

**CASE STUDY**

# MARITIME CENTER OF EXCELLENCE, U.S. COAST GUARD ACADEMY NEW LONDON, CONNECTICUT





The U.S. Coast Guard Academy's Maritime Center of Excellence in New London, Connecticut, offers a space where cadets can begin and end their training journeys by the water, creating the perfect opportunity for crews and groups to meet, work and enjoy the waterfront environment. The building's innovative design reflects the architect's unique vision as well as the performance and versatility of Kawneer's architectural aluminum systems.

Inspired by the design of a ship's hull, the 20,000-square-foot, LEED Gold®-certified facility features a welcoming reception center, state-of-the-art classrooms, a science and engineering lab and a boat bay designed to house the academy's largest training sailboats.

The project began with the controlled demolition of the existing structure, which was meticulously handled to ready the site for new construction. Following the preparation, Kawneer supplied a range of facade systems to help meet the project's various needs, including our hurricane impact-tested 1600 Wall System®1 Curtain Wall, IR 501UT Framing System, 350T Insulpour® Thermal Entrances and GLASSvent® UT (Ultra Thermal) Windows.

**Architect:** SmithGroup, Washington, D.C.

**General Contractor:** A/Z Corporation, North Stonington, CT

**Glazing Contractor:** Advanced Performance Glass, Inc., East Hartford, CT

Photography: © Prakash Patel Photography





### **SETTING SAIL FOR AN ICONIC DESIGN**

The architectural design of the ship's hull on the facade presented a remarkable challenge. Tapered down at the head and stepped at the sill, the convex shape of our 1600 Wall System®1 Curtain Wall required a unique fabrication and installation approach. The expertise of the project team's fabricators and installers helped ensure the desired look was achieved without fault.

Additionally, the challenging curvilinear vaulted roof, wooden decks and true north orientation of the building required precise engineering and construction techniques.

### **NAVIGATING CLIMATIC CHALLENGES**

Responding to the demands of the cooler climates often experienced in the northeastern region of the U.S., our IR 501UT Framing System was utilized to provide the thermal performance needed for the project. Combining IsoLock® thermal break technology with insulating impact-resistant glazing, the system provides ultra-thermal performance, which helps improve occupant comfort.

Further, our GLASSvent® UT (Ultra Thermal) Windows were specified to provide high thermal-performing ventilation for the facade.

### **THE LIVING BUILDING CHALLENGE**

To promote a motivating work environment for building occupants, our windows and framing systems help provide inspiring waterfront views for the U.S. Coast Guard leaders of tomorrow.

The facility's interior spaces were designed to maximize daylight and natural ventilation while minimizing reliance on artificial lighting and air conditioning. To achieve this, Kawneer's 1600 Wall System®1 Curtain Wall was specified to create spaces for vessel maintenance and serve as an atrium.







## STEERING TOWARD A SUSTAINABLE FUTURE

At Kawneer, we are renowned for our pioneering commitment to sustainability, which is greatly reflected in our vast product range. We take pride in creating industry-leading architectural aluminum solutions that champion sustainable facade design and innovation. We offer total product ingredient transparency, from aluminum billet to building facade, providing key information on our products and how they are manufactured. We also provide Environmental Product Declaration labels (EPDs) for all our products. Our BALANCE philosophy of holistic sustainability is at the heart of everything we do, as we focus on mindfully balancing our business strategy with our business responsibilities.

As this project achieved LEED Gold® certification, it was vital for the architects to incorporate sustainable materials and energy-efficient systems in the facility's architectural design. When factoring in functionality, economics and aesthetics, the materials used on a building are integral to executing a successful building design.

Aluminum's durability and flexibility help deliver longevity and a wide range of aesthetic options. Further, its high strength-to-weight ratio, recyclability and formability of aluminum give it many advantages compared to alternative materials.

## A CALM CREW ON BOARD

Kawneer supported the architects by helping select the right solutions for the project to meet the project's quality, sustainability and design goals. Seamless communication and coordination between the Kawneer team and key stakeholders including the architects, engineers, contractors and building owners was vital to keeping the project on-schedule.



## CHALLENGES

- One of the project's primary goals was to create an environment that supports productivity while also making it a comfortable, welcoming space for occupants.
- The project aimed to meet the sustainability goals of a high-profile, iconic building.
- The architectural design of the ship's hull on the facade presented a remarkable challenge. Tapered down at the head and stepped at the sill, the convex shape of the facade required a unique fabrication and installation approach.

## SOLUTIONS

- Kawneer's IR 501UT Framing System combines IsoLock® thermal break technology with insulating impact-resistant glazing to provide high ultra-thermal performance alongside occupant comfort.
- The incorporation of our sustainable, energy-efficient architectural aluminum systems helped the building achieve LEED Gold®.
- The Kawneer team supported the fabricators and installers in tapering our 1600 Wall System®1 Curtain Wall required to ensure the desired look was achieved.
- Our 1600 Wall System®1 Curtain Wall helped deliver functionality desired by the architects and building designers.

## PRODUCTS USED

- 1600 Wall System®1 Curtain Wall (Impact Rated)
- IR 501UT Framing System
- 350T Insulpour® Thermal Entrances
- GLASSvent® UT (Ultra Thermal) Windows