

## **Introduction to this document**

Seattle Municipal Code Section 22.502.016 adopts Chapter 51-56 of the Washington Administrative Code (WAC) as the base language for the Seattle Plumbing Code. Chapter 51-56 WAC adopts the Uniform Plumbing Code (UPC) and adds state-level amendments. This document contains Seattle-specific amendments to Chapter 51-56 WAC.

Seattle adopts a new Chapter 1 in place of WAC 51-56-0100; it is presented in this document as an entirely new chapter. Other UPC sections are presented with Seattle's amendments incorporated, sometimes in addition to state-level amendments, using the UPC's existing format for markup.

Section numbers in Chapter 51-56 WAC correspond to the UPC chapter they contain/amend: WAC 51-56-0200 addresses Chapter 2 UPC, WAC 51-56-0300 addresses Chapter 3 UPC, and so on up to Chapter 51-56-1700 addressing Chapter 17 UPC. The amendments in this document to each UPC chapter are amendments to the corresponding WAC section.

## CHAPTER 1

# ADMINISTRATION

**Chapter 1 is entirely Seattle amendments; changes from the 2021 Uniform Plumbing Code with Washington State amendments are not shown.**

### SECTION 101

#### TITLE, SCOPE, AND PURPOSE

**101.1 Title.** These regulations shall be known as the “Seattle Plumbing Code,” may be cited as such, and are referred to herein as “this Code.” All references to the Uniform Plumbing Code contained in this Code mean the Seattle Plumbing Code.

**101.2 Scope.** This Code applies to the erection, installation, alteration, repair, relocation, replacement, addition to, use or maintenance of plumbing systems within the City. The design and testing of equipment regulated by this Code are subject to the approval of the Authority Having Jurisdiction.

**101.3 Purpose.** The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation, and maintenance or use of plumbing systems within the City.

The purpose of this code is to provide for and promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this code.

**101.4 Applicability of City Laws.** A plumbing permit application shall be considered under applicable city law in effect on the date a valid and fully complete plumbing permit application is submitted or on a date as otherwise required by law.

**101.4.1 Complete Plumbing Permit Applications.** A plumbing permit application is complete if the Authority Having Jurisdiction determines it meets the requirements of Sections 107.1 and 107.6 through 107.7.7.

**Exception:** When the Authority Having Jurisdiction allows a plumbing permit application to be submitted in phases for portions of the building, each phased portion submittal shall meet the requirements of Sections 107.1 and 107.6 through 107.7.7 applicable to the scope of the allowed phased portion, and the plumbing permit application shall be considered complete for the purpose of Section 101.4 on the date the phased portion submittal is submitted.

**101.4.2 Permit Conditions and Denial.** The Authority Having Jurisdiction may impose on a permit any conditions authorized by this Code or other pertinent ordinances, regulations or laws. In addition, the Authority Having Jurisdiction may deny a permit if the Authority Having Jurisdiction determines that the proposed project or plumbing design documents do not conform to the requirements of this Code, or other pertinent laws, ordinances or regulations.

**101.5 Internal Consistency.** If in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive governs. If there is a conflict between a general requirement and a specific requirement, the specific requirement governs.

**101.6 Referenced Codes and Standards.** The codes and standards referenced in this code are part of the requirements of this code to the extent prescribed by each such reference. If differences occur between provisions of this code and referenced codes and standards, the provisions of this code apply.

**Exception:** Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and manufacturer’s instructions apply.

**101.7 Appendices.** Provisions in the Uniform Plumbing Code appendices do not apply except Appendices A, B, I and M which are specifically adopted.

**101.8 Metric Units.** Wherever in this Code there is a conflict between metric units of measurement and U.S. customary units, the U.S. customary units govern.

**101.9 References to Other Codes.** Whenever an International, National or Uniform Code is referenced in this Code, it means the Seattle edition of that Code, including local amendments. References to the “Building Code,” “Mechanical Code,” “Fuel Gas Code,” “Fire Code” and “Residential Code” mean the Seattle editions of those codes.

### SECTION 102

#### ORGANIZATION AND DUTIES OF AUTHORITY HAVING JURISDICTION

**102.1 Jurisdiction of Public Health—Seattle and King County.** The Director of Public Health—Seattle and King County is the Authority Having Jurisdiction. The Director and the Director’s authorized representative are authorized to

administer and enforce this code; provided, that the Director of Seattle Public Utilities or his or her authorized representative shall administer and enforce provisions relating to the inspection and approval of water meters and, where applicable, building supply piping.

**102.2 Designees.** The Authority Having Jurisdiction may appoint such officers, inspectors, assistants and employees as are authorized from time to time. The Authority Having Jurisdiction may authorize such employees and other agents as may be necessary to carry out the functions of the Authority Having Jurisdiction.

**102.3 Right of Entry.** With the consent of the owner or occupier of a building or premises, or pursuant to a lawfully issued warrant, the Authority Having Jurisdiction may enter a building or premises at any reasonable time to perform the duties imposed by this code.

**102.4 Modifications.** The Authority Having Jurisdiction may modify the provisions of this Code for individual cases if the Authority Having Jurisdiction finds: (1) there are practical difficulties involved in carrying out the provisions of this code; (2) the modification is in conformity with the intent and purpose of this code; and (3) the modification will provide a reasonable level of strength, effectiveness, fire resistance, durability, safety and sanitation when considered together with other safety features of the building or other relevant circumstances. The Authority Having Jurisdiction may, but is not required to, record the approval of modifications and any relevant information in the files of the Authority Having Jurisdiction or on the approved construction documents.

**102.5 Liability.** Nothing in this Code is intended to be nor shall be construed to create or form the basis for any liability on the part of the Authority Having Jurisdiction or the City, or their officers, employees or agents, for any injury or damage resulting from the failure of equipment to conform to the provisions of this Code, or by reason or as a consequence of any inspection, notice, order, certificate, permission or approval authorized or issued or done in connection with the implementation or enforcement of this Code, or by reason of any action or inaction on the part of the Authority Having Jurisdiction or the City related in any manner to the enforcement of this code by their officers, employees or agents.

This Code shall not be construed to lessen or relieve the responsibility of any person owning, operating or controlling any equipment, building or structure for any damages to persons or property caused by defects, nor shall the Authority Having Jurisdiction or the City of Seattle be held to have assumed any such liability by reason of the inspections authorized by this Code or any permits or certificates issued under this Code.

#### **102.6 Responsibilities of Parties.**

**102.6.1 Responsibility for Compliance.** Compliance with the requirements of this code is the obligation of the owner of the building, structure or premises, the authorized agent of the owner, and other persons responsible for the condition or work, and not of the Authority Having Jurisdiction or the City or any of their officers, employees or agents.

**102.6.2 Responsibilities of Registered Design Professional in Responsible Charge.** It is the responsibility of the registered design professional in responsible charge to ensure that the information in the plumbing system documents is complete, accurate, and, to the best of the design professional's knowledge, complies with the requirements of this Code.

**102.6.3 Responsibilities of Contractor.** It is the responsibility of the contractor to perform all the work in compliance with this Code, and in accordance with the approved plumbing design documents.

**102.6.4 Responsibilities of Plans Examiner.** It is the responsibility of the plans examiner to verify that the description of the work in the plumbing design documents is substantially complete, and to require corrections where, to the best of the plans examiner's knowledge, the plumbing design documents do not conform to this Code or other pertinent laws and ordinances.

**102.6.5 Responsibilities of Field Inspector.** It is the responsibility of the field inspector to conduct inspections to verify that the work in progress conforms with the approved plumbing design documents and to require corrections where, to the best of the field inspector's knowledge, the work either does not conform to the plumbing design documents or where the work is in violation of this Code or other pertinent laws and ordinances.

### **SECTION 103 RULES OF THE AUTHORITY HAVING JURISDICTION**

**103.1 Authority.** The Authority Having Jurisdiction has authority to issue interpretations of this Code and to adopt and enforce rules and regulations supplemental to this Code as may be deemed necessary to clarify the application of the provisions of this Code. Such interpretations, rules and regulations shall be in conformity with the intent and purpose of this Code.

**103.2 Procedure for Adoption of Rules.** The Authority Having Jurisdiction shall promulgate, adopt and issue rules according to the procedures specified in the Administrative Code, Chapter 3.02 of the Seattle Municipal Code.

**103.3 Construction Codes Advisory Board Committee.** A committee of the Construction Codes Advisory Board may examine proposed administrative rules, and amendments relating to this Code and related provisions of other codes and make

recommendations to the Authority Having Jurisdiction and to the City Council for changes in this code. The committee will be called on as needed by the Construction Codes Advisory Board.

## **SECTION 104 APPLICATION TO EXISTING PLUMBING SYSTEMS**

**104.1 Additions, Alterations, Renovations or Repairs.** Additions, alterations, renovations or repairs may be made to any plumbing system without requiring the existing plumbing system to comply with all the requirements of this Code, if the addition, alteration, renovation or repair conforms to the standards required for a new plumbing system. Additions, alterations, renovations or repairs shall not cause an existing system to become unsafe, unhealthy or overloaded.

Minor additions, alterations, renovations, and repairs to existing plumbing systems may be installed in accordance with the law in effect at the time the original installation was made, if approved by the Authority Having Jurisdiction.

**104.2 Existing Installations.** Plumbing systems lawful at the time of the adoption of this Code may continue their use, be maintained or repaired, or have components replaced if the use, maintenance, repair, or component replacement is done in accordance with the basic original design and location, and no hazard to life, health or property has been or is created by such plumbing system.

**104.3 Changes in Building Occupancy.** Plumbing systems that are a part of a building or structure undergoing a change in occupancy as defined in the International Building Code shall comply with all requirements of this Code that are applicable to the new use or occupancy.

**104.4 Maintenance.** All plumbing systems, materials, equipment, appurtenances and all parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe and hazard-free condition. All devices or safeguards that were required by a code in effect when the plumbing system was installed shall be maintained in conformance with the code edition under which installed.

The owner or the owner's designated agent is responsible for maintenance of plumbing systems and equipment. To determine compliance with this subsection, the Authority Having Jurisdiction may cause a plumbing system or equipment to be reinspected.

**104.5 Health and Safety.** Where compliance with the provisions of this Code fails to eliminate or alleviate a nuisance, or other dangerous or insanitary condition that involves health or safety hazards, the owner or the owner's agent shall install such additional plumbing and drainage facilities or shall make such repairs or alterations as ordered by the Authority Having Jurisdiction.

**104.6 Landmarks—Historic Buildings and Structures.** The Authority Having Jurisdiction may modify the specific requirements of this Code as it applies to landmarks and require in lieu thereof alternate requirements that, in the opinion of the Authority Having Jurisdiction, will result in a reasonable degree of safety to the public and the occupants of those buildings.

For purposes of this section, a landmark is a building or structure: that is subject to a requirement to obtain a certificate of approval from the City Landmarks Preservation Board before altering or making significant changes to specific features or characteristics, that has been nominated for designation and the City Landmarks Preservation Board has not issued a determination regarding designation, that has been designated for preservation by the City Landmarks Preservation Board, that has been designated for preservation by the State of Washington, that has been listed or determined eligible to be listed in the National Register of Historic Places, or that is located in a landmark or special review district subject to a requirement to obtain a certificate of approval before making a change to the external appearance of a structure.

## **SECTION 105 UNSAFE PLUMBING SYSTEM, EQUIPMENT AND HAZARD CORRECTION ORDER**

**105.1 Emergency Order.** Whenever the Authority Having Jurisdiction finds that any plumbing system or equipment regulated by this Code is in such a dangerous and unsafe condition as to constitute an insanitary condition, which may cause an imminent hazard to life or limb, the Authority Having Jurisdiction may issue an emergency order. The emergency order may (1) direct that the plumbing system and equipment be restored to a safe and sanitary condition by a date certain; (2) require that the building, structure or premises, or portion thereof, containing the insanitary plumbing and equipment be vacated within a reasonable time to be specified in the order, or in the case of extreme danger and unsafe condition, the order may specify immediate vacation of the building, structure or premises, or portion thereof; or (3) authorize immediate disconnection of the utilities.

**105.1.1 Service of Emergency Order.** The order shall be posted on the premises or personally served on the owner of the building or premises or any person responsible for the condition. The order shall specify the time for compliance.

**105.1.2 Effect of Emergency Order.** No person may occupy a building, structure or premises, or portion thereof, after the date on which the building is required to be vacated until the building, structure or premises, or portion thereof, is

restored to a safe and sanitary condition as required by the order and this Code. It is a violation for any person to fail to comply with an emergency order issued by the Authority Having Jurisdiction.

**105.2 Hazard Correction Order.** Whenever the Authority Having Jurisdiction finds that an unsafe plumbing system or equipment exists, the Authority Having Jurisdiction may issue a hazard correction order specifying the conditions causing the unsafe plumbing or equipment to be unsafe and directing the owner or other person responsible for the unsafe plumbing or equipment to correct the condition by a date certain. In lieu of correction, the owner may submit a report or analysis to the Authority Having Jurisdiction analyzing said conditions and establishing that the equipment is, in fact, safe. The Authority Having Jurisdiction may require that the report or analysis be prepared by a licensed engineer.

**105.2.1 Service of Hazard Correction Order.** The order shall be served upon the owner, agent or other responsible person by personal service or regular first class mail addressed to the last known address of such person or if no address is available after reasonable inquiry, the order may be posted in a conspicuous place on the premises. The order may also be posted if served by personal service or first class mail.

**105.2.2 Effect of Hazard Correction Order.** It is a violation for any person to fail to comply with a hazard correction order as specified in this subsection.

## **SECTION 106 ENFORCEMENT, VIOLATIONS AND PENALTIES**

**106.1 Violations.** It is a violation of this code for any person to:

- (1) Install, erect, construct, enlarge, alter, repair, replace, remodel, move, improve, remove, convert or demolish, equip, occupy, use or maintain any plumbing system or equipment, or cause or permit the same to be done, in the City, contrary to or in violation of any of the provisions of this Code.
- (2) Knowingly aid, abet, counsel, encourage, hire, induce or otherwise procure another to violate or fail to comply with this Code.
- (3) Use any material or install any device, appliance or equipment that is subject to this code and has not been approved by the Authority Having Jurisdiction.
- (4) Violate or fail to comply with any order issued by the Authority Having Jurisdiction pursuant to the provisions of this code or with any requirements of this Code.
- (5) Remove, mutilate, destroy or conceal any notice or order issued or posted by the Authority Having Jurisdiction pursuant to the provisions of this Code, or any notice or order issued or posted by the Authority Having Jurisdiction in response to a natural disaster or other emergency.
- (6) Conduct work under a permit without requesting an inspection as required by Section 109.

**106.2 Notice of Violation.** When, after investigation, the Authority Having Jurisdiction determines that standards or requirements of this Code have been violated or that orders or requirements have not been complied with, the Authority Having Jurisdiction may issue a notice of violation upon the owner, agent, or other person responsible for the action or condition. The notice of violation shall state the standards or requirements violated, shall state what corrective action, if any, is necessary to comply with the standards or requirements, and shall set a reasonable time for compliance.

**106.2.1 Service of Notice of Violation.** The notice shall be served upon the owner, agent or other responsible person by personal service or regular first class mail addressed to the last known address of such person, or if no address is available after reasonable inquiry, the notice may be posted in a conspicuous place on the premises. The notice may also be posted if served by personal service or first class mail. Nothing in this section limits or precludes any action or proceeding to enforce this code, and nothing obligates or requires the Authority Having Jurisdiction to issue a notice of violation prior to the imposition of civil or criminal penalties.

**106.2.2 Review of Notice of Violation by the Authority Having Jurisdiction.** Any person affected by a notice of violation issued pursuant to Section 106.2 may obtain a review of the notice by making a request in writing to the Authority Having Jurisdiction within ten days after service of the notice. When the last day of the period computed is a Saturday, Sunday, or city holiday, the period runs until 5 p.m. of the next business day.

**106.2.2.1 Review Procedure.** The review shall occur not less than ten nor more than 20 days after the request is received by the Authority Having Jurisdiction unless otherwise agreed to by the person requesting the review. Any person affected by the notice of violation may submit additional information to the Authority Having Jurisdiction.

The review shall be made by a representative of the Authority Having Jurisdiction who will review any additional information that is submitted and the basis for issuance of the notice of violation. The reviewer may request clarification of the information received and a site visit.

**106.2.2.2 Decision.** After the review, the Authority Having Jurisdiction shall:

- (1) Sustain the notice;

- (2) Withdraw the notice;
- (3) Amend the notice; or
- (4) Continue the review to a date certain.

**106.2.2.3 Order.** The Authority Having Jurisdiction shall issue an order containing the decision within 15 days of the date that the review is completed and shall cause the order to be mailed by regular first class mail to the persons requesting the review and the persons named on the notice of violation, addressed to their last known address.

**106.3 Stop Work Orders.** The Authority Having Jurisdiction may issue a stop work order whenever any work is being done contrary to the provisions of this Code, contrary to a permit issued by the Authority Having Jurisdiction, or in the event of dangerous or unsafe conditions related to equipment or construction. The stop work order shall identify the violation and may prohibit work or other activity on the site.

**106.3.1 Service of Stop Work Order.** The Authority Having Jurisdiction shall serve the stop work order by posting it in a conspicuous place at the site. If posting is not physically possible, then the stop work order may be served by personal service or by regular first class mail to the last known address of: the property owner, the person doing or causing the work to be done, or the holder of a permit if work is being stopped on a permit. For purposes of this section, service is complete at the time of posting or of personal service, or if mailed, three days after the date of mailing. When the last day of the period so computed is a Saturday, Sunday or city holiday, the period runs until 5 p.m. on the next business day.

**106.3.2 Effective Date of Stop Work Order.** Stop work orders are effective when posted, or if posting is not physically possible, when one of the persons identified in Section 106.3.1 is served.

**106.3.3 Review of Stop Work Orders by the Authority Having Jurisdiction.** Any person aggrieved by a stop work order may obtain a review of the order by delivering to the Authority Having Jurisdiction a request in writing within two business days of the date of service of the stop work order.

**106.3.3.1 Review Procedure.** The review shall occur within two business days after receipt by the Authority Having Jurisdiction of the request for review unless otherwise agreed by the person making the request. Any person affected by the stop work order may submit additional information to the Authority Having Jurisdiction for consideration as part of the review at any time prior to the review. The review will be made by a representative of the Authority Having Jurisdiction who will review all additional information received and may also request a site visit.

**106.3.3.2 Decision.** After the review, the Authority Having Jurisdiction may:

- (1) Sustain the stop work order;
- (2) Withdraw the stop work order;
- (3) Modify the stop work order; or
- (4) Continue the review to a date certain.

**106.3.3.3 Order.** The Authority Having Jurisdiction shall issue an order containing the decision within two business days after the review is completed and shall cause the order to be sent by regular first class mail to the person or persons requesting the review, any person on whom the stop work order was served, and any other person who requested a copy before issuance of the order, addressed to their last known address.

**106.4 Authority to Disconnect Utilities in Emergencies.** The Authority Having Jurisdiction has the authority to disconnect water, fuel-gas utility service or energy supplies to a building, structure, premises or equipment regulated by this Code in case of emergency where necessary to eliminate an immediate hazard to life or property. The Authority Having Jurisdiction may enter any building or premises to disconnect utility service. The Authority Having Jurisdiction shall, whenever possible, notify the serving utility, the owner and the occupant of the building, structure or premises of the decision to disconnect prior to taking such action, and shall notify the serving utility, owner and occupant of the building, structure or premises in writing of such disconnection immediately thereafter.

**106.5 Authority to Condemn Equipment.** Whenever the Authority Having Jurisdiction determines that any equipment or portion thereof regulated by this Code is hazardous to life, health or property, the Authority Having Jurisdiction shall order in writing that such equipment either be disconnected, removed or restored to a safe or sanitary condition, as appropriate. The written notice shall fix a date certain for compliance with such order. It is a violation for any person to use or maintain defective equipment after receiving such notice.

When any equipment or installation is to be disconnected, the Authority Having Jurisdiction shall give written notice of such disconnection and causes therefore within 24 hours to the serving utility, the owner and the occupant of the building, structure or premises. When any equipment is maintained in violation of this Code, and in violation of a notice issued pursuant to the provisions of this section, the Authority Having Jurisdiction shall institute any appropriate action to prevent, restrain, correct or abate the violation.

**106.6 Connection After Order to Disconnect.** No person shall make connections from any water, energy, fuel or power supply nor supply water, energy or fuel to any equipment regulated by this Code that has been disconnected or ordered to be

disconnected by the Authority Having Jurisdiction, or the use of which has been ordered to be discontinued by the Authority Having Jurisdiction until the Authority Having Jurisdiction authorizes the reconnection and use of such equipment.

**106.7 Civil Penalties.** Any person violating or failing to comply with the provisions of this Code is subject to a cumulative civil penalty in an amount not to exceed \$500 per day for each violation from the date the violation occurs or begins until the date compliance is achieved. In cases where the Authority Having Jurisdiction has issued a notice of violation, the violation will be deemed to begin, for purposes of determining the number of days of violation, on the date compliance is required by the notice of violation.

**106.8 Enforcement in Municipal Court.** Civil actions to enforce this Code shall be brought exclusively in Seattle Municipal Court, except as otherwise required by law or court rule. In any civil action for a penalty, the City has the burden of proving by a preponderance of the evidence that a violation exists or existed; the issuance of a notice of violation or of an order following a review by the Authority Having Jurisdiction is not itself evidence that a violation exists.

**106.9 Judicial Review.** Because civil actions to enforce this Code must be brought exclusively in Seattle Municipal Court pursuant to Section 106.8, orders of the Authority Having Jurisdiction, including notices of violation issued under this chapter, are not subject to judicial review pursuant to chapter 36.70C RCW.

**106.10 Alternative Criminal Penalty.** Anyone who violates or fails to comply with any notice of violation or order issued by the Authority Having Jurisdiction pursuant to this Code or who removes, mutilates, destroys or conceals a notice issued or posted by the Authority Having Jurisdiction shall, upon conviction thereof, be punished by a fine of not more than \$5000 or by imprisonment for not more than 365 days, or by both such fine and imprisonment for each separate violation. Each day's violation shall constitute a separate offense.

**106.11 Additional Relief.** The Authority Having Jurisdiction may seek legal or equitable relief to enjoin any acts or practices and abate any condition when necessary to achieve compliance.

**106.12 Administrative Review by the Authority Having Jurisdiction.** Prior to issuance of the plumbing permit, applicants may request administrative review by the Authority Having Jurisdiction of decisions or actions pertaining to the administration and enforcement of this code. Requests shall be addressed to the Authority Having Jurisdiction.

**106.13 Administrative Review by the Construction Codes Advisory Board.** After administrative review by the Authority Having Jurisdiction, and prior to issuance of the plumbing permit, applicants may request review of decisions or actions pertaining to the application and interpretation of this Code by the Construction Codes Advisory Board according to Seattle Building Code Section 105.11, except for stop work orders, notices of violations and revocations of permits. The review will be performed by three or more members of the Construction Codes Advisory Board, chosen by the Board Chair. The Chair shall consider the subject of the review and members' expertise when selecting members to conduct a review. The decision of the review panel is advisory only; the final decision is made by the Authority Having Jurisdiction.

## SECTION 107 PERMITS

**107.1 Permits Required.** Except as otherwise specifically provided in this Code, a permit shall be obtained from the Authority Having Jurisdiction prior to each installation, alteration, repair, replacement or remodel of any equipment or plumbing system regulated by this Code. A separate plumbing permit is required for each separate building or structure.

**107.2 Work Exempt from Permit.** A plumbing permit is not required for the work listed below.

- (1) The stopping of leaks in drains, soil, waste, or vent pipes, provided, that when a drainpipe, soil, waste, or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, the same shall be considered as new work and a permit shall be procured and inspection made as provided in this Code.
- (2) The clearing of stoppages, including the removal and reinstallation of water closets, or the repairing of leaks in pipes, valves, or fixtures, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.

**107.3 Compliance Required.** All work shall comply with this Code, even where no permit is required.

**107.4 Flood Hazard Areas.** In addition to the permit required by this section, all work to be performed in areas of special flood hazard as defined in Chapter 25.06 of the Seattle Municipal Code, subject to additional standards and requirements set forth in Chapter 25.06, the Seattle Floodplain Development Ordinance.

**107.5 Emergency Repairs.** In the case of an emergency, the installation, alteration or repair of any plumbing system or equipment may be made without a permit, provided that application for a permit is made within the later of 24 hours or one working day from the time when the emergency work was started.

**107.6 Application for Permit.** To obtain a permit, the applicant shall first file an application in a format determined by the Authority Having Jurisdiction. Every such application shall:

- (1) Identify and describe the work to be covered by the permit for which application is made.

- (2) Describe the land on which the proposed work is to be done by parcel number, property address or similar description that will readily identify and clearly locate the proposed building or project.
- (3) Provide unit, space suite, floor level, or other information that will clearly identify the location of the project
- (4) Provide the owner's name, address, and phone number of the property.
- (5) Provide the contractor's business name, address, and phone number of the property.
- (6) Be accompanied by plans, diagrams, computations and specifications, equipment schedules and other data as required by the Authority Having Jurisdiction.
- (7) Be signed by the owner of the property or building, or the owner's authorized agent, who may be required to submit evidence to indicate such authority.
- (8) Give such other data and information as may be required by the Authority Having Jurisdiction.
- (9) State the name of the owner and the name, address and phone number of a contact person.

**107.6.1 Plumbing Design Documents.** Plumbing design documents shall be submitted with each application for a permit, in electronic format to the Authority Having Jurisdiction. Diagrams, schedules, and other data sufficient to show the adequacy of the plans shall be submitted when required by the Authority Having Jurisdiction.

**Exception:** The Authority Having Jurisdiction may waive the submission of plumbing design documents where the Authority Having Jurisdiction finds that the nature of the work applied for is such that reviewing plumbing documents is not necessary to obtain compliance with this Code.

**107.6.2 Preparation by Registered Design Professionals.** Plumbing design documents for all plumbing work shall be prepared and designed by or under the direct supervision of a mechanical engineer licensed to practice under the laws of the State of Washington. Each sheet of plumbing documents shall bear the seal and the signature of the registered design professional before the permit is issued.

**Exceptions:**

- (1) Detached one- and two-family dwellings, and townhomes.
- (2) Design documents that do not include systems specifically required to be designed by a registered design professional shall be permitted to be submitted without a PE stamp by any individual holding an active Certified in Plumbing Design (CPD) designation issued by the American Society of Plumbing Engineers (ASPE) or by a Washington State Certified Journeyman Plumber (PL01).
- (3) Design documents provided for reference only.
- (4) Other work as specified by the Authority Having Jurisdiction.

**107.6.3 Registered Design Professional in Responsible Charge.** The Authority Having Jurisdiction is authorized to require the owner to engage and designate on the plumbing permit application a Registered Design Professional who shall act as the Registered Design Professional in Responsible Charge. If the circumstances require, the owner shall designate a substitute Registered Design Professional in Responsible Charge who shall perform the duties required of the original Registered Design Professional in Responsible Charge. The Authority Having Jurisdiction shall be notified in writing by the owner if the Registered Design Professional in Responsible Charge is changed or is unable to continue to perform their duties. The Registered Design Professional in Responsible Charge is responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design and scope of the project.

**107.7 Information Required on Plumbing Design Documents.** The documents shall include the following, as applicable:

**107.7.1 Cover Sheet.** The cover sheet shall include the project address, parcel number, scope of work narrative, legends, abbreviations, general notes, applicable code cycles, and other information as required by the Authority Having Jurisdiction.

**107.7.2 Calculations and Notes.** Calculations and/or load summaries shall be provided to determine system loading for each plumbing system included in the project scope of work. Provide a separate calculation for each separate utility point of connection. Domestic water pressure loss calculations shall be provided for each independent domestic water system or pressure zone. Notes shall include proposed material types and joining methods, insulation requirements, disinfection procedures, and similar information as required by the Authority Having Jurisdiction.

**107.7.3 Schedules.** Schedules shall be provided for all fixtures and equipment associated with the plumbing system design. Schedules shall include all information required to verify compliance with this code and the Seattle Energy Code. Such information may include operating weight, equipment make/model, applicable standards, connection sizes, flow rates, input/output ratings and similar information as required by the Authority Having Jurisdiction.



**107.7.3.1 Energy Code Compliance.** Equipment required to comply with provisions of the Seattle Energy Code shall include make/model and any other design or listing information required to determine compliance.

**107.7.4 Plan Sheets.** Plan sheets shall include building information, plumbing system design information, scale, key plan, north arrow, and similar information as required by the Authority Having Jurisdiction.

**107.7.4.1 Building Information.** Building information shown on plan sheets shall be screened (semi-opaque) and include information such as room names, walls, corridors, fixtures, footings, floor elevations, and other building elements relevant to the installation of the plumbing system(s).

**107.7.4.2 Plumbing System Design Information.** Plumbing system design information shown on plan sheets shall be easily identifiable and include all horizontal piping, all vertical risers, sizing, loading, notes, fixture and equipment tags, and similar information as required by the Authority Having Jurisdiction.

**107.7.5 Riser Diagrams.** Riser diagrams shall be provided for each distinct plumbing system type including sanitary waste and vent, domestic water, stormwater and roof drainage, natural gas, non-potable water, graywater, and any other system type referenced within the plumbing design documents. Riser diagrams shall include all piping from the utility or tenant point of connection to the furthest fixture or roof termination. Piping shown on riser diagrams shall be clearly sized and labeled and include loading at each pipe segment.

**107.7.6 Construction Details.** Construction details shall be provided for the installation of certain fixtures or equipment where determination of Code compliance may not be readily achievable through review of Plans, Schedules, Notes, or Riser Diagrams. Construction details may be required for the installation of water heaters, interceptors, pumps, backflow devices, and similar items. The Authority Having Jurisdiction may request additional construction details as deemed necessary.

**107.7.7 Deferred Submittals.** Deferral of any submittal items shall have the prior approval of the Authority Having Jurisdiction. The Registered Design Professional in Responsible Charge shall list deferred submittals on the plans for review by the Authority Having Jurisdiction. Documents for deferred submittal items shall be submitted to the Registered Design Professional in Responsible Charge who shall review them and forward them to the Authority Having Jurisdiction with a notation indicating that the deferred submittal documents have been reviewed and been found to be in general conformance to the plumbing design. The deferred submittal items shall not be installed until the deferred submittal documents have been approved by the Authority Having Jurisdiction.

**107.7.8 Application Review.** The plumbing design documents shall be reviewed by the Authority Having Jurisdiction. Such plumbing design documents may be reviewed by other departments of the City to check compliance with the laws and ordinances under their jurisdiction.

**107.7.9 Determination of Completeness.** Within 28 days after an application is filed, the Authority Having Jurisdiction shall notify the applicant in writing either that the application is complete or that it is not complete, and if not complete, what additional information is required to make it complete. Within 14 days after receiving the additional information, the Authority Having Jurisdiction shall notify the applicant in writing whether the application is now complete or what additional information is necessary. An application shall be deemed to be complete if the Authority Having Jurisdiction does not notify the applicant in writing by the deadlines in this section that the application is incomplete.

**107.7.10 Decision on Application.** Except as provided in Section 108.4 the Authority Having Jurisdiction shall approve, condition, or deny the application within 120 days after the Authority Having Jurisdiction notifies the applicant that the application is complete.

To determine the number of days that have elapsed after the notification that the application is complete, the following periods shall be excluded:

- (1) All periods of time during which the applicant has been requested by the Authority Having Jurisdiction to correct plans, perform required studies, or provide additional required information, until the determination that the request has been satisfied. The period shall be calculated from the date the Authority Having Jurisdiction notifies the applicant of the need for additional information until the earlier of the date the Authority Having Jurisdiction determines whether the additional information satisfies the request for information or 14 days after the date the information has been provided to the Authority Having Jurisdiction.
- (2) If the Authority Having Jurisdiction determines that the information submitted by the applicant under item 1 of this subsection is insufficient, the Authority Having Jurisdiction shall notify the applicant of the deficiencies, and the procedures under item 1 of this subsection shall apply as if a new request for information has been made;
- (3) All extensions of time mutually agreed upon by the applicant and the Authority Having Jurisdiction.

If a plumbing permit application is substantially revised by the applicant, the time period shall start from the date at which the revised plumbing permit application is determined to be complete under Section 107.7.9.

## SECTION 108 PERMIT ISSUANCE

**108.1 Issuance.** The application shall be reviewed by the Authority Having Jurisdiction. The application may be reviewed by other departments of the Authority Having Jurisdiction or the City to check compliance with the laws and ordinances under their jurisdiction.

**108.1.1 Issuance of Permit.** The Authority Having Jurisdiction shall issue a permit to the applicant if the Authority Having Jurisdiction finds the following:

- (1) The work described in the construction documents substantially conforms to the requirements of this Code and other pertinent laws and ordinances;
- (2) Construction documents for projects requiring Plan Review have been reviewed and Approved;
- (3) The fees specified in the Seattle Municipal Code Chapter 22.504 have been paid; and
- (4) The applicant has complied with all requirements to be performed prior to issuance of a permit for the work under other pertinent laws, ordinances, or regulations, or otherwise imposed by the Authority Having Jurisdiction. When the permit is issued, the applicant or the applicant's authorized agent becomes the permit holder.

**108.2 Phased Permits.** The Authority Having Jurisdiction may authorize installation of a portion or portions of a plumbing system before complete plumbing design documents for the whole plumbing project have been submitted or approved. The applicant shall proceed at the applicant's risk without assurance that a permit for the entire plumbing project will be granted.

**108.3 Compliance with Approved Plans and Permit.** When the Authority Having Jurisdiction issues a permit, the Authority Having Jurisdiction shall endorse the permit in writing or in electronic format and, where plans are required, stamp the plans "APPROVED." Such approved plans and permit shall not be changed, modified or altered without authorization from the Authority Having Jurisdiction, and all work shall be done in accordance with the approved plans and permit except as authorized by the Authority Having Jurisdiction during a field inspection to correct errors or omissions.

**108.4 Revisions to the Permit.** When changes to the approved work (plumbing design documents) are made during installation, approval of the Authority Having Jurisdiction shall be obtained prior to execution. The Authority Having Jurisdiction may approve minor changes to the plumbing design documents for work without revisions to the approved plumbing design documents when it is determined that the changes conform to the requirements of this Code and other pertinent laws, ordinances and other issued permits.

**108.5 Validity of Permit.** The issuance or granting of a permit or approval of plans shall:

- (1) Not be construed to be a permit for, or an approval of, any violation of any of the provisions of this Code or other pertinent laws and ordinances.
- (2) Not prevent the Authority Having Jurisdiction from requiring the correction of errors in the plans, or from preventing building operations being carried on thereunder when in violation of this Code or of other pertinent laws and ordinances of the City.
- (3) Not prevent the Authority Having Jurisdiction from requiring correction of conditions found to be in violation of this Code or other pertinent laws and ordinances of the City, or
- (4) Not be construed to extend the period of time for which any such permit is issued or otherwise affect any period of time for compliance specified in any notice or order issued by the Authority Having Jurisdiction or other administrative authority requiring the correction of any such conditions.

**108.6 Permit Expiration and Renewal.** Authority to do the work authorized by a permit expires 18 months from the date of the issuance. A permit may be renewed to extend the duration of the permit for an additional 18 months from the original expiration date.

**108.7 Revocation of Approval.** The Authority Having Jurisdiction may rescind prior approval of reviewed construction documents and deny permit issuance if any of the following conditions develop:

- (1) Permit applicant has not responded to a Plan Review invoice notice or request for plan corrections from the assigned Plans Examiner within 90 days of request.
- (2) Permit fees have not been paid within 90 days of notification to applicant that plans have been approved and an invoice generated.

**Exception:** The Authority Having Jurisdiction may grant an extension to the above noted timelines if mutually agreed upon by the Authority Having Jurisdiction and the permit applicant. Any request for an extension must be initiated by the permit applicant.

## SECTION 109 INSPECTIONS

**109.1 General.** All construction or work for which a permit is required is subject to inspection by the Authority Having Jurisdiction. In addition, the Authority Having Jurisdiction may make or require inspections of any plumbing work to ascertain compliance with the provisions of this Code and other laws and ordinances that are enforced by the Authority Having Jurisdiction.

**109.2 Inspection Requests.** The owner of the property or the owner's authorized agent, or the person designated by the owner or agent to do the work authorized by a permit shall notify the Authority Having Jurisdiction that work requiring inspection as specified in this section is ready for inspection.

**109.3 Access for Inspection.** The permit holder and the person requesting any inspections required by this Code shall provide access to and means for proper inspection of such work, including safety equipment required by the Washington Industrial Safety and Health Agency. The work shall remain accessible and exposed for inspection purposes until approved by the Authority Having Jurisdiction. Neither the Authority Having Jurisdiction nor the City shall be liable for expense entailed in the required removal or replacement of any material to allow inspection.

**109.4 Inspection Record.** Work requiring a plumbing permit shall not be commenced until the permit holder or the permit holder's agent has posted an inspection record in a conspicuous place on the premises and in a position that allows the Authority Having Jurisdiction to conveniently make the required entries regarding inspection of the work. This record shall be maintained in such a position by the permit holder or the permit holder's agent until final approval has been granted by the Authority Having Jurisdiction.

**109.5 Approvals Required.** No work shall be done on any part of the building or structure beyond the point indicated in each successive inspection without first obtaining the written approval of the Authority Having Jurisdiction.

**109.5.1 Effect of Approval.** Approval as a result of an inspection is not approval of any violation of the provisions of this Code or of other pertinent laws and ordinances of the Authority Having Jurisdiction or the City. Inspections presuming to give authority to violate or cancel the provisions of this Code or of other pertinent laws and ordinances of the Authority Having Jurisdiction or the City are not valid.

**109.6 Operation of Plumbing Equipment.** The requirements of this section do not prohibit the operation of any plumbing systems installed to replace existing equipment or fixtures serving an occupied portion of the building in the event a request for inspection of such equipment or fixture has been filed with the Authority Having Jurisdiction not more than 48 hours after such replacement work is completed, and before any portion of such plumbing system is concealed by any permanent portion of the building.

**109.7 Special Investigation.** If work that requires a permit or approval is commenced or performed prior to making formal application and receiving the Authority Having Jurisdiction's permission to proceed, the Authority Having Jurisdiction may make a special investigation inspection before a permit is issued for the work. If a special investigation is made, a special investigation fee may be assessed in accordance with the Seattle Municipal Code.

**109.8 Reinspections.** The Authority Having Jurisdiction may require a reinspection if work for which inspection is called is not complete, required corrections are not made, the approved plans are not readily available to the inspector, access is not provided on the date for which inspection is requested, if deviations from the plans that require the approval of the Authority Having Jurisdiction have been made without proper approval, or as otherwise required by the Authority Having Jurisdiction.

**109.8.1 Reinspection Fee.** The Authority Having Jurisdiction may assess a reinspection fee as set forth in the Seattle Municipal Code Section 22.504.010 for any action for which reinspection is required. In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

## SECTION 110 FEES

**110.1 Fees.** A fee for each plumbing permit and for other activities related to the enforcement of this Code shall be paid as set forth in Seattle Municipal Code Chapter 22.504.

## CHAPTER 2 DEFINITIONS

\* \* \*

**203.0**

**– A –**

\* \* \*

**[S] Air Admittance Valve.** A device that allows air to enter the plumbing drainage system in one direction, to protect fixture traps from siphonage when negative pressures develop, and prevents sewer gases from entering the interior building atmosphere during static pressure or positive pressure conditions in the plumbing waste system.

\* \* \*

**210.0**

**– H –**

\* \* \*

**[S] High Distribution Uniformity.** A higher than average measurement indicating the evenness with which water is applied to the landscape by an irrigation system.

\* \* \*

**225.0**

**– W –**

\* \* \*

**[S] Water Heater.** Any *listed* heating appliance or equipment that heats potable water and supplies such water to the potable hot water distribution system excluding any *appliance* or equipment that exceeds any of the following:

- (1) An operating temperature of 210°F (99°C),
- (2) A maximum allowable working pressure of 160 pounds per square inch (1103 kPa),
- (3) A volume of 120 gallons (454 L), or
- (4) A heat input of 200,000 Btu/hr (58.6 kW).

Any *appliances* and equipment that exceed any one of these values are classified as boilers.

\* \* \*

## CHAPTER 3

# GENERAL REGULATIONS

\* \* \*

**[S] 308.2 Exterior Installations.** Unless required to meet other provisions of this Code, or where first approved by the Authority Having Jurisdiction, no plumbing or piping system or part thereof shall be installed exterior to a building.

**Exceptions:**

- (1) Rainwater conductors, leaders, gutters, or downspouts.
- (2) Natural gas, fuel oil, or condensate piping serving exterior equipment.
- (3) Non-potable water serving irrigation systems, mechanical fill stations, or similar exterior uses.

\* \* \*

**[W] [S] 312.6 Freezing Protection.** No water, soil, or waste pipe shall be installed or permitted outside of a building, in attics or crawl spaces, or in an exterior wall unless, where necessary, adequate provision is made to protect such pipe from freezing. All hot and cold water pipes installed outside the conditioned space shall be insulated to a minimum of R-3 or as required by the Seattle Energy Code, whichever is greater.

\* \* \*

## CHAPTER 4

# PLUMBING FIXTURES AND FIXTURE FITTINGS

\* \* \*

**[W] [S] 418.3 Location of Floor Drains.** Floor drains shall be installed in the following areas:

- (1) Any restroom, toilet facility, or similar area within a building containing two (2) or more water closets or a combination of one (1) water closet and one (1) urinal, except in a dwelling unit. The floor shall slope in accordance with the requirements of 418.5. Any enclosed space containing a water closet or urinal and constructed in such a way as to prevent spillage from a fixture overflow from reaching a floor drain located outside of the enclosed space shall be provided with a dedicated floor drain within the space.
- (2) Laundry rooms in commercial buildings and common laundry facilities in multi-family dwelling buildings.

\* \* \*

**[S] 418.5 Floor Slope.** Floors shall be sloped to floor drains.

**Exceptions:**

- (1) Floors of parking garages.
- (2) Where existing floors are constructed such that creating a slope by recess or topping slab is not feasible, a threshold of a minimum ¼ inch, but not exceeding ½ inch in height shall be provided at each entry to the room or area to prevent spillage from entering adjacent spaces.

\* \* \*

## CHAPTER 5 WATER HEATERS

\* \* \*

**[W] [S] TABLE 501.1(2)  
FIRST HOUR RATING<sup>1,3</sup>**

Number of Bathrooms	1 to 1.5			2 to 2.5				3 to 3.5			
Number of Bedrooms	1	2	3	2	3	4	5	3	4	5	6
First Hour Rating, <sup>2</sup> Gallons	38	49	49	49	62	62	74	62	74	74	74

For SI units: 1 gallon = 3.785 L

**Notes:**

<sup>1</sup> The first-hour rating is found on the “Energy Guide” label.

<sup>2</sup> Non-storage and solar water heaters shall be sized to meet the appropriate first-hour rating as shown in the table and shall be capable of delivering hot water at the maximum system demand flow, as calculated in Section 610.0 or Appendix A, as applicable.

<sup>3</sup> For replacement water heaters, see Section 104.1.

\* \* \*

**[S] 501.2 Water Heaters Used for Space Heating.** Water heaters utilized both to supply potable hot water and provide hot water for space-heating applications shall be listed and labeled for such applications by the manufacturer and shall be installed in accordance with the manufacturer’s instructions and this code.

\* \* \*

## CHAPTER 6

# WATER SUPPLY AND DISTRIBUTION

\* \* \*

**[S] 608.1 Inadequate Water Pressure.** Where the water pressure in the main or other source of supply will not provide a residual water pressure of not less than 15 pounds force per square inch (psi) (103 kPa), after allowing for friction and other pressure losses, a tank and a pump or other means that will provide said 15 psi (103 kPa) pressure shall be installed. Where fixtures, fixture fittings, or both are installed that, require residual pressure exceeding 15 psi (103 kPa), that minimum residual pressure shall be provided. ASSE listed temperature and/or pressure compensating valves shall be provided with a minimum residual pressure equal to or greater than the minimum test pressure of the applicable standard or 20 psi (138 kPa), whichever is greater.

\* \* \*

**[W] [S] 609.12 Pipe Insulation.** Domestic water piping within commercial buildings shall be insulated in accordance with the Seattle Energy Code.

\* \* \*



**[S] TABLE 610.3  
WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPE SIZES<sup>3</sup>**

APPLIANCES, APPURTENANCES OR FIXTURES <sup>2</sup>	MINIMUM FIXTURE BRANCH PIPE SIZE <sup>1,4</sup> (inches)	PRIVATE	PUBLIC	ASSEMBLY <sup>6</sup>
Bathtub or Combination Bath/Shower (fill)	½	4.0	4.0	—
¾ inch Bathtub Fill Valve	¾	10.0	10.0	—
Bidet	½	1.0	—	—
Clothes Washer	½	4.0	4.0	—
Dental Unit, cuspidor	½	—	1.0	—
Dishwasher, domestic	½	1.5	1.5	—
Drinking Fountain or Water Cooler	½	0.5	0.5	0.75
Hose Bibb	½	2.5	2.5	—
Hose Bibb, each additional <sup>8</sup>	½	1.0	1.0	—
Lavatory <sup>9</sup>	½	1.0	1.0	1.0
Lawn Sprinkler, each head <sup>5</sup>	—	1.0	1.0	—
Mobile Home, each (minimum)	—	12.0	—	—
Sinks	—	—	—	—
Bar	½	1.0	2.0	—
Clinical Faucet	½	—	3.0	—
Clinical Flushometer Valve with or without faucet	1	—	8.0	—
Kitchen, domestic with or without dishwasher	½	1.5	1.5	—
Laundry	½	1.5	1.5	—
Service or Mop Basin	½	1.5	3.0	—
Washup, each set of faucets	½	—	2.0	—
Shower, per head	½	2.0	2.0	—
Urinal, 1.0 GPF Flushometer Valve	¾	See Footnote <sup>7</sup>		—
Urinal, greater than 1.0 GPF Flushometer Valve	¾	See Footnote <sup>7</sup>		—
Urinal, flush tank	½	2.0	2.0	3.0
Nonwater Urinal with Drain Cleansing Action	½	1.0	1.0	1.0
Wash Fountain, circular spray	¾	—	4.0	—
Water Closet, 1.6 GPF Gravity Tank	½	2.5	2.5	3.5
Water Closet, 1.6 GPF Flushometer Tank	½	2.5	2.5	3.5
Water Closet, 1.6 GPF Flushometer Valve	1	See Footnote <sup>7</sup>		—
Water Closet, greater than 1.6 GPF Gravity Tank	½	3.0	5.5	7.0
Water Closet, greater than 1.6 GPF Flushometer Valve	1	See Footnote <sup>7</sup>		—

For SI units: 1 inch = 25 mm

**Notes:**

- <sup>1</sup> Size of the cold branch pipe, or both the hot and cold branch pipes.
- <sup>2</sup> Appliances, appurtenances, or fixtures not referenced in this table shall be permitted to be sized by reference to fixtures having a similar flow rate and frequency of use.
- <sup>3</sup> The listed fixture unit values represent their load on the cold water building supply. The separate cold water and hot water fixture unit value for fixtures having both hot and cold water connections shall be permitted to be each taken as three-quarter of the listed total value of the fixture.
- <sup>4</sup> The listed minimum supply branch pipe sizes for individual fixtures are the nominal (I.D.) pipe size.
- <sup>5</sup> For fixtures or supply connections likely to impose continuous flow demands, determine the required flow in gallons per minute (gpm) (L/s), and add it separately to the demand in gpm (L/s) for the distribution system or portions.
- <sup>6</sup> Assembly [Public Use (See Table 422.1)].
- <sup>7</sup> Where sizing flushometer systems, see Section 610.10.
- <sup>8</sup> Reduced fixture unit loading for additional hose bibbs is to be used where sizing total building demand and for pipe sizing where more than one hose bibb is supplied by a segment of water distribution pipe. The fixture branch to each hose bibb shall be sized on the basis of 2.5 fixture units.
- <sup>9</sup> The minimum fixture branch size may be reduced to 3/8" when serving a single lavatory.

\* \* \*

■ **[W] [S] 611.1 Application.** The owner of a building that serves potable water to twenty-five or more people at least sixty or more days per year and that installs drinking water treatment units including, but not limited to, the treatment units in Section 611.1, may be regulated (as a Group A public water system) by the Washington State Department of Health under Chapter 246-290 WAC. See Washington State Department of Health publication 331-488 for guidance.

■ **611.1.1 Alkaline Water Treatment.** Alkaline water treatment devices shall comply with IAPMO IGC 322.

■ **611.1.2 Scale Reduction Devices.** Scale reduction devices shall comply with IAPMO Z601.

## CHAPTER 7

# SANITARY DRAINAGE

\* \* \*

**[S] TABLE 702.2(2)**  
**DISCHARGE CAPACITY IN GALLONS PER MINUTE FOR INTERMITTENT FLOW ONLY\***

GPM	FIXTURE UNITS
Up to 7½	Equals 1 Fixture Unit
Greater than 7½ to 15	Equals 2 Fixture Units
Greater than 15 to 30	Equals 4 Fixture Units
Greater than 30 to 50	Equals 6 Fixture Units
Greater than 50 to 100	Equals 12 Fixture Units
Greater than 100 to 200	Equals 18 Fixture Units
Greater than 200 to 350	Equals 24 Fixture Units

For SI units: 1 gallon per minute = 0.06 L/s

\* Discharge capacity exceeding 350 gallons per minute (3.15 L/s) shall be determined by the Authority Having Jurisdiction.

\* \* \*

**[W] [S] 704.3 Commercial Sinks.** Except where specifically required to be connected indirectly to the drainage system, or when first approved by the Authority Having Jurisdiction, all plumbing fixtures, drains, appurtenances, and appliances, including 3-compartment sinks, shall be directly connected to the drainage system of the building or premises.

\* \* \*

**[S] 709.1 General.** Plumbing fixtures shall be drained to the sanitary waste system by gravity flow and are permitted to be pumped or ejected as allowed per Section 710.2 or when approved by the Authority Having Jurisdiction.

\* \* \*

**[S] 710.4 Discharge Line.** The discharge line from such ejector, pump, or another mechanical device shall be of approved pressure rated material and be provided with an accessible backwater or swing check valve and gate or ball valve. Where the gravity drainage line to which such discharge line connects is horizontal, the method of connection shall be from the top through a wye branch fitting. The gate or ball valve shall be located on the discharge side of the backwater or check valve.

Gate or ball valves, where installed in drainage piping, shall be fullway type with working parts of corrosion-resistant metal. Sizes 4 inches (100 mm) or more in diameter shall have cast-iron bodies and sizes less than 4 inches (100 mm), cast-iron or copper alloy bodies. Discharge lines from elevator hoistway pumps shall be provided with a check valve and lockable gate or ball valve locked in the open position and located outside of the hoistway.

**Exception:** The discharge line of a pump serving an elevator hoistway shall be routed through an air break to an approved indirect receptor. The indirect receptor shall be provided with an outlet, tailpiece, and trap (if applicable) large enough to accommodate the design flow rate of the largest pump discharging to the indirect receptor. The trap seal of such receptor (if applicable) shall be maintained by a trap primer in accordance with section 1007.0.

**[S] 710.5 Size of Building Drains and Sewers.** Building drains or building sewers receiving a discharge from a pump or ejector shall be adequately sized to prevent overloading. Two fixture units shall be allowed for each gallon per minute (L/s) of flow.

**Exception:** Where first approved by the Authority Having Jurisdiction, the discharge from pumps or ejectors provided for periodic testing or emergency use only may be assigned fixture unit loading in accordance with Table 702.2(2). All gravity drainage piping and/or pretreatment devices downstream of such pumps shall be adequately sized for continuous full flow of the pumped discharge under emergency or test conditions.

\* \* \*

## CHAPTER 8

# INDIRECT WASTES

\* \* \*

**[S] 803.3 Pipe Size and Length.** Except as hereinafter provided, the size of indirect waste piping shall be in accordance with other sections of this code applicable to drainage and vent piping. No vent from indirect waste piping shall combine with a sewer-connected vent, but shall extend separately to the outside air. Indirect waste pipes exceeding 5 feet (1524 mm), but less than 15 feet (4572 mm) in length shall be directly trapped, but such traps need not be vented.

Indirect waste pipes less than 15 feet (4572 mm) in length shall be not less than the diameter of the drain outlet or tailpiece of the fixture, appliance, or equipment served, and in no case less than ½ of an inch (15 mm). Angles and changes of direction in such indirect waste pipes shall be provided with cleanouts to permit flushing and cleaning.

### Exceptions:

- (1) Gravity indirect waste pipes connected to elevator hoistway drains shall be provided with a normally closed backwater valve or a vented running trap installed in accordance with section 1008.1. Where a trap is provided, the trap seal shall be maintained by an automatic electronic trap primer.
- (2) Unless required by the Authority Having Jurisdiction, traps and vents shall not be required in indirect waste piping from backflow or pressure relief devices or other similar applications intended for emergency use only.

\* \* \*

## CHAPTER 9

# VENTS

\* \* \*

**[S] 903.1 Applicable Standards.** Vent pipe and fittings shall comply with the applicable standards referenced in Table 701.2, except that:

- (1) No galvanized steel or 304 stainless steel pipe shall be installed underground and shall be not less than 6 inches (152 mm) aboveground.
- (2) ABS and PVC DWV piping installations shall be in accordance with the applicable standards referenced in Table 1701.1. Except for individual single-family dwelling units, materials exposed within ducts or plenums shall have a flame-spread index of not more than 25 and a smoke-developed index of not more than 50 where tested in accordance with ASTM E84 or UL 723. These tests shall comply with all requirements of the standards to include the sample size, both for width and length. Plastic pipe shall not be tested filled with water.

\* \* \*

### **[S] 913.0 Air Admittance Valves.**

**913.1 General.** Vent systems utilizing air admittance valves shall comply with this section.

**913.2 Where Permitted.** Individual fixtures, a branch vent, a vertical wet vent, and a horizontal wet vent shall be permitted to terminate with a connection to an air admittance valve. Fixtures connected to an air admittance valve shall be located on the same floor level.

**913.3 Installation.** Air admittance valves shall conform to ASSE 1051 for single fixtures, and ASSE 1050 for multiple fixtures, and shall be installed as required in this section and the manufactures installations guidelines.

#### **913.3.1 Location.**

- (1) Air admittance valves shall be accessible and located in an area that allows air to enter the valve.
- (2) The air admittance valve shall be located a minimum of four (4) inches above the trap arm.
- (3) The air admittance valve that serves as a vent termination for a branch vent, or vertical and horizontal wet vent, shall be located at a minimum of six (6) inches above the flood level rim of the highest fixture being vented.
- (4) The air admittance valve shall be located within the maximum developed length permitted for the vent as shown in Table 703.2.
- (5) The air admittance valve shall be installed not less than six (6) inches above insulation materials.

**913.4 Size.** The air admittance valve shall be rated in accordance with the standard for the vent size as determined in Table 703.2.

**913.5 Vent Required.** Not less than one plumbing vent sized as required by Section 904.1, shall extend to the exterior of the building as required in Section 906.1.

**913.6 Relief Vent.** When a horizontal branch drain utilizes an individual or branch type air admittance valve, a relief vent shall be installed when the horizontal branch drain is located more than four (4) branch intervals from the top of the building drain (waste stack), and the relief vent shall extend to the outdoors or connect to a vent stack.

The relief vent shall be sized in accordance with Section 904.1, installed in accordance with Sections 905.0, and shall be permitted to serve as the vent for other fixtures.

**913.6.1 Prior Approval.** Installations that require a relief vent shall be submitted for an installation design review.

#### **913.7 Prohibited Installations.**

**913.7.1 Sumps.** Air admittance valves shall not be utilized to vent sumps or tanks of any type.

**913.7.2 Chemical Waste Systems.** Air admittance valves shall not be installed in nonneutralized chemical waste systems without a design review and approval by the Authority Having Jurisdiction.

**913.7.3 FOG Disposal Systems.** Air admittance valves shall not be installed on any fixtures that are connected to a *FOG disposal system*.

**913.7.4 Plenums.** Air admittance valves shall not be located in spaces utilized as supply or return air plenums.

## CHAPTER 10

# TRAPS AND INTERCEPTORS

\* \* \*

**[S] 1007.3 Trap Priming Water.** Trap primers serving floor drains located in rooms that contain fixtures served by a nonpotable water system complying with Chapter 15 or 16 shall also be served by the nonpotable water system.

\* \* \*

**[S] 1014.1.3 Food Waste Disposers and Dishwashers.** No food waste disposer or dishwasher shall be connected to or discharge into a grease interceptor.

**Exception:** Food waste disposers shall be permitted to discharge to grease interceptors that are designed to receive the discharge of food waste, or a listed food solids interceptor shall be installed at the discharge of the food waste disposer.

\* \* \*

**[S] 1018.0 Parking Garage Drainage Systems.** Parking garage drainage systems shall comply with Sections 1018.1 and 1018.2. All plans for parking garage floor drainage systems shall be submitted to the Authority Having Jurisdiction and approved prior to installation.

**[S] 1018.1 Parking Garage Drains.** Drains connected to the parking garage drainage system shall comply with the following:

- (1) Unless otherwise approved by the Authority Having Jurisdiction, drains serving parking or loading dock areas exposed to precipitation and greater than 200 square feet shall be connected to the building storm drainage system. All other parking garage and/or loading dock drainage shall be connected to the sanitary drainage system through the use of a sand interceptor or oil/water separator.
- (2) Parking garage drain outlets and connected drainage waste lines shall be a minimum of three inches in diameter. Waste unit loading for parking garage drains shall be sized in accordance with Table 702.2(1) or Table 702.2(2). Drainage piping serving parking garage drains shall be sized in accordance with Table 703.2.
- (3) Drains of any type connected to the parking garage drainage system shall be equipped with approved strainers and need not be trapped or vented when connected to the building drain through a properly trapped and vented sand interceptor or oil/water separator. Drains at floor level and subject to vehicular traffic shall be equipped with strainers with a load rating appropriate to the use of the parking area served.
- (4) Traps shall not be used when drains are located in areas exposed to freezing temperatures.
- (5) The waste line from drains entering a sand interceptor or oil/water separator shall be at an elevation equal to or above the waste line discharging from the sand interceptor or oil/water separator.
- (6) The sand interceptor or oil/water separator receiving the discharge from parking garage floor drains shall have a water seal of not less than six inches. Sand interceptors shall meet the requirements of Section 1016.0. Oil/water separators shall meet the requirements of Section 1009.0. Submittal information shall be provided to the Authority Having Jurisdiction prior to installation. The water seal of the sand interceptor or oil/water separator shall be maintained by an automatic electronic trap primer discharging not less than ½ gallon per day.

**[S] 1018.2 Drainage From Other Plumbing Fixtures.** Drainage from any plumbing fixture other than a parking garage floor drain shall not be interconnected with the parking garage drainage system.

**Exception:** Where first approved by the Authority Having Jurisdiction, the following types of drains may be connected to the parking garage drainage system upstream of the sand interceptor or oil/water separator and need not be individually trapped or vented, provided that all drainage piping downstream of such drains, including the sand interceptor or oil/water separator, is sized to accommodate the largest flow of effluent anticipated from any single connected drain under worst case or emergency conditions:

- (1) Drains within car or truck washing areas and drainage lines from car or truck washing equipment.
- (2) Approved indirect receptors located within the parking garage and accepting drainage from fire/sprinkler standpipes, fire water storage tanks, mechanical condensate, relief valves, or other similar clear water waste only.
- (3) Approved indirect receptors located within the parking garage and accepting drainage from hoistway pumps or drains required by ASME A17.1, provided the discharge from the sand interceptor or oil/water separator connects to the building drain by gravity and not to a sanitary lift station.
- (4) Where the sand interceptor or oil/water separator discharges to a sanitary lift station, an approved indirect receptor located within the parking garage and accepting drainage from a pump serving a hoistway containing a Fire Service Access or Occupant Evacuation Operation Elevator that is required to be on Emergency Power per Seattle Building Code Section

403.4.8.4 may only be connected to the parking garage drainage system when the floor of the hoistway enclosure is above the flood level rim of the sanitary lift station, and/or the hoistway enclosure is protected in accordance with Seattle Building Code Section 403.6.1.2. Sanitary lift station pumps shall not be connected to Emergency Power.

- (5) Floor drains and indirect receptors within mechanical rooms, water entry rooms, fire pump rooms, and similar spaces where no graywater or blackwater producing fixtures are located, provided such rooms have a door or doors that open directly into the parking garage and are directly and continuously exhausted by mechanical means or provided with permanent fixed openings into the parking garage.

**Note:** For the purposes of this section, a mop sink, utility sink, or similar fixture shall not be considered an approved indirect receptor.

\* \* \*

## CHAPTER 11

# STORM DRAINAGE

\* \* \*

**[W] [S] 1101.4 Material Uses.** Pipe, tube, and fittings conveying rainwater shall be of such materials and design as to perform their intended function to the satisfaction of the Authority Having Jurisdiction. Conductors within a vent or shaft shall be of cast-iron, galvanized steel, wrought iron, copper, copper alloy, lead, Schedule 40 ABS DWV, Schedule 40 PVC DWV, stainless steel 304 or 316L [stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) aboveground], or other approved materials, and changes in direction shall conform to the requirements of Section 706.0.

ABS and PVC DWV piping installations shall be installed in accordance with applicable standards referenced in Table 1701.1. Except for individual single-family dwelling units, materials exposed within ducts or plenums shall have a maximum flame-spread index of 25 and a maximum smoke-developed index of 50, when tested in accordance with ASTM E84 or UL 723. Plastic piping installed in plenums shall be tested in accordance with ASTM E84 and UL 723.

\* \* \*

**[W] [S] 1101.12.2.2.2 Combined System.** The secondary roof drains shall connect to the vertical piping of the primary storm drainage conductor downstream of the last horizontal offset located below the roof. The primary storm drainage system shall connect to the building storm water that connects to an underground public storm sewer. The combined secondary and primary roof drain systems shall be sized in accordance with Section 1103.0 based on double the rainfall rate for the local area. A relief drain shall be connected to the combined vertical drainage piping, within 20 feet of grade, using a wye-type fitting piped to daylight on the exterior of the building. The piping shall be sized as required for a secondary drain with a 4 inch maximum.

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**[S] 1101.16.2 Combining Storm with Sanitary Drainage.** The sanitary and storm drainage systems of a building shall be entirely separate from the building to the property line.

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