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**ARCHITECTURE AND
ENGINEERING FIRM**

Wiss, Janney, Elstner Associates, Inc.
Chicago, Illinois

INSTALLER

Auburn Corporation
Orland Park, Illinois

FEATURED PRODUCT

4" Fixed Over Fixed Thermal Windows

Northwestern University Montgomery Ward Building

CHICAGO, ILLINOIS

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PROJECT PROFILE
EDUCATION

HIGH-PERFORMING WINDOWS PROVIDE ENHANCED THERMAL PROTECTION WHILE MAINTAINING BUILDING'S HISTORIC APPEARANCE

Located in the heart of downtown Chicago, the Montgomery Ward Building of Northwestern University houses the school's medical and dental divisions as well as several high-profile research labs. Originally built in the mid-1920s, the university wanted to upgrade the building's original wood windows with a high-performing thermal solution that required minimal maintenance and would also help retain the classic historic appearance of the university's campus.

Additionally, matching the building's aesthetic was a prime concern for the university and the project's architects, Chicago-based architecture and engineering firm Wiss, Janney, Elstner Associates, Inc. (WJE). To meet this, and the many other functional and aesthetic needs of the project, TR-9460 4" Fixed over Fixed Architectural Thermal Aluminum Windows were selected for nearly 1,000 openings throughout the building.

"We needed a product that could easily be installed from the exterior that also matched the building's design," said Anthony Cinnamon, project architect with Wiss, Janney, Elstner Associates, Inc. "The TR-9460 matched so well with the existing design, and the engineering quality of the product was just what a building of this importance needed."

The Ward Building renovation project, completed in August 2011, spanned a period of two seasons and featured nearly \$2 million of window products.

DESIGN HIGHLIGHTS

Built of Indiana limestone over a concrete and steel framework, the Ward Building stands 14 stories tall and incorporates many modernized Gothic-style features, similar to those used throughout the main

Northwestern University campus. In 1927, a journalist for the American Architect commented that, "Despite the huge size of the building, the architect had provided ample light, air and ease of access."

CHALLENGES

- The university wanted to upgrade the original wood windows with a high-performing thermal solution that required less maintenance and would help retain the historic appearance of the building.
- Meeting strict project deadlines and enforcing security measures were essential to the success of the project, as was limiting distractions to building occupants – students, professors and researchers.
- Because the temperature in Chicago can drop well below zero degrees Fahrenheit, thermal performance was of the utmost importance.
- To match the original design intent, the building still needed to provide ample light, air and ease of access but with a more current solution.

SOLUTIONS

- The versatility and customization of the 4" fixed over fixed thermal windows made them an ideal solution for the Ward Building. To accommodate the facility's unique shape while maintaining design consistency, profiled muntins as well as several custom panning profiles and curved corners were created.
- Tested for air infiltration and water resistance, the windows also offer thermal performance that met the high standards required for the project.
- During the initial design phase, the architects considered replacing the entire window – frame, sash, etc. – but after a campus survey and assessment, they determined that would have greatly disrupted the occupants. The fixed over fixed thermal windows allowed architects to leave the original frame and install the new windows in the existing space.

