## BETTER REMODELING OUR GUIDANCE

As a designer and remodeler I find that attention to the following design concepts is likely to reveal robust and lasting, often even surprising, design opportunities. The right plan then integrates the green materials, techniques, and technologies that are being abundantly described everywhere you look. Good designers are alert to these principles. Develop the program for your project with these ideas in mind.

#### DON'T START WITH A SOLUTION

The single biggest mistake people make in making changes to their homes is to begin with a solution. Statements like, "I need an addition" are often the best expression we can make that we are not satisfied with how things are. But try to back up and attempt to understand the conditions that imply that answer. Then go further. Ask about everything that needs attention. Look for overlap. Look for patterns. Look for opportunities in the space that already exists. Identify green goals. You may in fact need an addition. Or you may just need to accept that you never use your dining room and find all you need right there!

#### WORK THRU EACH LAYER OF CHANGE

Stuff, Space, Systems, Shell, Site. Each layer represents a degree of greater permanence. Be most deliberate about the things that last the longest and change the least. Investments there last longest, and may offer the greatest returns. A location to which you are committed and is situated appropriately. A tight, super insulated, properly ventilated and durable shell. Efficient, simple and maintainable systems. Space that delights and serves the life of the household. Stuff that is beautiful, useful, and durable.

#### SEEK TO UNDERSTAND AND APPLY PATTERNS

Observe spaces working well in other homes and buildings and seek to understand underlying patterns: traffic flow, gathering space, ceiling height, alcoves, angles of repose, etc. Observe their presence or absence in your home and seek them as you plan. The book "A Pattern Language" is the respected guide to this ability, while the more recent "Patterns of Home" provides a succinct and well illustrated residential focus.

#### WORK WITH THE GRAIN

The woodworker studies the grain and works with it; the material volunteers to be used best by honoring the way in which it grew. We do best to look to the form and flow of a home's structure to discover what it wants to give us: spaces and traffic flow, views and light, areas of openness and privacy that are in place and available, either for new uses or to enhance and improve on existing ones. The house offers us these without a fight; no need for new foundations or arduous demolition.

#### MAKE THE EFFORT

On the other hand, substantial effort may return even more substantial rewards. A single grand gesture can sometimes allow six other features to succeed that otherwise wouldn't. Once you've squeezed all you can from what you have by working with the grain, if need be, get out the saw.

#### **D**O ENOUGH

Its tempting to anticipate and create space and function for every perceived eventuality. Be wary of temporary or overly specific needs. Assign spaces multiple functions. Give priority to enduring purposes. Do what present resources allow. Satisfying and dramatic results can flow from simple change.



#### **CHANGE USES**

Question the value of spaces you rarely use and consider alternatives. Informal lifestyles call into question the value of formal living rooms or two tables to gather at. We have converted formal living rooms into master suites and dining rooms into cozy TV spaces and home offices. Before adding space, make full use of what you have.

#### **B**REAK BAD HABITS

Over time we adapt to our home's bad habits. Shoes pile up in a back hall. Clutter accumulates on a kitchen counter; all the result of design deficiencies we come to accept and adapt to. Our homes break us in. Recognize these routines and seek solutions that change them.

#### AFTER USING ALL YOU HAVE, ADD A LITTLE

Every design effort should begin by assuring that existing space is being used effectively and imaginatively. Often that effort alone will reveal that the space you have is all you need. Sometimes the addition of only a few feet to the breadth of the home is enough to make magic happen. Don't assume you need a whole new room.

#### **D**ON'T ORPHAN SPACE

Too many projects create beautiful new spaces while leaving behind a chunk of valuable real estate that no longer has a purpose, or worse, duplicates what has been added; how many places can you sit? Be careful to think about what becomes of old spaces as you consider adding new ones.

#### MAKE IT BETTER

By all means make it yours, but at the same time make it ours. Make it better. Many choices will endure well past your term of use. Create something enduring, or easily modified by those who'll be calling this home after you've moved on. Look for solutions that deserve to last. Seek proven patterns of use and function. Act as a steward.

#### **C**ONNECT WITH THE SITE

No matter how small the opportunity, let the outside in. Create desirable outdoor "rooms" that are transparently accessible from within your home. Carefully frame desirable views rather than blast the facade with glass. Ration your budget to assure that the site is attended to.

#### KNOW WHEN TO LEAVE

When the effort and resources required to make suitable changes to your existing home become unreasonable, or require a configuration too idiosyncratic, it's probably time to find a more fitting alternative elsewhere. Leave what you have for someone it fits. A new structure may allow you to include more of the latest green features, but that is a deceptive virtue. Don't be lured by just that. Existing structures rooted in established neighborhoods long for the care, attention, and improvement that sustain communities. Your green sensibilities are just what they are waiting for.

#### **ABOVE ALL, MAKE IT BEAUTIFUL**

We pay attention to and care for the things we love. They nourish us. They inspire devotion. Everything we create, every choice we make, is an opportunity to generate beauty. Seek those opportunities in each decision. Take time, take care, and invest appropriately.

# **OWNING UP FUTURE FRIENDLY HOMES**

## FUTURE FRIENDLY HOME FEATURES

are attractive. They are durable, extremely efficient, exceptionally comfortable (in a way few of us have ever experienced), healthier, simpler and significantly cheaper to operate and maintain. They are responsive to the environmental impacts a home can present, while offering security and stability in the face of an uncertain future. And in good design hands, they are, as they must be, beautiful.

#### THEY ALIGN WITH OUR PURPOSE

Our work is to make your home a better place to live. We strive with you to make your home a place in which you and your familiy will thrive, find comfort, be convivial, connect with others and, if we can get it just right, be nourished, renewed, and fulfilled. But that's not all.

### WE HAVE A NEW LEGACY TO CONSIDER

Our homes are part of a larger fabric. It is not only our estate that we may be leaving our kids. Our homes are placing an uncomfortable burden on the earth coming generations will inherit. We need to recognize this impact on the global commons. We're invited to contemplate a necessary balance between our self interest and our shared interest.

### CHOOSING OUR FAIR SHARE

Trends in energy, the environment, and our economy make it clear: the next twenty years will be decidedly different than the last twenty years. We're all adjusting. We're also recognizing that each of our choices make a difference. Rather than wait on the sidelines, these challenges invite us to own up; to become alert and active; to recognize that ownership includes stewardship; to think clearly, then act, one choice at a time.

#### CHANGE IS OUR PRACTICE

We're up for this. We believe in the power and promise of design. Designers thrive where there are problems to be solved. We believe that there are exciting new opportunities to define what makes a home future friendly. We want you to understand and share our sense of excitement about what is possible. We want to share our capacity to make this possible with you. We look forward to making this work.

## **BEAUTIFUL** WE CARE FOR THINGS WE TREASURE

We strive to create homes of enduring beauty, vessels for living fully and well. These are homes to be loved, and thus cared for and maintained. Their charms are asking to last.

## **EFFICIENT** MISERLY USE OF TREASURED ENERGY

These homes treat energy as the precious resource it is. They are constructed to gain energy passively and place a miserly hold on every drop produced mechanically. Maximize gains. Minimize losses.

## **DURABLE** THUS LASTING AND MAINTAINABLE

Buildings that treat energy preciously must be durably built. The elements of the structure are essential to the buildings performance. They are built to last and easy to maintain.

## **COMFORTABLE** SURPRISINGLY EVEN AND STABLE

Homes that treasure energy are extremelyl comfortable. No drafts or temperature swings. No cold surfaces or windows that fog. Constant fresh air flow. Lower air temperatures without discomfort. Space that feels good.

## FLEXIBLE LONG LIFE AND LOOSE FIT

Buildings that last remain flexible. They expect and anticipate changing owners and changing uses. Rooms can shift and share functions. Alcoves and hall niches accept changing purposes.

## HEALTHY CLEAN AIR AND LIVELY SPACES

Constant fresh air at controlled rates provide consistent air quality. Indoor contaminants are constantly flushed. Lively spaces invite convivial living for personal well being.

## **SIMPLE** EASY TO USE AND CHEAPER TO OPERATE

Our goal is to reduce the size and complexity of mechanical systems and their controls. Fewer parts mean simpler maintenance and a system that's easier to understand.

## **RESPONSIBLE** ACCOUNTABLE FOR A FAIR SHARE

Future Friendly Homes, by decreasing their demand for energy while shifting from sources that contribute to climate change and resource depletion, contribute their fair share to solving this global challenge.

## **STABLE** SECURE AND PREDICTABLE

Dramatically reducing energy demand provides a desirable buffer against the unpredictable, but inevitable, increases in energy and fuel costs. Low loads align well with renewable sources that can be added on site. Now or later.

## **COHERENT** WITH ENVIRONMENT AND COMMUNITY

We strive to create buildings that are integrated with the life of the community and the sustainability of the environment. For a long, long time and for the good of both.



# **INTRODUCING PASSIVE HOUSE**

#### JAMIE WOLI

CERTIFIED PASSIVE HOUSE CONSULTANT

## WHAT IS A PASSIVE HOUSE?

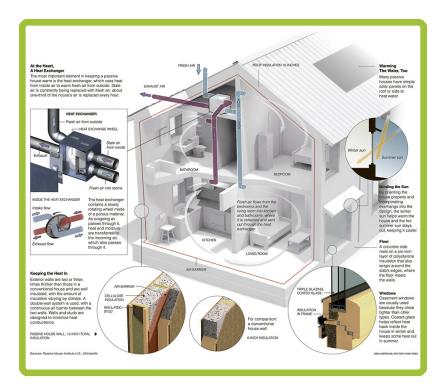
Passive House is a rigorous and uncompromising building energy design and performance standard developed and proven in Germany, being embraced internationally, and now available in the US.

## WHAT DOES IT DO?

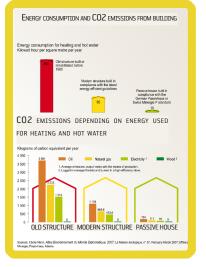
Passive House assures that a building takes the greatest advantage of available "gains" while minimizing energy "losses". The resulting "energy balance" provides a building with exceptional comfort and health, simplified operation, and dramatically lower operating costs.

## WHY DOES THIS MATTER?

Passive House is a delibrate response to the challenges of climate change and carbon reduction. By using dramatically less energy these are buildings that are truly "future friendly". Their benefits represent a significant redefinition of comfort and satisfaction. This is the future.







PASSIVE HOUSE STRINGENT STANDARDS: AIRTIGHT = .06ACH@50 pascals HEAT = 4.75 Kbtu/sf/yr. (10% Avg, Home) ENERGY = 38 Kbtu/sf/yr (55% Avg, Home)

## **ECONOMICS** MISERLY USE OF TREASURED ENERGY

By dramatically increasing the energy efficiency of a building, the mechanical system can be radically downsized. The cost savings are invested in more insulation and better windows and doors. This efficiency "sweet spot" is the basis for the Passive House performance standard and the key to its financial feasibility.

## **COMFORT** SURPRISINGLY EVEN AND STABLE

Passive House provides incredible year round comfort. Its built in ability to maintain healthy and comfortable room climates means that temperature, humidity levels, and the inside temperature of exterior surfaces stay within very close margins. The result is an indoor climate few of us have ever experienced.

## HEALTH FRESH AIR AND VITAL SPACE

A constant fresh air supply exchanges inside air with tempered and filtered outside air. Occupants are less likely to suffer from allergies and asthma. Filters in the ventilation equipment help reduce pollen and environmental pollutants from the outside air. Beneficial natural daylight is a result of the windows that provide solar gain.

## **ENERGY** LOW USE, LESS COST, INVITES RENEWABLES

The Passive House standard is the highest energy standard available. It results in an 80-90% reduction of the US average. The goal is simple: Reduce energy consumption up front by making a better building envelope – the slab, walls, roof, windows, and doors. It limits the amount of primary energy powering a home, dramatically reducing its ecological footprint and your utility bill. Alternative and renewable energy sources become more attainable, meaning that a Passive House can become carbon neutral or even produce more energy that it consumes.

# WHAT YOU CAN DO WHAT WE CAN DO FOR YOU

## We'RE A TEAM OF EXPERIENCED AND IMAGINATIVE GUIDES

Wolfworks is a team of experienced designers and builders who believe in the integration of those two practices. Put simply, we help people plan what to do, then do what we planned together. We believe that a thoughtully guided design process is the surest route to creating a satisfying home. We're here to help make your good home better.

## We'd like to provide you with useful actions

Here are a five important things you can choose to do that we believe to be constructive actions in the direction of creating a Future Friendly Home. These are each good places to start becoming alert and active stewards of the precious energy we depend on for the comfort and utility that allows us to live well.

	What you can do	WHAT IT PROVIDES	WHAT WE CAN DO	WHY IT MATTERS
1	Create an energy operating budget and monitor your use.	Awareness	Provide guidance and a simple spreadsheet that will help you understand and monitor use.	Its hard to determine what is effective if you aren't measuring and monitoring results
2	Install a wireless meter monitor and see what you are using in real time. You'll react!	Feedback	Provide guidance on installation. Insights to help drop the numbers you are monitoring.	Direct feedback inspires you to react right away. Its not abstract. Turn a light off and it shows.
3	Install and learn to use a setback thermostat. It will make a difference in your use.	Control	Determine the best model and provide guidance in setting up and using it effectively.	Using energy to condition and empty space is wasteful. Gain control and use less energy.
4	Replace lighting and appliances with more efficient alternatives. Energy Star and CFL are basic.	MINIMIZE LOSSES	Help evaluate uses and provide guidance about smart alternatives.	Replacing old lighting and appliances makes a significant difference in energy use.
5	Switch off items in standby mode. Use switchable or occupancy sensing plug strips.	Stop Leaks	Provide information and guidance about available devices and their use.	Some items use more energy off (standing by 24/7) than on.
*	Pay Attention. Become an active and alert steward of the energy you control.	CHANGE BEHAVIOR	Provide insight and guidance. Keep informed and share what we know. Learn together.	Howefficientlyhomes,fixtures, equipment and appliances actually operatedepends on how they are used. We make that difference.

## MORE INFORMATION AND GUIDANCE

We've created the Future Friendly Home blog as a place to share what we are thinking and learning. We invite you to do the same. Beside thoughtful and informative blog posts by Jamie Wolf and others at Wolfworks, there are pages that feature useful resources like books and magazines and websites we like and use. There is also an area devoted to the actions and interests of members of our community, and a special feature gallery of local architecture. We want you to visit and contribute, either by commenting or sending us your favorite resources - or a favorite building worth sharing.





WOLFWORKS FUTURE FRIENDLY HOME BLOG @HOMESTHATFIT.COM/BLOG