

CASE STUDY

# ST. VINCENT HEALTH SCIENCES CENTER, ST. JOHN'S UNIVERSITY QUEENS, NEW YORK





The St. Vincent Health Sciences Center at St. John's University in Queens, New York, establishes a new standard for energy-efficient, student-focused learning environments. Located next to the campus's historic Great Lawn, the 70,000-square-foot facility houses the university's growing health sciences programs. These include Nursing, Radiologic Sciences and Physician Assistant studies. Designed as an advanced academic hub supporting both students and faculty, the building incorporates laboratories, classrooms, simulation suites, collaborative zones and offices.

This project leverages Kawneer's architectural aluminum systems to meet demanding building requirements, deliver superior energy efficiency and help create exceptional learning environments. Kawneer's high-performance systems were integral to achieving the architect's design goals. These included Clearwall® SSI (structural silicone interface) Curtain Wall, 1600UT System™1 Curtain Wall, Trifab® VersaGlaze® 451T Framing System, 350T Insulpour® Thermal Entrances and fully custom curtain wall covers.

The St. Vincent Health Sciences Center demonstrates how Kawneer's products enable architects to meet demanding energy standards while delivering a visually striking design and creating collaborative, light-filled spaces for students and faculty.

**Architect:** CannonDesign, New York, NY  
**General Contractor:** Shawmut Design and Construction, New York, NY  
**Glazing Contractor:** Above All Storefronts, Hauppauge, NY

Photography: ©Scott Frances/OTTO



## HIGH-PERFORMANCE SOLUTIONS FOR DEMANDING REQUIREMENTS

As a high-traffic learning environment in New York, the St. Vincent Health Sciences Center required a high-performance facade to meet strict project needs.

New York's progressive energy codes and building requirements shaped every element of the building envelope, which incorporates Kawneer's 1600UT System™1 Curtain Wall, Clearwall® SSI Curtain Wall and Trifab® VersaGlaze® 451T Framing System. These thermal and ultra-thermal solutions were selected for the project to deliver exceptional performance and meet the regional regulations. The robust thermal barrier technology of these systems, such as Kawneer's patented Isolock® and IsoPour® thermal breaks, helps reduce thermal transmission. As a result, Kawneer's solutions maintain consistent interior temperatures throughout the year, critical for occupant comfort and reduced reliance on HVAC systems.

In addition to contributing to the building's thermal efficiency, the 350T Insulpour® Thermal Entrances bring durability to withstand constant use by students and faculty.

## CUSTOM SOLUTIONS FOR ARCHITECTURAL VISION

CannonDesign's architectural vision pushes boundaries, with a unique building exterior and distinctive profiles.

The initial design for St. Vincent Health Sciences Center called for covers to be incorporated on the central curtain wall. To achieve the architect's desired profile, the Kawneer team engineered a custom curtain wall cover, delivering a shape designed specifically for the project. The cover integrates seamlessly into the vertical framing members of the 1600UT System™1 Curtain Wall. As the sun moves across the sky, these covers reflect light and cast shadows across the glass, transforming the building's appearance in the shifting daylight.

Kawneer's ability to engineer tailored solutions preserved the architect's design intent while maintaining system performance, providing the university with a facility that is both distinctive and resilient.

## DESIGNING SPACES THAT INSPIRE LEARNING

The St. Vincent Health Sciences Center is designed to enhance the student experience, with a visually distinctive exterior and interior supported by Kawneer products.

The striking architectural centerpiece of the building is an expansive, multi-story 1600UT System™1 Curtain Wall elevation that forms the front facade. Paired with Kawneer's Trifab® VersaGlaze® 451T Framing System and 350T Insulpour® Entrances, this opening brings daylight deep into the large atrium, the 'living room' of the building, creating a welcoming environment that encourages collaboration and socialization among students and faculty.

Additionally, CannonDesign incorporated unique aluminum structures on the sides of the building for added visual impact. Sitting behind each aluminum 'cage' structure, Kawneer's toggle-glazed Clearwall® SSI Curtain Wall System presents a seamless, monolithic glass appearance without interrupting the structure or daylight flowing into the interior. Across the project, Kawneer solutions help create unique and inspiring spaces where staff and students can connect, study and think.

## SUPPORTING SUSTAINABLE, FUTURE-FOCUSED DESIGN

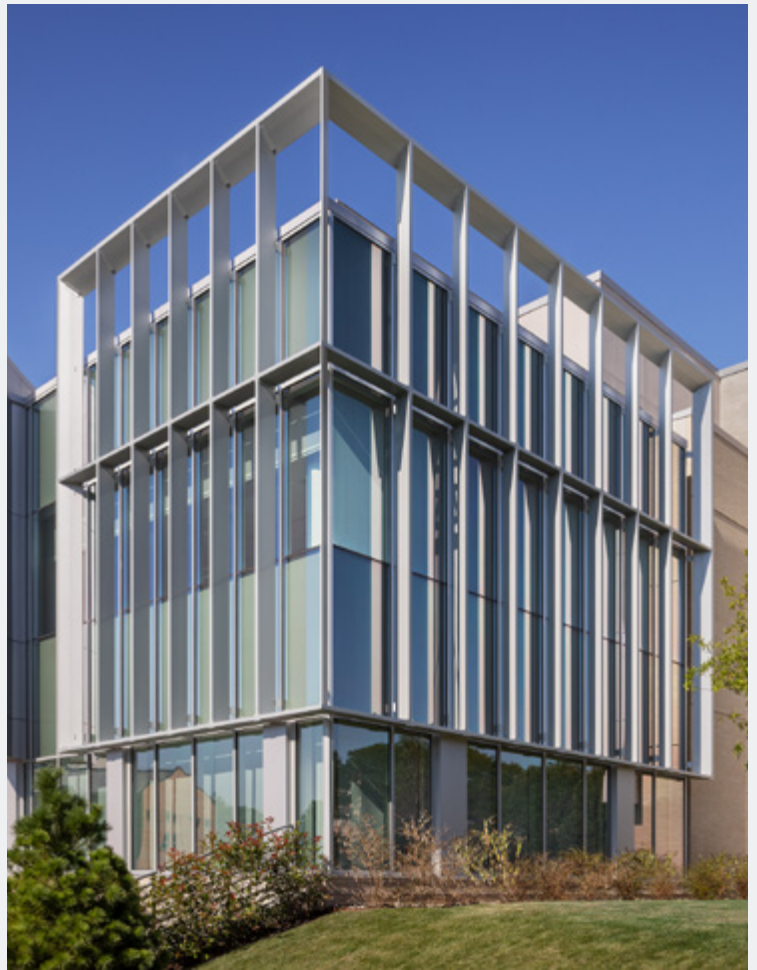
Sustainability was critical for the project, targeting LEED Silver® certification and net-zero carbon. To accomplish this, St. John's University and architect CannonDesign set ambitious design goals: an all-electric building with geothermal heating, rooftop solar panels and high-performance windows to maximize natural light and optimize energy usage.

Kawneer's sustainable aluminum systems helped achieve these goals. Creating an integrated, high-performance facade, Kawneer's Clearwall® SSI Curtain Wall, 1600UT System™1 Curtain Wall, Trifab® VersaGlaze® 451T Framing System and 350T Insulpour® Thermal Entrances collectively minimize thermal loss, benefiting the building's long-term energy consumption. The expansive glass facades made possible by Kawneer systems bring abundant natural light into learning and collaborative spaces, further reducing reliance on artificial lighting and contributing to a healthy indoor environment.

Kawneer's aluminum billet contains a minimum of 50% recycled content, with the remainder sourced from a hydroelectric powered, clean-energy smelter. These systems therefore contribute to the building's low carbon footprint.

## EXPERT PROJECT SUPPORT

The Kawneer team further collaborated on the St. Vincent Health Sciences Center project by delivering technical support to glazing subcontractor Above All Storefronts' Special Projects Division. Kawneer's in-house Drafting Team analyzed project requirements to create highly detailed shop drawings for fabrication. To identify and mitigate potential issues with dead load and wind load, the Kawneer Engineering team completed a structural analysis of the project. Kawneer's team additionally facilitated obtaining a Professional Engineering (PE) stamp on the shop drawings. This saved the glazing subcontractor time by eliminating the need to complete this critical step themselves. By partnering on this project, Kawneer's technical experts helped the glazing subcontractor and architect move forward with confidence.





## CHALLENGES

- CannonDesign's architectural vision required custom curtain wall covers.
- The project needed to meet strict New York City building codes and energy requirements.
- The architect and university targeted LEED Silver® certification and net-zero carbon.
- The design incorporated unique 'cage' structures on the sides of the building for powerful visual impact, requiring a facade that would not interfere with the structure or restrict natural daylighting.

## SOLUTIONS

- Kawneer engineered a custom curtain wall cover to meet the architect's aesthetic vision, integrating the cover with the 1600UT System™1 Curtain Wall. As the sun moves throughout the day, the custom cover becomes visually dynamic and creates a distinct building profile.
- Kawneer high-performance facade systems, including Clearwall® SSI Curtain Wall and 1600UT System™1 Curtain Wall, help the building meet energy efficiency requirements through exceptional thermal performance and maximized natural light.
- Kawneer's low-carbon aluminum and energy-efficient systems support the project's environmental goals, including LEED Silver® certification.
- Clearwall® SSI Curtain Wall, utilized behind the aluminum structures, allows abundant natural light into the building. The toggle-glazed system maintains a monolithic appearance without interrupting the 'cage' with exterior framing.

## PRODUCTS USED

- Clearwall® SSI Curtain Wall System
- 1600UT System™1 Curtain Wall
- Custom-designed curtain wall cover
- Trifab® VersaGlaze® 451T Framing System
- 350T Insulpour® Thermal Entrances