

The Advantage ICF System® is a stay-in-place insulating concrete forming (ICF) system used to construct cast-in-place concrete walls. The Advantage ICF System with a layer of expanded polystyrene (EPS) insulation on each side of the formed concrete wall provides superior thermal resistance. The higher thermal resistance and reduced air leakage provided by monolithic concrete walls formed by the Advantage ICF System are key attribute required by energy efficiency rating systems.

“LEED” stands for Leadership in Energy and Environmental Design. LEED for New Construction is a Green Building Rating System that represents U.S. Green Building Council (USGBC) and Canadian Green Building Council (CaGBC) efforts to provide national standards for what constitutes a “green building.” The table below summarizes requirements from the LEED rating system where the Advantage ICF System can provide points.

LEED Rating System for New Construction			
Energy and Atmosphere (EA)			
<i>EA Prerequisite 2: Minimum Energy Performance</i>			
Advantage ICF System can be used to achieve <i>required</i> building envelope design exceeding baseline energy performance targets per ASHRAE/IES Standard 90.1-1999 for USBGC or per Model National Energy Code for Buildings for CaGBC.			
<i>EA Credit 1: Optimize Thermal Performance – 10 Points Available</i>			
A building envelope constructed using the Advantage ICF System provides higher effective thermal resistance (R-Value) and lower air leakage characteristic that can contribute to one of the LEED optimized energy performance levels above the baseline requirement.			
USGBC LEED Version 2.1		CaGBC Version 1.0	
Design Energy Cost Base	ASHRAE /IESNA 90.1-1999	Design Energy Consumption Base	Model National Energy Code for Buildings
% Optimization	Possible Points	% Reduction	Possible Points
15%	1	24%	1
20%	2	29%	2
25%	3	33%	3
30%	4	38%	4
35%	5	42%	5
40%	6	47%	6
45%	7	45%	7
50%	8	51%	8
55%	9	55%	9
60%	10	60%	10



LEED Rating System for New Construction

Materials & Resources (MR)

MR Credit 2: Construction Waste Management

Advantage ICF system is a modular building component that can significantly reduce site waste and allow development of effective construction waste management plan meeting LEED for recycle requirements.

Indoor Environmental Quality (EQ)

EQ Credit 2: Increase Ventilation Effectiveness: One Point Available

Structures built using the Advantage ICF System can achieve superior air-tightness. A heat recovery ventilation (HRV) system is recommended as an integral part of the design process for structures built with the Advantage ICF System and will provide air change effectiveness to ensure that indoor air quality (IAQ) is maintained.

EQ Credit 4: Low-Emitting Materials: One Point Available

The key components in the Advantage ICF System are EPS insulation and the cast-in-place concrete wall. The Volatile Organic Content (VOC) and formaldehyde emissions from these materials after construction are virtually undetectable.