



# FIBERGLASS ARCHITECTURAL SOLUTIONS

**STRONGRAIL® Architectural Handrail and Fencing**

**Custom Architectural Handrail and Fencing**

**SAFPLANK® Decking**

**EXTREN® Structural Shapes**

**DURASHIELD® and COMPOSOLITE® Building Panels**

**DURAGRID® and DURADEK® Fiberglass Grating**

**DURAGRATE® Molded Grating**

**Custom Fiberglass Shapes**

**Architectural Application Profiles**





# STRONGRAIL® FIBERGLASS HANDRAIL AND FENCING SYSTEMS



STRONGRAIL® architectural handrail and fencing technology integrates aesthetic appeal with an easy-to-install, cost-effective picket rail system for Rupe Construction in Houston, TX.



The Moody Gardens Convention Center parking garage in Galveston, TX is outfitted with an attractive STRONGRAIL® architectural handrail system. A durable fiberglass architectural handrail system is the ideal solution for a building that experiences high levels of traffic.





## **STRONGRAIL® FIBERGLASS HANDRAIL & FENCING SYSTEMS**



White, square STRONGRAIL® system with round pickets.



Square, black STRONGRAIL® system with square pickets.



Rounded STRONGRAIL® system with square pickets in white.



Rounded STRONGRAIL® with square pickets in a custom color for a residential installation.



STRONGRAIL® architectural handrail systems mount quickly and easily to posts and walls.



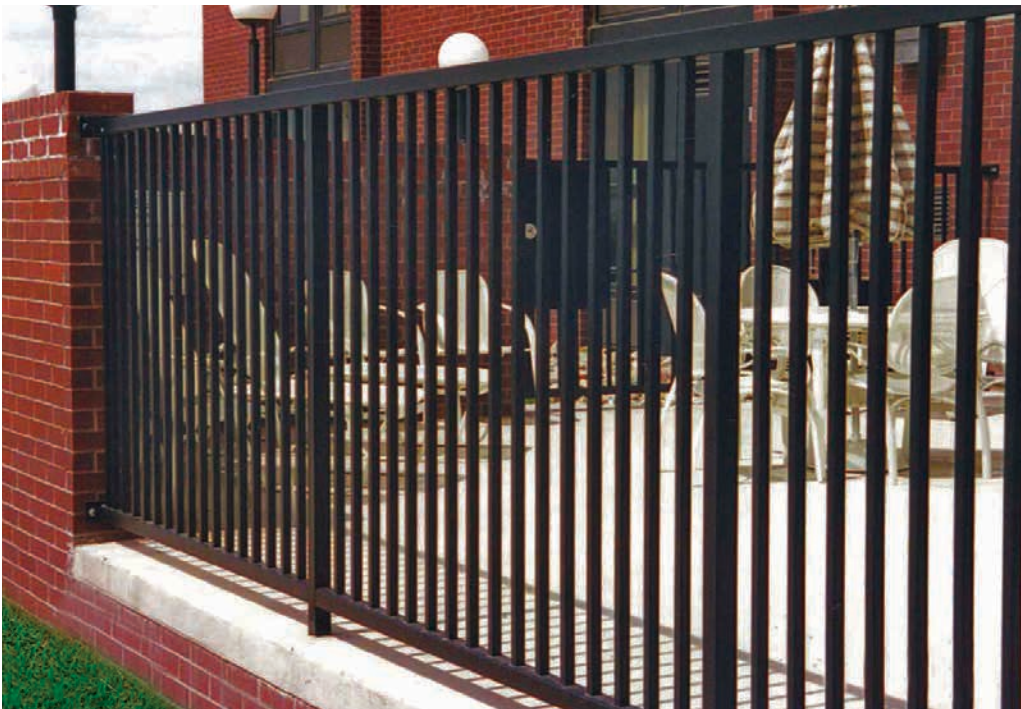
A white, square STRONGRAIL® architectural handrail system with round pickets.



Square STRONGRAIL® with square pickets in a custom color for homes in a coastal environment.



## CUSTOM FIBERGLASS HANDRAIL AND FENCING SYSTEMS



This custom fabricated pool railing for a national hotel chain was made to mimic the look of wrought iron.

An all-composite drawbridge on the island of Barbados features Strongwell's COMPOSOLITE® building panel system and an attractive custom architectural railing system that incorporates various EXTREN® structural shapes.



A custom fencing system installed for a casual dining restaurant blends with surrounding architecture and adds aesthetic appeal.



## CUSTOM FIBERGLASS HANDRAIL AND FENCING SYSTEMS



The Moody Gardens Theme Park has embraced the low maintenance and corrosion resistance of Strongwell's custom fiberglass handrail systems. A day dock at the popular destination features an ADA compliant custom handrail system that uses several Strongwell pultruded fiberglass structural profiles.



A plastics distributor in Jackson, MI used a custom Strongwell railing system to highlight and introduce the day-to-day industrial benefits of FRP to potential clients.



This custom picketed handrail system was designed to eliminate maintenance and provide long-lasting good looks.

# SAFPLANK® DECKING SYSTEM



Low maintenance, easy installation and minimal heat retention were key requirements for Camp Civitan officials when they began searching for materials to build a new pier at its Easter Seals camp on Lake Martin in southeastern Alabama. These requirements were easily met with the selection of Strongwell's SAFPLANK® fiberglass plank system for the pier deck.

With cellular dependency growing, signal boosting antennas are continually springing up to meet demand. Many find the structures intrusive and some municipalities require that cellular antennas be hidden from view. Concealing the antennas with standard building materials such as steel and aluminum becomes a challenge because metals can interfere with cellular signals and degrade an antenna's performance. The solution is Strongwell's fiber reinforced polymer (FRP) composites. The fiberglass composites are electro-magnetically transparent and therefore, invisible to cellular signals, radio waves, microwaves, and other electromagnetic frequencies.

The fabricator used EXTREN® structural tube for support posts. SAFPLANK®, Strongwell's interlocking fiberglass decking, was attached to the square tube with FRP plate clips and Strongwell's composite nut and bolt system, FIBREBOLT®.





## EXTREN® STRUCTURAL SHAPES



The Avila Beach Pier in California was reconstructed using EXTREN® I-beams and channels at the base of the pier for extra support. In addition, DURADEK® pultruded grating, stair treads and SAFRAIL™ handrail were installed.



Savoy apartment buildings in downtown Los Angeles chose a unique architectural application for gray EXTREN® shapes to achieve a more “modern” look. Savoy apartments chose gray EXTREN® instead of steel to trim the edges of the apartments because it was the most similar to the specified steel in properties and aesthetics. A deciding factor in choosing EXTREN® was that it will not rust and no annual repainting will be needed – saving on maintenance time and money.



Strongwell's EXTREN® fiberglass shapes are ideal in wet environments like waterparks. The shapes used to build this ladder will not rot or rust like traditional materials such as wood or steel. Fiberglass stair treads with gritted surfaces were also installed on each step, protecting park visitors.



# EXTREN® STRUCTURAL SHAPES



A fiberglass fabricated roof tops the Aerial Tram Station on Stone Mountain. Built from EXTREN® fiberglass structural shapes, DURASHIELD® building panels and FIBREBOLT® fiberglass studs and nuts, the structure conceals a grid that accommodates antennae. Fiberglass does not interfere with the radio frequencies, meets the structural requirements and also maintains the aesthetically pleasing looks the park required.



Higgins Power chose non-conductive EXTREN® tubes to create a generator screen. The fence system helped keep the area looking clean and less “industrial” while keeping passersby safe from electrical current.



Four 35' high x 35' square fiberglass turrets atop the SunTrust Bank Building in Orlando, FL, gives the massive building a sleek and elegant “peak of distinction” while serving a vital and practical purpose. Originally conceived as steel and aluminum decorations, the fiberglass turrets of EXTREN® structural shapes house 20' high antennae for police and fire communications. Unlike steel, FRP's properties allow radio signals to pass through fiberglass with virtually no interference. In addition, the turrets were specifically designed to accommodate hurricane winds common in Florida.

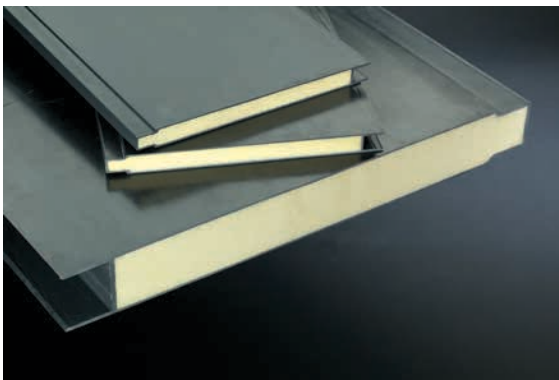




# DURA SHIELD® FOAM-CORE FIBERGLASS BUILDING PANELS



Switzerland-based Roth-Käse, an award-winning cheese manufacturer, used DURASHIELD® panels for walls in its U.S. location in Southern Wisconsin. The 3" foam-core panels were chosen because they are lightweight and can easily be removed for cleaning and moving equipment within the factory. They were also aesthetically pleasing on the exterior of the building.



DURASHIELD® foam core building panels were used to partially fabricate three pump houses for the city of Joliet, IL.



Fiberglass spires and towers atop high rise buildings are transparent to electromagnetic waves and integrate housing for antennae with overall building design.



# COMPOSOLITE® FIBERGLASS BUILDING PANELS



A floating office in the San Francisco Bay was constructed using the COMPOSOLITE® building panel system. The fiberglass structure was designed using COMPOSOLITE® FRP panels because they are less expensive than steel or concrete and were also easy to assemble.



Jenkins Bridge in Maine was installed with the COMPOSOLITE® Building system to create a corrosion resistant soil retention headwall system. This is an excellent example of how composites can be used to replace steel in vehicular superstructures in corrosive fresh and saltwater environments without compromising aesthetic appeal or increasing maintenance requirements.



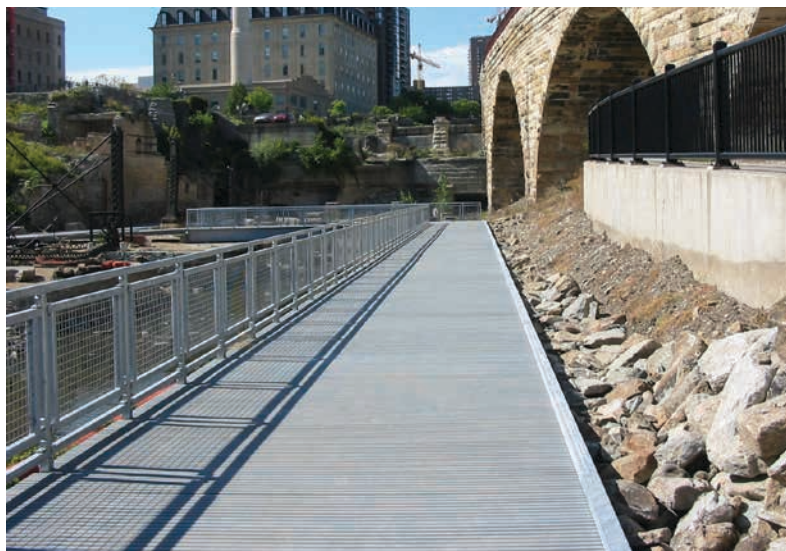
SAFPLATE® bonded to COMPOSOLITE®, along with EXTREN® angle, were chosen to replace the surface of approximately 312 feet of concrete platforms at the Hampton Court station in London, England. The platforms have a life expectancy of 60 years and were designed as a modular system that can be added to in the future.



# **DURAGRID®** PULTRUDED FIBERGLASS GRATING



Mill Ruins Park in downtown Minneapolis, MN utilized Strongwell's DURAGRID® 1" fiberglass grating for new walkways. The park is the centerpiece of the revitalization of Minneapolis' historic West Side Milling District.



DURAGRID® replaced wood planks which were frequently damaged during large storms and were susceptible to rotting caused by the corrosive salt-water environment at the Dinner Key Marina, FL.



DURAGRID® 1" provided a durable and maintenance-free solution for the revitalization of Cape Henlopen State Park near Lewes, DE.





# DURADEK® PULTRUDED FIBERGLASS GRATING

Strongwell DURADEK® I-6000 fiberglass grating was installed at School of Business and Information Systems for Vocational Training Council for both practical and aesthetic reasons. The panels served as air-conditioning platforms when placed horizontally and as louvers when placed vertically. FRP was chosen over other materials because of its resistance to weathering and its light weight, which helps to reduce the loading exerted on the structural members. This in turn provides a long lasting safe platform for future maintenance and maintain a pleasant and rust-free outlook.



Strongwell's fiberglass grating can be used for various types of visual screening. This screening is installed atop a high-rise apartment complex in Atlanta, GA to conceal HVAC systems that would interfere with the beauty of the residence.



DURADEK® 1-1/2" replaced wood in this renovation of the Aqua Theater in the Wildlife Conservation Society's New York Aquarium due to the superior resistance to corrosive elements.





# DURAGRATE® MOLDED FIBERGLASS GRATING



Metro, the transportation authority that serves the St. Louis, MO metropolitan area, recently undertook two large fencing installations utilizing custom DURAGRATE® molded grating as the main fencing component. Metro needed a functional fence that would keep pedestrians out but be aesthetically pleasing and not detract from the natural landscape.



DURAGRATE® was the perfect solution for this sun-screen project at the YMCA in Norfolk, VA.

Photos © Lyall Design Architects



The rooftop of the Gordon Persons Building in Montgomery, AL is part of a new urban trend called “green roofing”, which cities are pursuing to revitalize urban areas while reducing the carbon footprint of buildings. DURAGRATE® was chosen for the biomass platforms because it met the specifications to support green roof trays, plants and media in planters while ensuring proper drainage.



## CUSTOM FIBERGLASS SHAPES



A fiberglass E-channel reduces maintenance for Red Roof Inns by encasing the exposed edge of concrete walkways on the second floor balconies. Corrosion resistant fiberglass handrail systems, which replaced badly corroded steel structures, attach to the channel.



The Sea Scouts recently opened a facility on Galveston Island, TX. To protect the scenic views, FRP was chosen to provide a structural perimeter louvered wall system. The wall is structural, but also acts to shade, while continually allowing natural lighting through the building's corridors. Advantages of FRP over other materials include superior performance in the corrosive coastal environment, light weight and better UV performance. The facility was designed to provide sufficient protection against category IV hurricanes and is pursuing a LEED Platinum certification.



## CUSTOM FIBERGLASS SHAPES



Strongwell's engineering and manufacturing expertise allows the company to produce large tubes with thin walls, as shown to the left. In this application, Strongwell worked with the customer to produce tubes that would be used to manufacture architectural columns.





**BRISTOL LOCATION**

400 Commonwealth Ave., P. O. Box 580  
Bristol, VA 24203-0580 USA  
(276) 645-8000

**CHATFIELD LOCATION**

1610 Highway 52 South  
Chatfield, MN 55923-9799 USA  
(507)867-3479

[www.strongwell.com](http://www.strongwell.com)

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