



CAPITAL

curtain wall

Columbia Center glazing changes the face of Washington, D.C.

By Marilyn Deane Mendell

It could be said that Columbia Center, Hickok Cole Architects' latest office building in Washington, D.C., brought glass curtain wall into the central business district of the staid marble and precast-concrete of our nation's capital. Today, glass curtain walls are going up everywhere, but just a few years ago the central business district was a bastion of buildings reflecting the past.

Developers of Columbia Center, Monument Realty LLC, Washington, D.C., wanted to attract a top flight tenant, and knew to accomplish that the building had to be striking and different from everything currently on the market. They looked to Hickok Cole, also of Washington, D.C. The design team, led by Michael Hickok, AIA, principal of the firm, achieved the developer's goals by creating an

all-glass front façade, with several types of glass systems and interior glass elements, making an architectural mark on the nation's capital.

The Hickok Cole design team integrated several glass systems into Columbia Center: a point-supported glass lobby enclosure; a unitized curtain wall; a channel glass wall; and a storefront system.

"The challenge was to keep it all working together and unified," Hickok says. "Because of the varying proportions, the projections, and colors, it could've turned out to be a collection of glass products. Instead it is a balanced and cohesive design. Another challenge was to establish a hierarchy when you are dealing with a building made out of all one material. Our team did a great job of orchestrating the parts to make a cohesive whole."

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A point-supported glass cube acts as the "corner stone" of the building, providing clear views of the lobby, including several art glass elements.

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Columbia Center, Washington, D.C.

- Developer:** Monument Realty, Washington, D.C.
- Architect, interior and exterior design:** Hickok Cole Architects, Washington, D.C.
- General contractor:** James G. Davis Construction Corp., Rockville, Md.
- Contract glazier:** Harmon Inc., Eden Prairie, Minn.
- Art glass supplier:** Pulp Studios, Los Angeles
- Pilkington Planar supplier:** W&W Glass LLC, Nanuet, N.Y.
- Pilkington Profilit supplier:** Westcrowns Inc., Charlotte, N.C.
- Curtain wall glass fabricator:** Viracon, Owatonna, Minn.
- Curtain wall consultant:** Curtain Wall Design and Consulting Inc., Dallas

A lobby of lites

Anchoring the building is the four-story atrium lobby. Columbia Center's site is located midblock between L and M Streets at 1152 15th Street, NW, and is bound by alleys and existing 1970s concrete buildings. The illuminated glass cube entrance was moved to the south east corner of the building at the edge of an alley so it could catch the light on two sides and more easily allow one large unified retail space on the ground floor. The designers wanted the four-story building lobby to glow at night like a Chinese lantern so it would be seen for blocks and have an urban presence well beyond the immediate pedestrian scale.

The atrium wall features low-iron clear glass on point-supported systems that allows a deep and uninterrupted view into the warm wood walls of the lobby, framing an almost invisible edge and defining the corner stone of the structure. It also is the intersection where all the other systems of the building begin to interplay.

W&W Glass LLC, Nanuet, N.Y., supplied the Pilkington Planar system for the point-supported lobby wall, glass canopy and skylight. According to Jeff Haber, W&W managing partner, "The system brings a three-dimensional, floating, lightweight wedge of structural glass into the building lobby. The system utilizes all low-iron Optivwhite glass for



The heavily glass-clad Columbia Center stands out among Washington, D.C.'s traditional stone-faced structures.

maximum transparency. The glass canopy and skylight further enhance the daylighting and transparency by minimizing the use of metal framing and relying more on the glass itself for support.”

The all-glass entrance façade opens up the striking use of dichroic art glass and channel glass to passers-by. Pulp Studios, Los Angeles, supplied the dichroic glass. Westcrowns Inc., Charlotte, N.C., now defunct, supplied the channel glass, Pilkington Proflit K25. The 55-foot-long wall of channel glass, 19 feet, 6 inches high, runs along the open south side of the lobby.

The designers carried the reflective glass vocabulary throughout the lobby with several glass elements, including a lobby directory made of acid-etched tempered glass and clear tempered glass, a reception desk of blue matte glass and an entire wall of glass creating an abstract waterfall.

“The feature wall in the lobby comprises multiple pieces of glass with a custom colored interlayer,” says Bernard Lax, CEO, Pulp Studios. “These are then separated by pieces of laminated glass with a dichroic finish. As you move around the lobby, the color of these panels changes based on the angle that they are viewed from.”

While expensive to use, the dichroic glass achieves a dramatic effect by capturing and refracting light into different colors, producing a multitude of rainbows. To heighten the effect of the glass panels, designers used up-lighting behind the glass wall.

Butterfly curtain wall

The upper floors of the building feature a butterfly-shaped main curtain wall façade that catches and

reflects lights at different angles while providing expansive views of L Street. The extensive use of glazing allows light to permeate through all four sides of the building, a key design feature, because the building sits on an extremely deep lot.

“The curtain wall framing system, SMU 6000, offered the variety of aesthetics and the high performance in a single pre-glazed, unitized wall, complete with stainless steel accent features,” says John Meyers, director of technical services, Harmon Inc., Eden Prairie, Minn. Harmon was the contract glazier.

Viracon, Owatonna, Minn., fabricated the curtain wall glass and supplied about 60,000 square feet of its VE1-2M low-emissivity glass with a light to solar gain coefficient of 1.85. “[The glass] allows ample natural daylight even in the alley elevations,” Meyers says.

Roughly 10 percent of the VE1-2M insulating glass units incorporated a line silk-screen pattern in a gray ceramic frit, says Christine Shaffer, marketing manager, Viracon. “Low-E coatings in combination with a silk-screen pattern on the same glass surface improve solar performance and aid in glare reduction,” she says.

A warm gray frit pattern of 1/8-inch horizontal lines, at 50 percent coverage, also was applied to the glass. The frit, imperceptible from the outside, was applied below the sill line at desk height, to preserve color uniformity seen from the outside and achieve targeted privacy. The butterfly curtain glass façade extends beyond the roofline of the building and frames portions of the rooftop terrace. The surfaces are further articulated through the introduction of deep horizontal mullion caps carried across the building at each floor level.

The 415,000-square-foot building was completed in 2007. Curtain Wall Design and Consulting Inc., Dallas, served as the curtain wall consultant; James G. Davis Construction Corp., Rockville, Md., was the general contractor.

The design team met the owner’s challenge and created a building that would transform the block and look like nothing else in Washington, D.C., says Hickok. □

SOURCES

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