

Expanded ICF Comments; This feature is considered the “Ultimate Upgrade” because there are such enormous extended benefits

The following are “ICF wall attributes, as distributed by the manufacturer’s association, as measures of ‘Greenness’”:

A. Strength and Resilience- The monolithic concrete core makes for a much stronger structure when compared to wood-framed construction.....8.5 times the strength in the usual 2 by 6 wall, by controlled test. They won’t be pushed around by the bump of an auto, nor ordinary breezes or even fires....nor by termites or mold.

Nationally, in weather disasters, they are the only homes standing in the worst of conditions, without fail. Concrete resistance to fire is legendary, and Styrofoam will melt, but not sustain combustion. So while not technically fireproof, the outer walls (and center common walls) are still not flammable and will resist any fire on the “other side” for an extremely long time. Fire could however, spread roof to roof, but pictures we have show how California “flash” wild fires of recent years try, but quickly skip over ICF walled homes, and walls are left pretty well intact, and repairable, with insides intact.

Our Midwest climate is not considered particularly terrible, so it’s too easy to mentally skip this benefit as not important to us. Considering the extended life of these homes, discussed below, we’re into a unseen future however, (after planted trees mature for instance,) and who knows even what climate change will bring; weather patterns are already upset worldwide. But it occurs that we would be extremely comforted even now on a stormy night to know we had this protection; the author remembers many times our little family sought the “safest place in the house” when a thunderstorm threatened, finding nothing that really satisfied. So perhaps it isn’t going to save lives in every instance, but it’s awfully comfortable knowing that it’s available and that it is absolutely perfect for many more threatening events than we imagine. We’d be glad we had it every time we feel that need.

B. Energy Efficiency; A complex set of circumstances creates a phenomenal engine for saving energy, all done passively, never needing any kind of maintenance. The sandwich wall assembly creates a very airtight barrier to air leakage, and the R-value, a measure of resistance to energy loss, is about doubled. Thermal inertia plays a part, and there’s even a geothermal contribution, all as shown on Page 20 of our website, so **the total energy savings is considered to be 60%**, all proven in a controlled study, commissioned by the (ICF block) manufacturers’ association that claims a 60% reduction overall in the use of energy for heating and cooling. Most owners say they experience that “significant reduction” in their energy bills in an ICF walled home, without difficult precise measurement. The director of Better Building Institute, Don Deichman describes how this works in his website, where he concludes: “The cheapest energy you’ll ever enjoy is the energy you never buy.” In our website, he’s on page 24. There he also states his opinions about ICF walls where he advises: “If you want a high performance home, you need to start it with ICF walls, inferring the fact that they can never be added “after” a buildout without them.

C. Indoor Comfort: It's going to have great air quality generally and a very even heating and cooling, without quick changes. It's also going to be very quiet, and the sounds you want and control won't have outside "noise" as competition, making it much easier to focus on those sounds, like good music or even, television, and soft-spoken voices.

D. Extremely low maintenance: The "engine" driving maintenance benefits is a concrete wall sandwiched between two Styrofoam pads. There are no moving parts, no maintenance, not even duct tape or WD-40....can't get cheaper than "zero".

E. Sustainability : A long service life guarantees values into unforeseeable futures, and exterior materials have been chosen for the same qualities. Cosmetically, the interior and exterior surfaces can be exchanged with ease, giving a whole new "look" to the structure. With the original roofs offset as they are, so can the roofs be independently repaired or changed in the future, each independent of the other, without arguments with your neighbor. To quote a manufacturer's rep: "The highly efficient envelope can reduce the building's carbon footprint while the durable and robust structure fortifies it against nature's unavoidable hazards giving ICF buildings long service life, minimized maintenance costs and sustained values into a distant future." So really high marks for sustainability.

F. Investment Value: This would seem to be one of the few homes available on the market that can claim benefits similar to that of an investment, in that it has return on investment besides the intrinsic value of a home; it uniquely provides dividends or paybacks, cash and non-cash that ownership endows, a benefit that is usually not even considered at the time of a home's purchase, and not used as a comparable generally with other purchase options:

Extremely low maintenance; no ladders, or expenses.

Approaching 60% savings in energy for heating and cooling....passively, forever.

And so these homes are bound to maintain higher values into the distant future, too.

This feature was the theme of Thomas Edison's interest in concrete homes, (even without the Styrofoam) of 100 years ago, as told on page 27 of our web site.

The center dividing wall of all buildings, a "common wall" between two units, is also an ICF wall, so with back to back "interior" surfaces. So ordinary sounds from next door are just not heard, and it's an awesome firewall. This is therefore called a "common wall", and its center is the "lot line" defining the ownership boundary, measured at completion.