



New Standards for Sustainability? We're already there.



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PRODUCT MANUAL

Access full product overviews, design guides, engineering specs, exclusive research and testing, and MORE!

Directions for Online Product Manual Access

1. Go to www.rewardwalls.com/productmanualkit.
2. Create your username profile by filling in information.
(If you already have a profile from previous visits – login now)
3. Your password will be emailed to you.
4. Go back to the Product Manual login page and enter your username and password to login and view the iForm or eForm manuals.

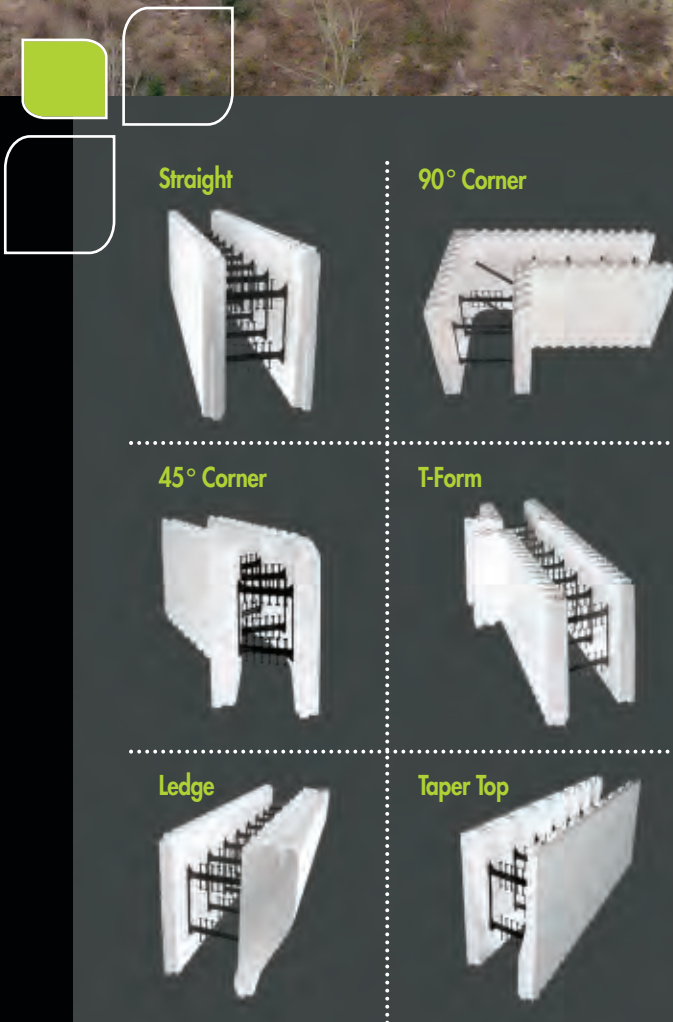


COMPANY HISTORY

Reward has been the foundation of the ICF industry for over 20 years by being one of the first ICF companies dedicated exclusively to ICF innovation and creation. Reward's company leadership has 70+ years of progressive experience in the ICF industry. Our customer service and support record is second to none, starting from the design phase through the completion of each project.

Throughout the years Reward quickly emerged as the industry pioneer and a recognizable industry leader by being the first to manufacture a reversible flat wall system, first to get approved for non-combustible fire ratings and by creating the only ICF specific concrete masonry anchor and drop-and-go ledge reinforcement systems. Plus, Reward has been *ahead of the curve* on market changes between residential and commercial sustainable construction.

Today, the unwavering commitment to customer-focused innovation continues. Reward continually embarks on ambitious research and development efforts that result in new products designed to improve building performance, enhance the ease of the use of insulating concrete forms and minimize the impact on the environment. Innovation is a cornerstone of our past success and of our future growth strategy.



PREMIUM CHOICE FOR SUSTAINABLE BUILDING

Architects throughout North America are choosing Reward Wall Systems insulating concrete forms (ICFs) for all types of residential and commercial construction, ranging from single-family homes to large scale commercial buildings. Reward's iForm® and eForm® product lines come in a wide variety of widths and configurations to fit any project's construction needs. All forms are completely universal and reversible. Reward provides the most in-depth building code approvals, a comprehensive technical manual, complete AutoCAD drawings, BIM objects and CSI specifications. Plus, we provide the onsite training, engineering and technical support professionals need to get the job done right. The key to sustainable structures must start with the building's enclosure. To design sustainable enclosures – **start with Reward ICFs.**

Get The Building You Deserve

Reward Wall System's goal is to make sure the ICF's role, function, and interactions are seamlessly integrated into a structure being built. Most other ICF companies only understand their products in isolation, and neglect the notion of integrating products into the buildings OVERALL design and performance.

We know how important it is for ICFs to function and interact properly with the building's other enclosure components such as the mechanical systems, the context of the exterior environment, and the activities and uses of the people inside the building.

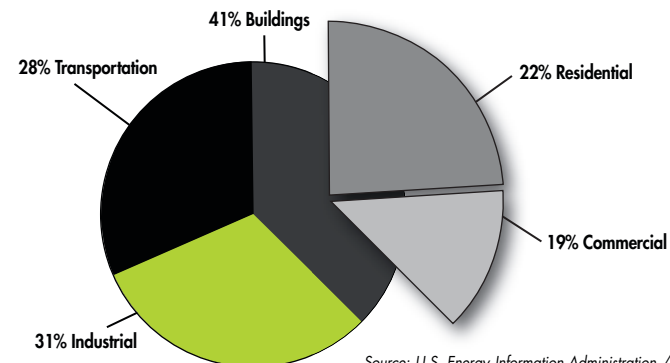
DESIGN BETTER BUILDINGS



Waterside Tower Condo at Norris Lakes: ICF shell completed in 3 months

Increased Focus On Energy Consumption

Buildings consume more than 40% of energy in the U.S., more than industrial and transportation.



Source: U.S. Energy Information Administration / Annual Energy Review 2008

WHY DESIGN WITH ICFs?

We Are Your ICF Building Science Experts

When designing a new building, designers can be inundated with many types of products and decisions with new and existing technologies. We are here to show that designing with ICFs will give you the building you expect, the ease of construction desired in the field, and the results clients need.

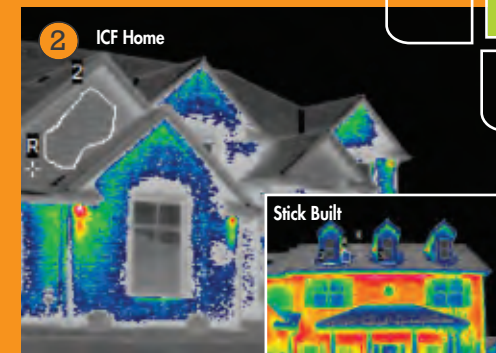
Bottom line – you will design a better building.

ICFs assist in enhancing a building's performance characteristics and Indoor Environmental Quality (IEQ) by improving air quality, mold control, thermal comfort and sound attenuation. Plus, ICFs can reduce heating and cooling costs by 50-80%, and create a disaster resistant, versatile building.

Exterior Environment • Building Enclosure Mechanical Systems • Interior Environment

These are the four building science principles that create the platform for the ICF enclosure solutions that Reward provides.

1. **Hotel Thermal Imaging:** 3rd party imaging estimated a temperature change to be $<2^{\circ}$.
2. **3,500 Square Foot Two-Story Home:**
The estimated temperature change to be $<2^{\circ}$.
The average heating bill is \$80.



High Performance Building Enclosure

When using ICFs as the wall structure you can create a superior building envelope to give the control of the indoor environment back to the occupants of the building. The Air Changes Hour (ACH) of an ICF building will typically range between .03 and .09.

Appreciate The Comfort

Feel the difference of an ICF building. With a tight building envelope, not only will it experience cleaner air, it will reduce the air changes keeping the inside temperature at a desired level and eliminating drafts and hot/cold spots.

Hear the difference of an ICF building. ICFs are ideal for owners wanting a quiet, distraction free environment. Our ICF wall assemblies have been tested to show STC ratings of 41 to 65 depending upon the ICF form size and interior or exterior finish.



Safer Buildings

ICF homes and buildings are safer than conventionally built structures, due to the steel reinforced concrete. This creates a building that, above all, provides a safe shelter for occupants. Reward ICFs have been shown to withstand hurricanes and tornados with winds up to 200+ mph as well as projectile debris traveling over 100 mph. All of Reward's ICFs are approved for combustibile and non-combustibile construction, and they have up to a 4 hour fire rating.

1. **Fire Damaged ICF Home:** This fire started in the wood-framed garage overnight. Luckily, Reward ICFs walls slowed the fire spread, allowing ample time for the family to escape and salvage the rest of their home and belongings.
2. **F3 Tornado in Stoughton, WI:** A tornado took a direct path through a neighborhood, demolishing everything in its path – except a lone standing Reward ICF home being constructed.



Design To USGBC's LEED Standard

Government and private buildings are all starting to focus on getting their buildings LEED certified and the immediate future shows more owners will start to build with green specifications. Reward's insulating concrete forms can contribute to credits that can receive up to 36 points for LEED v3 certification and play an important role in the qualifying credentials for Energy Star and other green certification programs. ICFs are naturally sustainable because they utilize concrete and because of the immense savings on energy one would expect to have when building with ICFs. See the overview table for the maximum point break down for each of the 6 topics Reward insulating concrete forms can contribute to.



Complete Summary:

Maximum points per credit that Reward ICFs can contribute to:

	Credit	Title	NC	School	CS
Sustainable Sites	SS Credit 5.2	Site Development – Maximize Open Space	1	1	1
Energy Efficiency	EA Prerequisite 2	Minimum Energy Performance	R	R	R
	EA Credit 1	Optimize Energy Performance	19	19	21
Material And Resources	MR Credit 2	Construction Waste Management	1 – 2	1 – 2	1 – 2
	MR Credit 4	Recycled Content	1 – 2	1 – 2	1 – 2
	MR Credit 5	Regional Materials	1 – 2	1 – 2	1 – 2
Indoor Environmental Quality	IEQ Credit 4.6	Low-Emitting Materials – Ceiling and Wall Systems	NA	1	NA
	IEQ Credit 7.1	Thermal Comfort – Design	1	1	NA
	IEQ Credit 7	Thermal Comfort – Design	NA	NA	1
	IEQ Credit 9	Enhanced Acoustical Performance	NA	1	NA
Innovative Design	ID Credit 1	Innovation in Design	5	4	5
Regional Priority	MRc2 (75%)	Material and Resources: Recycle and/or Salvage 75% Construction Debris	1	1	1
	MRc5 (20%)	Material and Resources: Use 20% Regional Materials	1	1	1
Total		Contribution of ICF Toward LEED v3 Credits	34	35	36

Faster Construction Schedules With Reward's 5-1 ICF Wall

Reward ICFs are a 5-in-1 wall assembly, essentially combining five different trades all in one system. Reward ICF walls can hasten the speed construction cycle by completing:

- **Structural Wall:** Steel Reinforced Concrete
- **Insulation:** Total of 5" of EPS with an actual R-Value of 22
- **Air Barrier:** Solid monolithic wall has no air leakage
- **Vapor Retarder:** PERM rating of 0.2 – 0.3
- **Furring:** Attachment strips embedded in the foam

ICFs also perform well in cold weather construction. The EPS foam on the exterior of the form insulates the concrete as it cures, so the project could continue, even through extreme cold conditions.

Innovative Product Line

Reward is known for being the most innovative insulating concrete form (ICF) manufacturer in the industry. We have paved the way with product developments since we've been in business, bringing many "firsts" to the market. We have relied on our most trusted brand of ICFs with the iForm® and eForm® product lines.

iForm®

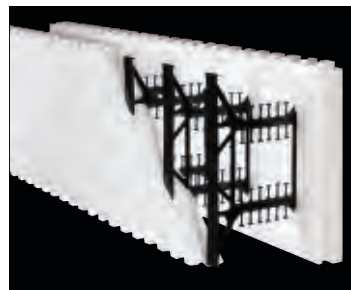
Our iForm has been the most popular and versatile form on the market. Available in five widths of 9", 11", 13", 15", and 17" and six universal form configurations: straight, corner, t-form, ledge form, taper top, and 45-degree.

eForm®

Our eForm line was engineered using the prescriptive method, to be able to design homes and light commercial buildings, set by requirements outlined by the NAHB for design, construction and inspection of ICF homes. It is available in two widths and four form configurations.

Plus More!

Reward gives unmatched customer support and we offer an exclusive line of ancillary products: **tieKey**® masonry anchor, **xLerator**® ledge reinforcement system and our **NoricF4**® Custom Metal ICF Frames (CMF).



iForm®



eForm®

We have a network of distributors and installers throughout all of North America!

Comprehensive Code Approvals and Fire Ratings

ICC ES.	ESR-1552
<i>Note: The ICC ES Report documents compliance to the UBC, SBC, NBC, IBC, IRC and the International One & Two Family Dwelling Code</i>	
Wisconsin.	200715-I
Miami-Dade County.	08-0805.19
City of N.Y.	MEA 116-03-M
Florida Product Approval.	FL1743-R2
City of L.A.	RR25418
CCMC.	13107-R
ASTM Physical Properties of EPS Foam.	C578
ASTM Fire Resistance.	E119
ASTM Flame Spread and Smoke Development.	E84



U.S. Patent #7437858

iForm®

Unmatched Corner Performance

Universal 90° Corner

There are no left or right corners; only one corner, designed to work as both left and right.



Double Bridging

This design provides superior support during concrete pours, virtually eliminating the possibility of blowouts.



Full Height Fastening Strips

Full height continuous furring on the corner's edge for easy attachment of finishes.

H-Bracket Design

Unique H-bracket gives a horizontal connector for more fastening points and increased strength. Ties are double stacked allowing for block to be cut in half and reused.

1. Material: 2 ½" EPS foam panel with a high density foam at 1.5 lbs per cubic foot for stronger formwork performance. Raised and indented vertical and horizontal ladder lines allow for easy identification of tie locations for attachments and serve as 1" cut lines.

2. Universal: No top or bottom, no right side or wrong end — even corners work as either left or right. 1" open tooth design greatly reduces dirt, debris and concrete between teeth, while allowing for secure stacking and a tighter fit.

3. Strong: Eight horizontally spaced vertical ties, placed 6" on center, and enhanced corner ties provide unmatched strength during the concrete pour. The 6" spacing and the symmetrically placed double crossbars provide up to 50% more support of the EPS foam panel, eliminating pillowing.

4. Easy: Snap-in rebar chairs let you place horizontal rebar in multiple positions and accommodate two pieces of horizontal rebar or overlapping ends. Eliminates the strain placed on walls because of improperly bent or crooked rebar.

5. Ties: The eight ties not only run the full height of the block for maximum strength, they serve as furring strips that are 1 ¼" wide and recessed a full ½" for faster application of TAFS and other finishes.



Reward Wall Systems designed and created NoricF4® Custom Metal ICF Frames for doors and windows, to further enhance the building envelope required by commercial ICF construction. The NoricF4 is a pre-assembled, 14 gauge steel, 2-in-1 custom metal ICF frame that combines the buck and the frame in one system, which eliminates waste, speeds door or window installation time and is customized to fit any specification.

The NoricF4 can reduce construction time by:

1. Eliminating the buck assembly
2. Eliminating squaring and stripping
3. Reducing bracing and support
4. Being ready to receive windows/doors of ANY manufacturer and of any size
5. Eliminating multiple trade steps
6. Anchoring the frame to the concrete wall by its continuous flange



1. NoricF4 For Doors

The NoricF4 door is custom designed and can be ordered to fit any door and hardware manufacturer of any type or size. The NoricF4 can be fabricated with the strike plate and hinge preps already in place at any location according to the project's specifications. The standard NoricF4 will include a press-in-place weather strip seal. The door seal is easily and quickly installed by hand with no tools. It provides superior weather stripping and can be easily replaced.



2. NoricF4 For Windows

The NoricF4 window is custom designed to any window opening size. The standard NoricF4 will consist of cased window head, sill and jambs. The NoricF4 sill will have an integrated opening for concrete placement and consolidation. A sill filler plate is available that caps the sill opening after concrete placement.

OTHER ANCILLARY PRODUCTS

tieKey®

Reward Wall Systems tieKey® is the only patent-pending ICF masonry anchor in the market. It is an easy to install, cast-in-place, adjustable masonry tie anchor embedded into the concrete wall formed by the ICF. This product is designed to provide the strength and security required when installing brick or stone veneer finishes.

Reward's

tieKey® is part

one of a two-part system: Reward's ICF masonry anchor and any standard wire tie. The masonry anchor is inserted through the ICF as the wall is constructed. The wire tie is installed by the mason contractor as the masonry facing is constructed.

The tieKey® has been tested for tension and compression strength by an independent laboratory to verify its capacity to resist lateral loads. This innovative product is available in two materials, either hot-dipped galvanized or stainless steel.



xLerator®

Available exclusively from Reward Wall Systems, xLerator® is the only patented ICF ledge reinforcement system to meet ACI 318 guidelines. xLerator® is for use with Reward's own 16" by 48" ledge form or taper top form and is designed for easy integration when used with our 11" or 13" iForm. It offers unmatched performance, along with a wide range of other benefits that save you time and labor.

- **Drop and Go:** Fully engineered ledge system allows you to easily place the ledge form, drop in the xLerator® reinforcement piece and fill with concrete
- **ACI 318 Compliant:** Only xLerator® meets ACI 318 guidelines
- **Weather Resistant:** Galvanized to protect from corrosion for lasting durability
- **Fully Engineered:** Comes complete with full engineering details for multiple applications
- **Maximum Strength:** Reinforcement in every corbel, along with horizontal placement, for maximum strength

1. Ledge form
with xLerator®

2. xLerator® closeup



U.S. Patent #7437858

1



Build Bigger, Taller and Faster!

Reward has built some of the largest and tallest ICF buildings to date. We've had experiences with tall walls to 54', 13 story infill hotels and massive 210,000 square foot movie theaters. Reward ICFs are versatile enough to even be used for retaining walls and swimming pools. ***We have the expertise and experience to do it all!***

OVER 50 MILLION SQUARE FEET OF WALLS HAVE BEEN BUILT USING REWARD ICFs

That's an area of 868 football fields – 9,200 miles lined end to end, spanning from Los Angeles to Cape Town, South Africa.

1. **Megaplex 20:** One of the largest ICF buildings in North America – 210,000 square feet completed in under 13 months!

TYPES OF BUILDINGS

- K – 12 Schools
- College and University
- Hotels
- Condominiums
- Multi-family
- Churches
- Medical Facilities
- Assisted Living and Nursing Homes
- Retail
- Theaters
- All Types of Residential

WITH REWARD ICFs, THERE ARE NO LIMITS TO YOUR DESIGN



- 2. **Pelican Beach Resort:** The tallest known ICF structure in North America – 148 feet high.
- 3. **University of Memphis:** Two student residence halls on campus, housing 468 beds.
- 4. **Retaining Wall:** 600 lineal feet around a Washington estate.
- 5. **Minimal Jobsite Waste:** 12,000 square foot home.



Design and Technical Support

With years of industry expertise and an engineer on staff, we are available to assist at any stage of the design process, when incorporating insulating concrete forms. Reward Wall Systems routinely assists designers in the following areas:

- Architectural Design
- Engineering Design
- Mechanical Design
- Project Design Review
- Recommendations for efficient product use

Product Application and Installation Training

Reward has a commitment to surpassing expectations in customer support, whether it's training personnel on techniques or advising sub trades on incorporating ICFs. We have corporately employed ICF installation consultants with 25+ years of general construction expertise. Reward Wall Systems is available for project planning, scheduling, onsite training and troubleshooting.

Sales and Services

Reward Wall Systems has sales managers for every region and staff at Reward's headquarters dedicated to customer service to make sure all orders are accurate and delivered on time. We have the manufacturing capacity to have a quick turnaround of product to the jobsite, and with 6 manufacturing locations servicing North America, we can assure product availability.

Reward gives you all of the resources you need to design your project with insulating concrete forms. We have the experience to give you the information and the know how to ensure success.

Architect Design Guide

- Helpful information on how to design with ICFs

CSI Specifications

- Reward ICF and NoricF4 performance specifications

Dynamic Block Library

- Create detail in elevation, plan, and wall section views

CAD Details

- 200+ details in DWG and DXF

BIM Objects Library

- Download our entire product library as parametric BIM objects to use with Revit Architecture through our website as well as through:
 - REED's SmartBuilding Index
 - SmartBIM Library
 - Autodesk Seek

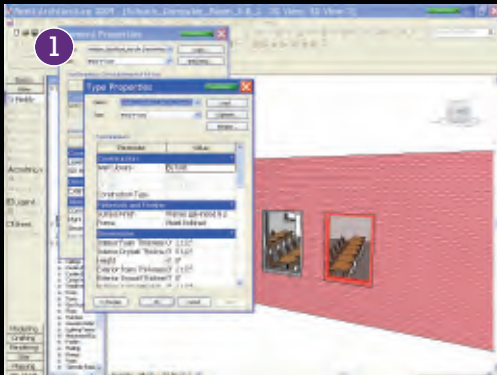
Third-Party Testing and Research

- Fire Rating Design Listings
- Sound Ratings
- Fastener Pull-out Ratings
- Exclusive Moisture and Mold Research

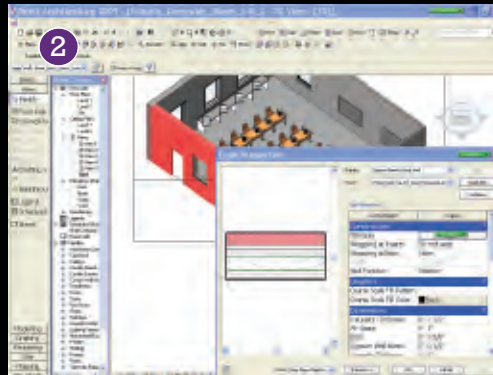
All of these items are easily accessed online at www.rewardwalls.com.



We lead our industry in innovation. Now we give you more tools to lead yours.



1. Packed with Critical Data of our ICFs



2. Editable ICF Wall Assemblies



3. Design 3D ICF Models



800-468-6344



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