

USGlass™

METAL & GLAZING

THE MAGAZINE OF RECORD FOR ARCHITECTURAL GLASS INDUSTRY LEADERS

Volume 59
Issue 4
April 2024

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LARGEST CIRCULATION OF
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The historic renovation of the Grant-Deneau tower in Dayton, Ohio, is currently the largest VIG retrofit in North America.

Vacuum Insulating Glass Gives New Life to Mid-Century Tower

w Fourth St
1-99

Paul Deneau Way

40 West 4th

40

ONE WAY
→

Cutting Imp.

The Grant-Deneau tower in Dayton, Ohio, was vacant for seven years when Columbus, Ohio-based developer Windsor Companies purchased the glass gem in 2019.

Built in 1969, the 22-story, mid-century tower was the city's first modern skyscraper and was listed on the National Register of Historic Places in 2016. The tower, however, was flawed. So flawed that no one wanted to work there. The problem wasn't mold, asbestos or bugs. It was the glass. The monolithic glazed building's heating and cooling costs were so high that no one could afford to work there. So, they left.

Now owned by Columbus, Ohio-based Windsor Companies, the firm had its eyes set on renovation. As the process began, Alex Manno, Windsor's director of construction, was sure there had to be an energy-efficient glass they could use. But not just any high-performance glass would work. As a historic site, the tower had to maintain its original aesthetic.

"I was searching for 'super-efficient' glass online, and vacuum insulating glass (VIG) popped up," he said.

Seeking Efficiency

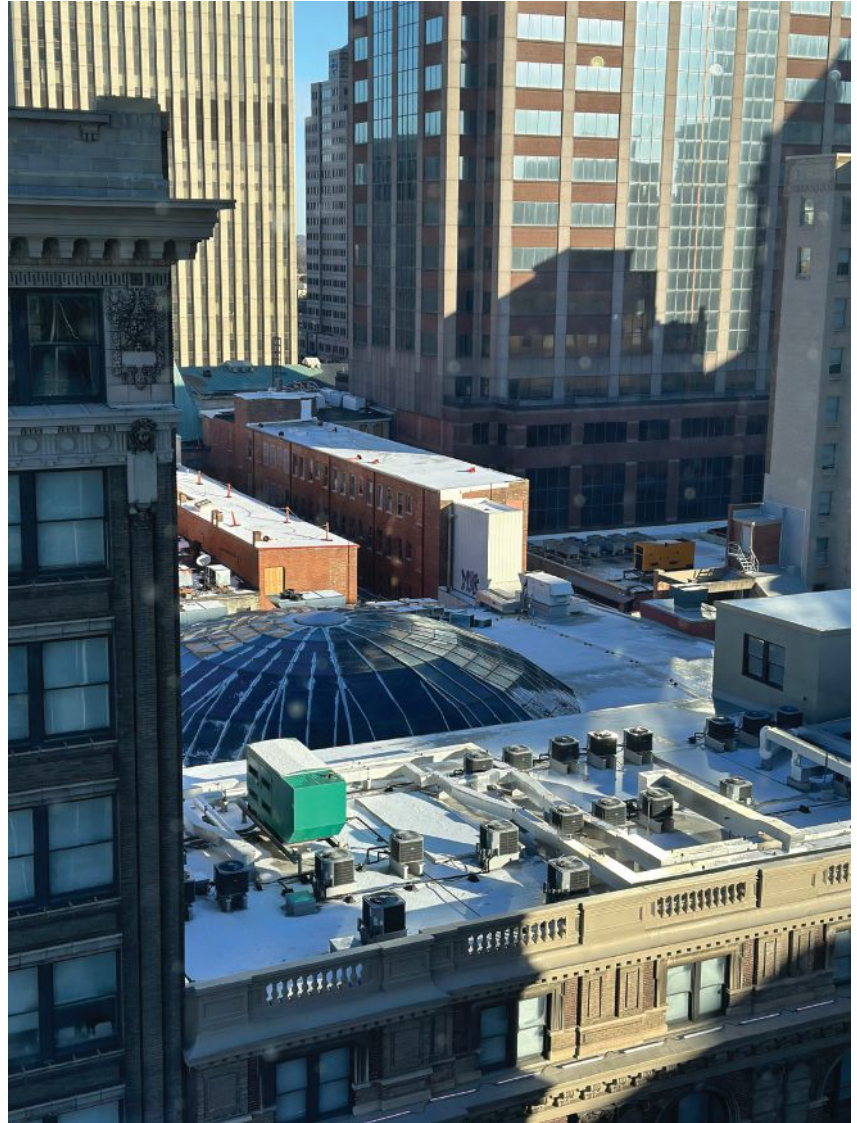
Through that search, Manno found Vacuum Glass LLC and began the conversation with its president and chief technical officer, Dave Cooper. Those conversations led to what is currently the largest VIG retrofit in North America.

The project includes around 2,400 VIG panels in vision and spandrel areas, totaling 60,000 square feet. Vacuum Glass provided fully tempered 10-mm VIG panels to replace the original curtainwall's annealed glass.

Minimal structural changes were needed, helping to reduce costs and enhance energy efficiency. The renovation includes the use of the original gasket from Stanlock, as well as the same profiles.

Manno says there are about 18 sizes, including arched windows on the 22nd floor, where they are building penthouse units.

Cooper says it took about three months to fabricate the units, and the glass is currently on site.



Vacuum Glass LLC supplied around 2,400 VIG panels for the renovation of the Grant-Deneau tower in Dayton, Ohio.

Historical Recognition

Because the tower is a historic site, it was also eligible for tax credits at both the federal and state levels.

The project has received acknowledgment from the State of Ohio for a historical tax credit in the millions by matching the new tempered VIG to the original annealed monolithic glass. Project developers are also working toward the 179 D tax credit for energy efficiency upgrades.

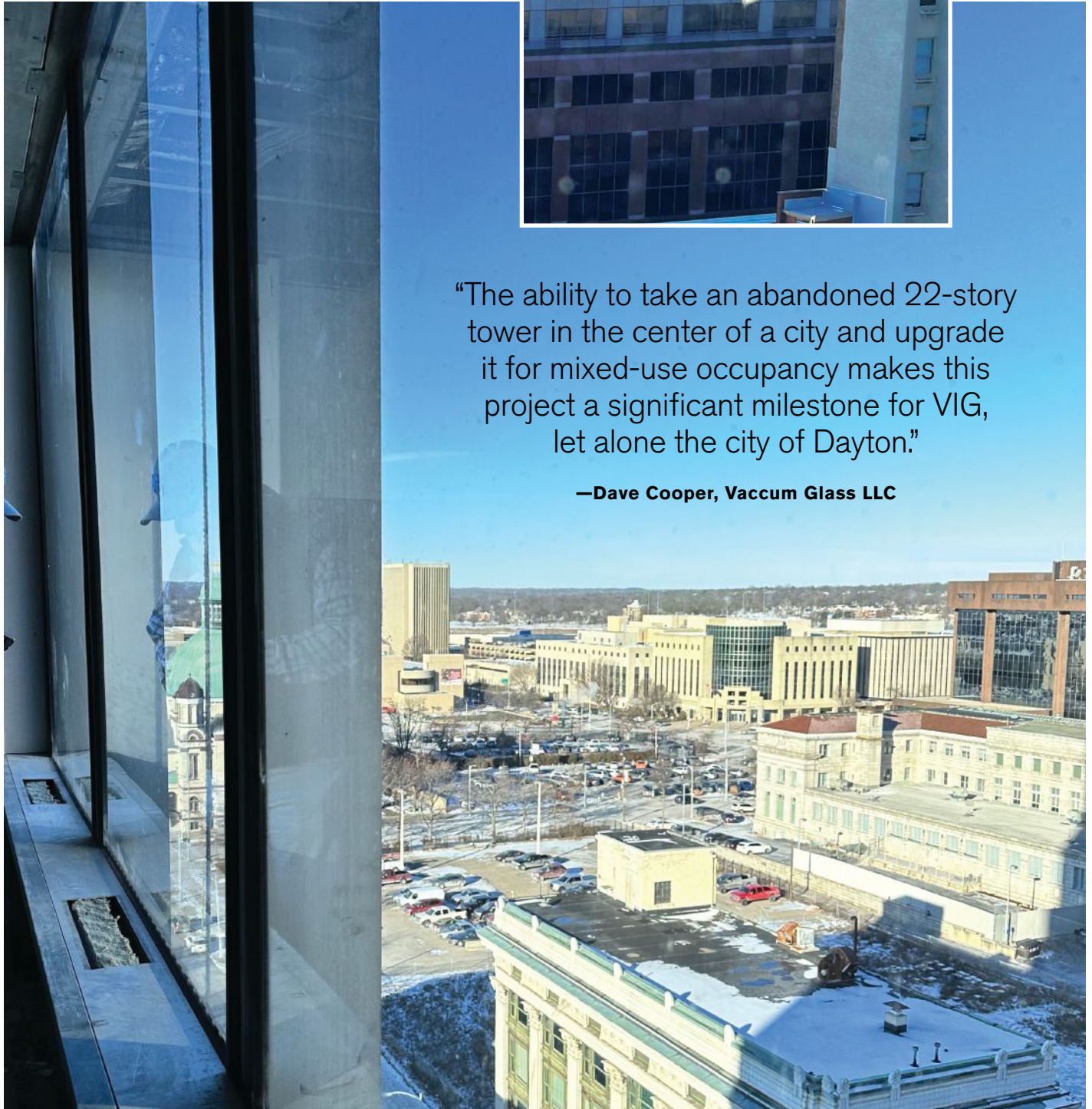


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“The ability to take an abandoned 22-story tower in the center of a city and upgrade it for mixed-use occupancy makes this project a significant milestone for VIG, let alone the city of Dayton.”

—Dave Cooper, Vaccum Glass LLC



The retrofit includes about 60,000 square feet of 10-mm VIG panels that are replacing the tower’s original monolithic façade.

Renovation work began in January 2022. Once complete, the tower will include commercial space on the lower floors and residential units on the higher levels. Developers are targeting July 1, 2024 for completion.

“This is the largest VIG glazing project in North America at this time,” says Cooper. “The ability to take an abandoned 22-story tower in

the center of a city and upgrade it for mixed-use occupancy makes this project a significant milestone for VIG, let alone the city of Dayton. Coupling VIG with a heat pump solution and tax incentives will drastically lower capital and operating costs. Such significant thermal insulation for the envelope glazing is impossible with standard insulating glass.” **USG**