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New SFO Control Tower Is State Of The Art



Aerial view of new SFO control tower as construction nears completion.

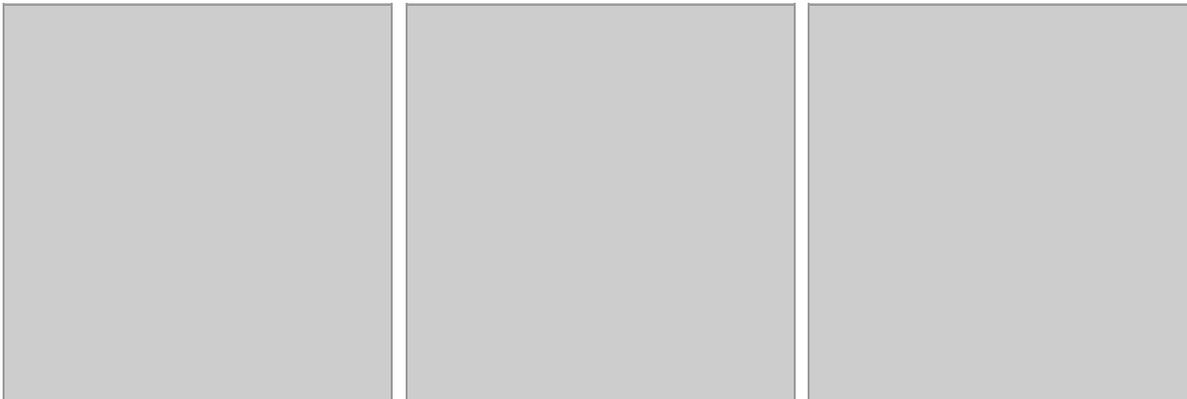
Two years from now, carpenters driving along the Bayshore Freeway will be able to brag to their kids about the new air traffic control tower at San Francisco International Airport.

It will be beautiful, "a unique, torch-shaped building flared at the top, clad in curved metal panels," according to the airport's own description. "A wide vertical ribbon of glass on the public face," visible from the freeway, "will reflect the sky during the day and be illuminated at night."

Aside from the aesthetic requirements of the Bay Area, the tower is also shaped by a multitude of structural requirements. The Federal Aviation Administration needs the tower to be able to withstand a magnitude 8 earthquake—larger than the 1906 temblor—and promptly resume operations. It must also be environmentally sustainable, meeting LEED standards, as well as satisfying federal security standards. And of course, the FAA requires the most current air traffic control technology, which will take a year to install after the structure is completed.

But undergirding it all will be more than a year's worth of hard work by union pilebutts and carpenters. The 220-foot tower, situated in a tight space between Terminal 1 and Terminal 2, is supported by some 215 auger cast piles, drilled 140 feet down through the bay mud to bedrock.

Construction of the tower, which sits on a three-story base building for the FAA and other personnel, is based on the customized wood forms produced by the Doka Corporation. Filled with 30" of concrete for the first 48 feet and 18" for the remainder of the tower, at 8,000 psi, the forms have been bolted, filled and jacked up to the next level—16 times to be precise.





San Francisco International Airport earns bragging rights for its spectacular new air traffic control tower.



Jose Ferreira, Local 22, and Phil Sardinia, Local 713, are the safety team at the SFO control tower site.



Carpenter foreman Tommy Molina, Local 405, and Superintendent Rich Gile, Local 713, at SFO control tower site..

"The interesting part of this job is simply working at that height, and using the Doka concrete form system," says Tommy Molina, Local 405, carpenter foreman for the tower and secure connector to Terminal 2. "It gets pretty complicated, flying in the forms and then jacking them up to the next level."

Superintendent Rich Gile, Local 713, adds, "It's the slope," noting the 1200 embeds in the concrete that will support the metal cladding. "It's been a great, very safe job."

At this writing, the design-build project has logged 120,000 hours without a lost-time accident, thanks in large part to the work of Phil Sardinia, Local 713, and Jose Ferreira, Local 22.

"We've built all the hand rails, deck edging and stair access, and taken care of general site maintenance," Sardinia says. "The project keeps moving up, so there's always new work to do."

Hensel Phelps is the general contractor. Albanese poured the concrete for the foundation. Nibbi for the tower. Insul Acoustics runs the drywall and framing for the project.

The \$102 million project will replace the existing tower located on top of Terminal 2, built in the early 1960s and last remodeled in 1988—"more evidence that renovation work at SFO will never, ever truly come to an end," according to San Francisco Chronicle urban design critic John King.

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