



Virginia Ready-Mixed Concrete Association

ICF Homes

What are Insulating Concrete Forms (ICFs)?

Insulated Concrete Forms (or ICFs) are forms or molds that have built-in insulation for accepting reinforced concrete. The first patent application for an ICF was registered in the late 1960's.

Since then, and particularly in the last 4 years, ICFs have been fast-becoming the mainstream preferred building product worldwide for all of the right reasons. These large, hollow blocks are stacked right off of the truck and filled with reinforcing bar and concrete. The end result leaves you with a high-performing wall that is structurally sound, insulated, strapped, has a vapor barrier and is ready to accept final exterior and interior finishes.



Why should you build with ICFs?

A better question would be, "Why would you consider building with anything else?" Here are a few of the best reasons to build with ICFs:

- **Comfort** – Nothing blows through reinforced concrete. There will be absolutely no drafts or cold spots. ICF homeowners have commented on how constant temperatures stay within their homes. Because of the tremendous thermal mass of the exterior wall envelope, temperature peaks are smoothed, and therefore homes are noticeably warmer in the winter and cooler in the summer.
- **Safe & Healthy** – There are no CFCs, HCFCs, or formaldehydes, and also no wood to rot and mold. ICFs are the answer for allergy and asthma sufferers. They have a two-hour fire rating and are termite and pest resistant. But most importantly, these structures can withstand a severe storm hit. Have you considered climate change into your future structure's design? Flexibility in Design – Reinforced concrete has tremendous proven design capabilities. For example, how many bridges do you travel over every day? ICF wall systems can support concrete floor and roof systems and give you the ultimate in innovative design.
- **Quiet** – Your outside noises are eliminated. Is your future building site near train tracks, airports, highways or recreational vehicle trails? Maybe you simply do not wish to hear the neighbor mowing his lawn.
- **Energy Efficiency** – Homes built with ICF exterior walls require an estimated 44% less energy to heat and 32% less energy to cool than comparable frame houses. Consequently, your HVAC systems can be downsized. Since floor systems are hung on the inside of the wall, real energy savings come when you design above-grade, thereby eliminating a huge heat loss area in conventional housing.

Build Green with ICFs - Protect our Children's Future!

Our world's number one challenge is to reduce the amount of carbon dioxide that is being discharged into our atmosphere. The earth's relatively sudden warming and consequent dramatic effects of climate change are directly related to these carbon dioxide emissions.

- Landfilling construction waste is reduced to less than 1% when you build with AMVIC. For every one tone of methane produced by landfilling practices, 20 tones of CO2 are produced.
- Every ICF home saves approximately 8.5 trees and effectively preserve nature's air filters. Ask yourself the question, "How much oxygen does sand and gravel produce?"
- If we can reduce our energy bills by as high as 40%, we can reduce CO2 emissions by the same amount. The world's international Kyoto agreement insists on a reduction of emissions by 50% just to slow down the effects of global warming. ICFs are a part of the answer to CO2 reductions. Storm Warning!

Most importantly, ICF walls provide safe shelter from severe storms, whose occurrence is increasing in frequency as well as severity. Provinces and states with no past history of tornadoes are now experiencing them. As a result of the recent number of hurricanes in their areas, building codes are being upgraded along the seashores of the Caribbean, Florida and the Carolinas. Since 1983, insurance claims due to a majority of severe storm events have been doubling every five years. Protect your investment, protect your family, and protect yourself. Build with Insulated Concrete Forms. Insulating Concrete Forms are the Right Choice!

- **Environmentally Friendly**
 - No CFC's
 - Replaces Timber
 - Non-Toxic
- **Builder Friendly**
 - Reduced Construction Time
 - Any Architectural Design
 - Replaces Insulation Material
- **Home Owner Friendly**
 - Reduces Energy Costs
 - Increases Resale Value
 - No Structural Deterioration