



## Residential Inspection Checklist – Plumbing

The intended use of this checklist is for preparation of an inspection. This is only a general list and is not intended to address all circumstances. Please refer to the 2018 International Residential Code and the City adopted amendments to the code.

Please verify the following before calling for the framing inspection:

<b>PERMITS AND PLANS</b>
<input type="checkbox"/> Job address shall be posted on in a visible location. <input type="checkbox"/> Permit and approved plans are on site and accessible to the inspector. <input type="checkbox"/> Prior to scheduling the inspection, the contractor or person doing the work has reviewed the approved plans and can assure that the construction being inspected is consistent and complete. <input type="checkbox"/> Test equipment, materials and labor shall be furnished by the permittee.
<b>UNDERGROUND PLUMBING</b>
<input type="checkbox"/> A pipe that passes through a foundation wall shall be provided with a relieving arch, or a pipe sleeve shall be built into the foundation wall. The sleeve shall be two pipe sizes greater than the pipe passing through the wall. <input type="checkbox"/> Trenching installed parallel to footings and walls shall not extend into the bearing plane of a footing or wall. The upper boundary of the bearing plane is a line that extends downward, at an angle of 45 degrees from horizontal, from the outside bottom edge of the footing or wall. <input type="checkbox"/> Where trenches are excavated such that the bottom of the trench forms the bed for the pipe, solid and continuous load bearing support shall be provided between joints. Where over excavated, the trench shall be backfilled to the proper grade with compacted earth, sand, fine gravel or similar granular material. Piping shall not be supported on rocks or blocks at any point. <input type="checkbox"/> Backfill shall be free from discarded construction material and debris. Backfill shall be free from rocks, broken concrete and frozen chunks until the pipe is covered by not less than 12 inches of tamped earth. Backfill shall be placed evenly on both sides of the pipe and tamped to retain proper alignment. <input type="checkbox"/> Piping in the ground shall be laid on a firm bed for its entire length, except where support is otherwise provided. <input type="checkbox"/> The proximity of a building sewer to a water service shall comply with Section (P2906.1). <input type="checkbox"/> Changes in direction in drainage piping shall be made by the appropriate use of sanitary tees, wyes, sweeps, bends or by a combination of these drainage fittings in accordance with Table (P3005.1). Change in direction by combination fittings, heel or side inlets or increasers shall be installed in accordance with Table (P3505.1) and Sections (P3005.1.1 through P3005.1.4), based on the pattern of flow created by the fitting. <input type="checkbox"/> The size of the drainage piping shall not be reduced in the direction of the flow. <input type="checkbox"/> No flat dry vents (take off above horizontal centerline) (P3104.3). <input type="checkbox"/> Horizontal dry vents minimum 6 inches above flood level rim of fixture (P3104.5). <input type="checkbox"/> Shall comply with Section (P3112) island fixture venting. <input type="checkbox"/> Shall comply with Section (P3105.1) distance of trap from vent. <input type="checkbox"/> Joints and connections in the Drainage Waste and Vent (DWV) system shall be gas tight and water tight for the intended use or pressure requires by test. <input type="checkbox"/> Shall comply with Section (P3003) for all joints and connections. <input type="checkbox"/> The load on (DWV) system piping shall be computed in terms of drainage fixture unit (d.f.u.) values in accordance with Table (P3004.1).

### UNDERGROUND PLUMBING (CONTINUED)

- Cleanouts shall be provided for drainage piping in accordance with Sections (P3505.2.1 through P3005.2.11).
- Cleanout provided at the junction of the building drain and building sewer or within 10 feet developed length of piping upstream of the piping.
- Pipe sizes and slope shall be determined from Table (P3005.4.2) on the basis of drainage load in fixture units (d.f.u.) computed from Table (P3004.1).
- Metallic piping protected against corrosion per Section (P2603.2.1).
- Accessible water service main shutoff valve near the entrance of the water service.
- Drains, waste and vents (DWV) shall be water tested with a 10 foot head for 15 minutes or air tested at 5psi for 15 minutes. **Plastic pipe not allowed to be tested by air.**
- Water lines tested to working pressure or 50 psi for 15 minutes. **Plastic water piping not allowed to be tested by air except PEX piping systems where compressed air testing is specifically authorized by the manufacturer's instructions for the PEX pipe and fittings.**

### PLUMBING ROUGH/TOPOUT

- Drilling and notching of wood framed structural and cold formed steel light frame construction members does not exceed code requirements Section (P26.03.2).
- Steel plate protection (Minimum 16 gage) for plastic or copper piping in notches or holes less than 1 ¼ inch from the nearest edge of the framing member.
- Steel plate protection to extend minimum 2 inches above sole plates and 2 inches below plates.
- CSST gas piping protected with approved manufactures striker plates and installed per manufacture's installation requirements.
- Concrete slab floor openings for tub connections shall be sealed with concrete, mortar or similar material to create a hard surface and seal the opening. **(Foam not allowed).**
- Slip joint connections not allowed in concealed location unless provide with an opening that is not less than 12 inches.
- All piping shall be supported in accordance with Section (P2605.1) and Table (P2605.1).
- Cleanout accessible from the outside shall be provided on a stack vent or vent stack on an exterior wall.
- Changes in direction in drainage piping shall be made by the appropriate use of sanitary tees, wyes, sweeps, bends or by a combination of these drainage fittings in accordance with Table (P3005.1). Change in direction by combination fittings, heel or side inlets or increasers shall be installed in accordance with Table (P3505.1) and Sections (P3005.1.1 through P3005.1.4), based on the pattern of flow created by the fitting.
- All pipe penetrations at top plates and exteriors walls sealed with approved materials.
- Water pipes installed outside, exterior walls and in unconditioned space shall be protected from freezing.
- Joints and connections in the Drainage Waste and Vent (DWV) system shall be gas tight and water tight for the intended use or pressure required by test.
- Water hammer arrestors in place where required (If installed at this stage).
- Vent pipes graded, connected and supported to allow moisture and condensate to drain back to the soil or waste.
- Horizontal dry vents minimum 6 inches above flood level rim of fixture (P3104.5).
- Shall comply with Section (P3112) island fixture venting.
- Individual shower and tub/shower combination valves in place, secured and shall be equipped with control valves of the pressure balance, thermostatic mixing or combination pressure balance/thermostatic valve types in accordance with ASSE 1016/ASME A112.1016/CSA B125.16.
- Water supply risers from the shower valve to the shower head outlet, whether exposed or concealed, attached to the structure using support devices designed for use with specific piping material or fittings anchored with screws.
- Onsite built up shower receptors lined with approved materials (P2709.2).
- Minimum 12"X12" access opening required for whirlpool pump, minimum 18"X18" where pumps are located more than 2 feet from access opening or per manufacture's installation requirements.
- Clothes washer standpipe a minimum of 18 inches and not greater than 42 inches above the trap weir.

**PLUMBING ROUGH/TOPOUT (CONTINUED)**

- Vacuum breakers installed on hose bibbs.
- Vent terminal not located less than 4 feet directly beneath any door, openable window, or other intake opening of the building or of an adjacent building, nor shall any vent be within 10 feet horizontally of such opening unless it is not less than 3 feet above the top of such opening.
- When using air admittance valves shall comply with manufacture's installation instructions and Section (P3114).
- When using air admittance valves not less than one stack vent or a vent stack shall extend outdoors.
- Drain for water heater drain pan provide.
- Drains, waste and vents (DWV) each section shall be filled with water to a point not less than 5 feet above the highest fitting connection in that section, or to the highest point in the complete system for 15 minutes or air tested at 5psi for 15 minutes. **Plastic pipe not allowed to be tested by air.**
- Water lines tested to working pressure or 50 psi for 15 minutes. **Plastic water piping not allowed to be tested by air except PEX piping systems where compressed air testing is specifically authorized by the manufacturer's instructions for the PEX pipe and fittings.**

**GAS INSPECTION PRIOR TO PLUMBING FINAL**

- Prior to a plumbing final a gas piping system shall be tested with air pressure with a minimum of 60 ounces using an ounce gauge or 10 inches in mercury using a gauge measuring inches of mercury. Call for inspection.
- Pressure shall hold for a minimum of 10 minutes without any pressure loss.
- All gas valves shall be in place for all appliance connections. All gas appliances shall be connected to gas valves, if gas appliance is not connected to gas valve then a plug shall be installed at the opening and gas valve shall remain open to complete test and inspection.
- A ladder shall be provided or attic pull down stair access in place to access and inspect any gas piping and gas valves installed in attic spaces.
- Gas inspection and test is valid for 30 days. If meter is not set within 30 days a retest and inspection will be required.

**PLUMBING FINAL**

- All plumbing fixtures are secured in place.
- All shut off valves installed at fixtures.
- Trash and debris removed from all plumbing fixtures.
- Water closets sealed and caulked at the base to floor surface.
- Hand held showers shall provide backflow protection in accordance with (ASME A112.18.1/CSA B125.1) or shall be protected against backflow by a device complying with (ASME A112.18.3).
- Minimum 12"X12" access opening required for whirlpool pump, minimum 18"X18" where pumps are located more than 2 feet from access opening or per manufacture's installation requirements.
- Lavatories, sinks and all other fixtures sealed and caulked to counter surface.
- All fixtures installed with approved p-traps, tail pieces and slip joint connections.
- Approved directional type branch fittings installed in fixture tailpieces receiving the discharge from food waste disposer units or dishwashers.
- Dishwasher discharge pipe or tube fastened to the underside of the counter.
- Reverse osmosis faucet shall have an air gap built in, if a faucet without an air gap is installed then the drain connection of the reverse osmosis must be an indirect connection.
- Hot water to all plumbing fixtures and on left side.
- Water supplied to all fixtures.
- Hot and cold water not crossed at fixtures.
- All plumbing pipes penetrating walls, floors and ceilings shall be sealed with approved materials.
- Water hammer arrestors installed on all required fixtures.

### PLUMBING FINAL (CONTINUED)

Dishwasher has separate shutoff (**Cannot use double stop**)

- Air admittance valves installed per manufactures installation instructions and Section (P3114).
- Vacuum breakers installed and cold water on all hose bibbs.
- Drain pan provided for water heater and pan drains full size to an indirect approved waste receptor or to the exterior of the building and terminate not less than 6 inches and not more than 24 inches above the adjacent ground surface.
- Water heater in garage elevated not less than 18" above the garage floor unless otherwise listed as flammable vapor ignition resistant.
- Gas water heater vented as per code requirements.
- Unions or flex connectors are installed between shut-off valve and appliance
- Unions or flex connectors cannot be concealed within or extend through a wall, floor, partition or appliance housing.
- One flex connector up to 6' long is allowed on each appliance.
- A shut-off valve is required in for each appliance, upstream of union and accessible.
- Piping cannot be installed in or through a ducted supply, return, supply or exhaust, or clothes chute, chimney or gas vent, ventilating duct, dumbwaiter or elevator shaft. Piping installed downstream of the point of delivery shall not extend through any townhouse unit other than the unit served by such piping.
- Temperature and pressure relief valve for water heater terminated as per code Section (P2804.6.1)
- All plumbing vent from a drainage system shall terminate a minimum of 12" above the roof.
- Vent terminals extending through the wall shall terminate not less than 10 feet from the lot line and 10 feet above the highest adjacent grade within 10 feet horizontally of the vent terminal. Vent terminals shall not terminate under the overhang of a structure with soffit vents. Side wall vents terminals shall be protected to prevent birds or rodents from entering or blocking the vent opening (P3103.6).
- Vent terminal not located less than 4 feet directly beneath any door, openable window, or other intake opening of the building or of an adjacent building, nor shall any vent be within 10 feet horizontally of such opening unless it is not less than 3 feet above the top of such opening (P3103.5).
- All cleanouts in place with clearances and plugs installed.
- Access provided for water service valve.
- Irrigation backflow device installed if applicable.