

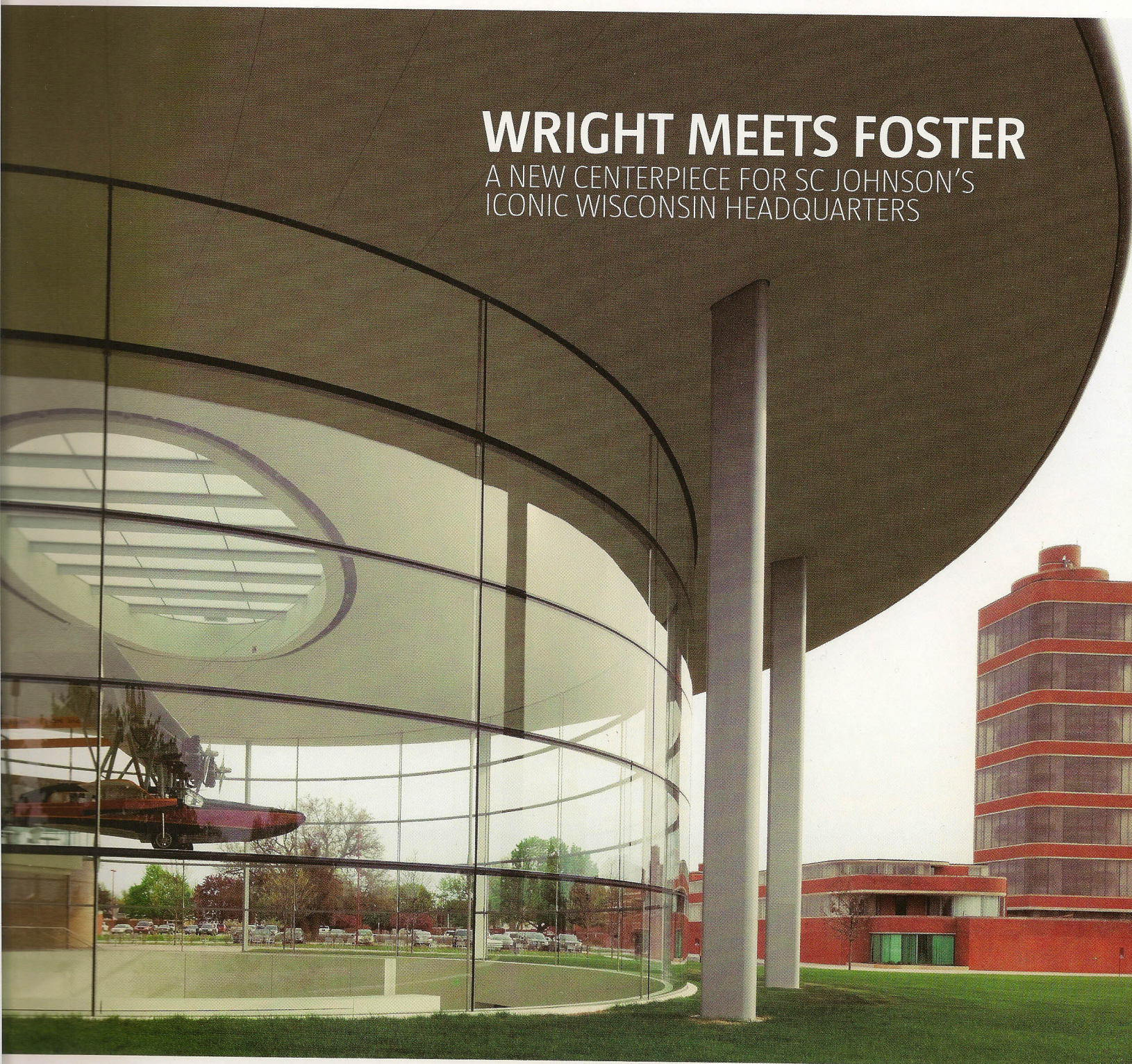
New at NeoCon 48 Leather and Bronze 57 2D Printers 46
The Firms From Ipanema 74 Weiss/Manfredi Go to Barnard 113

ARCHITECT

hanley wood

WRIGHT MEETS FOSTER

A NEW CENTERPIECE FOR SC JOHNSON'S
ICONIC WISCONSIN HEADQUARTERS



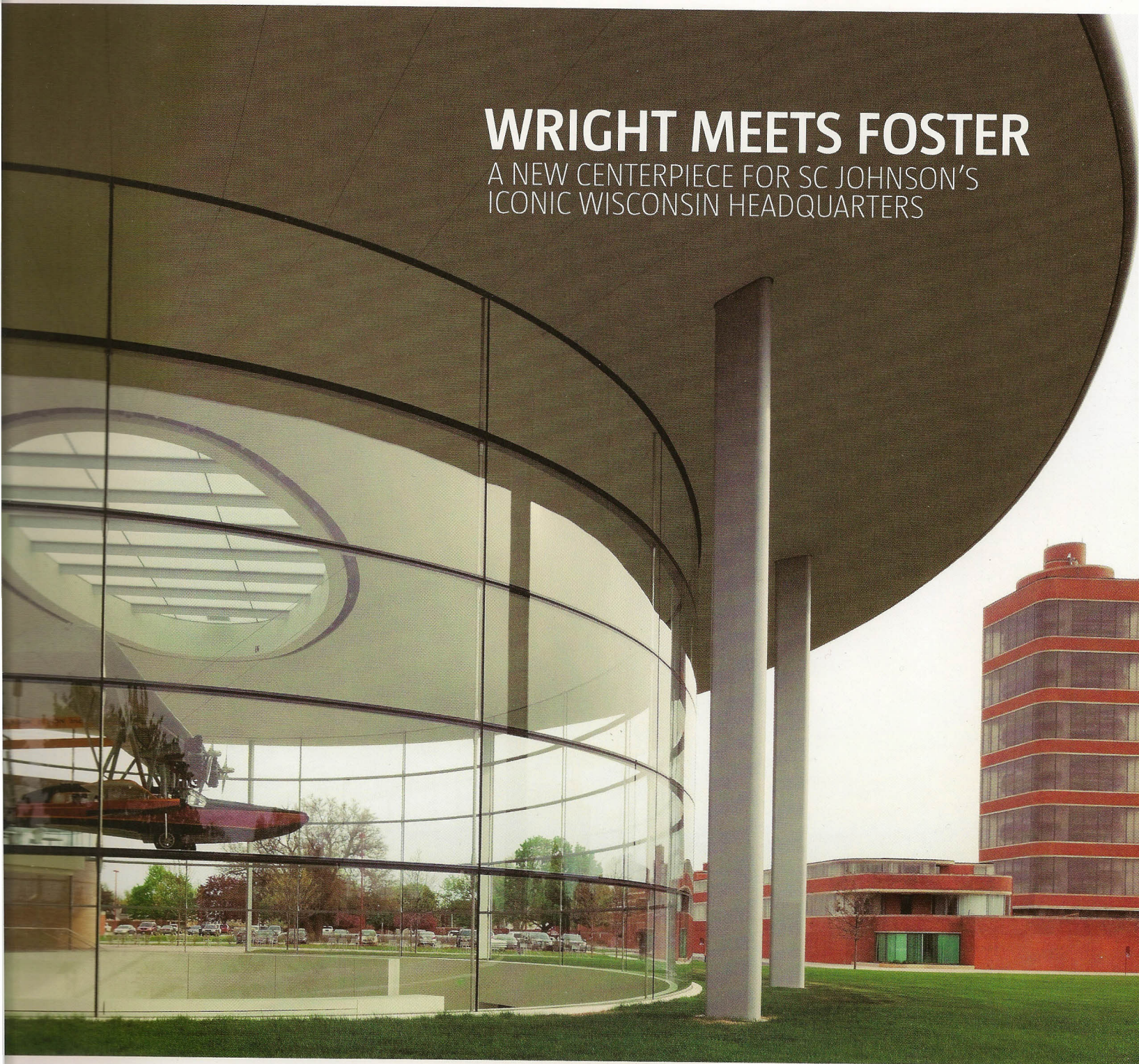
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→BUILDING

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BY KATIE GERFEN
PHOTO BY TODD EBERLE

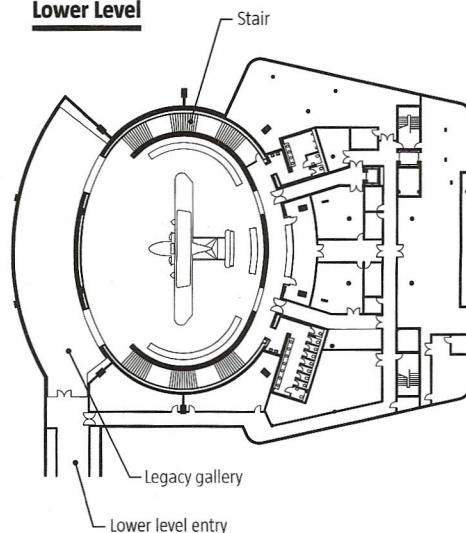
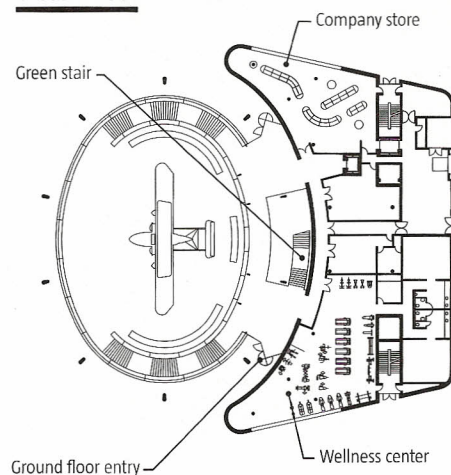
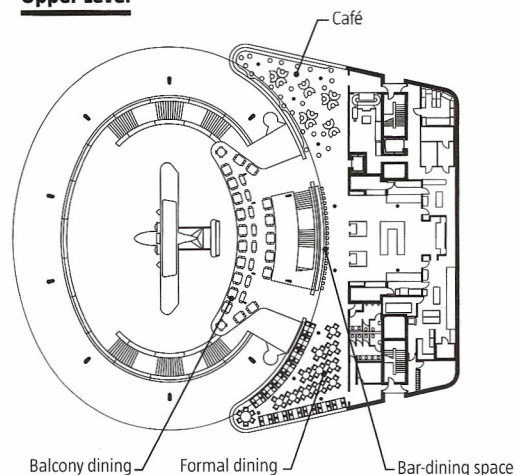
FORTALEZA HALL

RACINE, WIS.
FOSTER + PARTNERS

THE BASIS FOR A BUILDING'S DESIGN is often rooted in something seemingly inconsequential: a napkin sketch, a material sample, or, in the case of the new Foster + Partners–designed Fortaleza Hall, on the SC Johnson campus in Racine, Wis., an airplane. This isn't just any plane, however, but the *Carnaúba*—a replica of a 1930s twin-engine Sikorsky S-38 amphibious plane. The late SC Johnson chairman Sam Johnson flew the plane to Brazil in 1998, with his sons Fisk, the current chairman and CEO, and Curt. The father-and-sons flight team replicated (down to the aircraft) a 15,000-mile-roundtrip journey made 63 years earlier by Sam's father to see the source of the *Carnaúba* palm, the waxy leaves of which are used to make what was then the company's most famous product. (Wax has since been eclipsed by the company's other brands, like Ziploc.) When Sam died in 2004 and the idea for a memorial building took shape, his plane became the central conceit.

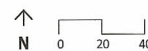
"What's wonderful about [the plane] is that it's a very fine-filigree piece of engineering," says Giles Robinson, partner-in-charge on the project. "When we developed the structural system for Fortaleza Hall, it was very important that it be a very elegant and simple backdrop to the complexity of the plane." But building a contemporary, minimalist structure on SC Johnson's campus is a fraught proposition, given the iconic context. Fortaleza Hall, and the attached Commons building, sit between the Golden Rondelle (the company's Lippincott & Margulies–designed pavilion for the 1964 New York World's Fair) on one side and Frank Lloyd Wright's iconic 1939 Administration Building and 1950 Research Tower on the other. "It's a very fine balance—purely because every architect studies the Johnson Wax building—between wanting to do something that is contemporary, yet sensitive to that building," Robinson says. "A lot of work goes into getting it right."



Lower Level**Ground Floor****Upper Level**

Foster + Partners effectively designed two buildings in one, each having its own name and material properties: the glassy Fortaleza Hall and the predominantly masonry Commons. Together, they add 60,000 square feet of employee-focused space to the campus. Fortaleza Hall's minimal form consists of an elliptical glazed shell and overhanging roof. The structure is supported by 10 steel columns, made from custom-designed hollow steel sections. Inside each column is a downspout, allowing rainwater that collects on the roof to run off without requiring the clutter of an exposed gutter system. And despite conventional wisdom that would dictate putting as much glass as possible between inside and out (the average January low temperature in Racine is 13 degrees), each of the 85 curved panes is single-glazed laminated glass. "We were very keen to avoid distortion in the glass, which you get with toughened glass," partner-in-charge Giles Robinson says. "It's regular annealed glass, but laminated to deal with any potential failure, and that system introduced onto the framing system produced what we consider the most elegant solution." Each panel is 7½ feet tall and 16 feet wide.

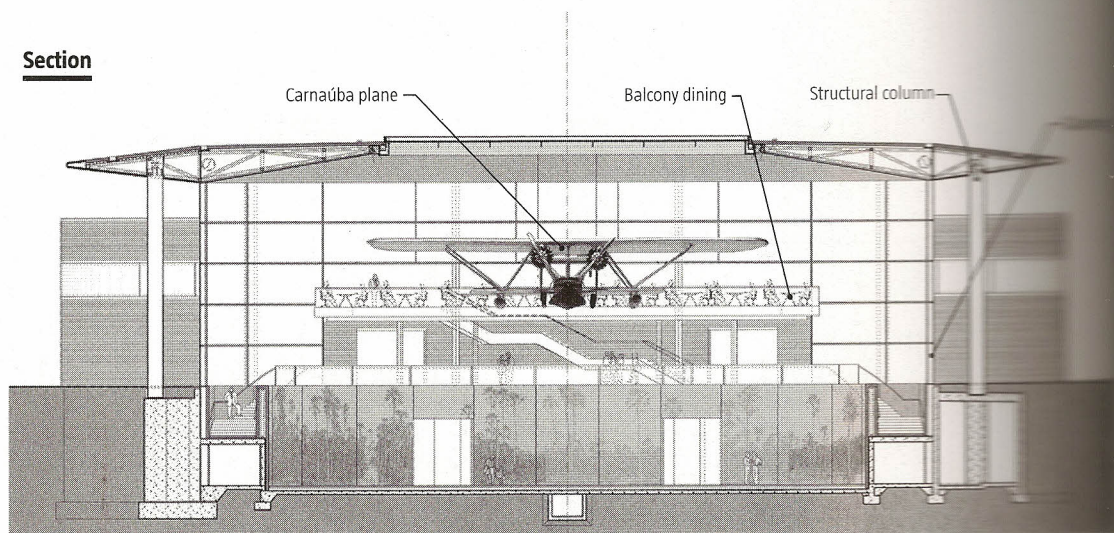
The Commons is a much more solid-looking building. Its brick mass-incorporating employee amenities such as eateries, a wellness center, a bank, a concierge, and a company store—curves around to envelop the east side of the glass pavilion. In contrast to Fortaleza Hall's intentional transparency, the Commons is constructed with self-supporting masonry walls made out of Kasota stone from the same quarry that Frank Lloyd Wright used for the copings of his Administration Building. "I think we were very conscious that we didn't want to mimic or ape the Wright building," Robinson adds, "but we did introduce the bull-nose curves on the end of The Commons that have a resonance to [Wright's] architecture."

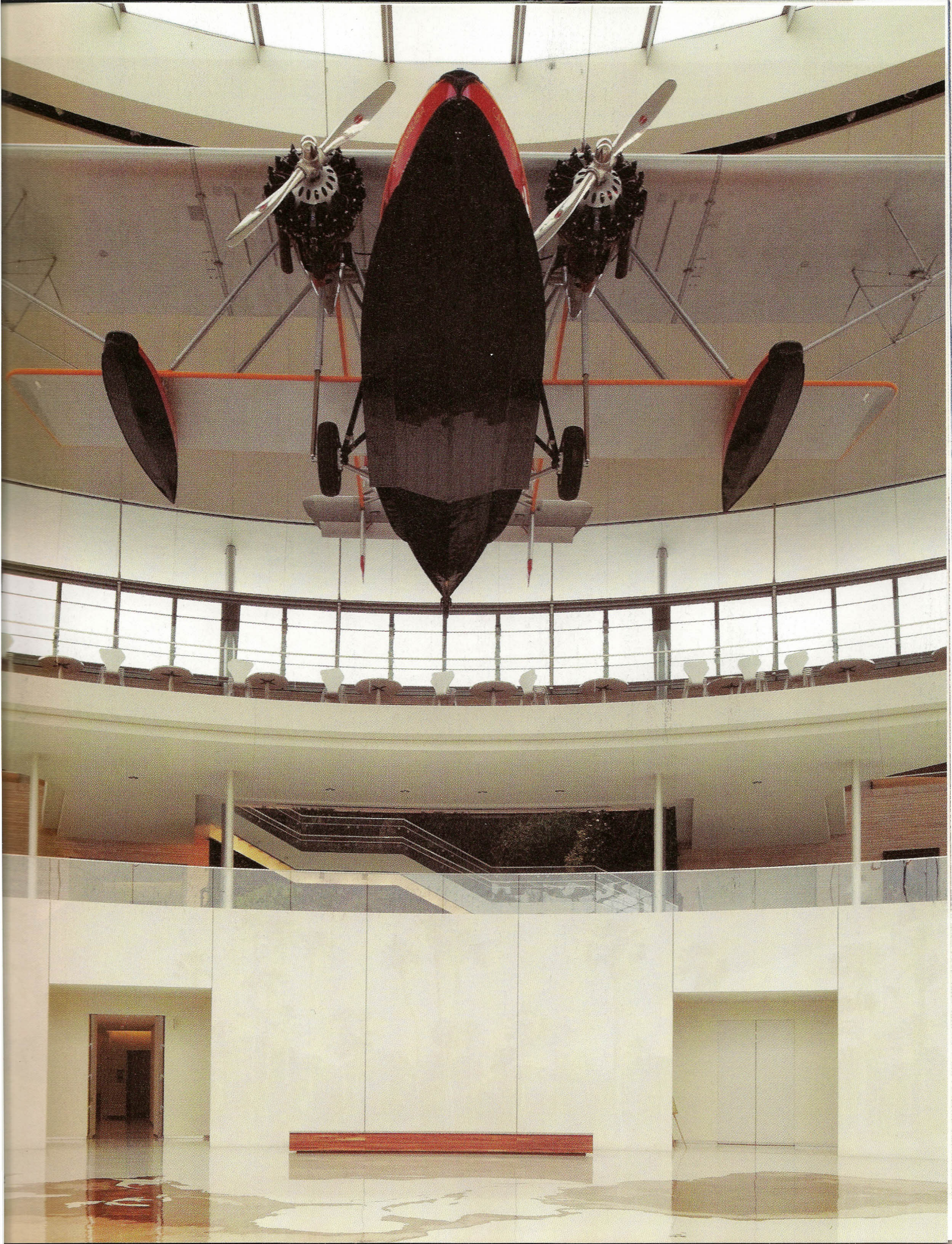


1. Suspended from the ceiling, the Carnaúba is the dominant visual element of Fortaleza Hall. Despite its size, the plane actually puts less stress on the roof structure than winter snow will. Still, extra steel members were put in place and tied into the roof's main truss system, and a mechanism was installed to allow the plane to be raised and lowered at will. Most employees enter the new building on the lower level, emerging from a system of tunnels that allow them to move between campus buildings during the harsh Wisconsin winters. "The experience the staff have when they come out of the tunnel and into that main space is really opening up to the plane [and] the sky," Robinson says. "It's a really strong sense of light that draws you up to the ground level." And when they do emerge, their path to one of the staircases leading to ground level takes them over a floor mosaic of the western hemisphere, made from four different types of end-grain FSC-certified wood.

2. The central skylight brings additional daylight into the space and ensures that the plane is adequately lit during the day. "There was a danger that if there wasn't enough illumination, the plane would go very dark," Robinson says. In a recessed trough around the skylight, focused downlights were placed to illuminate the rest of the triple-height space. Alongside those light fixtures are speakers, with counterparts hidden in the benches on the lower level, that pipe in sounds from Brazil via a link to the National Oceanic and Atmospheric Administration. "It could be the sound of a boat in the harbor," says Kelly Semrau, vice president of global public affairs and communication for SC Johnson, "or it could be voices speaking in Portuguese in a café or noises that you hear in a rainforest. It's very subtle and doesn't play all the time. But when it does, it feels like you're living in that sound." Also calling to mind the Brazilian landscape are the 17 white precast concrete panels that line the lower level. The acid-etched pattern on the 19-foot-high, 11-ton panels forms an image of a Brazilian palm grove, sourced from a photograph taken on H.F. Johnson Jr.'s original 1935 expedition to Fortaleza, Brazil, the city from which the building takes its name.

Section







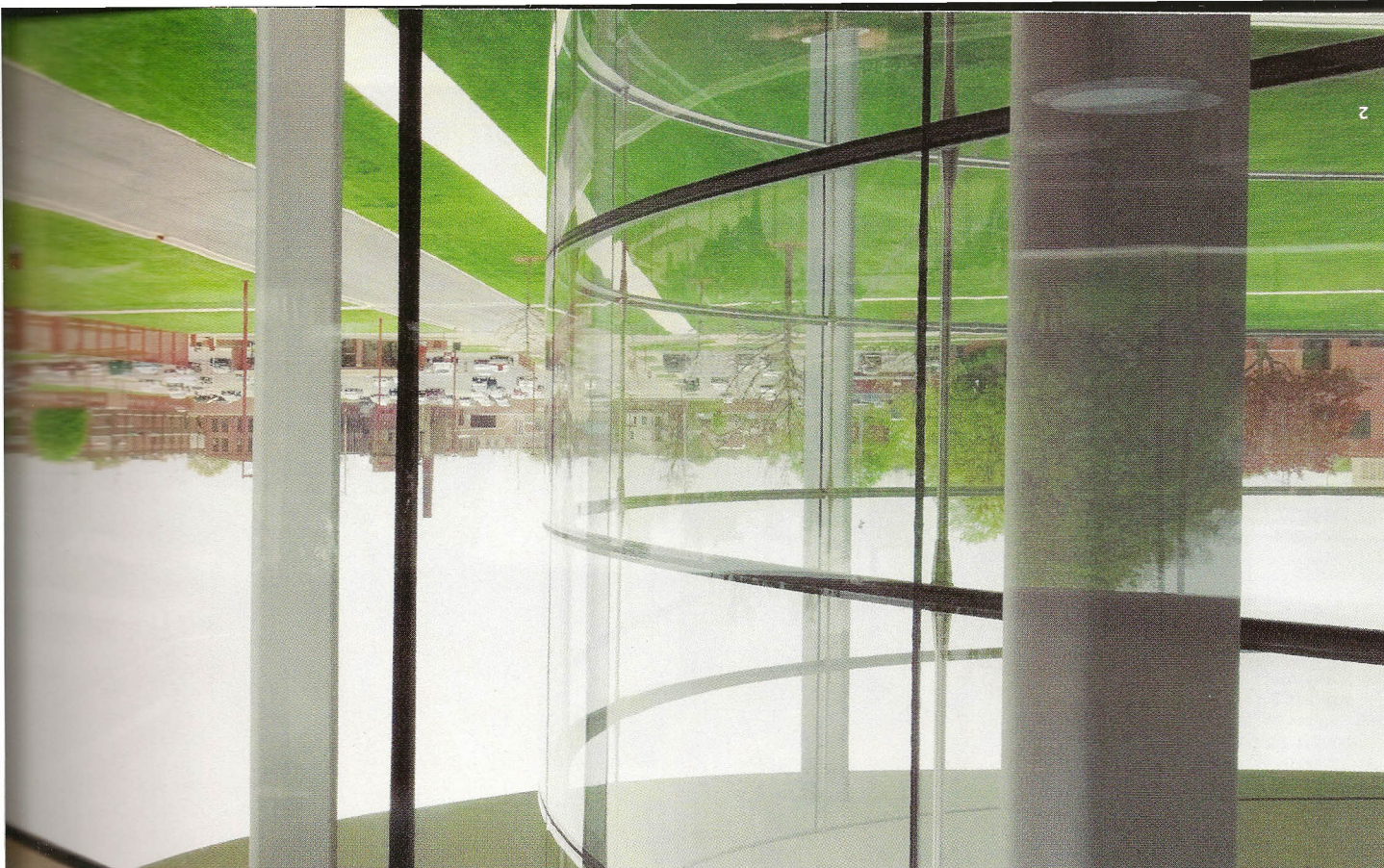
1. A green wall was designed as a backdrop for the stair linking the ground floor and the upper level. Foster's office worked in conjunction with Paris-based Patrick Blanc, the mastermind behind such installations as the vegetated façade of Jean Nouvel's Musée des Arts Premiers Quai Branly in Paris. The wall is constructed with a series of horizontal pipes placed on the surface of the wall. These pipes are covered with a felt that has pockets cut in it, into which the plants were placed. The wall features 2,500 plants from 79 different species that are native to Central and South America, and tries to recreate the sense of a lush Brazilian landscape. "The reason we wanted it in the space is [that] it makes the space living and organic," Semrau says. "It's such a bright splash of color; it's almost like a canvas." In front staircase is a waterfall, with water emerging from a recessed slot in the ceiling and falling 14 feet to a reflecting pool on the floor. "It almost sounds like a light rain," Semrau says. "It's right below where you sit in the [balcony dining area], and it is a wonderful white noise."

2. The staircase in front of the green wall leads to the upper-level balcony, on which the building's four eateries are located. At the base of the stairs is the southern ground-level entrance, which was put in as an alternative to the tunnels. "I think Fortaleza Hall is very much about encouraging the staff not to go down into tunnels, but to circulate around campus at ground level," Robinson says. "I think [the] staff have always tended to move about below ground both in the winter, when it's a necessity, but also in the summer. I think it's force of habit." Another entry, on the northern end of the hall, accommodates visitors coming from the Golden Rondelle, which has been turned into the tourism center of the complex.





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1. The balcony in Fortaleza Hall is at eye level with the Carnaúba. "You almost feel like you are floating up in the clouds with the plane," Robinson says. Designed as a part of the glass pavilion, the balcony serves as a bridge to The Commons and as one of the new building's four employee eateries. Giving those employees direct access to the plane was very important to company chairman and CEO and Sam's son, Fisk Johnson, as a means to engage them with his family's and the company's history. That history is detailed in a ground-floor gallery, which features artifacts from Sam Johnson's journey.

2. The other three dining spaces are found in The Commons. On the south side is a more formal dining room; in the middle, above the green stair, is a long bar; and to the north is a more casual coffee house-style environment (shown). All of these spaces have views to the plane. In contrast to the light tones and finishes of Fortaleza Hall, the spaces in The Commons feature a much warmer materials palette. Bamboo floors and rich brown leathers "give a greater sense of warmth and uniqueness to those spaces," Robinson says. And they get a lot of use; the employee reaction has been overwhelmingly positive. "The employees are wowed," Semrau says. "The space is packed every day, and it is a hub of activity."

Project Credits

Project Fortaleza Hall and The Commons, Racine, Wis.

Client SC Johnson

Architect Foster + Partners, London

Architect of Record Epstein, Chicago

Structural Engineering Buro Happold

M/E/P Engineering Cosentini Associates

Experiential Elements Consultant

Ralph Appelbaum Associates

Vertical Garden Patrick Blanc

Lighting Consultant George Sexton Associates

Sound Consultant Charlie Morrow Productions

Mosaic Design John Yarema

Exhibition Consultant Derse

Size 60,000 square feet