

FUN IN THE SUN

...and a head start on the 2003 building season, too!



Where can you go to get away from it all, escape the gloomy winter weather, and give a jumpstart to your 2003 building season all at the same time? The Reward Wall Systems National Convention, of course!

This year we are heading for the sunny shores of Cancun, Mexico, January 12-14, with more time to play, but also with the same valuable tips and sharing of useful experiences and information that have always characterized these annual one-of-a-kind happenings.

The Jumpstart

Highlights of this year's agenda include:

- Interesting profiles of four different projects from across the country, presented by Reward customers just like you
- Back by popular demand, expert marketer Robert Berman showing you how you can set yourself apart from your local competition

Continued on Page 6

Index

550-Acre Florida2

Make a Connection2

Barns- No Bull!3

Oregon Condos3

Letter from the President4

Technical Tips5

ICFs: THEY'RE NOT JUST FOR HOUSES ANYMORE

Medical labs, restaurants, condominiums, churches, hotels, office buildings, warehouses. These are just a few of the types of non-residential projects that Reward ICF professionals throughout the country have recently planned, started or completed.

The commercial market has opened up to ICF construction in a big way, and Reward Wall Systems are quickly becoming the forms of choice for these types of projects.

"I believe the increase in commercial ICF construction is a testament to the overall strength of the ICF building concept," said Chief Operating Officer Hank Pfeiffer. "ICF construction provides benefits, not just to homeowners, but to commercial contractors and developers as well. It's hard to argue with ease of construction, quality, strength and durability of the finished exterior envelope.



The Baymont Inn & Suites in Salina, Kansas, is typical of the types of commercial projects Reward ICF professionals all over the country are building.

"The performance of the building in terms of energy efficiency, air quality and comfort, not to mention safety is as important, if not more important, in a commercial structure," he added.

Although Reward's eForm™ has long been, and continues to be, used in commercial construction of all kinds, it was the introduction of the iForm™ in the spring of 2001 that really caught the attention of commercial developers and contractors. With its flat wall configuration, universal design, multiple rebar holders, and full-length ties, among other innovative design features, iForm stands alone as an easy-to-use, efficient building product.

Harry Pilkington, general construction manager of Icon, Inc. supervised the installation of the iForm infill walls on the 11-story Waterside IV condominium building in Ft. Myers, Florida, which were completed last February. Pilkington says he is very impressed with the strength of the iForm itself, even before the concrete is poured. "iForm is very strong," he said. "We can use less bracing, and I have had no bulging, even on a 12' pour. I like the fact that it has no right or left side and no top or bottom. The markings on the side come in handy for cutting, and because it's so user-friendly, the learning curve is very short for new hires."

Pilkington also served as a consultant on the resort in Seaside, Oregon [See related story Page 3], and recently began wall construction on Waterside V, the fifth of eight high-rise condominiums planned in Ft. Myers.

Reward ICF professionals are expanding into the commercial market with impressive projects of their own, including:

- A medical lab in Oregon
- An office building in Nebraska
- A hotel in New York
- A restaurant in Kansas
- Churches in Oklahoma
- An office/warehouse in Colorado
- A ready-mixed truck maintenance shop in Minnesota

"Reward's mission is 'living, working and building better,'" said Pfeiffer, "and that applies to commercial as well as residential construction."

550-ACRE FLORIDA DEVELOPMENT



The 3,000 square foot clubhouse contains an exercise room, a play room, four bathrooms, an office, and a reception area.

RIGHT: Six 12-unit and five 8-unit buildings are planned for the all-Reward multi-family section of the Formosa Gardens development.



When James Salisbury, director of construction for Formosa Gardens Homes, Inc. of Kissimmee, Florida, started building the first houses in the 550-acre Formosa Gardens development back in 1991, Reward Wall Systems, Inc. didn't even exist.

Salisbury started building wood frame houses in the development, switching to Polysteel later on, and then to Reward Wall Systems when he found that Reward forms incorporated many of the changes he had been asking Polysteel for. The residential portion of the development is now complete, and Salisbury has moved on to the multi-family part of the development.

With 660 units approved, Salisbury has completed the 3,000 square foot clubhouse with Reward and has started the first of 11 planned condominium buildings. The development will contain six 12-unit buildings and five 8-unit buildings—all two-story and all Reward. Salisbury plans to start one building every other month.

Salisbury is using the 9 ¼" eForm for all the walls. "I like the eForm because it saves concrete, but provides the same strength in the wall. We have always had good success with eForm, even with walls up to four stories," he said.

PROJECT PROFILE

- Kissimmee, Florida
- Two-story condominium buildings
- 18,696 finished square feet/12-unit condominiums
- 11,108 finished square feet/8-unit condominiums
- 210,330 total square feet
- High strength masonry stucco finish
- Shingled roof
- Heat pump heating system
- 1 ½ and 2-ton HVAC units totaling 197 tons
- Hambro concrete floor system and Reward walls between units
- Metal studs for partition walls
- 9 ¼" eForm

REWARD MAKES A CONNECTION

PROJECT PROFILE

- Colorado Springs, Colorado
- 22,994 square feet
- One-story, bi-level
- Brick and stucco exterior finish
- R-Mer Lite floating low slope metal roof
- First public building in the area to use linoleum on all floors
- 11" eForm
- Architect: Clifford Taylor Architects, PC
719-633-0801

Although the church and school at St. Paul's parish in Colorado Springs, Colorado, stood but a short distance away from each other, the parish wanted to connect the buildings to create a sense of unity not only between the two buildings, but also between the people of the church and the school.

"They wanted a building that you could heat with a candle," said Clifford Taylor of Clifford Taylor Architects, P.C., also of Colorado Springs, who designed the connecting building. "That, and the fact that we were required to use masonry construction, is why we chose Reward Wall Systems for both the exterior walls and the interior bearing walls."

The wedge-shaped addition contains three meeting rooms, each with a seating capacity of 30, or a combined seating capacity of 100, at the wide end of the wedge, which connects to the church. Next is a 400-seat auditorium, which also can be used as a 300-seat dining facility. The narrower end of the wedge, which is connected to the school, contains a kitchen, and at the very end, a library.

Youth center and kindergarten rooms were added to the existing school, also using Reward walls. Construction is scheduled to begin soon on a gymnasium/classroom addition, which will be connected to the other end of the school, also with Reward walls.



The archway (left) shows where the wedge-shaped addition connects to the school. The doors lead into the 400-seat auditorium.



Both the exterior and the interior bearing walls were built using Reward ICFs

REWARD WALLS ARE GREAT FOR BARN—NO BULL!



Reward ICFs made this unique house/barn combination at Proven Sires Ranch practical and easy to build.

A 5,300 square foot barn that Wes DeBey, of Wes Debey Construction, Inc. of Hays, Kansas, recently completed not only houses the fine registered bulls of Proven Sires Ranch located near Hays, but also provides living quarters for the Proven Sires Ranch foreman.

The 3,840 square foot first floor of the building contains an office, feed room, bathroom and garage in the front, with the barn and loft in the back. A three-bedroom, two-bathroom apartment occupies the second floor of the building. The apartment also features a living room, dining room, kitchen and utility room.

“The owners chose Reward because of the sound proofing,” said Debey. “Having a home connected to a barn full of bulls can be very noisy.” He added that the owners were very glad they had chosen Reward when during construction a severe winter storm blew through the area and completely blew the partially completed roof off the structure.

“The original plans called for post frame construction to the barn loft, with a seven-foot knee wall built on top of the loft. The project manager made the comment that if the barn had been built to the original plan, they would have had more than a roof to rebuild,” Debey said.

PROJECT PROFILE

- Hays, Kansas
- 5,376 total square feet
- 3,840 square foot barn/1,536 square foot living quarters
- 2 x 8 tongue and groove yellow pine exterior finish
- Wood truss with metal roof
- HVAC-92,000 BTU 80%/ 3 ½ ton
- 11" iForm

OREGON CONDOMINIUM PROJECT TAKES ICFs INTO MAINSTREAM CONSTRUCTION

Wall construction on the main part of North America’s largest ICF project is now complete signaling to the rest of the construction industry that ICFs are here to stay.

“Now there can be no doubt that ICFs are a mainstream construction product that can be used on any size project from small

safe rooms to high-rise office buildings,” said National Sales Manager, John Moylan. “ICFs are accepted as more than just a custom home product that is chosen because of its energy efficiency. Now they are chosen more often for their feasibility, constructibility and performance.”

“The use of ICFs will only continue to grow,” he added. Wall construction on the massive 436,161 square foot, eight-story condominium-resort, located in Seaside, Oregon, began last February, and the top floor of the main complex was completed in early August. Installation speed of the Reward ICF infill walls accelerated as the building rose, until the last three 54,500 square foot floors were installed in just 12 days each.

Since the building is located right next to the Pacific Ocean, the project planning team was looking for new, more durable wall materials that could withstand extreme weather conditions, the corrosive effects of salt water and possible seismic activity. After evaluating several types of wall systems, the team settled on Reward ICFs.



The Reward walls of North America’s largest ICF structure were completed in early August.

“Basically, ICF walls are simply concrete walls,” said Stephen Yu, a structural engineer with Cary Kopczynski & Co. of Bellevue, Washington. “ICF construction is cost competitive because there is no need to add insulation after the walls are constructed. And since there is no exposed steel, it is corrosion resistant, and it meets the code criteria,” he added.

Reward is the only ICF company that currently holds National Evaluation Service Type I approval for non-combustible construction, which is essential for the construction of large, multi-story buildings. The Seaside structure is actually three independent, freestanding buildings configured in a U shape. Designed to withstand seismic activity, the building system consists of spread footing foundations, traditional cast-in-place 20" shear walls, 8" post-tension slabs and concrete columns. The shear walls are the main structural component. The concrete slabs and columns transfer the load to the shear walls, which then take the load into the foundation.

The buildings are designed for 12 inches of lateral movement each way at the roof level during a seismic event. The Reward walls are used as non-load bearing infill walls that are isolated from the concrete column and slab frame. This means that they basically “ride” on the concrete slabs during seismic movement. Since the Reward walls move laterally in both directions, they are more resistant to damage during an earthquake.

“The Reward ICFs functioned very well in this project. They’re a great product, and I will definitely use them in other projects,” said Yu.

Letter From the President



Office of the President

4115 South 87th Street Omaha, Nebraska 68127 1.800.468.6344 402.592.7077 Fx 402.592.7969 www.rewardwalls.com

Dear Reward Building Professionals,

You have probably noticed that this issue of the newsletter has a definite commercial construction emphasis. While recognizing that residential construction is, and always will be of major importance to Reward Wall Systems, Inc., I have been gratified to see many of you expanding into commercial markets of all types as well.

On the corporate level, we have made a concerted effort during the last couple of years to show the world that Reward ICFs can be used in any type of construction project. The completion of the exterior walls of the Waterside IV condominium in Ft. Myers, Florida, and the Trendwest resort in Seaside, Oregon proves just that—*Reward ICFs can cost effectively compete with any other type of wall system for any type of residential or commercial construction.* The general contractors on both projects are extremely pleased with the ease and speed of the wall installation. Our high-rise efforts continue with Waterside V in Ft. Myers, which is the fifth of eight, 11-story high-rise condominiums. Wall construction on the project began earlier this month and is expected to be complete by the end of January, 2003.

2002 has been a year of significant growth and progress at Reward. The following are developments in addition to our impressive start in high-rise construction that we are excited about:

- The rollout of the 9" iForm, which is now in full production and being successfully installed in a variety of applications.
- The production of the 11" and 13" brick ledge iForm, which will be available in December
- The expansion of our manufacturing facilities—in addition to our Nebraska and Virginia locations, we are now producing iForm in Pennsylvania and Colorado, and will soon add a full iForm plant in Oregon

All of these developments on the corporate level, combined with your high-quality work and marketing efforts have served notice to the rest of the ICF industry that Reward Wall Systems, Inc. and its network of ICF professionals is #1 in product, quality and service.

Best regards,

Edward L. Storm
President

P.S. By the time you read this, there still may be time to register for the 2003 convention. Each year these events get better and better, but I truly believe this one will be the most productive and most fun yet! Call 1-800-523-2120 to find out if you can still register.



The Problem of Mold And How Insulating Concrete Form Construction Solves It

Mold development in residential and commercial construction is a common problem that is gaining more prominence these days because of greater concerns about how it affects the health of building occupants.

The Makeup of Mold

People are exposed to mold every day, because it is virtually impossible to create a space that is mold free. Mold releases spores, or invisible “seeds” that are carried through air and water. When these spores land on a damp, moist base that has food and oxygen available they will start to grow. Mold is a type of fungus that decomposes dead organic material such as leaves, wood and plants. Individual mold colonies are too small to be seen without a microscope, and the color varies according to the food source and the mold’s age.

The Effects of Mold

Mold not only damages the health of the occupants of a building, it can damage or destroy building materials such as wood or gypsum board. Prolonged exposure to mold can lead to the development of allergies in susceptible people. Mold can worsen chronic asthma in those who already suffer from it, and it can cause infections in individuals with suppressed immune systems, AIDS, certain types of cancer and organ transplant patients. Mold also causes property damage. The mold feeds on organic material, like wood and paper, and decomposes it.

The Growth of Mold in Wood Frame Structures

Mold has four requirements in order to grow and survive— food, oxygen, temperatures between 40 degrees and 100 degrees F, and water or moisture.

Food

In a wood frame structure, mold can find food sources in the wood, the paper facing of gypsum drywall and other wood materials, all of which are the dead organic material on which it thrives. The mold will decompose the wood making nutrients available for it to grow.

By contrast, a Reward insulating concrete form (ICF) wall assembly consists of two inorganic types of material— expanded polystyrene (EPS) and concrete. Because the Reward ICF walls are inorganic, the food source for mold is eliminated, and it has lost one of the four requirements for its survival. Although most structures contain organic material, such as wood or the paper on the drywall, eliminating a food source for mold in the exterior walls puts Reward ICF walls at a definite advantage compared to wood frame walls.

Oxygen

Oxygen, another requirement for the growth of mold, is always present and obviously can’t be eliminated because people need it to survive. Reward walls provide no advantage for this condition.

Temperature

Since the inside temperature of most buildings is between 40 and 100 degrees F, mold is able to grow if a building has the other three conditions. Since the temperatures needed to prevent mold growth are obviously too extreme for comfortable living conditions, Reward walls

provide no advantage for this condition, either.

Moisture

Moisture is the last requirement for mold. Since oxygen will always be present, a food source will always be available, and indoor temperatures will generally be between 40 and 100 degree F, controlling moisture is the only effective strategy for preventing mold growth in buildings. And here Reward ICF walls provide a definite advantage over other types of wall systems.

Controlling Humidity

To prevent the development of mold in a building, it is essential to keep it dry. Since Reward ICF walls create a virtually airtight building envelope, it is easier to control the humidity and moisture in a Reward structure than in other types of structures. Indoor air moisture comes from outdoor air, bathing, cooking and breathing. It is recommended to keep the relative humidity of the building below 50%.

There are several ways to control humidity and prevent the growth of mold inside a structure:

- Using exhaust fans in kitchens and bathrooms
- Venting air from the clothes dryer to the outside of the building
- Avoiding the use of humidifiers
- Preventing moisture or water leaks in walls, roofs, windows, basement walls and plumbing pipes
- Using good basement wall water sealant and drainage practices, such as detailing, flashing and sealing around doors, windows and penetrations

One of the easiest ways to control and remove the humidity is to correctly size the mechanical HVAC system. It is critical that the higher R-value, low air infiltration and thermal mass that Reward ICF walls provide is accounted for in the sizing of the mechanical system. An HVAC system that is too large will not remove humidity adequately.

Preventing Air Infiltration

Reward ICF walls create a solid monolithic wall with no cavities like those found in metal or wood frame construction. Air, combined with a large temperature differential cause condensation, or moisture, to collect. Since there are no cavities in a Reward ICF wall, there is no air circulation within the walls. In addition, the concrete in the Reward ICF wall acts as thermal mass that is insulated on both sides creating a consistent temperature barrier between the outside and inside air temperatures. Finally, although the EPS in Reward ICFs is not an impermeable material, it is a closed cell polystyrene foam that has a high degree of resistance to moisture absorption.

Typical wood frame construction, on the other hand, will achieve a condensation point within the wall assembly because there is no thermal mass, and the wall is not insulated on the exterior and interior faces. Once the condensation point is reached within the wall assembly, moisture collects. If the wood frame wall assembly has vapor and air barriers, the moisture can’t escape, and since wood frame construction is a food source and the moisture is present, mold can begin to grow.

Reward ICF construction has obvious advantages over traditional wood frame construction in controlling humidity and preventing air infiltration, and therefore preventing the development of mold. Reward ICF walls can reduce the possible health risks and property damage resulting from mold. ■

FUN IN THE SUN (continued from Page 1)



- A leading expert on systems integration, with insights into how the Reward walls you build act as one component of the whole structure, and how all the components work together in an energy efficient structure

- Back by popular demand...again—Richard Rue, who spoke at the 2002 and 2001 conventions, and always has valuable information to share. This year, Richard will be addressing the problem of mold, which is a problem that has gained prominence recently in construction of all kinds.

Chief Operating Officer Hank Pfeiffer will review changes in the ICF industry that have occurred during the past year, and will join President Ed Storm for their wildly popular review of the past year and forecast for the coming year at Reward Wall Systems, Inc., and how these changes affect you.

The Fun Part

This year the convention schedule has been adjusted to allow us more time to play. Meetings will begin right after breakfast and end with lunch. That leaves you all afternoon and evening to enjoy all the amenities that Cancun has to offer:

- Pristine white sand beaches
- Boating
- Deep-sea fishing
- Snorkeling
- Ecological tours
- Touring the Mayan ruins (They should have used ICFs!)
- Vibrant nightlife

Plan to stay for our closing dinner cruise on a 120-foot boat scheduled for the evening of January 14.

There may still be time to register! Our registration deadline has passed, but we may be able to add a few last minute reservations. Hurry and call 800-523-2120 to see if you can take advantage of the bargain rates Pegasus Travel has negotiated for us. You can receive our corporate rates at the hotel three days before and three days after the convention. Make it a once-in-a-lifetime winter vacation. ■