

StructuresUnlimited

ENGINEERING DAYLIGHT

Project Report

Samaritan Hospital

Troy, NY, USA

Canopy

Architect: Freeman White



Testimonial

“The contractors were sold on the value of Structures Unlimited and Kalwall. It made logistical sense because the canopy can accommodate environmental loads and be installed rapidly.”

Todd Riley, lead engineer



STRUCTURES UNLIMITED SPECS:

Canopy
Custom Freestanding Shed Canopy
Aluminum Box Beam Frame: 6" x 18"
Aluminum Finish: #418/M16827 Regal White
Size: 29' x 115'

KALWALL PANEL SPECS:

Panel: 2.75"
Grid core: shoji
Exterior FRP: crystal
Interior FRP: white
Panel U-Factor: 0.53

PROJECT CREDITS:

Architect: Freeman White
General Contractor: BBL Construction Services

WHY STRUCTURES UNLIMITED?

Single source turnkey solutions include:
Technical sales consultations
Estimating + budgeting services
Daylight modeling services
Design + engineering services
Drafting + modeling
Project management
Precision fabrication
Professional installation

AN IMPRESSIVE ENTRANCE INTO A MEMORABLE BUILDING

From beginning to end, Samaritan Hospital transcends healthcare expectations. It starts when you walk through the doors.

The centerpiece of a \$105 million master facilities plan by St. Peter’s Health Partners is the new Heinrich Medicus Pavilion at Samaritan Hospital. The startling addition includes two signature canopies engineered by Structures Unlimited, Inc. above the emergency room and main entrances.

“The contractors were sold on the appearance of the canopies, which provide a beautiful entrance into the hospital,” said Todd Riley, lead engineer for Structures Unlimited on the project.

The ultimate goal was to create not only a striking appearance, but to protect patients and visitors from the elements as they entered and exited the building. Structures Unlimited, based in Bow, N.H., worked with strategic partner, Kalwall®, a manufacturer of high-performance translucent sandwich panels.

“The contractors were also sold on the value of Structures Unlimited and Kalwall,” Riley said. “It made logistical sense because the canopy can accommodate environmental loads and be installed rapidly.”

The canopy system offers superior structural integrity that stands up to hurricane-force winds, high snow loads and the most demanding code requirements. While the original design for the canopy called for Point Glazed Glass over steel, Kalwall’s panels and Structures Unlimited’s aluminum box beams offered a more effective solution.

Due to the light weight and substantial size of the Kalwall panels, the Structures Unlimited system installs much more quickly than point-supported glass. At just under 2 pounds per square foot, the Kalwall panels are far lighter than typical glass systems, which range from 8 to 10 pounds per square foot. This decreased weight not only sped up the installation time, but also reduced the point loads on foundations, providing additional cost savings to the customer.

Another huge advantage of the Structures Unlimited system is the fact that it arrived onsite as an architecturally finished product. Unlike steel, which would have required ironworkers to erect the frames, painters to paint the steel, and glaziers to install the point-supported glass, the Structures Unlimited crew installed the entire system without the need for other trades. This reduction in trade needs, along with the easy-to-carry nature of the lightweight panels, allowed the canopy installation to be completed in less than half the time anticipated for a steel system with glass.

After installation, the Kalwall panels offer simple maintenance. Soil and detritus are less evident on Kalwall than on glass and cleaning is much simpler because access scaffolding is not required and maintenance staff can safely walk across its surface. Kalwall also eliminates shadows, hotspots, glare and the stark contrast of light and shade, boosting visual acuity and preventing eye strain for the patients and visitors as they enter or exit the hospital. The soft glow Kalwall gives off from artificial light often helps with wayfinding at night.

Structures Unlimited and Kalwall are well-established in the healthcare sector, providing solutions that blend memorable aesthetics with the proven benefits of daylighting, protection and easy maintenance.

