Insulating Concrete Form Association

Location: Tampa, FL

General Contractor: Hunt Construction Group, Dallas, TX

ICF Subcontractor: ICON, Omaha, FL

Design Professional: Bill Murry, AIA, URS Corp.

Total Area of Building: 140,000 sq. ft.

Year Completed: 2004

Total Cost: $34 Million

PROJECT - FLORIDA ARMED FORCES TRAINING CENTER

ICF system/materials used include: Reward Wall Systems

Interesting facts about the structure:

- **Speed of Construction:** Contractor was able to cut several weeks off the construction time by using ICFs over other traditional methods of building.

- **Anti-Terrorism/Force Protection:** Designer was able to use the blast resistant properties of concrete and ICFs to meet AF/TP guidelines.

- **Energy Efficiency:** ICFs will cut the energy use in the training center over the long term and reduce life cycle costs.

Insulating Concrete Forms:

Advancements in insulating concrete form (ICF) technology have revolutionized the construction industry over the past several years, dramatically increasing energy efficiency and quality in buildings and homes. First introduced in Canada in 1966 as a lightweight material for easily forming concrete, ICFs are well engineered and industry supported.

In addition to its thermal benefits ICFs are flexible in design and construction, cost competitive, and code approved.

What Are ICFs?

ICFs are essentially forms for poured concrete walls that stay in place as a permenant part of the wall assembly. The forms, made of foam insulation, are either pre-formed interlocking blocks or separate panels connected with plastic or metal ties. The left-in-place forms not only provide a continuous insulation and sound barrier, but also a backing for drywall on the inside and stucco, lap siding, or masonry on the outside.

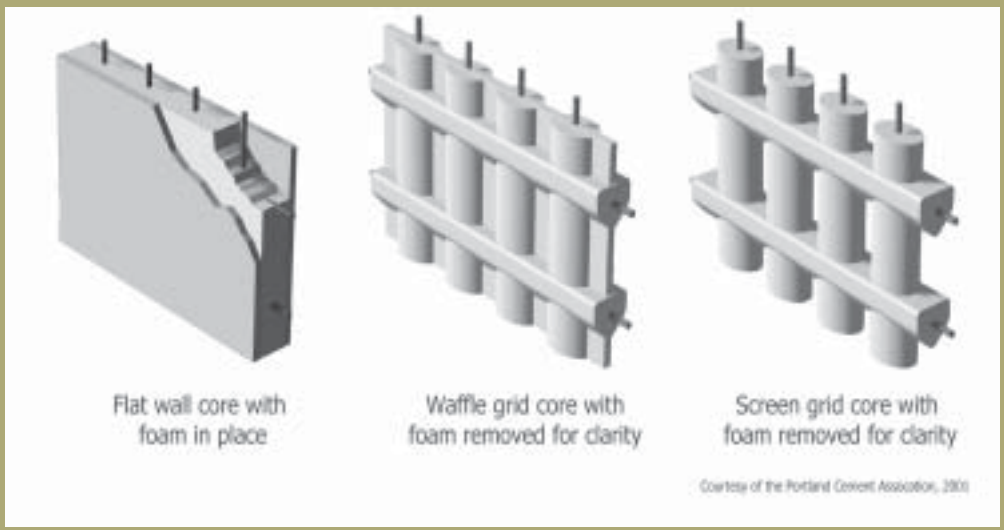
First introduced in Canada in 1966 as a lightweight material for easily forming concrete, ICFs have won over the hearts and minds of over 100,000 customers throughout Canada and the United States to become the fastest growing building system in North America.

ICF Configurations

Although all ICFs are identical in principle, the various brands differ widely in the details of their shapes, cavities and component parts.

Block systems have the smallest individual units, ranging from 8" x 1'4" (height X length) to 1'4" x 4'. A typical ICF block is 10" in overall width, with a 6" cavity for the concrete. The units are factory-molded with special interlocking edges that allow them to fit together much like plastic children's blocks.

Panel systems have the largest units, ranging from roughly 1' x 8' to 4' x 12'.. Their foam edges are flat, and interconnection requires attachment of a separate connector or "tie." Panels are assembled into units before setting in place - either on-site or by the local distributor prior to delivery.



Plank systems are similar to panel systems, but generally use smaller faces of foam, ranging in height from 8" to 12"and in width from 4' to 8' . The major difference between planks and panels is assembly. The foam planks are outfitted with ties as part of the setting sequence, rather than being pre-assembled into units.

Within these broad categories of ICFs, individual brands vary in their cavity design. "Flat wall" systems yield a continuous thickness of concrete, like a conventional poured wall. "Grid wall" systems have a waffle pattern where the concrete is thicker at some points than others. "Post and beam" systems have widely spaced horizontal and vertical columns of concrete which are completely encapsulated in foam. Whatever the differences among ICF brands, all major ICF systems are engineer-designed, code-accepted, and field-proven.

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ICFA
1730 Dewes Street
Glenview, IL 60025
(888) 864-4232
www.forms.org