



## **Patterson Homes – Building Green**

**Patterson Homes builds green** providing buyers the very best homes values while protecting our environment. Remember, green built homes:

- *are healthier to live in*
- *are healthier for our environment*
- *are less expensive to maintain*
- *last longer*
- *are worth more*
- *have better resale*
- *save money*

**When it's all said and done**, building green, operating green, and staying green really is the right thing to do! ***FYI - Homes/buildings consume 40% of all US energy (industry follows at 32% and transportation in last place at 28%). Furthermore, buildings consume 71% of all electricity and creates 39% of carbon dioxide emissions!***

**Patterson Homes** believes that ***“going green”*** requires a 3-fold effort with:

**ONE** - the builder being committed to building green and offering green

**TWO** - his trades (subs/suppliers) being committed to building green and offering green

**THREE** - the homebuyer being educated and committed in *staying green*.

**Consider what Patterson Homes does** in providing a truly green built home:

### **Business Practices**

- We buy locally saving gas, pollution and other oil-related problems used in transporting goods. As well it means we are supporting our local economy
- Recycling our waste instead of sending it all to the dump. It saves us twice: in purchasing and in hauling/dumping fees. ***FYI- 24% - 40% of land fill waste is construction debris.***
- Encourages and uses alternative fuels. We have all natural gas vehicles and may bi-fuel natural gas vehicles. As well, Patterson Homes encourages its trades to use natural gas, hybrid, electric or other more efficient vehicles.
- Educating our trades about building green and allowing them to educate us!
- Committing to building green even when it cost more or is inconvenient
- Use recycled or by-product of the environment in our materials wherever possible
- Waste conscious in supplies used and in moving excess to the next job

### **Educating buyers**

- Educating our buyers upfront (on additional green options), during construction (green procedures) and upon completion (staying and maintaining green) to insure they will continue to enjoy and benefit from their green built home
- We do final walkthroughs showing them all the many green features of their new home
- We educate our buyers about ways to continue going green - such as encourage recycling at their new home and at their work. ***FYI- 35% of the waste in landfills is recyclable paper and paperboard - while only 22% of glass is recycled and 40% of aluminum is recycled.***

### **Plan Choice/Size**

- The single most important thing you can do to help the environment - and your wallet - is to size the building appropriately. A properly sized building and means you have properly sized equipment which saves you energy and money.
- Many are downsizing as the smaller the building, the more materials, energy and money you save. ***FYI - the average new house has more than doubled from 1100 sf. in the '50s to over 2400 sf. today.***
- Patterson Homes allows you to customize our plans or yours to get exactly the right size.

### **Excavation & Lots**

- Low impact on the lot saves gas, foliage, existing trees/bushes which also saves money
- Strip existing top soil and reuse/lay/grade it back upon completion of the home
- Encourages at least some natural-scape on each lot
- Along with large lots many are choosing smaller lots (for less watering, landscaping, maintenance)
- Offering more natural open space developments with adjacent parks

### **Framing**

- Interior wall/backing corners framed so that corners allow insulation
- Material choice
- Precisely manufactured floor joist from engineered lumber that the entire tree
- Engineered trusses that makes the best use of short lengths of lumber

### **Insulation**

- Effective insulation is the most cost-efficient energy saver there is. Therefore Patterson Homes runs each and every home they build to exceed the National Model Energy Code (MEC check). ***FYI - almost all the energy used in the home goes to heating and cooling.***
- Provide Low E Windows on all homes
- Insulate attic space up to an R-50 and walls up to R-20 or more depending on the buyer. ***FYI - insulating ceiling space to R-50 cost more but will pay for itself in less than 5 years***
- Foam seal all air protrusions and foam/seal all pipes, gaps and air protrusions to the outside.
- Install proper weather stripping around doors and proper door adjustments. ***FYI - This simple procedure could save you more than 10% of your monthly utility bill.***
- Insulates basement exterior walls
- Provides vaulted ceilings through engineered attic trusses to keep ceiling R values.

### **Windows**

- Use high quality & Low-E windows. ***FYI - inefficient windows and doors cost Americans \$50 billion each year in higher utilities costs and waste as much energy as the US gets from the Alaska Pipeline.***
- Upgraded window weather stripping and locking mechanisms to assure low/no air penetration
- Use the sun by putting most of the larger windows on the south side you can let sun light up your home during the day and warm the house in the winter

## **Plumbing**

- Use low flow showers and faucets to not only save water but heating of hot water.
- Use low flush toilet (and option to buyers dual-flush toilets) saves tons of water! ***FYI 40% of the water used in a home goes right down the toilet. Dual-flush toilets save at least 6,000 gallons of water per year per family.***
- Uses higher efficient water heaters.
- Educate buyer to reduce water heater temperature to 115F to 120F. ***FYI - this will save you money and extend the length of your water heater. Also if you leave on vacation, turn it down to nearly off or to its vacation setting. As well wrapping your water heater with an additional insulated blanket saves money in the long run.***

## **Heating-A/C**

- Provide high efficient furnaces & 13 seer or higher A/C units. ***FYI - Each seer value is 10% more efficient to run.***
- Size correctly all ducts, furnace, AC for proper/efficient heating and cooling.
- Sealing/taping all duct joints. ***FYI - the average home loses 35% of its conditioned air before it even reaches the intended room.***
- Provide easy and efficient programmable thermostats - and educate buyers how to use such. ***FYI - setting to 68F in the winter day time and lower at nighttime and 78F in the summer time will significantly reduce your heating and cooling bill while extending the life of your furnace & A/C.***
- Install Ceiling fans in every home saving money by circulating heat in the winter and cooling air in the summer. ***FYI - night time use of a ceiling fan will greatly reduce A/C use saving you money!***
- Bath fans built to exhaust moist air to exterior

## **Electrical & lighting**

- Use energy efficient fluorescent bulbs in every home we build. ***FYI - fluorescent bulbs use 66% less energy and last 5000 hours (10 times longer than regular bulbs). As well, if every US household replaced just one light bulb with a compact fluorescent bulb it would prevent enough pollution to equal removing one million cars from the road.***
- Using energy efficient lights and light bulbs - with lower wattage
- Install Ceiling fans in every home saving money by circulating heat in the winter and cooling air in the summer. ***FYI - night time use of a ceiling fan will greatly reduce A/C use saving you money!***
- Reduce ceiling recess cans (in ceiling attic space) and/or better insulate/seal/cap them inside the attic space for heat loss.
- Option dimmer switches. ***FYI - dimmer switches can cause lights to use 50% to 80% less power while lasting twice as long***

## **Appliances**

- Use Energy Star appliances saving 10-50% less energy or nearly \$80.00 each year. ***FYI - if just 1 in 10 homes used Energy Star appliances the change would be like planting 1.7 million new acres of trees.***
- Upgraded dishwashers which include: Energy Star, low water use, delay start, and rinse only cycles, etc. ***FYI - if buyers use the rinse only cycles until full or better yet their delay start they save, water, power, money and their dishwasher will last longer.***
- Energy star water heaters
- Energy star furnaces

## **Fireplace**

- Use high efficient gas fireplaces
- Use direct vent to increase efficiency

## **Exterior finishes**

- Use at least 30 year to 40 year roof shingle saving thousands in future re-roofing needs.
- Use aluminum or steel products in siding, etc when at all possible instead of vinyl (PVC) products. ***FYI - Dioxins are a byproduct of PVC - the most toxic substance known on the planet. As well, PVC is not biodegradable and less than 1% can be recycled. Worse, due to illegal dumping and mishandling and burning, dioxins are now found all around the world. They are even detectable in our bodies. Dioxin exposure of the average American poses a risk of cancer of greater than 1 in 1,000.***

## **Interior finishes**

- Using no-VOC (volatile organic compounds) or low-VOC primers, paints, sealants and carpets. ***FYI - VOC can/does cause irritant of the eyes, nose and throat as well as headaches, fatigue and even cancer.***
- Include cold storages (plan specific) for a root/food cellar thereby keeping food fresh without refrigeration and increase storage capacity. This allows owners to buy and store lots of local food when it is in season while supporting local farmers. ***FYI - almost 50% of the food transported is lost to spoilage***
- Provides vaulted ceilings through engineered attic trusses to keep ceiling R values.

## **Landscaping**

- Provide water saver sprinkler heads, separate bubblers systems to planters
- Provide percentage % sprinkler timers and educate buyers how to use.
- Educate buyers on proper yard/water care and how to not over water. ***FYI - properly setting sprinkler timers and the % mode can reduce exterior watering by over 50%!***
- Encourages at least some natural-scape and/or desert-scape on each and every home/yard.
- Use native plants and trees to better cope with Utah weather, temperatures and droughts.