



**BENEFITS**



PRAIRIE LAKES CHURCH  
CEDAR FALLS, IOWA



## **ECO-BLOCK® BENEFITS**

### **DURABILITY**

Concrete is durable. ECO-Block® provides a moist cure which can result in a 25-35% stronger cure than removable form walls. When complete, ECO-Block® walls are virtually maintenance-free.

### **ENERGY EFFICIENCY**

ECO-Block® walls are energy efficient. Air infiltration is less than 0.01 cubic feet per minute (cfm) per square foot of ECO-Block Wall Assembly (or 0.15 air changes per hour (ACH) compared with wood framed walls that have up to a 0.5 AHC. ECO-Block® structures maintain comfortable and stable interior temperatures because the continuous insulation on both sides of the ICF wall creates a thermal barrier between exterior temperature extremes and interior comfort temperatures. This can reduce HVAC costs up to 50%. Because of the low air infiltration, the thermal mass contributions, and the continuous thermal envelope, the ECO-Block ICF wall will perform similar to a wood frame house with R-40 batt insulation.

Building a home with ECO-Block will create a structure that is super-insulated and therefore needs to have the HVAC system sized accordingly. Typically you can expect to see a 25 – 30% reduction in your unit size. For best results consult an engineer experienced with ICF construction.

### **SUPERIOR AIR QUALITY**

ECO-Block® structures eliminate moisture related problems, are allergen free, and eliminate unplanned air flows in the structure.

In traditional frame construction, mold can feed on the materials in the wall structure. This is not the case with an insulated concrete form (ICF) wall. The ICF wall structure consists of EPS foam panels filled with concrete. Both of these materials will not sustain the growth of mold.

### **REDUCED SOUND TRANSMISSION**

Sound Transmission Class (STC) is a measure of effectiveness in blocking sound. An ECO-Block ICF Wall Assembly achieves a Sound Transmission Classification (STC) of 51 with a 6" concrete core, 54 with an 8" concrete core, and 50 with a 4" concrete core.

### **SEVERE WEATHER MITIGATION**

ECO-Block® ICF Walls can be engineered to withstand any form of severe weather. This increases tornado or hurricane survival likelihood and provides safety from flying debris.

### **FIRE SAFETY**

ECO-Block® has a fire resistance rating (FRR) of four hours with a 6" and greater concrete core, without drywall; a two hour FRR with a 4" concrete core, without drywall, when tested in accordance with ASTM E119. The ECO-Block ICF has a Flame Spread Index (FSI) of five and a Smoke Development Index (SDI) of sixty-five when tested in accordance with ASTM E84.



## GREEN BUILDING & LEED

ECO-Block is a member of the United States Green Building Council (USGBC) which promotes sustainability through their LEED (Leadership in Energy & Environmental Design) program. This is an integrated system, and there are no direct plug-in credits for ECO-Block in the LEED system. However, ECO-Block can contribute *significantly* in several credit areas:

Sustainable Sites	Credit 5 – Reduced Site Disturbance	1-2 Points
Energy & Atmosphere	Credit 1 – Optimize Energy Performance	2-10 Point
	Reduced energy cost by 20%	2 Points
	Reduced energy cost by 30%	4 Points
	Reduced energy cost by 40%	6 Points
	Reduced energy cost by 50%	8 Points
	Reduced energy cost by 60%	10 Points
Materials & Resources	Credit 2 – Construction Waste Management	1-2 Points
	Credit 4 – Recycled Content	1-2 Points
	Credit 5 – Local/Regional Materials	1-2 Points
Indoor Environmental Quality	Credit 2 – Increased Ventilation Effectiveness	1 Point
	Credit 7 – Thermal Comfort	1-2 Points
Innovation & Design Process	Exceeds LEED performance credit in IAQ, Construction Waste, LCA	

For more information on USGBC and LEED, visit their website as [www.usgbc.org](http://www.usgbc.org).

