



SUSTAINABLE PRACTICES WITH SPANCRETE® HOLLOWCORE

WHAT IS SUSTAINABILITY?

In 1987, the United Nations Brundtland Commission Report declared: “Sustainable development” is that which meets the needs of the present without compromising the ability of future generations to meet their own needs.

WHAT IS GREEN BUILDING DESIGN?

“Green Building Design” is design and construction practice that reduces the unsustainable negative impact of the construction and operation of buildings on the environment. It addresses not only environmental impact, but also considers societal and economic factors that create benefits for all building stakeholders.

WHAT IS LEED?

In 1998, the U.S. Green Building Council (USGBC) developed a standard called “LEED” or “Leadership in Energy and Environmental Design” to define and measure green building design practices. The LEED system addresses sustainable building practices in 6 key areas:

1. Sustainable Sites
2. Water Efficiency
3. Energy and Atmosphere
4. Materials and Resources
5. Indoor Environmental Quality
6. Innovation in Design

HOW CAN SPANCRETE CONTRIBUTE TO SUSTAINABLE PRACTICES? SPANCRETE CAN CONTRIBUTE IN 3 KEY AREAS:

1. Sustainable Design with Spancrete

- Spancrete hollowcore plank can maximize floor spans (span to depth ratio up to 50), which reduces the amount of support structure and footings in a building.
- Large clear span design also facilitates future remodeling and reuse of the building.
- Spancrete easily accommodates design features such as underground or tuck-under parking to reduce site disturbance and hardscape.
- Use of high strength ASTM A416 prestressing strands uses much less steel than an equivalent CIP deck with reinforcing bars and composite steel decking.

2. Sustainable Product Performance with Spancrete

- In Spancrete Wall Panels, high levels of continuous insulation and thermal mass improves the energy performance of the entire building, and may allow heating and cooling demands to be downsized.
- In Spancrete Wall Panels, many attractive low maintenance and durable concrete finishes are available, eliminating the need for painting, brick veneers, EIFS, & stuccos; conserving materials and eliminating site disturbance, dust and runoff from on-site work.

3. Sustainable Manufacturing with Spancrete® Hollowcore

- Use of efficient structural design and concrete mix design to use less cement.
- Steel used in Spancrete is high in recycle content.
- Spancrete producers purchase 50% to 100% of raw materials from local suppliers and deliver products to job sites often less than 200 miles to help qualify for regional materials credit per LEED MR 5.1 & 5.2.
- The Spancrete slipform machine does not require any disposable wooden formwork to cast the product.
- Natural curing is used in the South and in the spring and summer months in the North to reduce energy use. When required, active curing is done efficiently with radiant heating under the casting beds in a manufacturing plant, compared to much higher heating needs in an open job site environment.
- Waste concrete in the plant is crushed and used for construction fill. The steel is also separated and sold to a recycler.
- Spancrete is shipped on truck loads with an average efficiency of 95% of the truck capacity.
- The Spancrete supplier can remove debris from field cutting of openings from the job site.

For detailed information on the LEED point system, go to www.usgbc.org or review the appropriate LEED rating system guide.