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Business Resource

Potential Revisions To State and Local Plumbing Codes Under Code Adoption Processes for the 2003 International Plumbing Code

Chapter 1-Administration

101.2 Scope: Adds vacuum piping, non-medical oxygen systems and sanitary and condensate vacuum collection systems, among other medical systems, to the scope of this code.

107.1 Inspections and Testing: Also, expect some jurisdictions to attempt to insert in this subsection of the code a requirement for testing of backflow prevention assemblies at time of installation .

Chapter 2–Definitions

Adds definitions for "Design Flood Elevation," "Storm," Fill Valve," "Flood Hazard Area," "Grease Interceptor," "Grease Trap," and "Storm Sewer"

Chapter 3–General Regulations

Materials

303.1 Connections to the sanitary drainage system: Clarifies that fixtures used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary system of the building or premises.

Structural Safety

307.4 Conflicts: Adds new subsection providing that where conflicts arise between this code and manufacturer's installation instructions, the code applies, except where the code is less restrictive.

307.5 Alterations to trusses: Adds new subsection providing that trusses shall not be altered in any way without written concurrence and approval of a registered design professional. Also, provides that alterations to any member (HVAV equipment, water heater, etc.) shall not be permitted without verification that the truss is capable of supporting such additional load.

307.6 Piping materials exposed within plenums: Adds new subsection that all piping systems exposed within plenums shall comply with provisions of the International Mechanical Code.

309 Flood Hazard Resistance

309.2 Flood hazard: Adds new subsection that requires for structures located in flood hazard areas, the following systems and equipment shall be located at or above flood design elevation . However, the following systems exceptions are permitted to be located below the design flood elevation provided that the systems are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy during the occurrence of flooding to the design flood elevation .

2. Adds: Pump seals in individual water supply systems where the pump is located below the design flood elevation.

3. Revises the requirement for sealing of covers on potable water wells except for where the casing well or pipe sleeve is elevated to at least one foot above the design flood elevation.

7. Adds: All other plumbing fixtures, faucets, fixture fittings, piping systems and equipment.

8. Adds: Water heaters.

9. Adds: Vents and vent systems.

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

312 Tests and Inspections

312.1 Required tests: Adds new provision that for piping systems other than plastic, tests will be done with air.

Test gauges: Provides that gauges used for testing shall be as follows:

1. Tests requiring a pressure of 10 psi or less shall utilize a testing guage having increments of 0.10 psi or less.

2. Tests requiring a pressure of greater than 10 psi but less than or equal to 100 psi shall utilize a testing guage having increments of 1 psi or less.

3. Tests requiring a pressure a pressure of greater than 100 psi shall utilize a testing guage having increments of 2 psi or less

312.2 Drainage and vent water test: Adds requirement that the system shall be tight at all points.

312.3 Drainage and vent final test: Adds requirement that for smoke test a pressure equivalent to a 1-inch water column shall be held for a test period of not less than 15 minutes.

Chapter 4–Fixtures, Faucets and Fixture Fittings

403 Minimum Plumbing Facilities

Table 403.1: Adds new tables for minimum number of required plumbing facilities, with one new exception for mercantile occupancies in which the maximum load is 50 or less. *

403.6 Public Facilities: *Expect possible amendments to require that access to public toilet facilities be on an accessible route and not pass through storerooms, kitchens and similar spaces.*

405 Installation of Fixtures

Securing wall-hung water closet bowls: Adds new provision that carriers shall conform to ASME A112.61M or ASME A112.6.2.

Design and installation of plumbing fixtures: Adds new subsection requiring that integral fixture fitting mounting surfaces shall meet the design requirements of ASME A112.19.2M or ASME A112.19.3M.

406 Automatic Clothes Washers

406.3 Waste connections: Adds new requirements that the trap and fixture drain for washer standpipes shall be a minimum of 2 inches in diameter and the fixture drain shall connect to a drainage or drainage stack a minimum of 3 inches in diameter.

407 Bathtubs

407.4 Bathtub enclosure: Adds new subsection requiring doors within a bathtub enclosure to conform to ASME A112.19.15.

409 Dishwashing Machines

409.3 Waste connection: Adds requirement that waste connections comply with Sections 802.1.6 or 802.1.7, as applicable.

409 Drinking Fountains

410.1 Approval: Adds requirement that drinking fountains and water coolers also conform to NSF 61, Section 9. In occupancies where drinking fountains are required, bottled water dispensers may be substituted for up to 50 percent of the required fountains.

411 Emergency Showers and Eyewash Stations

411.1 Approval: Such showers and stations must conform to ISEA Z 358.1.

416 Lavatories

416.4 Moveable lavatory systems: Such systems must comply with ASME A112.19.12.

417 Showers

417.3 Shower waste outlet: Such outlets must be at least 1 1/2 inches in diameter.

417.4 Shower compartments: Adds grab bars and rails to factors in determining the 30 inches minimum dimension. Also adds requirement that height of a shower compartment be not less than 70 inches above the shower drain outlet.

418 Sinks

418.3 Moveable sink systems: Adds new subsection that such systems comply with

ASME A112.19.12.

420 Water Closets

420.1 Approval: Adds requirement that electro-hydraulic water closets comply with ASME A112.19.13.

421 Whirlpool Baths

421.5 Whirlpool enclosure: Adds new subsection that doors within such an enclosure shall conform with ASME A112.19.15.

424 Faucets and Other Fixtures

424.1 Approval: Adds requirement that flexible water connectors exposed to continuous pressure shall conform to Section 605.6.

424.3 Shower valves: Adds requirement that water supplies controlled by a master thermostatic mixing valve for multiple gang showers must comply with ASSE 1017.

424.5 Temperature-actuated flow reduction valves for individual fixture fittings: Adds new subsection requiring such valves used for individual fittings shall conform to ASSE 1062. Also provides that such valves shall not be used alone as a substitute for balanced pressure, thermostatic or combination shower valves required in Section 424.3.

424.6 Transfer valves: Adds new subsection requiring that deck-mounted bath/shower transfer valves containing an integral atmospheric breaker shall conform to ASME A112.18.7.

425 Flushing Devices for Water Closets and Urinals

425.3.1 Fill valves: Adds requirement that all flush tanks shall be equipped with an anti-siphon valve conforming to ASSE 1002 or CSA B125.

425.3.2 Overflows in flush tanks: Adds requirement that manufacturers design conditions be considered when sizing for such overflows.

427 Floor Sinks

427.1 Approval (Floor Sinks): Adds new subsection requiring that sanitary floor sinks shall conform to ASME A112.6.7.

Chapter 5–Water Heaters

501 General

501.2 Water heater as space heater Adds requirement that where such uses involve temperatures higher than 140° F (60° C), a master thermostatic mixing valve complying with ASSE 1017 shall be used to limit the potable water distribution system to maintain those or lesser temperatures.

502 Installation:*Also, expect some jurisdictions to attempt to insert a requirement in this subsection for testing of backflow prevention assemblies at the time of installation.*

504 Safety Devices

504.6.1 Discharge (Relief outlet waste): Adds requirement that relief valve discharge pipes must discharge in same room as the water heater. The outlet end of the pipe may not be threaded or have a valve or tee installed and shall be piped independently of other equipment drains or relief valve discharge piping to the disposal point.

Chapter 6–Water Supply and Distribution

603 Water Service

603.2 Separation of water service and building sewer: Adds two new exceptions. One exception allows both pipes in the same trench if the sewer pipe is constructed of materials listed in Table 702.2. The other exception provides that where the water service pipe crosses a sewer pipe, the required 5 feet separation distance shall not apply when the water service pipe is sleeved at least 5 feet horizontally from the sewer pipe on both sides of the crossing with pipe materials listed in Tables 605.3, 702.2 or 702.3

604 Design of Building Water Distribution System

604.5 Size of fixture supply: Adds requirement that a reduced-sized flexible water connector installed between the supply side and a fixture be of an approved type.

604.6 Inadequate water pressure: Adds requirement that where the supply side water pressure is adequate, a water pressure booster system conforming to Section 606.5 be installed.

604.9 Water hammer: Adds requirement that water hammer-arrestors be installed according to the manufacturer's specifications.

604.11 Individual pressure balancing in-line valve for individual fixture fittings: Adds new subsection requiring that such valves comply with ASSE 1066 , be installed in an accessible location, and shall not be utilized alone as a substitute for the balanced pressure, thermostatic, or combination shower valves required in Section 424.3.

605 Materials, Joints and Connections

605.1 Soil and ground water: Adds prohibition on installing water service or distribution pipes in contaminated soil and expands the requirement for chemical analysis as to the acceptability of piping material where detrimental conditions are suspected.

605.3 Water service pipe: Adds requirement that plastic water service pipe be terminated within 5 feet inside the point where the pipe penetrates an exterior wall or slab on grade. Also includes a number of revisions to tables for water service pipe, water distribution pipe and pipe-fittings. *

605.6 Flexible water connectors: Adds requirement that such connectors shall conform to ASME A112.18.6.

605.17.2 Mechanical joints: Adds requirement that fittings for cross-linked polyethylene plastic tubing as described in ASTM F 108, ASTM F 1960, and ASTM F 2080 shall be installed in accordance with the manufacturer's instructors.

605.22 Stainless Steel: Adds new subsections requiring joints for stainless steel pipe and fittings to comply with Section 605. 22.1and 605.22.2. Also adds that 1) mechanical joints be installed in accordance with the manufacturer's instructions and 2) all welded joint surfaces be cleaned, welded autogenously or with an approved filler metal as reference in ASTM A 312.

605.23.3 Stainless steel: Adds new subsection requiring that all joints between stainless steel and different piping materials be made with a mechanical joint of the compression or mechanical sealing type or di-electric fitting.

607 Hoot Water Supply System

607.1 Where required: Adds new subsection with requirements for both residential and non-residential occupancies; in residential occupancies, hot water must be supplied to all plumbing fixtures and equipment used for bathing, washing, cleaning, laundry or building maintenance; in non-residential occupancies, hot water must be supplied to all plumbing fixtures and equipment used for culinary purposes, cleansing, laundry or building maintenance. Also, in non-residential occupancies, hot water or tempered water shall be supplied for bathing and wash-

ing purposes. Tempered water shall be delivered from accessible hand-washing facilities.

607.2.1 Piping insulation: Adds new subsection requiring that circulating hot water system piping be insulated in accordance with the International Energy Conservation Code.

607.2.3 Recirculating pump: Adds new subsection requiring that where a thermostatic mixing valve is used in a system with a hot water recirculating pump, the hot water or tempered water return line shall be routed to the cold water inlet pipe of the water heater and the cold water pipe or the hot water return connection of the thermostatic mixing valve.

607.3 Flow of hot water to fixtures: Adds new subsection requiring that fixture fittings, faucets and diverters be installed and adjusted so that the flow of hot water from the fittings corresponds to the left-hand side of the fixture fitting, with an exception for showers and tub/shower mixing valves conforming to ASSE 1016 where the flow of hot water corresponds to the markings on the device.

608 Protection of Potable Water Supply

608.1 General: Revises Table 608.1 with regard to application of backflow preventers. *

608.8 Identification of potable and non-potable water: Clarification

608.13.1 Air gap: Adds new requirement that air gaps comply with ASME A112.1.2 and air gap fittings to comply with ASME A112.1.3.

608.13.9 Chemical dispenser backflow devices: Adds that such devices shall comply with ASSE 1055 or shall be equipped with an air gap fitting.

608.16.1 Beverage dispensers: Adds requirement that backflow preventer devices and the piping downstream there-from shall not affected by carbon dioxide gas.

608.16.4.1 Additives or non-potable source: Adds requirement that where systems are not under continuous pressure, the potable water supply shall be protected against backflow by an air gap or pipe-applied atmospheric vacuum breaker conforming to ASSE 1001 or CAN/CSA B 64.1.1.

613 Temperature Control Devices and Valves

613 Temperature Control Devices and Valves: Adds new section, and new subsection for temperature-actuated mixing valves and requires that such valves comply with ASSE 1017.

Chapter 7-Sanitary Drainage

701 General

701.9 Drainage piping in food service areas: Adds new subsection requiring that exposed soil or waste piping shall not be installed above any working, storage or eating surfaces in food service establishments.

702 Materials

702.6 Lead bends and traps: Adds new subsection requiring that lead bends and traps shall not be less than 0.125 inch in wall thickness. Includes one change each to Tables 702.3 (Building Sewer Pipe) * and 702.4 (Pipe Fittings). *

705 Joints

705.16 Joints between different materials: Adds requirement that mechanical joints comply with ASTM C1173, C 1406 or C1461 and having an elastomeric seal also comply with multiple ASTM or CAN/CSA standards.

706 Connections Between Drainage Piping and Fittings

706.3 Installation of fittings: Adds exception to this requirement by providing that back-to-back water closet connections to double tees shall be permitted where the horizontal developed length between the outlet of the water closet and the connection to the double sanitary tee pattern is 18 inches or greater.

708 Cleanouts

708.3.2 Building sewers: Adds provisions clarifying that for building sewers 8 inches or larger, the location of man holes are to be not more than 200 feet from the junction of the building drain and building sewer at each change in direction.

708.3.5 Building drain and building sewer junction: Adds requirement that the minimum size of the cleanout at the junction of the building drain and building sewer shall comply with Section 708.3.2.

708.7 Minimum size (of cleanouts): Adds new exception that cast-iron cleanouts shall be in accordance with referenced standards in Table 702.4, ASTM A 74 for hub and spigot fittings or ASTM A 888 CISPI 301 for hub-less fittings.

712 Sumps and Ejectors

712.2 Valves required: Adds requirement that any valve installed be located on the discharge side of the check valve and that access be provided to such valves.

712.4.1 Macerating toilet systems: Adds requirement that such toilet systems conform to CSA B 45.9 or ASME A112.3.4.

Chapter 8–Indirect and Special Waste

802 Indirect Wastes

802.1.6 Domestic dishwashing machines: Adds new subsection requiring that such equipment shall discharge indirectly through an air gap or air break into a standpipe or waste receptor in accordance with Section 802.2 or discharge into a wye-branch fitting on the tailpiece of the kitchen sink or the dishwasher connection of a food waste grinder. The waste line of a domestic dishwashing machine discharging into a kitchen sink tailpiece or food waste grinder shall connect to a deck-mounted air gap, or the waste line shall rise and be securely fastened to the underside of the sink rim or counter.

802.1.7 Commercial dishwashing machines: Adds new subsection requiring that such equipment discharge through an air gap or air break into a standpipe or waste receptor in accordance with Section 802.2.

802.4 Standpipes: Adds requirement that standpipes be a maximum of 42 inches above the trap weir and that access be provided to all standpipes and drains for rodding.

Chapter 9–Vents

Vent Stacks and Stack Vents

903.3 *Expect an amendment to bring this subsection into advance conformance with the 2006 IBC by adding a reference to ASSE 1050.*

905 Vent Connections and Grades

905.4 Vertical rise of vent: Adds exception to subsection covering vents for interceptors located outdoors.

911 Circuit Venting

909.1.1 Vertical wet vents: Adds new subsection permits any combination of fixtures within two bathroom groups located on the same floor level to be vented by a vertical wet vent. That vent hall extend from the connection to the dry vent down to the lowest fixture drain connection. Each fixture shall connect independently to the vertical wet vent. Water closet drains shall connect at the same elevation. Other drains shall connect at or above the same elevation as the water closet fixture drains. The dry vent connection to the vertical wet vent shall be an individual or common vent serving one or two fixtures.

912 Combination Drain and Vent System

912.1 Type of fixtures: Adds requirement that combination drain and vent systems shall not receive the discharge from a food waste grinder or clinical sink.

912.2 Installation: Adds drinking fountains as a fixture covered by the combination drain and vent system.

916 Vent Pipe Sizing

916.4.1 Branch vents exceeding 40 feet in length. Adds new subsection for clarification purposes.

917 Air Admittance Valves

917.1 Vent admittance valves: *Expect an amendment to bring this subsection into advance conformance with the 2006 IBC by adding a reference to ASSE 1050.*

Chapter10-Traps, Interceptors and Separator

1002 Trap Requirements

1002 .4 Trap seals: Adds requirement that where a trap seal is subject to loss by evaporation, a trap seal primer valve shall be installed.

1003 Interceptors and Separators

1003.3.2 Food waste grinders: Adds a new subsection that requires that where food waste grinders connect to grease traps, a solids interceptor shall separate the discharge before connecting to the grease trap. Also, solids and grease interceptors shall be sized and rated for the discharge of the food waste grinder.

1003.2.3 Grease traps and grease interceptors: Requires that such traps and interceptors conform to ASME A112.14..3 or ASME A 112.14.4, as well as PDI G101, and shall be installed in accordance the manufacturer's instructions.

Chapter 11-Storm Drainage

1101 General

1101.8 Cleanouts required: Adds subsurface drainage systems as an exception to required cleanouts.

1102 Materials

One change to Table 1102.7 (Pipe Fittings) *

1113 Sumps and pumping Systems

1113.1.2 Sump pit: Revises subsection to require that the sump pit shall be not less than 18 inches in diameter and 24 inches deep, unless otherwise approved. The pit shall be accessible and located such that all drainage flows into the pit by gravity. The sump pit shall be constructed of tile, steel, plastic, cast- iron, concrete or other approved material, with a removable cover adequate to support anticipated loads in the area of use. The pit floor shall be solid and provide permanent support for the pump.

Chapter 12-Special Piping and Storage Systems

Chapter 13-Referenced Standards

Appendices:

Plumbing Permit Fee Schedule

Rates of Rainfall for Various Cities

Gray Water Recycling System

Degree Day and Design Temperatures

Sizing of Water Piping Systems

E 201 Selection of Pipe Size: (several changes to Table E201.1) *

Structural Safety

Vacuum Drainage System