



565 Broome

Left Curved corner windows and slim mullions give the facade of 565 Broome a sleek and elegant profile.

Rising above the entrance to the Holland Tunnel, a glass tower by Renzo Piano Building Workshop blocks out the noise while welcoming views of the city and the Hudson River.

Renzo Piano Building Workshop (RPBW) has left its mark on New York's prominent institutions, bringing its combination of precise forms, industrial materials, and rigorous craftsmanship to the Whitney Museum, the Morgan Library, the New York Times headquarters, and Columbia University's Manhattanville campus. For a very different client, the global real-estate developer Bizzi & Partners, RPBW delivered a 25-story apartment building featuring understated elegance and arresting views. It is the firm's first residential project in the United States, the tallest residential tower in SoHo, and likely the city's first zero-waste luxury apartment building.

Though the ground-floor retail space along Varick Street remains unoccupied at this writing, lending the building a construction-site atmosphere when viewed at grade, the rest of 565 Broome stands as an exercise in architectural refinement with a building envelope that practically disappears. The residential component, structured as mirror-image towers linked by a central glass atrium, opened in 2019 on what the firm calls "the last developable site of its size in SoHo." If 565 Broome marks the culmination of SoHo's evolution from hardscrabble industrial district through edgy bohemia to a privileged enclave, it does so with close attention to the simplest, most universal elements of the quality of life: light and air.

The site, observes RPBW partner and project architect Elisabetta Trezzani, sits adjacent to the Holland Tunnel's Freeman Plaza entrance ramps, which funnel more than 15 million cars a year under the Hudson River, according to Port Authority metrics. Noise, vibration, and exhaust may be inescapable there, but the tunnel ensures that the building will never have something built in front of it. To take full advantage of views in all directions, the architects designed a facade with ultra-transparent low-iron glass, slim mullions, and a regular rhythm of two-foot-wide modules.

One of the project's challenges was "the typical Renzo wish to have as little visible surface of the mullions and transoms of the unitized facade as possible to allow as much glass surface as pos-

sible and thus natural light into the building," says a spokesperson from the German office of curtain-wall fabricator/erector Josef Gartner, a division of Permasteelisa. "Implementing this in such a way as to meet the structural and building physics requirements is always a balancing act between what is feasible and what the architect wants."

"We stayed away from the idea of a flat glass facade, where you don't really see inside," Trezzani says. "We wanted to play with the light as a material." Minimizing shadows and obstructions, with columns set in from the facade and curved glazing allowing a full bi-directional view at each corner, the building maximizes occupants' sense of connection to the neighborhood. "This curved corner [is] completely transparent," says Trezzani. "You have almost the feeling of flying in the city." Apartment floors have a unitized aluminum-and-glass facade, while the double-height ground floor spaces (including the retail component) and central atrium use point-fixed cable-net glazing, offering exceptional transparency at grade as well.

Like RPBW's Jerome L. Greene Science Center (2016) in Manhattanville, 565 Broome does an exceptional job of muting exterior noise near transport infrastructure. But it accomplishes that without Greene's double-wall facade, instead using tight, double-glazed units with solar-protective coating (Guardian SN 62/34) on the interior lite and a more transparent exterior lite, minimizing tint. Acoustic testing guided the glazing selection, Trezzani says, initially for the Watts Street facade where ambient sound was loudest, and eventually for the full facade, outperforming code in noise reduction. The Gartner spokesperson notes that the requirements ranged from Outdoor-Indoor Transmission Class (OITC) 28 to OITC 37, depending on the facade's orientation to noise sources. Operable window segments feature Gretschi-Unitas projecting top-hung hardware, positionally stable at any angle up to the opening restrictor's fall-safe point, allowing occupants considerable airflow control. With 11-foot floor-to-floor heights, 10-foot internal ceiling heights, and floor-to-ceiling windows flush with the floorboards, the 115 apartments have a more spacious ambience than one normally finds in Manhattan residences.

When the client bought the site, it was L-shaped due to a youth center/charter school annex building on the northeast corner of the block. To assemble a rectangular site and allow construction of a driveway and private *porte-cochère*, the client bought the dilapidated annex used by the youth



This page, Top The double-story lobby is accessible by a private vehicular entry court tucked behind the building. **Center** The main indoor pool is part of an amenities-rich package that includes a library, gym, social spaces, and a 92-foot-tall glazed atrium between the two towers. **Bottom** Apartments, which range from studios to four-bedroom suites, feature floor-to-ceiling windows and many get views of the Hudson River. **Facing, clockwise from top:** Facade detailing at 565 Broome shows the minimalist aesthetic associated with Renzo Piano's work; Metal-and-glass curtain wall was attached to the concrete slab-and-column structure during construction; Glazing units fabricated for 565 Broome have high ratios of glass to aluminum mullions.



center as its primary entrance and agreed to build a new entrance for the center on the corner of Broome and Varick Street. As part of the deal, the developer included a basketball court underneath the new residential building that is accessible from the youth center/school. Since basketball courts must be column-free, "We built the slab on grade as a transfer beam," dedicating the outdoor area as an entry court for the apartment building and part of the interior for storage and MEP, says Trezzani. Because the property lies in a flood zone, important MEP equipment cannot be placed underground. A greater structural challenge, she says, involved the setback creating the 11th-story terrace, which RPBW solved by using a big transfer beam to move out the columns on the lower portion of the building and to bring in the columns on the upper part of the tower.

The building's volumes are organized in quadrants: the two symmetrical north and south towers are divided at the 11th floor into lower and upper segments. The glazed atrium between the two towers developed as a result of zoning regulations and negotiations with city officials, says Trezzani. The architects' initial design called for "one building until the setback" and two separate towers above that point, connected by a small bridge at roof level. When the team submitted documents for approval, however, officials told them that the 20-foot-long bridge was too small as a connecting element and insisted on a continuous facade. The solution was to enclose the space between the towers' inner concrete structural walls almost completely, leaving gaps for air and wind at the top. The resulting 92-foot-tall glazed volume ("the conservatory")

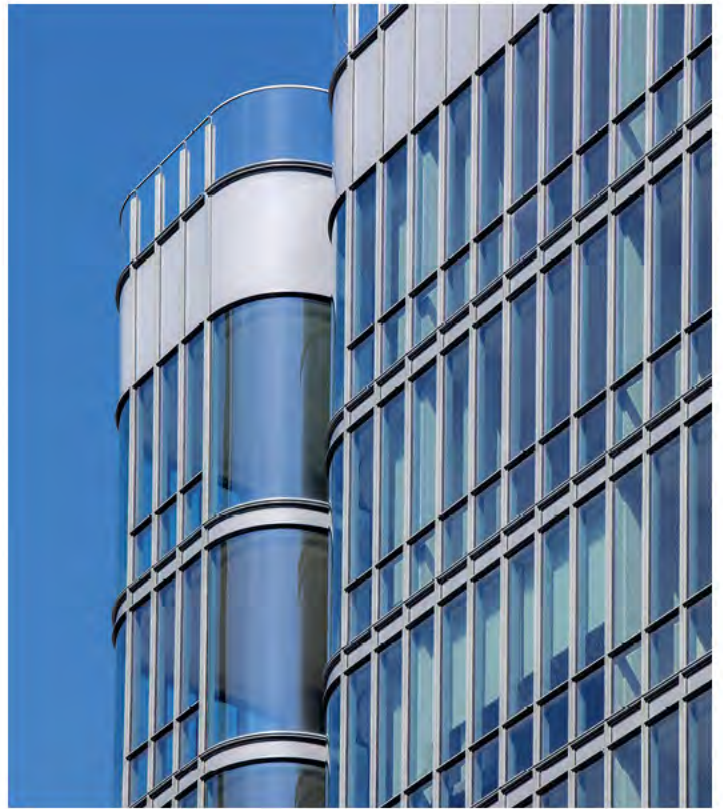
Top and center: Adrian Gaut; bottom: Evan Joseph, © Blizi & Partners.

has the feel of a placid liminal zone, neither entirely indoors nor entirely outside, with indoor furniture at home among olive trees. Taking advantage of air currents in the atrium, RPBW suspended a kinetic sculpture, *Rainbow Leaves*, by longtime Piano collaborator Susumu Shingu, which features tri-colored stainless-steel petals that dance when activated by breezes.

Another Shingu sculpture, *Birth of a Rainbow*, adorns 565 Broome's landscaped entry court, a rare feature in Manhattan. A robotic parking system carries cars to a 42-space garage on the third floor, so residents with automobiles need never grapple with street parking. The garage space, says Trezzani, was unusable as apartments because it would have exceeded the zoning limit for floor-area ratio.

Like many upscale Manhattan buildings, 565 Broome offers amenities—such as a library, wet bar, social spaces, pools, and gym—but here, the main pool and gym are located in naturally lit, generously proportioned double-height spaces. The 11th-floor terrace includes four swimming pools, two per tower, and the north and south penthouse suites each include a private rooftop pool.

In the apartments, which range from studios to four-bedroom suites, floor plans emphasize views. Some of the larger units position bathrooms at corners along the eastern facade, with tubs facing the curved windows at oblique angles, so a bather can gaze out above the roofs of SoHo and Greenwich Village.





Left When seen from between the two towers, 565 Broome's glazing appears to vanish against the sky.

Facing Viewed from the west, the building stands as a new landmark on the edge of SoHo and injects a sophisticated touch of modernism to a formerly industrial district.

A different type of amenity requested by the client is the property's status as a zero-waste building, thanks to the expertise of environmental consultant firm Think Zero in coordinating waste-reduction, recycling, and donation programs so that 90 percent of the building's waste materials are diverted from landfills and incinerators. Although the building did not seek LEED status, Trezzani describes its facade-wide thermal-control metrics as meeting the city's 2015 code standards in effect during design, roughly equivalent to LEED Gold-level performance. Details such as electric charging stations, composting facilities, electronic-waste recycling, water-bottle refillers, and on-site car sharing indicate the importance of light-footprint living to the building's management, which aims for it to become Manhattan's first residential building certified as Zero Waste by Green Building Certification, Inc.

SoHo was industrial, longtime New Yorkers recall, before it was posh. Threatened by Robert Moses's Lower Manhattan Expressway plan until Jane Jacobs and other activists blocked that form of automotive uricide, the neighborhood of cast iron and cobblestones attracted artists in the 1960s and '70s, then the deeper-pocketed residents who inevitably followed and displaced the "creative class." It's still possible to walk these streets at night and hear the ghosts of George Maciunas, Jonas Mekas, Holly Solomon, Keith Haring, and Ornette Coleman lamenting the tides of gentrification.

What 565 Broome brings to this environment is subtler than simple upscaling. "We use materials in a very honest way," Piano has said of this building,

eschewing elaborate finishes in favor of a material palette of steel, aluminum, crystal-clear glass, limestone, ultra-high-performance concrete, and white-oak flooring—embracing restraint over garish display. Trezzani, who also worked on the earlier Whitney project, finds that the newer building's essential material isn't really a material at all: "Steel is the material of the Whitney; light is the material of the SoHo building." Guiding that light into these dignified spaces called for a blend of craftsmanship and integrity that makes RPBW and its collaborators credible inheritors of this neighborhood's pioneer tradition.

565 BROOME

Location: 565 Broome Street, New York, NY

Owner and Developer: **Bizzi & Partners**, New York, NY

Architect: **Renzo Piano Building Workshop**, Genoa, Italy

Architect of Record: **SLCE Architects**, New York, NY

Structural Engineer: **DeSimone Consulting Engineering**, New York, NY

Mechanical Engineer: **Ettinger Engineering Associates**, New York, NY

Construction Manager: Joint venture: **Triton Construction** and

Plaza Construction, New York, NY

Curtain Wall Consultant: **ICS**, Mark Pasveer, Los Angeles, CA

Curtain Wall Fabricator: **Gartner / Permasteelisa**, Bloomfield, CT

Curtain Wall Erector: **Tower Installation**, New York, NY

Structural Steel Fabricator and Erector: **Maspeth Welding**, Maspeth, NY

Miscellaneous Iron Erector: **Integrity Iron**, Glen Cove, NY

