FACILITY EARTHQUAKE PREPAREDNESS

- Secure tall heavy furniture such as bookcases and lockers, to walls with L-brackets.
- Secure refrigerators and water heaters to the walls with strapping, eye-bolts, and wire.
- Secure hanging plants, mirrors, and heavy picture frames. Hooks holding heavy potted plants should be closed and screwed directly into joists. Consider replacing clay pots with lighter and sturdier plastic.
- Install positive (mechanical) latches on cabinets and cupboards.
- Store breakables and heavy objects near the bottom of bookcases, shelves, or cabinets. Replace glass containers with plastic.
- Secure overhead lights to joists or roof (not just suspended to ceiling). Fluorescent lights should be strapped so they won't fall out.
- Remove any object over beds that could fall on a sleeping person. Remove any object near an exit that could block that exit.
- Typewriters, base radios, and computer hardware should be secured to desks or tables to prevent slipping off. Glued patches of velcro will prevent slipping.
- All shelves should have safety wire or some other type of restraint system to prevent objects from sliding off.
- Secure all cascade-system oxygen bottles to the wall and plumb with approved flexible hose. Secure all welding units and breathing apparatus bottles also to prevent their falling over and breaking off the valve.
- Secure emergency generators and equipment with flexible fuel lines, cooling lines, and electrical connections.

FORMULA FOR PUTTING TOGETHER A 7 DAY FOOD SUPPLY

(Number of Family Members x 7 days)

2 servings of meat
2 servings milk*
4 servings fruits and vegetables
4 servings breads and cereals

*For each child add 4 extra servings of milk foods for the 7 day period.

For each teenager add 8 extra servings of milk foods for the 7 day period.

Hints

1. Select nutritious foods your family will enjoy, and rotate them in your home food supply. Buy your emergency supply a few items at a time, to avoid strain on your weekly budget.

2. Make the majority of the foods, or perhaps the first day's menus, edible without any heat or cooking. Choose foods requiring little or no water for preparation.

3. Provide a means of cooking and heating foods - for example: a Sterno stove, a 3-lb. empty coffee can to use as a cooking container, a 1-lb coffee can for mixing juices and pudding, a spoon for stirring, and a supply of matches in a waterproof container. A saucepan with water may be used to heat small cans of food (labels removed). Then the same water can be used for clean up.

4. Choose foods which are easy to store and which have high food value. Use mostly dried and instant-type foods with some canned goods. (Canned items are heavy to carry.) Include vitamins or other supplements if desired.

5. Select foods which will keep for at least 6 months in a cool dark place.

6. Store bottled drinking water beside the food supply, allowing at least 1 gallon of water for each person (for 7 days).

7. Don't forget other non-food items which would make the serving of meals possible and convenient. Be conservative - don't include the kitchen sink!

8. Quantity foods like instant milk, oatmeal, hot chocolate mix may be measured out in one-meal portions and stored in sealed plastic bags. Be very careful to expel all excess air before sealing.

9. Choose or package foods in one-serving or one-meal sizes, to eliminate leftovers.

10. Label each food in the food supply with the date of purchase or last date it should be used. (Be sure you can tell which date you mean.)

IN SHORT: BE ABLE TO PRODUCE SEVEN DAYS OF GOOD MEALS FOR YOUR FAMILY ANYWHERE WITH A MINIMUM OF TIME, EQUIPMENT, HEAT, AND WATER.

LONG-TERM FOOD SUPPLY MANAGEMENT

When planning a 2-week (or more) reserve food supply, pay special attention to the buying, storage, organization, and rotation of the foods to insure maximum use, freshness, and accessibility.

Buying

The most important common sense rule is to **buy sensibly and appropriately**. DO NOT HOARD large quantities of food as it is most often wasteful.

As you plan your reserve food supply, you probably will find that you already have many of the needed foods on hand. Simply keep at least a 2-week supply.

Select those foods which have a **shelf life of at least 6 months** and preferably one year or more.

For necessary flexibility, select foods in a variety of forms: canned, prepackaged, freeze-dried, dehydrated, and unprocessed.

Purchase the freshest looking packages. Messy or shopworn labels indicate old stock. Don't buy cans with swollen ends - food has spoiled. Check the expiration dates.

Choose nutritious foods your family likes. A sudden emergency is no time to have to depend on junk foods or to introduce new foods. Also, familiar foods will more easily rotate into your regular food supply.

Home canning or drying your own fruits, vegetables and meats will be the most economical. Home gardening and buying in season will help you get the most for your food dollar.

Be sure to include a two week supply of food for each pet. A disaster is no time to have to give animals "people food".

Storage

Store foods safely and compactly. Put paper packages into metal cans; repackage larger quantities into smaller sealed bags (be sure to include the package directions), etc.

Store reserve food supplies in a **dark dry area at temperatures of 70 degrees or less**. While foods will be safe beyond the recommended storage times, flavors will fade and textures wilt. Light can destroy vitamins and encourage rancidity in oils.

For longest shelf life, avoid high temperatures and air as much as possible. Tightly closed containers will minimize exposure to oxygen and moisture.

The coolest place to store food is on the floor or near a shaded outside wall. For example, it is often 5-10 degrees cooler on the floor in a bedroom or closet than in an upper kitchen cupboard.

Properly packaged dried foods, including powdered milk, will keep for 5-10 years when stored in a home freezer.

When storing foods in a garage, basement, or outbuilding, keep canned goods up off the ground to discourage rust. Keep other foods in tightly sealed metal or plastic containers to discourage insect and rodent infestation.

To minimize damage from earthquake motion, store the heaviest goods closest to the floor.

Do not store food in metal containers which have previously held petroleum or other hazardous products!

Organization and Rotation

When purchasing your reserve foods, they should be dated, recorded in your "Long-Term Food Supply Record", and properly packaged for long-term storage.

Your "Long-Term Food Supply Record" should include:

- A list of foods grouped according to type, e.g.

  Milk and Cheese Products
  Meats, Dried Eggs, Legumes and Nuts
  Fruits and Vegetables
  Juices
  Grains, Cereals and Baked Goods
  Fats and Oils
  Flour, Sugar and Salt
  Miscellaneous

- Amount in Stock, Storage Location and Recycling Date

Rotate reserve food supplies by working the oldest foods into your weekly menus. Replace them promptly with new products. Give foods to your favorite charity when rotation dates are due, if it is not possible to use them yourself.

When an emergency includes a power outage, careful management will prolong the freshness of foods such as fresh milk, fish, poultry and red meats. Unfertile eggs are not likely to spoil. Keep refrigerator door closed as much as possible. Foods in a well-filled, well-insulated freezer will stay safe for several days (as long as there are ice crystals in the center of the foods). If freezer is not full, cover foods with rugs, quilts or heavy layers of newspapers and keep the door closed!

How to Prepare an Emergency Water Supply

Containers made of heavy opaque plastic with screw-on caps are best if you choose to bottle your own water. Relabel clearly, as children should not identify bottles which normally contain a hazardous substance, as a container for pure drinking water.

Plastic juice and milk bottles, are a less desirable choice and tend to crack and leak more readily. They are difficult to wash clean and water stored in these containers should first be treated with the appropriate amount of liquid chlorine bleach (see below). This will ensure that bacteria still in the bottle, is destroyed.

Sterilizing the Bottles:

1. Wash bottles with soapy water, then rinse thoroughly.

2. Fill container about 3/4 full of tap water, then add 1/4 cup liquid bleach for each 1 quart water. (Remember, this is still the sterilization process, not the water fit for drinking).

3. Shake well, turning upside down a time or two to sterilize stopper.

   Let stand for 2-3 minutes, then pour bleach water into the next container. You can use the same chlorinated water for several containers.

Fill bottle with chemically purified water and tightly close with cap or stopper. Label preparation date and mark "Drinking Water - Purified."

How to Purify Water for Immediate Use or Long Term Storage

If water is polluted, strain through paper towels, paper coffee filters or several layers of clean cloth into a container to remove any sediment or floating matter. Then boil water vigorously for five minutes as this will usually make it safe from harmful bacterial contamination, adding one additional minute for each 1000 feet of altitude. (Boiling longer is safer, if you have the heat to spare.) Or strain the water as above, and chemically purify by adding liquid chlorine household bleach or tincture of iodine. (Do not use granular forms of household bleach - they are poisonous!)

(Purchase an eye dropper to add bleach or iodine. Keep it for this purpose only.)

Mix thoroughly by stirring or shaking water in container. Let stand for 30 minutes. A light chlorine odor should be detectable in the water. If not, repeat the dosage and let stand for an additional 15 minutes before using.

Liquid chlorine bleach loses strength over time. Rotate supply to keep fresh. If bleach is a year old, double the amount. Two year old bleach should not be used.

Water purification tablets are available in drug stores and sporting goods stores and are recommended for your first aid kit. 4 tablets will purify 1 quart of water. Water purification tablets have a shelf life of 2 years and lose their effectiveness if allowed to get damp.

When purifying water for immediate use, purify only enough at a time to last a maximum of 48 hours; this will minimize chances of recontamination.

How to Store Emergency Water

To keep drinking water safe from contamination, it should be stored in carefully cleaned, non-corrosive, tightly covered containers.

Commercially bottled water stored in 5-gallon, heavy plastic containers are well sealed and will last for an extended period of time (5-10 years). Spigots are available if you don't have the dispenser. The lightweight 1 and 2 1/2 gallon containers are less expensive and easily available but are not as durable and may begin to leak after several years.

Some stored water may develop a disagreeable appearance, taste, or odor - but these are not necessarily harmful. Inspect your water supply every six months to see whether the containers have leaked or other undesirable conditions have developed. Replace the water if any objectionable conditions appear.

If stored water tastes flat after opening, it probably lacks air. To aerate, simply pour the water from one container to another three or four times.

To increase the shelf life of water stored in translucent plastic bottles, group them in dark plastic trash bags to keep light out.

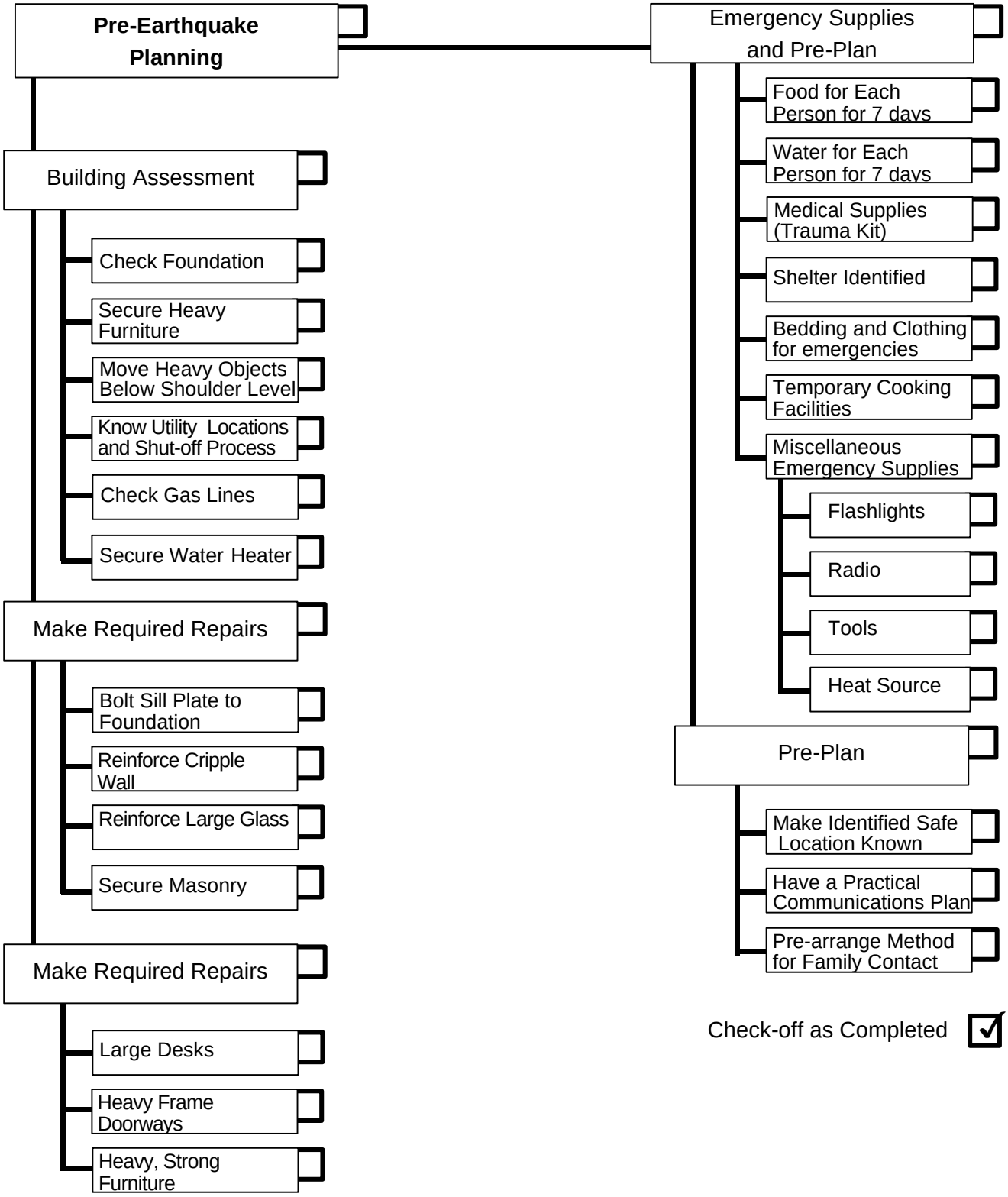
NOTE: Polyethylene plastics (water, milk and bleach bottles) are somewhat permeable to hydrocarbon vapors. Keep away from stored gasoline, kerosene, pesticides or similar substances.

Be careful! Most gadgets that claim they purify water are designed for microbiologically safe water only.

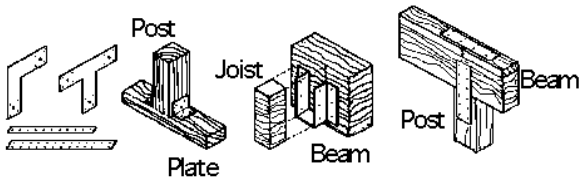
Do not drink water that has been stored in vinyl plastic containers (such as water beds). This plastic may release undesirable chemicals into the stored water.

For information on finding water outside your home refer to one of the many survival and camping handbooks.

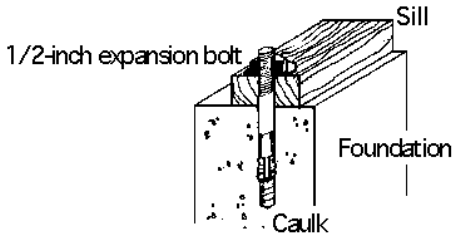
Information Sheet #2



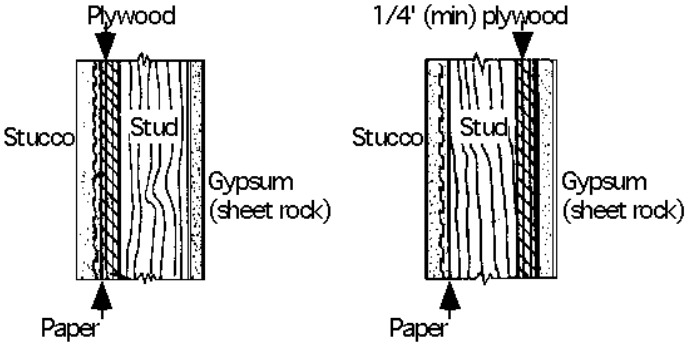
For the building to stay together during an earthquake, all parts have to be fastened together. The foundations must stay in the ground, the substructure on the foundation, the floor on the substructure, the walls on the floor and the roof on the walls.



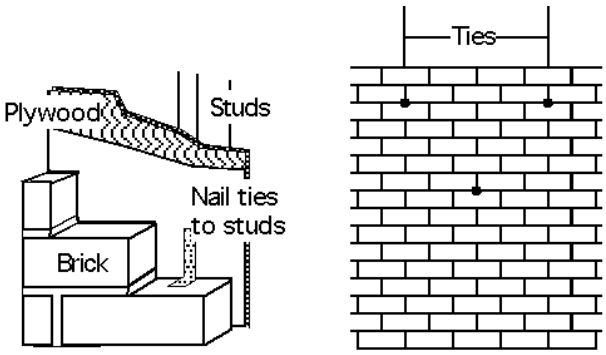
New Construction and Reinforcing Existing Buildings



Check to make certain the building is securely attached to the foundation. If not, correct with new insertable anchor bolts on 4' centers.

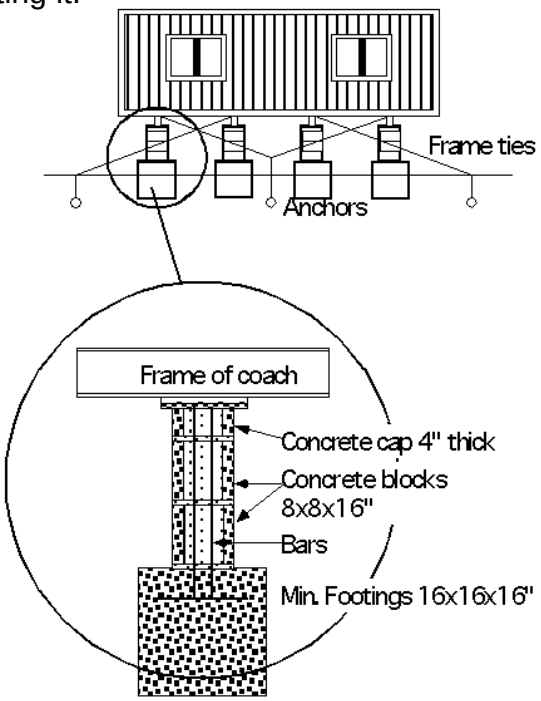


Stucco walls without adequate sheathing may be strengthened by the addition of plywood. Check to make certain that garage and basement walls have adequate lateral bracing. If a cripple wall is present, make sure it has a plywood backing and lateral support.

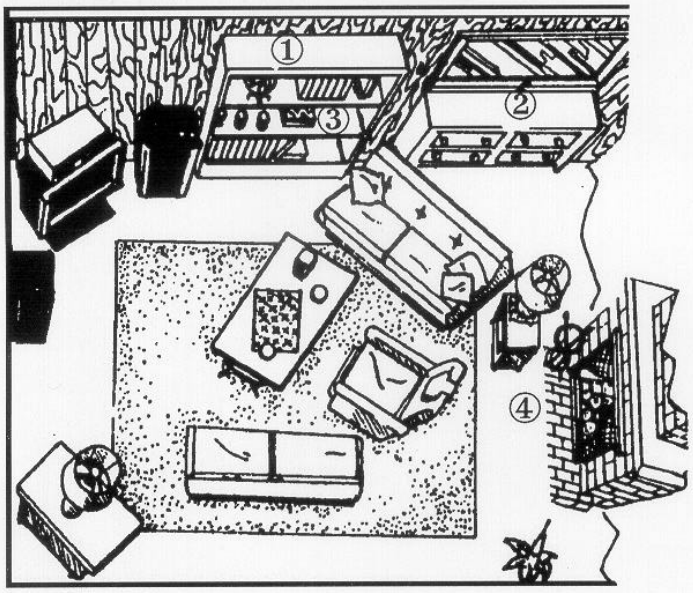


Masonry Ties

Remove or secure dangerous masonry mouldings and facades. Check that any masonry is securely attached. If chimney is very tall, consider means of strengthening or supporting it.

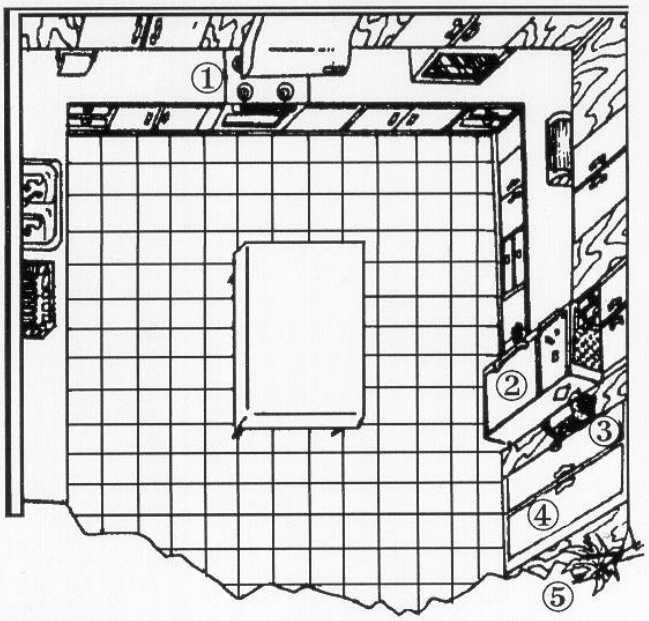


Foundations beneath mobile homes need to be reinforced and the undercarriage of the home tied securely to the foundations.



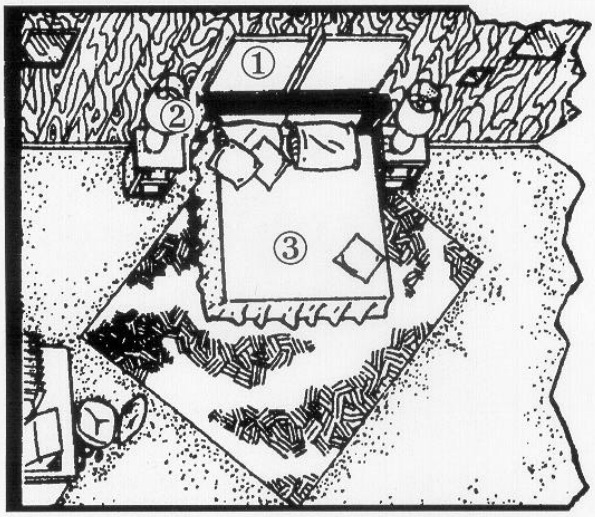
Living Room/Rec Room

1. All furniture: secure top-heavy furniture to wall studs.
2. Breakables: keep breakables low or in secure cabinets.
3. Mirrors: secure mirrors and heavy painting with wire through eye screws into studs.
4. Chimney protection: if masonry chimney is over 4 feet high or has weak mortar and roof lacks solid sheathing, nail plywood to ceiling joists to protect occupants from falling masonry.
5. Heavy objects: relocate all heavy objects to a place where they will fall a short distance or restrain them.



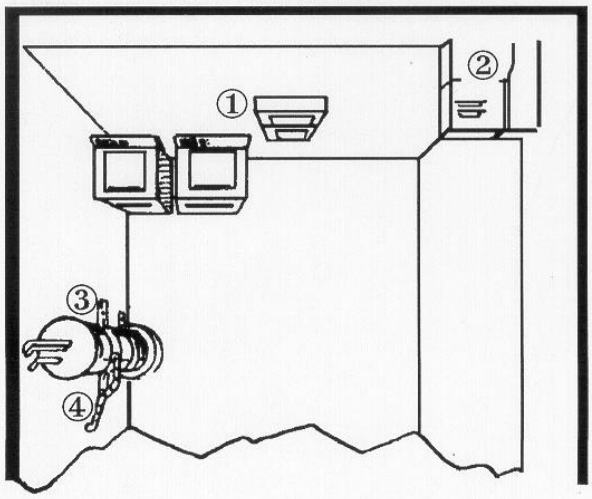
Kitchen/Mess Hall

1. Gas lines: have flexible connectors installed where gas lines meet appliances.
2. Refrigerators: remove or lock refrigerator rollers.
3. Fire extinguishers: have fire extinguisher suitable for all types of house fire (A, B, C).
4. Cabinets: place spring loaded latches on cabinets to secure contents.
5. Heavy appliances:secure heavy appliances to stud wall or restrain their movement. Relocate all heavy objects stored overhead.



Barracks/Bedroom

1. Lamps: anchor down any heavy lamps next to bed or change to lightweight unbreakable kinds.
2. Wall hangings and sculpture: replace with well-fastened lightweight alternative.
3. Bed placement: locate bed away from windows, and away from heavy objects such as dresser; lock bed wheels.
4. Heavy objects: restrained or secured, below shoulder level.

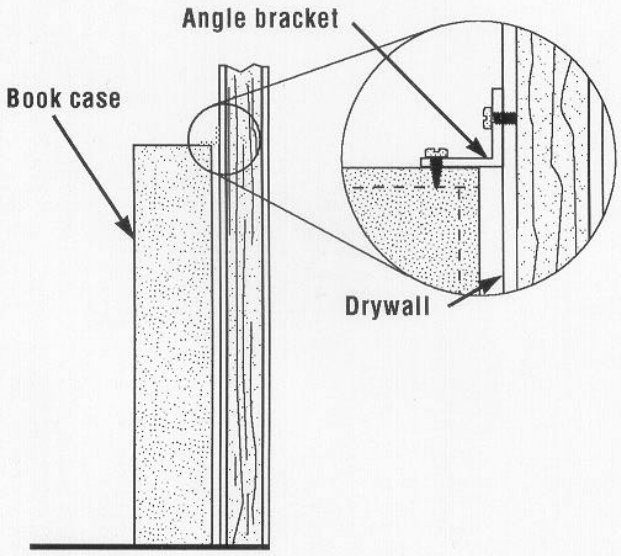


Apparatus Room/Utility Room

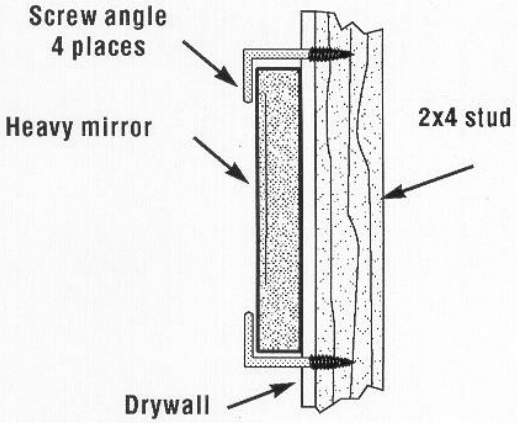
1. Power turn-off: locate main fuse box or circuit breaker.
2. Air conditioner: if necessary, add extra bracing for roof-top air conditioner.
3. Water heater: secure water heater to vertical wall studs with metal straps or plumber's tape attached with bolts or lag screws. Before fastening tape, wrap it around heater (one full turn) and pull taut.
4. "Flex" gas line: use a flex gas line on water heater.
5. Heavy objects: restrained or secured, below shoulder level.

General

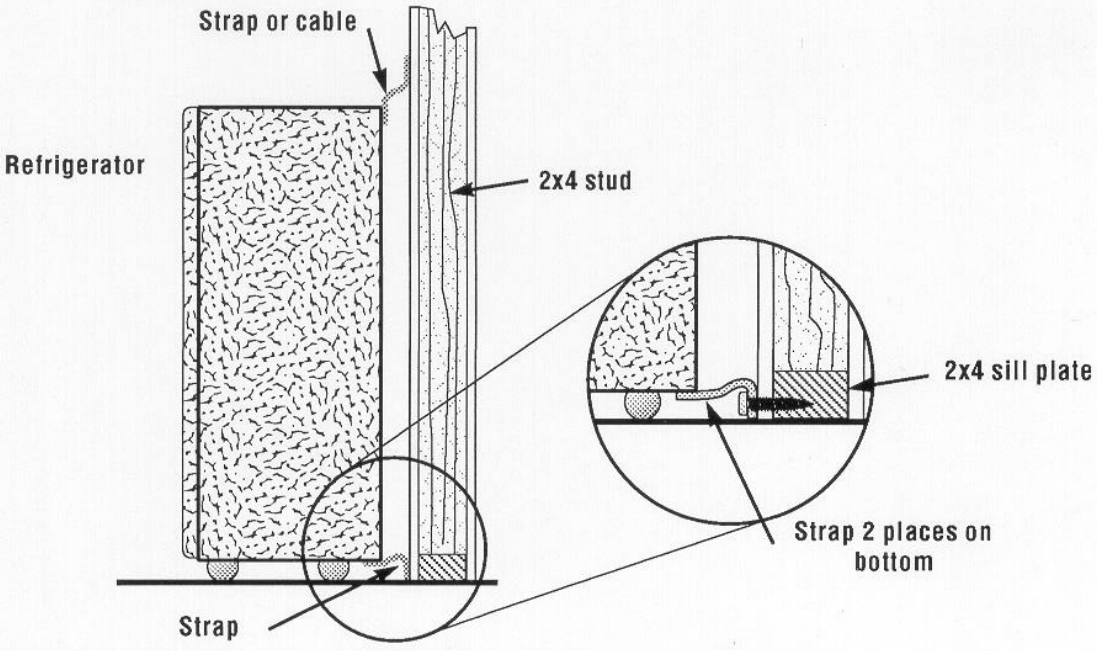
1. Install a smoke alarm on each floor.
2. Train all members on primary and secondary evacuation plans.
3. Do not store/maintain hazardous materials in breakable containers, or inside station or residence proper.
4. Do not store flammables in a room containing an open flame such as a gas heater or water heater.



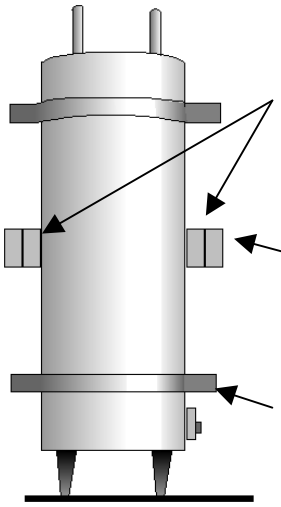
This is one good way to secure book cases and top heavy or tall furniture.



This is one way to increase stability of heavy mirrors and wall hangings.



Incorporate a degree of flexibility when securing appliances and furniture. Flexible gas line should be installed to avoid breaking.

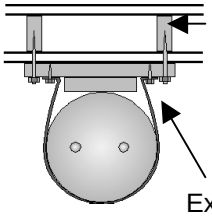


If tank has an insulation blanket, leave in place.

2x4 Non-combustible spacer

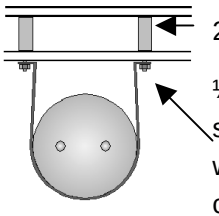
Steel plumber's tape best if snugly wrapped one full turn around tank.

This system may be used to anchor a hot water heater that is adjacent to a wall. Tank feet need to be bolted to the floor. The heater should be hooked up with a flexible gas connection.



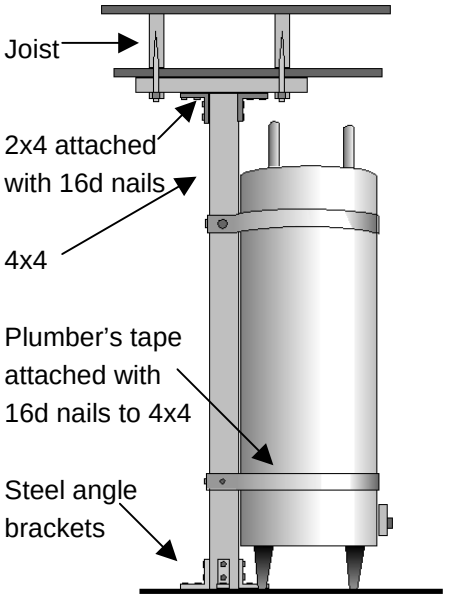
2x4 stud

Extra spacer to create snug fit between tank and wall



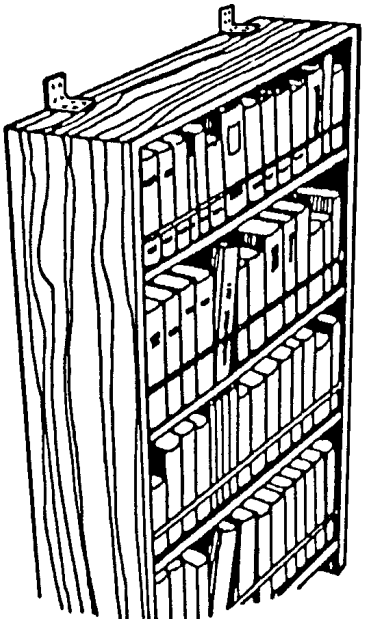
2x4 stud

¼" x 4 ½ lag screw with washer (for concrete walls, substitute ½ expansion bolts for screws)

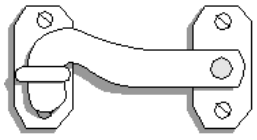


Alternate method of bracing for free-standing water heater

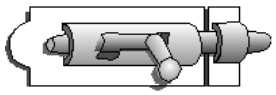
Hanging plants, pictures, etc. need strong attachments. Close all open hooks.



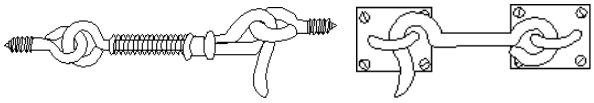
Metal or wood guard rails will help keep objects from sliding off open shelves.



Guillotine

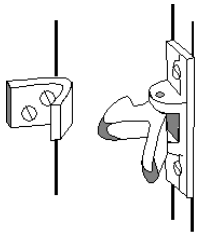


Bolt action

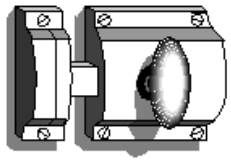


Hook and eye

Locks that close automatically



This one latches



This one turns to opens

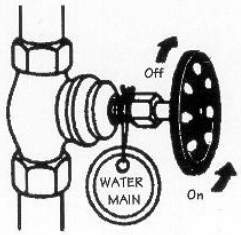
Install positive (mechanical) latches on cabinets and cupboards.

PROCEDURE FOR TURNING OFF WATER, GAS, ELECTRICITY

Water:

After the earthquake, make a visual inspection for leaks in your plumbing system;

If leaks are discovered, shut off the water at the house valve (per illustration). If the house valve does not work, shut off the water at the meter (located in a concrete box in the sidewalk).

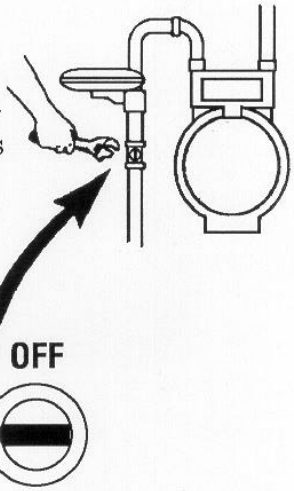


Gas:

Shut off gas only if you suspect a gas leak or can smell escaping gas.

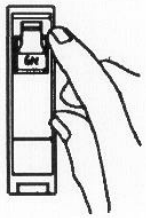
The main shut-off valve is located next to your meter on the inlet pipe.

Using a wrench, give valve a quarter turn in either direction so it runs crosswise or perpendicular to the pipe. The line is now closed.

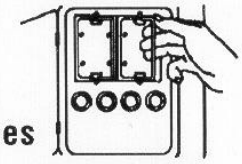


Electricity:

Know the location of your main service switch handle to cut off main power supply and branch circuit panel.



Circuit breaker



Pull-out cartridge fuses

EARTHQUAKE ACTIONS

During the shaking-

- **Don't Panic**

Indoors

- Get under a sturdy desk, table, or bed; or brace yourself in a doorway.
- Protect your head and neck area by covering them with your arms.
- Keep your back to the windows.
- Remain in position until shaking stops.

Outdoors

On a street that is not safe due to threat of falling objects:

- Seek shelter in the nearest building. Do not look up.
- Remove yourself from windows which may shatter.
- Brace against an inside door frame or against inside walls.

In a stadium, amphitheater or church:

- Remain in your current location. Do not rush to exits.
- Seek cover under a bench or chair.
- Keep away from overhead electrical wires or anything that may fall.

Automobile

- Pull over to the side of the road; avoid stopping on overpasses and underpasses, or power lines.
- Turn off ignition; set hand brake.
- Remain inside the car until the shaking stops.
- Turn on your radio for roadway damage reports.
- If in covered area, get low in vehicle. Avoid concrete supports.

Disabled/wheel chair restricted

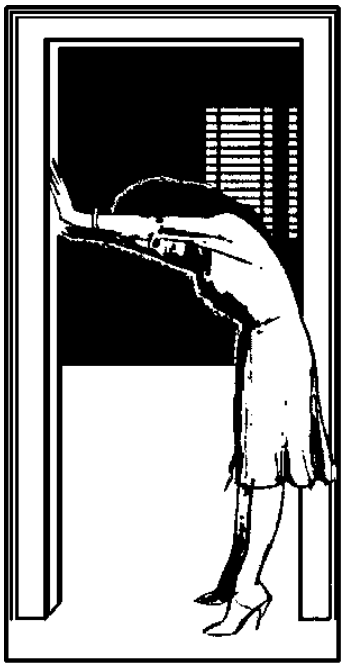
- if unable to seek cover under a desk or table, move to a center core wall area or in a doorway.
- If in a wheel chair, stay in it. Lock the wheels.

After the shaking has stopped.

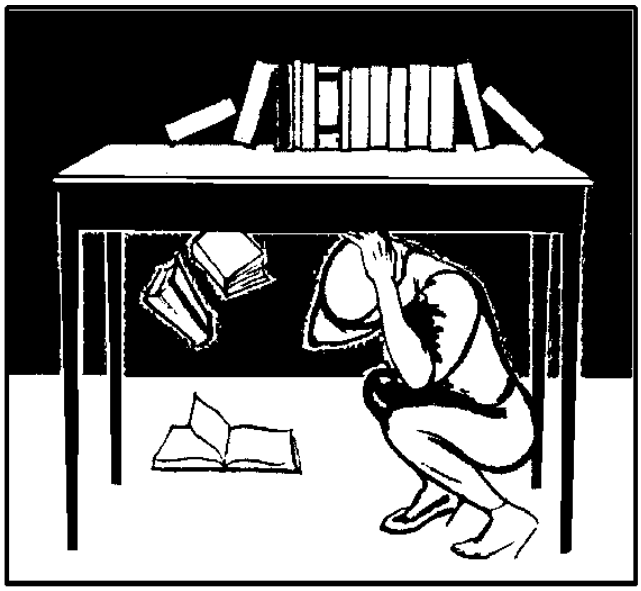
- Centralize all occupants. Check for injuries. Treat the wounded.
- Put on sturdy shoes and check the building for structural soundness and fallen debris (*e.g.*, broken glass, spilled gasoline, spilled medicines, etc.)
- Check for fire hazards and shut off utilities if warranted. Note: *Do not turn utilities back on until the utility company has advised that it is safe to do so.*
- Draw water into the bathtub or sink. If there are major leaks or ruptured pipes, close the water valve to prevent contamination.

Be prepared for aftershocks

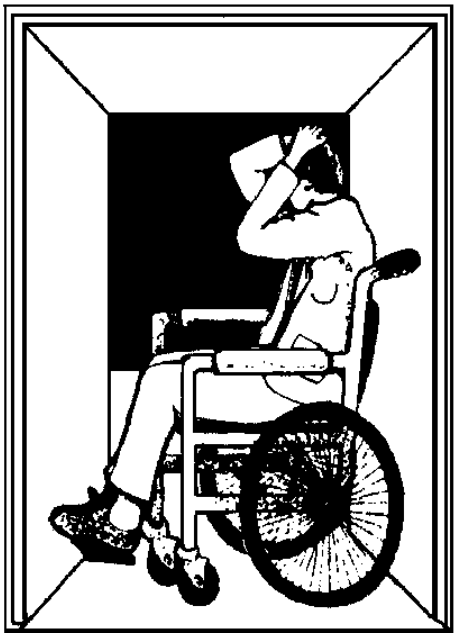
EARTHQUAKE ACTIONS



Buttocks and lower back against door frame.



Hands in back of head. Elbows down, covering face, crouching down.



Wheelchair bound individuals should seek cover in a doorway, if possible, or against a center core wall.

Cover your head and neck area with your arms (or an ink blotter if available) to deflect falling debris.

Stay in the chair; lock the wheels.

- **Always view your surroundings with Earthquake Eyes – when the occasion arises, be prepared to act.**

Target Hazard Survey

Station Responsible: _____

	Name or Identification of Hazard	Location	Map Reference (Response Area)	Nature of Hazard	Comments
1					
2					
3					
4					
5					

Reproduce This Form As Necessary

Building & Grounds
Disaster Damage Survey

Prepared by: _____ Community/Area: _____ Date: ___ Time Start: _____ Finish ____

Sheet ____ of ____ Sheets

Name or function of facility & location	Protective measures (nature & cost)	Debris Removal (nature & cost)	Estimated Value of Damage		If Structure Not Now in Use, When Will It Be?	Overtime Costs
			Emergency Repairs (nature & cost)	Permanent Repairs (nature & cost)		
Total estimated value of Damage (this sheet):	$_____	$_____	$_____	$_____		$ _____

Reproduce This Form As Necessary