

Project Profile



USG SECUROCK® Gypsum-Fiber Roof Board

Application/Building Type:

Public Facility

Project Name:

Crissy Field Environmental
Education Facility

Location:

San Francisco, California

Architect:

Project FROG

Featured Products:

SECUROCK® Gypsum-Fiber Roof Board



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Sustainable Roof System Tops Off One of the Nation's Greenest Park Buildings

SECUROCK® Gypsum-Fiber Roof Board's High-Recycled Content Helps Support Project FROG's Sustainability Objectives for Environmental Center

San Francisco, CA

While it was built in less than four months and will only be used for three to five years, San Francisco's award-winning environmental education facility, the Crissy Field Center, promises to be an outstanding model of sustainability for students, park visitors and the entire building industry. A major contributor to the project's sustainable design is its roof system that features an assembly of environmentally-friendly building materials including USG SECUROCK® gypsum-fiber roof board made from 95 percent recycled content.

The Center, operated in partnership by the Golden Gate National Parks Conservancy, the National Park Service, and the Presidio Trust, serves nearly 20,000 youth and families annually, both on-site and in the community. Many of the participating youngsters had never been to a national park, even though they live just a few miles away.

A major public works project required the Center to temporarily relocate from their original location. High-performance classrooms, a science lab, art room and café comprise the Center's temporary 7,500 square-foot location, which is expected to qualify for US Green Building Council LEED® Gold Certification. The structures were designed by San Francisco-based Project FROG (Flexible Response to Ongoing Growth). Project FROG designs and manufactures bright, inspiring, sustainable buildings, all of which were priority attributes for this project.

"The FROG solution combines key attributes, such as abundant natural daylight, to minimize the need for electrical light, low-VOC (volatile organic compound) content materials for improved air quality, better sightlines and optimal acoustics, to achieve an environment that enhances learning without compromising aesthetics or affordability," said Mark Miller, AIA, LEED AP, founder of Project FROG.

The Center's new location is at the easternmost end of Crissy Field, one of San Francisco's most popular recreation areas. While there are few opportunities for new building on the waterfront, this project was approved because of its sustainable and flexible nature, according to Nikki Tankursley, Project FROG's Director of Marketing.

"Sustainability is a key element in the park's strategy for serving visitors," said Greg Moore, executive director of the Parks Conservancy, lead agency for the Crissy Field Center relocation. "This new building exceeds our expectations."

"...SECUROCK gypsum fiber roof board's 95 percent recycled content contributed significantly to the overall roof system qualifications for enough points to achieve LEED certification."



Roof Major Contributor to Sustainable Design

The Center's nearly 10,000 square-foot roof assembly is a major contributor to the project's sustainable design and anticipated LEED Gold certification. A significant feature of the sustainable roof is SECUROCK gypsum-fiber roof board manufactured from a combination of synthetic gypsum and cellulose fibers. Synthetic gypsum is an environmentally-friendly byproduct from electrical plants and is indistinguishable from natural mined gypsum rock in performance and quality. By sourcing this material for use in board production, USG takes what previously was landfill waste and turns it into a useful product. The product's 95 percent recycled content has earned SECUROCK gypsum-fiber roof board a Green Cross certification from Scientific Certification Systems.

"The tipping point for Project FROG was the high recycled content," said Jennifer Link-Raschko, USG Architectural Service Manager—West for Specialty Products Division. "LEED Material and Resources Credit 4 points can be difficult to achieve but SECUROCK gypsum-fiber roof board's 95 percent recycled content contributed significantly to the overall roof system qualifications for enough points to achieve LEED certification."

Another critical benefit SECUROCK gypsum-fiber roof board provided this project was mold and moisture resistance. The gypsum-fiber roof board has been treated for uniform moisture resistance throughout the panel. In addition, it has been tested and scores a 10, the highest score for mold resistance, on ASTM D3273.

"The new Center is located within immediate proximity of the saltwater and San Francisco Bay, one of the harshest environments for building products," said Josh Barthel of Alliance Roofing California, the project's roofing contractor. "SECUROCK gypsum-fiber roof board's moisture resistance helps create long-term peace of mind for product durability."

The product's homogeneous composition provides exceptional bond and low surface absorption with no risk of facer delamination in all types of adhered systems, including single-ply, fluid-applied, built-up, spray foam, metal and modified bitumen roofing.

"The product," noted Barthel with Alliance Roofing, "cut cleanly and worked well for cutting numerous angles on the multiple roof areas that were small and odd-shaped."

Besides SECUROCK gypsum-fiber roof board, the roofing membrane also supports Project FROG's and the Center's sustainable building objectives. The Duro-Last roofing system's pre-fabricated and highly solar reflective roofing membrane helps reduce energy consumption. The company's manufacturing process recycles scrap back into roofing membrane and other products, and after its useful life on a rooftop, the membrane itself is recyclable.

"Sometimes the roof is overlooked but it is increasingly being viewed as a viable solution for sustainability in architecture and construction," said Steve Kolos, LEED AP for Fisher Development, Inc., the relocation project's general contractor and a preferred partner for Project FROG buildings.



Shared Values on Sustainability

USG has worked with Project FROG since 2008 when the company's ceilings solutions were featured in the "School of the Future, Today" zero-energy classroom demonstration building at USGBC's Greenbuild International Conference and Expo. Since then, Project FROG has utilized USG ceilings products in every one of their built projects including the Crissy Field Center.

The sustainable building design leader first used SECUROCK gypsum-fiber roof board in Hartford, Connecticut, at the Watkinson School which features three interconnected, energy-neutral classrooms. Project FROG also used SECUROCK gypsum-fiber roof board at the Jacoby Creek School in Bayside, California, and at the Vaughn Next Century Learning Center in the Los Angeles Unified School District. The two companies believe in a life-cycle approach to sustainable design and building.

"We look at companies that share our dedication to sustainability. We've definitely done our home work in every element of building, so we only spec the greenest products. Early on we identified USG as having high-quality performing products that were also some of the most sustainable," said Project FROG's Nikki Tankursley. "Going green is not just about using green materials. It is so much more. It encompasses the entire process—everything that happens before products are installed and everything after. We look at entire life-cycle of projects, fabrication through transportation and installation, and throughout the life of the building while it's in use and then after life.

"This project is pretty much 100 percent recyclable. After the Crissy Field Center moves back to their original location, the interim building will be re-used and possibly relocated and reused."

In the meantime, the Center is open and has integrated its current building's green technologies and sustainable design into its programming, including sustainable development workshops and site tours.

About USG Corporation

USG Corporation is a manufacturer and distributor of high-performance building systems through its United States Gypsum Company, USG Interiors, Inc., L&W Supply Corporation and other subsidiaries. Headquartered in Chicago, USG worldwide operations serve the residential and non-residential construction markets, repair and remodel construction markets, and industrial process markets. USG wall, ceiling, flooring and roofing products provide leading-edge building solutions for customers, while L&W Supply center locations efficiently stock and deliver building materials across the United States. For additional information, visit the USG website at usg.com.