

HIGH-PERFORMANCE INTEGRATED DESIGN

ACHIEVING NET ZERO ENERGY EFFICIENCY BEGINS WITH AN OPTIMIZED DESIGN

By considering each home's unique climate and site conditions and using the proprietary **HP.ID** (High-performance Integrated Design) protocol, BONE Structure's design team can make informed decisions about a home's shape, orientation, and window placement, creating a space that is both energy-efficient and pleasing to live in by maximizing thermal and visual comfort.





A HIGH-PERFORMANCE HOME is healthy, comfortable, and energy-efficient.

BONE Structure's high-performance design services prioritize comfort and energy efficiency throughout the entire design phase of a home, from initial concept to final design. The process highlights the immediate impact of every design iteration, and allows for choices that best suit individual needs, by identifying potential issues as early as possible and drastically increasing efficiency in the design workflow.

ELEMENTS OF HIGH-PERFORMANCE DESIGN

Thermal & Visual Comfort

- Provide natural light
- Avoid uncomfortable glare
- Maximize views of the outdoors

Energy Efficiency

- Design for natural ventilation
- Use the sun as free heating resource
- Avoid uncontrolled solar gains
- Provide sheltered access to the outdoors

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* Compared to a non-optimized, traditionally built stick-frame house.



Thanks to the BONE Structure **IMS**[™] (Integrated Measuring System), accessories such as overhangs and shades can be connected to the structure to address glare and uncontrolled solar gains.

Solar energy is 6 times less expensive today than it was just 8 years ago. Residential solar panels are not only an environmentally responsible choice, they are also a great investment.

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Consider planning for solar panels early in the design process.

HIGH-PERFORMANCE ANALYSIS

For every BONE Structure Home built, a High-Performance Analysis is performed in parallel with the design process. This analysis ensures the project meets all the BONE Structure standards in terms of energy efficiency, access to natural light and avoidance of glare and overheating.

Simulate energy use to ensure a Zero Energy Ready home.



Simulate daylight, glare and direct sunlight to maximize comfort.



Provide design recommendations to ensure maximum thermal and visual comfort along with energy performance.



Issue: Increased glare

Solution: Include overhangs

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UP TO 89% Recycled steel percentage in a

BONE Structure home. Moreover, the entire structure is recyclable.

Did you know?

The amount of solar energy that hits the Earth in one minute meets the world's energy needs for one year.







Ready to start planning your high-performance home? Contact us today and let's book a meeting!

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