



HOMEOWNER'S MAINTENANCE MANUAL

TABLE OF CONTENTS

About your new Home	3
Maintenance Checklist.....	4
Caring for your home	7
Air Conditioning.....	7
Appliances.....	10
Attic	11
Cabinets	11
Concrete.....	12
Condensation/ Mildew	13
Countertops	13
Doors and Locks	14
Electrical System	16
Exterior Wall Finishes	16
Fireplaces	17
Flooring	18
Framing & Carpentry	22
Garage Doors.....	22
Interior Walls & Ceilings	22
Landscaping, Grading Lawn, Shrubs and Sprinklers	23
Mirrors & Shower Enclosures	25
Painting and Caulking.....	25
Plumbing Fixtures	27
Plumbing System	30
Roofing, Gutters & Downspouts	32
Stairs	33
Window/Screens	33
Glossary of terms.....	34

ABOUT YOUR NEW HOME

This section will provide you with basic information about your new home. This includes a floor plan with water and gas shut-off valves and electric panel's location, and a materials list with their respective names and brands as this example:

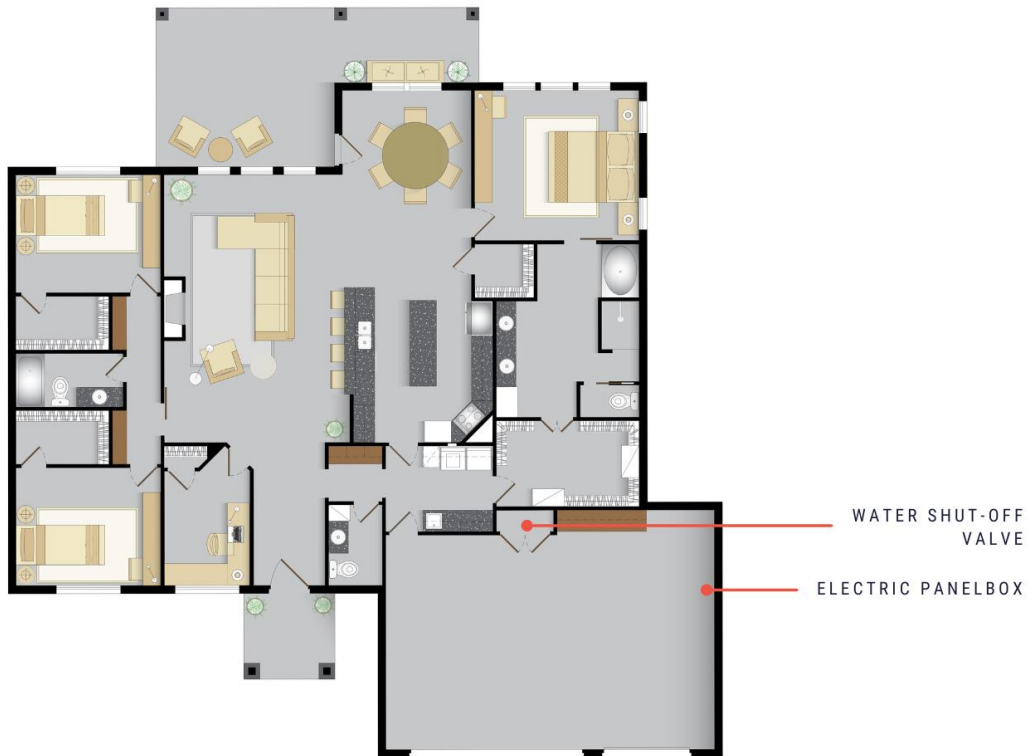


Figure I - Floor Plan and Shut-offs Map

MATERIALS LIST

Table I – Materials List

	#Color name	#Paint Brand
Interior Walls	tbd	tbd
Exterior Walls	tbd	tbd
Ceiling and Trim	tbd	tbd
Exterior Doors	tbd	tbd
Exterior Finishings	tbd	tbd

MAINTENANCE CHECKLIST

Establishing and following a maintenance schedule is the best way to manage your household maintenance budget, to protect your investment and to prevent problems. This maintenance checklist should not replace the manufacturer's recommendations. We suggest that you use licensed contractors for any tasks you may feel that you don't have the technical knowledge or ability to perform.

To help you pinpoint when specific maintenance items should be performed, this checklist is divided into four time periods: after move-in, monthly, semi-annual, and annual.

SAFETY FIRST - Homeowners often want to perform maintenance themselves to save money. It is important to bear in mind that there are many areas of home maintenance that are best left to professionals. For example, electrical work, entering an attic, or climbing on roofs and ladders are just a few hazardous activities. It is better to take the safe choice if there is any question as to the ability of the homeowner to perform any maintenance task.

AFTER MOVE-IN CHECKLIST

BATHROOMS

- Apply silicone grout sealer to ceramic tile grout if you wish to give the grout additional protection against discoloration from spills and stains.

ELECTRICAL

- Locate the main circuit breaker in the electrical panel box (See Figure 1) and show family members how to turn it off in case of emergency.

FLOORING

- Attach furniture protectors' underneath furniture legs to protect flooring finishes.

HOUSEHOLD TOOLS

- Acquire basic tools to help you with normal home maintenance chores including pliers, regular adjustable wrench, large adjustable wrench (for emergency gas shut-off), flat blade and Phillips's head screwdrivers, claw hammer, tape measure, caulk and caulking gun, putty knife, paint roller and brush, power drill and drill bits, assorted nails, brads, screws, nuts, bolts, sandpaper, utility knife, toilet plunger, gloves, ladder, flashlight and batteries.

NATURAL GAS

- Locate and label the main gas line shut-off valve at the exterior of the home and all individual valves and show all family members how to close them in case of a gas leak (See Figure 1).

PLUMBING

- Locate and label the main water line shut-off valve and all individual valves and show all family members how to close them in case of a plumbing emergency (See Figure 1).

MONTHLY CHECKLIST

AIR CONDITIONING AND HEATING

- Check air filters and clean or replace as necessary.
- Vacuum air supply and air return registers to remove dust and lint.

GARBAGE DISPOSAL

- Clean disposal blades by grinding up ice cubes. Freshen it with baking soda and by grinding up citrus fruit rinds.

INTERIOR CAULKING

- Check for cracks or separations in caulking around sinks, bathtubs, toilets, faucets, counter tops and back splashes, ceramic walls, resilient and ceramic floors, windowsills, and any other areas originally caulked by your builder. To repair these areas, use an appropriate caulking compound and follow the caulking instructions in the Painting and Caulking Section of this guide.

RANGE HOOD FAN

- Clean or replace dirty filter.

SMOKE DETECTORS

- Test smoke detectors.
- Clean and/or vacuum detector openings as necessary.
- When one battery beeps (indicating a new one is needed) replace the batteries in every smoke detector in the entire home.

SPRINKLER SYSTEM

- Adjust sprinkler heads for proper coverage.

SEMI-ANNUAL CHECKLIST

AIR CONDITIONING AND HEATING

- Have HVAC contractor perform six-month maintenance checkup if you live in the high temperature, high humidity area.
- Ensure that air supply registers are not blocked by rugs, draperies or furniture.
- Make certain the concrete foundation that the A/C unit sits on is level.
- Remove excess leaves from vents.

CABINETS

- Check screws and cabinet hardware and tighten as necessary (hinges, knobs, etc.).
- Clean and apply light coat of wax to wood-finish cabinets.

CAULKING/PAINTING

- Check all areas originally caulked by the builder, especially exterior windows and doors.
- Check exterior paint and stain surfaces (especially stained doors) and refinish as needed.

DOORS

- Check screws on door lock set and hardware and tighten as necessary.
- Clean sliding door track and apply silicone spray to tracks as necessary. **Caution: only use silicone lubricant; oil will cause the rollers to deteriorate.** Take necessary steps to protect adjacent flooring from the silicone, as it may discolor.
- Oil moving parts of garage door.

ELECTRICAL

- Check electrical extension and appliance cords. Replace frayed or split cords.

EXTERIOR FINISHES

- Check for cracks and voids in exterior caulking and re-caulk as necessary.
- Inspect vinyl siding and clean, as needed, per manufacturer's instructions.
- Check exterior painted surfaces for damage and weathering. To repair, follow the maintenance instructions contained in the Painting and Caulking Section of this guide.

PLUMBING

- Check assessable water supply lines and valves to sinks, toilets, refrigerators and clothes washer. Tighten if loose or leaking.
- Clean out faucet aerators, spray nozzles and drains. (Usually, these items can be unscrewed, cleaned out, and screwed back on again).
- Check pipes and drains for water leakage.
- Remove water heater residue following instructions in the manufacturer's guide.

ROOFING

- Visually inspect roof from ground for broken or missing shingles and gaps in flashing. Contact roofing contractor should repairs be required.
- Check and clean gutters and down spouts and repair gaps in flashing and soffits.

WINDOWS

- Check sills for caulking cracks or separations and re-caulk as necessary.
- Check weather-stripping around windows and repair or replace as necessary.
- Check windows for smooth opening and closing operation. Clean tracks and lubricate as necessary with a silicone spray lubricant.
- Inspect window screens and repair or replace as necessary.

ANNUAL CHECKLIST

AIR CONDITIONING AND HEATING

- Have HVAC contractor perform annual maintenance check-up.

ATTIC

- Check attic and crawl space to ensure that soffit vents are not blocked with insulation and move insulation back to its original location if there are voids on the attic floor.
- Check inside attic for signs of roof leaks. Be extremely careful not to damage or disturb electrical wiring or plumbing pipes that may be in the attic and never walk on the drywall.

CABINETS

- Check drawers and hinges for proper alignment. Tighten and adjust as needed.

DOORS

- Check and repair or replace weather-stripping on exterior doors as necessary.
- Check the fit of exterior doors at their thresholds. Many designs are adjustable.
- Tighten all bolts on garage doors.

FIREPLACE

- Have chimney professionally cleaned as necessary.
- Inspect chimney for nests.

PLUMBING

- Remove water heater residue following instructions in the Plumbing Fixtures Section of this manual.

PRESSURE CLEANING

- Clean roof tiles and asphalt shingles (where applicable) of mildew and dirt as necessary.
- Clean pavers, driveways, patios and walks as necessary.
- Clean exterior finishes such as siding, stucco, brickwork, stone of mildew and dirt as necessary.

SEPTIC TANK

- Check and clean as necessary.

TERMITE TREATMENT

- Contact an exterminator to set up termite treatment.

WINDOWS

- Check skylights for loose flashing and gaps in caulking. Take care not to crack asphalt shingles.
- Even when the house has vinyl siding installed, there may be areas where there is caulking around window that are wood wrapped. Check all windows for gaps in caulking at these locations and repair as necessary.
- Check all windows for gaps in caulking on the exterior of the houses.

CARING FOR YOUR HOME

IncorpUSA has constructed your home with carefully selected materials and the effort of experienced craftsmen and laborers under the supervision of our field personnel and with the administrative support of our office staff. Each home is unique. Over time, each behaves differently.

Although quality materials and workmanship have been used in creating your home, like an automobile, it requires care from the first day. Regular homeowner maintenance is essential to providing a quality home for a lifetime. This section was assembled to assist you in that effort.

We recognize it is impossible to anticipate and describe every attention needed for good home care. We focused on items that homeowners commonly ask about. The subjects are listed in alphabetical order to make finding answers to your questions convenient. This manual may discuss some components that are not present in your home.

Manufacturer Manuals and Warranties

Please take time to read the literature (users guide and warranties) provided by the manufacturers of consumer products and other items in your home. The information contained in that material is not repeated here. Although much of the information may be familiar to you, some points may differ significantly from homes you have had before.

AIR CONDITIONING

AIR CONDITIONING AND HEATING EQUIPMENT

The air conditioning and heating equipment was installed by the HVAC (Heating, Ventilating and Air Conditioning) contractor.

The air conditioning and heating system(s) provides year-round climate control and consists of a thermostat to control temperature, an air handler unit to heat or cool the air, a filter to remove particles from the air, plus a fan unit to distribute and circulate air throughout the home via ducts and registers. Air conditioners have an outdoor condensing unit or compressor which must be kept sufficiently free of obstructions (such as shrubbery) to allow air to flow freely.

NOTE: In certain areas of the country that experience extreme high temperatures, water-cooled air-conditioning systems may be used rather than air cooled systems. The difference between the two systems is how the heat is removed from the condenser. Water cooled units flow water over the condenser coils to remove heat and air-cooled systems blow air across the condenser to remove heat. In areas where there can be hard freezes, water must be drained from both the condenser unit and water supply line.

NOTE: Window coverings should be installed to maintain consistent room temperature. Direct sunlight entering the house will increase the temperature in the affected area and will also fade furniture and carpets.

Before Calling for Service:

1. Check to see that the thermostat is properly set.
2. Check the circuit breaker in the panel box. If tripped, reset by switching the breaker from the full "Off" position to "On". If the circuit breaker will not reset, contact the HVAC contractor. (See Circuit Breakers in Electrical System Section)
3. Check the electrical disconnect switch, located on or near the air handler, and reset.
4. Check the exterior disconnect switch located outside the home near the compressor and reset.

AIR FILTER

The air filter, located to the air handler unit or in the return air grille, helps reduce the flow of dust into the air. As the filter collects dust, it reduces the system's efficiency and must be either cleaned or replaced.

Monthly filter cleaning or replacement will provide cleaner air, improve air flow, and help reduce utilities costs. To remove, clean or replace filters, turn the air conditioner/furnace and fan off using the thermostat control, then carefully remove the old filter and clean, or insert a new one. Replacement filters are available through hardware and home supply stores. Make sure to buy the correct size for replacement.

NOTE: There are filters available that need to be replaced only every three (3) months and other filters that are washable and do not need to be replaced.

THERMOSTAT

The thermostat controls the entire heating and cooling system. The thermostat provides a fan switch to circulate the air when neither heating nor cooling is needed.

To maximize energy efficiency and minimize utility bills, set the thermostat to a comfortable level normally between 68°F to 71°F for heating, and between 76°F to 78°F for cooling, and leave it there. Then set the fan switch to either the "ON" or "AUTO" position.

The less frequently you change the thermostat setting, the more comfortable you will be, the lower your utility bills will be, and less wear and tear and the system's compressor will incur. Changing settings frequently will cause the supplemental heater to run more often and turning the system on or off expends extra energy to bring the temperature back to a comfortable level. Setting air conditioning controls too low does not cool the home faster and the same principle applies to heating.

Programmable thermostats can save energy and money without sacrificing comfort and convenience by reducing the amount of time heating and cooling systems operate. You can program different temperature settings for different times of the days of the week based on when you are in your home. When programmed properly, the heating and cooling systems will operate less frequently, consume less energy and lower utility costs. Programmable thermostats can be purchased at hardware and home supply stores.

AIR DISTRIBUTION SYSTEM

Duct Work: Ducts carry and distribute heated or cooled air to each room.

Registers: Two kinds of registers are used: air supply registers (located on the wall or ceiling) that deliver warm or cooled air into the room; and air return registers (located on walls, ceilings or under the air handler access door) that return air from the room back into the air handler fan to be re-heated or re-cooled.

To regulate temperatures on different floors or rooms during different seasons, adjust the air supply registers by partially opening or closing them, thus restricting or moving additional air into each room.

Vacuum supply and return registers to ensure they remain dust free. Check that registers are not blocked by draperies, furniture or other obstructions that restrict normal air flow.

Interior doors in each room are undercut to allow return air to circulate throughout each room when the doors are closed. Do not close doors to regulate room temperatures.

Caution: Burning candles for prolonged periods of time may, in some instances, create a phenomenon known as "ghosting". Ghosting occurs when soot from a burning candle is released into the air, carried throughout the house through the air conditioner, and expelled through the vents. The soot adheres to all surfaces including ceilings,

fabrics and countertops. It is especially visible on the carpet at the base of bedroom doors. Cleaning is very difficult and is a homeowner's responsibility.

To avoid ghosting in your home, follow these few simple steps:

1. Buy candles made with hard wax and with thin braided wicks that curl over when burned.
2. Buy candles with low aromatic properties and with wicks that burn with a low flame.
3. Buy candles with cotton or paper wicks and refrain from buying candles with metal-core wicks.
4. Do not allow candles to smoke and keep them out of drafts.
5. Keep matches and wick debris out of the candle.
6. Extinguish candles after one hour of continuous burning. Allow the candle to cool before relighting.
7. Large number of candles should be burned in the fireplace with the damper open to allow the smoke and emission to escape.
8. Stop using candles that leave a visible soot ring on their containers.

EXTERIOR COMPRESSOR/CONDENSING UNIT

Keep the condensing unit (*compressor*) level and keep the area surrounding the unit clear to allow unimpaired air flow. Do not plant bushes too close to the unit and be careful that dirt, leaves and grass clippings are cleared away. For a thorough cleaning, contact an HVAC contractor. Do not build a deck around or over the compressor unless there is an 18-inch clearance on the sides and a 6-foot minimum clearance on top.

CONDENSATE CONTROL

Dehumidification is part of the function of your air conditioning system. The moisture removed from the air is condensed into water and is then referred to as "condensate". The condensate forms and is collected on the evaporator coil which is in the air handling unit (*except on one-piece package units*). The condensate drain removes the water. Regular maintenance should be performed by the A/C contractor of the drain pan and line to control algae build-up and eliminate water leaks.

Install tablets in the condensate drain pan regularly. Flush condensates drain pan and lines regularly. Drains should be flushed from the inside of the house toward the outside. Never open the air handling unit without first disconnecting the power. Algae tablets are available through your air-conditioning contractor or home improvement center.

Helpful Hints

- a. Check and replace or clean filters every month. Clogged filters mean higher operating costs.
- b. Don't try to maintain different temperatures in different rooms by totally closing duct outlets – you will unbalance the system and reduce its efficiency.
- c. Use bath and kitchen exhaust fans sparingly when air conditioning is operating.
- d. To reduce the time your air conditioner must be on, do heat-producing chores such as baking and dish washing, during the cooler hours in the morning or evening.
- e. Check weather stripping and caulking around doors and windows for leaks.
- f. Shade your home with trees wherever possible
- g. Keep all windows and exterior doors shut when air conditioner is on.
- h. Do not short-cycle your compressor by moving the thermostat up and down too rapidly. Set your temperature slowly and leave it for at least five minutes before resetting.
- i. In case of outside temperatures exceeding 95° F, a differential of 15°F is acceptable.

HEAT PUMP

Your home may be equipped with an electric, forced-air heating system that includes a heat pump. The heat pump is an electrically powered, single-refrigeration unit that provides both heating and cooling function. It operates on the principle that outdoor air, even in winter, contains heat or thermal energy. During winter, the heat pump draws in outside air, extracts the heat and then circulates it throughout the home. In the summer the process is reversed, whereby the heat pump removes heat from indoor air, discharges it outdoors and then circulates cool air throughout the home.

A heat pump can be expected to operate continuously if outside temperatures fall below 50°F. Heated air coming from the registers feels cool to the touch. This is normal since the heat pump generates a low level of heat, sometimes below 90°F, while normal body temperature is 98.6°F.

Supplemental Heat: When outdoor temperatures fall to at least 50°F, the heat pump may be unable to draw sufficient heat from the outside air and a supplemental heating unit automatically turns on. You will know it is operating when the blue/green light on the thermostat is lit. The heating elements, located in the furnace units air handler, will turn on for a short time. The supplemental heat will also turn on if the thermostat is adjusted more than two degrees above room temperature.

Emergency Heating: Should the heat pump fail, activate the emergency switch on the thermostat. The red light indicates that it is on. This will stop the heat pump from operating and will provide supplemental heat until the HVAC contractor arrives.

Defrosting: During winter, ice can accumulate on the side of the heat pump's exterior coil. When ice covers 80 percent of the surface, the system automatically activates a defrost cycle that lasts about five minutes, heating the coil to melt the ice. It will also activate the supplemental heat to prevent ducts from blowing cold air into the home during the defrost cycle. This process may occur several times each day, and you will notice that steam rises from the unit when it occurs. This is completely normal and is not cause for concern.

Keep the heat pump unit level and keep the area surrounding the unit clear to allow unimpaired air flow. Do not plant bushes near the unit and be careful that dirt, leaves and grass clippings are cleared away. For a thorough cleaning, contact an HVAC contractor.

Do not built around or over the air conditioner unless there is and 18-inch clearance on the sides and a 6-foot minimum clearance on the top.

APPLIANCES

Your home may be equipped with a variety of appliances, such as a gas range, range hood, dishwasher, microwave oven and garbage disposal. At move-in time, you should test all appliances for proper operations.

If you purchase your own appliances, carefully measure existing appliances openings to ensure proper fit. Check that doorway widths leading to the appliance location are wide enough to move the appliance through.

Before Calling for Service:

If an electrical appliance fails to work complete the following checklist before calling the appropriate contractor; otherwise, you may be charged for a service call.

1. Check that the appliance is plugged in.
2. If the appliance is plugged into a wall-switched electrical outlet, make sure the switch is "ON". If the appliance is plugged into a GFCI circuit, check and reset the button if necessary.
3. The circuit breaker on the panel box controlling the appliance should be in the "ON" position.

4. Some appliances come with their own separate fuses or circuit breakers. Review the manufacturer's service manual for the exact location, then check for proper setting.
5. Annually check the dryer vent for obstructions. Accumulated lint should be removed by disconnecting and then vacuuming the dryer vent.

Helpful Hints:

Dishwasher: Use only when you have a full load. Use the shortest wash cycle.

Cook-Tops/Stoves/Ovens: Do not allow dirt to accumulate. Clean with a recommended over-the-counter cleaner. Do not use harsh abrasive unless specified. Clean all filters regularly.

Garbage Disposal: Always use cold water when disposal is working. Corn cobs and husks, bones, celery or any other food that shreds should not be put into the disposal. If the machine becomes jammed, use the wrench to free the mechanism and try again. The disposal will rust if not used regularly. If you are going to be away for an extended period, a teaspoon of oil will help prevent the mechanism from freezing.

Range Hood Fan or Microwaves: The range hood fan filters collect grease and should be cleaned regularly. Soaking the filter or lightly brushing them in hot soapy water is the best cleaning method. Be sure the filters are dry before reinstalling them.

Microwave Oven: Be sure that vent louvers are not blocked.

ATTIC

The attic space below the roof is part of the roof truss system. When inspecting the attic, use caution to avoid stepping off wood members onto the drywall, the drywall ceiling of the room below is not designed to support any weight. This can result in personal injury or damage to the ceiling below. Your limited warranty does not cover such injury or damage.

The attic truss system is not engineered to support additional weight and should not be used for any storage purpose. Materials stored can also be a fire hazard. Do not cover any vents with insulation or any other material. Insulation on the attic floor is for the thermal protection of the rooms below. If the insulation is moved, it will leave gaps between the insulation panels and may obstruct the attic vents. Always replace moved insulation back to its original position.

Building codes require attic and crawl space vents to minimize accumulation of moisture. Attic ventilation occurs through vents in the soffit (the underside of the overhangs) or on gable ends. Driving rain or snow sometimes enters the attic through these vents. Do not cover them to prevent this. Instead, cover the insulation in front of the vent. When you do this, precipitation that blows in safely evaporates and ventilation can still occur.

CABINETS

Kitchen, laundry room and bathroom vanity cabinets are all selected for their attractive appearance, durability and ease of care. With proper maintenance, the cabinets will remain serviceable and attractive for many years.

Wood Cabinets: Wood cabinet tone, grain and color variations are normal and reflect the natural characteristics of real wood.

Shelves: Shelves are not designed to hold weight that exceeds 20 pounds per square foot. Keep canned goods, flour, sugar and heavier products on the bottom shelf of the base cabinets. If desired, apply contact paper to shelves to protect against scratches and stains.

Repairing Nicks and Scratches: Hardware stores offer color-matching putty, stains, and polymer fillers to cover and repair cabinets nicks and scratches.

Cleaning

Clean wood cabinets with the same gentle care you would give any fine wood furniture. A light coat of wax or lemon oil applied once or twice a year will protect the finish and enhance the appearance. Follow the cabinet manufacturer's directions, or the cleaning product directions. Avoid washing cabinets with water or ammonia cleaners.

Hinges

If cabinet doors become misaligned, most new cabinet hardware can be adjusted by homeowners with ordinary household tools. If hinges catch or drawer glides bind or stick, a small amount of silicone lubricant will help. If lubricant does not help check to ensure nothing is inhibiting movement, or the cabinets or hardware have not been damaged in some way.

Moisture

Damage to cabinet finishes and door warping can result from using appliances that generate large amounts of heat or moisture (such as counter-top ovens, crockpots or water kettles) too near the cabinet. When using such appliances, be aware and place them in a location that is not directly under a cabinet or near furniture which can be damaged.

CONCRETE

Foundation and Floor Slabs: In monolithic construction, the floor slab, garage slab, foundations and footings are all poured in concrete at the same time. Most builders use heavily reinforced concrete monolithic slab construction. In some states, in order to prepare the soil for the foundation, a termite spray is applied to the ground prior to pouring the concrete slab. After the first year it is the homeowner's responsibility to maintain a termite contract.

One thing to understand about concrete is that it will crack!

It is important to understand that concrete is a porous material that will expand, contract, and crack as a result of temperature changes, shrinkage, stress and settlement. Hairline cracks that may appear on foundation walls and be visible on garage floors are common and are usually cosmetic, as opposed to structural. Shrinkage occurs from the normal curing process of concrete that varies with the time of year and the moisture conditions that exist when the concrete is poured. Slab stress and settlement are typically caused by soil conditions and loads such as the weight of the walls. These forces can create a variety of stresses which, in combination with seasonal temperature variations, can cause concrete and masonry foundations to develop non-structural cracks.

Home Slab and Garage Slab: Due to the large size of concrete home and garage slabs, shrinkage cracks (less than 1/4 inch wide) are common and are usually the result of expansion and contraction. These shrinkage cracks are normal, and it is best to leave them alone, since attempts to fill the cracks will not stop the expansion and contraction. Cracks in slabs, patios, garage floors, sidewalks and driveways are common and require no additional attention. They are cosmetic in nature and do not affect the integrity of the concrete. Any attempt to repair chips or cracks in concrete will result in product and color variation.

Color variations in concrete are common occurrence and are beyond the control of the builder or sub-contractor.

Clean concrete with a solution of five tablespoons of baking soda to a gallon of water. Before using the cleaning solution, wet the floor with clear water and loosen the dirt with a steel brush or scraping blade.

A concrete sealer may be applied to the floor, following the manufacturer's directions, approximately six months after you move in. This will make it easier to clean and will reduce concrete dusting. NOTE: Use of concrete sealer may make the floor slippery when wet.

DRIVEWAYS, SIDEWALKS, PATIOS, PORCHES, STEPS AND STOOPS

In most cases, exterior concrete cracks are due to expansion and contraction because of temperature variations, soil movement and slight home settlement. Driveways are not designed to handle the extreme weight of dual-axle and dual-wheel vehicles.

We anticipate stresses on concrete driveways, walks, and steps and have provided contraction and expansion joints to minimize cracking. However, cracking is one of the characteristics of concrete, and a method of eliminating cracks has not been discovered yet. Unanticipated cracking sometimes occurs from conditions such as severe frost. Ordinarily the cracks are of no serious consequence.

Lawn fertilizer left on the driveways, sidewalks and patios will stain the concrete and cause rust spots. This can be prevented by immediately hosing off the driveway, sidewalk or patio after applying fertilizer.

Color

Concrete slab/flatwork varies in color. No correction is provided for this condition, it is normal in concrete.

CONDENSATION/ MILDEW

Condensation, or the appearance of moisture that occurs when warm moist air meets a colder surface, is most prevalent in new homes, especially during the first year. This is caused by the large quantities of water used to build the new home, from the concrete foundations to the paint on the walls. As this water evaporates, and the drying out process occurs, the moisture takes the form of condensation on interior windows.

Window condensation is produced by conditions beyond your builder's control.

Mildew is a fungus that spreads through the air in microscopic spores. They love moisture and feed on drywall surfaces or dirt. On siding, they look like a layer of dirt. Cleaning mildew from your home is your responsibility. Solutions that remove mildew are available from local paint or home improvement stores. Wear protective eyewear and rubber gloves for this task; the chemicals that remove mildew may be unfriendly to humans.

Ventilation: Proper ventilation is the safe and steady way to reduce indoor humidity, condensation and mildew.

1. Ensure that the clothes dryer is properly vented to the outside and that the vent is clear of obstructions and lint. Do not push the dryer too far back or the vent hose may become kinked and therefore obstructed. By placing a 2x4 piece of wood behind the dryer, this situation can be prevented.
2. Kitchen, bath and utility exhaust fans should be used to carry moist air outside. Use the fans for short time periods since they exhaust cooler air-conditioned air outside the home.
3. Adjust the registers to maintain even temperatures throughout the home. Do not try to speed up the evaporation process by creating extremely high temperatures in the wintertime. This will cause the house to dry out unevenly, creating cracks and other problems.

COUNTERTOPS

Laminate Counter Tops: Clean laminate counter tops with a soapy cloth or sponge or use a non-abrasive liquid household cleaner for more stubborn stains. There are one-step cleaning products available for laminates that clean, reduce streaking and leave surfaces polished. As with all cleaning products, carefully follow the manufacturer's instructions.

Caution: Keep standing water away from the backsplash, side splashes, seams, and seal around the sink. These areas are prone to water damage, since excessive moisture will eventually break down the seal and cause swelling or delamination of the countertop. Check seams periodically and re-caulk as necessary.

If countertops or backsplashes swell or buckle it may be due to not maintaining the caulking. This is an important part of your routine maintenance. Joint in laminated surfaces should be periodically caulked to maintain a dryer moisture barrier.

GRANITE COUNTERTOPS

Granite is a type of real rock called igneous rock, which means it was once molten and it formed as it cooled deep within the earth. It is extremely hard and durable, and practically scratch-proof. It can be highly polished and shiny or finished in a variety of other ways. Granite countertops are easily cleaned because of low porosity. Wipe up wet spills immediately, especially acidic liquids like citrus juice, alcohol or soft drinks. Never wipe countertops with an acidic cleanser (like vinegar or lemon) or harsh chemicals/abrasive cleaners. Granite should have a protective sealant applied periodically to prevent staining.

SOLID SURFACE COUNTERTOPS – MAN MADE

Such as, but not limited to, Formica, Corian and Wilsonart Laminate

Caring for your solid surface countertop is as simple as wiping the surface with a damp cloth. If a stain develops, wipe it away with soap and water. If this does not remove the stain, consult your manufacturer's instructions on products which can be used on your top. Do not expose the surface to harsh chemicals such as paint remover, turpentine, nail polish remover or stove and drain cleanser. If these chemicals meet the surface, immediately wash them off with water, using appropriate safety measures to avoid injury.

Although solid surfacing can be repaired, certain steps should be taken to protect it. Be sure to use a cutting board instead of cutting directly on the surface. Hot pans and heat-producing appliances, when set directly on the countertop, can mar the product's beauty.

DOORS AND LOCKS

Your home comes with a variety of doors, which may include interior doors, French doors, louver doors, bi-pass and bi-fold doors, sliding glass doors, exterior doors and garage doors.

INTERIOR DOORS

Interior doors expand and contract in reaction to temperature and moisture changes and will be wider in humid summer periods and narrower during dryer winter months.

Sticking Doors: Home settlement or damp weather may cause swelling that puts the doors out of alignment. In some cases, this may only be temporary due to seasonal variations, and the sticking will tend to correct itself without any adjustment.

If door adjustment is required:

1. Check hinge screws for tightness.
2. Fold sandpaper around a wooden block and sand the edge that sticks. A small plane can also be used but be careful not to remove too much material from the door. Also, the use of a bar of soap on the door top and frame may help.
3. Always paint or varnish sanded or planed areas to protect the wood from future moisture penetration and sticking.

Door Precautions: Interior doors are usually hollow core and are not designed to support attachments and hanging accessories. Hanging heavy items on doorknobs, or at the top of a door, can damage hardware and hinges. These doors are also undercut to allow air movement.

Slamming: Slamming doors can damage both and jambs and can even cause cracking in walls. Teach children not to hand on the doorknob and swing back and forth; this will loosen the hardware and cause the door to sag.

Shrinkage: Use putty, filler or latex caulk to fill any minor separations that develop at mitered joints in door trim. Follow with painting. Panels of wood doors shrink and expand in response to changes in temperature and humidity. Touching up the paint or stain on unfinished exposed areas is your home maintenance responsibility.

EXTERIOR DOORS

An exterior door that is properly aligned, fitted, weather-stripped and maintained will help control energy costs. Exterior doors are often steel-clad or fiberglass to prevent warpage and to maximize insulation. An exterior door will warp to some degree, due to temperature differences between the inside and the outside surfaces. Warpage should not exceed 1/4" measured diagonally from corner to corner.

NOTE: Wood exterior doors should be checked every six months for signs of weathering and repainted as necessary.

Painting: Steel-clad or fiberglass doors are maintenance-free and require a little attention except for painting as necessary.

Weather stripping: Weather stripping on exterior doors helps maintain the home's energy efficiency, preventing the loss of conditioned air, and reducing the infiltration of outside air. Weather stripping must remain in place to operate effectively.

1. Replace weather stripping that becomes loose or damaged.
2. Prolong the life of vinyl and rubber weather stripping by applying a silicone spray.
3. The sweep weather stripping at the bottom of the door may require replacement from time to time. To replace, remove the sweep and match with a replacement available at any hardware store.
4. To raise or lower threshold, adjust the screws on the wood or metal portion of the threshold. Keep threshold always caulked.
5. Keep sprinklers away from doors.

DOOR HARDWARE/LOCKS/HINGES/KEYS

The brass door locks, door handles, hinges and stoppers used throughout the home are exposed to both inside and outside elements, pollution, extreme elements, and common everyday use. This may cause them to discolor or become pitted. The manufacturer does not guarantee the finish of any product. Clean these with a damp cloth and do not use abrasive cleanser or solvents. Periodic polishing, following manufacturer's recommendations, will help maintain the original luster and appearance. Do not use brass polish on lacquered brass parts or fixtures.

Locks: Lubricate door locks with graphite or other waterproof lubricant. Avoid oil, as it will gum up.

Failure to Latch: If a door will not latch because of minor setting, you can correct this by making a new opening in the jamb for the latch plate (*remortising*) and raising or lowering the plate accordingly.

Hinges: You can remedy a squeaky door hinge by removing the hinge pin and applying a silicone lubricant to it. Avoid using oil, as it can gum up or attract dirt. Graphite works well as a lubricant but can create a gray smudge on the door or floor covering beneath the hinge if too much is applied.

Keys: Keep a duplicate privacy lock key where children cannot reach it in the event a youngster locks himself or herself in a room. The top edge of the door casing is often used as a place to keep the key. A small screwdriver or similarly shaped device can open some types of privacy locks.

Your interior door locksets can loosen over time. If you notice excessive play in the lockset, we recommend tightening the screws located in the cover plate if the doorknob has become inoperative, it could mean that the interior mechanism has slipped out of place. Remove the knob, realign the interior mechanism, reset the knob, then tighten the exterior screws. Should a lock be hard to operate, apply a

graphite lubricant to the keyhole and lock mechanism. This will usually help the lock to operate more smoothly.

ELECTRICAL SYSTEM

The electrical system in your home is designed for safe, trouble-free service and meets both local and national electrical code requirements. Any additional alteration or modification to the original electrical system installation will void all applicable warranties.

Electrical Safety Cautions: Do-it-yourself electrical wiring is dangerous. Improper electrical wiring is dangerous. Improper electrical repairs can endanger the lives of your family and jeopardize your homeowner's insurance in the event of fire or electrical injury. Always use a licensed electrician to make electrical repairs, adjustments, and additions.

Electrical Storm Caution: It is recommended that you unplug television sets, computer and telephones during electrical storms.

Power Failure: If the electrical power goes out, check first to determine if neighbors are also without power, and if so, contact the utility company. Before attempting to reset the circuit breakers, check that power has been restored to the area. If neighbors have power, check the main circuit breaker in the panel box. See Figure 1 for the Electric Panel Box location.

Be aware that not every electrical power problem is due to problems within the home's electrical system. Utility companies experience a variety of situations that effect power supplies, including power surges and interruptions, peak overload periods, and even total shutdowns.

Electric Meter: The utility company installed an electric meter to measure your electric usage for billing purposes. Their invoice is based on kilowatt-hours used over a given period, with a kilowatt-hour being the energy expended by 1000 watts for one hour. Should you have any questions about the meter functions, please contact the customer service department at the utility company.

Circuit Breakers: Electrical wiring and appliances are protected by circuit breakers to stop circuit overloading. The main circuit breaker is in the electrical panel box (as showed on Figure 1), and if tripped for any reason, entirely cuts off all electricity to the house. The smaller circuit breakers within the panel box control appliances, wall switches, lighting, and the HVAC system, and each switch should be clearly marked as to what it controls. Do not tamper with the electrical service entrance cable that provides power to the service panel.

Circuit Tripping Causes and Remedies: Thunderstorms, lightning and power failures can cause circuit breakers to trip. If only your home is affected, try to reset by switching the breaker to full "OFF" then back to full "ON" position. If this does not reset the breaker, or if the breaker continues to trip, do not continue resetting the breaker as this can damage the panel box, wiring, or the appliance that it controls. Call a licensed electrical contractor for a service inspection.

Overload circuits can also cause tripping. This occurs when too many appliances are used on one circuit. To reduce the load, remove plugs of appliances that may cause the overloading, then reset the breaker as described above. If you install a microwave oven or other appliances that require large electrical loads, you may need a licensed electrical contractor to add additional wiring to accommodate the load.

Outlets and Wall Switches: If an electrical outlet does not work, check first to make sure that the outlet is not controlled by a wall switch. If the outlet still does not operate, contact an electrical contractor.

EXTERIOR WALL FINISHES

Exterior finishes are applied once the exterior and/or concrete block is complete. The exterior of your home may be finished with stucco, brick, siding and/or stone.

BRICK

Brick is used extensively throughout the United States. It is probably the lowest maintenance finish of all home exterior finishes.

The mortar between the bricks may require some tuck-pointing (filling in) as your home ages. The weep holes in the brick are there to allow moisture out. Do not fill these holes or allow landscaping material to cover them. Be aware there may be some mortar joint cracks, commonly referenced to as “stair step cracks” that are normal due to expansion and contraction of exterior walls.

Efflorescence: A white powdery substance that may appear on the exterior walls is called efflorescence. It is normal and is composed of water-soluble salts, originally present in masonry materials that are brought to and deposited on the surface when water evaporates. Most efflorescence can be removed with a stiff scrub brush, water and vinegar.

SIDING

Siding expands and contracts in response to changes in humidity and temperature. Slight waves are visible in siding under certain weather conditions; this cannot be eliminated. Wood or wood-product siding will require routine refinishing. The timing will vary with climatic conditions.

SOFFIT AND FASCIA

The aluminum soffit and fascia (where applicable) have a baked enamel finish that does not require painting. Wood and stucco fascia do require painting and caulking. The soffit vents are located under the roof overhang. The fascia is used behind gutters and to cover gable trim boards.

EXTERIOR HOME MAINTENANCE – USING A PRESSURE WASHER

Over time, the siding, stucco, brickwork, stone and other exterior finishes of your home accumulate dirt, grime and mildew. Using a pressure washer to clean the exterior of your house can clean and refresh the surfaces. Pressure washers have high-pressured sprays and will work much better than the average garden hose.

1. Choose the right nozzle for the pressure cleaner. Some nozzles could damage your home's exterior finish such as painted stucco.
2. If you use soap or chemicals, be very careful. Cleaning solutions may be harmful to some exterior surfaces. Never allow the soap or solution to dry on the exterior finish before rinsing off.
3. Before you begin pressure washing, always test the spray in an inconspicuous area of the house.
4. Start pressure washing at the top of the house working towards the bottom.
5. Do not point the high-pressure spray directly at electrical boxes or windows.
6. Make sure you protect your eyes. Debris may fly from the house while you are spraying.

FIREPLACES

In most cases, builders use a prefabricated fireplace that is delivered to the home site and then installed with a screen and glass doors. Do not burn pressure-treated wood, scrap lumber, Christmas trees, trash, cardboard, plastic or any flammable liquid such as gasoline. Burning these materials may cause brick and flue liners to crack.

Fireplace Equipment: A set of fireplace tools, available from a local fireplace equipment shop, will help you handle logs, stoke the flames and shovel out cold ashes.

Fireplace Inspections: A clean, unobstructed fireplace and chimney are important for safe fireplace operation. Have a fireplace chimney company inspect the fireplace and chimney annually for soot build-up and appropriate cleaning. Inspect the hearth and liner for loose or cracked firebrick.

GAS FIREPLACE

If you have a gas fireplace, supplying the source for the gas is usually the homeowner's responsibility. If you have this fireplace, read and follow all the manufacturer's directions.

A slight delay between turning the switch "on" and the flame ignition is normal. The flames should ignite gently and silently. If you notice any deviation from this and/or any gas smell, immediately shut off the switch and report it to the gas company.

Excessive wind can cause a downdraft which can blow out the pilot, requiring you to relight it before using the fireplace.

The exterior vent cover for a direct-vent gas fireplace becomes extremely hot when the fireplace is operating.

Close the damper and cold air vent when not using the fireplace. Leaving this open is equivalent to having an open window in the house. If the fire is still burning, but you are finished enjoying it, use glass doors to prevent heated air from being drawn up the chimney until your damper can be closed.

Caution on the use of glass doors: Do not close them over a roaring fire, especially if you are burning hard woods (such as oak or hickory) because this could break the glass. Also, when closing the doors over a burning fire, open the mesh screens first. This prevents excessive heat build-up the mesh, which might result in wrapping or discoloration.

Checklist for safe fireplace use:

1. Open the flue damper and outside air vent fully, and visually check the flue is not obstructed.
2. Clean obstructions and ashes.
3. Use a steel or cast-iron grate to elevate the wood above the fireplace brick. Do not build fires on the fireplace floor
4. Place, crumpled, non-colored newspaper under the grate.
5. Add kindling (small wood chips and twigs) on the grate over the newspaper.
6. Place three small legs in a pyramid arrangement at the back of the firebox, providing air spaces between logs.
7. Preheat the flue by lighting a piece of newspaper onto the logs, making sure that the smoke is being carried up the chimney.
8. Ignite the newspaper under the kindling.
9. Use seasoned hardwood for a long-burning, smoke-free fire. Store firewood outside as it may harbor insects.
10. Do not build large fires.
11. Keep damper open and screen or glass doors closed throughout the life of the fire.
12. Close damper the following day when the fire is completely out. Periodically remove ashes from previous fires and place them outdoors in a metal container.

FLOORING

Your home may be finished with a variety of flooring materials, including, carpet, vinyl, hardwood and ceramic tiles.

CARPETING

The carpet is durable and requires minimal care. Color variations and shading may be noticeable and depend upon the surface texture and pile fiber of the carpet.

Frequent vacuuming and immediate stain removal are primary carpet care steps. When using carpet cleaners, carefully follow manufacturer's instructions.

While normal vacuuming will only remove loose fibers from carpet yams, an occasional tuft may be lifted above the surface. Do not pull out the tuft, just snip it off with scissors to the length of the other tufts.

Color fading and spots caused by sunlight are normal and can be minimized by using the draperies during the day, or by using sheer drapes to reduce incoming sunlight. Some colors may fade faster than others.

Change filters in your heating and air conditioning systems on a regular basis or when dirty. Dust, pollen and smoke will settle on your carpets and increase staining and soiling.

When a spill occurs, immediately blot it firmly with a dry, white paper towel or rag. Do not rub the spot as it will damage your carpet's tufts and may permanently alter your carpet's appearance. If stain remains, spray with cold water and blot again. Repeat if necessary.

Cleaning: You can add years to the life of your carpet with regular care. Carpet wears out because of foot traffic and dirt particles that get trampled deep into the carpet beyond the suction of the vacuum.

The dirt particles wear down the fibers like sandpaper and dull the carpet. The most important thing you can do to protect your carpet is to vacuum it frequently.

Vacuum twice each week lightly and once a week thoroughly. Heavy traffic areas may require more frequent cleaning. A light vacuuming is three passes; a thorough job may need seven passes. A vacuum cleaner with a beater bar agitates the pile and is more effective in bringing dirt to the surface for easy removal.

Vacuuming high-traffic areas daily helps keep them clean and maintains the upright position of the nap. Wipe spills and clean stains immediately. For best result, blot or dab any spill or stain; avoid rubbing. Test stain remover on an out-of-way area of the carpet, such as in a closet, to check for any undesirable effects. Have your carpet professionally cleaned regularly, usually once a year.

Some problem conditions that may occur with your new carpet and our suggested remedies are presented below:

Stains

No carpet is stain proof. Although your carpet manufacturer designates your carpet as stain-resistant, some substances may still cause permanent staining.

These include hair dyes, shoe polish, paints, and India ink. Some substances destroy or change the color of carpet, including bleaches, acne medications, drain cleaners, plant food, insecticides, and food or beverages with strongly colored natural dyes as found in some brands of mustard and herbal teas.

Pretest any spot-removal solution in an inconspicuous area before using it a large area. Apply several drops of the solution, hold a white tissue on the area, and count to ten. Examine both tissue and carpet for dye transfer and check for carpet damage.

IncorpUSA is not responsible for dye lot variations if patches are made.

Your carpet is warranted by the manufacturer. Please review any warranty information you have for any additional items which may or may not be covered.

Cleaning Stains

First, scoop-up or blot as much of the spill as possible from the carpet. With a white cloth rag, blot from the edges toward the center of the stain until dry.

For asphalt, butter, chocolate, cooking oil, furniture polish, grease, food, lipstick, mascara, oil, shoe polish or tar, apply a small amount of dry-cleaning fluid (non-oil type commonly used for spot removal from garments) to a dry, white cloth towel and blot. Repeat and blot with paper towels until the spot is dry.

For ice cream, latex paint, excrement, mayonnaise, milk, vomit and white wine, apply a small amount of detergent or a recommended cleaner or solvent to a dry, white cloth towel and blot. Repeat and blot with paper towels until the spots is dry.

For fruits drinks, berries, blood, coffee, fruit juice, ketchup, mustard, soft drinks, tea and red wine, mix ½ cup household hydrogen peroxide with one teaspoon clear ammonia and dampen the spot with a small amount of the mixture. Let stand for two to three hours under a weighted sheet of plastic wrap. Blot with paper towels until dry. Apply a little undiluted white vinegar only after stain is removed.

NEVER APPLY DETERGENTS OR STAIN REMOVER DIRECTLY TO CARPET!

This could cause permanent discoloration. For recommended cleaners and solvents, call the fiber producer. When a stain reappears after cleaning, it means all the stain and cleaners were not removed completely. Re-cleaning is necessary. Always rinse your carpet thoroughly to remove any detergent residue.

Burns

Take care of any kind of burn immediately. First snip off the darkened fibers. Then use a soapless cleaner and sponge with water. If the burn is extensive, talk with a professional about replacing the damaged area.

Crushing

Furniture and traffic may crush a carpet's pile fibers. Frequent vacuuming in high-traffic areas and glides or cups under heavy pieces of furniture can help prevent this. Rotating furniture to change the traffic pattern in a room promotes more even wear. Some carpets resist matting and crushing because of their level of fiber, but this does not imply or guarantee that no matting or crushing will occur. Heavy traffic areas such as halls and stairways are more susceptible to wear and crushing. This is considered normal wear.

Fading

Science has yet to develop a color that will not fade with time. All carpets will slowly lose some color due to natural and artificial forces in the environment. You can delay this process by frequently removing soil with vacuuming, regularly changing air filters in heating and air conditioning systems, keeping humidity and room temperature from getting too high, and reducing sunlight exposure with window coverings.

Filtration

If interior doors are kept closed while the air conditioning is operating, air circulation from the closed room flows through the small space at the bottom of the door. This forces the air over the carpet fibers, which in turn act as filter, catching particulate pollution. Over time, a noticeable stain develops at the threshold.

Rippling

With wall-to-wall carpeting, high humidity may cause rippling. Prolonged or extreme cold and heat can also cause rippling. If the carpet remains rippled after the humidity has left, have a professional re-stretch the carpeting using a power stretcher, not a knee kicker.

Seams

Carpet usually comes in 12-foot widths, making seams necessary in most rooms. Visible seams are not a defect unless they have been improperly made or unless the material has a defect, making the seam appear more pronounced than normal. The denser and uniform the carpet texture, the more visible the seams will be. Carpe styles with low, tight naps result in the most visible seams. Seams are never more visible than when the carpet is first installed. Usually with time, use and vacuuming, the seams become less visible. You can see examples of how carpet seams diminish after they have been vacuumed and have experienced traffic in the model homes.

Shading

Shading is an inherent quality of line-cut carpets. Household traffic causes pile fibers to assume different angles; as a result, the carpet appears darker and lighter in these areas. A good vacuuming, which makes the pile all go in the same direction, provides a temporary remedy.

Shedding

New carpeting, especially pile, sheds bits of fiber for a period. Eventually these loose fibers are removed by vacuuming. Shedding will usually occur with wool carpeting than with nylon or other synthetics.

CERAMIC TILE FLOORS

Ceramic tile is easy to maintain and impervious to water. The grout joints are not waterproof and require special attention to prevent water seepage. Cracks appearing in grouting of tile joints or at junctions with other materials (i.e., baseboards) are the responsibility of the homeowner.

Glazed and unglazed tile floors – Vacuum regularly to remove gritty particles. Damp mop using a solution of water and soapless detergent. If stained, use scouring powder paste. Let stand five minutes, brush and scrub. Rinse and dry.

1. Never use abrasive cleaners or harsh chemicals or solvents on ceramic tile.
2. Unglazed tiles may need to be sealed on a regular basis
3. Wipe off spills immediately.

Never use harsh cleaning agents, such as steel wool pads, which can scratch or damage the surface of your tile.

Cleaning

Ceramic tile is one of the easiest tiles to maintain. Use a wet cloth with warm water to clean the tiles. Avoid adding detergent to the water.

Grout Discoloration

Clean grout that becomes yellowed or stained with a fiber brush, cleanser, and water. Grout cleansers and whiteners are available at most hardware stores.

Sealing Grout

Sealing grout is your decision and responsibility. Once grout has been sealed, ongoing maintenance of that seal is necessary and limited warranty coverage on grout that has been sealed is voided.

Separations

Expect slight separations to occur in the grout between tiles. This grout is for decorative purpose only; it does not hold the tile in place. Cracks in the grout can be filled using premixed grout purchased from flooring or hardware stores. Follow package directions.

HARDWOOD FLOORS

Most hardwood floors are pre-finished at the factory with a baked-on wax coating or a urethane coating. Wood floor tone, grain and color variations are normal and reflect the natural characteristics of real hardwood.

Some squeaking or separating of hardwood floors is normal and is caused by seasonal weather and humidity changes. It is normal to expect surface nailing to occur around the perimeter area of pre-finished hardwood floors, and around any repair areas. Cupping or crowing are normal and occur from gaining or losing moisture on one side faster than the other. Neither the builder nor the manufacturer can stop this from happening. It is also due to natural growth rings in the tree and the part of the tree that has been used. In some instances, the cupping and crowing action may loosen nails or adhesive. The only way to control this occurrence is to try to keep your home at an even temperature and moisture level.

Prior to cleaning your hardwood floors, carefully read and follow the manufacturer's instructions and recommendations.

Use entrance rugs or mats to protect wood flooring from dirt and water spots. Do not use rubber backed mats as they will remove the finish. Mop up after spills immediately. Do not set potted plants directly on a hardwood floor as moisture can leak and cause permanent staining and warpage.

Attach furniture protectors to the bottom of furniture legs to protect the hardwood flooring from scuffing and surface damage. High-heeled shoes and constant moving of chairs can damage hardwood floors.

Extra care is required to keep hardwood floors dry and promptly mitigate any unusual water intrusion that could occur.

FRAMING & CARPENTRY

Wall Framing: Wood and/or metal studs are set vertically on 16-inch or 24-inch centers.

Roof framing: Roof framing uses a pre-engineered truss system or hand framed roofing that supports the weight of the roof and can be used in combination with conventional ceiling and roof framing. The trusses are delivered to the building site by truck, and then placed and secured into position on the home using a crane.

Roof Sheathing: Roof sheathing covers and serves as a base for the roofing materials.

As the wood in your home dries, normal shrinkage will occur that causes settlement. While every home has certain degrees of settlement, not all settlement is severe enough to require repair. Natural shrinkage and swelling will cause small cracks, chips and splits. These are acceptable under industry standards. You may also hear noises that are caused by expansion and contraction due to temperature fluctuations in the attic, ceilings and walls of your home.

Insulation: Insulation is placed wherever there is likely to be a difference between interior and exterior temperature or humidity in the floors, ceilings, exterior walls and the attic. Flexible insulations, in the form of cellulous or blown insulation or fiberglass blankets, are commonly used in walls, floors, ceilings and around air ducts. Plastic foam may be used for spot insulation around windows and doors, pipe openings and other air leakage points.

R-Value: This is insulation measurement. The higher a material's "R-Value" number, the more effective it is as insulator. Different parts of the home have different insulation standards.

GARAGE DOORS

Garage doors with remote openers can be operated manually by pulling the release cord at the top of the garage door near the track, and then lifting the garage door open. If minor garage door adjustments are required, contact and authorized repairman.

Garage overhead doors cannot be airtight. Some light will be visible around all the edges. Severe weather conditions may result in some precipitation entering around the door.

Caution: The installation of a garage door opener, unless installed as an available option, may void your garage door warranty. Garage doors are warranted for proper mechanical operation as installed. The installation of a garage door opener (by others) alters the operation of the door, and the builder cannot be responsible for altered mechanical operation.

INTERIOR WALLS & CEILINGS

Your home has two types of walls: load-bearing and non-load bearing.

Any alteration of load-bearing walls may reduce the strength of the structure by altering its unit load capacity, its load bearing, or support capacity.

Interior wall construction begins with the placement of studs set vertically at specified intervals. Then the drywall is screwed and/or nailed to the studs.

Drywall: Drywall is screwed to the studs of the ceiling and wall surfaces. The seams where sheets of drywall come together are taped, spackled with a joint compound, allowed to dry and then sanded to prepare them for finishing.

Acceptable building standards are that slight “imperfections” such as nail pops, seam lines and cracks not exceeding 1/8” are common in drywall installation. However, obvious defects or poor workmanship resulting in excess compound in joints, trowel marks and cracked corner beads are not acceptable and must be noted prior to closing. Both nail pops and small drywall cracks are simple to repair.

Drywall Nail Pops and Crack Repair Instructions:

1. Reset the protruding nail slightly into the gypsum board surface or remove it entirely. Place another drywall nail two inches above or below the popped nail, and gently hammer it slightly below the paper surface. Then cover the area with spackling compound, allow to dry, sand smooth and the refinish the surface.
2. For drywall joint cracks, press a small “V”-shaped indentation using the back of a putty knife along the length of the crack, about 1/8” deep and 1/8” wide. Spackle, sand and refinish as with nail pops.
3. To prevent cracks wider than a 1/4” from reopening, first apply the spackling compound over the crack with a strip of drywall tape, add another top layer of spackling, feathering the edges well; sand to a smooth finish, then refinish.
4. Deep scrapes and indentations on drywall surfaces can be filled with two or three applications of spackling compound. Allow it to dry thoroughly, and sand between each application.

Touch-up painting of repaired areas will not blend perfectly with the original wall paint.

Interior Trim and Moldings: Homes are built with various moldings, including but not limited to floor moldings, door casings and other wood trims. Some separation of wood trims and moldings is normal and is caused by home settlement, plus shrinkage or expansion due to extremes of dryness or humidity.

Should the baseboard trim come loose, simply re-nail the baseboard back into the proper position. For moldings, it is better to wait for several months to see if settlement will bring the pieces back together naturally. If not, a separation at corners or seams can be patched with wood filler and then refinished to match the existing molding.

Shrinkage of wood trim occurs during the first two years or longer, depending on temperature and humidity. All lumber is more vulnerable to shrinkage during the heating season. Maintaining a moderate and stable temperature helps to minimize the effects of shrinkage. Wood will shrink less lengthwise than across the grain. Wood shrinkage can result in separation at joints of trim pieces. You can usually correct this with caulking and touch-up painting.

When re-nailing baseboards, drive in another nail close to – but not exactly in – the existing nail hole. Fill the old nail hole with putty and touch up with paint as needed. If the base shoe (small trim between base molding and the floor) appears to be lifting from the floor, the is probably due to slight shrinkage of the floor joists below. Again, you can correct by removing the old nails and re-nailing. You may prefer to wait until after the first heating season to make any needed repairs.

LANDSCAPING, GRADING LAWN, SHRUBS AND SPRINKLERS

Landscaping plans are generally designed by a landscape architect and approved by local officials. The home may be part of the entire community’s landscape master plan and therefore cannot be individually modified. Check with your builder before doing any extensive landscaping changes.

GRADING

The drainage plan for your community was designed by engineers and approved by the various authorities having jurisdiction. Storm water management is a critical part of the community design. The yard is carefully graded to direct storm water away from the house into areas where it can soak away or eventually flow into the community storm water drainage system. After heavy rain, it is normal to see

significant areas of standing water. This is a deliberate part of the approved drainage design; it allows water to enter the drainage system slowly and helps to limit the entry of nutrient, fertilizers, etc.; into the interconnected fresh-water system. After normal, heavy rain, water should not be standing on paved areas after 48 hours. Swales and drainage areas may be permanently wet, particularly in times of heavy rain or melting snow.

Over time, the grade around the house can settle. If this occurs, spread additional soil sand in the depressions to raise and re-establish the grade. Be sure the grade slopes away rather than towards the house.

To prevent erosion and ponding of water:

1. Do not alter the soil grade.
2. Keep water ditches or swales open and free of leaves and debris. Do not build sheds, hot tubs, decks, fences, pools, or gardens in the swales; otherwise, water may not flow properly through the swale.
3. Direct water run-off away from the home to prevent washouts. Reposition splash blocks if they are moved.
4. Do not allow sprinklers to wet the house or form puddles near or against the foundation.

LAWN

In new homes, the yard is graded, and the landscape contractor removes debris and rakes the ground surface prior to installing sod or grass seed.

The future beauty of your yard depends on the care and attention you provide. The builder cannot be responsible for homeowner neglect or improper landscape maintenance. The following suggestions should make the job easier:

Watering: Sod requires constant moisture until the second mowing. If allowed to dry out, the sod will shrink, and gaps will appear between the sections. If this occurs, the homeowner will need to repair these areas. For the first six weeks, water the lawn for 30 minutes once each day in the morning. Watering may be reduced after the second mowing to every other day for the next eight weeks. When using the sprinkler system, check to see if you are leaving footprints. If so, the area has been over watered. Remember, too much water is just as bad as not enough.

Fertilizing: Fertilizer should be applied a minimum of three times a year for turf. In the winter months two applications are necessary and one should be a weed and feed. In the summer months one application should be applied. Spray insecticide every other month. Do not spray immature grass with chemicals to kill weeds. The best approach is to use pre-emergent weed control when grass is stronger and more mature.

Be aware that sod, when initially laid, will occasionally go into shock and turn brown. The sod is not dead, and you should continue water it.

Extremely hot or cold weather or above average rainfall will affect these instructions.

Mowing: Mow new grass when it attains a height of four to six inches. Do not mow if the ground is soggy. Set the mower height at approximately three inches. Be sure the mower blades are sharp to avoid tearing the grass.

SPRINKLER IRRIGATION SYSTEM

Many homes have an automatic sprinkler system installed and this is by far the most efficient method for watering your lawn. There are two systems in use: **A.** an individual irrigation system for each home controlled by an individual time clock, or **B.** a community irrigation system. This system is regulated by community time clocks generally controlled and maintained by a Homeowner Association. It draws water from a lake or well within the community.

NOTE: If your irrigation system fails to operate after rain, your home may have a rain sensor installed. The sensor turns off the system for a period, depending on the rainfall.

Most sprinkler systems are controlled by an automatic time clock. Refer to the instruction on setting the time clock and watering times on the inside cover of the timer. Keep grass and shrubs trimmed around the sprinkler heads.

Occasionally, the sprinkler heads will clog with sediment build-up and will need to be removed and cleaned. Refer to your manufacturer's instructions on how to complete this task.

Depending on soil conditions, type of grass and time of year, your sprinkler system can be adjusted to run every day, every other day or certain days of the week. Also be aware that local water restrictions can prevent you from watering on certain days or times of the day. A good time to water your lawn with sprinkler system is between 2 a.m. and 9 a.m.

Your lawn is divided into several "zones" depending on the size of the lawn. To test the system, turn the sprinklers on manually. Each zone should be checked for proper coverage and for properly operating heads. If something is leaking, call a sprinkler contractor immediately.

MIRRORS & SHOWER ENCLOSURES

MIRRORS

Clean bathroom mirrors and shower enclosures with an ammonia-free spray glass-cleaner and a soft cloth, wiping several times to remove all glass cleaner residue. Most mirror failures are at the edges where "spillover" solutions attach the backing. By applying cleaner to the cloth rather than then mirror, this could be prevented. Do not use abrasive cleaners which will permanently scratch and mar mirror or glass surfaces. Do not expose mirror product to salt air for extended periods of time. Humidity, heat and dampness can cause permanent damage; therefore, provide adequate ventilation in rooms with mirrors.

Some mirrors will have some minor imperfections. This is perfectly normal. All scratches and other defects in mirrors and glass tub/shower enclosures must be reported to your builder at time of the orientation/walk through and not after closing.

The following is a list of common acceptable defects:

- Slight hairline face and back scratches
- Slight pinhead bubbles or seeds
- Slight rubs
- Slight discoloration
- Slight dings or bruises

SHOWER ENCLOSURES

Shower enclosures create extreme amounts of moisture; therefore, frequent checking of joint areas is recommended. Check caulking periodically to ensure against leaking. The homeowner is responsible for re-caulking as needed. The use of clear silicone is not recommended as it yellows with age.

PAINTING AND CAULKING

The interior walls of new homes are generally painted with latex paint. We strongly recommend that touch-up paint be used instead of washing the walls. The exterior walls of your home have been painted with a quality exterior paint.

INTERIOR AND EXTERIOR PAINT

Painting Note: The builder cannot guarantee that painting repairs requiring new material will match the color of the existing material. Paint repairs may show slight variations in color as a result of weathering, aging or pigment variations in different paint manufacturing runs. Color and texture variation are normal. Fading is also normal, and the degree is dependent on climate conditions.

Touch-up: Paint touch-up is visible under certain lighting conditions.

When doing paint touch-up, use a small brush, applying paint only to the damaged spot. Touch-up may not match the surrounding area exactly, even if the same paint mix is used. When it is time to repaint a room, prepare the wall surface first by cleaning with a mild soap and water mixture or a reliable cleaning product.

Regular attention will preserve the beauty and value of your home. Check the painted and stained surfaces of your home's exterior annually. Repaint before much chipping or wearing away of the original finish occurs; this will save the cost of extensive surface preparation. Plan on refinishing the exterior surface of your home approximately every two or three years or as often as your paint manufacturer suggests for your area and climate. Climatic conditions control the chemical structure of the paint used on the exterior. Over time, the finish will fade and dull a bit.

When you paint the exterior of your home, begin by resetting propped nails and removing blistered or peeling portions of paint with a wire brush or putty knife. Sand, spot with primer and then paint the entire area. Use a quality exterior paint formulated for local climate conditions. Avoid having sprinklers spray water on the exterior walls of your home. This will cause blistering, peeling, splintering and other damage to the home.

Cracking: As it ages, exterior wood trim will develop minor cracks and raised grain. Much of this will occur during the first year. Raised grains permits moisture to get under the paint and can result in peeling. This is not a defect in materials or workmanship. Paint maintenance of wood is your responsibility.

Cleaning Exterior Painted Surfaces: Lack or little sunlight, moisture and damp weather conditions may cause the formation of mildew or fungus on the exterior. Mildew or fungus can be removed by carefully washing the affected area with a water-diluted household bleach. The builder is not responsible for mildew or fungus build-up. See Exterior Wall Finishes for further information.

Cleaning Flat-Latex Painted Surfaces: In many homes an off-white, lead-free latex paint is applied to the interior walls of the home. This is not a washable paint and will smudge if cleaned. We do not recommend washing these surfaces, but instead suggests using touch-up paint to cover paint scuffs and marks.

Cleaning Semi-Gloss Painted Surfaces: An off-white, lead free semi-gloss paint is applied to interior wood trim and doors. These surfaces may be cleaned with a sponge and lukewarm water. The less moisture on the sponge, the better. Wipe quickly with a gentle washing pressure from top to bottom without allowing the solution to run down the door or trim. If water does not work, try the same procedure using a small amount of mild detergent mixed with water. Once complete, lightly rinse the washed area with plain water and allow to dry.

CAULKING

Caulking is a building joint sealant used where two dissimilar materials are joined. In time, caulking hardens and cracks and should be renewed prior to any repainting.

NOTE: Caulking is a homeowner's responsibility. Caulking around windows and doors should be checked and re-caulked at least once a year.

Exterior caulk will eventually shrink, separate and deteriorate. This will cause the caulking to pull away from surfaces and create areas for water and air to infiltrate. This should be monitored constantly because moisture can work its way behind wood trim or siding and cause rotting. Pay particular attention to the caulking at doors and windows; if separation of the caulking occurs, it can result in leaks. When recaulking on the exterior, use a product that paint will adhere to.

Changes in temperature and humidity cause all building materials to expand and contract. Dissimilar materials expand or contract at different rates. This movement results in separation between materials, particularly dissimilar ones. You will see the effects in small cracks in drywall and in paint, especially where moldings meet drywall, at mitered corners and where tile grout meets tub or sink. While this can alarm an uninformed homeowner, it is normal.

Shrinkage of the wood members of your home is inevitable and occurs in every new home. Although this is most notable during the first year, it may continue beyond that time. In most cases caulk and paint are all that you need to conceal this minor evidence of a natural phenomenon. Even though properly installed, caulking shrinks and cracks. Maintenance of caulking is your responsibility.

Acrylic Latex with Silicone Caulk: An all-purpose caulk that is mildew-resistant, flexible and paintable.

Latex Caulk: Latex caulking is appropriate for an area that requires painting, such as along the stair stringer or where wood trim meets the wall.

Silicone Caulk: Caulking that contains silicone will not accept paint; it works best where water is present, for example, where tub meets tile, or a sink meets a countertop.

NOTE: *If you are unsure what type of caulk to use for a specific job, you may want to consult a sales professional at your local hardware store or home improvement center.*

PLUMBING FIXTURES

The plumbing fixtures in most homes include the water heater, bathtubs, showers, toilets and sinks.

NOTE: *As equipment technology changes frequently, the manufacturer's service manuals will supersede all recommendations and procedures contained in this manual.*

WATER HEATER

The electric water heater is equipped with an automatic temperature and pressure relief valve, a safety feature that opens and releases excessive pressure or heat build-up. Should this occur, water will flow from the tank until both temperature and pressure are reduced to safe levels.

Hot Water Temperature: Water temperature is set at 120°F by the manufacturer. While low temperature settings reduce utility costs, bear in mind that dishwashers do not operate properly with settings below 120°F.

NOTE: *Do not store combustible items, oily rags, clothing, brooms or dust mops near the water heater as this presents a potential fire hazard. Do not use the top of the water heater as storage shelf.*

Scale: Small amounts of scale deposits will collect and settle on the bottom of the water tank. Remove this residue annually by draining the tank. Shut off the power first, using the appropriate circuit breaker in the electrical power box. Attach a garden hose to the valve and run it outside. Then open the valve at the bottom of the water heater, allowing residue to drain out until the water runs clear. If you live in a hard water region, a water softener will reduce the need for more frequent draining.

Do not completely drain an electric water tank without first shutting off the water heater circuit breaker. Do not turn circuit breaker on until the tank is full of water.

Element Cleaning or Replacing: The heating elements in the water heater will require periodic cleaning. The frequency is determined in part by the quality of the water in your area. Again, refer to the manufacturer's literature for step-by-step instructions and drawings, or contact an authorized service company.

No Hot Water: If you discover you have no hot water, check the breaker, the temperature setting and the water supply valve before calling for service. Refer to the manufacturer's literature for locations of these items and other troubleshooting information.

Pressure Relief Valve: At least once each year, manually operate the pressure relief valve. Stay clear of the discharge line to avoid injury. See manufacturer's literature for diagrams and detailed instructions.

FIXTURES

Kitchen and bathroom sinks, toilets and bathtubs are made with cultured marble, plastic, fiberglass, stainless steel, or steel finished with porcelain.

To clean, use a non-abrasive spray cleanser and sponge. Dropping heavy objects onto porcelain or fiberglass can chip or crack the surface and may produce permanent staining. Do not leave steel wool pads on sink surfaces, as they will rust and stain the surface.

Be aware that continuous-action toilet bowl cleansers, placed in the toilet water tank, will prematurely wear out the rubber tank flapper and may discolor the bowl. Follow the manufacturer's recommendations for cleaning and maintenance.

KITCHEN SINKS/STAINLESS STEEL AND CAST IRON

For routine cleaning, use a non-abrasive household cleanser with warm water and a sponge. Do not scrape the surface with utensils, pots or pans. Do not leave leftovers in sink or strainer, particularly tea bags and coffee grounds, which contain harmful acids. Regular washing soap – not baking soda – should be added to the drain to keep it grease and soap-free.

Do not clean stainless steel sinks with steel wool or metal brushes, and do not leave rubber mats in the sink since they trap water and produce surface discoloration. To restore luster to stainless steel, apply a small amount of mineral oil with a soft cloth, then wipe dry.

BATHROOM SINKS

Sink surfaces can be easily chipped and stained, so treat them accordingly. Prevent hair accumulation clogs by periodically removing the stopper for cleaning or purchase a rubber hair collector. Avoid setting lit cigarettes on the edge of the sink, as they will burn and permanently damage the surface.

TOILETS

A water-saving regulation went into effect in 1993. It prohibits the manufacture of toilets that use more than 1.6 gallons of water per flush. In the search for a balance among comfort, convenience and sensible use of natural resources, the government conducted several studies. The 1.6-gallon toilet turned out to be the size that consistently saves water.

NOTE: Your new toilets are different if you moved from a residence that was built prior to 1993. Toilet prior to 1993 used three gallons to flush and were not as inclined to stop up.

As a result of implementing this standard, flushing twice is occasionally necessary to completely empty the toilet bowl. Even though you flush twice on occasion, rest assured that overall, you are saving water and you have complied with the law.

Running Toilets: To stop running water in the toilet, check the shut-off float in the tank. You will most likely find it has lifted too high in the tank, preventing the valve from shutting off completely. In this case, gently bend the float rod down until it stops the water at the correct level. The float should be free and not rub the side of the tank or any other parts. Also check the chain on the flush handle. If it is too high, it will prevent the rubber stopper at the bottom of the tank from sealing, resulting in running water.

BATHTUBS, SHOWERS AND TUB SHOWER COMBINATIONS

Cleaning: Clean porcelain-on-steel bathtubs, cultured marble tubs and sinks, fiberglass showers, tub/shower combinations and shower stall floors with warm water and a non-abrasive cleanser. Clean glass shower doors with a commercial glass cleaner. Check bathtub stoppers and shower floor drain grates for hair accumulation. Do not use ammonia-based cleanser. Gel-Gloss is recommended for polishing cultured marble.

Do not step into a bathtub or tub/shower with shoes on. Gritty particles adhere to your shoe soles and will scratch the finish.

Re-caulking of tubs and showers: Over time, cracks and separations between tub or shower stall and wall surfaces or bathroom floors will appear. Maintaining these areas is critical since excessive moisture can severely damage underlying materials.

It will be necessary to re-apply a tub and tile caulk when the previous caulking has dried out or eroded. To re-caulk the area, use a tub and tile caulk available in local hardware stores. Do not use a clear silicone caulk, as it yellows with age. Begin by removing the old caulk and cleaning the area. Once the areas are dry, apply fresh caulking to fill the vacant space, then smooth out the finish with a wet finger.

INTERIOR FAUCETS

Interior faucets are either single-faucets or washer faucets.

Single-lever Faucets: The single-lever kitchen and bath faucet are low-maintenance, washerless faucets. Should the cartridge ever need to be replaced, turn off the water supply under the sink, remove the handle assembly, and pull the cartridge out. Take the cartridge to a local plumbing supplier and match, accordingly, being sure to follow installation instructions.

Polished Brass Fixtures: Polished brass in humid regions is sure to pit and tarnish. Besides the climate, there may be other catalysts that cause this reaction to occur. Cleaning agents, standing water, shampoos, toothpaste and personal hygiene products are among items that may heighten the tarnishing and pitting process. Any cleaning agent that contains harsh chemicals will most certainly wear through the protective coating applied to brass. The manufacturers of polished brass recommend the use of plain water and polishing with a soft cloth.

Chrome Faucets: Chrome Faucets should be cleaned with a soft damp cloth and a commercially accepted cleaner. Dry the faucet with a soft cloth. Never use an abrasive or ammonia-based cleaner.

Washer Faucets: A washer faucet has a shut-off feature that requires light closing pressure to stop the flow of water. Do not apply too much pressure since washers can be damaged.

Faucet Aerators: Screened aerators screw into the spout of a faucet to add air to the flowing water which reduces splashing. Aerators are easy to remove for periodic cleaning. This should be done every three months.

Washer Replacement: Dripping faucets can dramatically increase water bills and represent the loss of a valuable natural resource. Over time, all washers will wear out and must be replaced. Neglecting to change washers may cause damage to the valve seat or to the entire faucet. Many homeowners prefer to do this simple replacement procedure themselves:

1. Turn off the water supply intake valve located under the sink.
2. Using a wide-jaw wrench, remove the hexagonal cap from the top of the faucet assembly. This may take just a turn or two.
3. Remove the inside part, turn it upside down and you will see a fiber washer held by a screw through its center. This is the source of the leak. The screw can easily be removed, but the washer itself may take a little prying to remove.
4. Match the new washer to the worn-out washer and replace it. Re-use the same screw if it is in good condition. Then, reassemble the faucet.

EXTERIOR HOSE BIBS

Exterior faucets are called hose bibs. Check for leaks and replace washers as required since a leaking exterior faucet can cause water damage. See washer replacement under Interior Faucets in this section.

Water Back-flow Prevention: Most new homes have a vacuum breaker installed on the exterior hose faucet. This device prevents back-flow and stops potentially contaminated water from flowing back into the home water supply system via the garden hose. These devices are a plumbing code requirement and may not be removed.

With a vacuum breaker installed, it is normal to hear a humming or vibrating noise throughout the home when the exterior faucet is on. This is caused by the washers built into the backflow preventer and is not a reason for concern.

PLUMBING SYSTEM

A licensed plumbing contractor installed all plumbing pipes and systems in your new home. These have been tested and inspected.

In most cases, minimum Homeowner's Maintenance is all that the plumbing system requires. Attending to small problems as they occur keeps them from becoming larger, more costly problems later.

WATER LINES

Your home is served by a well or a city water supply. The pipes that carry water into the home are designed to resist rust and corrosion.

Noisy Pipes: Noisy water pipes should be corrected immediately since the resulting vibrations can damage plumbing line fittings and cause them to leak. There is one exception: exterior hose faucets often produce a high-pitched noise caused by an attached vacuum breaker or back-flow preventer. This noise is normal and not cause for concern.

Noisy pipe problems can be identified and corrected as follows:

1. The water heater temperature may be set too high, producing steam in the pipes. To resolve, gradually reduce the water heater temperature setting until the steam is reduced.
2. Abruptly turning off a faucet in areas which high water pressure can produce a pounding or knocking sound. To resolve, slightly close the main shut-off.
3. Air can get into the pipes; to resolve, open all interior and exterior faucets and run for a few minutes, allowing all air to pass through the system.

Freezing Pipes: Provide the homes is heated at a normal level, pipes should not freeze. Set heat at 65° F if you are away during winter months. Keep garage doors closed to protect plumbing lines that run through this area.

MAIN SHUT-OFF VALVE

This is the center of the plumbing system, the point at which the main water line comes into the home. If a major plumbing problem occurs, turn off the main shut-off valve to prevent flooding. It is a good idea to show every family member where the shut-off valve is, explain how to close it in case of an emergency and mark it with an easy-to-locate identification tag.

See Figure 1 for the location of the Water Shut-off Valve.

WATER INTAKE VALVES

Most plumbing fixtures in the home have a water intake valve to individually shut off the water to that fixture for minor repairs and emergencies. Show family members how to operate them and where they are located on sinks, bathtubs, showers, toilets, water heater, washing machine and laundry tub. Toilet valves are behind the toilet and sink valves are under the sink.

DRAIN TRAPS

Every plumbing fixture in the home is equipped with a drain trap, an S-shaped pipe that holds water and acts as a barrier to keep airborne bacteria and sewer gas odors from coming back into the home. If a sink or bathtub fixture is not used frequently, turn it on periodically to replace evaporating water and to keep the water trap barrier intact.

Guidelines

Drain traps can be cleaned by putting three tablespoons of ordinary dishwashing detergent into the drain. Add a little hot water, let stand for 15 minutes, then flush with hot water. Use a rubber plunger to unclog a blocked toilet.

Caution: Do not pour grease into drains or toilets or use caustic cleansers to open plugged drains. Do not use a plunger with any drain cleaning chemical. When using a chemical drain cleaner, carefully follow the manufacturer's safety precautions and product directions.

SANITARY SEWER LINES

In the final stages of preparing your home for move in, the plumber tested and flushed the sewer lines to ensure they were clear and working properly.

Do not put hair, grease, lint, garbage, heavy tissue, disposable diapers or sanitary materials into the sewer system.

When operating the garbage disposal, always use a generous amount of cold water to keep the sink drain clear and the disposal motor cool.

Tree roots causing breaks in sewer lines or main lines are a homeowner's responsibility.

SEPTIC TANKS

The septic tank is primarily a holding tank, generally made of concrete or fiberglass, for all the waste coming from your home by way of the kitchen sink, bathrooms, laundry tubs and washing machines.

Homeowners are responsible for the proper maintenance of the septic tank. For best results, inspect your septic tank and the drainage field area at least once a year.

The frequency of septic tank cleaning varies depending on the tank size, daily sewage intake and the number of people it serves. Generally, septic tanks should be cleaned every two years.

Cleaning a septic tank requires special knowledge and tools. This is not recommended as a "do-it-yourself" project.

As warm weather causes bacterial action to increase, septic tanks should be cleaned in the spring. The waste material should be disposed of in a manner approved by your local health department, and only a licensed septic tank contractor should be used.

Periodic pumping of the septic tank between cleanings is considered a homeowner responsibility. The need for pumping is considered normal and not a deficiency. Ask your professional septic tank contractor to recommend a pumping timetable for your usage. Failure to do so might cause problems.

Do not allow petroleum products, paint thinners, solvents, harsh chemicals, cleaning fluids, dyes, excessive amounts of bleach, cigarettes, dental floss, kitty litter, sanitary napkins or plastics to enter the septic system.

Never allow grease, cooking fats or gristle to go down the drain or through the garbage disposal. Save the fat in a jar or can and put it in the garbage can outside your home. Avoid using drain cleaners and high-foaming detergents if you have a septic system. These substances will clean away the natural bacteria that the system needs. Use non-phosphate cleaners and biodegradable laundry soaps.

If you have a garbage disposal, do not grind large amounts of vegetable and fruit matter as it may create the need for more frequent cleanings. Avoid putting coffee grinds in the disposal. Do not connect roof drains or allow backwash from a water softener to enter the septic tank system. Do not allow a sump pump to discharge into the septic tank system.

Vehicles should not be driven or parked over septic tanks or drainage fields. Trees and shrubbery should not be planted in the drain field.

Warning signals that something is wrong:

1. You notice that the wastewater backs up or the toilet bowl does not drain properly when you flush a toilet
2. Wastewater backs up in any other drain.
3. “Gurgling” sound in the plumbing
4. Grass in the yard grows faster and is greener in one area, especially along the path that leads to the septic tank.
5. Ground is mushy underfoot in one area of the yard.
6. Obnoxious odors inside or outside the home, especially around drains
7. Low spots begin to appear in the yard, whether any of the above symptoms have occurred.

ROOFING, GUTTERS & DOWNSPOUTS

The roof of most homes is constructed with a two-ply roof system which consists of roofing felt and plywood or sheathing. Tile or shingles are installed following manufacturer’s guidelines and product specifications. For more information on roof sheathing and insulation, see section on Framing & Carpentry.

SHINGLE ROOFS

Shingle roofs come in many different colors and styles. Shingle roofs provide water protection to the roof underlayment. As above, the builder is not responsible for damage to shingles caused by the homeowner.

FLASHING

Roof flashings are sheet-metal trims used around roof openings, on vent stacks, roof vents and valleys. Their purpose is to channel water away from the house.

GUTTERS AND DOWNSPOUTS

Where applicable and installed, gutters channel water run-off from the roof to downspouts that guide the water to ground-level drainage areas.

Gutters and downspouts should be inspected and cleaned regularly. Clear the gutter of accumulated debris such as leaves, twigs, branches, balls and other objects.

Gutters need to slope slightly downward to channel water to the downspout. Splash blocks can be properly positioned at the bottom of the downspout to direct water away from the foundation. Finally, the soil grade must slope away from the home. Gutters and downspouts should not leak but may overflow during heavy rain.

VENTS

Vents should remain unobstructed year-round. If your home has soffit vents and/or ridge vents, they should be cleared of debris. Ridge vents should be checked periodically to ensure they are secure and have not come loose in high winds. Also, check that these vents have not been stepped on and deformed. Excessive heat build-up in the attic is usually caused by blocked air vents. This condition can be resolved by clearing all obstructions away from the vents to allow proper heat release.

There are a variety of attic vents that could be used in your home. The different types can be soffit vents (*located in the eaves of your roof*), ridge vents (*found at the peak of your roof*) and attic vents (*sometimes known as whirly birds, turtlebacks and mushrooms*). Familiarize yourself with all the different vents on your home.

STAIRS

No known method of installation prevents all vibration or squeaks in wood staircase. A shrinkage crack may develop where the stairs meet the wall. If this occurs, apply a thin bead of latex and, when dry, touch up with paint.

WINDOW/SCREENS

Typically, the windows in your new home are single-pane glass and are framed in aluminum. The manufacturer has sealed all the glass to the frame and the frame has been attached to your home and caulked.

NOTE: It is the homeowner's responsibility to check and re-caulk all exterior frames. All window scratches or imperfections must be reported to your builder at time of orientation/walkthrough, not after closing.

Cleaning Window Glass: Clean windows with a commercial glass cleaner or a cup of vinegar mixed with a gallon of warm water. Apply with a sponge or lint-free cloth, then dry and polish with paper towels. A rubber squeegee passed over glass surfaces will speed the drying and eliminate streaking.

Aluminum Windows: Abrupt changes in weather may cause aluminum windows to bind or stick. Should this occur, apply silicone spray to the windows sash tracks. Aluminum window frames have a baked enamel finish and may be cleaned with a mild detergent solution. Be aware that aluminum window frames will weather due to exposure to the outside elements.

Window Condensation: the appearance of moisture that occurs when warm moist air meets a colder surface is called condensation. While moisture may appear on the windows, this does not indicate a window problem. The most common cause is humid air outside the home hitting the cold surface of the window glass. Wipe up condensation as quickly as possible in order to avoid staining the drywall, windowsill or caulking.

Weep Holes: In heavy rains, water may collect in the bottom channel of window frames. Weep holes are provided to allow excess water to escape to the outside. Keep the bottom window channels and weep holes free of dirt and debris for proper operation.

Window Screens: Their sole purpose is to help prevent insects from coming inside when the windows are open. Window screens may be washed and rinsed using a mild household detergent.

Storing Screens: Many homeowners remove and store screens for the winter to allow more light into the home. To make re-installation more convenient, label each screen as you remove it. Use caution; screens perforate easily, and the frames bend if they are not handled with care.

Caution: Windows screens will not prevent children from falling through open windows to the ground below. The screen is not a barrier, and the fastening system for the screen will not support any weight beyond the screen itself. Never allow children near an opened screened window or place any weight on or push against a window screen. Do not place furniture near window so that children have easy access.

GLOSSARY OF TERMS

Aerator – A small, removable extension at the tip of a sink faucet that mixes streaming water with air to reduce splashing and conserve water.

Air Handler – A unit that is part of the air conditioning system located in either the garage or interior closet that circulates cool air from the condenser throughout the house.

Air Hammer – A banging noise in plumbing pipes caused by air infiltration.

Airway – The space between roof installation and roof boards which allows for movement of air.

Anchor Bolts – Bolts that secure a wooden sill plate to a concrete or masonry floor or wall.

Attic Ventilators – Screened openings provided to ventilate an attic space.

Base Molding – Molding used to trim the upper edge of interior baseboards.

Beam – A structural member transversely supporting a load.

Bearing Wall – A wall that supports any vertical load in addition to its own weight.

Brace – An inclined piece of framing lumber applied to wall or floor to stiffen the structure. Often used on walls as temporary bracing until framing has been completed.

Brick Veneer – A facing of brick laid against and fastened to sheathing of a frame or tile wall.

Casing – Molding of various widths and thickness used to trim door and window openings at the jambs.

Caulk – Caulk is a building joint sealant used where two dissimilar materials are joined. In time, caulk hardens and cracks and should be renewed prior to any painting.

Circuit Breaker – A switching device, located in the main electrical panel that opens and closes

electrical circuits and automatically shut off electricity to a circuit should it become

overloaded. Once the electrical load is reduced, the breaker switch can be turned back on to resume normal service.

Concrete Dusting – A fine dust that accumulates on finished concrete surfaces.

Condenser – An exterior unit that is part of the air conditioning system which expels heat onto the outside air.

Conduit, Electrical – A pipe, usually metal, in which insulated wire is installed.

Corner Bead – An angled metal edging used to protect and form an edge where drywall panels meet at outside edges.

Damper – A device in a fireplace that controls the air draft allowed into the fire.

De-Lamination – The separation of the top piles or laminate from the base to which they are attached. In vanity and kitchen countertops, the warping or detachment of laminate material from the wood substrate.

Dethatching – The loosening and/or removal of matted grass and leaves from existing lawns, which allows the grass to breathe and therefore promotes healthy growth.

Downspout – A pipe, usually metal, for carrying water from roof gutters.

Drywall – Also known as gypsum board or sheetrock, these large sheets are attached to the wall studs and ceiling framing to construct the walls and ceiling of the home.

Eaves – The margin or lower part of a roof projection over a wall.

Efflorescence – A white powdery substance that can form on new block, brick or stucco finishes. It is composed of water-soluble salts that are

present in masonry materials and that rise to the surface via water vapor.

Face Frame – The front of kitchen and bathrooms cabinets, to which the hinged doors attach.

Face Nailing – Nailing through a finished, exposed surface so that the flat top of the nail head is still visible after nailing.

Facia or Fascia – The exterior horizontal trim around rafters. Also positioned directly behind gutters and over gable trim boards.

Filler Board – Cabinet-grade wood used to fill gaps that occur between cabinets and wall openings.

Fillers – A wood putty used in preparation for painting to fill holes or cracks in wood.

Flashing – Sheet metal or other material used in roof and wall construction to protect a building from rainwater penetrating the house structure.

Flue – A vertical duct constructed of sheet metal or clay that channels smoke from a fireplace out of the home.

Footing – A masonry section, usually concrete, in a rectangular form wider than the bottom of the foundation wall or pier it supports.

Foundation – The supporting portion of a structure below the first-floor construction, or below grade, including the footings.

Frame Construction – A type of construction in which the structural parts are wood or depend upon a wood frame for support.

Gable – The portion of the roof above the eave line of a double-sloped roof.

Gabled Louvers – A vent with angled slats that provides ventilation at the peak of gable ends.

Graphite Lubricant – A finely powdered graphite used as lubricant.

Ground Fault Circuit Interrupter (GFCI) – A specialized electrical device that will interrupt electrical power there a weak electrical loss of ground occurs. Normally installed in areas where water may be present.

Grout – A white or colored plaster-like-mortar compound used to fill spaces between ceramic tiles.

Header – A heavy timber and/or concrete beam that spans open spaces in walls, over doors and windows and provides support to structural members above it.

Hip Roof – A roof that rises by inclined planes from all four sides of a building.

Honeycomb – In concrete, an open-cell-like surface texture that occurs while pouring concrete.

Hose Rib – An exterior faucet connection for lawn and garden hoses.

Insulation – Any material high in resistance to heat that, when placed in walls, ceilings, or floor of a structure, will reduce the rate of heat flow.

Jamb – the side and headlining of a trimmed doorway, window or other opening.

Joint Compound – A plaster-like compound used with drywall tape to join sheets of drywall into a smooth, continuous panel.

Joists – The horizontal support members used in constructing a floor or ceiling.

Keeper Plate – The metal plate that keeps a door lock latch firmly in place.

Lockset – A door lock

Louver – An opening with a series of horizontal slats so arranged as to permit ventilation but to exclude rain, sunlight or vision.

Masonry – Stone, brick, concrete, hollow tile, concrete block, gypsum block or other similar building units or materials or a combination of the same, bonded together with mortar to form a wall, pier, buttress or similar mass.

Mastic – A construction adhesive that is thick and waterproof. Used on roofs and floors.

Moldings – Shaped strips of ornamental wood used around doors and windows. Also used for base molding, tile molding, as chair rails and for exterior area molding. Moldings finish the junction of different materials or shapes.

Nail Pops – Nails that come loose from a stud and push joint compound up. Caused by normal wood shrinkage and home settlement.

Pointing – The filling and finishing of broken mortar and stone cement masonry joints.

Ponding – The collection of water on driveways, walkways, or lawns. Ponding for excessive periods of time is indicative of grading problems.

Rafter – One of a series of structural members of a roof designed to support roof loads. The rafters of a flat roof are sometimes called roof joists.

Resilient Flooring – Vinyl flooring used in areas such as kitchens, halls, bathrooms and laundry rooms. It is capable of withstanding shock without permanent deformation.

Ridge – The peak or crest of the roof created where opposite side or slopes of the roof meet.

Ridge Vent – An open system located along roof peaks, which in conjunction with soffit vents, creates ventilation through the passage of natural air.

Roof Sheathing – Boards or sheet material fastened to roof rafters on which the shingles or other roof covering is laid.

Scaling – In concrete, the breaking away of the top surface of the concrete, caused by a freeze/thaw cycle. In painting, the flaking or peeling away of the paint.

Sheathing – The structural covering, usually wood boards or plywood or oriented strand board (OSB), used over studs or rafters of a structure. Structural building board is normally used only as wall sheathing.

Shingles – Roof covering of asphalt, asbestos, wood, tile, slate or other material cut to stock lengths, widths and thickness.

Siding – The finish covering on the outside walls of a frame building, whether made of horizontal weatherboards, vertical boards with battens, vinyl siding, shingles or other material.

Sill – The lowest member of the frame of a structure, resting on the foundation and

supporting the floor joists or the uprights of a wall. The member forming the lower side of an opening, as a doorsill or windowsill.

Sill Plates – A support member laid on the top of the foundation wall that serves as a base for the wall framing.

Silicone – A synthetic lubricant compound with high resistance to temperature change and water. When added to caulking, it extends elasticity properties and increases the life of the caulking.

Soffit – Usually the underside of an eave or overhanging roof.

Soffit Vent – A vent located on the ceiling of a roof overhang that allows air to pass through the attic.

Spackle – See Joint Compound.

Spalling – Flaking or chipping of stone or other masonry material. Like scaling, but the chips and flakes are larger.

Struts – Vertical supports in the attic used to support sections of the roof.

Stud – One of a series of slender wood or metal vertical structural members placed as supporting elements in walls and partitions.

Sub-flooring – A wood-sheet flooring placed directly over the floor joists that supports the underlayment or floor covering.

Tack Strips – A wood strip with exposed tack points that is attached to the sub-flooring or slab and holds stretched wall-to-wall carpeting in position.

Tread – The horizontal surface in a stairway on which the foot is placed.

Trim – The finish materials in a building, such as moldings, applied around openings or at the floor and ceilings of rooms.

Trusses – Engineered wood structural members used to construct floors and roofs.

Turnaround – An additional section of driveway where cars can be turned around.

Underlayment – A flooring layer over the base sub-flooring, over which tile or resilient floor covering is laid.

Valley – The internal angle formed by the junction of two sloping sides of a roof.

Vacuum Braker – Also called a back-flow preventer, this device is placed on exterior faucets to allow water to only flow out of the home.

Valve Seat – An interior part of the faucet valve assembly where the valve rests.

Wall Ties – The metal pieces that tie masonry veneer to the frame of the home, or, when pouring concrete, the metal pieces that hold concrete foundation wall forms in place until the concrete cures.

Washers – Round, rigid rubber or plastic discs used as a sealing device in water faucet valves.

Weather Stripping – A weather-insulating strip of material placed around doors and windows to reduce water entry into the home. Also reduces air infiltration into the home or the escape of conditioned air out of the home.

Washouts – An area where water has produces soil erosion.