The *Best Built* Home

Stan and Colette Corwin wanted to build the best home they could build. So they searched for a home that could save them money, was comfortable day-to-day and lasted for years to come. There were so many choices in the marketplace so the Corwins asked their architect for guidance.

The Corwin's architect suggested they build with concrete insulated forms. The forms are made from fiber cement board, insulated with Styrofoam and reinforced with light gauge metal studs to create an energy efficient, comfortable and durable home. Homes built from the forms can withstand high winds of up to 150 mph. There are no organic materials that could be food sources for mold and mildew, so the forms are a more durable alternative to conventional block and stick framed homes.

Costs Less
Comfortable
Durable

In fact, the Buildings *Technology Center at Oak Ridge National Laboratory* investigated sixteen different wall assemblies and found concrete-foam-concrete performed the best. The concrete insulated section outperformed all other assemblies, including structural insulated panels (SIP) and Insulated Concrete Forms (ICF). The Buildings *Technology Center* found that a concrete insulated section, with concrete on the interior, was *ten percent more efficient* than any other wall assembly.

The Corwins built their home with the ALL WALL System, a concrete insulated wall form commercially available throughout the United States. The system was designed and patented by H. John Griffin II, a licensed professional engineer in the state of Florida with decades of experience building homes from concrete. Griffin has assisted homebuilders for years, so the Corwin's were pleased to choose a tried and true system.

Why Concrete ?

For hundreds of years people have built concrete homes. Today's building codes require homes to use less energy and in some places to withstand hurricanes and earthquakes. The Corwins wanted a home that was the most sustainable. A home that uses less energy and has less of an impact on the environment. For all these reasons, a concrete insulated home is the best home that can be built. It's energy efficient, comfortable and durable.

Beautiful arch detail in concrete

A concrete insulated wall system with the concrete on the inside has significant benefits over other wall systems. The walls are non-combustible and non-flammable so they won't contribute to a house fire. The walls are solid, so outside air has no way to get inside. There is no food source for termites and no food source for mold. The walls provide a solid barrier to prevent rainwater from getting inside and a concrete insulated home is quiet—outside noise stays outside.

The strength of concrete

The Corwins built their home from concrete to make it last longer. "To be sustainable it has to last," said Stan Corwin. The concrete insulated home is the most efficient way to build with the most durable material available. Stan and Colette Corwin lived in their home for two years before volunteering to help with this case study.

Saves Energy, Saves Money

The Corwin's home was certified ENERGY STAR, and received a HERS score of 93.2, which means the Department of Energy has recognized their home to be at least 36 percent more efficient than an average home of similar size. Stan and Colette Corwin have kept energy data on their 2,380 sq. ft. home since occupying it in June 2003.

Energy saving spray foam

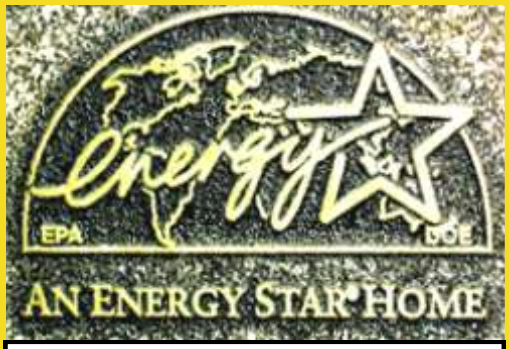
Stan Corwin saved money the day he moved into his new home. Each month the Corwins pay themselves a bonus. "It feels good to be making money," Stan Corwin said. "Our energy bill was only half of our previous home." In fact, the Corwin's return on investment has been better than the stock market.

According to data provided by the Corwins, the home averages 2.5 cents a heated/cooled square foot ($65/month). That's a fraction of the average cost in their region, which averages about $200 a month. The home cost the Corwins two percent more than what a conventional concrete block home or a stick framed home would have cost, but the utility bills have decreased beyond the added expense.

John Griffin P.E. shows 4" foam

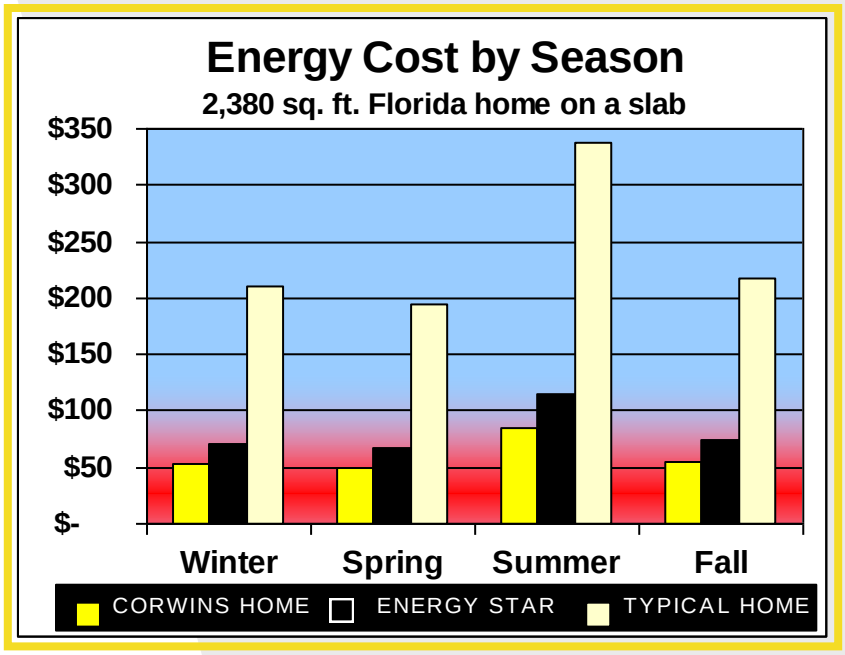
Comfortable Year Round Lasts Longer

Concrete insulated homes are comfortable because they are well insulated. The solid walls don't allow moisture laden air to get inside. In the Corwin's home, one room isn't hotter or colder than another room. "Every room in the home is comfortable," Stan Corwin said. In all climates, it is important that homes be analyzed to determine the heating and cooling requirements. Installing an inappropriately sized air conditioner or furnace can cause comfort problems.



Exceeds ENERGY STAR requirements

In the Corwin's home, the concrete is in contact with the interior, and a cool surface makes the room feel cooler during the day. Stan Corwin said, "We quit running the air conditioner at night because we didn't need to." Most people are comfortable between 65 and 80 degrees Fahrenheit at a relative humidity between 30 and 50% and the Corwin's concrete insulated home maintains the appropriate temperature and humidity year round at a fraction of the cost.



The Corwins home has been built so well that unseasonable weather does not affect their comfort. Even after the energy savings and comfort improvements, Stan Corwin knows that his *best built home* gives him what other homes can't: "A real sense of security."

"We designed our home to withstand winds up to 130 mph and fortunately we haven't seen winds that high but when the hurricanes came through last year our house didn't get a scratch." Stan Corwin said that when hurricanes pounded the coast of Florida in 2004, their home experienced winds of 80 miles per hour. Concrete insulated homes have been designed to resist winds upwards of 150 mph.


No drywall yet corners are flush

Durability isn't a question of severe weather alone. A poorly built home can allow water to get inside, which can cause mold to grow or the structure to rot. In a concrete insulated home, the walls are continuous and solid, and water cannot penetrate to the inside.

In concrete insulated walls there is no food source present for mold or pests. No food source means no chance for rot. "The home is so just so dense," Stan Corwin said, "that nothing can get through the walls." The Corwin's home is on a slab, but concrete insulated walls below grade should have a proper drainage plane and a foundation drain.

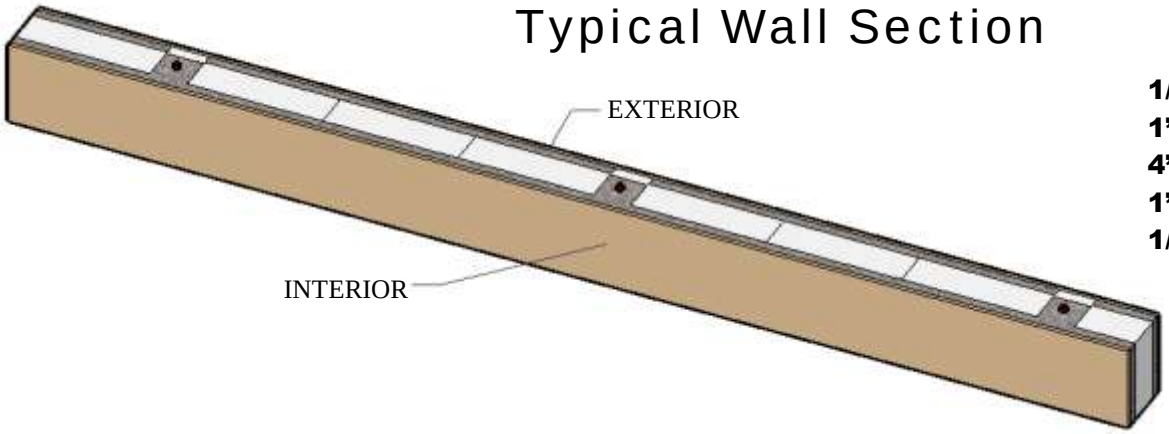
Given the opportunity to build over again, would Stan Corwin have chosen a concrete insulated home? "Absolutely. We were told it's the best way to build and we've found it's true. I recommend a concrete insulated home to everyone."

Stan and Colette Corwin's Home Specifications

The *Best Built* Home

Location: Alva, Florida (Ft. Myers)
Climate: Hot, humid (Zone 3 IECC)

Typical Wall Section



1/2" Hardiboard
1" Reinforced Concrete
4" EPS Foam Insulation
1" Reinforced Concrete
1/2" Hardiboard

ENERGY PERFORMANCE INDEX = 66 (2010); (*OLDER METHOD*) HERS Rating 93.2 (2003)
2,380 sq. ft., Single story on a slab, 9' walls.
ALL WALL System Concrete Insulated Home and
Lap Siding on 1/4" Furring Strips, High Efficiency Air Conditioner (13 SEER),
ENERGY STAR Appliances, Compact Florescent Lighting, Rainwater Harvesting with Cistern,
Ozoneator Water Filtration, Reverse Osmosis, Backup

ALLWALL™
SYSTEM
www.AllWallSystem.com
(954) 325-7578

Licensing Builders and Manufacturers in all 50 States

All Wall Company, Inc.
www.AllWallSystem.com
John Griffin PE
Fort Lauderdale, Florida
(954) 325-7578