Bill No. 13742-25

No. 30-25-OR

AN ORDINANCE

An Ordinance of the Council of the County of Allegheny ratifying the revisions of Article XV of the Allegheny County Health Department Rules and Regulation concerning Plumbing and Building Drainage

Whereas, Allegheny County, pursuant to the Pennsylvania Local Health Administration Law, 16 P.S. §§ 12001 – 12028, created the Allegheny County Health Department, and the Allegheny County Board of Health; and

Whereas, Section 12011 of the Local Health Administration Law provides for the Board of Health to adopt regulations and submit such regulations to Allegheny County for approval or rejection; and

Whereas, on November 19, 2025, during its regularly scheduled public meeting, the Allegheny County Board of Health adopted by affirmative vote the attached revisions to Article XV and

Whereas, it is the desire of Council to ratify the revised Allegheny County Health Department regulations as approved by the Board of Health.

The Council of the County of Allegheny hereby resolves as follows:

SECTION 1. ***Incorporation of Preamble.***

The provisions set forth in the preamble to this Ordinance are incorporated by reference in their entirety herein.

SECTION 2. ***Ratification of Regulations.***

Acting pursuant to the Pennsylvania Local Health Administration Law and the Allegheny County Home Rule Charter, County Council hereby ratifies the revisions of the Allegheny County Health Department Rules and Regulations, Article XV, "Plumbing and Building Drainage", attached hereto as Exhibit "A."

SECTION 3. Severability.

If any provision of this Ordinance shall be determined to be unlawful, invalid, void or unenforceable, then that provision shall be considered severable from the remaining provisions of this Resolution which shall be in full force and effect.

SECTION 4. Repealer.

Any Resolution or Ordinance or part thereof conflicting with the provisions of this Ordinance is hereby repealed so far as the same affects this Ordinance.

Enacted in Council, this 16th ***day of*** December, ***2025.***

Council Agenda No. 13742-25.

Patrick Catena
President of Council

Attest:
Jared Barker
Chief Clerk of Council

Chief Executive Office December 22, ***2025***

Approved:
Sara Innamorato
Chief Executive

Attest:
John Fournier
County Manager

Proposed Revisions of the Allegheny County Health Department Rules and Regulations, Article XV, Plumbing and Building Drainage

LEGISLATIVE SUMMARY

Pursuant to the authority granted to it under the Pennsylvania Local Health Administration Law, Sections 12010(f) and 12011(c), on July 16, 2025, the Allegheny County Board of Health approved revisions to the Allegheny County Health Department ("ACHD") Rule and Regulation Article VX, "Plumbing and Building Drainage" be made public for comment. The motion to approve passed without opposing vote.

The approval was proceeded by a 30-day public comment period, including a public hearing scheduled for September 4, 2025. The Department received 41 comments and ten public testimonies about the proposed changes. Through the comment period, ACHD and the Plumbing Program presented the proposal to the Plumbing Advisory Committee which positively recommended the revisions proceed to the Board of Health for a vote to approve the revisions for ratification by the Allegheny County Council.

On November 19, 2025, the Board of Health approved the revisions to be sent to the Allegheny County Council for approval by resolution.

The proposed revisions to Article XV would allow for:

- Approval of gender-neutral bathrooms in facilities
- Approval of facilities having drinking fountains that are accessible for both standing and persons in a wheelchair.
- Approval to require tracer wire for all non-metallic piping for locating purposes.
- Approval to change the new emergency floor drain requirement to apply only to new constructions.
- Approval requires pre-and-post video of sewer line/drains and plumbing inspector approval.
- Approval to require department approved certificate stating all materials were installed to manufacture guidelines.

EXHIBIT "A"

PROPOSED REVISION

Allegheny County Health Department Rules and Regulations
Article XV, Plumbing and Building Drainage

LEGEND
Deletions are shown with ~~strikethroughs~~.
Additions are shown in **larger font, bolded, and underlined**

CHAPTER 1 ADMINISTRATION

SECTION 101
GENERAL

AC 101.2 Scope

- The provisions of this code shall apply to the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing systems **and residential fire sprinklers (NFPA 13D or IRC P2904)** within this jurisdiction. This code shall also regulate non-flammable medical gas, inhalation anesthetic, vacuum piping, nonmedical oxygen systems and sanitary and condensate vacuum collection systems.

SECTION 102
APPLICABILITY

102.8 Referenced codes and standards.

- The codes and standards referenced in this code shall be those that are listed in **CHAPTER 15** and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference.

102.8.1 Conflicts. Where conflicts occur between provisions of this code and the referenced standards, the provisions of this code shall apply.

102.8.2 Provisions in referenced codes and standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within

the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

SECTION 103
DEPARTMENT OF PLUMBING INSPECTION

AC-103.1 General.

- **The function of the agency shall be the implementation, administration and enforcement of the provisions of this code.**

~~**103.4 Liability.** The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction 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 liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.~~

~~Any suit instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.~~

AC-103.5 Conflict of interest.

- **It shall not be considered a conflict of interest for any person appointed Chief Plumbing Inspector, Assistant Chief Plumbing Inspector, Plumbing Inspector Supervisor, and/or Plumbing Inspector to serve as an instructor in a plumbing apprenticeship program (AC106.7.9)**

SECTION 104
DUTIES AND POWERS OF THE CODE OFFICIAL

~~AC-104.2~~ AC-104.1.1 Rule-making authority

~~AC-104.3~~ AC-104.2 Applications and permits.

AC-~~104.4~~ 104.3 Inspections

~~104.5~~ 104.5 Right of entry.

~~104.6~~ 104.5 Identification.

~~104.7~~ 104.6 Notices and orders.

AC~~104.7.1~~ 104.6.1 Civil penalties.

~~104.8~~ 104.7 Department records.

~~103.4~~ AC-104.8 Liability.

SECTION 105
APPROVAL

105.2 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material or method of construction shall be *approved* where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not *approved*, the code official shall respond in writing, stating the reasons why the alternative was not *approved*.

105.3 Required testing. Where there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction.

~~**105.4 Alternative engineered design.** The design, documentation, inspection, testing and approval of an *alternative engineered design* plumbing system shall comply with Sections 105.4.1 through 105.4.6.~~

~~**105.4.1 Design criteria.** An *alternative engineered design* shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Material, equipment or components shall be designed and installed in accordance with the manufacturer's installation instructions.~~

~~**105.4.2 Submittal.** The registered design professional shall indicate on the permit application that the plumbing system is an *alternative engineered design.* The permit and permanent permit records shall indicate that an *alternative engineered design* was part of the *approved* installation.~~
~~**105.4.3 Technical data.** The registered design profes- sional shall submit sufficient technical data to substantiate the proposed *alternative engineered design* and to prove that the performance meets the intent of this code.~~
~~**105.4.4 Construction documents.** The registered design professional shall submit to the code official two complete sets of signed and sealed construction documents for the *alternative engineered design.* The construction documents shall include floor plans and a riser diagram of the work. Where appropriate, the construction documents shall indi- cate the direction of flow, all pipe sizes, grade of horizontal piping, loading, and location of fixtures and appliances.~~
~~**105.4.5 Design approval.** Where the code official deter- mines that the *alternative engineered design* conforms to the intent of this code, the plumbing system shall be *approved.* If the *alternative engineered design* is not *approved*, the code official shall notify the registered design professional in writing, stating the reasons thereof.~~
~~**105.4.6 Inspection and testing.** The *alternative engineered design* shall be tested and inspected in accordance with the requirements of Sections 107 and 312.~~

~~105.5~~**105.4 Approved materials and equipment.**

~~105.5.1~~**105.4.1 Material and equipment reuse.**

SECTION 106
PERMITS

~~AC~~**-106.1.2 Exempt Work.**

AC- 106.2 Exempt work.

Allied Trades may install equipment not identified as plumbing but which may require water and/or waste connections such as heating, air conditioning, cooling, refrigeration, **commercial** fire sprinkler systems, and industrial piping.

106.3.1 Preliminary inspection. Before a permit is issued, the code official shall be authorized to inspect and evaluate the systems, equipment, buildings, devices, premises and spaces or areas to be used.

106.5 Permit issuance. The application, construction documents and other data filed by an applicant for permit shall be reviewed by the code official. If the code official finds that the proposed work conforms to the requirements of this code and all laws and ordinances applicable thereto, and that the fees specified in Section 109.1 have been paid, a permit shall be issued to the applicant.

106.5.1 Approved construction documents. When the code official issues the permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "APPROVED." Such *approved* construction documents shall not be changed, modified or altered without authorization from the code official. Work shall be done in accordance with the *approved* construction documents.
The code official shall have the authority to issue a permit for the construction of a part of a plumbing system before the entire construction documents for the whole system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire plumbing system will be granted.

AC-106.5.3 Expiration.

Every permit issued by the code official 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 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work can be recommenced, a new permit shall be first obtained and the fee therefore shall be **equal to the plan fee required for a new permit**, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded 1 year.

106.5.6 Previous approvals. This code shall not require changes in the construction documents, construction or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

AC-~~106.5.7~~ 106.5.6.1 Permission to proceed.

AC-~~106.5.8~~ 106.5.7 Performance of plumbing work.

~~109.3~~106.6.1 Work commencing before permit issuance.

~~109.4~~106.6.4 Related fees.

SECTION 107
CONSTRUCTION DOCUMENTS

107.1 Construction documents. Construction documents, engineering calculations, diagrams and other such data shall be submitted in two or more sets, or in a digital format where allowed by the code official, with each application for a permit. The code official shall require construction documents, computations and specifications to be prepared and designed by a registered design professional where required by state law. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. Construction documents for buildings more than two stories in height shall indicate where penetrations will be made for pipes, fittings and components and shall indicate the materials and methods for maintaining required structural safety, fire-resistance rating and fire blocking.

Exception: The code official shall have the authority to waive the submission of construction documents, calculations or other data if the nature of the work applied for is such that the reviewing of construction documents is not necessary to determine compliance with this code.

107.2 Retention of construction documents.

One set of *approved* construction documents shall be retained by the code official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws.

One set of *approved* construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress

107.5.2 Validity. The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or any other ordinance of the jurisdiction. A permit presuming to give authority to violate or cancel the provisions of this code shall not be valid.

The issuance of a permit based on construction documents and other data shall not prevent the code official from thereafter requiring the correction of errors in said construction documents and other data or from preventing building

operations being carried on thereunder where in violation of this code or of other ordinances of this jurisdiction.

~~**106.5.6 Retention of construction documents.** One set of *approved* construction documents shall be retained by the code official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws.~~

2. **Successfully** completed 576 hours of plumbing training at an accredited school, preferably within six (6) years of the beginning of the apprenticeship training;

SECTION 108
VIOLATIONS RESERVED

SECTION 109
FEES

~~106.6~~**109.1 Fees.**

~~106.6.1~~**109.1.1 Work commencing before permit issuance.**

AC-~~106.6.3~~109.1.3 Fee refunds.

SECTION 110

SERVICE UTILITIES INSIGHTS

110.1 Connection of service utilities. A person shall not make connections from a utility, source of energy, fuel, power, water system or sewer system to any building or system

that is regulated by this code for which a permit is required until authorized by the code official.

110.2 Temporary connection. The code official shall have the authority to authorize the temporary connection of the building or system to the utility, source of energy, fuel, power, water system or sewer system for the purpose of testing plumbing systems or for use under a temporary approval.

110.3 Authority to disconnect service utilities. The code official shall have the authority to authorize disconnection of utility service to the building, structure

or system regulated by this code and the referenced codes and standards in case of emergency where necessary to eliminate an immediate hazard to life or property or where such utility connection has been made without the approval required by Section 110.1 or 110.2. The code official shall notify the serving utility, and wherever possible the owner or the owner's authorized agent and occupant of the building, structure or service system, of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner, the owner's authorized agent or occupant of the building, structure or service system shall be notified in writing as soon as practical thereafter.

SECTION 111
TEMPORARY EQUIPMENT, SYSTEMS AND USES

111.1 General. The code official is authorized to issue a permit for temporary equipment, systems and uses. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The code official is authorized to grant extensions for demonstrated cause.

111.2 Conformance. Temporary equipment, systems and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure the public health, safety and general welfare.

111.3 Temporary utilities. The code official is authorized to give permission to temporarily supply utilities before an installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in the code.

111.4 Termination of approval. The code official is authorized to terminate such permit for temporary equipment, systems or uses and to order the temporary equipment, systems or uses to be discontinued.

SECTION ~~107~~ 112

INSPECTIONS AND TESTING

~~107.1~~ 112.1 General.

~~107.2~~ 112.2 Required inspections and testing.

~~107.2.1~~ 112.2.1 Other inspections.

~~107.2.2~~ 112.2.2 **Inspection requests.**

~~107.2.3~~ 112.2.3 **Approval required.**

AC-~~107.2.4~~ 112.2.4 Approved agencies.

~~107.2.5~~ 112.2.5 **Evaluation and follow-up inspection services.**

~~107.2.5.1~~ 112.2.5.1 **Evaluation service.**

~~107.2.5.2~~ 112.2.5.2 **Follow-up inspection.**

~~107.2.5.3~~ 112.2.5.3 **Test and inspection records.**

~~107.3~~ 112.3 **Special inspections.** Special inspections of *alternative engineered design* plumbing systems shall be conducted in accordance with Sections ~~107.3.1~~ 112.3.1 and ~~107.3.2~~ 112.3.2.

~~107.3.1~~ 112.3.1 **Periodic inspection.**

~~107.3.2~~ 112.3.2 **Written report.**

~~107.4~~ 112.4 **Testing.** Plumbing work and systems shall be tested as required in Section 312 and in accordance with Sections ~~107.4.1~~ 112.4.1 through ~~107.4.3~~ 112.4.3. Tests shall be made by the permit holder and observed by the code official.

~~107.4.1~~ 112.4.1 **New, altered, extended or repaired systems.**

~~107.4.2~~ 112.4.2 **Equipment, material and labor for tests.**

~~107.4.3~~ 112.4.3 **Re-inspection and testing.**

AC-~~107.4.3.1~~ 112.4.3.1 Re-inspection fees.

~~107.5~~ 112.5 **Approval.**

~~107.5.1~~ 112.5.1 **Revocation.**

~~**107.6 Temporary connection.** The code official shall have the authority to authorize the temporary connection of the building or system to the utility source for the purpose of testing plumbing systems or for use under a temporary certificate of occupancy.~~

~~**107.7 Connection of service utilities.** A person shall not make connections from a utility, source of energy, fuel, power, water system or *sewer* system to any building or system that is regulated by this code for which a permit is required until authorized by the code official.~~

SECTION ~~109~~ 113

MEANS OF APPEAL

AC-~~109.1~~ 113.1 Application for appeal.

SECTION AC-~~110~~ 114

PLUMBING ADVISORY BOARD

AC-~~110.1~~ 114.1 General.

AC-~~110.2~~ 114.2 Terms of appointments.

AC-~~110.3~~ 114.3 Election of officers.

AC-~~110.4~~ 114.4 Duties of the Plumbing Advisory Board.

CHAPTER 2

DEFINITIONS

BACKFLOW, DRAINAGE. A reversal of flow in the drainage system.

COPPER ALLOY. A metal alloy where the principle component is copper.

DUAL FLUSHING DEVICE. A feature that allows the user to flush a water closet with either a reduced or full volume of water, depending on bowl contents.

GROUP WASH FIXTURE. A type of lavatory that allows more than one person to utilize the fixture at the same time. The fixture has one or more drains and one or more faucets.

AC-**PRIVATE**. In the classification of plumbing fixtures, "*private*" applies to fixtures in residences and apartments, and to fixtures in nonpublic toilet rooms of hotels and motels and similar installations in buildings where the plumbing fixtures are intended for utilization by a family or an individual.

AC-**PUBLIC OR PUBLIC UTILIZATION.** In the classification of plumbing fixtures, "*public*" applies to fixtures in general toilet rooms of schools, gymnasiums, hotels, airports, bus and railroad stations, public buildings, bars, public comfort stations, office buildings, stadiums, stores, restaurants and other installations where a number of fixtures are installed so that their utilization is similarly unrestricted exposure to walk in traffic.

PUSH-FIT FITTING. A mechanical fitting that joins pipes or tubes and achieves a seal by mating the pipe or tube into the fitting.

AC-**WATER DISPENSER.** A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises. This definition also includes a free- standing apparatus for the same purpose that is not connected to the potable water distribution system and that is supplied with potable water from a container, bottle or reservoir.

CHAPTER 3

GENERAL REGULATIONS

301.3 Connections to drainage system. Plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid waste or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems required by Chapter 8.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved system in accordance with Chapters 13 and 14.

SECTION 305
PROTECTION OF PIPES AND
PLUMBING SYSTEM COMPONENTS

~~305.2~~ **AC-305.2.1 Breakage.**

~~305.3~~ **305.2 Stress and strain.**

~~305.5~~ **305.3 Pipes through or under footings or foundation walls.**

~~305.4~~ **AC-305.3.1 Sleeves.** Annular spaces between sleeves and pipes shall be filled or tightly caulked in an *approved* manner. Annular spaces between sleeves and pipes in fire-resistance- rated assemblies shall be filled or tightly caulked in accordance with the *International Building Code* and ***International Residential Code.***

AC-~~305.6~~ 305.4 Freezing.

305.4.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be installed not less than 12" inches (304.8mm) below finished grade at the point of septic tank connection. Building sewers shall be installed not less than 12" inches (304.8mm) below grade.

AC-~~305.7~~ 305.5 Waterproofing of openings.

~~305.8~~ **AC-305.6 Protection against physical damage.**

~~305.9~~ **305.7 Protection of components of plumbing system.**

~~307.5.1~~ **307.5 Protection of footings.**

~~307.5~~ **AC-307.5.1 Trench location.**

SECTION 308

PIPE SUPPORTS

308.2 Piping seismic supports. Where earthquake loads are applicable in accordance with the International Building Code, plumbing piping supports, anchorage, and bracing shall be designed and installed for seismic forces in accordance with Chapter 16 of the International Building Code.

308.5 Interval of support. Pipe shall be supported in accordance with Table 308.5.

Exception: The interval of support for piping systems designed to provide for expansion/contraction shall con- form to the engineered design in accordance with Section ~~105.4~~**316.1**.

AC-308.9 Parallel water distribution systems.

SECTION 309

FLOOD HAZARD RESISTANCE

~~**309.3 Flood hazard areas subject to high-velocity wave action Coastal high-hazard areas and coastal A zones.** Structures located in flood hazard areas subject to high-velocity wave action shall meet the requirements of Section 309.2. The plumbing systems, pipes and fixtures shall not be mounted on or penetrate through walls intended to break away under flood loads.~~

SECTION 310

WASHROOM AND TOILET ROOM REQUIREMENTS

AC-310.4 Water closet compartment.

AC-310.5 Urinal partitions.

AC-310.6.2 Location near food handling or storage areas. The doors of toilet rooms in any establishment regulated by Article III of the Rules and Regulations of the Allegheny County Health Department shall not open directly into any kitchen or dining rooms**/consumption area**, or any room in which food, drink, or utensils are handled or stored. When such toilet rooms are located adjacent to the kitchen or dining areas, an intervening vestibule of at least three (3) feet square shall be provided.

SECTION 312

TESTS AND INSPECTIONS

312.10.2 Testing.

- The testing procedure shall be performed in accordance with one of the following standards: ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CSA B64.10 or CSA B64.10.1. **Test gauges shall comply with ASSE 1064.**

SECTION 314

CONDENSATE DISPOSAL

314.1.1 Identification. The termination of concealed condensate piping shall be marked to indicate whether the piping is connected to the primary or secondary drain.

314.2.1.1 Condensate discharge. Condensate drains shall not directly connect to any plumbing drain, waste or vent pipe. Condensate drains shall not discharge into a plumbing fixture other than a floor sink, floor drain, trench drain, mop sink, hub drain, standpipe, utility sink or laundry sink. Condensate drain connections to a lavatory wye branch tailpiece or to a bathtub overflow pipe shall not be considered as discharging to a plumbing fixture. Except where discharging to grade outdoors, the point of discharge of condensate drains shall be located within the same occupancy, tenant space or dwelling unit as the source of the condensate.

314.2.3.3 Identification. The termination of concealed condensate piping shall be marked to indicate whether the piping is connected to the primary or secondary drain.

SECTION 316

ALTERNATIVE ENGINEERED DESIGN

316.1 Alternative engineered design. The design, documentation, inspection, testing and approval of an alternative engineered design plumbing system shall comply with Sections 316.1.1 through 316.1.6.

316.1.1 Design criteria. An alternative engineered design shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Material,

equipment or components shall be designed and installed in accordance with the manufacturer's instructions.

316.1.2 Submittal. The registered design professional shall indicate on the permit application that the plumbing system is an alternative engineered design. The permit and permanent permit records shall indicate that an alternative engineered design was part of the approved installation.

316.1.3 Technical data. The registered design professional shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that the performance meets the intent of this code.

316.1.4 Construction documents. The registered design professional shall submit to the code official two complete sets of signed and sealed construction documents for the alternative engineered design. The construction documents shall include floor plans and a riser diagram of the work. Where appropriate, the construction documents shall indicate the direction of flow, all pipe sizes, grade of horizontal piping, loading and location of fixtures and appliances.

316.1.5 Design approval. Where the code official determines that the alternative engineered design conforms to the intent of this code, the plumbing system shall be approved. If the alternative engineered design is not approved, the code official shall notify the registered design professional in writing, stating the reasons thereof.

316.1.6 Inspection and testing. The alternative engineered design shall be tested and inspected in accordance with the requirements of Sections 112 and 312.

CHAPTER 4

FIXTURES, FAUCETS AND FIXTURE FITTINGS

SECTION 403

MINIMUM PLUMBING FACILITIES

Footnotes to Table AC-403.1:

2. For establishments serving food and/or drinks, see Article III, ~~"Restaurants,"~~ **"Food safety"** ~~and Article IV "General Food~~," of the Allegheny County Health Department Rules & Regulations.

6. Utility sinks shall be provided for washing utensils, equipment, and appurtenances in accordance with Article III, ~~"Restaurants"~~ **"Food safety"** ~~and Article IV, "General Food."~~

7.A dedicated, safe-wasted/air-gapped food prep sink of adequate capacity will be required in facilities which are engaged in procedures which include but are not limited to washing

produce, thawing frozen foods, draining pasta, washing rice, and other similar tasks as determined by the Allegheny County Health Department's Food Safety Program Article III.

403.1.1 exceptions

2. Where multiple-user facilities are designed to serve all genders, the minimum fixture count shall be calculated 100 percent, based on total occupant load. In such multiple-user facilities, each fixture type shall be in accordance with ICC A117.1 and each urinal that is provided shall be located in a stall.

3. Distribution of the sexes is not required where single-user water closets and bathing room fixtures are provided in accordance with Section 403.1.2.

403.1.2 Single-user toilet and bathing room fixtures. **The plumbing fixtures located in single-user toilet** and bathing rooms, including family or assisted-use toilet and bathing rooms that are required by Section 1110.2.1 of the International Building Code, shall contribute toward the total number of required plumbing fixtures for **a building or tenant space. Single-user toilet and bathing rooms**, and family or assisted-use toilet rooms and **bathing rooms shall be identified as being available for use by all persons regardless of their sex The total number of fixtures shall be permitted to be based on the required number of separate facilities or based on the aggregate of any combination of single-user or separate facilities.**

403.2 Separate Facilities exceptions

5. Separate facilities shall not be required to be designated by sex where single-user toilet rooms are provided in accordance with Section 403.1.2.

6. Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by both sexes and privacy for water closets is provided in accordance with Section 405.3.4. Urinals shall be located in an area visually separated from the remainder of the facility or each urinal that is provided shall be located in a stall.

AC-403.3.1 Access.

403.3.2 Prohibited toilet room location. Toilet rooms shall not open directly into a room used for the preparation of food for service to the public.

AC-403.3.3 Location of toilet facilities in occupancies other than malls.

Exceptions:

2. The location and maximum distances of travel to required public and employee facilities in Group S occupancies shall be permitted to exceed that

required by this section, provided that the location and maximum distances of travel are approved.

~~403.3.3~~ **403.3.4 Location of toilet facilities in covered malls.**

~~403.3.4~~ **403.3.5 Pay facilities.**

~~403.3.5~~ **403.3.5 Door locking.**

AC-403.5 Drinking fountain location. Drinking fountains shall not be required to be located in individual tenant spaces provided that public drinking fountains are located within a distance of travel of 300 feet (152 m) of the most remote location in the tenant space and not more than one story above or below the tenant space. Where the tenant space is in a covered or open mall, such distance shall not exceed 300 feet (91 m).

SECTION 404

ACCESSIBLE PLUMBING FACILITIES

404.1 Where required. Accessible plumbing facilities and fixtures shall be provided in accordance with Chapter 11 of the International Building Code.

404.2 Accessible fixture requirements. Accessible plumbing fixtures shall be installed in accordance with ICC A117.1.

404.3 Exposed pipes and surfaces. Water supply and drain pipes under accessible lavatories and sinks shall be covered or otherwise configured to protect against contact. Pipe coverings shall comply with ASME A112.18.9 or ASTM C1822.

SECTION 405

INSTALLATION OF FIXTURES

405.3.1 Water closets, urinals, lavatories and bidets. A water closet, urinal, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction**. Where partitions or other obstructions do not separate adjacent water closets, urinals, or bidets, the fixtures shall not be set** closer than 30 inches (762 mm) center to center between **adjacent fixtures or adjacent water closets, urinals, or bidets. There shall be not less than a 21-inch (533 mm)** clearance in front of a water closet, urinal, lavatory or **bidet to any wall, fixture or door. Water closet compartments shall be not less than 30 inches (762 mm) in width** and not less than 60 inches (1524 mm) in depth for floor-mounted water closets and not less than 30 inches (762 mm) in width and 56 inches (1422 mm) in depth for wall-hung water closets.

Exception

405.4.3 Securing wall-hung water closet bowls. Wall-hung water closet bowls shall be supported by a concealed metal carrier that is attached to the building structural members so that strain is not transmitted to the fixture connector or any other part of the plumbing system. The carrier shall conform to ASME A112.6.1M or ASME A112.6.2.

405.5 Plumbing fixtures with a pumped waste. Plumbing fixtures with a pumped waste shall comply with ASME A112.3.4/CSA B45.9. The plumbing fixture with a pumped waste shall be installed in accordance with the manufacturer's instructions.

~~405.5~~ 405.6 Water-tight joints.

~~405.6~~ 405.7 Plumbing in mental health centers.

~~405.7~~ 405.8 Design of overflows.

~~405.7.1~~ 405.8.1 Connection of overflows.

~~405.8~~ 405.9 Slip joint connections.

~~405.9~~ 405.10 Design and installation of plumbing fixtures.

SECTION AC-406

AUTOMATIC CLOTHES WASHERS

AC-406.1 Approval.

AC-406.2 Water connection.

AC-406.3 Waste connection.

SECTION 407

BATHTUBS

407.2 Bathtub waste outlets and overflows. Bathtubs shall be equipped with a waste outlet that is not less than 1 1/2 inches (38 mm) in diameter. The waste outlet shall be equipped with a watertight stopper. Where an overflow is installed, the overflow shall be not less than 1 1/2 inches (38 mm) in diameter.

SECTION 408

BIDETS

408.1 Approval. Bidets shall conform to ASME A112.19.2/CSA B45.1 or **ASME A112.19.3/CSA B45.4.**

SECTION 409

DISHWASHING MACHINES

409.4 Residential dishwasher waste connection. The waste connection of a residential dishwasher shall connect directly to a wye branch fitting on the tailpiece of the kitchen sink, directly to the dishwasher connection of a food waste disposer, or through an air break to a standpipe. The waste line of a residential dishwasher shall rise and be securely fastened to the underside of the sink rim or countertop.

SECTION 410

DRINKING FOUNTAINS

410.3 High and low drinking fountains. Where drinking fountains are provided on an exterior site, on a floor or within a secured area, the drinking fountains shall be provided in accordance with Sections 410.3.1 and 410.3.2.

410.3.1 Minimum number. Not fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons.

Exceptions:

1. A single drinking fountain with two separate spouts that complies with the requirements for people who use a wheelchair and

standing persons shall be permitted to be substituted for two separate drinking fountains.

2. Where drinking fountains are primarily for children's use, the drinking fountains for people using wheelchairs shall be permitted to comply with the children's provisions in ICC A117.1 and drinking fountains for standing children shall be permitted to provide the spout at 30 inches (762 mm) minimum above the floor.

410.3.2 More than the minimum number. Where more than the minimum number of drinking fountains specified in Section 410.3.1 is provided, 50 percent of the total number of drinking fountains provided shall comply with the requirements for persons who use a wheelchair and 50 percent of the total number of drinking fountains provided shall comply with the requirements for standing persons.

Exceptions:

1. Where 50 percent of the drinking fountains yields a fraction, 50 percent shall be permitted to be rounded up or down, provided that the total number of drinking fountains complying with this section equals 100 percent of the drinking fountains.

2. Where drinking fountains are primarily for children's use, drinking fountains for people using wheelchairs shall be permitted to comply with the children's provisions in ICC A117.1 and drinking fountains for standing children shall be permitted to provide the spout at 30 inches (762 mm) minimum above the floor.

410.4 Substitution. Where restaurants provide drinking water in a container free of charge, drinking fountains shall not be required in those restaurants. In other occupancies where three or more drinking fountains are required, water dispensers shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains.

~~410.2~~ **410.5 Prohibited location.**

SECTION 411

EMERGENCY SHOWERS AND

EYEWASH STATIONS

411.3 Water supply. Where hot and cold water is supplied to an emergency shower or eyewash station, the temperature of the water supply shall only be **controlled by a temperature-actuated mixing valve complying with ASSE 1071. Where water is supplied directly to an emergency shower or eyewash station from a water heater, the water heater shall comply with ASSE 1085.**

SECTION ~~424~~ 412

FAUCETS AND OTHER FIXTURE FITTINGS

412.10 Head shampoo sink faucets. Head shampoo sink faucets shall be supplied with hot water that is limited to not more than 120°F (49C). Each

faucet shall have integral check valves to prevent crossover flow between the hot and cold-water supply connections. The means for regulating the maximum temperature shall be one of the following:

1. A limiting device conforming to ASSE 1070/ASME A112.1070/CSA B125.70.

2. A water heater conforming to ASSE 1082.

3. A temperature-actuated, flow-reduction device conforming to ASSE 1062.

412.11 Prerinse spray valve. Prerinse spray valves for commercial food service shall conform to ASME A112.18.1/CSA B125.1.

SECTION ~~412~~ 413

FLOOR AND TRENCH DRAINS

~~412.1~~ 413.1 Approval.

~~412.2~~ 413.2 Floor drains.

Exceptions

~~AC-412.3~~ AC-413.3 Size of floor drains.

~~412.4~~ 413.4 Public laundries and central washing facilities.

SECTION ~~427~~ 414

FLOOR SINKS

SECTION ~~425~~ 415

FLUSHING DEVICES FOR WATER CLOSETS AND URINALS

SECTION ~~413~~ 416

FOOD WASTE GRINDER UNITS(FIG ~~AC-413.3~~ AC-416.3)

SECTION ~~414~~ 417

GARBAGE CAN WASHERS(FIG ~~AC-414.2~~ AC-417.2)

SECTION ~~415~~ 418

LAUNDRY TRAYS

SECTION ~~416~~ 419

LAVATORIES

AC-419.3 Lavatory waste outlets. Lavatories and group wash fixtures shall have a waste outlet not less than ~~1 1/4 inches~~ **1 ½ inches** in diameter. A strainer, pop-up stopper, crossbar or other device shall be provided to restrict the clear opening of the waste outlet.

~~**416.4 Moveable lavatory systems.** Moveable lavatory systems shall comply with ASME A112.19.12.~~

SECTION ~~426~~ 420

MANUAL FOOD AND BEVERAGE DISPENSING EQUIPMENT

SECTION ~~417~~ 421

SHOWERS

421.1 Approval. Prefabricated showers and **shower compartments shall conform to ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124.** Shower valves for individual showers shall conform to the requirements of Section 412.3.

421.3.1 Waste fittings. Waste fittings shall conform to ASME A112.18.2/CSA B125.2.

421.4.1 Floor and wall area. Bathtub floors, shower floors, wall areas above built-in tubs that have installed shower heads and walls in shower compartments shall be constructed of smooth, corrosion-resistant and nonabsorbent waterproof materials. Wall materials shall extend to a height of not less than 6 feet (1829 mm) above the room floor level, and not less than 70 inches (1778 mm) above the drain of the tub or shower. Such walls shall form a watertight joint with each other and with either the tub or shower floor.

421.5.2.3 Sheet lead. Sheet lead shall weigh not less than 4 pounds per square foot (19.5 kg/m2) and shall be coated with an asphalt paint or other approved coating. The lead sheet shall be insulated from conducting substances other than the connecting drain by 15-pound (6.80 kg) asphalt felt or an equivalent. Sheet lead shall be joined by burning.

421.5.2.6 Liquid-type, trowel-applied, load-bearing, bonded waterproof materials. Liquid-type, trowel-applied, load-bearing, bonded waterproof materials shall meet the requirements of ANSI A118.10 and shall be applied in accordance with the manufacturer's instructions.

SECTION ~~418~~ 422

SINKS

~~418.1~~ 422.1 Approval.

~~418.2~~ 422.2 Sink waste outlets.

~~418.3~~ 422.3 Moveable sink systems.

SECTION ~~419~~ 424

URINALS

~~419.1~~ 424.1 Approval.

AC-~~419.2~~ 424.2 Number of urinals.

[B] ~~419.3~~ 424.3 Surrounding material.

SECTION ~~420~~ 425

WATER CLOSETS

425.1 Approval. Water closets shall conform to the water consumption requirements of Section 604.4 and shall conform to ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124.

425.1.1 Hydraulic performance. Water closets shall conform to the hydraulic performance requirements of ASME A112.19.2/CSA B45.1.

425.1.2 Water closet tanks. Water closet tanks shall conform to ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124.

425.1.3 Dual flush water closets. Water closets equipped with a dual flushing device shall comply with ASME A112.19.14.

425.2 Water closets for public or employee toilet facilities. Water closet bowls for public or employee toilet facilities shall be of the elongated type.

425.3 Water closet seats. Water closets shall be equipped with seats of smooth, nonabsorbent material. Seats of water closets provided for public or employee toilet facilities shall be of the hinged open-front type. Integral water closet seats shall be of the same material as the fixture. Water closet seats shall be sized for the water closet bowl type.

425.4 Water closet connections. A 4-inch by 3-inch (102 mm by 76 mm) closet bend shall be acceptable. Where a 3-inch (76 mm) bend is utilized on water closets, a 4-inch by 3-inch (102 mm by 76 mm) flange shall be installed to receive the fixture horn.

SECTION ~~421~~ 426

WHIRLPOOL BATHTUBS

~~421.1~~ 426.1 Approval.

~~421.2~~ 426.2 Installation.

~~421.3~~ 426.3 Drain.

~~421.4~~ 426.4 Suction fittings.

~~421.5~~ 426.5 Access to pump.

~~421.6~~ 426.7 Whirlpool enclosure.

SECTION ~~422~~ AC-427

HEALTH CARE FIXTURES AND EQUIPMENT

~~422.1~~ AC-427.1 Scope.

~~422.2~~ AC-427.2 Approval.

~~422.3~~ AC-427.3 Protection.

~~422.4~~ AC-427.4 Materials.

~~422.5~~ AC-427.5 Access.

~~422.6~~ AC-427.6 Clinical sink.

~~422.7~~ AC-427.7 Prohibited usage of clinical sinks and service sinks.

~~422.8~~ AC-427.8 Ice prohibited in soiled utility room.

~~422.9~~ AC-427.9 Sterilizer equipment requirements.

SECTION 501

GENERAL

501.2 Water heater as space heater. Where a combination potable water heating and space heating system requires water for space heating at temperatures greater than **140°F (60C), a temperature-actuated mixing valve complying** with ASSE 1017 shall be provided to limit the water supplied to the potable hot water distribution system to a temperature of 140°F (60C) or less. The potability of the water shall be **maintained throughout the system. Requirements for combination potable water heating and space heating systems shall be in accordance with the International Mechanical Code.**

CHAPTER 6

AC-603.1.1 Tracer wire for nonmetallic piping. An insulated tracer wire listed for the purpose or other approved conductor shall be installed adjacent to underground nonmetallic water service. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall be not less than 12 AWG, solid core, coated and the wire insulation type shall be suitable for direct burial.

605.5 Fittings. Pipe fittings shall be approved for installation with the piping material installed and shall comply with the applicable standards listed in Table 605.5. Pipe fittings utilized in water supply systems shall also comply with NSF 61. Ductile and gray iron pipe and pipe fittings utilized in water service piping systems shall be cement mortar lined in accordance with AWWA C104/A21.4.

~~AC-605.13~~ AC-605.11

~~AC-605.13.1~~ AC-605.11.1 Rodding of joints on grey iron and ductile iron joints.

~~605.14~~ 605.12 Copper pipe.

~~605.14.1~~ 605.12.1 Brazed joints.

~~605.14.2~~ 605.12.2 Mechanical joints.

~~605.14.3~~ 605.12.3 Soldered joints.

~~605.14.4~~ 605.12.4 Threaded joints.

~~605.14.5~~ 605.12.5 Welded joints.

~~AC-605.15~~ 605.13 Copper tubing.

~~605.15.1~~ 605.13.1 Brazed joints.

~~605.15.2~~ 605.13.2 Flared joints.

~~605.15.3~~ 605.13.3 Mechanical joints.

~~605.15.4~~ 605.13.4 Soldered joints.

~~605.15.5~~ 605.13.5 Press-connect joints.

~~AC-605.15.6~~ 605.13.6 Push-fit joints.

~~AC 605.26~~ 605.15 **Chlorinated polyvinyl chloride/aluminum/ chlorinated polyvinyl chloride (CPVC/AL/CPVC) pipe and tubing.**

~~AC 605.26.1~~ 605.15.1 **Mechanical joints.**

~~AC 605.26.2~~ 605.15.2 **Solvent cementing.**

~~605.17~~ 605.16 **PEX Plastic.**

605.17.1 605.16.1 **Flared joints.** Flared pipe ends shall be made by a tool designed for that operation.

~~605.17.2~~ 605.16.2 **Mechanical joints.**

~~605.17.3~~ 605.16.3 **Push-fit joints.**

~~605.18~~ 605.17 **Steel**

~~605.18.1~~ 605.17.1 **Threaded joints.**

~~605.18.2~~ 605.17.2 **Mechanical joints.**

~~605.19~~ 605.18 **Polyethylene plastic.** Joints between polyethylene plastic pipe and tubing or fittings shall comply with Sections 605.19.1 **605.18.1 through 605.18.4**.

~~605.19.1~~ 605.18 .1 **Flared joints.**

~~605.19.2~~ 605.18 .2 **Heat-fusion joints.**

~~605.19.3~~ 605.18 .3 **Mechanical joints.**

~~605.19.4~~ 605.18 .4 **Installation.**

~~605.20~~ 605.19 **Polypropylene (PP) plastic.**

~~605.20.1~~ 605.19.1 **Heat-fusion joints.**

~~605.20.2~~ 605.19.2 **Mechanical and compression sleeve joints.**

~~605.21~~ 605.20 **Polyethylene/aluminum/polyethylene (PE-AL-PE) and cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX).**

~~605.21.1~~ 605.20.1 **Mechanical joints.**

~~605.22~~ 605.21 **PVC plastic.**

~~605.22.1~~ 605.21.1 **Mechanical joints.**

~~605.22.2~~ 605.21.2 **Solvent cementing.**

~~605.22.3~~ 605.21.3 **Threaded joints**

~~605.23~~ 605.22 **Stainless steel.**

~~605.23.1~~ 605.22.1 **Mechanical joints.**

~~605.23.2~~ 605.22.2 **Welded joints.**

~~605.23.3~~ 605.22.3 **Grooved and shouldered mechanical joints.**

~~605.24~~ 605.23 **Joints between different materials.**

~~605.24.1~~ 605.23.1 **Copper or copper-alloy tubing to galvanized steel pipe.**

~~605.24.2~~ 605.23.2 **Plastic pipe or tubing to other piping material.**

~~605.24.3~~ 605.23.3 **Stainless steel.**

~~605.25~~ 605.24 **PE-RT plastic.**

~~605.25.1~~ 605.24.1 **Mechanical joints.**

~~605.12~~ AC-605.25 **Brass.** Joints between brass pipe or fittings shall comply with Sections 605.12.1 AC-605.25.1 through 605.12.4 AC-605.25.4

~~605.12.1~~ AC-605.25.1 **Brazed joints.**

~~605.12.2~~ AC-605.25.2 **Mechanical joints.**

~~605.12.3~~ AC-605.25.3 **Threaded joints.**

606.1.4 AC-605.25.4 **Welded joints**

606.1 Location of full-open valves.

2.1. In multiple-tenant buildings, where a common water supply piping system is installed to supply other than one- and two-family dwellings, a main shutoff valve shall be provided for each tenant.

AC-606.2 Individual fixture valves. Location of shutoff valves. Shut off valves shall be installed in the following locations:

1. **On the water service line to each fixture or other piece of equipment shall be provided with a valve or fixture stop to shut off the water to the fixture.**
2. **All sill cocks and wall hydrants shall be separately controlled by a valve inside the building.**
3. **On the water supply pipe to each appliance or mechanical equipment.**

~~606.7~~ **AC-606.7 Labeling of water distribution pipes in bundles.**

607.1 Where required. In residential *occupancies*, *hot water* shall be supplied to plumbing fixtures and equipment utilized for bathing, washing, culinary purposes, cleansing, laundry or building maintenance. In nonresidential *occupancies*, *hot water* shall be supplied for culinary purposes, cleansing, laundry or building maintenance purposes. In non-residential *occupancies*, *hot water* or *tempered water* shall be supplied for bathing and washing purposes.

607.1.1 Temperature limiting means. A thermostat control for a water heater shall only serve as the temperature limiting means for the purposes of complying with the requirements of this code for maximum allowable *hot* or *tempered water* delivery temperature at fixtures where the water heater complies with ASSE 1082 or ASSE 1085.

607.1.2 Tempered water temperature control.
***Tempered water* shall be controlled by one the following:**
1. **A limiting device conforming to ASSE 1070/ASME A112.1070/CSA B125.70 and set to not greater than 110°F (43°C).**
2. **A thermostatic mixing valve conforming to ASSE 1017.**
3. **A water heater conforming to ASSE 1082.**
4. **A water heater conforming to ASSE 1084.**

This provision shall not supersede the requirement for protective shower valves in accordance with Section 412.3.

~~607.2~~ **AC-607.2 Hot or tempered water supply to fixtures.**

- The *developed length* of *hot* or *tempered water* piping, from the source of hot water to the fixtures that require *hot* or *tempered water*, shall not exceed 50 **feet for commercial occupancy (15 240 mm) and 100 feet for residential occupancy**.

607.2.1 Circulation systems and heat trace systems for maintaining heated water temperature in distribution systems. For Group R2, R3 and R4 occupancies that are three stories or less in height above grade plane, the installation of heated water circulation and temperature maintenance systems shall be in accordance with Section R403.5.1 of the *International Energy Conservation Code*. For other than Group R2, R3 and R4 occupancies that are three stories or less in height above grade plane, the installation of heated water circulation and heat trace systems shall be in accordance with Section C404.6 of the *International Energy Conservation Code*.

607.2.1.1 Pump controls for hot water storage systems.
The controls on pumps that circulate water between a water heater and a storage tank for heated water shall limit operation of the pump from heating cycle startup to not greater than 5 minutes after the end of the cycle.

607.2.1.2 Demand recirculation controls for distribution systems. A water distribution system having one or more recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold-water supply pipe shall be a demand recirculation water system. Pumps shall have controls that comply with both of the following:

1. **1.The control shall start the pump upon receiving a signal from the action of a user of a fixture or appliance, sensing the presence of a user of a fixture, or sensing the flow of hot or *tempered water* to a fixture fitting or appliance.**
2. **2.The control shall limit the temperature of the water entering the cold water piping to 104°F (40°C).**

~~607.2.3~~ **607.2.2 Recirculating pump.**

~~607.2.2~~ **AC-607.2.3 Hot water system controls.**

~~607.3.1~~ **AC-607.3.1 Pressure-reducing valve.**

~~607.3.2~~ **AC-607.3.2 Backflow prevention device or check valve.**

~~AC-608.3.2~~ **608.4 Potable water handling and treatment equipment.**

~~608.4~~ **608.5 Water service piping**. Water service piping shall be protected in accordance with Sections AC-603.2 and **AC-603.2.1**.

~~608.5~~ **608.6 Chemicals and other substances.**

~~608.6~~ 608.7 Cross-connection control.

~~608.6.1~~ 608.7.1 Private water supplies.

~~608.7~~ AC-608.8 Valves and outlets prohibited below grade.

~~608.8~~ 608.9 Identification of non-potable water systems.

~~608.8.1~~ 608.9.1 Signage required.

~~608.8.2~~ 608.9.2 Distribution pipe labeling and marking.

~~608.8.2.1~~ 608.9.2.1 Color.

~~608.8.2.2~~ 608.9.2.2 Lettering Size.

~~608.8.2.3~~ 608.9.2.3 Identification tape.

~~608.9~~ 608.10 Reutilization prohibited.

~~608.10~~ 608.11 Reuse of piping.

~~608.11~~ 608.12 Potable water tanks.

~~608.12~~ 608.13 Pumps and other appliances.

~~608.13~~ 608.14 Backflow protection.

~~608.13.1~~ 608.14.1 Air gap.

~~608.13.2~~ 608.14.2 Reduced pressure principle backflow preventers.

608.14.3 Backflow preventer with intermediate atmospheric vent. Backflow preventers with intermediate atmospheric vents shall conform to ASSE 1012, ASSE 1081 or CSA B64.3. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by *air gap* and shall be prevented from being submerged.

~~608.13.4~~ 608.14.4 Barometric loop.

~~608.13.5~~ 608.14.5 Pressure-type vacuum breakers.

~~608.13.6~~ 608.14.6 Atmospheric-type vacuum breakers.

~~608.13.7~~ 608.14.7 Double check-valve assemblies.

~~608.13.9~~ **608.14.8 Chemical dispenser backflow devices.**

608.14.9 Dual check backflow preventer. Dual check backflow preventers shall conform to ASSE 1024 or CSA B64.6.

~~608.13.8~~ **AC-608.14.10 Spillproof vacuum breakers.**

~~608.14~~ **608.15 Location of backflow preventers.**

~~608.14.1~~ **608.15 .1 Outdoor enclosures for backflow prevention devices.**

~~608.14.2~~ **608.15.2 Protection of backflow preventers.**

~~608.14.2.1~~ **AC-608.15.2.1 Relief port piping.** The termination of the piping from the relief port or air gap fitting of a backflow preventer shall discharge to an approved indirect waste receptor ~~or to the outdoors where it will not cause damage or create a nuisance~~. **The indirect waste receptor and drainage piping shall be sized to drain the maximum discharge flow rate from the relief port as published by the backflow preventer manufacturer.**

~~AC-608.14.3~~ **AC-608.15.3 Protection of water service.**

~~608.15~~ **608.16 Protection of potable water outlets.**

~~608.15.1~~ **608.16.1 Protection by air gap.**

~~608.15.2~~ **608.16.2 Protection by a reduced pressure principle backflow preventer.**

~~608.15.3~~ **608.16.3 Protection by a backflow preventer with intermediate atmospheric vent.**

~~608.15.4~~ **608.16.4 Protection by a vacuum breaker.**

~~608.15.4.1~~ **608.16.4.1 Deck-mounted and integral vacuum breakers.**

~~608.15.4.2~~ **608.16.4.2 Hose connections.**

608.17 Connections to the potable water system. Connections to the potable water system shall conform to Sections 608.17.1 through 608.17.10.

608.17.1 Beverage dispensers. The water supply connection to beverage dispensers shall be protected against backflow in accordance with Sections 608.17.1.1 and 608.17.1.2.

608.17.1.2 Coffee machines and noncarbonated drink dispensers.

The water supply connection to each coffee machine and each noncarbonated beverage dispenser shall be protected against backflow by a backflow preventer conforming to ASSE 1022 or ASSE 1024, or protected by an *air gap*.

608.17.2 Connections to boilers. The potable supply to the boiler shall be equipped with a backflow preventer with an intermediate atmospheric vent complying with ASSE 1012, ASSE 1081 or CSA B64.3. Where conditioning chemicals are introduced into the system, the potable water connection shall be protected by an *air gap* or a reduced pressure principle backflow preventer, complying with ASSE 1013, AWWA C511 or CSA B64.4.

~~608.16.3~~ **608.17.3 Heat exchangers.**

~~608.16.4~~ **608.17.4 Connections to automatic fire sprinkler systems and standpipe systems.**

~~608.16.4.1~~ **608.17.4.1 Additives or non-potable source.**

~~608.16.5~~ **608.17.5 Connections to lawn irrigation systems.**

~~608.16.6~~ **608.17.6 Connections subject to backpressure.**

- Where chemical dispensers connect to the potable water distribution system, the water supply system shall be protected against backflow in accordance with Section ~~608.13.1, 608.13.2, 608.13.5, 608.13.6, 608.13.8 or 608.13.9~~ **608.14.1, 608.14.2, 608.14.5, 608.14.6, 608.14.9.**

~~608.16.8~~ **608.17.8 Portable cleaning equipment**

- Where the portable cleaning equipment connects to the water distribution system, the water supply system shall be protected against backflow in accordance with Section ~~608.13.1, 608.13.2, 608.13.3, 608.13.7 or 608.13.8~~ **608.14.1, 608.14.2, 608.14.3, 608.13.7 or 608.14.8.**

~~608.16.9~~ **608.17.9 Dental pump equipment.**

- Where dental pumping equipment connects to the water distribution system, the water supply system shall be protected against backflow in accordance with Section ~~608.13.1, 608.13.2, 608.13.5, 608.13.6 or 608.13.8~~ **608.14.1, 608.14.2, 608.14.5, 608.14.6 or 608.14.8.**

608.16.10 Coffee machines and noncarbonated beverage dispensers. The water supply connection to coffee machines and noncarbonated beverage dispensers shall be protected against backflow by a backflow preventer conforming to ASSE 1022 or by an air gap.

~~608.16.11~~ **608.17.10 Humidifiers.**

~~608.17~~ **608.18 Protection of individual water supplies.**

~~608.17.1~~ **608.18.1 Well locations.** A potable ground water source or pump suction line shall not be located closer to potential sources of contamination than the distances shown in Table ~~608.17.1~~ **608.18.1**. In the event the underlying rock structure is limestone or fragmented shale, the local or state health department shall be consulted on well site location. The distances in Table ~~608.17.1~~ **608.18.1** constitute minimum separation and shall be increased in areas of creviced rock or limestone, or where the direction of movement of the ground water is from sources of contamination toward the well.

~~608.17.2~~ **608.18.2 Elevation.** Well sites shall be positively drained and shall be at higher elevations than potential sources of contamination. ~~608.17.3~~ **608.18.3** Depth. Private potable well supplies shall not be developed from a water table less than 10 feet (3048 mm) below the ground surface.

~~608.17.3~~ **608.18.3 Depth.**

~~608.17.4~~ **608.18.4 Water-tight casings.**

~~608.17.5~~ **608.18.5 Drilled or driven well casings.**

~~608.17.6~~ **608.18.6 Dug or bored well casings.**

~~608.17.7~~ **608.18.7 Cover.**

~~608.17.8~~ **608.18.8 Drainage.**

AC- 609.2.1 Tracer wire for nonmetallic piping. An insulated tracer wire listed for the purpose or other approved conductor shall be installed adjacent to underground nonmetallic piping serving as a water service for a hospital. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall be not less than ~~18 AWG~~ 12 AWG, solid core, coated and the wire insulation type shall be suitable for direct burial.

CHAPTER 7
SANITARY DRAINAGE

AC-701.2.3 Inspection / site tee required at public sewer connections. All new or replaced sanitary or combined sewer laterals, when connected to public sewers, shall be provided with an ~~inspection / site tee~~ **two-way tee** at or near the property line. Such connection shall be brought to grade and finished with a water- and air-tight cleanout assembly.

SECTION 704
DRAINAGE PIPING INSTALLATION

704.2 Reduction in pipe size in the direction of flow. INSIGHTS
The size of the drainage piping shall not be reduced in the direction of the flow. The following shall not be considered as a reduction in size in the direction of flow:
1. A 4-inch by 3-inch (102 mm by 76 mm) water closet flange.
2. A water closet bend fitting having a 4-inch (102 mm) inlet and a 3-inch (76 mm) outlet provided that the 4-inch leg of the fitting is upright and below, but not necessarily directly connected to, the water closet flange.
3.An offset closet flange.

SECTION 708

CLEANOUTS

~~708.1.6~~ 708.11 Cleanout equivalent. A fixture trap or a fixture with integral trap, removable without altering concealed piping, shall be acceptable as a cleanout equivalent.

~~708.11~~ 708.12 Prohibited use.

SECTION AC-~~717~~ 716

REPLACEMENT OF UNDERGROUND SEWERS BY PIPE-BURSTING METHODS

~~717.1~~ 716.1 General.

~~717.2~~ 716.2 Applicability.

~~717.3~~ 716.3 Pre-installation inspection.

~~717.4~~ 716.4 Pipe.

~~717.5~~ 716.5 Pipe fittings.

~~717.6~~ 716.6 Cleanouts.

~~717.7~~ 716.7 Post-installation inspection.

~~717.8~~ 716.8 Pressure testing.

SECTION 717

RELINING BUILDING SEWERS AND BUILDING DRAINS INSIGHTS

717.1 General. This section shall govern the relining of existing building sewers and building drainage piping.

717.2 Applicability. The relining of existing building sewers and building drainage piping shall be limited to gravity drainage piping 4 inches (102 mm) in diameter and larger. The relined piping shall be of the same nominal size as the existing piping.

717.3 Preinstallation requirements. Prior to commencement of the relining installation, the existing piping sections to be relined shall be descaled and cleaned. After the cleaning process has occurred and water has been flushed through the system, the piping shall be inspected internally by a recorded video camera survey.

717.3.1 Preinstallation recorded video camera survey. The video survey shall include verification of the project address location. The video shall include notations of the cleanout and fitting locations, and the approximate depth of the existing piping. The video shall also include notations of the length of piping at intervals not greater than 25 feet (7620 mm).

717.4 Permitting. Prior to permit issuance, the code official shall review and evaluate the preinstallation recorded video camera survey to determine if the piping system is able to be relined in accordance with the proposed lining system manufacturer's installation requirements and applicable referenced standards.

717.5 Prohibited applications. Where review of the preinstallation recorded video camera survey reveals that piping systems are not installed correctly or defects exist, relining shall not be permitted. The defective portions of piping shall be exposed end repaired with pipe and fittings in accordance with this code. Defects include, but are not limited to, backgrade or insufficient slope, complete pipe wall deterioration or complete separations such as from tree root invasion or improper support.

717.6 Relining materials. The relining materials shall be manufactured in compliance with applicable standards and certified as required in Section 303.

Fold-and-form pipe reline materials shall be manufactured in compliance with ASTM F1504 or ASTM F1871.

717.7 Installation. The installation of relining materials shall be performed in accordance with the manufacturer's installation instructions, applicable referenced standards and this code

717.7.1 Material data report. The installer shall record the data as required by the relining material manufacturer and applicable standards. The recorded data shall include but is not limited to the location of the project, relining material type, amount of product installed and conditions of the installation. A copy of the data report shall be provided to the code official prior to final approval.

717.8 Post-installation recorded video camera survey. The completed, relined piping system shall be inspected internally by a recorded video camera survey after the system has been flushed and flow-tested with water. The video survey shall be submitted to the code official prior to finalization of the permit. The video survey shall be reviewed and evaluated to provide verification that no defects exist. Any defects identified shall be repaired and replaced in accordance with this code.

717.9 Certification. A certification shall be provided in writing to the code official, from the permit holder, that the relining materials have been installed in accordance with the manufacturer's installation instructions, the applicable standards and this code.

717.10 Approval. Upon verification of compliance with the requirements of Sections 717.1 through 717.9, the code official shall approve the installation.

SECTION 718

REHABILITATION OF BUILDING SEWERS AND BUILDING DRAINS INSIGHTS

718.1 Cure-in-place. Sectional cure-in-place rehabilitation of building sewer piping and sewer service lateral piping shall be in accordance with ASTM F2599. Main and lateral cure-in-place rehabilitation of building sewer and sewer service lateral pipe and their connections to the main sewer pipe shall be in accordance with ASTM F2561. Hydrophilic rings or gaskets in cure-in-place rehabilitation of building sewer piping and sewer service laterals shall be in accordance with ASTM F3240 to ensure water tightness and elimination of ground water penetration.

Chapter 8 – Indirect/Special Waste

AC-802.1.1.1 Food Handling includes but is not limited to washing produce, thawing frozen foods, draining pasta, washing rice, and other similar tasks as determined by the Allegheny County Health Department's Food Safety Program Article III.

AC-802.1.6 Domestic dishwashing machines.

~~802.2~~ 802.3 Installation.

~~802.2.1~~ 802.3.1 Air gap.

~~802.2.2~~ 802.3.2 Air break.

~~802.3~~ 802.4 Waste receptors.

~~802.3.1~~ 802.4.1 Size of receptors.

~~802.3.2~~ 802.4.2 Open hub waste receptors.

SECTION 803 SPECIAL WASTES

~~803.2~~ 803.1 Neutralizing device required for corrosive waste

~~803.3~~ 803.2 System design.

~~803.1~~ AC-803.3 Wastewater temperature.

~~AC-803.1.1~~ AC 803.3.1 Condenser tanks.

CHAPER 9 VENTS

~~903.1.3~~ 905.6 Protected vent terminal. Where an open vent pipe terminates above a sloped roof and is covered by either a roof-mounted panel (such as a solar collector or photovoltaic panel mounted over the vent opening) or a roof element (such as an architectural feature or a decorative shroud), the vent pipe shall terminate not less than 2 inches (51 mm) above the roof surface. Such roof elements shall be designed to prevent the adverse effects of snow accumulation and wind on the function of the vent. The placement of a panel over a vent pipe

and the design of a roof element covering the vent pipe shall provide for an open area for the vent pipe to the outdoors that is not less than the area of the pipe, as calculated from the inside diameter of the pipe. Such vent terminals shall be protected by a method that prevents birds and rodents from entering or blocking the vent pipe opening.

~~907.2~~ **904.6 Upper section. The upper section of the drainage stack shall be vented as a separate stack with a vent stack connection installed in accordance with Section ~~904.4~~ 904.2. The offset shall be considered to be the base of the stack.**

~~AC 904.6~~ **AC-904.7 Vent headers.**

CHAPTER 10

SECTION 1002 TRAP REQUIREMENTS

AC-1002.1 Fixture traps.

Exceptions:

1. This section shall not apply to fixtures with integral traps.

~~2. A combination plumbing fixture is permitted to be installed on one trap, provided that one compartment is not more than 6 inches (152 mm) deeper than the other compartment and the waste outlets are not more than 30 inches (762 mm) apart.~~

~~3. A grease interceptor intended to serve as a fixture trap in accordance with the manufacturer's installation instructions shall be permitted to serve as the trap for a single fixture or a combination sink of not more than three compartments where the vertical distance from the fixture outlet to the inlet of the interceptor does not exceed 30 inches (762 mm) and the developed length of the waste pipe from the most upstream fixture outlet to the inlet of the interceptor does not exceed 60 inches (1524 mm).~~

~~4.~~ **2. Where a hydromechanical grease interceptor serves a food utensil, dishes, pots and pans sink, in accordance with the manufacturer's installation instructions. The branch drain serving the interceptor shall be provided with an emergency floor drain downstream of the interceptor connection, and the branch shall serve only the emergency floor drain and the interceptor. Where the interceptor serves a combination sink of not more than three compartments where the vertical distance from the fixture outlet to the inlet of the interceptor does not exceed 30 inches (762 mm) and the developed length of the waste pipe from the most upstream fixture outlet to the inlet of the interceptor does not exceed 60 inches (1524 mm). The food utensil, dishes, pots and pans sink shall be required to connect directly with the interceptor.**

~~1002.3~~ **AC-1002.3 Prohibited traps.** The following types of traps are prohibited:

1. Traps that depend on moving parts to maintain the seal.
2. Bell traps.
3. Crown-vented traps.
4. Traps not integral with a fixture and that depend on interior partitions for the seal, except those traps con- structed of an *approved* material that is resistant to corrosion and degradation.
5. "S" traps.
6. Drum traps.
7. **Bottle Traps**

Exception: Drum traps used as solids interceptors and drum traps serving chemical waste systems shall not be prohibited.

1002.4 Trap seals. Each fixture trap shall have a liquid seal of not less than 2 inches (51 mm) and not more than 4 inches (102 mm), or deeper for special designs relating to accessible fixtures.

1002.4.1 Trap seal protection. Trap seals of emergency floor drain traps and trap seals subject to evaporation shall be protected by one of the methods in Sections 1002.4.1.1 through 1002.4.1.5.

1002.4.1.1 Potable water-supplied trap seal primer valve. A potable water-supplied trap seal primer valve shall supply water to the trap. Water-supplied trap seal primer valves shall conform to ASSE 1018. The discharge pipe from the trap seal primer valve shall connect to the trap above the trap seal on the inlet side of the trap.

1002.4.1.2 Reclaimed or graywater-supplied trap seal primer valve. A reclaimed or graywater-supplied trap seal primer valve shall supply water to the trap. Water-supplied trap seal primer valves shall conform to ASSE 1018. The quality of reclaimed or graywater supplied to trap seal primer valves shall be in accordance with the requirements of the manufacturer of the trap seal primer valve. The discharge pipe from the trap seal primer valve shall connect to the trap above the trap seal, on the inlet side of the trap.

1002.4.1.3 Wastewater-supplied trap primer device. A wastewater supplied trap primer device shall supply water to the trap. Wastewater supplied trap primer devices shall conform to ASSE 1044. The discharge pipe from the trap seal primer device shall connect to the trap above the trap seal on the inlet side of the trap.

AC-1003.3.2 Food waste grinders. ~~Where food waste grinders connect to grease interceptors, a solids interceptor shall separate the discharge before connecting to the grease interceptor.~~ **A food waste disposer shall not discharge to a grease interceptor.** Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste grinder. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste grinder.

1003.3.3 Additives to grease interceptors. Dispensing systems that dispense interceptor performance additives to grease interceptors shall not be installed except where such systems dispense microbes for the enhancement of aerobic bioremediation of grease and other organic material, or for inhibiting growth of pathogenic organisms by anaerobic methods. Such microbial dispensing systems shall be installed only where the grease interceptor manufacturer's instructions allow such systems and the systems conform to ASME A112.14.6. Systems that discharge emulsifiers, chemicals or enzymes to grease interceptors shall be prohibited.

~~1003.3.3~~ **1003.3.4 Grease interceptors and automatic grease removal devices not required.**

~~1003.3.4~~ **1003.3.5 Hydromechanical grease interceptors, fats oils and greases disposal systems and automatic-grease removal devices.**

~~AC-1003.3.4.1~~ **AC-1003.3.5.1 Grease interceptor capacity**. Grease interceptors shall have the grease retention capacity indicated in Table ~~AC-1003.3.4.1~~ **AC-1003.3.5.1** for the flow-through rates indicated. The minimum size grease interceptor at point of use inside a building is 25 gpm (95 L/m). The minimum size outside grease interceptor is 1,000 gallons (3786 L).

~~1003.3.4.2~~ **1003.3.5.2 Rate of flow controls.**

~~1003.3.5~~ **1003.3.6 Automatic grease removal devices.**

~~1003.3.6~~ **1003.3.7 Gravity grease interceptors and gravity grease interceptors with fats, oils, and greases disposal systems.**

~~1003.3.7~~ **1003.3.8 Direct connection.**

1003.6 Clothes washer discharge interceptor. Clothes washers shall discharge through an interceptor that is provided with a wire basket or similar device, removable for cleaning, that prevents passage into the drainage system of solids 1/2 inch (12.7 mm) or larger in size, string, rags, buttons or other materials detrimental to the public sewage system.

Exceptions:
1. Clothes washers in individual dwelling units shall not be required to discharge through an interceptor.
2. A single clothes washer designed for use in individual dwelling units and installed in a location other than an individual dwelling unit shall not be required to discharge through an interceptor.

AC-1003.10.1 Maintenance schedule of interceptors, and separators. Interceptors and separators shall be maintained in efficient operating condition by periodic removal of accumulated grease, scum, oil, or other floating substances and solids deposited in the interceptor or separator. When interceptors and separators are installed, a maintenance schedule and records, including the hauler, shall be kept on the premises and made available upon request to the Administrative Authority. **All grease traps must be cleaned at a minimum of every calendar quarter.**

CHAPTER 11
STORM DRAINAGE

SECTION 1102
MATERIALS

1102.6 Roof drains. Roof drains shall conform to ASME A112.3.1 or ASME A112.6.4. Roof drains, other than siphonic roof drains, shall be tested and rated in accordance with ASME A112.6.4 or ASPE/IAPMO Z1034.

SECTION 1104
CONDUCTORS AND CONNECTIONS

~~1104.3~~ **1104.2 Floor drains.**

~~AC-1104.2~~ **AC-1104.3 Combining storm with sanitary drainage.**

SECTION 1105
ROOF DRAINS

~~AC-1105.4~~ **1105.1 General.** Roof drains shall be installed in accordance with the ~~manufacture's~~ **manufacturer's** instructions. The inside opening for the roof drain shall not be obstructed by the roofing membrane material.

1105.2 Roof drain flow rate. The published roof drain flow rate, based on the head of water above the roof drain, shall be used to size the storm drainage system in accordance with Section 1106. The flow rate used for sizing the storm drainage piping shall be based on the maximum anticipated ponding at the roof drain.

~~1105.1~~ AC-1105.3 **Strainers.**

~~1105.2~~ AC-1105.4 **Flat decks.**

~~1105.3~~ AC-1105.5 **Roof drain flashings.**

SECTION 1106
SIZE OF CONDUCTORS, LEADERS AND STORM DRAINS

~~1106.1~~ AC-1106.1 **General.** The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on rainfall rates **of 4" per hour.**

~~1106.2~~ AC-1106.2 **Vertical conductors and leaders.** Vertical conductors and leaders shall be sized for the maximum projected roof area, in accordance with Tables AC-1106.2(1) and 1106.2(2).

1106.5 Parapet wall scuppers. Where scuppers are used for primary roof drainage or for secondary (emergency overflow) roof drainage or both, the quantity, size, location and inlet elevation of the scuppers shall be chosen to prevent the depth of ponding water on the roof from exceeding the maximum water depth that the roof was designed for as determined by Section 1611.1 of the International Building Code. Scupper openings shall be not less than 4 inches (102 mm) in height and have a width that is equal to or greater than the circumference of a roof drain sized for the same roof area. The flow through the primary system shall not be considered when locating and sizing secondary scuppers.

SECTION 1107
SIPHONIC ROOF DRAINAGE SYSTEMS

1107.1 General. Siphonic roof drains and drainage systems shall be designed in accordance with ASME A112.6.9 and ASPE 45.

SECTION ~~AC-1107~~ AC-1108
SECONDARY (EMERGENCY) ROOF DRAINS

~~AC-1107.1~~ AC-1108.1 **Secondary drainage required.**

~~1107.2~~ 1108.2 **Separate systems required.**

~~1107.3~~ 1108.3 **Sizing of secondary drains.**

SECTION ~~AC-1108~~ AC-1109
COMBINED SANITARY AND STORM SYSTEM

~~AC-1108.1~~ AC-1109.1 **Size of combined drains and sewers.**

SECTION ~~1109~~ 1114
VALUES FOR CONTINUOUS FLOW

~~AC-1109.1~~ AC-1114.1 **Equivalent roof area.**

CHAPTER 12
SPECIAL PIPING AND STORAGE SYSTEMS

SECTION 1202
MEDICAL GASES

[F] 1202.1 Nonflammable medical gases. Nonflammable medical gas systems, inhalation anesthetic systems and **vacuum piping systems shall be installed, tested and labeled** in accordance with NFPA 99.

Exceptions:

1. This section shall not apply to portable systems or cylinder storage.
2. Vacuum system exhaust terminations shall comply with the International Mechanical Code.

CHAPTER 13
NONPOTABLE WATER SYSTEMS

SECTION 1301
GENERAL

1301.1 General. **The provisions of Chapter 13 shall govern** the materials, design, construction and installation of systems for the collection, storage, treatment and distribution of **non-potable water. For non-potable rainwater systems, the provisions of CSA B805/ICC 805 shall be an alternative for regulating the materials, design, construction and installation of systems for rainwater collection, storage, treatment and distribution of nonpotable water**. The use and application of non-potable water shall comply with laws, rules and ordinances applicable in the jurisdiction.

1301.9 Non-potable water storage tanks. Non-potable water storage tanks shall comply with Sections 1301.9.1 through ~~1301.9.11~~ **1301.9.10**.

CHAPTER 14 SUBSURFACE GRAYWATER SOIL ABSORPTION SYSTEMS

SECTION 1401
GENERAL

AC-1401.1 Scope. The provisions of this chapter shall govern the materials, design, construction and installation of subsurface graywater soil absorption systems connected to non-potable water from on-site water reuse systems. For reference see: DEP Act 537. Chapters 71, 72, and 73 deal with onsite private sewage disposal systems.

1401.2 Materials. Above-ground drain, waste and vent piping for subsurface graywater soil absorption systems shall conform to one of the standards listed in Table 702.1. Subsurface graywater soil absorption systems, underground building drainage and vent pipe shall conform to one of the standards listed in Table 702.2.

1401.3 Tests. Drain, waste and vent piping for subsurface graywater soil absorption systems shall be tested in accordance with Section 312.

1401.4 Inspections. Subsurface graywater soil absorption systems shall be inspected in accordance with Section 112.

1401.5 Disinfection. Disinfection shall not be required for on-site non-potable water reuse for subsurface graywater soil absorption systems.

1401.6 Coloring. On-site non-potable water reuse for subsurface graywater soil absorption systems shall not be required to be dyed.

SECTION 1402
SYSTEM DESIGN AND SIZING

1402.1 Sizing. The system shall be sized in accordance with the sum of the output of all water sources connected to the subsurface graywater soil absorption system. Where graywater collection piping is connected to subsurface landscape irrigation systems, graywater output shall be calculated according to the gallons-per-day-per-occupant number based on the type of fixtures connected. The graywater discharge shall be calculated by the following equation:

C= A × B
where:
A = Number of occupants: Residential-Number of occupants shall be determined by the actual number of occupants, but not less than two occupants for one bedroom and one occupant for each additional bedroom. Commercial-Number of occupants shall be determined by the International Building Code. B = Estimated flow demands for each occupant: Residential-25 gallons per day (94.6 Lpd) per occupant for showers, bathtubs and lavatories and 15 gallons per day (56.7 Lpd) per occupant for clothes washers or laundry trays. Commercial-Based on type of fixture or water use records minus the discharge of fixtures other than those discharging graywater. C = Estimated graywater discharge based on the total number of occupants.

(Equation 14-1)

1402.2 Percolation tests.
The permeability of the soil in the proposed absorption system shall be determined by percolation tests or permeability evaluation.

1402.2 Percolation tests. The permeability of the soil in the proposed absorption system shall be determined by percolation tests or permeability evaluation.

1402.2.1 Percolation tests and procedures. Not fewer than three percolation tests in each system area shall be conducted. The holes shall be spaced uniformly in relation to the bottom depth of the proposed absorption system. More percolation tests shall be made where necessary, depending on system design.

1402.2.1.1 Percolation test hole. The test hole shall be dug or bored. The test hole shall have vertical sides and a horizontal dimension of 4 inches to 8 inches (102 mm to 203mm). The bottom and sides of the hole shall be scratched with a sharp-pointed instrument to expose the natural soil. Loose material shall be removed from the hole and the bottom shall be covered with 2 inches (51 mm) of gravel or coarse sand.

1402.2.1.2 Test procedure, sandy soils. The hole shall be filled with clear water to not less than 12 inches (305 mm) above the bottom of the hole for tests in sandy soils. The time for this amount of water to seep away shall be determined, and this procedure shall be repeated if the water from the second filling of the

hole seeps away in 10 minutes or less. The test shall proceed as follows: Water shall be added to a point not more than 6 inches (152 mm) above the gravel or coarse sand. Thereupon, from a fixed reference point, water levels shall be measured at 10-minute intervals for a period of 1 hour. Where 6 inches (152 mm) of water seeps away in less than 10 minutes, a shorter interval between measurements shall be used,
but in no case shall the water depth exceed 6 inches (152 mm). Where 6 inches (152 mm) of water seeps away in less than 2 minutes, the
test shall be stopped and a rate of less than 3 minutes per inch (7.2 s/mm) shall be reported. The final water level drop shall be used to
calculate the percolation rate. Soils not meeting the requirements of this section shall be tested in accordance with Section 1402.2.1.3.

1402.2.1.3 Test procedure, other soils. The hole shall be filled with clear water, and a minimum water depth of 12 inches (305 mm) shall be maintained above the bottom of the hole for a 4-hour period by refilling whenever necessary or by use of an automatic siphon. Water remaining in the hole after 4 hours shall not be removed. Thereafter, the soil shall be allowed to swell not less than 16 hours or more than 30 hours. Immediately after the soil swelling period, the measurements for determining the percolation rate shall be made as follows: any soil sloughed into the hole shall be removed and the water level shall be adjusted to 6 inches (152 mm) above the gravel or coarse sand. Thereupon, from a fixed reference point, the water level shall be measured at 30-minute intervals for a period of 4 hours, unless two successive water level drops do not vary by more than 1/16 inch (1.59 mm). Not fewer than three water level drops shall be observed and recorded. The hole shall be filled with clear water to a point not more than 6 inches (152 mm) above the gravel or coarse sand whenever it becomes nearly empty. Adjustments of the water level shall not be made during the three measurement periods except to the limits of the last measured water level drop. Where the first 6 inches (152 mm) of water seeps away in less than 30 minutes, the time interval between measurements shall be 10 minutes and the test run for 1 hour. The water depth shall not exceed 5 inches (127 mm) at any time during the measurement period. The drop that occurs during the final measurement period shall be used in calculating the percolation rate.

1402.2.1.4 Mechanical test equipment. Mechanical percolation test equipment shall be of an approved type.

1402.2.2 Permeability evaluation. Soil shall be evaluated for estimated percolation based on structure and texture in accordance with accepted soil

evaluation practices. Borings shall be made in accordance with Section 1402.2.1.1 for evaluating the soil.

1402.3 Subsurface graywater soil absorption site location. The surface grade of all soil absorption systems shall be located at a point lower than the surface grade of any water well or reservoir on the same or adjoining lot. Where this is not possible, the site shall be located so surface water drainage from the site is not directed toward a well or reservoir. The soil absorption system shall be located with a minimum horizontal distance between various elements as indicated in Table 1402.3. Private sewage disposal systems in compacted areas, such as parking lots and driveways, are prohibited. Surface water shall be diverted away from any soil absorption site on the same or neighboring lots.

TABLE 1402.3LOCATION OF SUBSURFACE GRAYWATER SOIL ABSORPTION SYSTEM

ELEMENT	MINIMUM HORIZONTAL DISTANCE	
	Storage tank (feet)	Absorption field (feet)
Buildings	5	2
Lot line adjoining private property	5	5
Public water main	10	10
Seepage pits	5	5
Septic tanks	0	5
Streams and lakes	50	50
Water service	5	5
Water wells	50	100

For SI: 1 foot = 304.8 mm.

SECTION 1403
INSTALLATION

1403.1 Installation. Absorption systems shall be installed in accordance with Sections 1403.1.1 through 1403.1.5.

1403.1.1 Absorption area. The total absorption area required shall be computed from the estimated daily graywater discharge and the design-loading rate based on the percolation rate for the site. The required absorption area equals the estimated graywater discharge divided by the design-loading rate from Table 1403.1.1.

TABLE 1403.1.1DESIGN LOADING RATE

PERCOLATION RATE (minutes per inch)	DESIGN LOADING FACTOR (gallons per square foot per day)
0 to less than 10	1.2
10 to less than 30	0.8
30 to less than 45	0.72
45 to 60	0.4

For SI: 1 minute per inch = min/25.4 mm, 1 gallon per square foot = 40.7 L/m^2.

1403.1.2 Seepage trench excavations. Seepage trench excavations shall be not less than 1 foot (305 mm) in width and not greater than 5 feet (1524 mm) in width. Trench excavations shall be spaced not less than 2 feet (610 mm) apart. The soil absorption area of a seepage trench shall be computed by using the bottom of the trench area (width) multiplied by the length of pipe. Individual seepage trenches shall be not greater than 100 feet (30 480mm) in developed length.

1403.1.3 Seepage bed excavations. Seepage bed excavations shall be not less than 5 feet (1524 mm) in width and have more than one distribution pipe. The absorption area of a seepage bed shall be computed by using the bottom of the trench area. Distribution piping in a seepage bed shall be uniformly spaced not greater than 5 feet (1524 mm) and not less than 3 feet (914 mm) apart, and greater than 3 feet (914 mm) and not less than 1 foot (305mm) from the sidewall or headwall.

1403.1.4 Excavation and construction. The bottom of a trench or bed excavation shall be level. Seepage trenches or beds shall not be excavated where the soil is so wet that such material rolled between the hands forms a soil wire. Smeared or compacted soil surfaces in the sidewalls or bottom of seepage trench or bed excavations shall be scarified to the depth of smearing or compaction and the loose material removed. Where rain falls on an open excavation, the soil shall be left until sufficiently dry so a soil wire will not form when soil from the excavation bottom is rolled between the hands. The bottom area shall then be scarified and loose material removed.

1403.1.5 Aggregate and backfill. Not less than 6 inches (152 mm) in depth of aggregate, ranging in size from 1/2 to 21/2 inches (12.7 mm to 64 mm), shall be laid into the trench below the distribution piping elevation. The aggregate shall be evenly distributed not less than 2 inches (51 mm) in depth over the top of the

distribution pipe. The aggregate shall be covered with approved synthetic materials or 9 inches (229 mm) of uncompacted marsh hay or straw. Building paper shall not be used to cover the aggregate. Not less than 9 inches (229 mm) of soil backfill shall be provided above the covering.

1403.2 Distribution piping. Distribution piping shall be not less than 3 inches (76 mm) in diameter. Materials shall comply with Table 1403.2. The top of the distribution pipe shall be not less than 8 inches (203 mm) below the original surface. The slope of the distribution pipes shall be not less than 2 inches (51 mm) and not greater than 4 inches (102 mm) per 100 feet (30 480 mm).

TABLE 1403.2DISTRIBUTION PIPE

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe	ASTM F405
Polyvinyl chloride (PVC) plastic pipe	ASTM D2729
Polyvinyl chloride (PVC) plastic pipe with a 3.5-inch O.D. and solid cellular core or composite wall	ASTM F1488

For SI: 1 inch = 25.4 mm.

1403.2.1 Joints. Joints in distribution pipe shall be made in accordance with Section 705.

MEMORANDUM

OFFICE OF THE ALLEGHENY COUNTY EXECUTIVE

TO: Jared Barker
Chief Clerk and Director of Legislative Services
Allegheny County Council

FROM: James Reid
Deputy Chief of Staff, Policy
Office of Allegheny County Chief Executive Sara Innamorato

CC: John Fournier
County Manager

DATE: November 26, 2025

RE: **Revisions to Article XV of the ACHD Rules and Regulations**

An Ordinance of the Council of the County of Allegheny ratifying the revisions of Article XV of the Allegheny County Health Department Rules and Regulation.

The Allegheny County Law Department has reviewed the Ordinance prior to submission to the Council.

On behalf of Allegheny County Chief Executive Sara Innamorato, I am requesting this Ordinance be included on the agenda for introduction at the Regular Meeting of County Council on December 2, 2025.