



ASSE ILLINOIS CHAPTER MONTHLY NEWSLETTER

AUGUST 2022

PUBLISHED BY: GARY W. HOWARD

*PRAYING THE UKRAINIAN PEOPLE KEEP THEIR
FREEDOM*



**AMERICAN SOCIETY OF SANITARY ENGINEERING
ILLINOIS CHICAGO CHAPTER
SANITATION NEWS LETTER**

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If you have any questions about lead service lines please see the full text of the Act at:

<https://www.ilga.gov/legislation/publicacts/102/PDF/102-0613.pdf>

Remember the Corporation Cock shall be replaced as it contains Lead also.

I would like to thank Denis Riordan for bringing this subject to the attention of the membership in the April 2022 Newsletter

2022 ASSE INTERNATIONAL ANNUAL MEETING

Oct. 25-27 | San Diego Marriott Mission Valley
At the ASSE International Annual Meeting, experts from all segments of the industry gather to participate in meetings, attend educational seminars, celebrate member achievements, and re-connect with colleagues and friends.

For 116 years, ASSE International has been bringing the industry together to improve the performance and reliability of products and professionals. By working together, we protect the health and safety of the public.

Join us in San Diego for the 2022 ASSE International Annual Meeting for three days of education, input, networking, idea sharing, advice, and camaraderie.

CITY OF CHICAGO GENERAL PLUMBING DEFINITIONS

More on the Chicago Plumbing Code in upcoming Newsletters

18-29-201.4 Terms not defined.

Where terms are not defined in this article, such terms shall have ordinarily accepted meanings such as the context implies.

18-29-202 General definitions.

ACCEPTED ENGINEERING PRACTICE. Practice which conforms to accepted principles, tests or standards of nationally recognized technical or scientific authorities.

ACCESS (TO). That which enables a fixture, appliance or equipment to be reached by ready access or by a means that first requires the removal or movement of a panel, door or similar obstruction. See "Ready Access".

ACCESS COVER. A removable plate, usually secured by bolts or screws, to permit access to a pipe or pipefitting for the purposes of inspection, repair or cleaning.

ADAPTER FITTING. An approved connecting device that suitably and properly joins or adjusts pipes and fittings which do not otherwise fit together.

AIR BREAK (DRAINAGE SYSTEM). A piping arrangement in which a drain from a fixture, appliance or device discharges indirectly into another fixture, receptacle or interceptor at a point above the flood level rim.

AIR GAP (DRAINAGE SYSTEM). The unobstructed vertical distance through the free atmosphere between the outlet of the waste pipe and the flood level rim of the receptacle into which the waste pipe is discharging.

AIR GAP (WATER DISTRIBUTION SYSTEM). The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level rim of the receptacle.

ALTERNATIVE ENGINEERED DESIGN. A plumbing system that performs in accordance with the intent of Articles 3 through 13 and provides an equivalent level of performance for the protection of public health, safety and welfare. The system design is not specifically regulated by Articles 3 through 13.

ANCHORS. An approved support for securing pipe, fixtures, and equipment to walls, ceilings, floors, or any other structural members. See "Supports".

ANTIMICROBIAL. An additive or surface coating that inhibits the growth of bacteria or staphylococci.

ANTISIPHON. A term applied to valves or mechanical devices that eliminate siphonage.

APPROVED. See definition in Chapter 13-4 of the Municipal Code of Chicago.

AREA DRAIN. A receptacle designed to collect surface or storm water from an open area.

ASPIRATOR. A device supplied with fluid under positive pressure which passes through an integral orifice or constriction causing a partial vacuum. Any apparatus for producing a movement of fluid by the suction of that partial vacuum.

ATMOSPHERIC VACUUM BREAKER. A device consisting of a soft disc, reaction cup, stem guide with machined brass or other metal seat and large hooded atmospheric vent port used to prevent back siphonage.

BACKFLOW CONNECTION. Any arrangement whereby backflow is possible.

BACKFLOW PREVENTER. See "Reduced Pressure Principle Backflow Preventer".

BACKPRESSURE. Pressure created by any means in the water distribution system, which by being in excess of the pressure in the water supply mains causes a potential backflow condition.

BACKPRESSURE, LOW HEAD. A pressure less than or equal to 4.33 psi (29.88 kPa) or the pressure exerted by a 10-foot (3048 mm) column of water.

BACKSIPHONAGE. The backflow of potentially contaminated water into potable water system as a result of the pressure in the potable water system falling below atmospheric pressure of the plumbing fixtures, pools, tanks or vats connected to the potable water distribution piping.

BACKWATER VALVE. A device or valve installed in a building drain or building sewer where a sewer is subject to backflow, and which prevents drainage or waste from (i) backing into a low level or fixtures, causing a flooding or (ii) combining with flows intended for stormwater only.

BALLCOCK. A water supply valve, opened or closed by means of a float or similar device, utilized to supply water to a tank. An antisiphon ballcock contains an antisiphon device in the form of an approved air gap or vacuum breaker that is an integral part of the ballcock unit and that the position on the discharge side of the water supply control valve.

BATHROOM GROUP. A group of fixtures, including or excluding a bidet, and consisting of a water closet, lavatory, a bathtub or shower. Such fixtures are located together on the same floor level.

BATTERY OF FIXTURES. Any group of two or more similar adjacent fixtures which discharge into a common horizontal waste or soil branch.

BEDPAN STEAMER OR BOILER. A fixture utilized for scalding bedpans or urinals by direct application of steam or boiling water.

BEDPAN WASHER AND STERILIZER. A fixture designed to wash bedpans and to flush the contents into the sanitary drainage system. Included are fixtures of this type that provide for disinfecting utensils by scalding with steam or hot water.

BEDPAN WASHER HOSE. A device supplied with hot and cold water and located adjacent to a water closet or clinical sink to be utilized for cleansing bedpans.

BRANCH. Any part of the piping system except a riser, main or stack.

BRANCH INTERVAL. A distance along a soil or waste stack corresponding in general to a story height, but not less than 8 feet (2438 mm), within which the horizontal branches from one floor or story of a structure are connected to the stack.

BRANCH VENT. A vent connecting one or more individual vents with a vent stack or stack vent.

BUILDING. Any structure occupied or intended for supporting or sheltering any occupancy.

BUILDING DRAIN (or HOUSE DRAIN). That part of the lowest piping of a drainage system that receives the discharge from soil, waste or other drainage pipes inside a building and that extends 60 inches (1524 mm) beyond the walls of the building and conveys the drainage to the building sewer.

Combined. A building drain that conveys both sewage and storm water or other drainage.

Sanitary. A building drain that conveys sewage only.

Storm. A building drain that conveys storm water or other drainage, but not sewage.

BUILDING SEWER (or HOUSE SEWER). That part of the drainage system that extends from the end of the building drain and conveys the discharge to a public sewer, private sewer, individual sewage disposal system or other point of disposal.

Combined. A building sewer that conveys both sewage and storm water or other drainage.

Sanitary. A building sewer that conveys sewage only.

Storm. A building sewer that conveys storm water or other drainage, but not sewage.

BUILDING SUBDRAIN. That portion of a drainage system that does not drain by gravity into the building sewer.

BUILDING TRAP. A device, fitting or assembly of fittings installed in the building drain to prevent circulation of air between the storm drainage system of the building and the building sewer.

CESSPOOL. A receptacle in the ground which receives crude sewage and is so constructed that the organic portion of such sewage is retained while the liquid portion seeps through its walls or bottom.

CHEMICAL WASTE SYSTEM. Piping which conveys corrosive or toxic chemical waste to the drainage system.

CHICAGO WATERWORKS (also WATER WORKS) SYSTEM. Includes the Chicago cribs, water purification plants, pumping stations and infrastructure necessary to deliver potable water to City of Chicago water customers.

CIRCUIT VENT. A vent that connects to a horizontal drainage branch and vents two traps to a maximum of eight traps or trapped fixtures connected into a battery.

CLEANOUT. An access opening in the drainage system utilized for the removal of obstructions. Types of cleanouts include a removable plug or cap, or a removable fixture or fixture trap.

CLEAR WATER OR CLEAR WATER WASTE. Cooling water and condensate waste from refrigeration or air condition equipment, cooled condensate from steam heating systems, and seepage water.

CLINICAL SERVICE SINK. A fixture used in healthcare occupancies used for the disposal of wastes from a bedpan or other portable waste container.

CLOSED WATER SYSTEM. If a backflow preventer device is installed in a water distribution system, that portion of the system on the outlet side of the device is considered a closed water system. A check valve or backflow preventer (e.g., a reduced pressure principle backflow preventer assembly) may be used to create a closed water system.

COMBINATION FIXTURE. A fixture combining two or more compartments or receptors.

COMBINATION WASTE AND VENT SYSTEM. A system of waste piping with the horizontal wet venting of one or more floor drains by means of a common waste and vent pipe adequately sized to provide free movement of air above the flow line of the drain.

COMBINED BUILDING DRAIN. See "Building Drain, Combined".

COMBINED BUILDING SEWER. See "Building Sewer, Combined".

COMMON VENT. A vent connecting at the junction of two fixture drains or to a fixture branch and serving as a vent for both fixtures.

COMMON TRAP. A trap having a water seal of not less than 2 inches (50 mm) or not more than 4 inches (100 mm).

CONCEALED FOULING SURFACE. Any surface of a plumbing fixture which is not readily visible and is not scoured or cleansed with each fixture operation.

CONDUCTOR. A pipe inside the building that conveys storm water from the roof of a storm or combined building drain.

CONNECTION. The joining of two pieces of pipe, or pipes and fittings, valves or other appurtenances.

CONTAMINATION. An impairment of the quality of the potable water that creates an actual hazard to the public health through poisoning or through the spread of disease by sewage, industrial fluids or waste.

CONTINUOUS VENT. A vertical vent that is a continuation of the drain to which it connects. The drain may be either vertical or horizontal. A continuous vent is also known as a back vent or an individual vent.

CONTINUOUS WASTE. A drain or waste line from two or more fixtures or sink compartments (of a single fixture), such as a combined three-compartment sink, connected to a single common trap.

CRITICAL LEVEL (C-L). An elevation (height) reference point that determines the minimum height at which a backflow preventer or vacuum breaker is installed above the flood level rim of the fixture or receptor served by the device. The critical level is the elevation level below which there is a potential for backflow to occur. If the critical level marking is not indicated on the device, the bottom of the device shall constitute the critical level.

CROSS CONNECTION. Any physical connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other either water of unknown or questionable safety or steam, gas or chemical, whereby there exists the possibility for flow from one system to the other, with the direction of flow depending on the pressure differential between the two systems (see "Backflow").

Cross connection control by containment. The installation of a backflow preventer at the service connection to a premises to protect the water main.

Cross connection control by isolation. The installation of a backflow preventer at each cross connection in a premises to protect both the premises and water main.

Cross connection control (CCC). An activity designed to prevent, discover, and eliminate all cross connections.

Cross connection control device. A safety device installed in a potable water line to prevent potable water and fluids of any kind from being mixed. Cross connection control devices include, but are not limited to: atmospheric vacuum breaker, double check valve backflow preventer, double detector check valve backflow preventer, dual check valve backflow preventer, and reduced pressure principle backflow preventer.

Cross connection control device inspector. A plumber who holds an Illinois or Chicago Plumbing License and who has been certified by the Illinois Environmental Protection Agency to inspect, test, maintain and repair cross connection control devices. Such certification attests to an inspector's understanding of the principles of backflow and back siphonage and the public health hazard presented by the improper installation of cross connection control devices.

DEAD END. A pipe which is terminated at a developed distance of 2 (metric equivalent) feet or more by means of a plug or other closed fitting, except piping serving as a cleanout extension to an accessible area.

DEEP SEAL. A term applied to a trap having a water seal of more than four inches.

DEPTH OF WATER SEAL. The depth of water that would have to be removed from a full trap before air could pass through the trap.

DEVELOPED LENGTH. The length of a pipeline measured along the centerline of the pipe and fittings.

DISCHARGE PIPE. A pipe that conveys the discharges from plumbing fixtures or appliances.

DOWNSPOUT. A leader or conductor pipe which carries water from the roof or gutter to the ground or to any part of the drainage system.

DRAIN. Any pipe that carries waste water or waterborne wastes in a building drainage system.

DRAINAGE. A reversal of flow in the drainage system.

DRAINAGE FITTINGS. Special fittings utilized in the drainage system. Drainage fittings are similar to cast-iron fittings, except that instead of having a bell and spigot, drainage fittings are recessed and tapped to eliminate ridges on the inside of the installed pipe.

DRAINAGE FIXTURE UNIT. A measure of the probable discharge into the drainage system by various types of plumbing fixtures. The drainage fixture-unit valve for a particular fixture depends on its volume rate of drainage discharge, on the time duration of a single drainage operation and on the average time between successive operations.

DRAINAGE SYSTEM. All of the piping within public or private premises that conveys sewage, rainwater or other liquid wastes to a point of disposal. A drainage system does not include the mains of public sewer systems or a private or public sewage treatment or disposal plant.

Building gravity. A drainage system that drains by gravity into the building sewer.

Sanitary. A drainage system that carries sewage that excludes storm, surface and ground water.

Storm. A drainage system that carries rainwater, surface water, condensate, cooling water or similar liquid wastes.

DRAIN LAYING. Encompasses the laying and connection of piping from 60 inches (1575 mm) outside the foundation wall of a building to the public sewer system in the City right-of-way or easement.

EFFECTIVE OPENING. The minimum cross-sectional area at the point of water supply discharge, measured or expressed in terms of the diameter of a circle or, if the opening is not circular, the diameter of a circle of equivalent cross-sectional area. For faucets and similar fittings, the effective opening shall be measured at the smallest orifice in the fitting body or in the supply piping to the fitting.

EXISTING INSTALLATIONS. Any plumbing system regulated by this chapter that was legally installed prior to the effective date of this chapter, or for which a permit to install has been issued.

EXTRACTED MECHANICAL JOINT. A joint which is developed with a special drilling tool used to penetrate a copper pipe wall, after which two steel pins are extended from the drill. While rotating, the drill head is withdrawn from the pipe under power, raising an external collar from the hole in the pipe. The branch pipe is then brazed into the collared outlet.

FAUCET. A valve end of a water pipe by means of which water is drawn from or held within the pipe.

FIRE PROTECTION SYSTEMS AND EQUIPMENT. Includes but is not limited to risers, standpipes, tanks and compression tanks.

FIXTURE. See "Plumbing Fixture".

FIXTURE BRANCH. A water supply soil or waste pipe serving one or more fixtures.

FIXTURE CARRIER. A device designed to support an off-the-floor plumbing fixture.

FIXTURE DRAIN. The drain from the trap of a fixture to a junction with any other drain pipe.

FIXTURE FITTING. A fitting that is attached to or accessible from a fixture and controls the volume and/or directional flow of water to, or conveys water from, that fixture.

FIXTURE SUPPLY. The water supply pipe connecting a fixture to a branch water supply pipe or directly to a main water supply pipe.

FIXTURE UNIT, WATER SUPPLY or WATER SUPPLY FIXTURE UNIT (W.S.F.U.). Fixture unit, water supply is the mathematical factor used by the plumbing industry to estimate the probable demand on the water supply system (considering the volume, duration of flow, and intervals between operations) caused by various plumbing fixtures.

FLOAT VALVE. An automatic opening valve, operated by a float, used to control the water level in a vessel, tank or other container.

FLOOD CONTROL DEVICE. A mechanical device consisting of back water valve or valves, a motorized unit of sufficient capacity to overcome back water pressures and housing, the bottom of which is the invert of the sewer it serves, permitting gravity flow under normal conditions. The motorized unit lifts and ejects the contents of the house drain without overheating or failure by means of a by-pass to the outlet side of the back water valve.

FLOOD LEVEL RIM. The edge of the receptacle from which water overflows.

FLOOR DRAIN. A receptacle fitted with a strainer or grate and a trap or seal and connected to the plumbing or drainage system.

FLOW PRESSURE. The pressure in the water supply pipe near the faucet or water outlet while faucet or water outlet is wide open and flowing.

FLUSH TANK. A tank designed with a ballcock and flush valve to flush the contents of the bowl or usable portion of the fixture.

FLUSHOMETER TANK. A device integrated within an air accumulator vessel that is designed to discharge a predetermined quantity of water to fixtures for flushing purposes.

FLUSHOMETER VALVE (FLUSH VALVE). A valve attached to a pressurized water supply pipe and so designed that when activated it opens the line for direct flow into the fixture at a rate and quantity to operate the fixture properly, and then gradually closes to reseal fixture traps and avoid water hammer.

GRADE. The fall, pitch, or slope of a line of pipe in reference to a horizontal plane. In drainage, it is usually expressed as the fraction of an inch fall per foot length of pipe. This may also be expressed as a percentage.

GRAVEL BASIN. A receptacle through which roof water flows and which is designed to retain sediment.

GRAY WATER. Waste water, such as dishwater, or other waste water not containing fecal matter or urine.

GREASE INTERCEPTOR. A receptacle designed to cause separation and retention of oil or grease from liquid wastes.

GREASE TRAP. An interceptor located inside the building.

GROUP OF FIXTURES. Two or more fixtures adjacent to or near each other.

HANGERS. For supporting and securing pipe, fixtures, and equipment to walls, ceilings, floors, or any other structural member.

HORIZONTAL BRANCH DRAIN. A drainage branch pipe extending laterally from a soil or waste stack or building drain, with or without vertical sections or branches, that receives the discharge from two or more fixture drains or branches and conducts the discharge to the soil or waste stack or to the building drain.

HORIZONTAL PIPE. Any pipe or fitting that makes an angle of less than 45 degrees (0.79 rad) with the horizontal.

HOSE BIBB. A faucet to which a hose may be attached.

HOT BOX. A manufactured, heated enclosure installed above ground.

HOT WATER. Water at a temperature greater than or equal to 120°F (49°C).

HOUSE TRAP. See "Building Trap".

HYDRANT. A valve or faucet for drawing water from a buried pipe which generally includes a stand pipe with a valve or faucet at the upper end. It usually has a threaded valve outlet to which a hose may be attached.

INDIRECT WASTE PIPE. A waste pipe that does not connect directly with the drainage system, but that discharges into the drainage system through an air break or air gap into a trap, fixture, receptor or inceptor to permit visibility of such discharge and to prevent a backflow into the pipe above the connection.

INDIVIDUAL SEWAGE DISPOSAL SYSTEM. A system for disposal of domestic sewage by means of a septic tank, cesspool or mechanical treatment, designed for utilization apart from a public sewer to serve a single establishment or building.

INDIVIDUAL VENT. A pipe installed to vent a fixture trap and connected with the vent system above the fixture served.

INDUSTRIAL WASTES. Industrial wastes are liquid wastes resulting from the processes employed in industrial and commercial establishments.

INTERCEPTOR. A device designed and installed to separate and retain for removal, by automatic or manual means, deleterious, hazardous or undesirable matter from normal wastes, while permitting normal sewage or wastes to discharge into the drainage system by gravity. Interceptors may be designed to remove gas, oil, sand, grit and grease.

JOINT. A joint is the juncture of two pipes, a pipe and a fitting, or two fittings.

Expansion. A loop, return bend or return offset that provides for the expansion and contraction in a piping system and is utilized in tall buildings or where there is a rapid change of temperature, as in power plants, steam rooms and similar occupancies.

Flexible. Any joint between two pipes that permits one pipe to be deflected or moved without movement or deflection of the other pipe.

Mechanical. See "Mechanical Joint".

Slip. A type of joint made by means of a washer or a special type of packing compound in which one pipe is slipped into the end of an adjacent pipe.

LABELED. Equipment, devices, fixtures or materials bearing the label of an approved agency.

LEAD-FREE PIPE AND FITTINGS. Containing not more than 8.0 percent lead.

LEAD-FREE SOLDER AND FLUX. Containing not more than 0.2 percent lead.

LEADER. See "Downspout."

LICENSED DESIGN PROFESSIONAL. See Section 13-40-020 of the Municipal Code of Chicago.

LOAD FACTOR. The percentage of the total connected fixture unit flow rate which is likely to occur at any point in the drainage system. The load factor varies with the type of occupancy, the total flow above

the point being considered, and the probability of simultaneous use. Load factor represents the ratio of the probable load to the potential load.

LOOP VENT. A circuit vent which loops back to connect with a stack vent instead of a vent stack. Its use is limited to floor drains and floor outlet fixtures which depend on self.

MAIN. The principal pipe artery to which branches are connected.

MAIN VENT. The principal artery of the venting system, to which the vent branches may be connected.

MANHOLE. An opening constructed to permit a person to gain access to an enclosed space. In a sewer or any portion of the plumbing system, it is used to eliminate restriction of flow at changes of direction or junctions and to facilitate cleaning.

MANIFOLD. See "Plumbing Appurtenance".

MAXIMUM DEMAND. The greatest requirement of flow of either water supply or waste discharge from the fixtures of a building, or any specific segment thereof.

MECHANICAL JOINT. A connection between pipes, fittings, or pipes and fittings which is not screwed, caulked, threaded, soldered, solvent cemented, brazed or welded. A joint in which compression is applied along the centerline of the pieces being joined. In some applications, the joint is part of a coupling, fitting or adapter.

MEDICAL GAS SYSTEM. The complete system to convey medical gases for direct patient application from central supply systems (bulk tanks, manifolds and medical air compressors) through piping networks with pressure and operating controls, alarm warning systems, and related components, and extending to station outlet valves at patient use points.

MEDICAL VACUUM SYSTEMS. A system consisting of central-vacuum-producing equipment with pressure and operating controls, shutoff valves, alarm- warning systems, gauges and a network of piping extending to and terminating with suitable station inlets at locations where patient suction may be required.

MINOR REPAIRS. The repair and maintenance of faucets and valves and the forcing out of obstructions in soil, waste, vent, and sewer pipes. It does not include the removal, replacement, installation or reinstallation of any pipe or plumbing fixture.

NEW PLUMBING or NEW WORK. Any new plumbing system or part thereof, or any addition to or alteration of an existing system.

NONPOTABLE WATER. Water that does not meet public health standards for drinking water and is not suitable for human consumption or culinary use. Any water of unknown quality is considered nonpotable (See "Potable Water").

NUISANCE. Public nuisance as known in common law or in equity jurisprudence; whatever is dangerous to human life or detrimental to health; whatever structure or premises is not sufficiently ventilated, sewerred, drained, cleaned or lighted, with respect to its intended occupancy; and whatever renders the air or human food or drink or water supply unwholesome.

OCCUPANCY. The purpose for which a building or portion thereof is utilized or occupied. See Chapter 13-56 for additional information.

OFFSET. A combination of approved bends that makes two changes in direction bringing one section of the pipe out of line but into a line parallel with the other section.

OPEN AIR. Outside the structure.

OPEN PLUMBING. Installation of plumbing so that traps and drainage pipes and their surroundings beneath fixtures are ventilated, accessible, and open to inspection. Open plumbing is also referred to as an exposed plumbing installation.

OPEN WATER SYSTEM. A water system with no check valve or backflow preventer installed in the service pipe.

PET COCK. A small faucet or valve used to drain water, steam, or air.

PIPE DIAMETER. Generally the interior pipe distance measured from the inside wall of a pipe (passing through the center of the pipe) to the opposite inside wall. Any referenced pipe diameter or pipe size shall mean the nominal size or diameter as designated by the commercial manufacturer.

PIPE INCREMENT. One pipe size change of a commercially available size.

PITCH. See "Grade".

PLUMBING. Shall include all piping fixtures, appurtenances, and appliances for a supply of water for all purposes in and about buildings, structures and public places where persons live, work, or assemble and shall also include all piping, fixtures, appurtenances, and appliances for a sanitary drainage and related ventilating system within a building, and all piping, fixtures, appurtenances, and appliances outside a building connecting the building with the source of water supply on the premises or the main in the public way, also all piping, fixtures, appurtenances, appliances, drains, waste pipes carrying sewage from the foundation walls of a building to the public sewer or other disposal terminal, holding private or domestic sewage. Plumbing shall also include the installation, repair and maintenance work upon and in connection with such piping, fixtures, appurtenances, appliances, lawn sprinkler systems, drain or waste pipes, except minor repairs by a person upon his own premises.

PLUMBING APPLIANCE. Any one of a special class of plumbing fixtures intended to perform a special function. Included are fixtures having operation or control dependent on one or more energized components, such as motors, controls, heating elements, or pressure- or temperature-sensing elements. Such fixtures are manually adjusted or controlled by the owner or operator, or are operated automatically through one or more of the following actions; a time cycle, a temperature range, a pressure range, a measured volume or weight.

PLUMBING APPURTENANCE. A manufactured device, prefabricated assembly or an on-the-job assembly of component parts that is an adjunct to the basic piping system and plumbing fixtures. An appurtenance demands no additional water supply and does not add any discharge load to a fixture or to the drainage system.

PLUMBING FIXTURE. A receptacle or device that is either permanently or temporarily connected to the water distribution system of the premises and demands a supply of water therefrom; discharges waste water, liquid-borne waste materials or sewage either directly or indirectly to the drainage system of the premises; or requires both a water supply connection and a discharge to the drainage system of the premises.

PLUMBING SYSTEM. Includes the water supply and distribution pipes; plumbing fixtures and traps; water-treating or water-using equipment; soil, waste and vent pipes; and sanitary and storm sewers and building drains, in addition to their respective connections, devices and appurtenances within a structure or premises.

POP-UP WASTE. A pop-up waste consists of a waste outlet into which a sliding metal or plastic stopper is fitted, and the stopper can be raised to drain the waste. A common pop-up waste used for lavatories has a lever which passes out the side of the drain fitting and connects to a lift rod that extends on top of the lavatory or sink. The rod is lifted to lower the stopper, or depressed to raise the stopper and drain the lavatory.

POTABLE WATER. Water used for human consumption – including but not limited to water used for drinking, bathing, washing dishes, preparing foods and for watering gardens in which produce intended for human consumption is grown – which meets Safe Drinking Water Act.

PREMISES. The word "premises" wherever used in this chapter, shall be held to include a lot, or part of a lot, a building, or part of a building or any parcel or tract of land whatever.

PRESSURE GRADIENT MONITOR. A device used to protect the quality of water, failsafe by design, securing the potable water system by isolating a heat exchanger when the pressure between the potable water and the heat exchange medium drops below a preset level.

PRIVATE. In the classification of plumbing fixtures, “private” applies to fixtures in residences, condominiums 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.

PRIVATE FIRE HYDRANT. A hydrant connected to a private water main and located on private property.

PRIVATE SEWER. A sewer not dedicated for public use, built in a street, alley, or granted easement.

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. Where access to fixtures in an office or other occupancy is restricted to employees or otherwise controlled these fixtures shall not be considered public.

PUBLIC SEWER. A sewer dedicated for public use and built by or constructed under the authority of the city in a public place such as a street or alley or in and through land for which an easement has been granted for the common use of the property abutting on such public place or easement.

PUBLIC WATER MAIN. Water mains are the pipes through which Lake Michigan water from the Chicago Waterworks Systems stations is distributed to any and all service pipes, fire hydrants, sprinkling systems.

QUARTER BEND. A quarter bend is a fitting changing direction of 90 degrees.

QUICK-CLOSING VALVE. A valve or faucet that closes automatically when released manually or that is controlled by a mechanical means for fast-action closing.

READY ACCESS. That which enables a fixture, appliance or equipment to be directly reached without requiring the removal or movement of any panel, door or similar obstruction and without the use of a portable ladder, step stool or similar device.

RECEPTOR. A receptacle which receives the discharge from an indirect waste and is directly connected to the inlet of a properly vented trap. It shall be of cast-iron, brass, lead or aluminum and shall be of such shape and capacity as to prevent splashing or flooding. The receptor outlet and trap shall not be less than 1 1/2 inches.

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER. A backflow prevention device consisting of two independently acting check valves, internally force-loaded to a normally closed position and separated by an intermediate chamber (or zone) in which there is an automatic relief means of venting to atmosphere, internally loaded to a normally open position between two tightly closing shutoff valves and with means for testing for tightness of the checks and opening of relief means.

RELIEF VALVE.

Pressure relief valve. A pressure-actuated valve held closed by a spring or other means and designed to relieve pressure automatically at the pressure at which such valve is set.

Temperature and pressure (T&P) relief valve. A combination valve designed to provide both temperature relief and pressure relief.

Temperature relief valve. A temperature- actuated valve designed to discharge automatically at the temperature at which such valve is set.

Vacuum relief valve. A valve which admits air to the system when the system is attempting to reduce its pressure to less than atmospheric.

RELIEF VENT. A vent whose primary function is to provide circulation of air between drainage and vent systems.

REVENT PIPE. A pipe which connects directly at or near the junction of an individual trap outlet with a waste or soil pipe underneath or back of a fixture and extends to a connection with the main or branch vent above the top of the fixture.

RIM. An unobstructed open edge of a fixture.

RISER. See “Water Pipe, Riser”.

ROOF DRAIN. A drain installed to receive water collection on the surface of a roof and to discharge such water into a leader or a conductor.

ROOF GUTTER. A receptacle either suspended from the edge of a roof or constructed as part of the roof to convey roof water to the down spout rain leader or conductor pipe.

ROUGH-IN. Parts of the plumbing system that are installed prior to the installation of fixtures. This includes drainage, water supply, vent piping and the necessary fixture supports and any fixtures that are built into the structure.

SAFE PAN. Device installed beneath piping and/or a fixture to collect and drain any leakage. Safe pans are especially important in food preparation/storage areas and sterile areas of health care facilities that have overhead, exposed drainage piping.

SANITARY SEWER. A house drain or house sewer designed and used to convey only sewage.

SECONDARY WATER. Water used for process purposes, which is fed through the potable water system and separated from it by means of a backflow preventer or break tank.

SELF-CLOSING FAUCET. A faucet containing a valve that automatically closes upon deactivation of the opening means.

SEPARATOR. See "Interceptor".

SEPTIC TANK. A watertight reservoir or tank which receives sewage and by sedimentation and bacterial action effects a process of clarification and partial purification.

SEWAGE. Any liquid waste containing animal or vegetable matter in suspension or solution, including liquids containing chemicals in solution.

SEWAGE EJECTOR. A device for lifting sewage by entraining the sewage in a high-velocity jet of steam, air or water.

SIDE VENT. A vent connecting to the drain pipe through a fitting at an angle not greater than 45 degrees to the vertical.

SILL COCK. A type of lawn faucet. A faucet used on the outside of a building to which a garden hose may be attached.

SIZE OF PIPE OR TUBING. Pipe is generally sized according to the approximate dimension of its bore or inside diameter, whereas tubing is usually sized by measuring its outside diameter. Both are expressed in inches and fractions thereof. For purposes of this chapter, any referenced pipe or tubing size shall mean the nominal size or diameter as designated by the commercial manufacturer.

SLOPE. The fall (pitch) of a line of pipe in reference to a horizontal plane. In drainage, the slope is expressed as the fall in units vertical per units horizontal (percent) for a length of pipe.

SOIL PIPE. A pipe that conveys sewage containing fecal matter to the building drain or building sewer.

SOIL OR WASTE VENT. That part of the main, soil or waste pipe which extends above the highest installed branch or fixture connection.

SPILL-PROOF VACUUM BREAKER. An assembly consisting of one check valve force-loaded closed and an air-inlet vent valve forced-loaded open to atmosphere, positioned downstream of the check valve, and located between and including two tightly closing shutoff valves and a test cock.

SPECIAL WASTE. Wastes which require special handling and treatment before they may be discharged into the plumbing system.

SPECIAL WASTE PIPE. Piping which conveys special waste. Piping that has been designed and manufactured of special material to handle special waste such as acids.

STACK. A general term for any vertical line of soil, waste, vent or inside conductor piping that extends through at least one story with or without offsets.

STACK VENT. The extension of a soil or waste stack above the highest horizontal drain connected to the stack.

STERILIZER.

Boiling type. A boiling-type sterilizer is a fixture of a nonpressure type utilized for boiling instruments, utensils or other equipment for disinfection. These devices are portable or are connected to the plumbing system.

Instrument. A device for the sterilization of various instruments.

Pressure (autoclave). A pressure vessel fixture designed to utilize steam under pressure for sterilizing.

Pressure Instrument Washer Sterilizer. A pressure instrument washer sterilizer is a pressure vessel fixture designed to both wash and sterilize instruments during the operating cycle of the fixture.

Utensil. A device for the sterilization of utensils as utilized in health care services.

Water. A water sterilizer is a device for sterilizing water and storing sterile water.

STERILIZER VENT. A separate pipe or stack, indirectly connected to the building drainage system at the lower terminal, that receives the vapors from nonpressure sterilizers, or the exhaust vapors from pressure sterilizers, and conducts the vapors directly to the open air. Also called vapor, steam, atmospheric or exhaust vent.

STORM DRAIN. See "Drainage System, Storm".

SUBSOIL DRAIN. A drain that collects subsurface water or seepage water and conveys such water to a place of disposal.

SUMP. A tank or pit that receives sewage or liquid waste, located below the normal grade of the gravity system and that must be emptied by mechanical means.

SUMP PUMP. An automatic water pump powered by an electric motor for the removal of drainage, except raw sewage, from a sump, pit or low point.

SUMP VENT. A vent from pneumatic sewage ejectors, or similar equipment that terminates separately to the open air.

SUPPORTS. Devices for supporting and securing pipe, fixtures and equipment.

SWIMMING POOL. Any structure, basin chamber or tank containing an artificial body of water for swimming, diving or recreational bathing having a depth of 2 feet (610 mm) or more at any point. See Article 12.

TEMPERED WATER. Water ranging in temperature from 85°F (29°C) to 120°F (49°C).

TERMINAL. The upper portion of a soil, waste or vent pipe which projects above or through the roof of the building.

TEST COCK. A small cock, faucet, or valve set in a water pipe, pump, backflow device or water jacket used to drain water or test pressure.

TRAP. A fitting or device that provides a liquid seal to prevent the emission of sewer gases without materially affecting the flow of sewage or waste water through the trap.

TRAP ARM. That portion of a fixture drain between a trap and its vent.

TRAP PRIMER. A device or system of piping to maintain a water seal in a trap.

TRAP SEAL. The maximum vertical depth of liquid that a trap will retain, measured between the crown weir and the top of the dip of the trap. (CBC 13-168 -020)

UNION. A coupling device used to join two pipes end-to-end, but allow them to be disconnected and reconnected. This joint can be assembled and disassembled without removing any adjacent pipes.

UNSTABLE GROUND. Earth that does not provide a uniform and sufficient bearing for the barrel of a building sewer between the joints at the bottom of the building sewer trench.

VACUUM. Any pressure less than that exerted by the atmosphere.

VACUUM BREAKER. A type of backflow preventer installed on openings subject to normal atmospheric pressure that prevents backflow by admitting atmospheric pressure through ports to the discharge side of the device.

VACUUM RELIEF VALVE. A device to prevent excessive vacuum in a pressure vessel.

VENT PIPE. “Vent pipe or vent” means any pipe provided to ventilate a plumbing system, to prevent trap siphonage and back pressure, and to equalize the air pressure within and without the piping system at the dip of the trap. See “Vent System”.

VENT STACK. A vertical vent pipe installed primarily for the purpose of providing circulation of air to and from any part of the drainage system and terminating to the atmosphere or in the stack vent.

VENTURI. A short section in a pipe with a reduced diameter or cross sectional area (forming a throat) compared to the larger ends, thereby increasing the velocity of the fluid passing through the throat and decreasing the pressure at the throat. This decrease in pressure allows another fluid to be drawn into the venturi.

VERTICAL PIPE. Any pipe or fitting that makes an angle of 45 degrees (0.79 rad) or more with the horizontal.

WALL-HUNG WATER CLOSET. A wall-mounted water closet installed in such a way that the fixture does not touch the floor.

WASTE. The discharge from any fixture, appliance, area or appurtenance that does not contain fecal matter.

WASTE PIPE. A pipe that conveys only waste.

WATER HAMMER. The sound of concussion of moving water against the sides of a containing pipe or vessel due to a sudden flow stoppage. A pressure that results from a sudden deceleration of flow of water in a closed conduit. Also called hydraulic shock.

WATER-HAMMER ARRESTOR. A device utilized to absorb the pressure surge (water hammer) that occurs when water flow is suddenly stopped in a water supply system.

WATER HEATER. An appliance for supplying hot water for domestic commercial purposes.

WATER MAIN. A pipe or group of pipes through which Lake Michigan water from the Chicago Waterworks System pumping stations is distributed to any and all service pipes, fire hydrants and sprinkling systems.

WATER OUTLET. A discharge opening through which water is supplied to a fixture, into the atmosphere (except into an open tank that is part of the water supply system), to a boiler or heating system, or to any device or equipment requiring water to operate but which is not part of the plumbing system.

WATER PIPE.

Riser. A water supply pipe that extends one full story or more to convey water branches or to a group of fixtures.

Water distribution pipe. A pipe within the structure or on the premises that conveys water from the water service pipe, or from the meter when the meter is at the structure, to the points of utilization.

Water service pipe. The pipe from the water main or other source of potable water supply, or from the meter when the meter is at the public right of way, to the water distribution system of the building served.

WATER SUPPLY SYSTEM. The water service pipe, water distribution pipes, and the necessary connecting pipes, fittings, control valves and all appurtenances in or adjacent to the structure or premises.

WATER SUPPLY SYSTEM. The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply from any source except the intended source.

WATER WORKS SYSTEM. See “Chicago Waterworks”.

WELL.

Bored. A well constructed by boring a hole in the ground with an auger and installing a casing.

Drilled. A well constructed by making a hole in the ground with a drilling machine of any type and installing casing and screen.

Dug. A well constructed by excavating a large diameter shaft and installing a casing.

WHIRLPOOL BATHTUB. A plumbing appliance consisting of a bathtub fixture that is equipped and fitted with a circulating piping system designed to accept, circulate and discharge bathtub water upon each use.

YOKE VENT. A pipe connecting upward from a soil or waste stack to a vent stack for the purpose of preventing pressure changes in the stacks.



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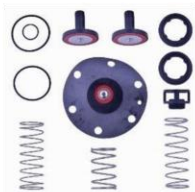
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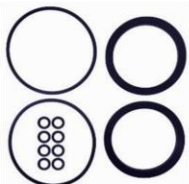
Kit Includes: Complete Relief Valve Assembly, Relief Valve O-Ring, Lube



Watts: 0794090 – Complete Total Rubber Kit 4" for 909 RP; *Lead Free* (Previously 0887751)

Kit Includes: Check Disc, Cover O-Ring, Sleeve O-Ring, Piston O-Ring, RV Disc Assembly, Diaphragm, Piston

RK 4-350
4" 350AST, 4" 375AST



Kit Includes: (2) Check Disc Rubber, (2) Cover O-Ring, (8) Bolt O-Ring, Lube



Apollo-Conbraco: 40-004-A1 – ¾"-1" Major Repair Kit for 40-200 RP

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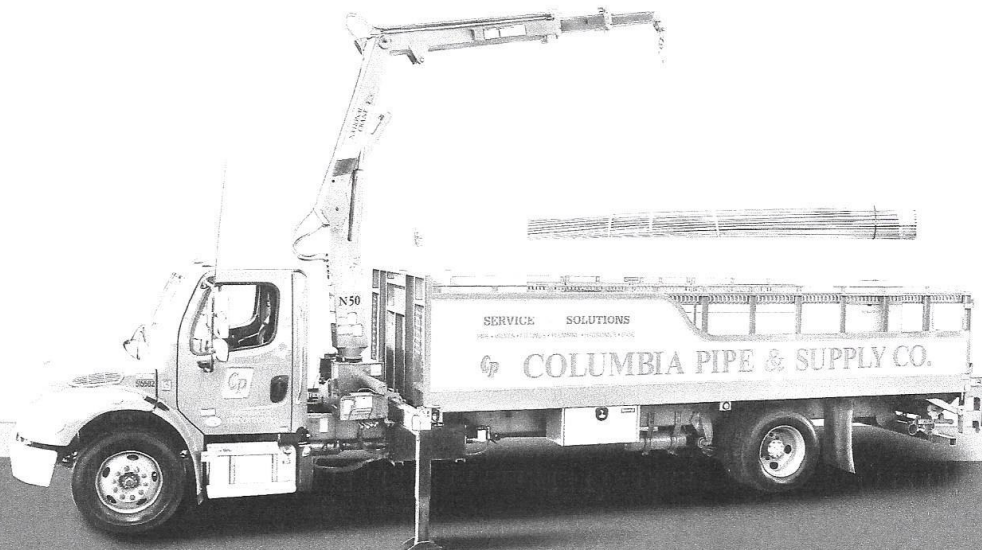
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