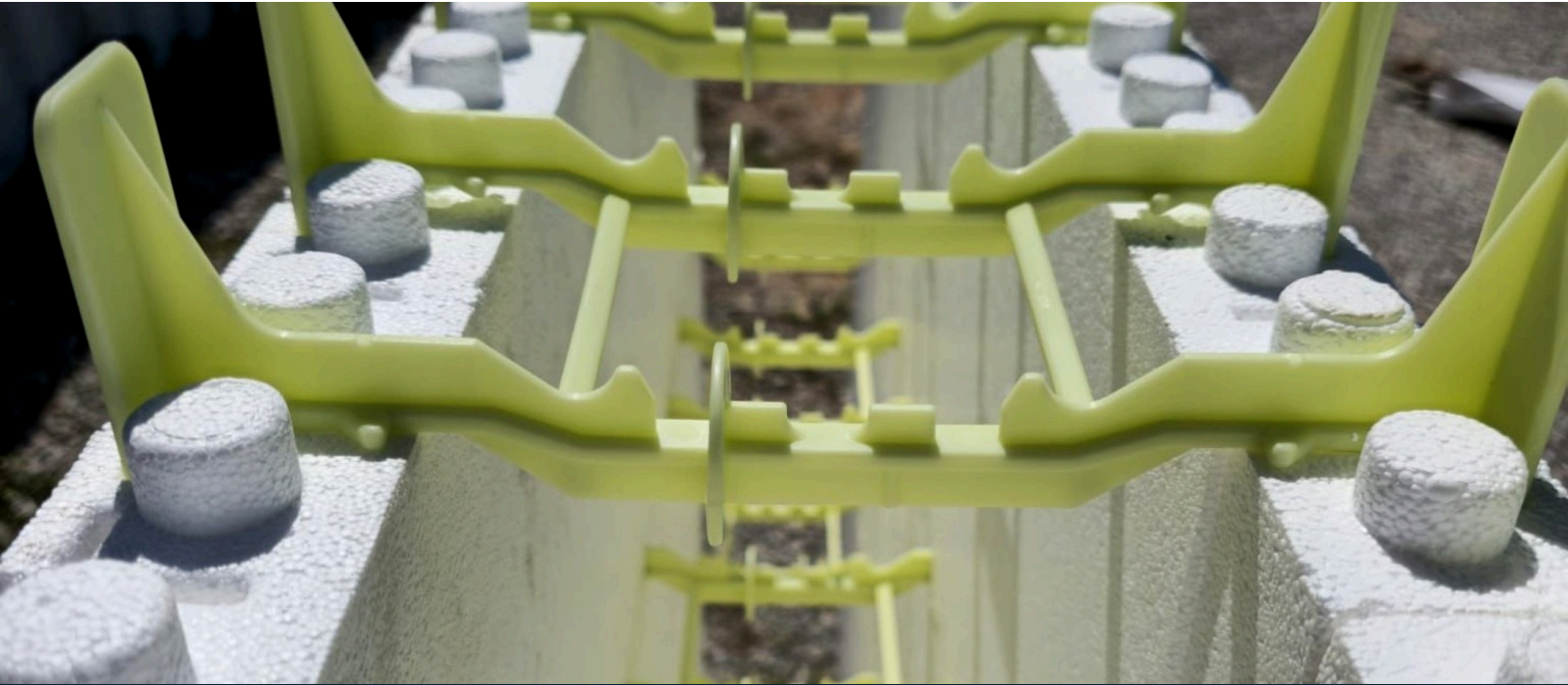


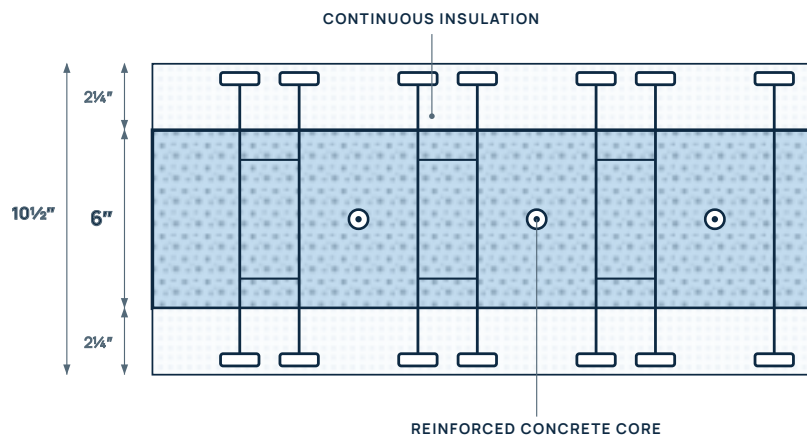


Build better.

Proven ICF technology, manufactured and supported in Belize.

BELIZE FIRST. CARIBBEAN CAPABLE.

THE WALL ASSEMBLY



Reinforced concrete. Continuous insulation. One wall system.

An insulating concrete form is a permanent mould for a reinforced concrete wall. Two engineered EPS panels, held apart by moulded ties, are stacked into courses. Reinforcing steel goes inside the cavity to the engineer's drawings. Concrete is poured into the form.

The concrete becomes the structure. The panels stay exactly where they are, permanently, as continuous insulation on both faces of the building — and as the substrate the finishes fix to. One operation produces the wall, its insulation and its formwork together.

One operation. Four results.

Structure

A continuous reinforced concrete core: the load-bearing wall the engineer designs.

Formwork

The form is part of the finished wall. Nothing to strip, clean, store or return.

Insulation

Continuous on both faces, in place before the pour. No second trade, no gaps at the joints.

Substrate

A flat, plumb plane on both faces, with fastening points built into the wall, ready for approved interior and exterior finishes.

You are specifying a reinforced concrete wall. Stelcor manufactures the insulated forming system used to build it.



ICF wall construction.

A proven building system

ICF is not experimental. It has been in continuous commercial use for close to sixty years, and independent laboratories and government studies have measured what it does.

60%

Up to 60% energy savings

Compared with the tested conventional 2×6 insulated timber wall.

ICFMA / CLEB Laboratories, 2017

58%

Greater effective R-value / RSI

Six-inch-core ICF wall against the same tested timber wall assembly.

ICFMA / CLEB Laboratories, 2017

250 mph

Engineered wind resistance

ICFMA reports ICF walls able to withstand winds up to 250 mph (402 kph).

ICFMA category material

4+ hrs

Fire resistance

ICFMA reports a 4+ hour fire rating for qualifying ICF wall assemblies.

ICFMA category material

40 & 42

Field sound transmission

Measured for ICF walls against 34 for the wood-framed comparison house.

US HUD / NAHB Research Center field study, 1998

60 yrs

In continuous use

Patented in 1966; documented in US HUD publications from the 1990s onward.

Patent record; US HUD

The technology is proven. Stelcor manufactures it in Belize — and puts a technical team in the same time zone as the job.

Independent evidence for ICF construction as a category. Each figure relates to the wall assembly tested or described by the cited source. Stelcor publishes figures for its own product against its own testing.

Heat, storms, salt, humidity

Buildings in Belize and across the Caribbean work in a demanding environment for fifty years or more. Three properties of the system do the work here.

A continuous structural core

Reinforced concrete poured in one operation, rather than assembled from individual units and mortar joints.

Mass between insulated faces

Concrete mass with insulation on both sides — the combination that moderates heat entering the building through the day, and airborne noise.

Insulation that cannot be skipped

It is the formwork. It is in place before the pour and permanent afterwards, on both faces, with no separate trade to schedule.

Compared with conventional block

Both methods produce concrete walls. Stelcor ICF combines reinforced concrete, continuous insulation, stay-in-place formwork and built-in fastening points in one coordinated system.

Operation	Conventional block	Stelcor ICF
Structural wall	Individual units, mortar joints, columns and beams poured separately	One continuous reinforced concrete core
Formwork	Built, poured, stripped, cleaned, stored	Stays in place as part of the wall
Insulation	A separate later trade, where specified	Continuous on both faces, installed before the pour
Services	Commonly chased into the finished wall	Planned into the wall before the pour
Finish substrate	Varies with blockwork and rendering quality	Consistent plane on both faces, with built-in fastening points
Trade sequence	Several dependent operations	One coordinated sequence



Coastal construction, Belize — the conditions the system is designed for.

The Stelcor block

A continuous concrete core

Six inches of structural concrete, poured in one operation, not assembled from units and mortar.

Insulation on both faces

2¼ inches of EPS inside and out, in place before the pour and permanent after it.

Fastening points built in

A 5-inch flange every 12 inches, half an inch below the finish face. Finishes fix to a target rather than to foam.

Standard assembly

Block format	1 ft × 4 ft
EPS face, each side	2¼ in
Reinforced concrete core	6 in
Nominal wall thickness	10½ in
Tie span	9½ in
Connectors per tie	2, at 4 in
Ties per block, per course	4
Tie spacing	12 in
Face scoring	every 2 in

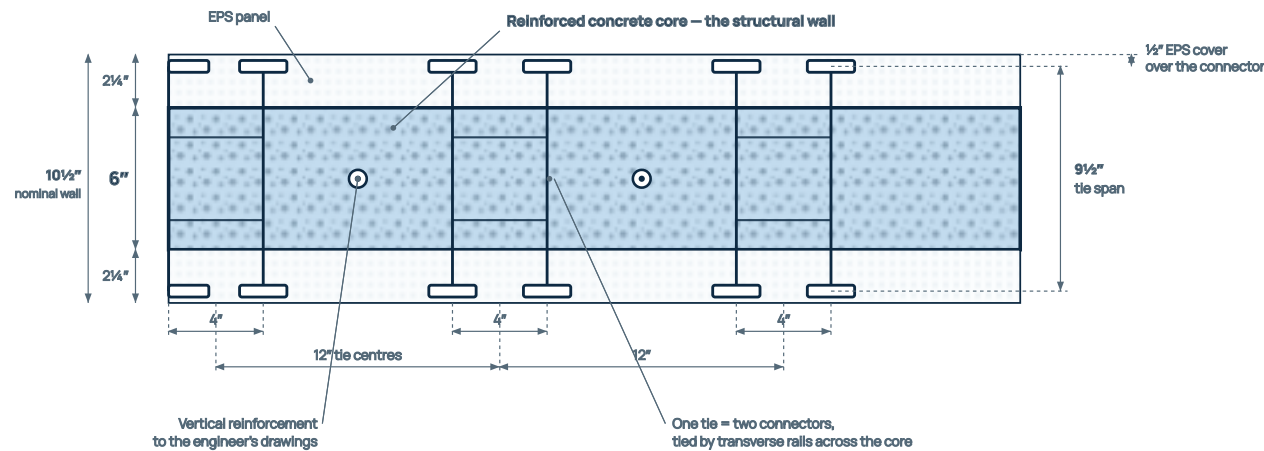
Ties sit on a 12-inch grid — four per block per course, with additional ties at butt joints and corners. The deeper moulded grooves in the panel face mark those lines, so the tie layout is read off the block rather than measured onto it.

Each tie carries two connectors, and each connector straddles the course joint: 2½ inches into the block below, 2½ inches into the block above. That ties every course to the one beneath it, and puts the fastening flange on a known grid all the way up the wall.

Manufactured in Belize to a consistent, repeatable dimension. Every block is the same block — which is what makes a takeoff reliable and a crew's second project faster than its first.

04.1 WALL SECTION — PLAN

Horizontal cut through the assembled wall. Each tie carries two connectors at 4" centres; ties run at 12" centres.



Specified by the project engineer

Reinforcement · concrete specification · wall configuration · openings and structural connections.

Supported by Stelcor

Product installation · stacking · bracing · sequencing · pour preparation.

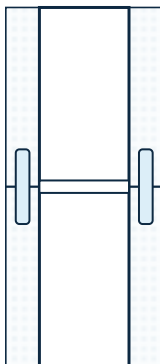
Five stages

The same wall at each step. Nothing is stripped, and nothing is added later that could have been built in.

05.1 FIVE STAGES

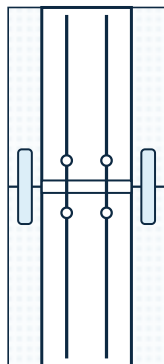
The same wall section at each stage. Vertical cut through the wall thickness, two courses shown.

01 Assemble



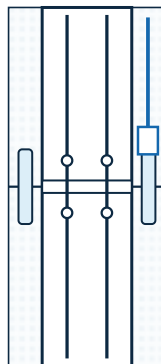
Panels and ties stack in courses, aligned and braced.

02 Reinforce



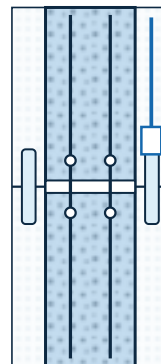
Steel placed inside the cavity to the engineer's drawings.

03 Services



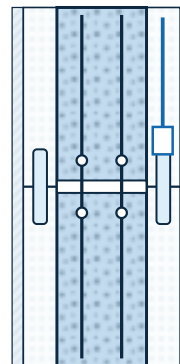
Penetrations and service routes set before the pour.

04 Pour



Concrete placed in lifts. The core becomes the structure.

05 Finish



Forms stay. Finishes fix to the tie connectors.

□ EPS panel ■ Reinforced concrete core □ Tie and connector | Reinforcement | Service route □ Approved finish

01 Assemble

Panels and ties stack in courses, aligned and braced. The moulded grooves mark the tie lines, so the layout is read off the block rather than set out by measurement.

03 Install services

Penetrations, sleeves and service routes are planned before the pour rather than chased into a finished wall afterwards.

05 Finish

The forms stay. The EPS remains permanently in place, and approved interior and exterior finishes fix to the tie connectors.

02 Reinforce

Steel is placed inside the cavity to the project's structural drawings, horizontally and vertically, seating into the tie connectors before the form is closed.

04 Pour

Concrete is placed into the form in lifts, creating the continuous reinforced structural core.

Stelcor supplies the forms and supports the crew with stacking, bracing, sequencing and pour preparation — so a crew building this way for the first time is not working it out alone.

Made here. Supplied here. Supported here.

Stelcor manufactures ICF and EPS products in Belize. The technology is proven. What Stelcor adds is a supply of it that is made close to the projects using it, and a technical team in the same time zone as the job.

Local production and replenishment

Product made and resupplied here, so a programme is not held to an import schedule.

Material takeoffs and documentation

Quantities and technical documentation from your drawings, for pricing and for the site.

Crew guidance on site

Stacking, bracing and pour sequence walked through with the crew running the job.

Less dependence on imported forms

A wall specification that does not rest on a container arriving on time.

Direct technical support

For architects, engineers and contractors — product specifications, dimensional data and wall assembly information.

A repeatable product

A standard block that can be specified across multi-building developments, with consistent envelopes throughout.

Proven technology. Local supply.

Stelcor manufactures and supplies the ICF system, and provides the product information your project team needs to coordinate it with foundations, floors, roof systems, windows and doors, services, waterproofing and finishes.

Design stays with your engineer, construction with your contractor — and the manufacturer is a phone call away, not a continent.



Residential construction, Belize.

Start with your drawings.

Choose a proven ICF system — with the manufacturer close enough to support the work.

Whether it is one home or an entire development, the time to evaluate ICF is before construction begins. Send us what you have — drawings, a sketch, a site, or just the building you have in mind.

What happens next

- 1 You send the project**
Architectural drawings if you have them. If you do not, tell us the building, the site and roughly when you want to start.
- 2 We come back with something usable**
Product specifications your architect and engineer can design to, a material takeoff, and the technical information that matters for your build.
- 3 We support the project team**
Product supply, installation guidance, sequencing and crew guidance through construction, so the first project your crew builds this way is not a learning exercise.

Send us your drawings

Material takeoffs · technical documentation · product pricing

Stelcor Solutions

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Third-party figures in section 02 relate to the wall assemblies tested or described by the cited sources: ICFMA / CLEB Laboratories (2017); US HUD / NAHB Research Center (1998); ICFMA category material. Photography shows construction in Belize.

Build better.

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