

## **Chapter 17**

### **PLUMBING**

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\* **Editor's Note:** Chapter 17, "Plumbing," was repealed and replaced in its entirety, pursuant to Ordinance 07-84.

**Chapter 17****PLUMBING****Article 1. General Provisions.****Section 17-1. Title and purpose.**

- (a) This chapter shall be known as the “plumbing code,” may be cited as such, and will be referred to herein as “this code.”
- (b) The purpose of this code is to provide for the protection of the public health and safety by establishing minimum regulations for the installation, alteration, or repair of plumbing and drainage systems and the inspection thereof.
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-2. 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.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-3. Definitions.**

As used in this code, unless otherwise specified:

“Administrative authority” means the director of the department of public works, or the director’s authorized representative(s).

“Assistant” means the authorized representative(s) of the administrative authority.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-4. Reference to the Uniform Plumbing Code; conflicting provisions.**

If any provisions of this code conflict with or contravene provisions of the Uniform Plumbing Code that have been incorporated by reference, the provisions of this code shall prevail as to all matters and questions arising out of the subject matter of that provision.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-5. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Section 17-6. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Article 2. Administration and Enforcement.****Division 1. Administration.****Section 17-7. Department having jurisdiction.**

Unless otherwise provided for by law, the department of public works shall have jurisdiction over and administer all matters covered by this code.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-8. 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:

- (1) Require submission of, examine, and check plans and specifications, drawings, descriptions, and diagrams necessary to show clearly the character, kind, and extent of work covered by applications for a permit, and upon approval, shall issue the permit applied for;
  - (2) Administer and enforce the provisions of this code in a manner consistent with the intent thereof and shall inspect all plumbing and drainage work authorized by any permit to assure compliance with provisions of this code or amendments thereto, approving or condemning said work in whole or in part as conditions require;
  - (3) Issue upon request a certificate of approval for any work approved by the administrative authority;
  - (4) 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;
  - (5) Order changes in workmanship and materials essential to obtain compliance with all provisions of this code;
  - (6) Investigate any construction or work regulated by this code and issue such notices and orders as provided in this code; and
  - (7) Keep a complete record of all essential transactions.
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-9. Compliance with this code and other laws.**

Any approval or permit issued pursuant to the provisions of this code shall comply with all applicable requirements of this code. The granting of a permit or variance under this code does not dispense with the necessity to comply with any law, ordinance, regulation or any other provision of the Hawai'i County Code to which a permittee may also be subject.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-10. Adoption of rules.**

The administrative authority may adopt rules pursuant to chapter 91, Hawai'i Revised Statutes, necessary for the purposes of this code.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-11. Right of entry.**

Upon presentation of proper credentials, the administrative authority or such person's assistants may enter at reasonable times any building, or premises in the County to perform any duty imposed by this code, provided that such entry shall be made in such a manner as to cause the least possible inconvenience to the persons in possession. An order of a court authorizing such entry shall be obtained in the event such entry is denied or resisted.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-12. Limited liability of authorized personnel.**

The authorized personnel charged with the enforcement of this code, acting in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance shall not thereby be rendered personally liable for damages that may accrue to persons or property as a result of an act or by reason of an act or omission in the discharge of such duties. A suit brought against the authorized personnel because of such act or omission performed by the authorized personnel in the enforcement of any provision of this code or other pertinent laws or ordinances implemented through the enforcement of this code shall be defended by the County until final termination of such proceedings, and any judgment resulting therefrom shall be assumed by the County.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-13. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Section 17-14. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Division 2. Permits.****Section 17-15. Permit required.**

- (a) It shall be unlawful for any person to install, remove, alter, repair or replace or cause to be installed, removed, altered, repaired or replaced any plumbing, gas or drainage piping work or any fixture or water heating or treating equipment in a building or premises without first obtaining a permit to do such work from the administrative authority.
- (b) A separate permit shall be obtained for each building or structure.
- (c) No person shall allow any other person to do or cause to be done any work under a permit secured by a permittee except individuals in such permittee's employ.
- (d) Plumbing permits shall be posted in a conspicuous place on the job site. Permits shall remain posted until the plumbing work has passed a final inspection by the administrative authority. Failure to comply with this provision shall subject the violator to a \$25 fine.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-16. Work not requiring permit.**

- (a) No permit shall be required in the case of any repair work as follows: the stopping of leaks in drains, soil, waste or vent pipe, provided, however, that should any trap, drainpipe, soil, waste or vent pipe be or become defective and it becomes necessary to remove and replace the same with new material in any part or parts, the same shall be considered as such new work and a permit shall be procured and inspection made as provided in this code. No permit shall be required for the clearing of stoppages or the repairing of leaks in pipes, valves, or fixtures, when such repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.
- (b) No permit shall be required in the case of any replacement work for the following: the replacement or repair of disposals, faucets and fixtures, to include sinks, water closets and heaters for non-commercial occupancies only. Permits, however shall be required when such repairs do involve or require the replacement or rearrangement of valves or pipes. All repair or replacement work shall be done by licensed plumbers in accordance with section 444, Hawai'i Revised Statutes.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-17. Persons to whom permits may be issued.**

- (a) Except as provided in subsection (b) of this section, no permit shall be issued to any person to do or cause to be done any work regulated by this code, except to a person holding a valid, unexpired, and unrevoked "Plumbing Contractor's License" as provided for in chapter 444, Hawai'i Revised Statutes, or to the representative of a gas utility.
- (b) A permit may also be issued to a home owner for plumbing work on a single-family dwelling which the owner will personally occupy and use exclusively for living purposes, provided the owner is a person licensed under chapter 448E, Hawai'i Revised Statutes. Only one such permit may be issued to such a home owner, unless the administrative authority finds that strict application would result in practical difficulty and hardship and that the granting of a second permit would not be contrary to the purpose of the code. This does not preclude the home owner from obtaining additional permits for the same building or accessory building on the same lot.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-18. Application for permit.**

- (a) **Application.** Any person legally entitled to apply for and receive a permit shall make such application on forms provided for that purpose. Such person shall give a description of the character of work proposed to be done, and the location, tax map key, ownership, occupancy, and use of the premises in connection therewith. The administrative authority may require plans, specifications, or drawings and such other information as the administrative authority may deem necessary. Appropriate permit application fees, as set out in section 17-28, shall be submitted with the permit application.
- (b) **Plans Required.** Plumbing permit applications shall be accompanied by three sets of plans for approval by the administrative authority. Two sets shall be retained by the administrative authority and the other set shall be returned to the applicant, which shall be kept at such building or site whenever work authorized is in progress. Other plans, drawings, or specifications may be required as indicated under subsection (a). Plans are not required for one and two-family dwelling units. The administrative authority may waive the requirement for submission of plans for other occupancies when deemed unnecessary. The approval of plans by an architect or engineer, licensed with the State of Hawai‘i, shall be according to State statutes and when required by the administrative authority as indicated under subsection (a).
- (c) **Issuance.** If the administrative authority determines that the plans, specifications, drawings, descriptions, or information furnished by the applicant are in compliance with this code, the administrative authority shall issue the permit applied for upon payment of the required fee. The plumbing permit card shall be posted in a conspicuous place at the job site during construction.
- (d) **Validity.** The issuance or granting of a permit or approval of plans and specifications shall not be construed to be a permit for or an approval of, violations of the provisions of this code, or other State or County laws, including rules and regulations. No permit presuming to give authority to violate or cancel the provisions of this code, or other State or County laws, including rules and regulations, shall be valid, except insofar as the work or use, which it authorizes is lawful. The issuance of a permit based upon plans and specifications shall not prevent the administrative authority from thereafter requiring the correction of errors in the plans and specifications or from preventing any plumbing work being carried on under that permit when in violation of this code, or other State or County laws, including rules and regulations, or from revoking any certificate of approval when issued in error.
- (e) **Expiration.** Every permit issued by the administrative authority under the provisions of this code shall expire by limitation and become null and void, if the work authorized by such permit is not commenced within one hundred twenty days from the date of issuance, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of one hundred twenty days; provided, however, that a permit issued for work on construction having a valid building permit, shall expire only when such building permit expires.

Where a permit expires, before work can be recommenced, a new permit shall be obtained, and the fee shall be one-half the amount required for a new permit, provided no changes have been made or will be made to the original plans and specifications of such work; and provided, further, that the suspension or abandonment has not exceeded one year.

- (f) **Suspension or Revocation.** The administrative authority may, in writing, suspend or revoke a permit issued under provisions of this code whenever the permit is issued in error, or on the basis of incorrect information supplied, or in violation of any ordinance or regulation or any of the provisions of this code.
  - (g) **Refunds.** Refunds of permit fees shall be made in accordance with the provisions of section 2-12.
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-19. Amnesty period.**

(REPEALED. 2007, Ord. No. 07-84, sec. 2)

**Section 17-20. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Division 3. Qualifications of Persons Performing Work.****Section 17-21. General provisions.**

- (a) It shall be unlawful for any person to perform any work covered by this code in violation of those provisions of chapter 448E, Hawai'i Revised Statutes, relating to the licensing of electricians and plumbers.
- (b) Unlicensed persons may perform work covered by this code providing such work performance is not in violation of chapter 444, Hawai'i Revised Statutes.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-22. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Section 17-23. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Division 4. Inspections.****Section 17-24. Inspection required.**

All plumbing and drainage systems shall be inspected by the administrative authority to ensure compliance with all the requirements of this code.

(2007, Ord. No. 07-84, sec. 2)

Intentionally left blank.

**Section 17-25. Notification to administrative authority that work is ready for inspection.**

- (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 said work is ready for inspection. Such notification shall be given not less than forty-eight 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 make sure that the work will stand the tests prescribed elsewhere in this code, before giving the above notification.
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-26. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Section 17-27. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Division 5. Fees.**

**Section 17-28. Permit fees.**

- (a) Schedule of Fees
  - (1) Permit application fee ..... \$10
  - (2) In addition:
    - For each plumbing fixture or trap (including drainage and vent piping)..... \$ 4
    - For installation, alteration, or repair of each building sewer, building drain, or vent piping..... \$20
    - For each industrial waste injector, grease interceptor, sewage ejector, and grinder pump, including its trap and vent..... \$12
    - For installation, alteration, or repair of water piping and/or water treating equipment ..... \$ 4
    - For vacuum breakers or backflow protective devices installed subsequent to the installation of the piping or equipment served..... \$12
    - For each lawn sprinkler system on any one valve including backflow protection devices thereof..... \$12
    - For each electric water heater, solar or gas water heater, and/or vent..... \$ 4
    - For each new installation, alteration, or repairing of gas piping systems, house piping, and/or exterior piping for lamps, luau torches, and other miscellaneous equipment..... \$12
    - For each gas appliance..... \$ 4
    - For each medical gas piping serving one to five inlet(s) or outlet(s) for a specific gas..... \$50
    - For each additional medical gas inlet(s) or outlet(s)..... \$ 4
- (b) Where work for which a permit is required by this code is begun prior to obtaining a permit, the application fee shall be \$100 plus the additional fees specified in subsection (a). Payment of such fees shall not relieve any person, firm, or corporation from the obligation to comply with the requirements of this code.

This provision shall not apply to emergency work performed under circumstances that did not allow time to obtain a permit. To qualify for this exception, it must be proved to the satisfaction of the administrative authority that the unpermitted work was urgently necessary and that it was not practical to obtain a permit therefore before the commencement of the work. In all such cases a permit must be obtained as soon as it is practical to do so. Any delay in obtaining a permit as soon as it is practical to do so will subject the petitioner to the doubled permit fees.

- (c) The County and all agencies and contractors doing County jobs shall be exempt from the requirement to pay any permit fee except for fees imposed pursuant to subsection (b), when applicable.
  - (d) Habitat for Humanity Hilo and Habitat for Humanity Kona shall be exempt from the requirement of paying any permit fee, except for fees imposed pursuant to subsection (b), when applicable. This exemption shall not apply to penalty fees when required under this chapter.
- (2007, Ord. No. 07-84, sec. 2; Am. 2007, Ord. No. 07-113, sec. 4.)

**Section 17-29. Inspection fees.**

- (a) A fee of \$50 shall be assessed upon the permittee or requestor for each extra inspection made. “Extra inspection” means a requested or scheduled inspection wherein the work to be inspected is not complete or ready for inspection.
  - (b) A fee of \$50 shall be assessed upon the requestor or property owner for each courtesy inspection made. “Courtesy inspection” means a requested inspection wherein no permit has been issued or for general requirements regarding the health, safety, or welfare of people.
  - (c) The administrative authority has the authority to waive inspection fees.
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-30. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Section 17-31. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Division 6. Violations, Enforcement, and Penalties.**

**Section 17-32. General provisions.**

- (a) 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.
  - (b) Failure to comply with any provision of this code, any rule adopted pursuant to this code, or with conditions imposed as part of any permit or variance from the provisions of this code, shall constitute a violation of this code.
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-33. Notice of violation.**

Whenever any person, firm or corporation violates any provision of this code, the administrative authority shall serve a notice of violation upon 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:

- (1) The date of the notice;
- (2) The name and address of the person noticed, and the location of the violation;
- (3) The section number of the ordinance, code or rule which has been violated;
- (4) The nature of the violation; and
- (5) The deadline for compliance with the notice.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-34. Administrative enforcement.**

- (a) 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 division.
  - (b) 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 in the manner, at the place and before the date specified in the order;
      - (C) Pay a civil fine not to exceed \$1,000 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 thirty calendar days after the date of its delivery. The order shall also advise that the administrative authority’s action may be appealed to the board of appeals.
  - (c) Effect of Order; Right to Appeal. The provisions of the order issued by the administrative authority under this section shall become final thirty calendar days after the date of the delivery of the order. The party responsible for the violation may appeal the order to the board of appeals as provided by section 5-1.0.5, Hawai‘i County Building Code (chapter 5). The appeal must be received in writing on or before the date the order becomes final. However, an appeal to the board of appeals shall not stay any provision of the order.
  - (d) Judicial Enforcement of Order. The administrative authority may institute a civil action in any court of competent jurisdiction for the enforcement of any final order issued pursuant to this section. Where the civil action has been instituted to enforce the civil fine imposed by such final 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.
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-35. Criminal prosecution.**

- (a) General Provisions. 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, or by imprisonment for not more than one year, or by both 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 Hawai'i and County of Hawai'i.
- (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 by giving to the violator a 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 copy shall bear the number of its respective original.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-36. Injunctive action.**

The County of Hawai'i may maintain an action for an injunction to restrain or remedy any violation of the provisions of this code and may take any other lawful action to prevent or remedy any violation.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-37. Dangerous and insanitary construction.**

- (a) Any portion of a plumbing system found by the administrative authority to be insanitary as defined herein is hereby declared to be a nuisance. "Insanitary" means a condition which is contrary to sanitary principles or is injurious to health. Conditions to which "insanitary" shall apply include, but are not limited to, the following:
  - (1) Any trap which does not maintain a proper trap seal.
  - (2) Any opening in a drainage system, except where lawful, which is not provided with an approved water-sealed trap.
  - (3) Any 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.
  - (4) Any defective fixture, trap, pipe, or fitting.
  - (5) Any trap directly connected to a drainage system, the seal of which is not protected against siphonage and back-pressure by a vent pipe, unless otherwise allowed by this code.
  - (6) 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 distribution system used for domestic purposes.
  - (7) The foregoing enumeration of conditions to which the term "insanitary" shall apply, shall not preclude the application of that term to conditions that are, in fact, insanitary.
- (b) Upon determining 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 administrative authority may order any person, firm or corporation using or maintaining any 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 may be considered necessary for the proper protection of life, health, or property. In the case of any gas piping or gas appliance, the administrative authority 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 with respect 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 conditions exists, and shall specify the date or time for compliance with such order.

- (c) Refusal, failure, or neglect to comply with any 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.  
(2007, Ord. No. 07-84, sec. 2)

**Section 17-38. Remedies cumulative.**

The remedies provided in this code shall be cumulative and not exclusive.  
(2007, Ord. No. 07-84, sec. 2)

**Section 17-39. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Section 17-40. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Division 7. Variances and Appeals.**

**Section 17-41. Variances.**

Whenever strict application of any provision of this code, except for the provisions relating to materials, methods of construction, equipment, fixtures, devices, or appliances, would result in practical difficulty or unnecessary hardship that would deprive the owner of the reasonable use of the land or building involved, the owner may petition the board of appeals for a variance from the provision. In granting a variance, the board of appeals shall prescribe any conditions that it deems to be necessary or desirable. No variance from the strict application of this code shall be granted by the board of appeals unless it finds that all of the following are present:

- (1) That there are special circumstances or conditions applying to the land or building for which the variance is sought, which circumstances or conditions are peculiar to such land or building and do not apply generally to lands or buildings in the neighborhood or surrounding property, and that the circumstances or conditions are such that the strict application of the provisions of this code would deprive the applicant of the reasonable use of the land or building;
- (2) That the granting of the variance is necessary for the reasonable use of the land or building and that the variance granted is the minimum variance that will accomplish this purpose; and
- (3) That the granting of the variance will be consistent with the intent and purpose of this code, and will not be injurious to persons or property, will not create additional fire hazards, and otherwise will not be detrimental to the public welfare. In making its determination, the board of appeals shall take into account the character, use and type of occupancy and construction of adjoining buildings, buildings on adjoining lots, and the building or land involved.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-42. Appeals regarding alternative materials and methods of construction.**

Any person denied the use of new or alternate materials, methods of construction, equipment, fixtures, devices, or appliances by the administrative authority, may, within thirty days after the administrative authority's decision, appeal the decision to the board of appeals. In considering an appeal, the board may require any reasonable test of the proposed material, method of construction, equipment, fixture, device, or appliance, and the appellant shall pay all expenses necessary for the test. The board of appeals may affirm the decision of the administrative authority or it may reverse the decision if it finds:

- (1) That the new or alternate materials, methods of construction, equipment, fixtures, devices, or appliances meet standards established by this code;
- (2) That permitting the requested use will not jeopardize the safety of persons or property; and
- (3) That the requested use will not be contrary to the intent and purpose of this code.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-43. Other appeals.**

- (a) Any person aggrieved by the decision of the administrative authority in the administration or application of this code, other than that prescribed in sections 17-41 and 17-42, may, within thirty days after the date of the administrative authority's decision, appeal the decision to the board of appeals. The board of appeals may affirm the decision of the administrative authority, or it may reverse or modify the decision if the decision is:
- (1) In violation of this code or other applicable law;
  - (2) Clearly erroneous in view of the reliable, probative, and substantial evidence on the whole record; or
  - (3) Arbitrary, or capricious, or characterized by an abuse of discretion or clearly unwarranted exercise of discretion.
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-44. Rules; adoption by board of appeals.**

The board of appeals shall adopt rules pursuant to chapter 91, Hawai'i Revised Statutes, necessary for the purposes of this article.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-45. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Section 17-46. Reserved.**

(2007, Ord. No. 07-84, sec. 2)

**Article 3. Installation Requirements.****Section 17-47. Uniform Plumbing Code adopted.**

The "International Association of Plumbing and Mechanical Officials Uniform Plumbing Code, 1997 Edition," 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 code. This incorporation by reference includes all parts of the Uniform Plumbing Code, except for part 1, relating to Administration, and is subject to the amendments hereinafter set forth.

- (1) Amending Section 204.0. Section 204.0 is amended by amending the definition of "building drain" to read:
 

"Building Drain - That part of the lowest 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 beginning five feet (1.5 m) outside the building wall."
- (2) Adding a new definition to Section 205.0. A definition of "control valve (water)" is added to read:
 

"Control Valve (Water) – A control valve is any type of valve which can change the flow rate of water, which includes compression stop valves."
- (3) Adding a new definition to Section 210.0. A definition of "health officer" is added to read:
 

"Health Officer - Shall mean the Director of Health of the Department of Health, State of Hawai'i, or the Director's authorized agent."
- (4) Adding a new definition to Section 221.0. A definition of "single-stack system" is added to read:
 

"A single-stack system - A specially designed plumbing system wherein a common stack serves as a drainage pipe as well as a vent pipe."

- (5) 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 Hawai‘i 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 Hawai‘i 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.”
- (6) Amending Section 311.4. Section 311.4 is amended by deleting the last sentence, that reads:
- “Also, single stack drainage and venting systems, with unvented branch lines are prohibited.”
- (7) Deleting Section 311.6.
- Section 311.6 is deleted.
- (8) 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.”
- (9) 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 (1.5 m) of any building or structure or less than one (1) foot (.3 m) below the surface of the ground or as approved by the administrative authority.”
- (10) Deleting Section 314.8.
- Section 314.8 is deleted. (See Table 3-2, which requires only one support within eighteen inches of the joint.)
- (11) 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.”
- (12) Deleting Sections 318.0 and 319.0.
- Sections 318.0 and 319.0 are deleted. (The requirements of Section 318 are covered in DOH Chapter 12, Food Establishment Sanitation 11-12-21.)

- (13) 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.”

- (14) Deleting Section 402.2.

Section 402.2 is deleted.

- (15) Amending Section 402.3. Section 402.3 is amended to read:

**“Section 402.3 Water Closets.**

**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 two and one-half (2.5) gallons per minute at eighty (80) psi and lavatory faucets shall be provided with such flow control devices which limit flow to a maximum of two and one-half (2.5) gallons per minute at eighty (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 one and three-fifths (1.6) gallons per flush and urinals shall have volume limiting devices and methods which will limit the discharge to one (1) gallon per flush. When a satisfactory performance of the water closet or urinal cannot be obtained with one and three-fifths (1.6) gallons or less per flush, or one (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 one and three-fifths (1.6) gallons per flush requirement herein.

**402.3.3** Any new installation using potable water for cooling equipment at a rate exceeding one (1) gallon per minute, or operating more than ten (10) hours in a twenty-four (24) 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.”

- (16) Amending Section 408.6. Section 408.6 is amended by changing the third sentence to read:  
“The clear space in front of any water closet, bidet and lavatory, shall not be less than twenty-four (24) inches (610 mm) which may include adjoining floor area.”
- (17) Deleting Section 412.2.  
Section 412.2 Location of Floor Drains is deleted.
- (18) 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.)
- (19) 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.”
- (20) 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.”
- (21) 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.”
- (22) 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.”
- (23) 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.”
- (24) Amending Sections 507.3.3 and 507.3.5. Sections 507.3.3 and 507.3.5 are amended by changing the first word from “Openings” to “Ducts.”

- (25) 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 one hundred (100) percent opening on one side and fifty (50) percent 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 flow 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.”

- (26) Amending Section 510.5. Section 510.5 is amended to read:

“Due to seismic activity in Hawai’i County, all new water heaters shall be anchored or strapped to resist horizontal displacement due to earthquake motion. Strapping shall be at points within the upper one-third (1/3) and lower one-third (1/3) of its vertical dimensions. At the lower point, a minimum distance of four (4) inches (102 mm) shall be maintained above the controls with the strapping. All strapping shall attach to a well-anchored structural wall.”

- (27) Amending Section 511.0. Section 511.0 is amended by changing the first sentence to read:

“Every water heater, clothes washer and clothes dryer installation should have a working space of not less than thirty (30) inches (762 mm) in front of such appliance for inspection, repair, or replacement.”

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

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

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

- (30) 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 (18) 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 eight (8) feet from an adjacent vertical wall.”

(31) 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 piped water for human consumption, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) 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.”

- (32) 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.”

- (33) 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 assembly tested 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.”

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

“Installations elevated more than five (5) feet (1524 mm) 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.)”

- (35) 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 one (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 two (2) or more including ethylene glycol, hydrocarbon oils, ammonia refrigerants and hydrazine.”

- (36) 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 eight-foot maximum intervals. Below ground piping shall be continuously labeled except for irrigation piping.”

- (37) 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.”

- (38) 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 supplies 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.”

- (39) 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.”

- (40) 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.”

- (41) 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. No dielectric fittings shall be located below grade unless approved by the administrative authority and they shall be wrapped as provided under Section 609.3.1.”
- (42) Amending Section 607.0. Section 607.0 is amended by adding at the end of the last sentence:
- “or other approved method with approval of the administrative authority.”
- (43) Adding Section 607.1. Section 607.1 is added to read:
- “**607.1** 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 (6) inches (152.4 mm) above the overflow. A drain shall be provided at the bottom of the tank.”
- (44) 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.”
- (45) 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.”
- (46) 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 six (6) inches below finish grade or as approved by the administrative authority.”
- (47) Amending Section 609.2. Section 609.2 is amended by changing “as” to “with” in the first line.
- (48) 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.”
- (49) Amending Section 609.7.2. Section 609.7.2 is amended by changing the last two sentences to read:
- “Such an agreement shall be as a part of the conditions of ownership of said properties and shall be binding on all heirs, successors and assigns to such properties.”

(50) Amending Table 6-4 Water Supply Fixture Units (WSFU) and Minimum Fixture Branch Pipe Sizes. Table 6-4 is amended as follows:

- A) Deleted the figures under “3 or more Dwellings” and “Heavy-Use Assembly.”
  
- B) Changed the values (“Minimum Fixture Outlet Pipe Size” and “Notes” remain unchanged) for the following fixtures:
  - Bathtub or Combination Bath/Shower;
  - Clotheswasher, domestic;
  - Kitchen Sink, domestic;
  - Lavatory;
  - Shower;
  - Urinal, 1.0 GPF;
  - Water Closet, 1.6 GPF Gravity Tank;
  - Water Closet, 1.6 GPF Flushometer Tank;
  - Water Closet, 1.6 GPF Flushometer Valve; and
  - Whirlpool Bath or Combination Bath/Shower.

Intentionally left blank.

As amended, Table 6-4 shall read:

<b>“TABLE 6-4</b>			
<b>Water Supply Fixture Units (WSFU) and Minimum Fixture Branch Pipe Sizes</b>			
<b>Individual Fixtures<sup>2</sup></b>	<b>Minimum Fixture Outlet Pipe Size<sup>1</sup></b>	<b>Private Individual Dwelling</b>	<b>Public General Use</b>
Bar Sink	1/2”	1.0	2.0
Bathtub or Combination Bath/Shower	1/2”	2.5	
Bidet	1/2”	1.0	
Clinic Sink	1/2”		8.0
Clotheswasher, domestic	1/2”	2.0	4.0
Dental Unit, cuspidor	1/2”		1.0
Dishwasher, domestic	1/2”	1.5	1.5
Drinking Fountain or Watercooler	1/2”		0.5
Hose Bibb	1/2”	2.5	2.5
Hose Bibb, each additional	1/2”	1.0	1.0
Kitchen Sink, domestic	1/2”	1.6	3.2
Laundry Sink	1/2”	2.0	2.0
Lavatory	1/2”	0.6	1.2
Lawn Sprinkler, each head		1.0	1.0
Mobile Home, each		12.0	
Service Sink or Mop Basin	1/2”		3.0
Shower	1/2”	1.6	3.2
Shower, continuous use	1/2”		5.0
Urinal, 1.0 GPF		1.7	2.8
Urinal, greater than 1.0 GPF			5.0
Urinal, flush tank	1/2”		3.0
Washfountain, circular spray	3/4”		4.0
Washup Sink, each set of faucets	1/2”		2.0
Water Closet, 1.6 GPF Gravity Tank	1/2”	1.7	2.8
Water Closet, 1.6 GPF Flushometer Tank	1/2”	1.7	2.8
Water Closet, 1.6 GPF Flushometer Valve	1”	3.4	5.6
Water Closet, 3.5 GPF Gravity Tank	1/2”	3.0	5.5
Water Closet, 3.5 GPF Flushometer Valve	1”	7.0	8.0
Whirlpool Bath or Combination Bath/Shower	1/2”	2.5	

Notes:

1. Size of the cold branch outlet pipe, or both the hot and cold branch outlet pipes.
2. For unlisted fixtures, refer to a listed fixture with a similar flow rate and frequency of use.
3. The listed fixture unit values represent their total load on the cold water service. The separate cold water and hot water fixture unit value for fixtures having both cold and hot water connections shall each be taken as three-quarters (3/4) of the listed total value of the fixture.
4. The listed minimum supply branch pipe sizes for individual fixtures are the nominal (I.D.) pipe size.
5. “General use” applies to business, commercial, industrial, and assembly occupancies other than those defined under “Heavy-use.” Included are the public and common areas in hotels, motels, and multi-dwelling buildings.
6. “Heavy-use assembly” applies to toilet facilities in occupancies which place a heavy, but intermittent, time-based demand on the water supply system, such as schools, auditoriums, stadiums, race courses, transportation terminals, theaters, and similar occupancies where queuing is likely to occur during periods of peak use.
7. For fixtures or supply connections likely to impose continuous flow demands, determine the required flow in gallons per minute (GPM) and add it separately to the demand (in GPM) for the distribution system or portions thereof.”

(51) Amending Section 609.10. 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.”

(52) 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.”

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

“**Note:** Meter and water service sizes shall be subject to approval of the board of water supply under their rules and regulations.”

(54) Deleting Section 701.1.2.

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

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

“For flashings or vent terminals – not less than two and one-half (2.5) pounds per square foot (12.2 Kg/square meter).”

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

A) Deleted the figures under “3 or more Dwellings” and “Heavy-Use Assembly”.

B) Changed the values for the following fixtures:

- Bathtub or Combination Bath/Shower
- Urinal, 1.0 GPF
- Urinal, greater than 1.0 GPF
- Urinal, 1-1/2” trap

As amended, Table 7-3 shall read:

<b>“TABLE 7-3</b>			
<b>Drainage Fixture Unit Values (DFU)</b>			
<b>Individual Fixtures<sup>2</sup></b>	<b>Min. Size Trap and Trap Arm<sup>7</sup></b>	<b>Private Individual Dwelling</b>	<b>Public General Use</b>
Bar Sink	1-1/2”	1.0	
Bar Sink	1-1/2” <sup>2</sup>		2.0
Bathtub or Combination Bath/Shower	1-1/2”	2.0	
Bidet, 1-1/4” trap	1-1/4”	1.0	
Clinical Sink, 3” trap	3”		6.0
Clothes Washer, domestic, 2” standpipe <sup>5</sup>	2”	3.0	3.0
Dental Unit, cuspidor	1-1/4”		1.0
Dishwasher, domestic, with independent drain	1-1/2”	2.0	2.0
Drinking Fountain or Watercooler	1-1/4”		0.5
Food-waste-grinder, commercial	2”		3.0
Floor Drain, emergency			0.0
Kitchen Sink, domestic, with one 1-1/2” trap	1-1/2” <sup>2</sup>	2.0	2.0
Kitchen Sink, domestic, with food-waste-grinder	1-1/2” <sup>2</sup>	2.0	2.0
Kitchen Sink, domestic, with dishwasher	1-1/2” <sup>2</sup>	3.0	3.0
Kitchen Sink, domestic, with grinder and dishwasher	1-1/2” <sup>2</sup>	3.0	3.0
Laundry Sink, one or two compartments	1-1/2”	2.0	2.0
Laundry Sink, with discharge from clothes washer	1-1/2”	2.0	2.0
Lavatory, single	1-1/4”	1.0	1.0
Lavatory in sets of two or three	1-1/2”	2.0	2.0
Mobile Home, trap	3”	12.0	
Mop Basin, 3” trap	3”		3.0
Receptor, indirect waste, 1-1/2” trap <sup>1,3</sup>	1-1/2”		(1)
Receptor, indirect waste, 2” trap <sup>1,4</sup>	2”		(1)
Receptor, indirect waste, 3” trap <sup>1</sup>	3”		(1)
Service Sink, 2” trap	2”		3.0
Service Sink, 3” trap	3”		3.0
Shower Stall, 2” trap	2”	2.0	2.0
Showers, group, per head (continuous use)	2”		5.0
Sink, commercial, 1-1/2” trap, with food waste	1-1/2” <sup>2</sup>		3.0
Sink, service, flushing rim	3”		6.0
Sink, general, 1-1/2” trap	1-1/2”	2.0	2.0
Sink, general, 2” trap	2”	3.0	3.0
Sink, general, 3” trap	3”		5.0
Urinal, 1.0 GPF			2.0
Urinal, greater than 1.0 GPF			3.0
Urinal, 1-1/2” trap	1-1/2” <sup>2</sup>		2.0
Washfountain, 1-1/2” trap	1-1/2		2.0
Washfountain, 2” trap	2”		3.0
Wash Sink, each set of faucets			2.0

Water Closet, 1.6 GPF Gravity Tank <sup>6</sup>	3”	3.0	4.0
Water Closet, 1.6 GPF Flushometer Tank <sup>6</sup>	3”	3.5	5.0
Water Closet, 1.6 GPF Flushometer Valve <sup>6</sup>	3”	3.0	4.0
Water Closet, 3.5 GPF Gravity Tank <sup>6</sup>	3”	4.0	6.0
Water Closet, 3.5 GPF Flushometer Valve <sup>6</sup>	3”	4.0	6.0
Whirlpool Bath or Combination Bath/Shower	2”	3.0	

<sup>1</sup>Indirect waste receptors shall be sized based on the total drainage capacity of the fixtures that drain therein to, in accordance with Table 7-4.  
<sup>2</sup>Provide a 2” (51 mm) minimum branch drain beyond the trap arm.  
<sup>3</sup>For refrigerators, coffee urns, water stations, and similar low demands.  
<sup>4</sup>For commercial sinks, dishwashers, and similar moderate or heavy demands.  
<sup>5</sup>Buildings having a clothes washing area with clothes washers in a battery of three (3) or more clothes washers shall be rated at six (6) fixture units each for purposes of sizing common horizontal and vertical drainage piping.  
<sup>6</sup>Water closets shall be computed as six (6) fixture units when determining septic tank sizes based on Appendix K of this Code.  
<sup>7</sup>Trap sizes shall not be increased to the point where the fixture discharge may be inadequate to maintain their self-scouring properties.”

(57) 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.”

(58) Deleting Section 704.3.

Section 704.3 is deleted.

(59) Amending Table 7-5. Table 7-5 is amended by adding at the end of Note 4:

“or four (4) - 1.6 gallons per flush water closets on any horizontal branch or drain.”

(60) Amending Section 707.4. Section 707.4 is amended to read:

“Each horizontal drainage pipe shall be provided with a cleanout at its upper terminal, and each run of piping which is more than fifty (50) feet (15.2 m) in length shall be provided with a cleanout for each fifty (50) feet (15.2 m) or fraction thereof, in length of piping, and at each change in pipe size up to four (4) inches (101.6 m).”

(61) Amending Section 707.4, Exception (1). Section 707.4, Exception (1) is amended to read:

“(1) Cleanouts may be omitted on a horizontal drain line less than five (5) feet (1524 mm) in length.”

(62) Amending Section 707.12. Section 707.12 is amended by adding to the end of the last sentence:

“or other engineered design method with the approval of the administrative authority.”

- (63) 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 (6) inches (152.4 mm) above the flood level rim of the lowest fixture.”
- (64) 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.”
- (65) 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 one and one fourth (1-1/4) inches.”
- (66) 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.”
- (67) Amending Section 711.0. Section 711.0 is amended by deleting “Bathtubs,” from the second sentence and capitalizing the initial letter of “laundries” therein.
- (68) Amending Section 715.1. Section 715.1 is amended by deleting “two (2) feet (610 mm)” and inserting in lieu thereof “five feet (1.5 m).”
- (69) Deleting Section 716.0.
- Section 716.0 is deleted.
- (70) Amending Section 717.0. Section 717.0 is amended to read:
- “**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.”
- (71) 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 (1/4) of an inch per foot (20.9 mm 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 (1/4) of an inch per foot (20.9 mm per m), any such pipe or piping four (4) inches (101.6 mm) 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.”

- (72) Amending Section 718.3. Section 718.3 is amended by:
- a) Deleting “two (2) feet (610 mm)” and inserting in lieu thereof “five (5) feet (1.5 m).”
  - b) At the end of the last sentence adding, “or as approved by the administrative authority.”
- (73) 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 (5) feet (1.5 m) 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 (100) feet in straight runs and for each aggregate change in direction exceeding one hundred and thirty-five (135) degrees.”
- (74) 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 environmental management, wastewater division. Cleanouts in sidewalk and driveway areas shall be flush with the surface and shall be of cast iron or brass body with brass plug.”
- (75) Amending Section 721.1. Section 721.1 is amended to read:
- “**721.1** 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.”
- (76) Amending Section 721.2. Section 721.2 is amended by amending the last two sentences to read:
- “Such an agreement shall be as a part of the conditions of ownership of said properties and shall be binding on all heirs, successors and assigns to such properties.”
- (77) 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.”

- (78) 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.”
- (79) Deleting Table 7-7.
- Table 7-7 is deleted.
- (80) 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.)”
- (81) 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).”
- (82) Amending Section 801.2.3. Section 801.2.3 is amended by deleting the words “or airbreak” at the end of the first sentence.
- (83) 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).”
- (84) 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).”
- (85) Deleting Section 801.7.
- Section 801.7 is deleted.
- (86) Amending Section 803.0. Section 803.0 is amended by adding after the last sentence:
- “Indirect waste piping shall be limited to fifteen (15) feet unless approved by the administrative authority.”
- (87) 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.”

- (88) Amending Section 811.1. Section 811.1 is amended to read:
- “**811.1** Chemical industrial liquid wastes which are likely to damage or increase maintenance costs on the sanitary sewer system, detrimentally affect sewage treatment, or contaminate surface or subsurface waters, shall be pretreated to render them innocuous prior to discharge into a drainage system. Any discharge of such waste shall be subject to the provisions of chapter 21, Hawai‘i County Code and all other applicable laws.”
- (89) Deleting Section 814.0.
- Section 814.0 is deleted.
- (90) Deleting Section 815.1.
- Section 815.1 is deleted.
- (91) 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.”
- (92) Deleting Section 903.1.2.
- Section 903.1.2 is deleted. (ABS and PVC DWV piping are approved without limitations of building height.)
- (93) 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.”
- (94) Amending Section 906.6. Section 906.6 is amended by adding:
- “For pre-fabricated flashings – Sheet lead shall be at least two and one-half (2.5) pounds per square foot.”
- (95) 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.”
- (96) 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.”
- (97) Adding Section 1014.11. Section 1014.11 is added to read:
- “**1014.11** Each grease trap or interceptor shall have at least twelve (12) inches clearance above the cover for inspection and maintenance.”
- (98) Deleting Chapter 11.
- Chapter 11 Storm Drainage is deleted.

- (99) 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.”
- (100) 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.”
- (101) 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.”
- (102) 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.”
- (103) 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 and shall be appropriately labeled as gas piping system. 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.”

(104) 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 one thousand (1,000) degrees F.”

(105) Deleting Section 1211.2.

Section 1211.2 is deleted.

(106) 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 encased in an independent concrete jacket with a minimum wall thickness of one and one half (1-1/2) inches. The protective coating shall extend at least one (1) 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.”

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

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

(108) Deleting Section 1211.6.

Section 1211.6 is deleted.

(109) 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.”

- (110) 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.”

- (111) Amending Section 1213.6. Section 1213.6 is amended to read:

“**1213.6** Liquefied petroleum gas piping shall not serve any gas appliance located in a pit or basement where heavier than air gas might collect to form a flammable mixture.”

- (112) Adding Section 1213.10. Section 1213.10 is added to read:

“**1213.10** Liquefied Petroleum Gas Cylinder Tank Facilities more than twenty-four (24) inches in vertical height, shall be secured against seismic movements within the upper top one-third (1/3) of its vertical dimensions.”

- (113) 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.”

- (114) 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 (1/2) inch for a recessed oven section, a recessed top section, or for a freestanding range using L.P.G.”

- (115) 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.”

- (116) 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 (3) to five (5) psig (20.7 or 34.5 kPa) gas.”

- (117) Amending Section 1218.8. Section 1218.8 is amended by deleting “eighteen (18) inches (457.2 mm)” and inserting in lieu thereof “twelve (12) inches (304.8 mm).”

- (118) 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.”

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

<b>“TABLE 12-1</b>		
<b>Demand of Typical Domestic Gas Appliances</b>		
<b>In Cubic Feet Per Hour</b>		
<b>Appliance</b>	<b>Demand in Cu. Ft./Hr</b>	
	<b>SNG</b>	<b>LPG</b>
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”

(120) Amending Section 1301.1. Section 1301.1 is amended by adding the last sentence to read:

“The provisions of this Chapter on Medical Gas Systems shall be used as REFERENCE ONLY, for the design and construction of Medical Gas Systems. This section will not be regulated or enforced by the County of Hawai‘i.”

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

**“1301.3** Those facilities that do not provide twenty-four (24) hour patient care shall not be required to provide alarm systems or multiple supply sources for air, vacuum and gas systems.”

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

**“1303.1** 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.)”

(123) 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.”

(124) Amending Section 1322.0. Section 1322.0 Inspection is amended by replacing the word “Administrative Authority” with “Certified Medical Gas System Verifier”(Individuals who have successfully passed an National Inspection Testing Certification Service competency examination in accordance with the ASSE Series 6000 Standard, Section 6030) in Sections 1322.1 – 1322.9.

- (125) Amending Section 1322.2. Section 1322.2 is amended by changing “twenty-four (24) hours” to “forty-eight (48) hours.”
- (126) 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 such engineer’s knowledge complies with the installation requirements.”
- (127) Amending Chapter 14 Mandatory Referenced Standards. Chapter 14 is amended by deleting the word “Mandatory” from the title.
- (128) Deleting Appendix D, Sizing Stormwater Drainage Systems.  
 Appendix D is deleted.
- (129) Deleting Appendix E, Manufactured/Mobile Home Parks and Recreational Vehicle Parks.  
 Appendix E is deleted.
- (130) Deleting Appendix G, Graywater Systems for Single Family Dwellings.  
 Appendix G is deleted.
- (131) 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 rules and regulations of the Hawai‘i County Code, Chapter 21, pertaining to Grease Interceptors and Grease Traps.”
- (132) Deleting Appendix I, Installation Standards.  
 Appendix I is deleted. Although it is not a part of the code, it is included for the convenience of the user.
- (133) Deleting Appendix J, Reclaimed Water Systems for Non-Residential Buildings.  
 Appendix J is deleted.
- (134) Deleting Appendix K, Private Sewage Disposal Systems.  
 Appendix K is deleted. (Private sewage disposal systems are governed by Hawai‘i Administrative Rules, Title 11, State Department of Health, Chapter 62, Wastewater Systems.)
- (2007, Ord. No. 07-84, sec. 2)

**Section 17-48. Reserved.**  
 (2007, Ord. No. 07-84, sec. 2)

**Section 17-49. Reserved.**  
 (2007, Ord. No. 07-84, sec. 2)

**Article 4. Plumbing Work Within Special Flood Hazard Areas.****Section 17-50. General applicability.**

The provisions of this article shall apply to the construction of any new plumbing system, renovation and major alteration, addition, or reconstruction of existing plumbing system within any special flood hazard area as identified by chapter 27, Hawai'i County Code.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-51. Exemptions.**

The provisions of this article shall not apply to the following:

- (1) Any plumbing system serving a building or structure exempted from chapter 27, Hawai'i County Code;
- (2) Any plumbing system serving a building or structure which has been granted a flood control variance pursuant to article 2, chapter 27, Hawai'i County Code; or
- (3) Any plumbing system lawfully existing prior to November 8, 1993, subject to the provisions of chapter 27, Hawai'i County Code.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-52. Definitions.**

For the purpose of this article, the following words and terms are defined in the same manner as those words and terms are defined in section 27-12, Hawai'i County Code:

- (1) Base flood elevation.
- (2) Flood or flooding.
- (3) Special flood hazard area.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-53. Drainage (plumbing) systems.**

- (a) Drainage systems that have openings below the base flood elevation shall be provided with an automatic backwater valve installed in each discharge line passing through a building exterior wall, except backwater valves may be deleted if the fixture drainage openings are located at or above a floor level which is above the surrounding ground level.
- (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 one hundred fifty percent of the anticipated demand for a twenty-four hour period. Vents provided for such holding tank shall terminate at an elevation of at least one foot above the base flood elevation.
- (c) All pipes in a plumbing vent system shall terminate at an elevation of at least one foot above the base flood elevation.
- (d) All pipe openings through exterior walls below the base flood elevation shall be floodproofed to prevent infiltration of flood water through spaces between pipes and wall construction materials by use of embedded collars, sleeves, waterstops, or other means as may be approved by the administrative authority.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-54. Private sewage disposal/treatment.**

An individual private sewage disposal system or a treatment facility may be permitted in a special flood hazard area when the design and location of such system or facility is approved by the State department of health. In addition to complying with public health regulations and administrative rules of the State department of health, any such new or replacement sewage disposal system shall be designed to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-55. Water supply systems.**

- (a) Potable water supply systems that are located in a special flood hazard area shall be designed and installed in such a manner as to prevent contamination from flood waters up to the base flood elevation. Location and construction of private water supply wells shall comply with rules and regulations of the department of water supply of the County of Hawai'i.
- (b) Potable water supply tanks, filters, softeners, heaters, and all water-supplied appliances and fixtures located below the base 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 base flood elevation.
- (c) Backflow preventers or devices approved by the department of water supply shall be installed on water service lines as close to the property control valve as possible to protect the public water system from backflow or back siphonage of flood waters or other contaminants in the event of a line break. Devices shall be installed at accessible locations and shall be maintained in good working condition by the owner. The backflow preventers or devices shall be subject to periodic testing as prescribed in the rules and regulations of the department of water supply.
- (d) An approved double-check valve assembly shall be used in lieu of any vacuum breaker, permitted, or otherwise required under this chapter when located below the regulatory flood elevation.
- (e) Air relief valves are permitted on private pipelines only when installed at least one foot above the base flood elevation.

(2007, Ord. No. 07-84, sec. 2)

**Section 17-56. Plumbing piping under buildings.**

Plumbing piping under buildings constructed on stilts shall be securely anchored against lateral movement and flotation and protected against damage by flood water 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.

(2007, Ord. No. 07-84, sec. 2)