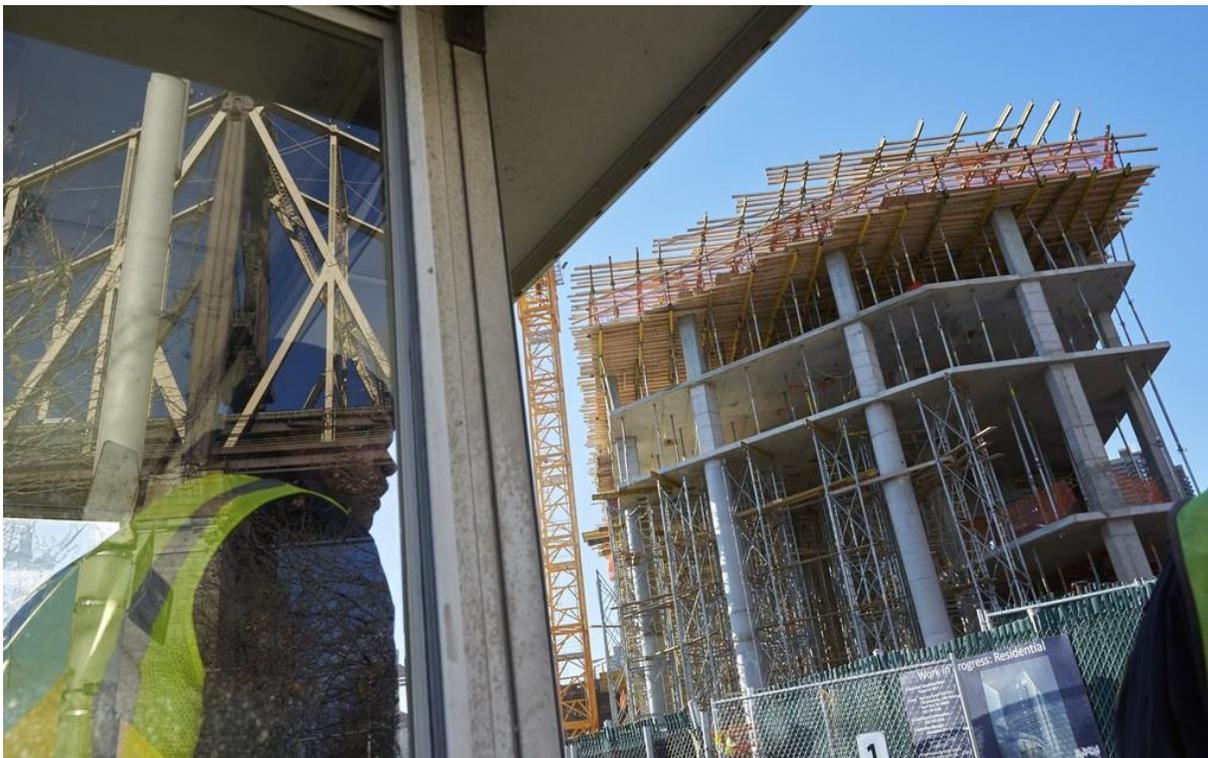


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NEW YORK

Striving for Energy-Efficiency in New York

Passive design focuses on creating airtight buildings and maintaining comfortable temperatures



The project on Cornell Tech's new Roosevelt Island campus will be the first high-rise residential passive house in the world. Passive building techniques focus on constructing highly insulated buildings. When completed, the building will rise 26 stories. PHOTO: STEVE REMICH

By *Keiko Morris*

A church and a developer have teamed up to use passive-construction standards for a 174-apartment building in Jamaica, Queens, joining a growing list of larger-scale New York City developments embracing these ultra-energy-efficient building methods.

Passive-design principles focus on creating airtight buildings and maintaining comfortable temperatures while dramatically reducing the use of mechanical heating or cooling systems. Proponents say the process, which relies on high-quality materials and components such as windows and doors as well as advanced ventilation systems, can reduce energy use for heating and cooling by as much as 90%.

“There is definitely a push toward passive-house or at least more energy-efficient design,” said Eric Bluestone, a partner at the Bluestone Organization, which was tapped by First Presbyterian Church in Jamaica as its partner for the Queens project. He noted, “What has become our standard construction method is very close to passive house design.”

In 2010, the New York region had about 50,000 square feet of passive-design building projects planned, said Ken Levenson, founding board member of New York Passive House, a nonprofit organization that provides education and promotes passive-design methods and principles. Today he estimates well over 3.5 million square feet of passive-design projects are in the pipeline.

Until the last few years, buildings in New York City incorporating passive design standards tended to fall in the smaller size range. But that has been changing as developers of bigger projects, especially affordable-housing builders, have been aiming to reduce operating costs and boost energy-efficiency levels.

Called Tree of Life, the 174-apartment project, which was expected to break ground on Friday, will also house First Presbyterian’s community-services center and a health clinic at 89-48 164th St. in Jamaica. The \$74 million development includes a solar-power system on its roof. The church tapped Bluestone as its partner because of its experience in energy-efficient construction, said Rev. Patrick O’Connor, First Presbyterian’s senior pastor. Bluestone is about to complete a passive-design, affordable building with 101 units in the Rockaways.

Building to passive standards can raise costs between 3% and 6% above the expenses for typical construction, but building owners save down the road on lower operating costs, proponents said.

Earlier this year, the city selected a team of developers led by Jonathan Rose Cos. for an East Harlem affordable development that will include about 650 apartments in three buildings, a

YMCA, a school and a community health center. Building to passive standards was a requirement.

“It’s a large enough scale that we hope we will learn a lot about how you can build affordable housing that meets very aspirational standards for efficiency in a way that adds no costs or reasonable costs,” said Fred Harris, managing director of development for Jonathan Rose Cos.

In 2012, there were only about 10 certified residential units in North America, said Katrin Klingenberg, executive director of Passive House US, non-profit that provides passive-house certification and training and has established standards for North American climates. By 2016, there were 1,000 certified units, she said.

“It’s a pretty good growth rate,” Ms. Klingenberg said. “Most of the growth is driven by affordable-housing developers.”

Perhaps the city’s most prominent passive-design project is the House at Cornell Tech. The 26-story residence for students and faculty on Roosevelt Island, one of the world’s tallest residential high-rises under construction, will open at Cornell University’s new technology campus in August. The university and the tower’s developer, a partnership of the Hudson Cos. and Related Cos., were aiming to be “as thought-provoking and innovative and energy-conscious as possible,” said Jennifer Klein, assistant director of strategic-capital partnerships at Cornell Tech.

Such projects have encouraged other developers to learn about passive standards, proponents of passive design said. And they are hoping eventually the concept will be more routine.

“I honestly believe it will become normal within 10 years in New York,” said Mr. Levenson.