



# CITY OF NEWPORT BEACH

## COMMUNITY DEVELOPMENT DEPARTMENT

### BUILDING DIVISION

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## ROUGH PLUMBING CHECKLIST

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

Per California Plumbing Code (CPC)

### **PIPE SUPPORT (table 3-2) 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 313.2]
- Sleeve pipes through footings and foundations. [CPC 313.10]
- Seal spaces between pipes and sleeves. [CPC 310.10.3]

### **SOIL PIPING**

- Pipe supported on firm bed for entire length. [CPC 314.3]
- No rocks supporting or touching pipes. [CPC 315.4]
- 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 315.4]
- Trenches not to undermine footings within bearing plane (45°). [CPC 315.1]
- 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 301.1.2]
- 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 316.4.1]
- No drilling or tapping of connections. [CPC 311.2]
- Use only listed transition fittings at plastic to cast iron pipe.
- Minimum trap sizes per table 7-3

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

- Size per CPC table 7-6
- 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 20 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 no larger than 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 10.1.
- Only 1 trap permitted on trap arm. [CPC 1001.1]
- 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 404.2]

### **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 313.9]
- Steel plate protection must span minimum 1 ½" beyond outside of pipe. [CPC 313.9]
- Water hammer arrestors required near quick-acting valves. [CPC 609.10]
- Hot water pipe insulation R-6.5.
- Ream test required for copper pipe (CPC 606.1)
- Only one shower head per shower operational at one time.

### **REQUIRED VALVES**

- Main shutoff and water heater shutoff valves must be fullway type. [CPC 605.2]
- Valves required at fixture supply pipe except tub and shower. [CPC 605.5]
- Shower valve location such that adjustment may be made without entering stream (CPC 411.10)
- Valves required on cold-water supply at each water heater. [CPC 605.2]
- All shutoffs require access. [CPC 605.6]
- 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 1211.1.6]
- Gas tubing requires shield plates to extend minimum 4" past studs and plates. [CPC 1211.3.4]
- Cap all unused gas outlets. [CPC 12.11.9.2]
- Accessible dry leg required if water vapor in gas. [CPC 1211.8.1]
- Corrugated stainless steel tubing shall be installed per manufactures instructions.
- Piping through concrete shall be sleeved. [CPC 1211.1.5]
- 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 313.4)

### **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 712.3]
- Gas test: 1 ½ X working pressure for 10 minutes minimum (longer for larger systems). [CPC 1214.3.3]
- Test gauge scale not more than 2X test pressure. [CPC 309.4]
- Roof drains tested and approved prior to covering.

### **SHOWER PAN TEST (CPC 411.7)**

- 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