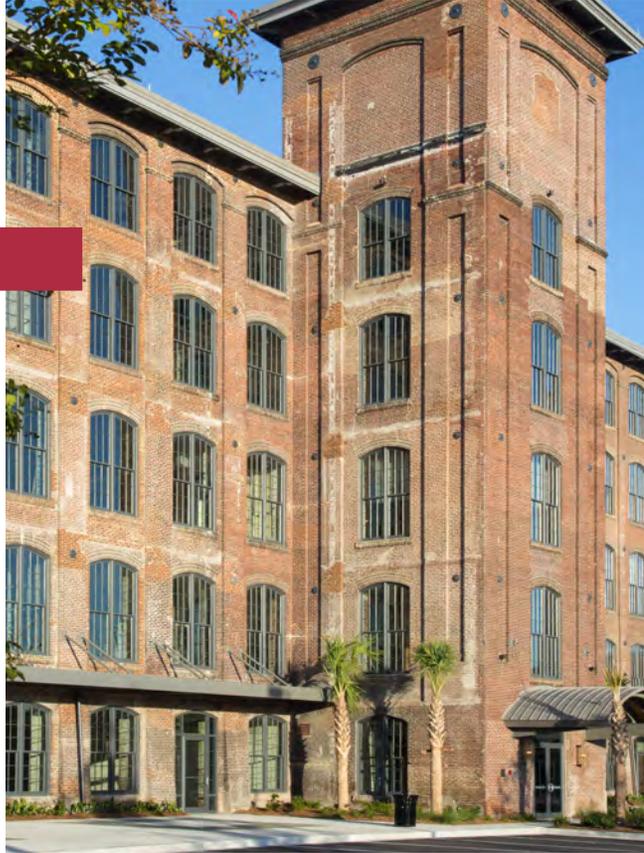


# OVERCOMING A HOST OF CHALLENGES CASE STUDY

THE CIGAR FACTORY  
CHARLESTON, SC





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- Ron Stang,  
AIA, LEED AP, Principal and Chairman of Stevens & Wilkinson

## + PROJECT SNAPSHOT

**Architect**  
Ron Stang, AIA, LEED AP  
Stevens & Wilkinson

**General Contractor**  
Trident Construction

**Dealer**  
Charlotte Glass Contractors

**Window Design Consultation**  
Graham Architectural Products

**Product**  
HI 2200H Series Single Hung, HI 6800 Series Fixed

**Assignment**  
Fill 361 window openings with new, thermally broken, aluminum historic replication windows that had to meet National Park Service requirements.

## + CHALLENGE

Because this was a historic window replication project requiring National Park Service approvals, it was a good fit for Graham Architectural Products (GAP). But because the Cigar Factory windows also had to meet hurricane impact requirements, it was doubly challenging, making it the perfect fit for GAP.

## + NEW LIFE FOR HISTORIC SITE

As the site of what is thought to be the first singing of “We Shall Overcome” in a moment of civil rights and labor activism, the Cigar Factory in Charleston, SC, is more than just a striking old building.

But it is that, too. It is, in fact, on the National Register of Historic Places. Not for its role in America’s struggles for equality, but instead because of its standing as one of the few remaining Victorian-era industrial buildings in Charleston and its key role in the region’s textile and tobacco industries.

Built in 1881 as a cotton mill, the five-story, 244,000-square-foot structure was converted into a factory for the American Tobacco Company in the early 1900s. The aforementioned labor issues led to a strike of 1,200 mostly black workers in 1945 – a strike considered by many to have kicked off the civil rights movement in America.

Now fast forward six decades. It’s 2007. The iconic property, which had enjoyed relative success under various occupants until abandoned by Johnson & Wales University in 2004, suddenly finds renewed hope. A significant rehabilitation effort geared toward converting it into high-end residential condominiums is launched. Then, bang! An economic downturn – and an ensuing bank failure – brings the job to a halt.

In 2014, a new group purchases it with an eye toward offering a mix of commercial uses, including offices, restaurants, event space and retail

stores. Stevens & Wilkinson, architects on the previous effort, are brought back in. But with the owners seeking tax credits, National Park Service (NPS) approvals become a key challenge – a challenge made more difficult by the enormous window openings and a regional code calling for hurricane resistant windows.

None of the original radius-top windows existed, but photographs and research gave Ron Stang, AIA, LEED AP, principal and chairman of Stevens & Wilkinson, a clear idea of what he wanted: a single-hung or a double-hung window with offset upper and lower sashes.

He initially looked for a wood window, without any luck. Then, he said, “We had a few people saying they could do it in aluminum, but not of the national quality of Graham. Graham was the one window company that we got comfortable with, that was proven, and that we knew could deliver.”

According to Tim Cooper, Graham Architectural Products’ (GAP) southeast regional sales manager, the windows were over 10 feet tall, which he said is “a very large window for hurricane impact.”

However, GAP was able to overcome the need for NPS approvals, the significant hurricane impact engineering challenge and what Cooper called “a very short time frame.”

“We do National Park Service work all the time, but the size of these windows, in conjunction with the hurricane impact requirements – that’s what really made this a difficult project,” said Cooper.

According to Stang, a lot of collaborative work took place between the National Park Service, S + W, GAP and Richard Sidebottom, a consultant from MacRostie Historic Advisors, LLC. Stang said specific hurdles included matching the jamb sightlines, rail dimensions and mullion details of the original windows.

Once the window was approved, GAP designed a custom panning and mullion cover to meet the field conditions and ensure a smooth installation for the contractor. In addition, GAP created a custom interior trim to help finish off the window installation and maintain a minimalistic interior design.

“Graham was responsive and good to work with,” Stang said. “We ended up with single lift windows that were very much detailed to be as close as possible to the double-hung we saw in the photographs that we had researched.”

The project was completed during the summer of 2015.



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