

# THE ART OF WINDOW REPLICATION CASE STUDY

SAINT LOUIS UNIVERSITY MUSEUM OF ART  
SAINT LOUIS, MO





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*-Larry Vihlidal, Project Manager, Koch Corporation*

## + PROJECT SNAPSHOT

**General Contractor**  
Koch Corporation

**Dealer / Installer**  
Koch Corporation

**Window Design Consultation**  
Jack Hornsey, Independent Sales Rep

**Product**  
S6500 Series Thermal Strut Aluminum Fixed Window

**Assignment**  
Replace 546 windows in 120 openings set in a historic panning system, using fixed windows to replicate the original casements.

## + CHALLENGE

The window replacement assignment was a challenge in two ways. As windows in an art museum, they had to contribute to climate control and art preservation. And as windows in the one-time home of the Saint Louis Club, built in 1900 as the center of Saint Louis social life, they had to replicate those that had stood during visits by several U.S. presidents, including Presidents Cleveland, McKinley, Taft, Roosevelt, Wilson and Harding.

## + SAVING ENERGY. PRESERVING ART.

In commercial window sales, there are a number of ways to find opportunities, not the least of which is the good, old-fashioned cold call. That’s how Jack Hornsey, an independent sales rep, began his relationship with Saint Louis University, a relationship that led to Graham Architectural Products (GAP) replacing 546 windows at the University’s Museum of Art.

“I was driving around, looking to see if someone needed windows,” he recalled. “It’s what I do, and if they do need windows I call on them.” As he drove past the museum – a four-story, French revival mansion built in 1900 as the home of the venerable Saint Louis Club – he noticed “the windows definitely needed to be replaced.”

He contacted Facilities Management, and one conversation led to another. Jack conveyed the value of quality replacement windows, blending the aesthetic appeal of historic replication with the economic imperative of energy efficiency. And over time, a relationship ensued.

According to Jack, the toughest part was getting the job into the University budget. A presentation by GAP Technical Marketing Manager Bruce Croak made a compelling case for energy savings. “The heat loss through the replacement windows from thermal transmission alone will be one-third what it is now, or three times better,” he explained.

And the go-ahead was given.

The assignment was clear enough: Replace 546 windows in 120 openings set in a historic panning system, using fixed windows to replicate the original casements.

But the devil was in the details. The windows required UV protection to preserve the art. The University wanted to replace the existing casement windows with fixed windows, so the interior climate could be more easily and completely controlled. And they wanted to reduce their energy costs.

Because of the building’s historic significance – not only was it the center of Saint Louis social life, six U.S. presidents stayed there in its first 25 years – it required windows that replicated the look of the originals. This necessitated a historic panning system and two colors – “Dark Bronze” on the interior to match the woodwork, and “Aged Copper” on the exterior to complement a campus color scheme.

Having earned the University’s trust, Jack was tasked with bringing in three bidders. Koch Corporation prevailed and became part of a collaborative effort along with the facilities people and Graham.

The windows – Graham S6500 Series thermal strut aluminum fixed windows – featured insulated glass with high performance, Low-E coating on the glazing for energy savings and reduced ultraviolet light. With a U-value of 0.34 (R-3), the GAP window proved to be a significant upgrade over the existing windows, which had a U-value (R-1) of 0.87 and allowed a lot of air infiltration due to their age and condition.

Koch Corporation took over from there, Jack said, delighting the Museum’s curator. “Koch was always mindful of the building and what the building is used for. They worked in complete coordination with the curator to make sure that they never interfered with any parties or exhibits. And the curator loved the fact that Koch cleaned up after themselves every day.”

Koch Corporation Project Manager Larry Vihlidal wasn’t surprised that the collaboration went so well, despite what he called “a very demanding schedule.”

He explained, “I have worked with several of Graham’s sales reps on many different projects. All are very knowledgeable regarding the products and means and methods to have a successful experience from the order process to the completion of the project.

He added, “I feel that Graham is one of the top manufacturers in the historic field. They have been able to match any existing window site lines and profiles we have run across since I have worked with them.”

And according to Jack, these windows back up Larry’s assertion. “It’s a great product,” he said. “No air, no water, no sounds. And while I don’t know specifically the amount of energy they’ve saved, my guess is they cut their heating and air conditioning usage in half. That’s a wild guess, but I know they’re saving a lot of money on energy.”



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