RETROFIT CHICAGO CASE STUDIES | 2023

SAIC 280 BUILDING

Impact at a Glance

- ***20% energy reduction*** from baseline achieved in 2016
- Occupants reported ***improved air quality***, comfort, better acoustics, and improved user control
- ***25.8% reduction of carbon emissions*** in 2022 compared to 2011 (data via ENERGY STAR Portfolio Manager)

Building Stats

- **Year Built:** 1973
- **Neighborhood:** The Loop
- **Architect:** SOM
- **Use:** Higher Education
- **Square Footage:** 142,184

The School of the Art Institute of Chicago 280 Building is a haven for artists to develop their skills at one of the most prestigious creative institutions in the country, located in the heart of Chicago.

Built in 1973, this multi-use educational building has high heat needs of the foundry and furnaces, ventilation and lighting had to meet the safety and performance needs of building users using materials with varying volatile organic compound (VOC) content. The facilities team entered the project into the Retrofit Chicago Challenge in 2016 and worked to improve the energy efficiency and user comfort.

Spotlight on Energy Efficiency Investments

- Replaced two air handling units (AHUs)
- Converted to a variable speed pumping water heating system
- Transitioned to medium pressure variable volume air handling distribution
- Installed Pressure Independent Control Valves on chilled water coils in AHUs
- Envelope improvements to roof, windows, and seals
- Upgraded the building system interface
- Instituted central air cleaning using UV filtration
- Completed lighting and electrical upgrades
- Provided control valves for perimeter radiation
- Installed new variable speed exhaust fan systems
- Enhanced metering for steam and chilled water usage

The building's creative arts use requires a commitment to air quality and ventilation due to the hazardous materials used in artistic processes.

The Key to Success
for SAIC 280 Building

> "We built energy into a comprehensive plan. We looked at all the energy savings options then prioritized by ***possibility*** and ***necessity***."
>
> **Tom Buechele**
> *VP for Facilities & Campus Operations, SAIC*

The team at SAIC was driven to join Retrofit Chicago by the school's commitment to sustainability, which began with the Second Nature Climate Leadership Commitment adopted by SAIC in 2008. In working towards increasing energy savings, SAIC worked with RMI and Cannon Design to identify energy conservation measures.

The 280 Building at the School of the Art Institute Chicago's biggest challenge in improving energy performance: a building consisting of multiple studios and over 80 separate exhaust fans. This complex HVAC system was metered through heavy duty carbon filters which kept VOCs at an acceptable level, and multiple envelope improvements to reduce heat loss.

SAIC was able to use incentives from ComEd and People's Gas to finance some of the retrofitting cost. They were also able to leverage visibility from the Retrofit Chicago program to raise awareness of energy use and request additional capital from executive staff.

The benefits didn't stop with reduced energy costs. Occupants also reported improved air quality, acoustics, user control, comfort, and storage availability.

The 280 Building is home to the departments of Ceramics, Painting and Drawing, Performance, Photography, Printmedia, and Sculpture at SAIC.

About Retrofit Chicago

The Retrofit Chicago Energy Challenge encourages, promotes, and celebrates voluntary energy efficiency leadership. Together, participating building owners, facility managers, engineers, and policymakers are demonstrating that energy efficiency is a winning proposition for Chicago's real estate industry as well as the environment.

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