

Glamorous Glass Towers: 165 Charles Street Apartments

Renowned architect Richard Meier placed his signature on two tall glass luxury apartments along the city's downtown Hudson River waterfront in 2002. Shortly thereafter, Meier was approached to turn the twin towers into a trio by creating a third tower at 165 Charles Street, directly south of the original pair.

The goal was to design a minimalist luxury apartment structure, ascending the same height as the first two towers, made primarily of glazed glass and steel with requisite expansive views of the city through floor-to-ceiling glazed walls. The challenge was how to best approach the issues that living in these glamorous glass houses presented - among them incoming noise, particularly on the lower floors from the steady stream of traffic, and excessive sunlight from the sweeping curtain walls.

Tranquil Surroundings

Glass can be the weakest link in the transmission of unwanted noise into a building. The insulating glass, made with polyvinyl butyral (PVB) interlayers from Solutia's Saflex division, provides isolation of the towers interior spaces from exterior building sounds, which was a critical consideration when selecting glazing for the glass tower. The sound-dampening performance of the Saflex interlayers enhances the relaxing, retreat-like quality of life at the luxury apartments on Charles Street.

The laminated glass panes made with Saflex interlayers were made by permanently bonding a tough Saflex interlayer between two pieces of glass under heat and pressure. With its ability to screen high frequency noise, the interlayer provides built-in sound control characteristics because it dampens the vibration of the glass when struck by sound energy and blocks sound transmission at the frequency where the human ear is most sensitive to noise. Adding laminated glass to a glazing system is one of the best ways to optimize acoustic performance - adding a pane of laminated glass to an insulating glazing system gives the unit an even higher Sound Transmission Class (STC), blocking more sound waves.

With sweeping expanses of curtain wall, Meier's team chose Viracon's Solarscreen™ VRE-59 insulating glass to address the challenge of excessive sunlight streaming into the building. The Radiant Low-E coating combines a crisp, neutral appearance with a light transmittance of 59 percent. Its increased light transmittance addresses the psychological need for natural light, while its reduced solar heat gain provides energy benefits.



PROJECT FACTS

PROJECT

165 Charles Street Apartments

LOCATION

New York, NY

ARCHITECTURAL FIRM

Richard Meier & Partners

GLASS FABRICATOR

Viracon, Owatonna, MN

LAMINATED GLASS INTERLAYER

Saflex®, a unit of Solutia Inc., St. Louis, Missouri

COMPLETION DATE

June 2006



As the world's leading interlayer, Saflex is found in nearly 50 percent of laminated architectural and automotive glazing applications globally. In fact, Saflex interlayer is used to protect some of the world's most precious treasures, including the US Constitution, the Mona Lisa, and the Louvre. When it comes to critical applications where safety, security, sustainability and acoustic performance are a primary concern, automotive designers and architects' first choice is Saflex interlayer.



project profile (cont.)

Significant Noise Reduction

Laminated glass made with Saflex interlayer can reduce irritating outside noise by up to 50%. Saflex A series is a superior acoustical offering that provides a significantly higher level of sound reduction capabilities when compared to standard laminated glass while providing great dampening performance. There is no need to increase the overall thickness of the glass or the air space to achieve higher STC performance for the same configuration. Visual clarity and optical quality are not sacrificed when using Saflex acoustic interlayer in laminated glass applications. Such applications include airports and surrounding structures, hotels, sports stadiums, train stations, high-rises and educational facilities.

About Saflex

Over 75 years ago, the originators of the Saflex business started an entirely new industry based on the belief that glass could be made better through lamination. While glass was a common material in 1927, it typically occupied relatively small spaces in buildings. Through lamination and the introduction of Saflex protective interlayers, architects and automotive designers were empowered to rethink their traditional approach to glazing design.

Photos by Paul Masck/masck.com

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ARCHITECTURAL GLAZING SOLUTIONS CENTRE

The Saflex Architectural Glazing Solutions Centre (AGSC) is an international network that provides a comprehensive range of services to support architects and designers throughout the world. The AGSC can provide technical support, literature, master specs, testing data and samples, as well as, glass fabricator and manufacturer referrals. The AGSC also offers AIA CEU courses.

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