



BUILDING UP

BEHIND THE SCENES

Before Studio Gang's iconic structures become a reality, they have an architectural dress rehearsal at the firm's in-house model shop.

By Jessie Sardina | Photography by Chris George

Long before the Vista Tower was a lofty vision of tessellating steel and glass along Chicago's eastern swath of lakeshore, it was a pair of classic red-and-white movie-theater-style popcorn boxes stacked base to base in Jeanne Gang's studio. The architect, principal of the revered firm Studio Gang (studiogang.com), was inspired by the geometry of crystalline structures and represented the mineral's trapezoidal geometry with the pinstriped cardboard boxes. Drawing on Gang's rudimentary model, her team expertly handrendered the tower's undulating frustums from foam. Years later, as construction crews grind away at the foundation of the 95-story spire slated for completion in 2020, Schuyler Smith and Juan De La Mora—who helm Studio Gang's dedicated model-making Studio Shop—are ruminating on the exact colors of bluish gradient glass that will eventually clad the skyscraper's near 1,200-foot facade through colored films carefully taped to a 3-foot-tall model.

While model-making is a requisite part of Studio **CONTINUED...**



SHOP TALK From top: Studio Gang's model shop is open to all members of the firm's team; a bevy of textural model greenery.



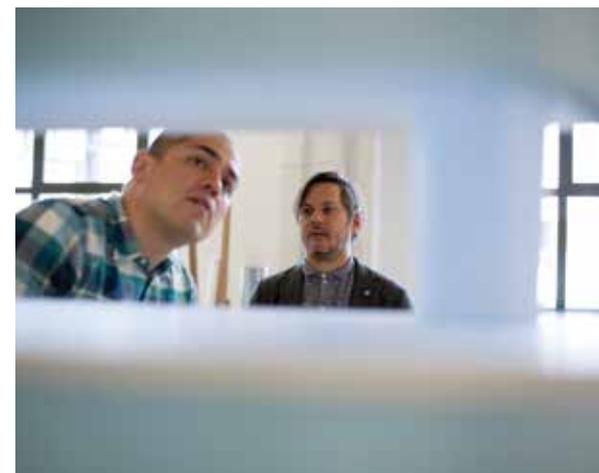
IT'S A SMALL WORLD
Clockwise from top: A designer handstitches fabric to a bent-wire structure; Juan De La Mora and Schuyler Smith co-manage the model shop; the team uses colored film to test the exact shade of gradient glass for Vista Tower's exterior.

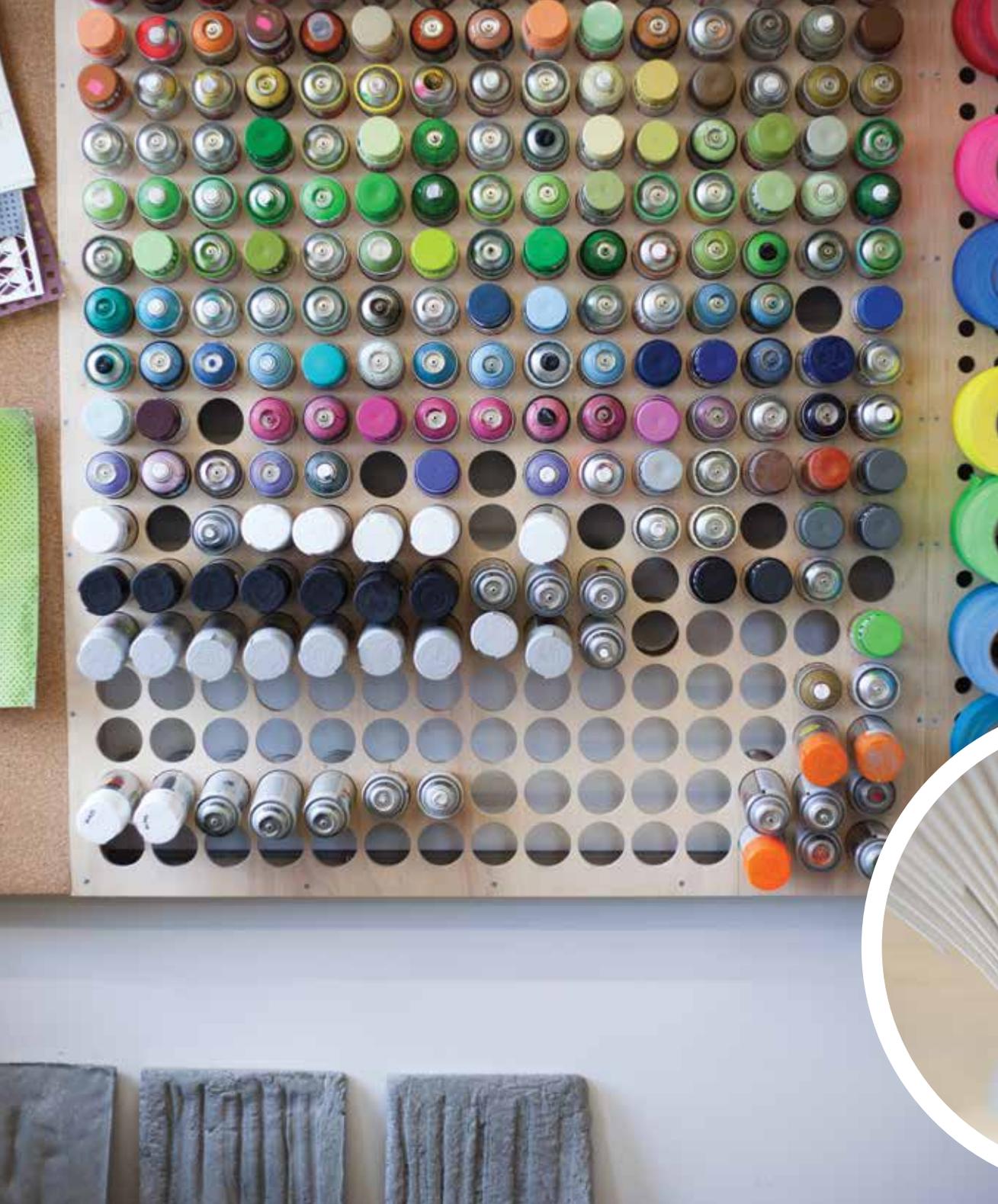
...CONTINUED Gang's process, the onslaught of digital technologies has rendered the once-compulsory practice a latent skill that most young architects will never employ beyond undergraduate design classes. "There's a tremendous amount of respect [at Studio Gang] for things done with your hands," says Smith, who studied under Gang and Managing Principal Mark Schendel alongside De La Mora at IIT's College of Architecture before joining the team at Studio Gang. "The process of making is a tool itself," explains Gang. "We often employ both digital and analog methods—combining digitally printed and cut elements with materials that have been woven, cast, carved and assembled by hand."

While master architects like Uruguay's Rafael Viñoly and Italy's Renzo Piano still famously utilize model-making in their everyday practices, one would be hard-pressed to find a studio in North America with an in-house shop like Studio Gang's. Prominently placed behind a glass partition on the second floor of the firm's recently renovated Noble Square headquarters, the 800-square-foot model shop is a hands-on space where nearly every member of the almost 100-person team is encouraged to build, investigate and explore their designs off the screen. "We use modeling differently than a lot of architectural offices use it," says Smith. "The models are used as studies to drive the design; to prove things out. They're not just trophies that show up in the building's sales center. They are tools."

A walk through Studio Gang's offices proves this mentality: Intricate foam towers and wispy paper trees dot desktops and conference tables like miniature cityscapes. Not a single structure is immune to revision (think entire basswood wings ripped off with the stroke of a hand) even after ground has been broken and beams have been erected. "You're not married to your models," CONTINUED...

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TOOLS OF THE TRADE

From top: A wall of spray paint cans is a colorful sight in the workshop; a study model for a ceiling system in the American Museum of Natural History takes inspiration from the underside of a mushroom cap.



...CONTINUED explains De La Mora. “You can pull and tear and rip your model apart to get further across your process and settle your own creativity. I mean, how many times do we sketch over our own lines to get the perfect curve?”

From conception to construction, each and every project that Studio Gang takes on evolves structurally, aesthetically and even materially through the building of its various models. After the firm was tasked to design the Richard Gilder Center at the New York American Museum of Natural History, Smith and De La Mora attempted to manifest the expansion’s infill volume that is carved out like a canyon from paper, clay, foam, acrylic and even ice before arriving to their current technique. A bent wire apparatus defines the space’s structure, while carefully basted cotton creates organic sightlines—a method that has directly informed the construction process, which will utilize curved

rebar sprayed with concrete. “There’s a direct correlation between building the model and building the building,” explains Smith. “Tolerances, material thicknesses... all of these things that don’t exist in the digital realm become abundantly clear when you start building a smaller version with your hands.”

Even the less glamorous architectural considerations are determined through the studio’s model-making process. Smith and De La Mora once transported a large-scale model to the construction site of Columbia College Chicago’s 35,500-square-foot state-of-the-art Media Production Center in order to help contractors coordinate the building’s intricate placement of mechanical equipment and utility ducts. “Whether it’s to inspire or warn against, the step of seeing something in the physical world is an important one every time,” says Smith. “It’s built into the very way we do business. It’s essential to who we are.” ■