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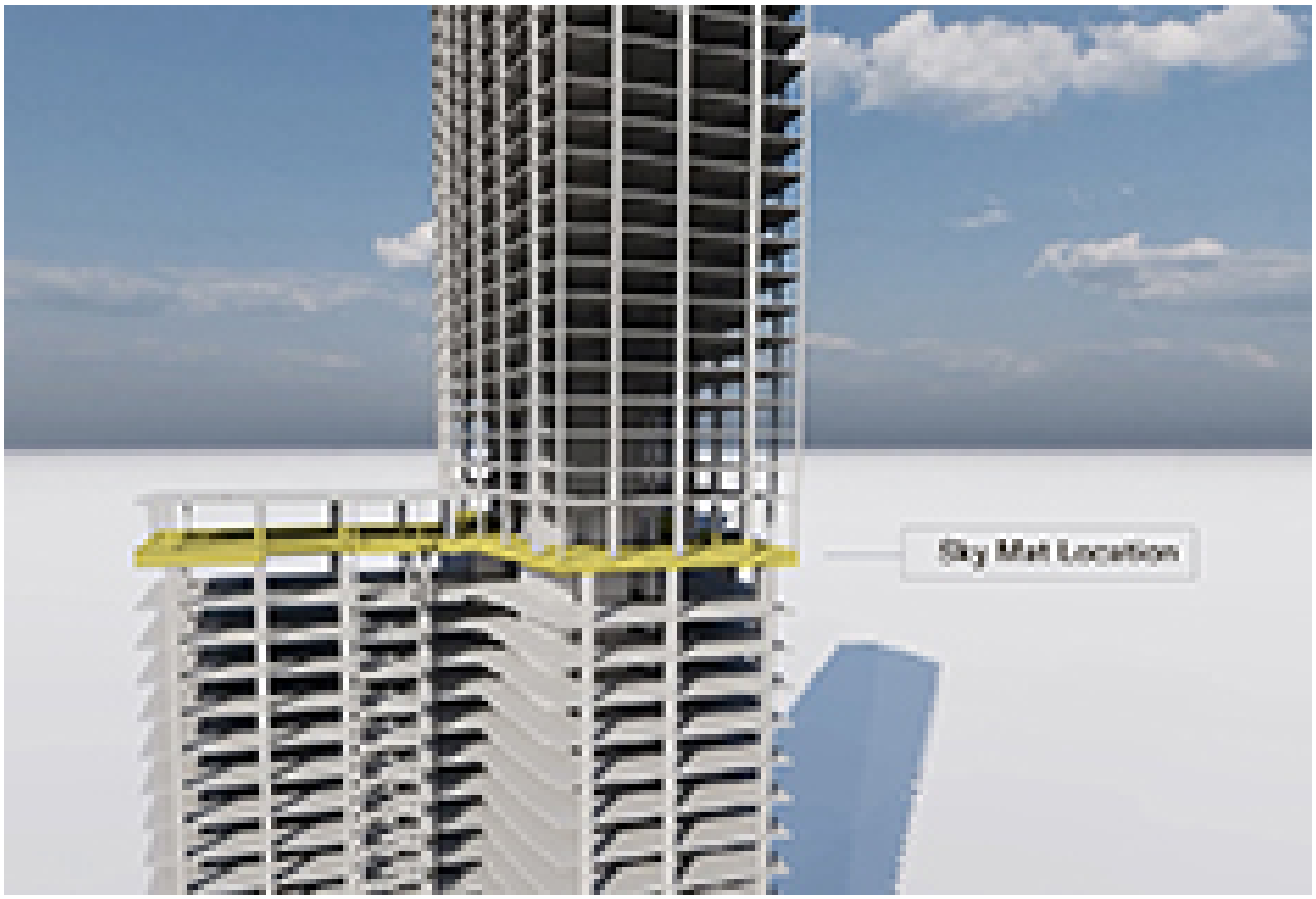
Suffolk manages concrete “sky mat” pour on Winthrop Center project

November 19, 2021 - Construction Design & Engineering



Boston, MA On a construction project site, a concrete pour in a deep hole or at ground level can be a complex logistical challenge requiring methodical planning and great attention to detail during execution. A recent concrete pour at Winthrop Center was no different – except that it occurred 350 feet off the ground.

In a first for the city, Suffolk managed the pour of a 20-million-pound “transfer mat” (aka “sky mat”) halfway up to the eventual top of Winthrop Center, a 52-story tower slated to be the fourth-tallest building in the city. The mat, which required 1,200 tons of rebar and nine levels of shoring compared to the typical five, had to be kept in place for 21 days. The purpose of the slab is to separate the office and residential components of the tower, which require different layouts and structural elements.

The office floors will have open floor plans spanning 45 feet, with few walls and columns on the floors to support the building's structure. The residential floors of the tower will be denser with residential units and columns on the inside. The contrasting uses of the tower presented a unique challenge: The team needed to find a way to bear and transfer the weight to the lower, more spaced-out perimeter columns, and eventually the ground. The highly innovative transfer mat will help create column-free, unobstructed views of the outdoors, which promotes the overall healthy building design strategy.

"The pour of the transfer mat was carried out flawlessly, thanks to the careful planning and execution by the entire project team," said Suffolk project executive John Newhall.

Once completed, the 691-foot Winthrop Center will deliver 812,000 s/f of class A office space, 572,000 s/f of residential space comprising 321 residences, and an urban "living room" on its ground floor. Winthrop Center will set new global standards by integrating health and wellness, productivity and social engagement, and technology and sustainability into its design.

That strategy has three supporting pillars: LEED certification, WELL certification, and Passive House design.

While others are responding to COVID-era concerns by retrofitting their buildings with advanced air filtration systems and performance-based building standards, Winthrop Center had the connection between building performance and human health, wellness, and productivity in its DNA from its inception. The building is also on track to become the largest office building in the world to seek certification from the Passive House Institute, and the standard in those designs means Winthrop Center may use 65 percent less energy than the average Boston office building.