

## RESIDENTIAL PLUMBING

- This handout is intended only as a guide. It shall not be considered a complete set of requirements.
- Materials and installation must comply with the current Plumbing Code, Section R403.4 of the MN Residential Energy Code, and the manufacturers' installation specifications for each product.
- Multiple fixtures may be included on the same plumbing permit, provided that they will be ready for inspection at the same time. Residential plumbing permits can be issued over the counter at the municipality office. Commercial projects require a plan review. Please request a Commercial Plumbing Permit Application from your municipality office.
- MN Statutes 326B.46 states: "Anyone not so licensed may do plumbing work which complies with the provisions of the minimum standards prescribed by the Plumbing Board on premises or that part of premises owned and actually occupied by the worker as a residence, unless otherwise forbidden to do so by a local ordinance." This means, as the owner of a one- or two-family dwelling, you can either hire a licensed plumbing contractor or do the plumbing work yourself without a license. A friend, neighbor, tenant, general contractor, or other person cannot legally do the plumbing work unless he or she is a licensed plumber working on behalf of a licensed plumbing contractor.

### PERMIT CARD (throughout the project) shall be:

**POSTED** prior to start of work - **VISIBLE** from street or driveway - **ACCESSIBLE** to the inspector

### INSPECTION REQUIREMENTS:

Inspections **MUST** be scheduled during office hours **AT LEAST** one business day prior to inspection. If a specific date and time is required, additional notice may be needed. Failure to cancel a scheduled inspection may result in a reinspection fee.

- **Office Hours:** Monday - Friday • 8:00 a.m. - 4:30 p.m.
- **Phone:** (952) 442-7520 or (888) 446-1801

#### Inspections (required inspections are dependent on the project type):

- **Someone 18 years or older must be present at the time of the inspection.**
- **The person doing the work should verify that required tests will hold prior to scheduling.**
- **Rough-in:** After all drain, waste, and vent (DWV) and water supply piping is installed and before placing any fixtures. Refer to Project Checklist section of this handout to determine what will be inspected at the rough-in. You must conduct a pressure test on all new (DWV) lines.
  - ✓ Test pressure shall be no less than 5 psi.
  - ✓ Test duration shall not be less than 15 minutes.
- **Final:** After all work is complete. You must conduct a final manometer test on DWV lines and fixtures at time of final inspection.
  - ✓ Test shall be by means of air introduced into the system equal to the pressure of 1" water column.

**NOTICE:** Construction or work for which a permit is required shall be subject to inspection by the Building Official, and such **construction or work shall remain accessible and exposed for inspection purposes until approved.** It is the responsibility of the permit applicant to be in attendance on site and provide access to the Building Official for all required inspections. If work is concealed and/or work is not complete at time of inspection, an additional inspection is required and a **reinspection fee may apply.**

**Note:** The State of Minnesota requires all residential building contractors, remodelers, roofers, plumbers, and electricians to obtain a state license, unless they qualify for a specific exemption. Any person claiming an exemption must provide a copy of a Certificate of Exemption from the Department of Labor & Industry to the Municipality before a permit will be issued.

**Note:** To determine contractor requirements, or to check the licensing status of a contractor, please call the Minnesota Department of Labor & Industry at 651-284-5065 or toll free 1-800-342-5354.

**Note:** For specific code requirements, contact the Building Inspection Department at 952-442-7520 or 888-446-1801 or e-mail: [infoMN@safebuilt.com](mailto:infoMN@safebuilt.com).

## PROJECT CHECKLIST:

### Inspected during rough-in inspection:

- All proposed fixtures must be trapped and vented separately. A vent pipe cannot be run horizontally until it is 6" above the spill line of the fixture it serves. The spill line is the top of the fixture where the water would overflow to the floor.
- A trap arm is the pipe between the trap and its vent/drain connection. The trap arm of a fixture may have one long turn 90-degree fitting, or two 45-degree fittings before the vent. The maximum length of trap arms are 42" for 1½" pipe and 60" for 2" pipe; 48" for a toilet.
- Between the trap and the vent for the fixture you cannot wye, or tee off, to add another fixture. This must be tied on separately, after the vent into the drain line, with its own vent.
- ABS pipe (black) and PVC (white) cannot be glued together. You may use an approved mechanical joint, typically called a "mission coupling." It must have a smooth stainless-steel shroud when used above ground.
- When using PVC (white pipe) you must use a contrasting colored primer before gluing the joints.
- All drainage lines underground must be a minimum 2", and installed below the concrete - NOT embedded in it.
- Drainage pipes must be connected with a wye fitting, not a tee, on a horizontal to horizontal drain pipe. A tee fitting may only be used when going from a horizontal position to a vertical downward position, or on its back as a vent.
- All drainage fittings must be of the long turn or 45-degree style unless going from horizontal to vertical position - then a tee or medium turn 90-degree fitting may be used.
- The horizontal drain line from kitchen fixtures must be continuously supported for its entire length.
- If you will be drilling and notching a top plate at exterior wall or interior load-bearing wall by more than 50% of its width, a galvanized metal tie not less than .054" thick and 1½" wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d nails, minimum length of 1½". The metal tie must extend a minimum of 6" past the opening on each side.
- An air test of 5 psi must be done at the time of inspection of the new drains and vent piping. The air test must hold for 15 minutes. To do this, you must cap off all openings of the new plumbing system and put an air pressure gauge on one of the pipe openings (usually the sink drain).
- Three fixtures are permitted on a ½" water supply line if they are in the same room (tub, toilet, lav). Two fixtures are allowed on a ½" water supply line if they are in different rooms. So if you are adding a new bathroom the water supply must be teed off from a minimum ¾" water line.
- New or replacement shower valves must be anti-scald and pressure-balanced. (Most 2-handle tub/shower valves do not meet this requirement, and will need a mixing valve or other anti-scald device.)
- All plastic pipe and copper pipe must be protected with a nail protection plate when the pipe is within 1¼" of the nailing surface of a stud, or top or bottom plate it passes through.
- Minimum drain size for a toilet is 3"; shower or washing machine, 2"; lav, bar sink, laundry tub or bathtub, 1½".
- Minimum vent size for a toilet is 2"; shower, bathtub, washing machine, laundry tub, lav, or bar sink, 1½".
- Plastic pipe supports for horizontal piping are required at 32" intervals (no wires or metal straps on plastic pipes).
- Trap seal must be 2" minimum to 4" maximum.
- Laundry standpipe must be between 18" and 42" above the trap.

### Inspected during final inspection:

- Water heaters must have a ¾" shut-off on cold side inlet (no other tees between water heater and shut-off valve). Temperature/Pressure Relief valve drain (TPR) must be piped to a maximum of 18" from floor, and not be reduced from ¾" outlet.
- Gas piping: Use an approved gas valve (must replace old brass handles with new valves). Must have union between gas valve and fixture. Gas valve must be within 6' of appliance and in the same room. The sediment trap (dirt "T") must be a minimum 3".
- The system must pass a manometer test equal to the pressure of 1" water column.
- The dishwasher drain hose must be secured to the underside of the counter with a loop as high as possible, or have an air gap.
- All fixtures must be sealed to the floor or countertop.
- Gas lines shall be labeled.
- If CSST gas piping is being used, it shall be bonded with solid copper wire on the supply side of the tubing.
- See diagrams on the following page for examples of a waste and vent system.

