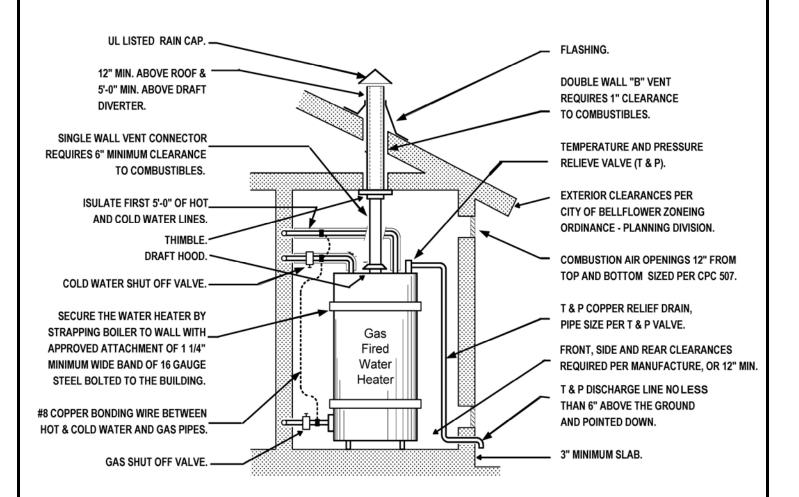


## RESIDENTIAL WATER HEATER Handout #12

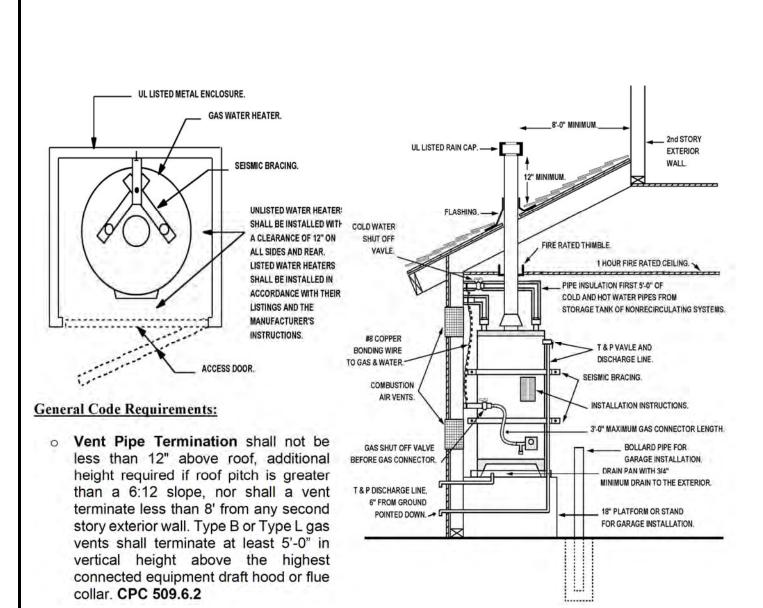
## A plumbing permit is required for all water heater replacements or new installations within the City of Covina.

- Homeowners Association: If the property is regulated by a Home Owners Association, any exterior work must have written approval of the Association and the written approval must be attached to the permit.
- o A plumbing permit may only be issued to a State of California Licensed C-36 Plumbing Contractor or to an approved homeowner-builder in accordance with City requirements and State licensing laws.
- City of Covina Municipal code requires that all water heaters are enclosed or in an approved cabinet

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- Venting Clearance for single wall metal vent piping shall be installed in a manor to provide 6" clearance from combustible materials and shall be secured together with sheet metal screws or rivets. Single wall vent piping shall not be installed in a confined space, and only installed below fire stop flashing/thimble. Type B Double wall vent piping shall be installed in a manor to provide 1" clearance from combustible materials and shall not be secured together with Tech screws or rivets. CPC 509.7.2
- Roof Thimble or other approved non-combustible collar shall be placed against the ceiling, sealing gaps.
   CPC 509.7.3.6
- Combustion Air Vents within 12" of top and bottom of enclosure is required where enclosure has volume less than 50 C.F. per 1000 BTU/Hour of all appliances within enclosure. Minimum area per opening shall be based on I" squared per 4000 BTU/Hour of input capacity, with minimum screen mesh of a 1/4". CPC 506
- Seismic Bracing System shall be installed to provide protection from displacement due to earthquake motion. Water heater shall be anchored/secured with 1 1/4" minimum wide band of 16 gauge steel bolted to the building at the upper and lower 1/3's of the water heater, minimum 4" above gas control valve and 4" below side T & P outlet. Solid blocking may be required to properly secure the water heater. CPC 507.2, Health and Safety Code 17958.5
- Side & Rear Clearances of unlisted water heaters shall be 12" minimum on all sides. Listed water heaters shall be installed in accordance with their listings and the manufacturers' instructions. CPC 504.3.2



## RESIDENTIAL WATER HEATER Handout #12

- Temperature, Pressure and Vacuum Relief shall be installed in accordance with their listing CPC 505.6
- Physical Damage Appliances shall be guarded against damage CPC 507.13.1
- Sediment Trap shall be installed to gas supply at water heater control valve with a T fitting and a minimum
   3" nipple in length with cap for sediment trap. CPC 1210.8.3
- o **Bonding** of metallic piping shall be continuous with a #8 copper bonding wire and bonding clamps, to cold, hot, and gas lines to tie systems together at the water heater. **CEC 250.104**
- Water Piping Insulation shall be installed 5' on the cold and 5' on the hot water supplies at water heater when possible, and to maintain 6" clearance from vent and flue. 2019 California Energy Standards-Mandatory Measures
- Drain Pan shall be required when a water heater is installed in a location where it could cause damage;
   in case of failure/leak to floor, sub-floor, drywall, or platform. Drain pan shall be installed with a minimum 3/4" drain outlet and drains to the exterior of the building or approved location. CPC 507.4
- Water Heater Stand or built in platform is required when water heater is installed in a garage to elevate water heater a minimum 18" above grade. CPC 507.13.1
- Physical Protection must be provided where subject to mechanical damage. 4" minimum pipe, 3 ft above grade. CPC 507.13.1
- o Installation Instructions for water heater to be on site and readily available for reference. CPC 507.24

Storm Collar
Roof Flashing
See Detail 'A' for vent requirements

Draft Hood (3 sheet metal screws) at duct connection.

Dielectric type connection

Manufacturer/ Energy
Pilot and control shall be a minimum18" above finished surface

Install AGA approved gas shutoff valve, flex connector and sediment trap.

>Labeled Vent Pipe:Type B (double wall) use in concealed spaces.

Hot Water Line w/ R4 Insulation.

Cold Water Line w/ R4 Insulation and IAPMO approved Shutoff Valve

T&P (Temperature and Pressure)Relief Valve.

Typical 2"x4" stud -wood frame construction

Secure seismic straps w/ Install (2) California State Architect approved seismic straps. Install at top and bottom 1/3 of heater. Bottom strap shall be a

Minimum of 4" above controls.

T&P Relief Valve drain shall terminate outside of the building or to an approved location. Non-threaded ends shall face down 6" to 24" above grade.

It may be made of hard drawn copper, CPVC, or galvanized steel pipe.

\*PLOT/SITE PLAN REQUIRED- Reference HANDOUT #15\* (8 1/2"x11")

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