatory faucets, toilets, and urinals shall conform to the water conservation requirements in Chapter 30, Article 4.
- (b) The owner or the owner's designated agent shall be responsible for the maintenance of the plumbing system in a safe and sanitary condition.

(Added by Ord. 99-73)

***Editor's Note:** "February 14, 2000" is substituted for "the effective date of this code."

Article 2. Administration and Enforcement

Sections:

- 19-2.1 Authority.**
- 19-2.2 Duties of the administrative authority.**
- 19-2.3 Right of entry.**
- 19-2.4 Dangerous and insanitary construction.**
- 19-2.5 Permit required.**
- 19-2.6 Inspection--Compliance.**
- 19-2.7 Notification.**
- 19-2.8 Liability.**
- 19-2.9 Unconstitutionality.**

Sec. 19-2.1 Authority.

- (a) Administrative Authority. Whenever the term "administrative authority" is used in this code, it shall be construed to mean the director or the director's authorized representative.
- (b) Assistants. Whenever the term "assistants" is used in this code, it shall be construed to mean the authorized representatives of the administrative authority.

(Added by Ord. 99-73)

Sec. 19-2.2 Duties of the administrative authority.

The administrative authority shall maintain public office hours necessary to efficiently administer the provisions of this code and amendments thereto and shall perform the following duties:

- (a) Require submission of, examine and check plans and specifications, drawings, descriptions and/or diagrams necessary to show clearly the character, kind and extent of work covered by applications for a permit; and upon approval thereof, issue the permit applied for;
- (b) Administer and enforce the provisions of this code in a manner consistent with the intent thereof, and inspect all plumbing and drainage work authorized by any permit to assure compliance with provisions of this code or amendments thereto, approving or condemning such work in whole or in part as conditions require;
- (c) Issue, upon request, a notice of plumbing inspection for any work approved;
- (d) Condemn and reject all work done or being done, or materials used or being used, which do not in all respects comply with the provisions of this code and amendments thereto;
- (e) Order changes in workmanship and/or materials essential to obtain compliance with all provisions of this code;
- (f) Investigate any construction or work regulated by this code and issue such notices and orders as provided in Section 19-2.4;
- (g) Keep a complete record of all the essential transactions of the department.

(Added by Ord. 99-73)

Sec. 19-2.3 Right of entry.

Upon presentation of proper credentials, the administrative authority may enter at reasonable times any building or premises in the City and County of Honolulu to perform any duty imposed upon the administrative authority by this code; provided, that such entry shall be made in such manner as to cause the least possible inconvenience to the persons in possession; and provided further, that an order of a court authorizing such entry shall be obtained in the event such entry is denied or resisted. (Added by Ord. 99-73)

Sec. 19-2.4 Dangerous and insanitary construction.

- (a) Any portion of a plumbing system found by the administrative authority to be insanitary as defined herein is declared to be a nuisance.
- (b) Whenever it is brought to the attention of the department having jurisdiction that any insanitary conditions exist or that any construction or work regulated by this code is dangerous, unsafe, insanitary, a nuisance or a menace to life, health or property or otherwise in violation of this code, the department may request an investigation by the administrative authority, who, upon determining such information to be fact, shall order any person, firm or corporation using or maintaining any such construction or work in such condition or responsible for the use or maintenance thereof to discontinue the use or maintenance thereof or to repair, alter, change, remove or demolish same as the administrative authority may consider necessary for the

proper protection of life, health or property; and in the case of any gas piping or gas appliance, the department may order any person, firm or corporation supplying gas to such piping or appliance to discontinue supplying gas thereto until such piping or appliance is made safe to life, health or property. Every such order shall be in writing, addressed to the owner, agent or person responsible for the premises in which such condition exists, and shall specify the date or time for compliance with such order.

- (c) Refusal, failure or neglect to comply with such notice or order shall be considered a violation of this code.
- (d) When any plumbing system is maintained in violation of this code and in violation of any notice issued pursuant to the provisions of this section, or where a nuisance exists in any building or on a lot on which a building is situated, the administrative authority may institute any appropriate action or proceeding in any court of competent jurisdiction to prevent, restrain, correct or abate the violation or nuisance.

(Added by Ord. 99-73)

Sec. 19-2.5 Permit required.

A building permit is required to perform work covered by this code as provided in Chapter 18. (Added by Ord. 99-73)

Sec. 19-2.6 Inspection—Compliance.

All plumbing and drainage systems shall be inspected by the administrative authority to ensure compliance with the requirements of this code. (Added by Ord. 99-73)

Sec. 19-2.7 Notification.

- (a) It shall be the duty of the person doing the work authorized by the permit to notify the administrative authority, orally or in writing, that such work is ready for inspection. Such notification shall be given not less than 48 hours before the work is to be inspected.
- (b) It shall be the duty of the person doing the work authorized by the permit to ensure that the work will withstand the tests prescribed elsewhere in this code, before giving the above notification.

(Added by Ord. 99-73)

Sec. 19-2.8 Liability.

The administrative authority, acting in good faith and without malice in the discharge of official duties, shall not be personally liable; and the administrative authority is relieved from all personal liability for any damage that may accrue to persons or property as a result of any act required or by reason of any act or omission in the discharge of official duties. Any suit brought against the administrative authority because of such act or omission performed in the enforcement of any provision of this code shall be defended by the corporation counsel or its authorized representative until final termination of the proceedings. (Added by Ord. 99-73)

Sec. 19-2.9 Unconstitutionality.

If any section, subsection, sentence, clause or phrase of this chapter is, for any reason, held to be unconstitutional, such holding shall not affect the validity of the remaining portions of this chapter. The legislative body declares that it would have passed this chapter, and each section, subsection, subdivision, paragraph, subparagraph, sentence, clause or phrase thereof, irrespective of the fact that any one or more of such provisions be declared unconstitutional. (Added by Ord. 99-73)

**Article 3. Qualification of Performers of Work
Under Plumbing Code**

Sections:

19-3.1 General provisions.

Sec. 19-3.1 General provisions.

- (a) It is unlawful for any person to perform any work covered by this code in violation of those provisions of the Hawaii Revised Statutes relating to the licensing of electricians and plumbers.
- (b) Unlicensed persons may perform work covered by this code; provided, that such work performance is not in

violation of HRS Chapter 444.
(Added by Ord. 99-73)

Article 4. Installation Requirements

Sections:

19-4.1 Uniform Plumbing Code.

Sec. 19-4.1 Uniform Plumbing Code.

The Uniform Plumbing Code, 1997 Edition, as copyrighted and published by the International Association of Plumbing and Mechanical Officials, 20001 Walnut Drive South, Walnut, California 91789-2825, including its appendices, is adopted by reference and made a part of this chapter, subject to the amendments hereinafter set forth, as the standard for plumbing work covered by this code.

- (1) Amending Section 101.3. The first paragraph of Section 101.3 is amended to read:

Plans and specifications shall be required prior to issuance of a building permit to perform work covered by this code as provided in Chapter 18, Revised Ordinances of Honolulu 1990, as amended.

- (2) Amending Section 101.4.1.3, Existing Construction. Section 101.4.1.3 is amended to read:

See Article 1, Sec. 19-1.3.

- (3) Amending Section 101.5.3, Existing Installation. Section 101.5.3 is amended to read:

See Article 1, Sec. 19-1.3.

- (4) Amending Section 102.0, Organization and Enforcement. Section 102.0 is amended by adding:

See also Article 2, Administration and Enforcement.

- (5) Adding Section 102.2.7, Modifications. Section 102.2.7 is added to read:

102.2.7 Modifications.

Modifications: Where there are practical difficulties involved in carrying out the provisions of this code, the administrative authority shall have the right to vary or modify such provisions upon application by the owner or the owner's representative, provided that the spirit and intent of the law are observed and that the public health, safety and welfare are assured. The details of action granting modifications shall be recorded and entered in the files of the department.

- (6) Amending Section 102.3, Violations and Penalties. Section 102.3 is amended by deleting Sections 102.3.1 and 102.3.2 and inserting:

For violation and penalty provisions, see Article 6.

- (7) Amending Section 103.1.1, Permits Required. Section 103.1.1 is amended to read:

A building permit is required to perform work covered by this code as provided in Chapter 18, Revised Ordinances of Honolulu 1990, as amended.

- (8) Deleting Sections 103.1.2 through 103.4.5.3.

Sections 103.1.2 through 103.4.5.3 are deleted.

- (9) Amending Section 103.5.4, Inspection Requests. Section 103.5.4 is amended to read:

Inspection Requests. It shall be the duty of the person doing the work authorized by the permit to notify the administrative authority, orally or in writing, that such work is ready for inspection. Such notification shall be given not less than 48 hours before the work is to be inspected. It shall be the duty of the person doing the work authorized by the permit to make sure that the work will stand the tests prescribed elsewhere in this code, before giving the above notification.

- (10) Deleting Sections 103.5.4.1 and 103.5.4.2.

Sections 103.5.4.1 and 103.5.4.2 are deleted.

- (11) Deleting Table 1-1, Plumbing Permit Fees.

Table 1-1 is deleted.

- (12) Adding Section 104. Section 104 is added to read:

Section 104. Appeals and Petitions.

Any appeal from the decision of the administrative authority in the administration of the City and County of Honolulu plumbing code involving any denial of the use of new or alternate materials, types of construction, equipment, fixtures, devices, or appliances, or any petition for varying the application of the plumbing code may be submitted to the building board of appeals for hearing and determination as specified in Section 105, Uniform Building Code, as amended, pursuant to Sec. 16-1.1, Revised Ordinances of Honolulu 1990, as amended.

- (13) Amending Section 202.0, Definition of Terms. The following definitions are amended or added:

- (i) Building Drain, is amended by deleting "two (2) feet (.6m)" and inserting in lieu thereof "five feet (1.5m)."
- (ii) Add "Control Valve (Water) - A control valve is any type of valve which can change the flow rate of water, which includes compression stop valves."
- (iii) Add "Health Officer - Health officer shall mean the director of health of the department of health, State of Hawaii, or the director's authorized agent."
- (iv) Add "Single-stack System - A single-stack system is a specially designed plumbing system wherein a common stack serves as a drainage pipe as well as a vent pipe."

- (14) Adding Section 301.3. Section 301.3 is added to read:

Section 301.3 International Plumbing Code. The 1997 edition of the International Plumbing Code (IPC) may be used in lieu of the Uniform Plumbing Code when approved by the administrative authority. A written request by a Hawaii licensed mechanical engineer with the concurrence of the building or project owner must be made to the administrative authority. The details of this approval shall be recorded and entered in the files of the department. Plans submitted shall be stamped by the Hawaii licensed mechanical engineer. This section shall apply only to a new building or project and shall not be applied in conjunction with an existing building. Provisions of the Uniform Plumbing Code and the International Plumbing Code shall not be combined or interchanged unless approved by the administrative authority. Plans submitted shall clearly state on the plumbing and/or mechanical sheets that the International Plumbing Code was used as the basis of design.

- (15) Adding Section 307.3. Section 307.3 is added to read:

307.3 Industrial Waste Discharge Permits. All sanitary sewer systems connected to the city's wastewater collection system shall comply with the requirements of ROH Chapter 14, Public Works Infrastructure Requirements Including Fees and Services, Section 14-1.9 Use of Public Sewers—Restrictions. An industrial wastewater discharge permit may be required by the Department of Environmental Services Regulatory Control Branch.

- (16) Amending Section 311.4. Section 311.4 is amended by deleting the last sentence:

Also, single stack drainage and venting systems, with unvented branch lines are prohibited.

- (17) Deleting Section 311.6. Section 311.6 is deleted.

- (18) Amending Section 313.2. Section 313.2 is amended by changing the second sentence to read:

No piping shall be directly embedded in concrete or masonry unless provisions are made to protect the piping from damage resulting from expansion, contraction and structural settlement.

- (19) Amending Section 313.4. Section 313.4 is amended to read:

313.4 No building sewer or other drainage piping or part thereof, constructed of materials other than those approved for use under or within a building, shall be installed under or within five (5) feet (1.5m) of any building or structure, or less than one (1) foot (.3m) below the surface of the ground or as approved by the administrative authority.

- (20) Deleting Section 314.8.

Section 314.8 is deleted. (See Table 3-2, which requires only one support within eighteen inches of the joint.)

- (21) Adding Section 314.9. Section 314.9 is added to read:

314.9 Seismic Supports. Where earthquake loads are applicable in accordance with the building code, plumbing piping supports shall be designed and installed for the seismic forces in accordance with the building code.

- (22) Deleting Sections 318 and 319.

Sections 318 and 319 are deleted. (The requirements of Section 318 are covered in DOH Chapter 12, Food Establishment Sanitation 11-12-21.)

- (23) Amending Section 402.1. Section 402.1 is amended by adding to the end of the sentence "but shall not exceed the requirements of Section 402.3."

- (24) Deleting Section 402.2. Section 402.2 is deleted.

- (25) Adding Section 402.3. Section 402.3 is added to read:

Section 402.3. Water Conservation.

402.3.1 Water supply faucets or valves shall be provided with approved flow control devices which limit flow to a maximum three gallons per minute; provided that shower heads and kitchen faucets shall be provided with approved flow control devices which limit flow to a maximum of 2.5 gallons per minute at 80 psi and lavatory faucets shall be provided with such flow control

devices which limit flow to a maximum of 2.5 gallons per minute at 80 psi.

Exceptions:

- (1) Hose bibbs or valves not used for a designated fixture or equipment.
- (2) Hose bibbs, faucets, or valves serving fixed demand, timing or water level control appliances, equipment or holding structures such as pools, automatic washers and other similar equipment.
- (3) Emergency showers.

402.3.2 Tank-type water closets and flushometer valve toilets shall have volume limiting devices or methods which will limit the discharge to 1.6 gallons per flush and urinals shall have volume limiting devices or methods which will limit the discharge to 1 gallon per flush. When a satisfactory performance of the water closet or urinal cannot be obtained with 1.6 gallons or less per flush, or 1 gallon or less per flush, respectively, the administrative authority may approve a larger discharge if hardship circumstances exist. For those places where toilets are heavily used by the public, as determined by the administrative authority, including but not limited to arenas, airports, shopping centers and malls, auditoriums, theaters, convention halls, and the public areas of hotels, flushometer toilets with blowout action may be used and need not comply with the 1.6 gallons per flush requirement herein.

402.3.3 Any new installation using potable water for cooling equipment at a rate exceeding one gallon per minute, or operating more than 10 hours in a twenty-four-hour period, shall be designed to recirculate or reuse the cooling water.

402.3.4 Any new decorative water feature using potable water shall be designed to recirculate the water used for the feature.

(26) Deleting Section 412.2. Section 412.2 Location of Floor Drains is deleted.

(27) Deleting Sections 413.0 through 413.7.

Sections 413.0 through 413.7 are deleted. Table 4-1 may be used as a guide only. See department of health Chapter 11, Sanitation, Paragraph 11-11-9 Minimum sanitary facilities for assembly, school, dorms, restaurant and liquor dispenser type occupancies. See state department of labor and industrial relations, Division of Occupational Safety and Health, Chapter 67 Sanitation, paragraph 12-76-4, Toilet facilities and lavatories for the required toilet facilities for employees. (See also UBC amendments Section 303.5 which requires Group A Occupancy (assembly) area to have two female water closets for every male water closet.)

(28) Amending Section 420.0. Section 420.0 is amended by adding:

Exception: Tub-mounted hand-held shower heads do not require an anti-scald valve.

(29) Amending Section 501.0. Section 501.0 is amended by adding a second paragraph to read:

Provisions in NFPA (National Fire Protection Association) Standard No. 211-1996, Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances, and Part 7, Venting of Equipment, in the National Fuel Gas Code, NFPA 54-1996, may be used in lieu of provisions in this chapter covering the same subject and as guidelines for design, construction and workmanship.

(30) Deleting Section 503.0. Section 503.0 is deleted.

(31) Adding Section 505.4. Section 505.4 is added to read:

505.4 A vacuum relief valve, dip tube with perforated inlet or an approved method shall be provided to prevent siphoning in any water heater tank or hot water boiler tank.

- (32) Adding Section 506.3. Section 506.3 is added to read:

506.3 A vacuum relief valve, dip tube with perforated inlet or an approved method shall be provided to prevent siphoning in any water heater tank or hot water boiler tank.

- (33) Amending Section 507.3.1. Section 507.3.1 is amended by adding to the end thereof:

The upper combustion air duct shall extend horizontally or upwards to the outside of the enclosure.

- (34) Amending Section 507.3.3. Section 507.3.3 is amended by changing the first word "Openings" to "Ducts."

- (35) Amending Section 507.3.5. Section 507.3.5 is amended by changing the first word "Openings" to "Ducts."

- (36) Amending Section 510.1. Section 510.1 is amended by adding an exception note at the end thereof to read:

Exception:

- (1) Water heaters may be installed at floor level in carports having 100% opening on one side and 50% net opening on another side or the equivalent of such openings on two or more sides, provided the adjacent ground level is at or below the floor level of the carport.
- (2) Fuel burning water heaters having sealed combustion chambers may be installed at floor level.
- (3) Electric water heaters in garages may be installed at floor level.

- (37) Amending Section 510.5. Section 510.5 is amended by adding:

Oahu is in Seismic zone 2A.

- (38) Amending Section 511.2. Section 511.2 is amended by changing the first sentence to read:

Every attic, roof, mezzanine, or platform more than 16 feet (4.9 meters) above the ground or floor level shall be accessible by a stairway or ladder permanently fastened to the building.

- (39) Amending Section 511.4. Section 511.4 is amended by deleting the second and third sentences.

- (40) Adding Sections 512.9 and 512.10. Sections 512.9 and 512.10 are added to read:

512.9 Listed gas fired water heaters need not be provided with a vent to the exterior when installed in an open parking garage or carport under the following conditions:

- (1) Such a garage shall comply with the openings provisions of the Building Code for open parking garages or carports.
- (2) Floor mounted heaters shall be installed in the garage so that the bottom of the combustion chamber is at least eighteen inches above the floor and outside grade level.
- (3) Heaters shall be protected against mechanical damage as provided in Section 510.3.
- (4) An acceptable vent cap shall be provided unless not required by the heater's listing or the manufacturer's instructions.
- (5) When location of the heater may result in unsatisfactory dispersions of combustion products, venting by means of a mechanical draft system to the exterior wall line or to other approved point of termination shall be provided.
- (6) Installation of heaters under these provisions shall be approved by the administrative authority and the serving gas supplier.

512.10 Listed single and two-family gas fired water heaters rated at less than 55,000 Btuhs need not be provided with a vent extended through the roof of the building or enclosure when installed outside of the exterior walls of the building unenclosed or in approved enclosures. Protection of such water heaters from the weather shall be provided either by the appliance design itself or by an approved enclosure, when climatic or safety conditions warrant. In addition, such installations shall meet the following:

- (1) Adequate openings and clearances shall be provided by the enclosure in accordance with Sections 507 and 508.
- (2) Enclosure openings or vent caps shall be located in accordance with Section 517.5.
- (3) Section 517.2 is not applicable unless required by the heater manufacturer.
- (4) Vents extending through the roof of an enclosure adjacent to a one or two-family dwelling must comply with Table 5-2 but may be located less than 8 feet from an adjacent vertical wall.

- (41) Adding Section 601.4 Section 601.4 is added to read:

601.4. Private water systems. Owners of private water systems are responsible for maintaining the potability of their water systems.

Note: Public water systems must meet the requirements of department of health. See department of health, Chapter 20, Rules Relating to Potable Water Systems.

"Public water system" means a system for the provision to the public of piped water for human consumption, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least sixty days out of the year. Such term includes (1) any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system, and (2) any such collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. A public water system may be privately or publicly owned or operated.

- (42) Amending Section 603.0. Section 603.0 is amended by adding a third paragraph under "Approval of Devices or Assemblies" thereof to read:

All installations treating, handling, manufacturing or using liquids, chemicals, or waste products which may be polluttional, dangerous to health or toxic, or having a non-potable auxiliary water supply shall obtain from the board of water supply the requirements for an approval of the backflow prevention assembly to be installed after the water meters and prior to any branches or tees. It shall be the duty of the person or persons having control of such assemblies to obtain from the board of water supply the requirements for approved devices before the preliminary plans, specifications, and drawings are prepared.

- (43) Amending Section 603.3.2. Section 603.3.2 is amended to read:

603.3.2 The premise owner or responsible person shall have the backflow prevention assembly tested by a certified backflow assembly tester at the time of installation, repair, or relocation or when required by the administrative authority. See the board of water supply and the department of health regulations for annual testing and reporting requirements.

- (44) Amending Section 603.3.3. Section 603.3.3 is amended by deleting the last sentence:

Installations elevated more than five (5) feet (1.52 m) above the floor or grade shall be provided with a permanent platform capable of supporting a tester or maintenance person.

(NOTE: Section 603.4.6 Protection from Lawn Sprinklers and Irrigation Systems does not allow a double check valve assembly to be an approved device.)

- (45) Amending Section 603.4.4.1. Section 603.4.4.1 is amended to read:

603.4.4.1 Heat exchangers. Heat exchangers utilizing an essentially toxic transfer fluid shall be separated from the potable water by double-wall construction. An air gap open to the atmosphere shall be provided between the two walls. Heat exchangers utilizing an essentially nontoxic transfer fluid shall be permitted to be of single-wall construction.

On every heat exchanger or heat pump, there shall be posted a readily visible, durable sign stating: "Potable water heating system. Check heat exchanger for leaks before adding refrigerant."

603.4.4.1.1. Essentially Nontoxic Transfer Fluids. Fluids having a Gosselin rating of 1, including: propylene glycol; mineral oil; polydimethylsiloxane, hydrochlorofluorocarbon, chlorofluorocarbon and hydrofluorocarbon refrigerants; and FDA-approved boiler water additives for steam boilers.

603.4.4.1.2. Essentially Toxic Transfer Fluids. Soil, waste or gray water and fluids having a Gosselin rating of 2 or more including ethylene glycol, hydrocarbon oils, ammonia refrigerants and hydrazine.

- (46) Adding Section 603.4.12.1 Section 603.4.12.1 is added to read:

603.4.12.1 Labeling of nonpotable water pipes. When nonpotable water is furnished to a property, the pipes shall be labeled "nonpotable water" above and below ground and at all outlets. Above ground piping shall be labeled at 8-foot maximum intervals. Below ground piping shall be continuously labeled except for irrigation piping.

- (47) Amending Section 603.4.13 Section 603.4.13 is amended to read:

603.4.13 Potable water supply to carbonators shall be protected by a listed reduced pressure principle backflow preventer or double check valve with intermediate atmospheric vent as approved by the administrative authority for the specific use.

- (48) Amending Section 603.4.18.1. Section 603.4.18.1 is amended to read:

603.4.18.1 Except as provided under Sections 603.4.18.2 and 603.4.18.3 below, potable water supply to fire protection systems, including but not limited to standpipes and automatic sprinkler systems, shall be protected from back-pressure and back-siphonage by a double check valve assembly or a reduced pressure backflow preventer.

Exceptions:

- (1) Systems with alarm check valve assembly
- (2) Systems with detector check assembly
- (3) One and two family dwellings and mobile homes
- (4) Systems with booster pumps and check valve assembly

- (49) Amending Section 604.1. Section 604.1 is amended to read:

604.1 Water pipe and fittings shall be of brass, copper, cast iron, galvanized steel or other approved materials. Asbestos-cement, CPVC, PB, PE, PEX, PEX-AL-PEX, or PVC water pipe manufactured to recognized standards may be used for cold water distribution systems outside a building. CPVC, PB, PEX and PEX-AL-PEX water pipe and tubing may be used for hot and cold water distribution systems within a building. All materials used in the water supply system, except valves and similar devices shall be of a like material, except where otherwise approved by the administrative authority.

- (50) Amending Section 605.3. Section 605.3 is amended by deleting the last sentence of the paragraph and

adding at the end of the paragraph:

Exception: When a supply riser serves not more than one plumbing fixture in each dwelling unit, the fixture supply stop may be used in lieu of the fullway valve as its isolating shutoff valve. In such an installation, the supply riser shall be properly located and provided with an accessible fullway valve at the foot or the top of the riser so that the valves will isolate not more than twenty dwelling units. The fixture supply stop shall be an angle valve or stop, straightway stop, screw stop, ball valve, corporation cock, butterfly valve, plug valve or similar valve. Valves shall not have slip joints on the valve inlet side.

- (51) Adding Section 606.2.4. Section 606.2.4 is added to read:

606.2.4 Copper or copper-alloy tubing to galvanized steel pipe. Joints between copper or copper-alloy tubing and galvanized steel pipe shall be made with a brass converter fitting or dielectric fitting. The copper tubing shall be soldered to the fitting in an approved manner, and the fitting shall be screwed to the threaded pipe. When dielectric fittings are located below grade, they shall be wrapped as provided under Section 609.3.1.

- (52) Adding Section 607.1. Section 607.1 is added to read:

No gravity tank shall be directly connected to the city water main, but shall be provided with an over-the-rim-filler, the orifice or outlet of which must be elevated a distance of six inches (152.4mm) above the overflow. A drain shall be provided at the bottom of the tank.

- (53) Amending Section 608.1. Section 608.1 is amended by adding a new sentence at the end to read:

The tank and pump installations shall be in accordance with provisions of Sections 603 and 607 of this code and with pertinent rules and regulations of the health officer, the board of water supply or any other department having jurisdiction.

- (54) Amending Section 608.3. Section 608.3 is amended by deleting the following third paragraph:

In addition to the required pressure or combination pressure and temperature relief valve, an approved, listed expansion tank or other device designed for intermittent operation for thermal expansion control shall be installed whenever the building supply pressure is greater than the required relief valve pressure setting or when any device is installed that prevents pressure relief through the building supply. The tank or device shall be sized in accordance with the manufacturer's recommendation.

- (55) Amending Section 609.1. Section 609.1 is amended by deleting the last two sentences of the section and adding at the end a paragraph to read:

The minimum cover shall be 12 inches below finish grade or as approved by the administrative authority.

- (56) Amending Section 609.2. Section 609.2 is amended by changing "as" to "with" in the first line.

- (57) Amending Section 609.2.2. Section 609.2.2 is amended by adding to the last sentence:

unless the sewer line is jacketed with reinforced concrete for a minimum of five feet on both sides of the point of crossing. Concrete jacket shall conform to Standard Detail S-5 of the Standard Details for Public Works Construction, City and County of Honolulu. See also Design Standard of the Department of Wastewater Management, Volume I, July, 1993, Section 24.11, Protection of Water Systems.

- (58) Amending Section 609.3.2. Section 609.3.2 is amended by adding at the end of the first sentence: "or soldered with 95-5 Tin Antimony solder."
- (59) Amending Section 609.6. Section 609.6 is amended by changing "609.6" to "609.7" in the text.
- (60) Amending Table 6-4 Water Supply Fixture Units (WSFU) and Minimum Fixture Branch Pipe Sizes. Table 6-4 is amended as follows:
- (1) Delete the figures under "3 or more Dwellings" and "Heavy-Use Assembly."
 - (2) Change the values for the individual fixtures listed:

Individual Fixture	Private Individual Dwelling	Public General Use
Bathtub or Combination Bath/Shower	2.5	
Clothes Washer	2.0	4.0
Kitchen Sink	1.6	3.2
Lavatory	0.6	1.2
Shower	1.6	3.2
Urinal, 1.0 GPF	1.7	2.8
Water Closet, 1.6 GPF Gravity Tank	1.7	2.8
Water Closet, 1.6 GPF Flushometer Tank	1.7	2.8
Water Closet, 1.6 GPF Flushometer Valve	3.4	5.6
Whirlpool Bath or Combination Bath/Shower	2.5	

- (61) Amending Section 610.8. Section 610.8 is amended by adding at the end of the first paragraph a sentence to read:

Meter and water service sizes shall be subject to approval of the board of water supply under their rules and regulations.

- (62) Amending Table 6-5. Table 6-5 is amended by adding a footnote to read:

Final sizes to be governed by rules and regulations of the board of water supply.

- (63) Amending Section 609.10 Water Hammer. Section 609.10 is amended by changing the first sentence to read:

All building water supply systems in which quick-acting valves are installed should be provided with devices to absorb high pressures resulting from the quick closing of these valves.

(64) [Reserved.]

(65) Deleting Section 701.1.2.

Section 701.1.2 is deleted. (Plastic DWV piping has no height restrictions.)

(66) Amending Section 701.3. Section 701.3 is amended by changing the third sentence to read:

For flashings or vent terminals -- not less than 2.5 pounds per square foot (12.2 Kg/square meter).

(67) Amending Table 7-3 Drainage Fixture Unit Values (DFU). Table 7-3 is amended as follows:

- (1) Delete figures under "3 or more Dwellings" and "Heavy-Use Assembly."
- (2) Change the value for the Individual Fixtures as listed:

Individual Fixture	Private Individual Dwelling	Public General Use
Bathtub or Combination Bath/Shower	2.0	
Urinal, 1.0 GPF		2.0
Urinal, greater than 1.0 GPF		3.0
Urinal, 1-1/2" trap		2.0

(68) Amending Section 703.2. Section 703.2 is amended by adding an exception provision to read:

Exception: When approved by the administrative authority, other tables of loading limits based on engineered studies and testings may be used in the sizing of drainage and vent piping. The administrative authority may require supporting data, prepared and stamped by a registered professional engineer or architect, submitted for each project. The use of higher loading limits extracted from different tables for the same project or drainage system is not permitted.

(69) Deleting Section 704.3. Section 704.3 is deleted.

(70) Amending Table 7-5. Table 7-5 is amended by adding at the end of Note 4: "or four 1.6 gallons per flush water closets on any horizontal branch or drain."

(71) Amending Section 707.4. Section 707.4 Exceptions: (1) is amended to read:

(1) Cleanouts may be omitted on a horizontal drain line less than five (5) feet (1.5 m) in length.

(72) Adding Section 707.15. Section 707.15 is added to read:

707.15 All cleanouts located on the ground floor within any residential occupancy shall be extended outside of or below the building or shall be extended above the floor at least six inches (152.4mm) above the flood level rim of the lowest fixture.

(73) Amending Section 710.1. Section 710.1 is amended to read:

710.1 Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover of the public or private sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type backwater valve. Where such upstream manhole cover does not exist, an approved backwater valve shall be installed if the fixtures have flood level rims below the connecting manhole cover. Fixtures above such elevation shall not discharge through the backwater valve.

- (74) Adding Section 710.3.4. Section 710.3.4 is added to read.

710.3.4 Macerating or grinder type sump pumps shall have a minimum pipe size of 1-1/4 inches.

- (75) Amending Section 710.6. Section 710.6 is amended by adding to the end of the last sentence of the first paragraph:

or other approved compartment.

- (76) Amending Section 711.0. Section 711.0 is amended by deleting "Bathtubs," from the second sentence and capitalizing the initial letter of "laundries" therein.

- (77) Amending Section 713.6. Section 713.6 is amended by deleting the "Exception."

- (78) Adding Section 713.7. Section 713.7 is added to read:

713.7 It is unlawful for any person to connect to or to aid another in connecting to, or to cause a connection to be made to, or to make use of, the public sewer system of the City and County of Honolulu without first having filed an application in writing and having obtained the written approval of the administrative authority.

- (79) Adding Section 713.8. Section 713.8 is added to read:

713.8 Building sewer construction shall conform to the requirements for main line sewers as set forth in the department of wastewater management DESIGN STANDARDS, and in Chapter 14, Revised Ordinances of Honolulu 1990, as amended, when either of the following conditions exists:

- (1) Where the administrative authority requires such construction because of the character or quantity of the sewage or industrial waste to be discharged.
- (2) Where the sewer will be dedicated to the City and County of Honolulu.

- (80) Adding Section 713.9. Section 713.9 is added to read:

713.9 Sewer lateral connections shall be installed in accordance with Section 14-1.8, Revised Ordinances of Honolulu 1990, as amended. A 4-inch or appropriate size cast iron long radius 90 degree bend shall be connected to the lateral from which shall extend the cast iron, PVC or ABS (Schedule 40) riser and cleanout vertically to at least one inch above ground except in a sidewalk and driveway area. In sidewalk and driveway areas, the cleanout shall be flush with the surface and shall be made of cast iron or brass body with brass plug.

- (81) Amending Section 715.1. Section 715.1 is amended by deleting "two (2) feet (.6m)" and inserting in lieu thereof "five feet (1.5m)."

- (82) Deleting Section 716.0. Section 716.0 is deleted.

- (83) Amending Section 717.0. Section 717.0 is amended to read:

Section 717.0. Size of Building Sewers.

The minimum size of any building sewer shall be determined on the basis of the total number of fixture units drained by such sewer, in accordance with Table 7-8, except that collection sewers under applicable conditions may be sized by recognized engineering design practices when approved by the administrative authority. No building sewer shall be smaller than the building drain unless approved by the administrative authority.

- (84) Amending Section 718.1. Section 718.1 is amended to read:

718.1 Building sewers shall run in practical alignment and at a uniform slope of not less than one fourth of an inch per foot (20.9mm per m) toward the point of disposal. Where it is impractical due to the depth of the street sewer or to the structural features or to the arrangement of any building or structure to obtain a slope of one fourth of an inch per foot (20.9mm per m), any such pipe or piping four inches (101.6mm) or larger may have a lesser slope when approved engineering methods have been used to design the system and when such a system has first been approved by the administrative authority.

- (85) Amending Section 718.3. Section 718.3 is amended by deleting "two (2) feet (.6m)" and inserting in lieu thereof "five feet (1.5m)." At the end of the last sentence add: "or as approved by the administrative authority."

- (86) Amending Section 719.1. Section 719.1 is amended to read:

719.1 Cleanouts shall be placed inside the building near the connection between the building drain and building sewer or installed between the exterior wall line and five feet (1.5m) outside the building at the lower end of a building drain and extended to grade. An approved type of two-way cleanout fitting installed outside a building or a sewer manhole may be substituted for this cleanout requirement.

Additional building sewer cleanouts shall be installed at intervals not to exceed one hundred feet in straight runs and for each aggregate change in direction exceeding one hundred and thirty-five (135) degrees.

- (87) Adding Section 719.7. Section 719.7 is added to read:

719.7 Cleanouts shall be installed immediately upstream of the connection of the city sanitary sewer system in accordance with the rules and regulations of the department of wastewater management. Cleanouts in sidewalk and driveway areas shall be flush with the surface and shall be of cast iron or brass body with brass plug. The entire cleanout shall be installed within the private property and at the expense of the property owner.

- (88) Amending Section 720.0. Section 720.0 is amended by changing "as" to "with" in the third line.

- (89) Amending Section 720.0. Section 720.0 is amended by adding to the last sentence thereof, excluding the note thereto, following the words "drain pipe":

unless the sewer line is jacketed with reinforced concrete for a minimum of five feet on both sides of the point of crossing. Concrete jacket shall conform to Standard Detail S-5 of the Standard Details for Public Works Construction, City and County of Honolulu. See also Design Standard of the Department of Wastewater Management, Volume I, July, 1993, Section 24.11, Protection of Water Systems.

- (90) Amending Section 721.1. Section 721.1 is amended to read:

No building sewer or private sewage disposal system or parts thereof shall be located in any lot

other than the lot which is the site of the building or structure served by such sewer or private disposal system. Provided, however, a building sewer or private disposal system may be located on an abutting lot when specifically required by the health officer or other department having jurisdiction over sewage disposal and provided further that a legal easement over the abutting lot is first obtained and the plans are approved by the administrative authority.

- (91) Amending Section 722.2. Section 722.2 is amended by adding at its end:

Exception: An abandoned cesspool may be used as an overflow receptor for a sewage sump with pump discharge when approved by the administrative authority.

- (92) Amending Section 722.3. Section 722.3 is amended to read:

722.3 The top cover, access cover or arch over the cesspool, septic tank, or seepage pit shall be removed before filling and the filling shall not extend above the top of the vertical portions of the sidewalls or above the level of any outlet pipe until inspection has been called and the cesspool, septic tank, or seepage pit has been inspected. After such inspection, the cesspool, septic tank, or seepage pit shall be filled to the level of the top of the ground.

- (93) Adding Section 724.0. Section 724.0 is added to read:

724.0 Private Sewage Disposal (General).

Where permitted by Section 713.0, the building sewer or private sewer may be connected to a private sewage disposal system complying with the requirements of the state health officer and all city regulations governing private sewage disposal systems. (See State Department of Health, Chapter 62, Wastewater Systems.)

- (94) Deleting Table 7-7. Table 7-7 is deleted.

- (95) Amending Section 801.2.1. Section 801.2.1 is amended by deleting the last clause of the first sentence:

and the maximum developed length shall not exceed fifteen (15) feet (4572 mm).

- (96) Amending Section 801.2.3. Section 801.2.3 is amended by deleting the word "airbreak" at the end of the first sentence.

- (97) Amending Section 801.3. Section 801.3 is amended by deleting the last sentence: "The developed length from the fixture outlet to the receptor shall not exceed five (5) feet (1524 mm)."

- (98) Amending Section 801.5. Section 801.5 is amended by deleting the last clause of the second sentence: "and shall not exceed fifteen (15) feet (4572 mm)."

- (99) Deleting Section 801.7. Section 801.7 is deleted.

- (100) Amending Section 803. Section 803 is amended by adding after the last sentence:

Indirect waste piping shall be limited to 15 feet unless approved by the administrative authority.

- (101) Amending Section 804.1. Section 804.1 is amended by adding at the end thereof:

Indirect drains for air conditioning condensate may be installed in toilet or bathroom areas.

- (102) Amending Section 811.0. Section 811.0 is amended by adding the following to the first paragraph:

An industrial wastewater discharge permit may be required by the Department of Environmental Services' Regulatory Control Branch. See Section 307.3.

(103) Deleting Section 814.0 Refrigeration Wastes. Section 814.0 is deleted.

(104) Deleting Section 815.1 Size. Section 815.1 is deleted.

(105) Adding Section 815.2.3. Section 815.2.3 is added to read:

815.2.3 Condensate wastes shall not drain over a public way.

(106) Deleting Section 903.1.2. Section 903.1.2 is deleted. (ABS and PVC DWV piping are approved without limitations of building height.)

(107) Amending Section 905.3. Section 905.3 is amended by changing the last sentence to read:

Vents less than six (6) inches (152.4 mm) above the flood level rim of the fixture shall be installed with sanitary tees or approved drainage fittings, material and grade to the drain.

(108) Amending Section 906.6. Section 906.6 is amended by adding:

For pre-fabricated flashings—Sheet lead shall be at least 2.5 pounds per square foot.

(109) Amending Section 910.6. Section 910.6 is amended by changing the last sentence to read:

An accessible cleanout shall be installed in the above-floor portion of each vent for the combination waste and vent system.

(110) Adding Section 911.0. Section 911.0 is added to read:

Section 911.0 Single-stack System.

When approved by the administrative authority, a single-stack system based on engineered studies and testings may be used in lieu of other related provisions in this code. Plans and specifications of such systems shall be prepared and stamped by a licensed professional engineer or architect. Plans shall be submitted for microfilming.

(111) Amending Section 1009.1. Section 1009.1 is amended by adding to the last sentence:

See Section 307.3 Industrial Waste Discharge Permits.

(112) Amending Section 1014.1. Section 1014.1 is amended by adding to the last sentence:

See Section 307.3. Industrial Waste Discharge Permits. See also the Department of Environmental Service Division of Environmental Quality, Regulatory Control Branch, "Policy for Grease Interceptor Program Compliance, June 1999." Note that this policy may be more stringent than Uniform Plumbing Code requirements.

(113) Deleting Sections 1014.8 and 1014.9. Sections 1014.8 and 1014.9 are deleted.

(114) Amending Section 1014.10. Section 1014.10 is amended by adding:

See Section 1014.1.

(115) Adding Section 1014.11. Section 1014.11 is added to read:

Each grease trap or interceptor shall have at least twelve inches clearance above the cover for inspection and maintenance.

- (116) Deleting Chapter 11.

Chapter 11 Storm Drainage is deleted. (See Uniform Building Code Section 1506 and Public Works requirements.)

- (117) Amending Section 1201.0. Section 1201.0 is amended by adding at the end thereof:

Compliance with the National Fire Protection Association (NFPA) Standard No. 54-1996, National Fuel Gas Code will be deemed equivalent to meeting requirements of the Uniform Plumbing Code.

- (118) Amending Section 1204.3.2. Section 1204.3.2 is amended by adding at the end thereof a sentence to read:

The administrative authority may accept the use of any testing apparatus which has been approved by a nationally recognized testing laboratory in lieu of the foregoing air pressure test.

- (119) Adding Section 1204.3.3. Section 1204.3.3 is added to read:

1204.3.3 Gas Appliance Installation Inspection:

This inspection shall be made after all gas piping in the system as authorized has been inspected and approved and the connections of such gas fixtures and appliances as authorized by permit have been made to the piping system. This inspection shall include a soap solution test or other approved testing method of detecting any gas leakage occurring in the connection or attachment and shall include a determination that the installation meets the requirements and intent of this code.

- (120) Amending Section 1209.1. Section 1209.1 is amended to read:

1209.1 All gas meter locations under the control of the gas supplier shall be approved by the supplier. All meter locations shall conform to local fire regulations.

- (121) Amending Section 1210.0. Section 1210.0 is amended to read:

1210.0 Material for Gas Piping.

1210.1 Pipe: All pipe used for the installation, extension, alteration, or repair of any gas piping shall be standard weight wrought iron or steel (galvanized or black), threaded copper or brass pipe. Threaded copper or brass pipe is restricted to above ground only. Approved PE pipe may be used in exterior buried piping systems.

1210.2 Tubing: Seamless copper, aluminum alloy, brass or steel tubing may be used in lieu of pipe listed in Section 1210.1 for above ground installations only and shall not be installed in concealed spaces. Copper tubing shall be of type K or L, or equivalent, having a minimum wall thickness of 0.032 inch. Aluminum alloy shall not be used in exterior locations or where it is in contact with masonry, plaster or building insulation or is subject to corrosive wettings. Approved PE tubing may be used in exterior buried piping systems. Corrugated stainless steel tubing (CSST) shall be tested and listed as to compliance with construction, installation, and performance requirements for use in interior gas piping systems per ANSI/AGA LC1-1991, Interior Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing.

1210.3 All such pipe or tubing shall be either new, or shall previously have been used for no other purpose than conveying gas; it shall be in good condition and free from internal obstructions. Burred ends shall be reamed to the full bore of the pipe or tubing.

1210.4 Fittings, except stopcocks or valves, shall be malleable iron or steel or wrought iron, and shall be copper or brass when used with copper or brass pipe or tubing and shall be aluminum alloy when used with aluminum alloy pipe or tubing. PE fittings, mechanical connectors and transition fittings shall be of the approved types when used with PE piping or tubing.

1210.5 Valves: All valves and appurtenances used in connection with the above piping shall be of the type designed and approved for use with fuel gas.

- (122) Amending Section 1211.1. Section 1211.1 is amended to read:

1211.1 All pipe joints in the piping system, unless welded, shall be screwed joints, having approved standard threads. Such screwed joints shall be made up with approved pipe joint material, insoluble in the presence of fuel gas and applied to the male threads only. Tubing joints shall either be made with approved flared gas tubing fittings, or be brazed with a material having a melting point in excess of 1,000 degrees F.

- (123) Deleting Section 1211.2. Section 1211.2 is deleted.

- (124) Amending Section 1211.3. Section 1211.3 is amended by amending the Exception note to read:

Exception: When necessary due to structural conditions, approved type gas piping may be installed in other locations when permission has first been obtained from the administrative authority. In non-industrial occupancies, approved machine-wrapped or coated ferrous piping as defined in Section 1211.5 and Section 1211.7 may be embedded in concrete ground floor when encased in at least 1-1/2 inches of concrete or may be encased in an independent concrete jacket with a minimum wall thickness of 1-1/2 inches. The protective coating shall extend at least one inch above the point of entry into the slab and above the point of exit from the slab for the appliance riser. Such piping shall not be in physical contact with other metallic objects such as reinforcing rods or electrical neutral conductors.

- (125) Amending Section 1211.5. Section 1211.5 is amended by changing the third sentence to read:

Plastic gas piping shall have at least 12 inches (.3m) of earth cover or other equivalent protection.

- (126) Deleting Section 1211.6. Section 1211.6 is deleted.

- (127) Amending Section 1211.10. Section 1211.10 is amended to read:

1211.10. Ground-joint unions may only be used at exposed fixture, appliance, or equipment connections and in exposed exterior locations immediately on the discharge side of a building shutoff valve. Heavy duty flanged type unions may be used in special cases, when first approved by the administrative authority. Bushings shall not be used in concealed locations.

- (128) Amending Section 1212.0. Section 1212.0 is amended by adding to the end of Exception condition (5) the following sentence:

Semi-rigid aluminum tubing shall not be used as an appliance connector.

- (129) Amending Section 1214.1. Section 1214.1 is amended to read:

1214.1 Leaks in gas piping shall be located by applying soapy water to the exterior of the piping, or by use of approved or listed gas detecting devices.

(130) Amending Section 1216.4. Section 1216.4 is amended to read:

1216.4 The size of the supply pipe outlet for any gas appliance shall be not less than the size of the inlet connection of that appliance.

The minimum size of any piping outlet shall be three-quarter inch for a freestanding gas range using synthetic natural gas and shall be one-half inch for a recessed oven section, a recessed top section, or for a freestanding range using L.P.G.

(131) Amending Section 1217.3. Section 1217.3 is amended to read:

1217.3 For conditions other than those covered by Section 1217.1, such as commercial, industrial and multiple units which require longer runs or greater gas demands, the size of each gas piping system shall be determined by standard engineering methods acceptable to the administrative authority.

(132) Amending Section 1218.6. Section 1218.6 is amended by amending the first sentence to read:

Approved engineering methods or Tables 12-5 and 12-6, when corrected for the specific gravity of the gas utilized, may be used to size gas piping systems carrying three to five psig (20.7 or 34.5 kPa) gas.

(133) Amending Section 1218.8. Section 1218.8 is amended by deleting "eighteen (18) inches (457.2mm)" and inserting in lieu thereof "twelve inches (304.8mm)."

(134) Adding Section 1219.0. Section 1219.0 is added to read:

1219.0 Allowable Pressure Drop. The design pressure loss in any piping system under maximum probable flow conditions, from the point of delivery to the inlet connection of the gas utilization equipment, shall be such that the supply pressure at the equipment is greater than the minimum pressure required for proper equipment operation.

(135) Amending Table 12-1. Table 12-1 is amended to read:

TABLE 12-1		
Demand of Typical Domestic Gas Appliances In Cubic Feet Per Hour		
Appliance	Demand in Cu. Ft./Hr.	
	SNG	LPG
Bunsen Burner	3	2
Domestic Full Size Range	65	26
Domestic Apt. Size Range	60	24
Domestic Recessed Oven Section	22	9
Domestic Surface Unit	40	16
Domestic Storage Water Heater up to 30 Gal.	39	16
Domestic Storage Water Heater 40 and 50 Gal.	50	20
Domestic Clothes Dryer	35	14
Domestic Barbecue	50	20
Gas Refrigerator	3	2
Gas Luau Torch	24	10

(136) Amending Section 1303.1. Section 1303.1 is amended by adding:

Medical Gas Systems conforming to NFPA 99C-1993 Gas and Vacuum Systems shall be deemed equivalent to meeting the requirements of this chapter. (Medical Gas Systems are also governed by Uniform Fire Code Section 74-201.)

(137) Adding Section 1301.3. Section 1301.3 added to read:

Those facilities that do not provide 24 hour patient care shall not be required to provide alarm systems or multiple supply sources for air, vacuum and gas systems.

(138) Amending Section 1318.2. Section 1318.2 is amended to read:

1318.2 The medical air compressor shall take its source from the outside atmosphere and shall not add contaminants in the form of particulate matter, odor or other gases.

(139) Amending Section 1322.2. Section 1322.2 is amended by changing "twenty-four (24) hours" to "forty-eight (48) hours."

(140) Amending Section 1323.3. Section 1323.3 is amended by adding:

The licensed mechanical engineer responsible for the design and observation of the system shall provide a statement that the certification tests of Section 1323.2.1 through 1323.2.10, as

applicable, has been verified and to the best of his/her knowledge complies with the installation requirements.

- (141) Amending Chapter 14 Mandatory Referenced Standards.

Chapter 14 is amended by deleting the word "Mandatory."

- (142) Deleting Appendix D, Rainwater Systems. Appendix D is deleted.

- (143) Deleting Appendix E, Mobile Home Parks. Appendix E is deleted.

- (144) Deleting Appendix G, Graywater Systems for Single Family Dwellings. Appendix G is deleted.

- (145) Amending Appendix H, Recommended Procedures for Design, Construction and Installation of Commercial Kitchen Grease Interceptors.

Appendix H is amended by adding at the end of H101.0 General, the following:

See Department of Environmental Services "Policy for Grease Interceptor Program Compliance, June 1999," Attachment 2, Grease Interceptor Sizing Criteria.

- (146) Deleting Appendix I Installation Standards.

Appendix I Installation Standards are deleted and formally not adopted as part of the code but are included for the convenience of the users.

- (147) Deleting Appendix J Reclaimed Water Systems for Nonresidential Buildings.

Appendix J is deleted.

- (148) Deleting Appendix K, Private Sewage Disposal Systems.

Appendix K is deleted. (Private sewage disposal systems are governed by Hawaii Administrative Rules, Title 11, State Department of Health, Chapter 62, Wastewater Systems.)

(Added by Ord. 99-73)

Article 5. Plumbing Work Within Flood Hazard Districts and Developments Adjacent to Drainage Facilities

Sections:

19-5.1 Applicability.

19-5.2 Definitions.

19-5.3 Drainage (plumbing) systems.

19-5.4 Private sewage disposal/treatment.

19-5.5 Water supply.

19-5.6 Plumbing systems in special floodproofed conditions.

Sec. 19-5.1 Applicability.

- (a) General. The provisions of this article are applicable to the construction of all new plumbing systems, renovations and major alterations, additions or reconstruction of existing plumbing systems within the flood hazard district as delineated on the flood boundary and floodway maps and flood insurance rate maps on

file at the department of land utilization. These provisions shall also apply to developments adjacent to drainage facilities outside the flood hazard district which are determined to be within a floodway area or a flood fringe area in accordance with Section 21-9.10-9.

- (b) All pipe openings through exterior walls below the regulatory flood elevation shall be floodproofed to prevent infiltration of floodwater through spaces between pipes and wall construction materials by use of imbedded collars, sleeves, waterstops or other means as may be approved by the administrative authority.
- (c) Existing Plumbing Systems. Any plumbing system which was lawful before August 13, 1996* but which is not in conformity with the provisions of this article may be continued subject to the provisions of Section 21-9.10-12.
[***Editor's Note:** "August 13, 1996" is substituted for "the effective date of this ordinance" (Ordinance 96-38).]
- (d) Exemptions. The provisions of Sections 19-5.3 and 19-5.4 shall not apply:
 - (1) To plumbing systems serving buildings and structures exempted from the flood hazard district provisions under Section 21-9.10-13.
 - (2) To plumbing systems serving buildings and structures which have been granted a flood hazard variance under the provisions of Section 21-9.10-11.

(Added by Ord. 99-73)

Sec. 19-5.2 Definitions.

For the purpose of this article, the following terms shall mean the same as defined in Section 21-10.1:

"Flood" or "flooding";

"Flood elevation";

"Flood fringe";

"Flood hazard district";

"Floodproof";

"Floodway"; and

"Regulatory flood."

(Added by Ord. 99-73)

Sec. 19-5.3 Drainage (plumbing) systems.

- (a) Drainage systems that have openings below the regulatory flood elevation shall be provided with an automatic backwater valve installed in each discharge line passing through a building exterior wall. Fixtures located at a floor level above the flood elevation shall not discharge through the backwater valve.
- (b) Drainage systems for emergency servicing facilities that are required to remain in operation during a flood shall be provided with a sealed holding tank and the necessary isolation and diversion piping and appurtenances to withhold or postpone sewage discharge to the sewer system during the flood. The holding tank shall be sized for storage of at least 150 percent of the anticipated demand for a 24-hour period. Vents provided for such holding tank shall terminate at an elevation of at least one foot above the regulatory flood elevation.
- (c) All pipes in a plumbing vent system shall terminate at an elevation of at least one foot above the regulatory flood elevation.

(Added by Ord. 99-73)

Sec. 19-5.4 Private sewage disposal/treatment.

Individual private sewage disposal systems or treatment facilities may be permitted in a flood hazard district or in other floodway or flood fringe area when design and location of such systems are approved by the department of health, State of Hawaii. In addition to meeting the administrative rules of the department of health, State of Hawaii, all such new and replacement sewage disposal systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems. (Added by Ord. 99-73)

Sec. 19-5.5 Water supply.

Potable water supply systems that are located in a flood hazard district or in other floodway or flood fringe area shall be designed and installed in such a manner as to prevent contamination from floodwaters up to the

regulatory flood elevation. Location and construction of private water supply wells shall comply with rules and regulations of the board of water supply and state department of health.

- (a) Potable water supply tanks, filters, softeners, heaters, and all water-supplied appliances and fixtures located below the regulatory flood elevation shall be protected against contamination by covers, walls, copings or castings. All vent pipes serving the water supply system shall terminate at an elevation of at least one foot above the regulatory flood elevation.
- (b) When required, backflow preventers or assemblies approved by the board of water supply shall be installed on water service lines one-foot minimum above the regulatory flood elevation. Installations shall be after the water meter and prior to any tees or branches.
- (c) Air relief valves are permitted on private pipelines only when installed at least one foot above the regulatory flood elevation.

(Added by Ord. 99-73)

Sec. 19-5.6 Plumbing systems in special floodproofed conditions.

Plumbing piping under buildings constructed on stilts shall be securely anchored against lateral movement and flotation and protected against damage by floodwater and debris. Protection shall be provided by the structural enclosure of such piping or by attaching such piping to the downstream side of structural members which are large enough to provide this protection. (Added by Ord. 99-73)

Article 6. Violations and Penalties

Sections:

19-6.1 General.

19-6.2 Notice of violation.

19-6.3 Criminal prosecution.

19-6.4 Administrative enforcement.

Sec. 19-6.1 General.

It is unlawful for any person, firm or corporation to install, alter, repair, remove, replace or maintain any plumbing, gas or drainage piping work or any fixture, gas appliance or water heating or treating equipment, or cause or permit the same to be done, in violation of this code. (Added by Ord. 99-73)

Sec. 19-6.2 Notice of violation.

Whenever any person, firm or corporation violates any provision of this code, the administrative authority shall serve a notice of violation to the parties responsible for the violation, including but not limited to the owner/lessee of the property where the violation is located, to make the building or structure or portion thereof comply with the requirements of this code. Such notice of violation shall include:

- (a) The date of the notice;
- (b) The name and address of the person noticed, and the location of the violation;
- (c) The section number of the ordinance, code or rule which has been violated;
- (d) The nature of the violation; and
- (e) The deadline for compliance with the notice.

(Added by Ord. 99-73)

Sec. 19-6.3 Criminal prosecution.

- (a) General. Any person, firm or corporation violating any of the provisions of this code shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any provisions of this code is committed, continued or permitted; and upon conviction of any such violation, such person shall be punishable by a fine of not more than \$1,000.00, or by imprisonment for not more than one year, or by both such fine and imprisonment.
- (b) Any officer or inspector designated by the administrative authority, who has been deputized by the chief of police as a special officer for the purpose of enforcing the provisions of the building, plumbing, electrical or

housing codes (hereinafter referred to as "authorized personnel"), may arrest without warrant alleged violators by issuing a summons or citation in accordance with the procedure specified in this section. Nothing in this section shall be construed as barring such authorized personnel from initiating prosecution by warrant or such other judicial process as is permitted by statute or rule of court.

- (c) Any authorized personnel designated by the administrative authority, upon making an arrest for a violation of the building, plumbing, electrical or housing codes, may take the name and address of the alleged violator and shall issue to the violator in writing a summons or citation hereinafter described, notifying the violator to answer the complaint to be entered against the violator at a place and at a time provided in the summons or citation.
- (d) There shall be provided for use by authorized personnel a form of summons or citation for use in citing violators of the building, plumbing, electrical or housing codes which does not mandate the physical arrest of such violators. The form and content of such summons or citation shall be as adopted or prescribed by the administrative judge of the district court and shall be printed on a form commensurate with the form of other summonses or citations used in modern methods of arrest, so designed to include all necessary information to make the same valid within the laws and regulations of the State of Hawaii and the City and County of Honolulu.
- (e) In every case when a citation is issued, the original of the same shall be given to the violator; provided, that the administrative judge of the district court may prescribe that the violator be given a carbon copy of the citation and provide for the disposition of the original and any other copies.
- (f) Every citation shall be consecutively numbered and each carbon copy shall bear the number of its respective original.

(Added by Ord. 99-73)

Sec. 19-6.4 Administrative enforcement.

In lieu of or in addition to enforcement pursuant to Section 19-6.3, if the administrative authority determines that any person, firm or corporation is not complying with a notice of violation, the administrative authority may have the party responsible for the violation served, by mail or delivery, with an order pursuant to this section.

- (a) Contents of the Order.
 - (1) The order may require the parties responsible for the violation, including but not limited to the owner/lessee of the property where the violation is located, to do any or all of the following:
 - (A) Correct the violation within the time specified in the order;
 - (B) Pay a civil fine not to exceed \$1,000.00 in the manner, at the place and before the date specified in the order;
 - (C) Pay a civil fine not to exceed \$1,000.00 per day for each day in which the violation persists, in the manner and at the time and place specified in the order.
 - (2) The order shall advise the party responsible for the violation that the order shall become final 30 calendar days after the date of its delivery. The order shall also advise that the administrative authority's action may be appealed to the building board of appeals.
- (b) Effect of Order—Right to Appeal. The provisions of the order issued by the administrative authority under this section shall become final 30 calendar days after the date of the delivery of the order. The party responsible for the violation may appeal the order to the building board of appeals as provided by Section 204, Article 1, Chapter 16, ROH 1990 (Building Code). The appeal must be received in writing on or before the date the order becomes final. However, an appeal to the building board of appeals shall not stay any provision of the order.
- (c) Judicial Enforcement of Order. The administrative authority may institute a civil action in any court of competent jurisdiction for the enforcement of any order issued pursuant to this section. Where the civil action has been instituted to enforce the civil fine imposed by such order, the administrative authority need only show that the notice of violation and order were served, that a civil fine was imposed, the amount of the civil fine imposed and that the fine imposed has not been paid.

(Added by Ord. 99-73)