



City of Vacaville  
Community Development  
Building Division

## Rough Plumbing Checklist

***This is to be used as a general checklist; it is not inclusive of all code requirements and inspection criteria.***

Per 2019 California Plumbing Code (CPC)

### **PIPE SUPPORT (Table 313.3) and PROTECTION**

- ABS/PVC: Horizontal support every 4 feet, support vertically every story and provide mid-story guide.
- Cast iron: Horizontal support every other joint unless over 4 feet, within 18" of joints, and at all horizontal branch connections. Vertical support at base and each story using riser clamps.
- Copper tubing: 1 ½" and less every 6 ft. horizontally and every 10 ft. horizontal for pipe 2" and larger. Support vertical piping every story.
- Wrap embedded piping to prevent strain and corrosion. CPC 312.4 Sleeve pipes through footings and foundations. CPC 312.10
- Seal spaces between pipes and sleeves. CPC 312.10.2

### **SOIL PIPING**

- Pipe supported on firm bed for entire length. CPC 313.5 No rocks supporting or touching pipes. CPC 314.4
- Six inches of sand bed minimum for ABS/PVC drain pipe per manufacturer
- No rocks or debris in first 12" of backfill over ABS pipe. CPC 314.4 Trenches not to undermine footings within bearing plane (45°). CPC 314.1 Sewer and water pipe minimum 12" deep. CPC 609.1
- Water and sewer OK in same trench if sewer materials are approved for such use.

### **DRAINAGE**

- Materials must be listed and all pipes must have manufactures listing and labeling. CPC 301.2.1
- Minimum slope ¼" per foot, or when preapproved, 1/8" per foot for 4" diameter or larger. CPC 708.0
- No reductions in pipe size allowed in direction of flow. CPC 315.2
- No drilling or tapping of connections. CPC 310.2
- Use only listed transition fittings at plastic to cast iron pipe.
- Minimum trap sizes per CPC Table 702.1

## **CLEANOUTS (C.O.)**

- Size per CPC Table 707.1
- Required at upper terminal of horizontal runs on first floor or two way clean out required near building drain/building sewer. CPC 707.4
- Cleanout in horizontal drainage piping every 100' and/or every aggregate 135° change of direction. CPC 707.4
- Clean outs clearances per CPC 707.9
- Under floor clean out shall not be farther than 5 ft. from access point. CPC 707.9
- Passageway to under floor cleanout minimum 30" horizontal by 18" vertical. CPC 707.9

## **FIXTURES BELOW SEWER/ BACK WATER VALVES**

- Fixtures to drain by gravity where practicable. CPC 709.0
- When necessary due to site conditions, install sewer ejector pump per CPC 710.
- Backwater valves required for fixtures below next upstream manhole cover. CPC 710.1
- Fixtures above manhole cover elevation not allowed to discharge through backwater valves (typical).
- Back water valves required to be accessible for service. CPC 710.6

## **TRAPS**

- Trap size shall be the same size as trap arm. CPC 1003.3
- Trap weir to vent distance minimum 2 times trap arm diameter. CPC 1002.2 Horizontal distance of trap arms per Table 1002.2
- Only 1 trap permitted on trap arm. CPC 1001.2
- Maximum 1 slip joint allowed on outlet side of trap. CPC 1003.2
- Clean out required if change of direction is more than 90°. CPC 1002.3
- Slip joints must be accessible, minimum 12" X 12" access. CPC 402.10

## **VENTS**

- No flat venting (take off above horizontal center line). CPC 905.2
- Slope vents toward waste piping and must be free of sags. CPC 905.1
- No vent opening below trap weir. CPC 905.5
- Horizontal vents minimum 6" above flood level rim or drainage fittings CPC 905.3
- Vents must terminate outdoors 6" above roof. CPC 906.1
- Minimum 12" horizontal from any vertical surface. CPC 906.1
- Minimum 7 ft. above roofs used as decks if within 10 ft. horizontally. CPC 906.3
- Clearance from building openings 3 ft. above or 10 ft. away. CPC 906.2
- Vent terminations minimum 3 ft. from property lines. CPC 906.2

## **WATER SUPPLY**

- Minimum water service piping is ¾" (type L If copper). CPC 610.8
- Steel plate protection for piping if notches or holes are closer than 1" to face of framing. CPC 312.9
- Steel plate protection must span minimum 1 ½" beyond outside of pipe. CPC 312.9
- Water hammer arrestors required near quick-acting valves. CPC 609.10
- Copper pipe shall comply with CPC 605.1

## **REQUIRED VALVES**

- Main shutoff and water heater shutoff valves must be fullway type. CPC 606.2 Valves required at fixture supply pipe except tub and shower. CPC 606.5
- Shower valve location such that adjustment may be made without entering stream CPC 408.8
- Valves required on cold-water supply at each water heater. CPC 606.2
- All shutoffs require access. CPC 606.6
- Vacuum relief valve for water heaters higher than the appliance(s) it serves. CPC 608.7

## **GAS PIPING**

- Gas piping prohibited underground beneath buildings unless in conduit sealed in building and vented on exterior. CPC 1210.1.6
- Gas tubing requires shield plates to extend minimum 4" past studs and plates. CPC 1210.3.3
- Cap all unused gas outlets. CPC 1210.7.1
- Accessible dry leg required if water vapor in gas. CPC 1210.8.1
- Corrugated stainless steel tubing shall be installed per manufactures instructions. Piping through concrete shall be sleeved. CPC 1210.1.5
- Yellow insulated copper tracer wire minimum 18 AWG buried with plastic pipe.
- Minimum 6" above grade when mounted to the building
- Galvanized, painted or otherwise prevented from corrosion CPC 312.4

## **PIPING TEST**

- Water pipe test at working pressure 15 minutes or 50 PSI air test for other than plastic pipe (15 minutes). CPC 609.4
- Drain waste and vent 10 foot head for 15 minutes or air test 5 PSI for 15 minutes. CPC 712.2
- Test pressures shall be held for 15 min with no perceptible drop in pressure. CPC 1213.3
- Test gauge scale not more than 2X test pressure. CPC 318.5
- Roof drains tested and approved prior to covering.

### **SHOWER PAN TEST (CPC 408.6)**

- Shower pan sloped to drain.
- 3" dam and solid backing all around for backing.
- Listing and installation instructions for other than hot mop (built up).
- Drain weep holes not sealed with tar or mastic.

### **TPR AND CONDENSATE PIPING**

- TPR valve piping to grade or other approved location
- Condensate piping to appropriate locations with minimum fall