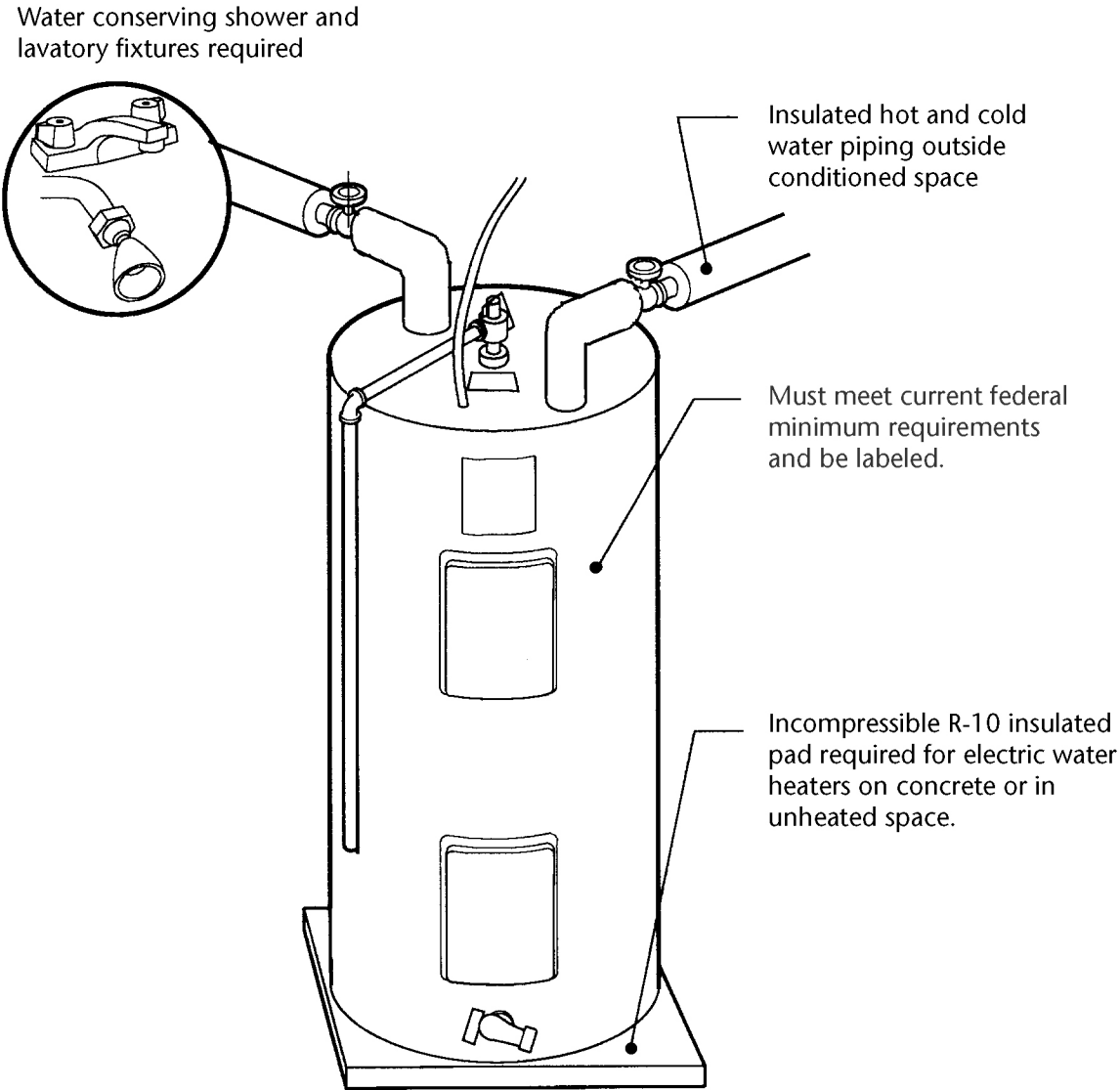


Chapter 6: Plumbing

The *Washington State Energy Code (WSEC)* sets standards that minimize heat loss and conserve water (see Figure 6-1).

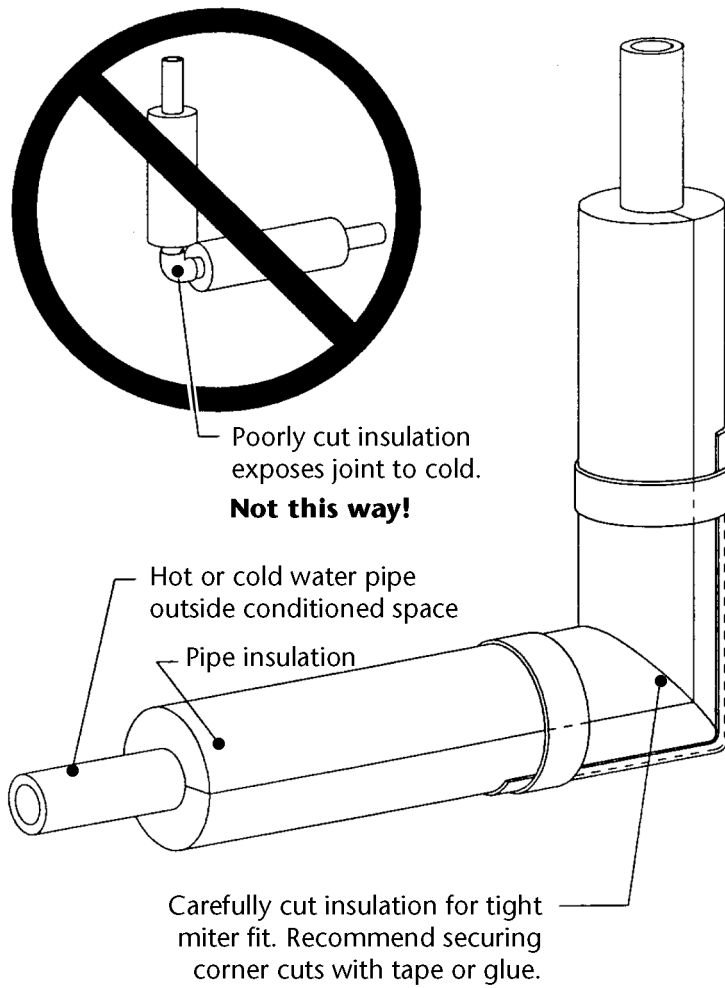
Figure 6-1

Plumbing Requirements



- [504.8.1] **Water Conservation.** Flow rates for shower heads and lavatories are limited by the Washington Administrative Code.
- [504.2.1] **Water Heaters.** All water heaters must comply with current federal minimum standards and be labeled. For more information, please visit:
www.eere.energy.gov/buildings/appliance_standards
- All electric water heaters in unheated spaces or on concrete floors must be placed on an incompressible insulated surface with minimal thermal resistance R-10.
- [504.3] Residential water heaters must be set to a maximum 120°F.
- [504.4] Each water heater must have a separate shut-off switch or valve.
- [504.2.1] Storage water heaters used for combination space heating and water heating must meet the efficiencies listed in Section 504.2.1.
- [503.11] **Pipe insulation.** Hot and cold water pipes outside the conditioned envelope of the building must be insulated to the level specified in WSEC Table 5-12 (R-3.6 for < 2-inch pipe, R-5.4 for > 2 inches).
- Swimming Pools.** Heated swimming pools must meet the following requirements:
- [504.5.3] Have a pool cover approved by the Building Official.
- [504.5.1] All pool heaters must have an accessible ON/OFF switch to shut off the heater without adjusting the thermostat.
- [504.5.1] Pool thermostats must be adjustable to a minimum 65°F setting.

Figure 6-2
Pipe Insulation



Note: Polyethylene foam will provide approximately R-3.6 per inch of thickness.

Residential Pool Pumps and Controls. Pool pump motors cannot be split phase or capacitor start induction run type.

[504.5.2.1]

One horsepower (1 hp) pump motors or larger must have the capability of operating at two or more speeds. The low speed is limited to one-half (1/2) the motor's maximum rotation rate.

Pump controls must have the capability of operating the pool pump with at least two speeds. The default circulation speed is the lowest speed with the control having an override allowing the pump to operate at high speed not to exceed one normal cycle.