



ARCHITECT

Bernardon Haber Holloway
Architects PC
Wilmington, Delaware

FEATURED PRODUCTS

Double Hung and Fixed Windows

WINDOW INSTALLER

Graboyes Commercial Window Co.
Philadelphia, Pennsylvania

GENERAL CONTRACTOR

Shoemaker Construction Co.
West Conshohocken, Pennsylvania

Joseph R. Biden, Jr. Railroad Station

WILMINGTON, DELAWARE

Joseph R. Biden, Jr. Railroad Station

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PROJECT PROFILE
PUBLIC

PRESERVING THE HISTORY OF A CITY LANDMARK

During his 36 years in the Senate, President Joe Biden rode Amtrak every day from Wilmington, Delaware to Washington, D.C. and often talks about his experiences on the trains – the people he met and the importance of trains in America. To honor the president and his dedication to the railroads, the Wilmington Amtrak train station was renamed the Joseph R. Biden, Jr. Railroad Station. The station renaming occurred on the heels of an extensive two-year, \$37.7 million renovation project, which included \$20 million in federal stimulus money and was one of the first American Recovery and Reinvestment Act (ARRA) projects to be released by the federal government.

The station began operating in 1907 and was originally designed by renowned architect Frank Furness to celebrate America's industrial strength began operating. The station has become an icon of Wilmington, which meant that preserving its history was a top priority during the renovation. Bernardon Haber Holloway Architects PC, based in Wilmington, was selected to design the renovation and take on the challenge of integrating modern technology while retaining the station's historic charisma.

According to Amtrak, the Wilmington Station is the 12th busiest station in the Amtrak system. After the renovation/restoration was completed, the architecture firm received a prestigious 2011 Brunel Award by the Watford Group, an international volunteer association consisting of railway architecture and design professionals.

DESIGN HIGHLIGHTS

The original Amtrak station incorporated historic architecture and building elements, including its windows, which needed to be updated to preserve the building and its character. The renovation included detailed restoration of various parts of the station, including the lobby's

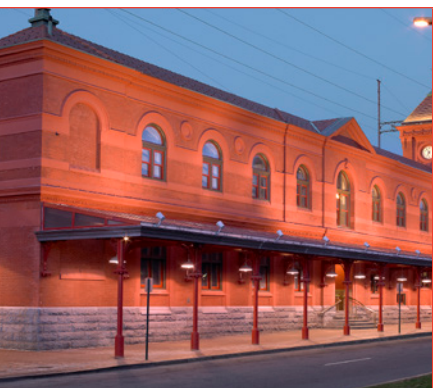
grand staircase and the historic men's and women's waiting rooms, as well as construction of a larger concourse equipped with a new passenger display system and improved safety features.

CHALLENGES

- The greatest challenge was to integrate modern technology while retaining the history of the station. The \$20 million in federal stimulus money required the project team to address the Secretary of the Interior's Standards for Rehabilitation, which meant a great deal of attention focused on restoring the building's façade.
- The project team found the building's windows to be challenging, with the sightlines, thicknesses of frames and muntins.
- In addition to having to follow stringent requirements for the historical replication of the original windows, there were unusual color requirements that not only specified that the interior color had to differ from the exterior color, but also the exterior panning and window frame color had to differ from the window sash color.

SOLUTIONS

- After much discussion with the state preservation office, the architectural team was able to replace the windows that were exposed to weather with custom-made historic-quality aluminum windows that feature 1" double-pane insulating glass with low-E coating. The original windows that were protected against weather were kept and restored.
- Kawneer product engineers developed the custom extrusions and fabrication techniques needed to install the new aluminum windows in a way that replicated the station's old wooden windows.



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