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## Residential Water Heater Inspection Checklist

**This is to be used as a general checklist; it is not inclusive of all of water heater code requirements and inspection criteria. Permits are required prior to installation or replacement of water heaters. In addition to the code referenced items, the water heater installation instructions are used for inspections.**

- Manufacturer Installation Instructions** shall be onsite and attached to the unit at time of inspection.
- Clearances** at front, sides, back and top as described by the manufacturer installations instructions.
- Seismic Straps** – Water heaters up to 52 gallons require two seismic straps; one located within the top 1/3 of the water heater unit and one at the bottom 1/3. The bottom strap must be located at least 4” away from the water heater controls (2019 CPC 507.2). Water heaters up to 75 gallons require an additional third strap. Earthquake bracing details for water heaters with a capacity greater than 75 gallons must be approved by the building department.
- Flue Clearance** – Type B vent terminating min 1 ft. above roof in approved cap. Double-wall B vents are required and must have 1 in. clearance to combustibles. Single wall connectors are allowed with a minimum 6 in clear to combustibles.
- Venting** – Water heaters of other than the direct-vent type shall be located as close as practical to the chimney or gas vent (2019 CPC 504.2). The vent height above the roof surface shall be in accordance with Section 509.6.1. Up to a 6:12 roof slope the minimum height is 1 foot. All single-walled vents and single-walled to double-walled vent joints shall be secured with a minimum of **three** sheet metal screws, rivets or similar positive connection. Venting systems shall be sized in accordance with Section 510.0.
- Pressure - Temperature Relief Valve** – All water heaters have a pressure / temperature (P/T) relief valve (2019 CPC 504.6). The valve shall be drained to the **exterior** through an air gap and terminate toward the ground maintaining between 6” and 24” of clearance from the ground and pointing downward (2019 CPC 608.5(3)). The diameter of the valve opening (generally ¾”) must be maintained to the termination of the drain. Check the manufacturer’s requirements. Relief valve drains shall not terminate in a building. (2019 CPC 608.5(3)).
- Located in a Garage** – Water heaters located in a garage must be elevated so the pilot light and controls are at least 18” above the garage floor surface unless listed as flammable vapor ignition resistant (2019 CPC 507.13). Water lines shall be insulated (2019 CPC 609.11) 5’ from the water heater.
- If subject to vehicle damage**, adequate barriers must be installed (2019 CPC 507.13.1).
- Located in an Attic or Furred Space** – If located in an attic or furred space (i.e. closet) where leaking could cause damage to underlying wood framing the water heater must be set in a pan constructed of water tight corrosion resistant material (2019 CPC 507.5). The pan must be fitted with a minimum ¾” drain that drains to an approved location (2019 CPC 507.5). The P/T line is not allowed to terminate at this pan or be connected to it.

❑ **Located in a Bedroom, Bathroom, or Closet** – Shall be permitted when provided with a listed self-closing, gasketed door and all combustion air shall be obtained from outdoors (2019 CPC 504.1(1)). Water heater closets shall not be used from any other purpose (2019 CPC 504.1 (1)).

❑ **Located in Attic** – Shall be accessible through an opening and passageway at least as large as the largest component of the appliance, and not less than 22” by 30” (2019 CPC 508.4) Where the height of passageway is less than 6 feet the distance from the passageway access to appliance shall not exceed 20 feet measured along the centerline of the passageway (2019 CPC 508.4.1). The passageway shall be unobstructed and shall have solid flooring not less than 24”. (2019 CPC 508.4.2). A level working platform not less than 30” by 30” shall be provided in front of the service side of the appliance (2019 CPC 508.4.3). A 120v receptacle outlet and a lighting fixture shall be located near the appliance, the switch controlling the lighting fixture shall be located at the entrance to the passageway. (2019 CPC 508.4.4).

❑ **Tankless Water Heater** – Tankless water shall be listed by an approved testing agency (UL, UPC, etc.) and be installed in accordance with manufacturer’s requirements. Category II stainless venting material and larger gas supply lines may be required based on the manufacturer’s specifications / instructions. All water heaters on the façade of the building require planning department approval.

❑ **Shut Off’s and Gas Lines** – Both gas and water shut off valves are required adjacent and within 6 feet of the water heater (2019 CPC 1212.6). Maximum 3 feet long gas flex connector allowed (2019 CPC 1212.4.3). New gas piping shall be pressure tested (2019 CPC 1213.0).

❑ **Thermal Expansion Tank** - A water system provided with a check valve, backflow preventer, or other normally closed device that prevents dissipation of building pressure back into the water main, independent of the type of water heater I used, shall be provided with an approved, listed, and adequately sized expansion tank or other approved device having a similar function to control thermal expansion (2019 CPC 608.3).

❑ **Sediment Trap** - A 3-inch minimum sediment trap shall be installed on the gas line downstream of the appliance shut-off valve, as close to inlet of the equipment as practical, and upstream of the flex connector (2019 CPC 1212.9) unless manufacturers installation instructions specify a different location (manufacturer installation instructions must be left onsite at all times). The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet (see diagram below) or other recognized as an effective sediment trap.

