

The Architect's Newspaper

Getting A Handel

In Boston, the world's largest Passive House office tower is on the rise

By James McCown



Winthrop Center at night (Courtesy Millennium Partners Boston)

John Fernandez is a tenured professor of architecture at the Massachusetts Institute of Technology (MIT), so it might seem an odd coupling that this academic would be associated with high-end mixed-use developments. But though a firm called Metabolic Design Office, of which he is founder and principal, Fernandez consults with real estate developers who are finding more and more that sustainability can rent office space and sell pricey condominiums. For proof of his effectiveness, look no further than Winthrop Center, a mammoth mixed-use office and condominium tower now rising in Boston's Financial District.

Winthrop Center will be the largest Passive House Institute-certified office building in the world when it's completed in 2022, Fernandez explained. "Passive House is a set of systems related to a building's walls, windows, ventilation, and heat exchange," he continued. "All elements must work together. Take any of them away and your energy efficiency decreases considerably." Indeed "Passive House" is something of a misnomer—it began in Europe in the late 1980s to gauge energy efficiency in single-family homes. Now it's applied to any project type. The office portion of the mixed-use project Winthrop Center is guided by an international construction standard maintained and continuously developed by the Germany-based Passive House Institute (PHI).

The 690-foot-tall Winthrop Center is a development of Millennium Partners Boston and designed by Handel Architects, based in New York. The building will comprise 812,000 square feet of office space and 321 ultra-luxury condominiums at its upper reaches. Millennium credits Handel Architects with laying the groundwork to make the building use what it estimates will be 65 percent less energy than similarly-sized projects in Boston and deliver 30-to-50-percent more fresh air than comparable buildings. (The Passive House designation applies only to the office portion of the project.)

"The architects and developer asked me how they could make the building as sustainably and digitally sophisticated as possible," Fernandez said. The building is also slated to be WELL and LEED Platinum-certified once finished.

"Passive House is a high level of building energy performance," said Blake Middleton, a partner at Handel Architects. "It has never been done on this scale before. In a few years, all buildings will have this level of performance, but this is the first one. We're ahead of the curve but the curve will eventually catch up."



The main entrance to Winthrop Center (Courtesy Millennium Partners Boston)

Richard Baumert, a principal of Millennium Partners Boston, said he's often asked whether the building's wellness and sustainability features were influenced by COVID-19.

"People say to us 'You really pivoted quickly with this pandemic.' But in reality, the nuts and bolts of this project were made years ago." Baumert said he took a trip to Amsterdam to see an office project he thought would be state-of-the-art in terms of its sustainability and then had an epiphany.

"It occurred to me that right across the river in Cambridge, we have the technology capital of the world at MIT. So I looked up a guy named John Fernandez, and we've been working together ever since." By coincidence, Fernandez is an old friend of Gary Handel, founder of the eponymous architecture firm, from when the two worked together at Kohn Pedersen Fox in New York.



An example of the project's expansive office floor plates (Courtesy Millennium Partners Boston)

“John’s research proved to us that when you combine sustainability, technology, wellness and social engagement you create happier people,” said Baumert. Among the other suggestions Fernandez made was the creation of an Earth Room, an electromagnetic-free space that will prevent people from engaging their hand-held devices and will instead envelop them in calm. Fernandez also became a champion of what the team is calling “The Connector,” a ground floor concourse that will provide a link between the heavily traveled Federal and Devonshire Streets and become a public promenade open not just to building tenants and residents but the city at large.

“The Connector is a space for the city,” Fernandez said. “I think the role of money-making projects like this is their civic presence. I think that struck a real chord with Millennium.” Of note is the fact that this is the fifth Boston collaboration between Millennium and Handel; the team also produced the two-building Ritz-Carlton project on Washington Street in the early 2000s; One Charles in 2004; Millennium Place in 2011, and the Millennium Tower on the site of the old Filene’s department store in Downtown Crossing in 2016.



A slice of the Connector (Courtesy Millennium Partners Boston)

Handel's Middleton said other design features of Winthrop Center were driven by its location and architectural context. "You have art deco buildings nearby and other structures that date back to the 1880s," he said. The upper portion of Winthrop Center pivots to form a balcony and what the architect calls "pleated surfaces." Many of the residential units have bay windows, drawing their inspiration from the city's iconic townhouses in the Back Bay and South End neighborhoods.

For his part, Baumert says he reveled in the give-and-take of the design process.

"All the times I went down to New York to work with Blake and his team, it occurred to me how much I enjoyed this project," Baumert said. "It's got so many layers to it."