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## **Why ICF construction works – From one builder to another - by Joe Harnois**

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Joe Harnois

After years in the field swinging a hammer and running job sites, I can tell you this: what you build with matters. That's why I got behind insulated concrete forms (ICFs) and haven't looked back. ICF checks all the boxes – cost effectiveness, energy performance, durability – and it's changing the way we build across commercial, multifamily, hospitality, school and public safety projects.

#### Cutting Long-Term Operational Costs for Commercial Projects

Heating and cooling account for a big chunk of operating costs in commercial buildings, so efficiency matters. That's where Nudura ICF systems shine. With solid concrete cores between expanded polystyrene foam, ICF provides airtight construction and thermal mass that keeps interior temperatures steady.

In a hot-box study comparing wall systems, ICF walls maintained temperature for more than 50 hours before needing additional heat. In comparison, the traditional stud wall took 60 hours to reach a steady state and required heat immediately. Over time, the ICF system consumed 149% less energy. That translates into lower utility bills and real savings for property owners. Some ICF buildings have seen up to 50% energy savings compared to conventional framing.

#### Soundproofing for Multifamily, Hotels and Mixed-Use

Ever stayed in a hotel where you could hear every word next door? ICF solves that problem. With sound transmission class (STC) ratings between 46 and 72, ICF significantly outperforms standard wood framing (~36). For developers, that means quieter interiors, happier tenants or guests, and the ability to charge a premium for peace and quiet.

#### Hitting Energy Codes and Saving Tenants Money

If you're working in a state with tough energy codes, ICF can help you meet those requirements more easily. Developers throughout New England are choosing ICF to meet stretch codes without overcomplicating their builds.

Renters feel the benefits too. Studies show that ICF homes use up to 41% less electricity, saving tenants around \$270 annually. It's a strong selling point for property managers trying to reduce turnover and attract cost-conscious renters.

#### Building Tougher, Safer Schools

The same qualities that make ICF ideal for commercial construction also benefits schools. Education facilities must be safe, energy-efficient, and quiet enough to support focused learning. ICF delivers on all fronts, with a four- to six-hour fire-resistance rating, a continuous thermal envelope that reduces HVAC demand, and STC. Its proven strength also offers protection during catastrophic events, including seismic activity and severe winds. For school districts, that means code compliance, long-term savings, and peace of mind for educators, parents and communities.

David Prouty High School in Spencer, Mass. is a solid example. They chose ICF to meet modern energy codes and secured sustainability grants in the process. What they are getting in return is a

school built for durability, comfort and long-term savings.

### Public Safety Buildings: Strength Where It Counts

Police and fire stations operate 24/7, and the structures that house them need to keep up. ICF offers the strength and low-maintenance performance these buildings demand. In Bristol, NH, the town built its 19,800 s/f public safety building with ICF, completing installation in just 68 days. The choice was driven by durability, efficiency, and the capacity to hold up under constant use. That project took inspiration from the Portsmouth Fire Station, which has served the community with the same ICF backbone since 2010.

### Let's Talk Residential – ICF Delivers at Home, Too

As someone who's built houses, I can say ICF is just as valuable in residential construction. Homeowners get quieter interiors – ideal for dense neighborhoods – along with more stable indoor temps and lower utility bills. ICF homes are also fire-resistant, storm-resilient, and meet today's strict energy codes. If you're building in New England, that's a big win.

What surprises people is ICF's design flexibility. You're not boxed into a particular style. Whether you're going traditional, modern, or totally custom, ICF supports virtually any architectural look. It delivers performance without compromising aesthetics.

### Build Smarter with ICF

Whether you're planning a commercial project, designing a school, constructing a public safety complex, or developing residential units, ICF gives you a one-stop solution:

- Lower energy bills;
- Quieter interiors;
- Fire and storm resistance; and
- Long-term structural integrity.

And yes, building owners, tenants, and communities are noticing. I've built with wood. I've built with steel. And I'll put it simply: ICF delivers more value across the board.

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