

September/October 2024



The Insulating Concrete Forms Magazine



Disaster Resistance

California Insurance Crisis

Project Profiles



INTEGRASPEC
Pioneering
& Defining
the 'I' in ICF

WHY INTEGRASPEC STANDS APART

USER FRIENDLY - IntegraSpec ICF's design simplifies installation, reducing time, labor costs, and waste, offering a hassle-free construction process compared to conventional ICFs, with absolutely no need for clips or tape;

FLEXIBLE & ADAPTABLE - our ICF solution offers flexibility and adaptability, accommodating various designs and concrete wall thicknesses for customized, efficient, and robust structures;

PRECISE - IntegraSpec ICF, engineered for precision, ensures uniform wall assembly for consistent results, eliminating inconsistencies and enhancing reliable construction outcomes;

SUPERIOR SUPPORT - partnering with IntegraSpec provides access to experienced customer support and training resources, equipping your team for success in every project.

REVOLUTIONIZING CONCRETE CONSTRUCTION

Concrete Contractors, meet the future of efficiency and flexibility with IntegraSpec Insulating Concrete Forms (ICF). Embrace a solution that surpasses traditional ICF options, delivering unparalleled ease of installation and unmatched flexibility in your projects.

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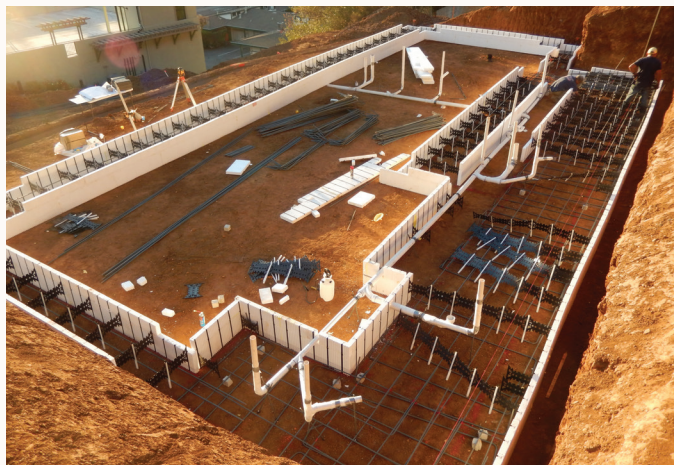
San Anselmo

Two homes next door to each other in San Anselmo California, were built using IntegraSpec ICFs. The larger of those homes, at 3,420 square feet, was the 2nd Runner Up in the 2024 ICF Builder Awards. The home is 100% ICF, including all gables, garage, bay windows, and dormers, with a concrete roof. ICF installation time for the two homes was a total of 89 days out of a total construction time for the two homes of 48 weeks. Nicholas Nikiforuk with IntegraSpec, the form manufacturer for the project, estimated that the team saved 3 to 4 weeks of construction time per house by building with ICFs.

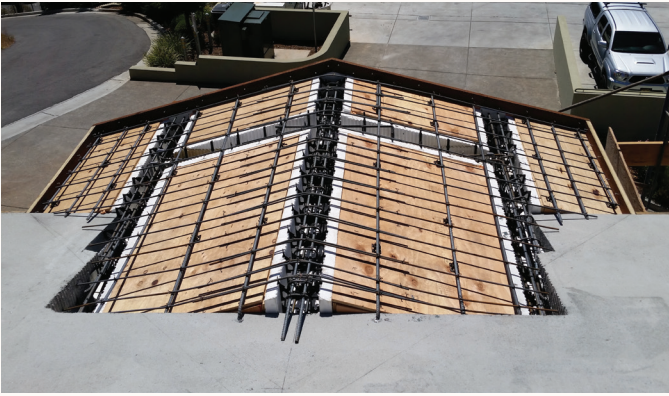
Design & Complexity

Both homes are located on a hillside and are designed with a lower-level walkout and an upper-back split slab on grade. The

ICF lower walls were used as retaining walls and the upper-level transition was accomplished with an ICF brick ledge to integrate with the slab. The floors used ICF forms to separate the levels, and wall heights vary from 10 feet to 14 feet. The design of the winning home features many vaulted ceilings and false dormers, all created out of concrete using ICF forms. There are false chimneys made of ICF material covered in stucco. The IntegraSpec independent panel allowed the contractor, Olenka Builders, to create the shapes. Breakfast nooks with banquet seating were created using 45-degree corners. Cantilever concrete porch roofs were created using ICF forms to create beams. Concrete for both houses had to be poured at the same time at each phase. The concrete soffit overhangs and roof were poured monolithically, with temporary triangular supports created to assist.



Photos courtesy of IntegraSpec



Construction took place in a period of heavy rain. Several mudslides compromised the construction of the basement foundations. “In two incidents, the hillside collapsed onto the ICF footings and wall forms, creating a delay as the debris had to be shoveled out and wheel barreled away,” says Nikiforuk. “Crews had to work late nights under lights to get ahead of the rain predictions so the footings and walls could be poured before the 12-foot excavated dirt walls slid onto the forms.”

The exposed dirt of the hillside had to be covered with plastic tarps to prevent erosion. The crews set up work tents to be able to cut and bend rebar while wearing full rain gear. “The ICF crew never stopped working, even though all other projects shut down in the area,” says Nikiforuk. To make matters even more difficult, there was a fire next to the building lot that delayed the project. The ICF product was safe, but the surrounding terrain was damaged.

Using the IntegraSpec independent panel, 6-foot-wide, by 18-inch-tall footings were created. Nikiforuk says this saved time and money. “They were easy to form and make level and they didn’t have to be stripped because they were stay-in-place,” he says. “The ICF gables were all constructed of ICF panels with zero waste as the independent IntegraSpec panel easily flipped and reversed as they were cut, to be placed on the opposite side of the gable.”

The IntegraSpec ICF buck with the built-in stud was used for all window and door openings. Nikiforuk says the strength of the IntegraSpec ICF system allows installers to pour a 10-foot lift with a 10-inch slump, which eliminates any possibility of voids and is self consolidating to eliminate the need to vibrate.



Sustainability & Impact

The entire building is resilient in the face of fire, termites, earthquakes, and mold, and is sound proof. The entire roof is concrete, formed with ICF material, complete with vaulted cathedral ceilings and cantilevered overhangs and porches. The soffit overhangs and eaves are all concrete poured monolithically with the roof. False dormers were created with EPS geo-fill pieces that created the shape of the dormer then skirted with rebar and poured with concrete. "The entire ICF concrete shell of footings, walls, floors, and roof create a passive geothermal shell equivalent to a cave above ground," explains Nikiforuk.



The thermal efficiency is very high, keeping the house cool in the summer and warm in the winter. The houses were designed and built to Net Zero standards. Numerous people toured the projects after the fires in Santa Rosa, looking for a sustainable alternative to rebuild their homes. Overall, the owners are very pleased and the local planning department was extremely impressed with the technology. ■

Project Statistics

Location: San Anselmo, California

Type: Residence

Size: 3,420 sq. ft.

ICF Use: 11,724 sq. ft.

Cost: \$2.2 million

Total Construction: 48 weeks

ICF Installation Time: 89 days

ICF System: IntegraSpec

Fast Facts

- Entire building is ICF material
- Concrete roof structure used ICF gables and EPS geofoam to create concrete dormers
- Concrete ICF stairs, inside and out
- Area under the stair porch created a wine cellar
- Concrete roof creates vaulted cathedral ceilings

Visit www.icfmag.com/project-profiles for more photos of this project.

