The advantages of ICF construction

"It Feels So Good to Save People Money" After working for a general contractor, Tim Lehotsky built his first house when he was 21. Now, 44 years later, Lehotsky is not only building houses, he also runs Wallrus Wall Systems, selling insulated concrete forms (ICFs) to contractors throughout northeast Ohio.

ICFs are lightweight, interlocking forms made of insulating foam, used to create basement and above-grade exterior walls. Once stacked, the hollow 16" x 48" forms are filled with concrete and reinforced with rebar, creating an extremely strong home with low energy consumption for heating and cooling, which is also environmentally friendly due to the reduced greenhouse gas emissions.

Lehotsky switched to ICF construction in 2000, after a 2-year investigation of the ICF building system. Ultimately, according to Lehotsky, "ICFs simply made the most sense. Build the most energy efficient home that you can, because utility costs continue to go up, making energy efficiency a good investment."

We caught up with Lehotsky, who, along with his partner, Mike Farrow, operate Big Sky Homes.

GDM: ICF construction is well-known for its energy efficiency. What are other advantages of building with ICFs?

Lehotsky: ICF homes are extremely strong and can better withstand dangerous weather conditions such as tornados and hurricanes. ICF homes are also so much quieter – I really like that – and more comfortable. There's no drafts.

GDM: Are there disadvantages to ICF construction as well?

Lehotsky: Because of the foam insulation on the inside, basement walls in an ICF home must have drywall, which adds to the cost. We also run the typical electrical outlets in the basement, which again adds cost over an unfinished basement.

GDM: Speaking of costs, how does an ICF home compare with the same design built conventionally?

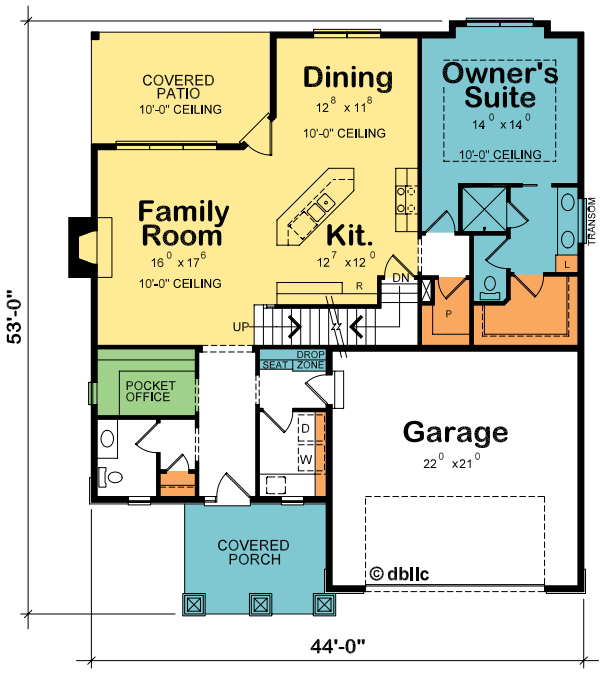
Lehotsky: For homes like [Design Basics'] Trenton and Bassett, building with ICFs is about the same cost per square foot as conventional

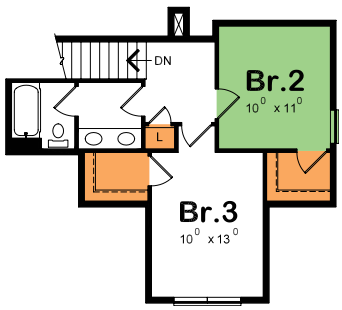
Bassett
#42240

walls 2"x6"
main level 9' high
foundation basement

1397 Main | 481 Upper
1878 Total Sq. Ft. (based on 2"x6" exterior walls)

Big Sky Homes may offer many options that differ from Design Basics' original plan.





construction. There's just more square feet due to the thicker ICF walls. [The department of Housing and Urban Development (HUD) estimated that building with ICFs would add just under 4% to the price of a 2,500 square foot, 2-story home.]

GDM: Do you have any tips for a builder who is building with ICFs for the first time?

Lehotsky: Make sure your penetrations for doors and windows are all the way through the walls, and that those doors and windows are exactly where you want them. The thicker ICF walls require wider jambs or jamb extensions, so those need to be ordered with adequate lead time. And you don't want to nail into the plastic ICF ties in sub-freezing temperatures, because they can break. When it's that cold, you need to screw into those ties. Also, the HVAC contractor needs to be on board with ICF construction and run the numbers to properly size the furnace and air conditioner. On a recent home, the HVAC contractor initially bid a 5-ton air conditioner, using a rule-of-thumb. But due to the R-25 ICF walls and tightness of the home, a less expensive 1 ½-ton unit was all that was needed.

GDM: Is it difficult to convert home plans designed from traditional framing to ICF construction?

Lehotsky: You want to make sure you are working with inside room dimensions and stretching the plan outwards, so that you don't pinch interior room sizes. Sometimes dual-pitch roofs can be more of an issue.

GDM: What are the most important things that buyers of ICF homes should know?

Lehotsky: An ICF home will outperform other homes, so there may well be money left over at the end of the month. For households that don't go in and out of the home very much, they may want to consider adding an air exchanger for fresh air. And if the power goes out in the winter, an ICF home can remain comfortable for up to three days without depending on emergency backup.

GDM: Does Big Sky Homes build ICF homes on a speculative basis?

Lehotsky: Yes. In addition to custom built homes, we start a new ICF spec home about every 10 months. Our last two spec homes were from Design Basics' Trenton and Basset plans. Design Basics' plans are done very nicely, and Design Basics allows us to make changes to their plans, other designers don't. The Trenton sold to the first person who walked through the home. It was ready for selections when they walked through. The Bassett sold to the second person through the home. It sold for over the asking price due to some upgrades the buyers could still make.

Striking Kitchen: A colorful palette consisting of black, white, and grays is a stunning contrast to natural wood floors.

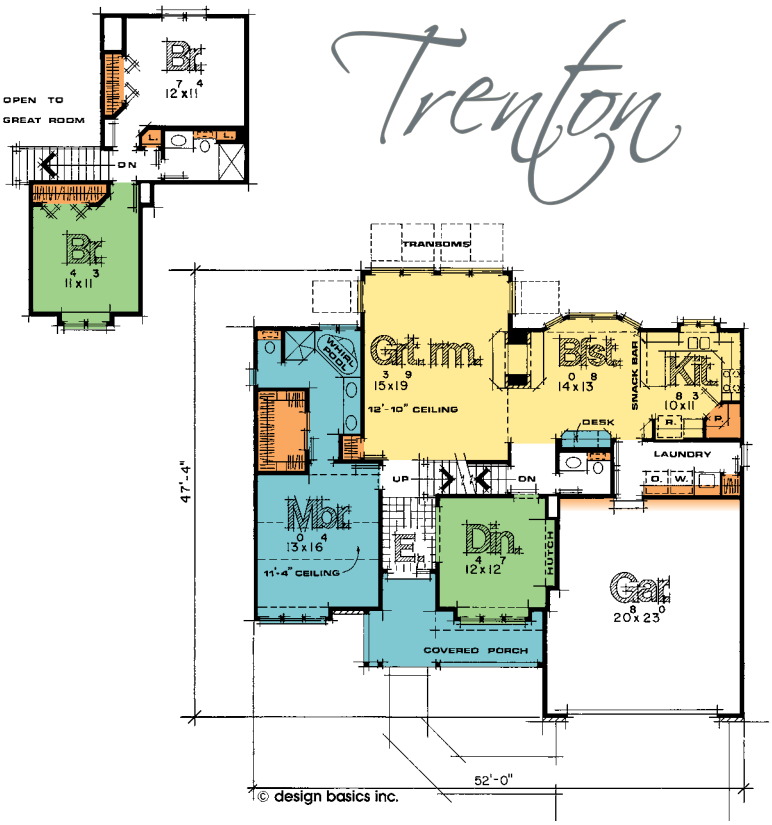
Curvy Appeal: Big Sky chose to curve the kitchen island, which serves as this home's activity hub.

Trenton
#1330

walls 2"x4"
main level 8' high
foundation basement

1421 Main | 448 Upper
1869 total sq. ft. (based on 2"x4" exterior walls)

Big Sky Homes may offer many options that differ from Design Basics' original plan.



GDM: How does building with ICFs make you feel, as a builder?

Lehotsky: I love it! In some ways, it makes me feel like a kid again because ICFs stack like Legos®. Really, it feels so good to save people money in the long run. Building with ICFs says we care about our customers, their overall investment, and comfort.

GDM: And what does buying an ICF home say about your customers?

Lehotsky: That they care about the environment, and that they're on the cutting edge.

Tim Lehotsky & Mike Farrow
Owners