CASE STUDY

EDUCARE SAFE ROOM

Following the devastating 2013 Moore Tornado, the Educare Childcare & After School Program in Perkins, Oklahoma, located in Payne County, sought a permanent solution to protect its 75 students and 18 staff members. By utilizing BuildBlock ICFs and BuildDeck technology, the facility successfully constructed a multi-purpose safe room, designed to FEMA and ICC-500 standards, that serves as a high-tech media classroom while providing absolute protection against EF5 tornadoes.

About

Location: First United Methodist Church, Perkins, OK
Project Type: Childcare Safe Room
Project Start Date: June, 2014
Architectural Firm: Boynton Williams & Associates (BWA), Norman, OK
School District: Perkins Oklahoma

Safe Room: 208 SF Interior
Capacity: 75 Students/18 Staff
System: ICF (BuildBlock)
Standards: FEMA P-361, ICC-500

Background

For years, the Educare program—an outreach mission of the First United Methodist Church—relied on an interior hallway for shelter during Oklahoma's severe weather. The Board recognized that this was insufficient. They required a structure that met compliance standards without becoming a "dead space" that sat empty between storms.

The Solution?

BuildBlock provided a comprehensive structural envelope designed for maximum disaster resilience and energy efficiency.

1. Key Structural Components

- **Vertical Infrastructure:** The walls were constructed using 6-inch BuildBlock ICFs. These stay-in-place foam forms are reinforced with steel rebar and filled with concrete to create a monolithic barrier.
- **Fortified Roofing:** The project utilized BuildDeck Floor and Roof Decking to create a 6-inch reinforced concrete structural ceiling.
- **FEMA Compliance:** The combined system is designed to meet EF5 FEMA and ICC-500 standards, offering one of the strongest methods of disaster-resistant construction available today.

2. Performance Benefits

- **Extreme Insulation:** The finished walls perform like R-54 insulation, significantly reducing long-term energy costs.
- **Acoustic Comfort:** The sound-dampening characteristics of the ICF walls are designed to block the "roar of the storm," keeping children calm during high-stress weather events.
- **Multi-Use Design:** The 208-square-foot interior includes a restroom and was designed to function as a media room for year-round educational use.

3. Project Execution & Community Collaboration

- **Philanthropy:** The Educare program raised funds for two years through bake sales, yard sales, and charity golf tournaments.
- **Expertise:** BuildBlock distributor Ladwig Construction donated the labor and technical experience required for the build.
- **Personal Connection:** BuildBlock became involved through Director of Operations Nicole Zoellner, whose own children attend the program.

"There isn't a safer and more energy-efficient way to build, especially here in Oklahoma... I am glad we are able to help create a strong and dependable shelter for all of the kids and staff during extreme weather."

— Brian Corder, CEO, BuildBlock Building Systems

Results & Impact

The Perkins Educare safe room stands as a model for school safety in high-risk wind zones. By investing in ICF technology, the program achieved a 3-5% initial cost difference that pays for itself immediately through energy savings, while providing a "bomb-shelter" grade sanctuary for the community's most vulnerable members.