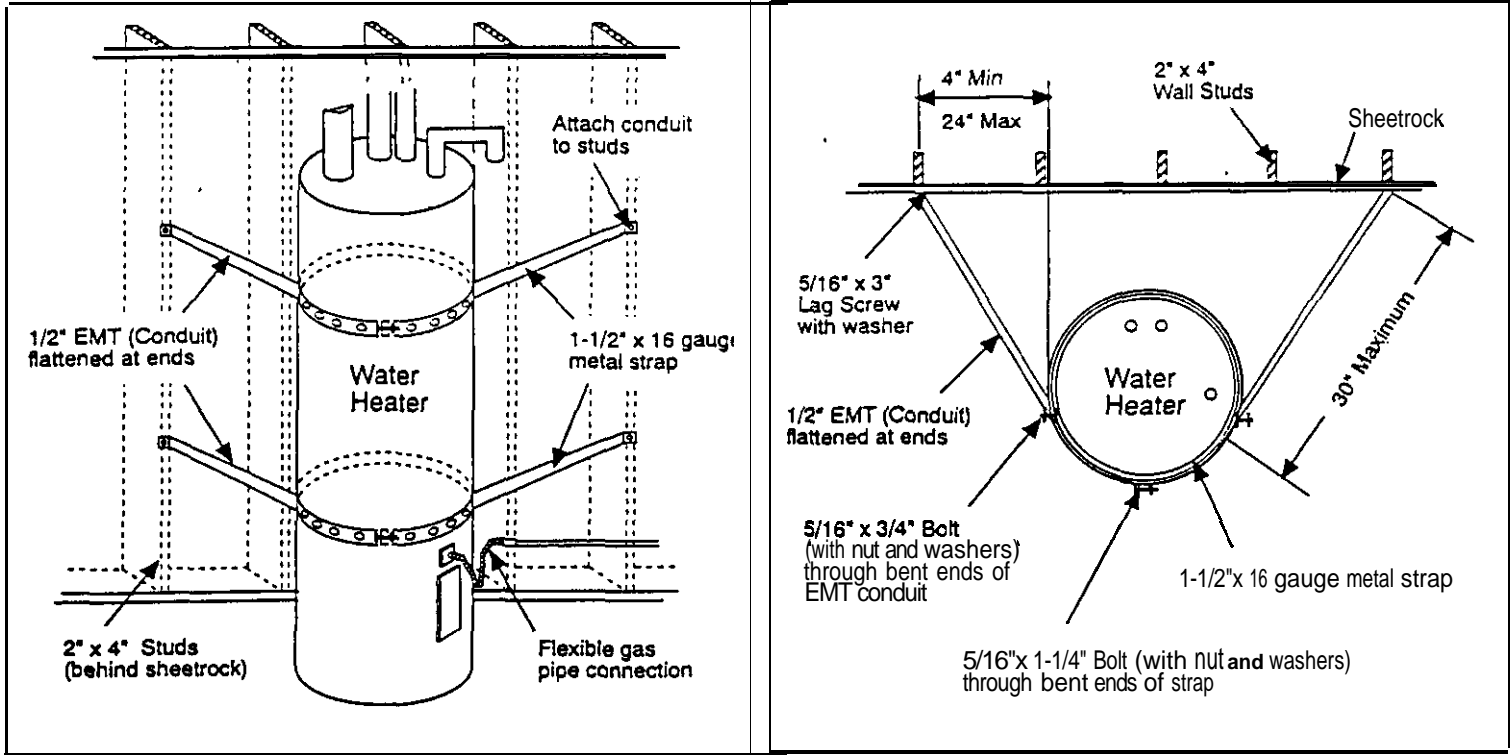


NEVADA EARTHQUAKE SAFETY COUNCIL

Strap The Water Heater



Materials Needed:

- (2) 6' lengths of 1-1/2" 16 gauge pre-drilled strap
- (1) 10' length of 1/2" EMT tube (conduit)
- (4) 5/16" x 3" lag screws with washers
- (4) 5/16" x 3/4" long hex head machine bolt with 4 nuts and washers
- (2) 5/16" x 1-1/4" hex head machine bolt with 1 nut and 2 washers each

Tools Needed:

- Tape measurer
- Hammer
- Hack Saw
- Crescent Wrench
- Vise or Clamp
- Power Drill
- 3/8" Drill Bit
- 3/16" Drill Bit
- Center Punch

Strapping your water heater and making sure it is fitted with flexible gas supply line will greatly reduce the danger of fire or explosion from a gas leak after an earthquake. If your water heater does not have a flexible gas supply line, contact a licensed plumber to install one. Your water heater is also a source of fresh water in case your outside water is disrupted.

These instructions are intended to act as a guide in strapping a 30-40 gallon water heater within 12" of a wall stud:

1. Locate the studs in the wall on both sides of the water heater. Mark the water heater at 6" down from the top and about 18" up from the bottom. Transfer these marks to the wall. Drill a 3/16" hole through the sheetrock and into the center of the wall stud.

2. Measure the distance around the water heater. Add 2" to the measurements. Use the hack saw to cut two 1-1/2" x 16 gauge metal straps to this length. Use the vise or clamp to bend the strapping to a right angles 1-1/2" from each end.

3. Measure the distance from a midway point on each side of the water heater to the holes drilled in the walls. Add 1-1/2" to these measurements. Use a hack saw to cut two pieces of EMT conduit to the appropriate lengths.

4. Use a hammer to flatten about 1-1/2" at each end of the EMT conduit. Use care to ensure the flattened ends are in the same plane. Use the vise or clamp to bend the EMT conduit to allow the flattened ends to fit flush against the wall and water heater (about 45°).

5. With a hammer and the center punch, make a mark 3/4" from each of the flattened tubing ends. Drill 3/8" hole through the marks.

6. Wrap the straps around the water heater and insert a 5/16" x 1-1/4" bolt with washers into the bent ends. Tighten ends with fingers.

7. Insert 5/16" x 3/4" bolts through straps from the inside at the mid-point of the water heater. Insert flattened EMT conduit, add washers, nut and tighten with fingers.

8. With the lag screws, screw the other ends of the EMT conduit into the prepared wall stud holes.

9. Adjust the straps to the proper height and tighten all nuts snugly, but too tight.

Modified from:
The Governor's Office of Emergency Services, State of California
"Beat the Quake - Steps to Take"
Originally from "Home earthquake Preparedness Guild", EQE, Inc. San Francisco, CA.