

# Texas Architect





# Brick Slam

What kind of hit brings in nine runs?! When the dust settled on BIA's national awards jury, Acme Brick Co. accounted for a quarter of 36 winning projects. We salute our valued architect partners and teams, who outperform year after winning year. Together, we deliver on durable beauty and long-term life cycle sustainability.

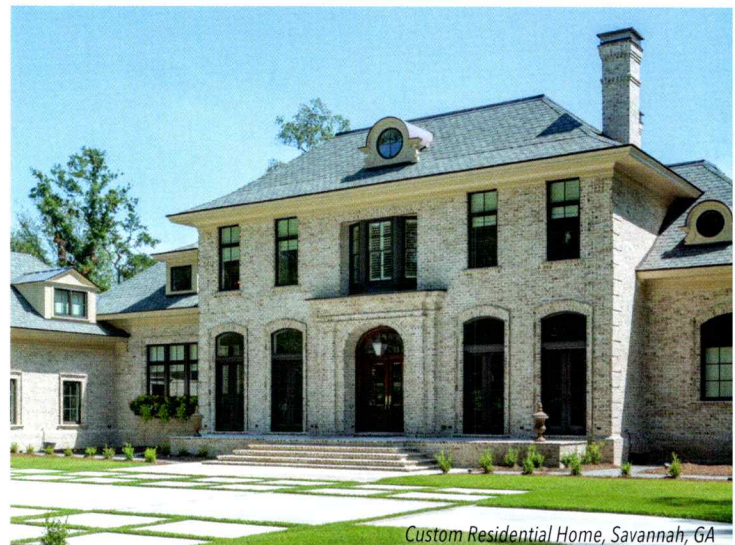


For details and video, please visit [gobrick.com/awards](http://gobrick.com/awards)

Globe Life Field



Washington Heights Elementary School



Custom Residential Home, Savannah, GA

**Canopy Hotel Austin GOLD AWARD**

Architect: Lake|Flato Architects

**Inglewood, Austin, TX GOLD AWARD**

Architect: Mark Odom Studio

**Music Activities Center**

Texas A&M University College Station, TX

Architect: Brown Reynolds Watford Architects

**Custom Residential Home, Savannah, GA**

Architect: Sottile & Sottile

**Birmingham Intermodal Max and Amtrak Stations, Birmingham, AL**

Architect: Giattina Aycok Architecture Studio

**Globe Life Field, Arlington, TX**

Design Architect: HKS Inc  
Associate Architect: VLK Architects

**South Texas Medical Academic Building  
University of Texas Health Science Center  
Edinburg, TX**

Architect: Muñoz & Co.

**Washington Heights Elementary School  
Fort Worth, TX**

Architect: WRA Architects

**Whitesburg P8 School, Huntsville, AL**

Architect: Chapman Sisson Architects

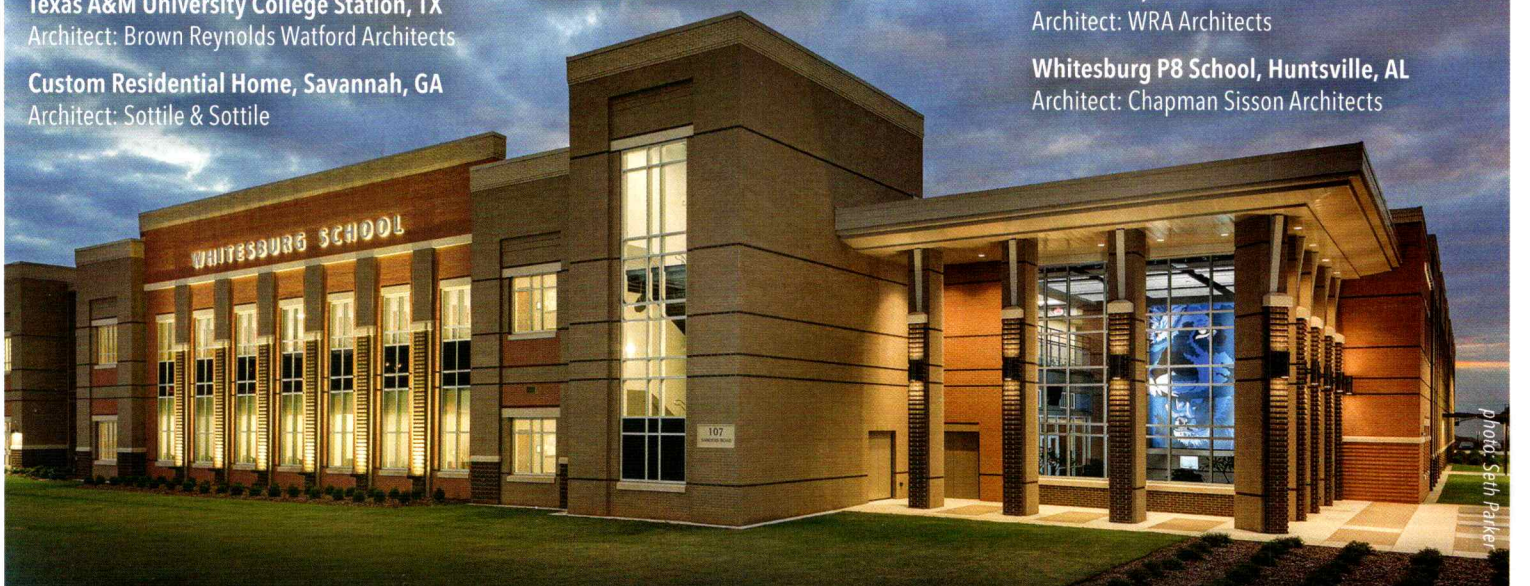


photo: Seth Parker



# Midline in Time and Space

Midcentury made the neighborhood, and provided the design framing for this inspired new architecture. Acme Brick was primary aesthetic finish and delineating material to organize the residence's entry sequence and circulation, focused on natural light and a courtyard with preserved oaks. The strong north-south brick axis supports terraced zones that maintain perspective while subtly reducing the apparent scale and conserving the site's natural resources. Today, as it has been since midcentury and long before, Acme Brick continues masonry building tradition with unmatched beauty and durability. Please let us provide options that grace any era, with the reliable long-term life cycle value of Acme Brick.

*"Brick was a natural and easy selection for its timelessness, orthogonal lines, and crisp detail. It relates to context very well, appears hand-made, and has a feeling of material mass. In this project, the brick spine leads from outside to inside, allowing us to establish the wayfinding experience. The continuation of brick with level mortar joints had a way of offering rhythm through the house as well as helping break down the scale. The earthy texture helped us tie the design to our natural context. Acme staff has always been wonderful, responsive, and informative. When considering brick, Acme is first on our list."*

— Mark Odom, AIA

**Inglewood Courtyard Residence** Austin  
**owner** Neslie Cook  
**architect** Mark Odom Studio, Austin  
**structural** PCW Construction  
**civil** Thrower Design, Neslie Cook  
**builder** Doug Cameron, ESS Design+Build  
**landscape** Mark Odom Studio, ESS Design+Build  
**interiors** Mark Odom Studio, Ruby Cloutier  
**photo** Casey Dunn



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Photo: Exterior Walls, Mezzo Taupe, Limestone,  
4" H X 4" D, Random Lengths, Classic Finish;



## Texas Architect

### Departments

- 5** Editor's Note
- 6** President's Letter
- 9** Of Note: Inequities Revealed by the Winter Storm; BIG Comes to Texas; A New Home for the Rockport Arts Scene; LOWDO Receives Emerging Voices Recognition; Q&A with Buell Prize Winners
- 23** Calendar
- 25** Reviews: Making Houston Modern: The Life and Architecture of Howard Barnstone; Three Texas Monographs

- 36** Products: Surfaces
- 38** Voices: NOMA of Central Texas Forms Amid Pandemic and Protest  
*Lucy Begg, AIA*
- 96** Backpage: The Kinder Building's Cold Jacket

### Materials

- 46** Mass Timber in Texas  
*Michelle Giuseppetti-Old, AIA, and Melika Mirzakhani, AIA*
- 54** Carbon Negative Materials  
*Purva Chawla*
- 62** Adobe in Marfa  
*Beck Andrew Salgado and Stephen "Chick" Rabourn, AIA*

### Performing Arts

- 74** Brockman Hall for Opera  
*Jack Murphy*
- 82** Buddy Holly Hall of Performing Arts and Sciences  
*Peter Raab*

### More Online

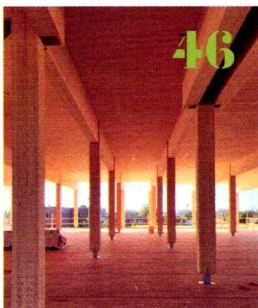
▣ [txamagazine.org](http://txamagazine.org)  
A tribute to Mayor Rawley Glenn McCoy, AIA: 1950–2021. Meet the TxA Design Award jury.

# 71 03

### On the Cover

The spiral staircase at Buddy Holly Hall is a reference to the 1970 tornado that demolished much of downtown Lubbock (p. 82).

### Materials



### Performing Arts





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## CITY OF FRISCO PUBLIC WORKS DEPARTMENT

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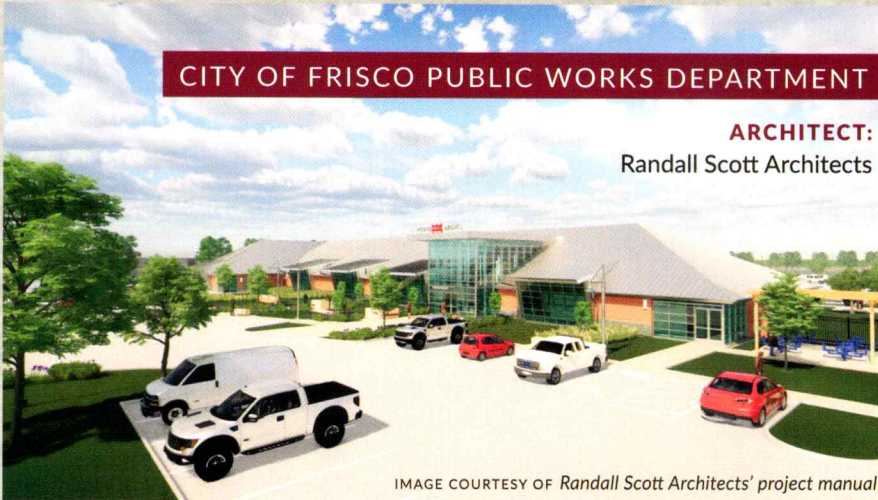


IMAGE COURTESY OF *Randall Scott Architects' project manual*

With Frisco, Texas' substantial growth, governmental entities also expanded to meet the city's growing needs. In fact, the U.S. Census Bureau reported that the city's population grew by 10,000 people from 2017 to 2018\*. Frisco's former Public Works Department building could accommodate approximately 150 people, but in 2020 the team was already up to 210 staff members. The Department literally had outgrown its facility.

Frisco's Public Works Department purchased nine acres adjacent to the original building at 11300 Research Road on which to expand. The building is a multi-use facility that consists of the following features:

- a new 50,654 square foot driveway,
- a new 6,500 square foot heated storage building,
- 18,798 square feet of new parking lot,
- the renovation of an existing 13,585 square foot shop and warehouse building,
- approximately 110,000 square feet of site work,
- a new 15,467 square foot addition to the existing administration building, and
- renovation of an existing 20,351 square foot administration building

The construction began in the fall of 2020 with the goal of completing the buildout in the spring of 2022. The project is estimated at \$12,988,990 and was funded by the May 2020 bond election and utility funds. Halford Busby provided estimates for Schematic, Design Development, and Construction Documents phases of this project.

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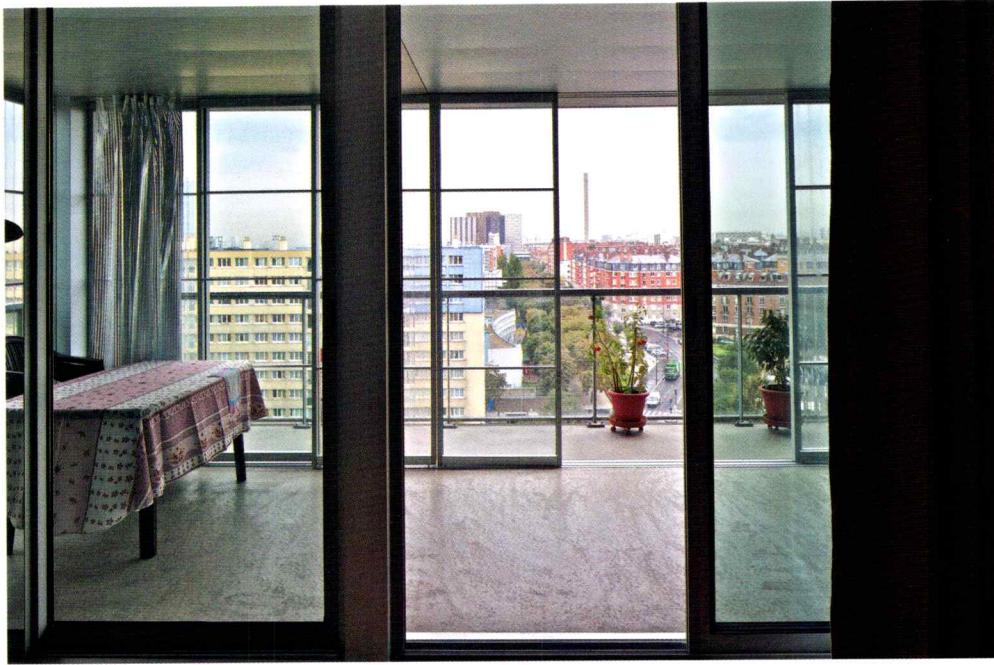
\*Wadsack, William C. *Community Impact*, Jan 7, 2020, "Frisco Public Works outgrowing current space, looking to expand".

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*Tour Bois le Pêtre, Paris, social housing transformation, Lacaton Vassal with Frédéric Druot, 2011.*

## Not Fade Away

by Aaron Seward

This year, the Pritzker Architecture Prize, widely considered the discipline's highest honor, was awarded to French architects Anne Lacaton and Jean-Philippe Vassal. In 1987, the duo founded their office in Paris, but the genesis of the practice and the thinking that defines it began to coalesce somewhat earlier, first when they met in the late '70s as students at École Nationale Supérieure d'Architecture et de Paysage de Bordeaux, and after that in Niger, where Vassal, who was born in Morocco, worked as an urban planner (Lacaton herself earned a master's in urban planning from Université Bordeaux Montaigne). It was there, in West Africa, that Lacaton Vassal completed their first structure, a straw hut erected by the Niger River atop a sand dune that received the prevailing breezes, where at night one could just make out the twinkling lights of the capital city, Niamey. As in a fairytale, they built this little *paillote* in two days from local bushes, and saw it collapse in the wind within two years. The story goes that watching their creation come apart in the air, while being steeped in the culture and desert landscapes of Niger, with its barren beauty and resourceful yet generous people, etched an ethics in the minds of the young architects, and they vowed that they would never tear down what could be preserved, but instead reinforce and improve what already exists, using the simplest

and most sustainable means at hand. "Niger," Vassal is quoted as saying, "is one of the poorest countries in the world, and the people are so incredible, so generous, doing nearly everything with nothing, finding resources all the time, but with optimism, full of poetry and inventiveness. It was really a second school of architecture." This schooling has endured and blossomed. Over the span of three decades plus, Lacaton Vassal has put this directive, which has hardly changed, to work on a wide range of projects, including private and social housing, cultural and academic institutions, public and urban strategies, all of which exhibit their ethos of environmental responsibility, economical solutions, and care for the wellbeing of their buildings' users. One recurring theme is the incorporation of greenhouse-like strategies and mobile planes to create layered spaces and microclimates within the architecture, deployed first in the Maison Latapie (1993) in Floirac, France, a low-budget house for a couple with two children, which posits two volumes within a light steel frame, one opaque and insulated, the other transparent, each mediated with a variety of operable panels that allow the tuning of the spaces for a range of climatic conditions as well as the desired level of privacy or connectivity. Lacaton Vassal along with Frédéric Druot took this layered, bioclimatic idea and scaled it up in their renovation and expansion of La Tour Bois-le-Prêtre (2011) in Paris, a 16-story, 96-unit housing project originally built in the 1960s that was scheduled for demolition. The architects showed that, for a fraction of the price it would cost to destroy the struc-

ture and build something new, the tower could be preserved and improved through removing the concrete facade and adding wide wintergarden-like terraces, separated from the existing units by sliding walls of double-paned glass, the modular construction of which was executed without displacing residents. Lacaton Vassal, Druot, and Christophe Hutin deployed the tactic again in the improvement of three buildings, comprising 530 apartments, at Grand Parc (2017) in Bordeaux, where, as with La Tour Bois-le-Prêtre, residents received more room, more daylight, and access to the outdoors, without having to move, while the very image of public housing received a makeover, changing this idea of home from something quite drab to accommodation that is positively delightful. The architects have also applied their "never demolish" tenet to cultural projects, perhaps most poetically in the FRAC Nord-Pas de Calais (2013-2015), an institution that conserves, archives, and displays local collections of contemporary art, which acquired an old ship fabrication building at the port of Dunkerque, whose monumental, gabled, concrete-framed form the architects duplicated precisely in dimensions but oppositely in materiality, opting for a transparently clad, light steel frame positioned on the seaward side of the existing hall and containing the program of the FRAC, while leaving the existing shell empty, a house for spirits and flexible programming. The Pritzker jury specifically commended Lacaton Vassal for renewing the legacy of modernism by reviving modernist aspirations for improving the lives of normal people, particularly in the realm of urban housing, while updating their approach to address contemporary climatic and ecological concerns. I hope this view that architectural quality, environmental responsibility, and dedication to ethical society can be pursued and accomplished simultaneously will prove catching.





*On February 14, 2021, the weather changed in Austin.*

## Envisioning Change

by Audrey Maxwell, AIA

My father loves to tell the story of moving me to graduate school, the cars packed so full that he “was practically wearing a lampshade on his head.” While he’s always been one to use exaggeration for maximum storytelling effect, this particular tale is closer to truth. My entry-level salary meant doing the move on the cheap, so he gamely agreed to caravan in our own overstuffed vehicles for the 16-hour drive from Dallas to Phoenix. As we drove through the rugged terrain of the desert Southwest, the rear of my Honda Civic dangerously low to the pavement, my thoughts were focused on the prospect of new friends, a new city, a new life. It was an intentional, orchestrated change, the outcome unknown but laced with excitement.

Two years later, I would make the same drive, in reverse, this time full of apprehension. The country was deep into the Great Recession, and my West Coast job prospects had dwindled. After months of job hunting and a failed attempt at substitute teaching, I secured an AmeriCorps position in Dallas and reluctantly decided to return to my home state. I would be making a whopping \$12,000 that year and had accumulated many

times that in student loan debt. It was not the future I had imagined when I made the first trip.

I often think back on those two road trips that bookended my graduate school years. Each represents a different journey with drastically different circumstances. The last 12 months, which encompassed most of my time as TxA president-elect and the start of my presidency, have brought similar dichotomies. My journey began with the best of hopes, and any contingency plans I entertained certainly did not include a pandemic. I didn’t spend much time contemplating what leadership would look like amid a crisis, but I’ve adjusted like everyone else. Unlike our most recent past president, Connie G. Rivera, AIA, I have had the benefit of time to adapt to a new way of doing business. By the time my term officially started, everyone was focused on forward momentum.

The year began with a renewed sense of focus and fresh perspective on the future of our organization. In the first quarter, our board dug into the strategic plan, outlining focus areas and strategies to reach our goals. TxA launched its search process for our new executive vice president, whom I hope will have been announced by the time this letter is published. Our Executive Committee is in more regular communication, working to improve our processes at the commit-

tee level with a focus on better collaboration. We are actively seeking ways to provide resources and support to our volunteer-led chapters and advance partnerships with staffed components. We have just scratched the surface of reimagining our Annual Convention and Design Expo and continue to pursue actionable ways to achieve a more inclusive profession.

I’ve said before that sudden change can propel us forward at accelerated rates. We are all watching this in real time. There are benefits to the disruption we’ve seen over the last year, including less restrictive attitudes toward change. It is our responsibility as leaders to guide those changes with integrity and purpose. In Bruce Mau’s latest book, “Mau: MC24,” his first principle for massive change is that design leaders should inspire. He says, “The only way to effect real change is to show people a future more exciting than the past and inspire them to work together on the journey.” Change can be uncomfortable and messy. Our role as designers and leaders is to convey a vision for real transformation. I hope to inspire a better future for the Texas Society of Architects that is supportive and inclusive. I care deeply about our profession and will continue to prioritize meaningful action over mere words.

March 2021 marked the one-year anniversary of the COVID-19 pandemic. Hours before completing this letter, I received my first dose of the COVID-19 vaccine. There is a collective sense that we as a nation are turning a corner. I’ve begun to feel the same anticipation I felt during that long drive to Arizona. There is hope on the horizon, and I am genuinely excited about a future where I will see colleagues in person. Our Annual Convention, which seemed so tenuous, now feels real, and I am anxious to unveil our plans. None of us knows what the future holds, but for now I’m content to drive onward without looking back.

Audrey Maxwell, AIA, is a principal at Malone Maxwell Dennehy Architects in Dallas and the 2021 TxA president.



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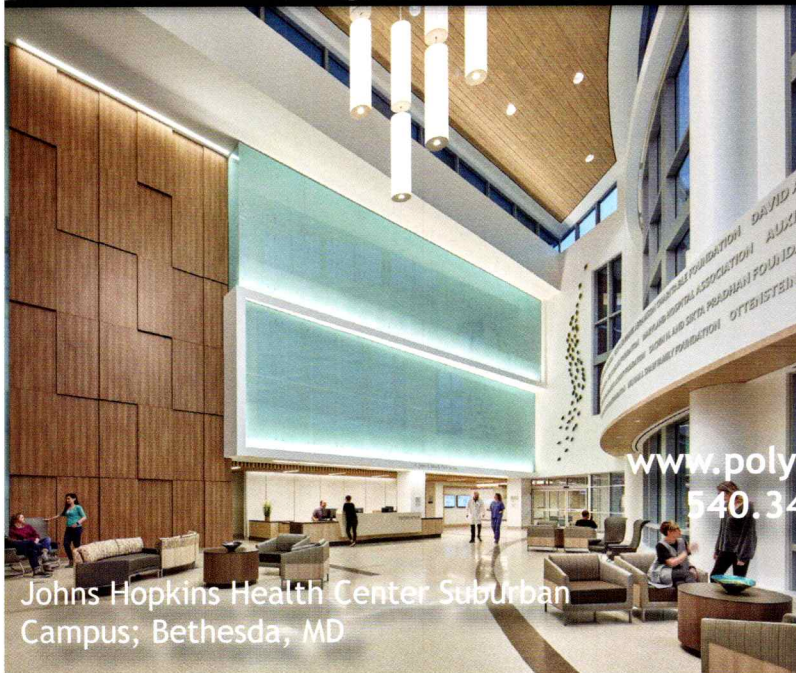
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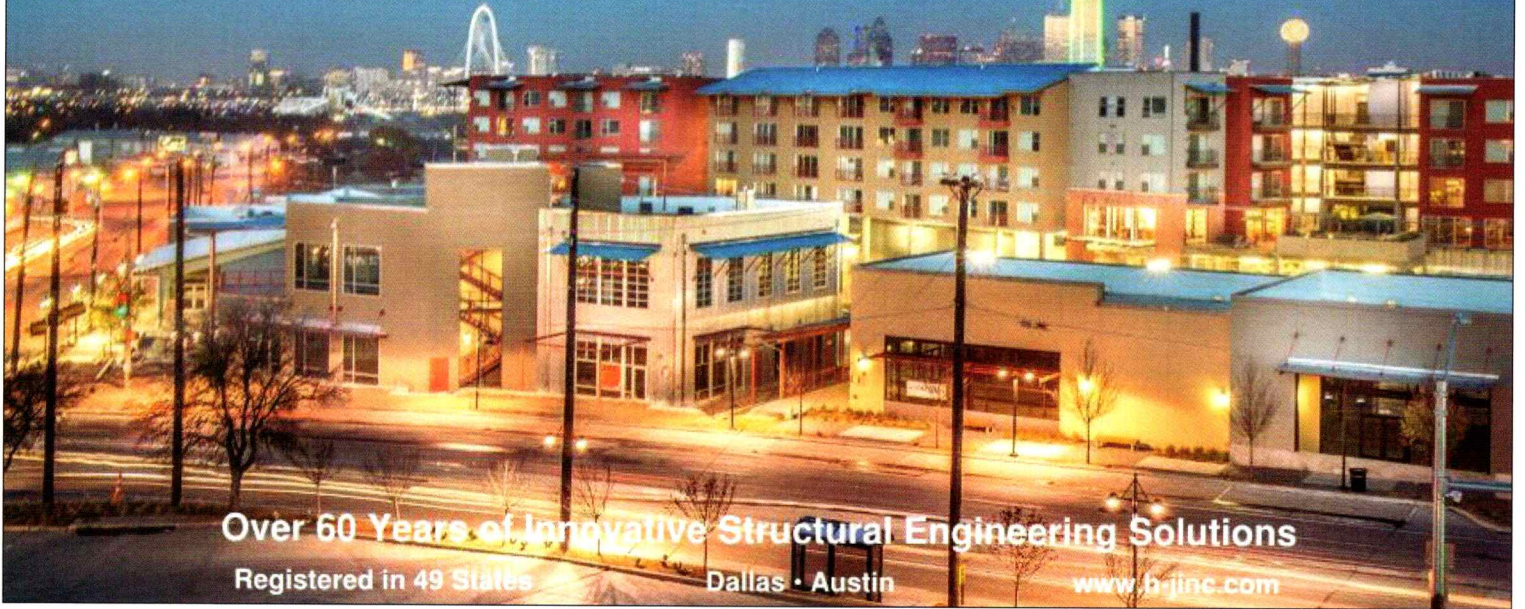


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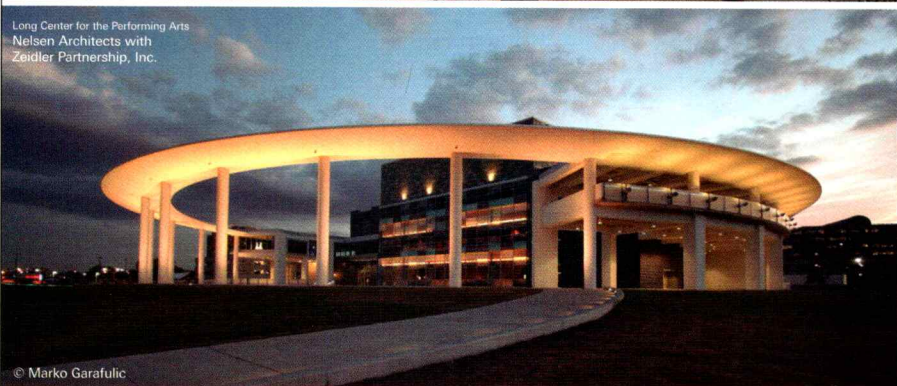
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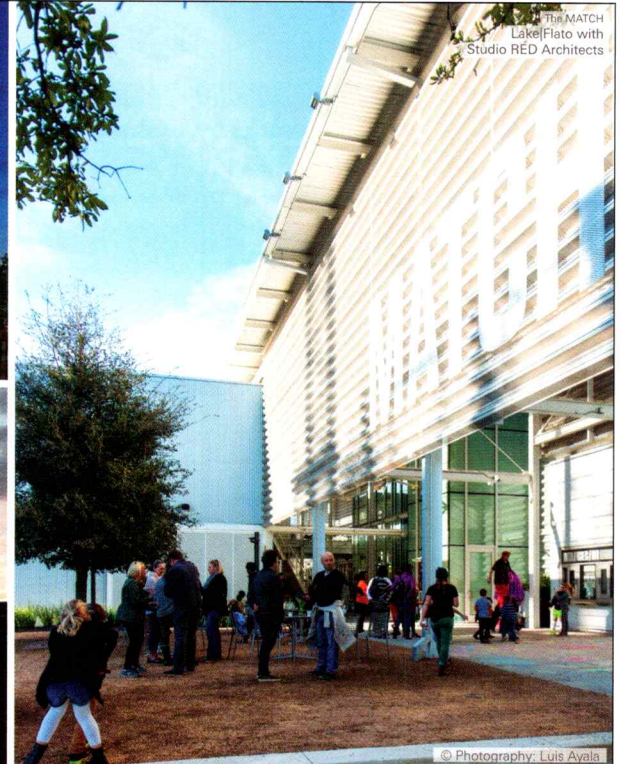
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*Congress Avenue in downtown Austin, looking toward the Texas State Capitol, days after the snow first fell.*

**Winter Storm Reveals Inequities in the Built Environment Along Lines of Race and Class**

The winter storm that descended on the United States in mid-February was particularly hard on Texas. Temperatures plunged into the single digits, and snow and ice blanketed the state from Amarillo to Brownsville. This nearly unprecedented weather event (a similar storm hobbled Texas in 2011) crippled the state’s infrastructure, caused approximately \$200 billion in damage, and killed at least 111 people, most of whom died from hypothermia.

While the state legislature focuses on energy policies that led to widespread power failures, the built environment itself is also in need of some scrutiny. The storm revealed the equalizing power of natural disasters while at the same time exposing disparities that have come to light during the coronavirus pandemic and at this moment of racial reckoning. The extreme cold vividly demonstrated how severe weather events can create climate refugees, particularly

the semi-homeless and homeless working and middle classes. It also pointed up the difficulties of recovery for the vulnerable and marginalized Black, brown, yellow, and immigrant communities left behind as a result of systemic racism, redlining, disinvestment, and disparate access to healthcare.

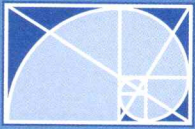
“How are we going to deal with those communities that have contributed least to the problems but are feeling the pain first and longest?” says Dr. Robert Bullard, Distinguished Professor of Urban Planning and Environmental Policy at Texas Southern University in Houston. “Climate change will not affect everyone the same.”

Bullard, who received the United Nations’ Champions of the Earth Lifetime Achievement Award in 2020 and is the author of 18 books that address multiple issues — sustainable development, environmental racism, urban land use, industrial facility siting, community reinvestment, housing, transportation, climate justice, disasters, emergency response, community resilience, smart growth, and regional equity

— believes research, policy, and practice must operate with an equitable lens to drive solutions that will work for everybody. “Justice and equity need to form the core principles of sustainability and climate resilience planning,” he says. “Every social justice movement that has been successful in the country has had a strong and fearless youth and student component that pushes the envelope beyond baby steps and incremental change. This was the case for the movement for civil rights, women’s rights, anti-war, environment, Black Lives Matter, and climate. The multiple converging threats facing humanity today call for transformative change.”

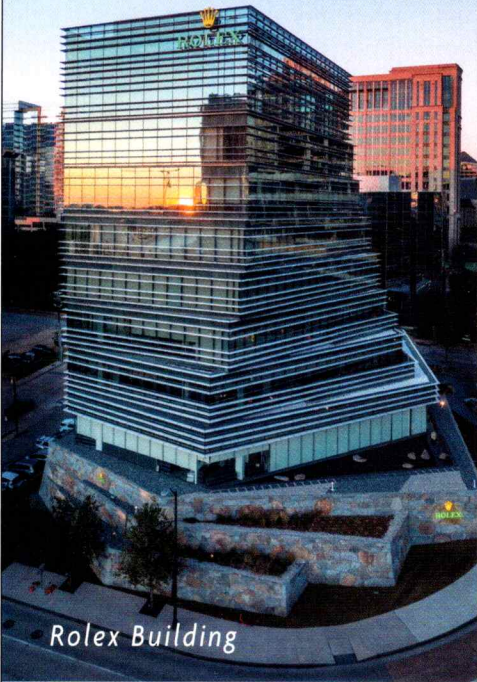
What can architects, designers, and planners do to create a more equitable built environment? The first step is to not repeat historical injustices. Says Bullard: “In the past, [architects] were complicit in designing and building spaces that supported segregation and creating a sort of outdoor apartheid. Their roles will be beyond just planning and talking about the responsibility of what is planned and add to redressing some of the mistakes and inadequacies that promoted those issues.”





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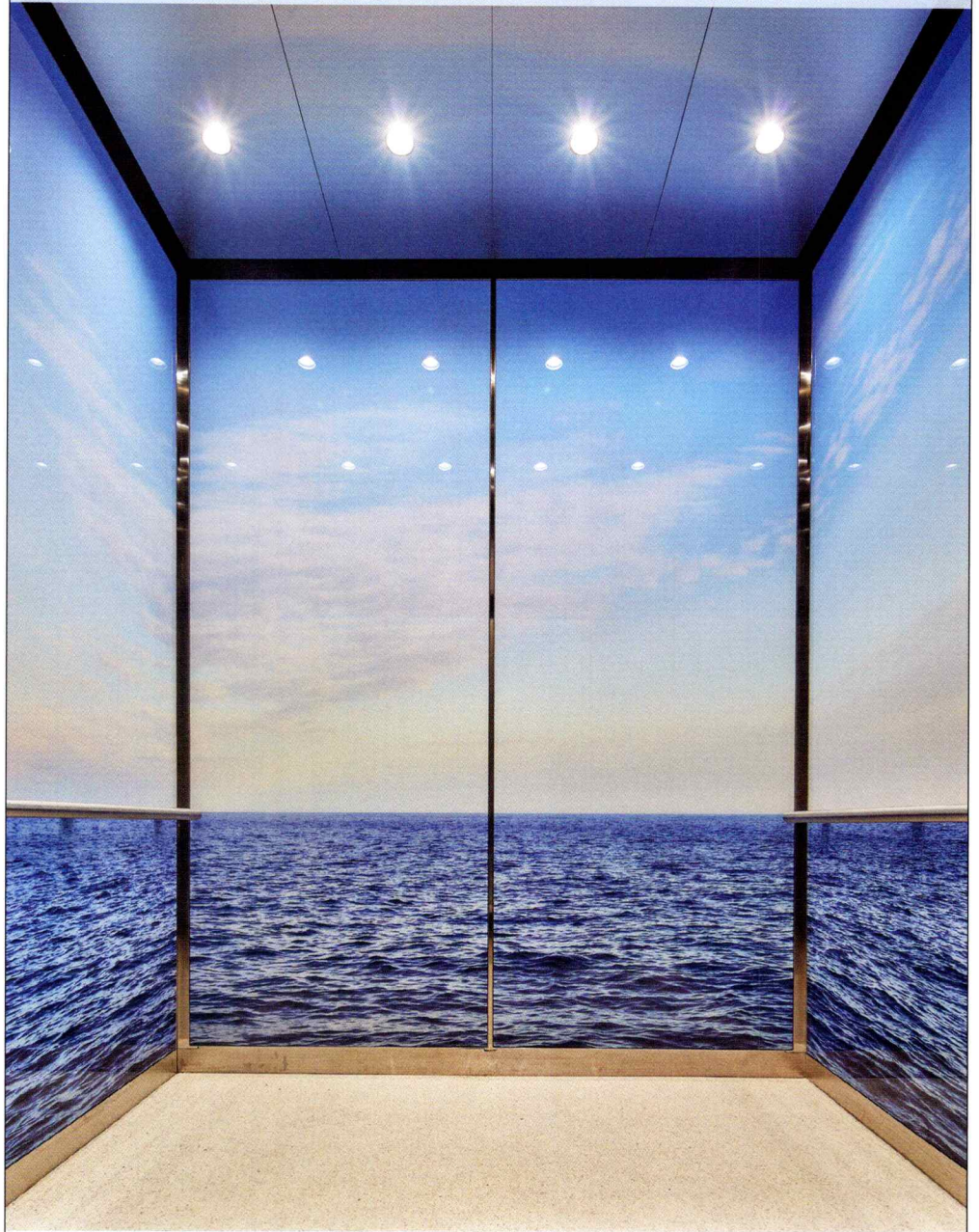
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But promoting equity and social justice can be politically difficult, especially when perceptions of those who are most vulnerable are not always favorable. San Antonio District 1 Councilmember Roberto Treviño, AIA, has been caught between his city's homeless encampments, one of which is right outside his office, and those who believe they are dangerous and should be removed. "What is happening outside my office is happening all over the city," he says. "It's a growing homeless crisis with over 3,000 out in the streets. At the heart of this is [that] the city's approach to the crisis is not working[; they are] hiding behind other apparatuses, including public safety. We have underfunded human services."

The Centers for Disease Control and Prevention (CDC) recommends that during the pandemic, homeless people living in encampments be allowed to remain where they are if no individual housing options are available, but that social distancing be encouraged and hygiene resources provided. Still, from June 2020 through February 2021, San Antonio conducted 151 "abatement," a term officials use for cleaning up the camps and forcing the unsheltered to leave. Treviño discussed the need for long-term solutions and services that provide outreach to those experiencing homelessness to dismantle the barriers allowing the vulnerable to recover. He looked to Austin's ProLodge program as a possible path forward for San Antonio. In ProLodge, the city purchases hotels to provide shelter to people experiencing homelessness as the first step in getting their lives back on track. Treviño envisions a similar model, with San Antonio purchasing a hotel in each district. "There is no excuse for how we treat people," he says. "These are people, not objects. During the storm, we were all in crisis, just as the unsheltered [were]. What was needed during the storm is what we all needed: water, food, warmth, medical attention. I am hopeful that we can set a good example and a good framework to help the most vulnerable and improve the emergency preparedness plan."

In preparation for the Texas Society of Architects' Annual Convention, which is scheduled to take place in San Antonio in October, Treviño has been meeting with AIA members. He is convinced there is a way forward to protect the environment and the most vulnerable by building smarter and reducing energy consumption. "Architects need to be out in front of this," he says. "This is the built environment



*The weight of the snow and ice proved too much for trees all across the state, which severed countless powerlines and blocked road access as they fell.*

with homes, shelters, and facilities. We throw millions of dollars at this issue operationally [which] doesn't work. This is a challenge I would like to set out there for all architects to think about. There are truly meaningful projects with purpose to use your talents and ability to be creative and produce a multitude of ideas. We can set an example to have compassionate and responsible design."

Darren James, FAIA, president of national design and construction firm KAI Enterprises and a board member of the Texas Board of Architectural Examiners, also believes design and construction solutions can provide avenues to avoid the devastation experienced due to the last storm. He spoke of tailoring, learning from, and leveraging the solutions in other regions of the country that are more experienced with inclement weather, in preparation for future events that will be just as devastating and impactful. "How do we adjust and adapt the design to respond to the environment?" he says. "Because we are a connected community, we have resources across the country that can offer insight for a 'future-ready' approach. The convergence of forces has opened eyes across the region and state, including social justice issues. When you peel back the layers, [you] recognize [that] the community as a whole benefits when

everyone participates. When one sector suffers, the community suffers."

As a leader of a national firm, James has been engaged in conversations about creating economic capacity for communities on the margins of prosperity — about how to provide sustainable and inclusive job opportunities as opposed to cyclical jobs with finite construction starts and stops. He doesn't see progress as a sequential, stepped process but as a concerted effort with some commonality across all platforms and sectors simultaneously. "We need to have people moving in all sectors and all cylinders for progress to happen," he says. "I know not everyone is on the same page to create empowered communities that don't have food deserts or healthcare disparities with meaningful jobs."

One way for architects to participate and be part of the efforts is by having authentic conversations without pat, ready responses. "We cannot bring preconceived solutions from other communities," James says. "We must re-engage the community and be part of the conversation. We cannot cherry-pick who we listen to. We should listen to the detractors and hear what the other side has to say."

Florence Tang, Assoc. AIA, is a journalist, designer, and project manager based in Houston.



## Skanska and BIG Unveil a Cluster of Office Towers for Downtown Houston

On January 13, development and construction giant Skanska USA unveiled renderings of 1550 on the Green, an office tower in downtown Houston designed by Bjarke Ingles Group (BIG). The 28-story, 375,000-sf development marks BIG's inaugural project in the biggest city of the biggest state within the contiguous United States. The anchor tenant, international law firm Norton Rose Fulbright, will acquire naming rights in 2024, when the structure is scheduled for completion.

The development is the first part of a master plan called Discovery West, designed by BIG for Skanska after the developer acquired nearly 3.5 acres of property in East Downtown for \$55 million. Skanska, which also created the open-source Embodied Carbon in Construction Calculator, is collaborating with the Discovery Green board and other urban organizations in Houston in hopes of developing a walkable, carbon-neutral campus adjacent to Discovery Green.

1550 sits on a lot directly south of the westernmost point of Discovery Green park, wrapping around an existing Embassy Suites hotel. The partial parcel the project occupies is bound by La Branch Street, Dallas Street, Crawford Street, and lines the curve of Lamar Street where the project directly confronts the park. The site is a vital location for the urban complexion of East Downtown as it caps off any views west of the park.

The project is a series of six attached towers, varying in height, curling out to mirror the bend of the road. The towers, measuring 60 feet wide and 60 feet deep, all share floorplates and a common circulation facilitated by a side core scheme. Grooves demarcate each tower, breaking up the glassy facade into six parts of similar widths tangential to the curve of Lamar Street. These wedges separating the office towers are the columns that hold up the volumes, simultaneously creating more corner conditions in the offices. "The challenge here was how to create a striking silhouette with a simple stepped massing responding to the context of Downtown Houston and the future development of Discovery West and, at the same time, create a human-scale pedestrian experience on the ground," says BIG partner in charge Martin Voelkle.

Each tower is raised off the ground at a different height, and together they create a pedestrian zone accessible from the park. Promises of walkability and 7,000 sf of retail space on the ground floor should soften the boundary between the project

and the park. The towers cantilever over this pedestrian zone, and an extension of the tree canopy from the park further shades the area. This ground floor plaza space includes places to eat as well as a "microforest" corresponding to the tower closest to the park and framing both sides of the lobby in hopes of drawing in park visitors. While, on the one hand, this move establishes a human-scaled streetscape at the base of the high-rises, there is the risk that it will be operated like a corporate campus for tenants and not visitors, where spaces of leisure are paired with consumption, conflicting with the public, accessible nature of Discovery Green.

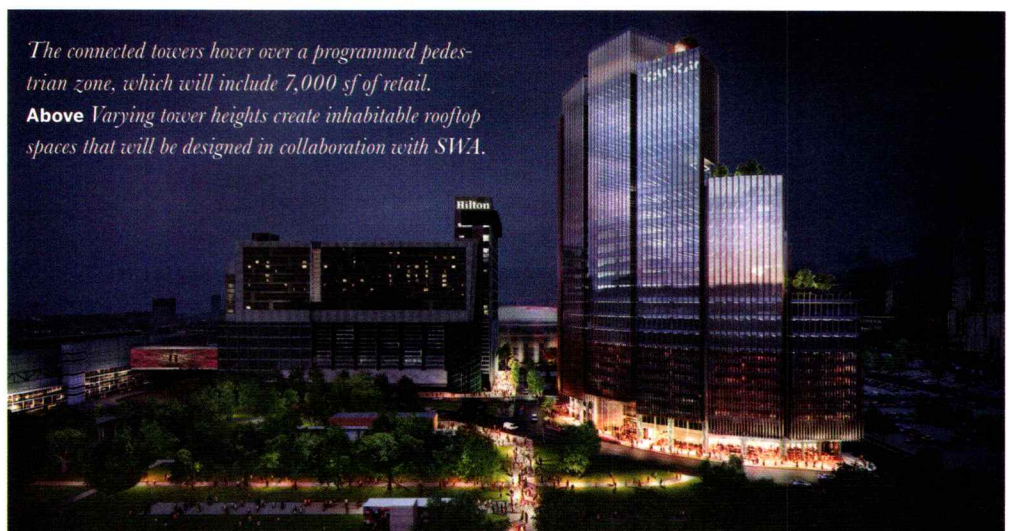
A parking garage sits directly above the pedestrian zone, and the inhabitable office space sits atop the plinth. A continuous facade of louvers that begin to twist at the level of the garage blends the parking and office volumes, acting as a shading system for the offices and a screening system for the garage. Two of the shorter towers have rooftop

terraces accessible to tenants, and the tallest tower has a rooftop event space reserved exclusively for tenant use. BIG has designed the rooftop spaces in collaboration with landscape architects SWA of Houston. Michael Hsu Office of Architecture is slated to design the interior amenity spaces.

"Rather than just adding another building to downtown Houston that tries to get a lot of attention," says Voelkle, "we tried to be quite subtle and simply complete the framing of the park on a site with a quite complex outline."

While the project does not greatly challenge the emerging skyline, it does show a level of restraint and maturity from BIG, rejecting the gestural formalism typical of the firm in favor of a quiet building on a complex site that nonetheless adds to the complexity of East Downtown.

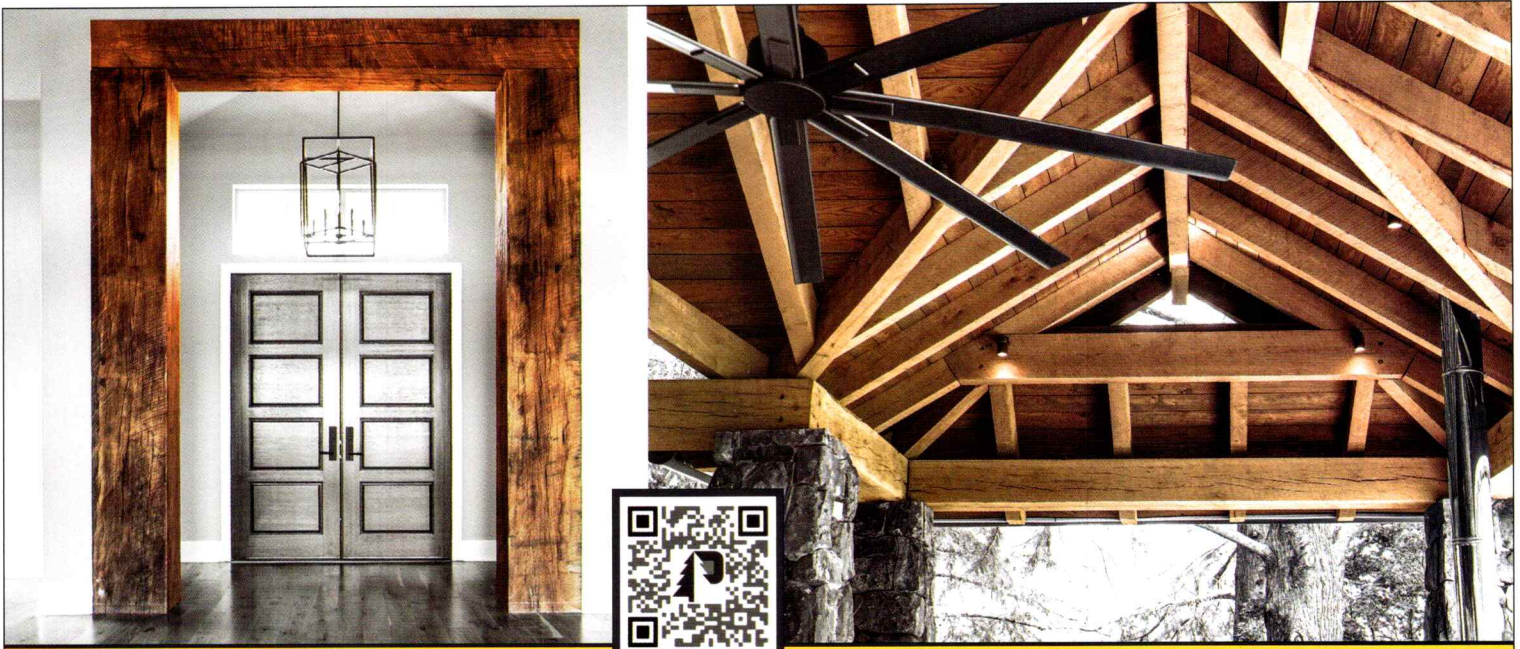
Jad Moghnieh is a student at the University of Houston Gerald D. Hines College of Architecture and Design.



*The connected towers hover over a programmed pedestrian zone, which will include 7,000 sf of retail.*

**Above** *Varying tower heights create inhabitable rooftop spaces that will be designed in collaboration with SWA.*



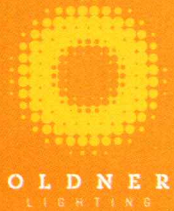


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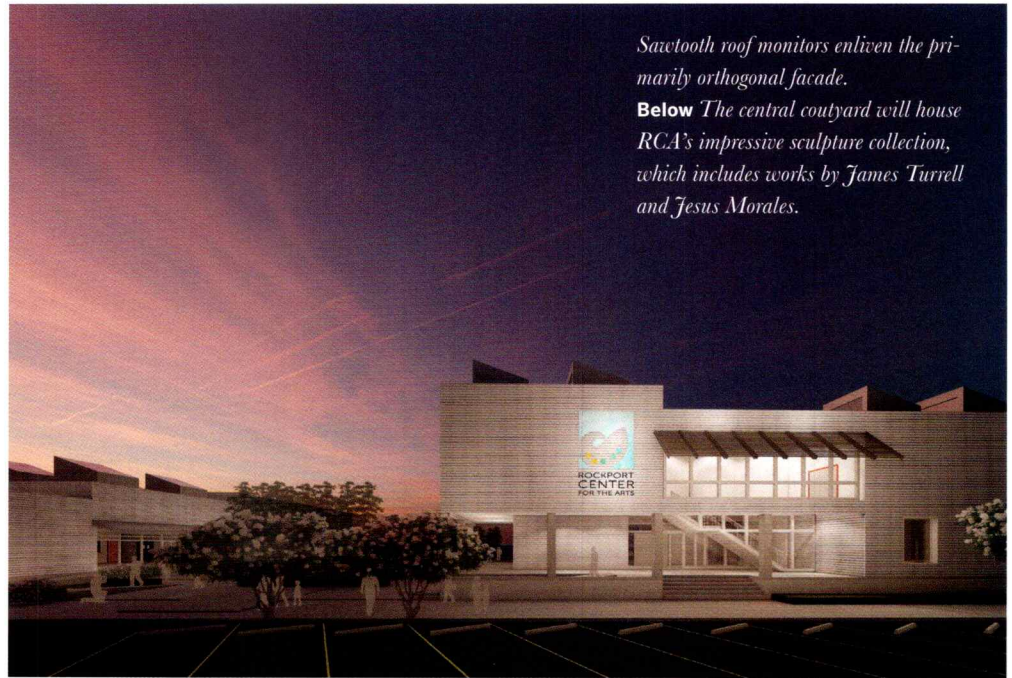
## Richter Architects-Designed Rockport Center for the Arts Breaks Ground

On August 25, 2017, communities along the Gulf Coast were forever changed by the devastating effects of Hurricane Harvey. The category four storm made landfall in Aransas County, where winds up to 132 mph damaged nearly every structure in sight — including the beloved Rockport Center for the Arts (RCA). The historic structure, which had housed RCA since the 1980s, was deemed a total loss, along with a significant portion of the 2-D exhibits on display at the time, which were on loan from other museums. This came as a blow not only to the museums' patrons, but to the entire Rockport community, as the RCA had acted as a nexus for engagement to so many permanent and semi-permanent residents.

Under the guidance of Executive Director Luis Puron, RCA transitioned to rented space, then into a 200-sf historical building owned and restored by the museum, where it continued to operate during the aftermath of the storm through the end of 2019. Puron was not prepared to let RCA's ambitious agenda — which includes 27 yearly exhibitions, a film festival, art workshops, an art festival, and an art fair — fall to the wayside during what was already a difficult time. In fact, when the hurricane prevented the museum from accepting the national traveling show "Birds in Art," which was set to arrive a week after the storm, RCA networked with the Art Museum of South Texas to host and open the exhibit on September 28, 2017, just two weeks after the initial planned launch date. More than 16,000 people viewed it. "I credit that transitional moment in our history as the Renaissance for art in Rockport," says Puron. Within a few months, the board of directors had launched a large capital campaign to raise funds for the construction of a new, multifunctional facility.

Now, nearly four years later, RCA has broken ground on a resilient new facility designed by Richter Architects of Corpus Christi. The firm's design includes a 13,000-sf visual arts and art education complex; an 8,000-sf performing arts facility and conference center containing a culinary arts education kitchen and multiple meeting rooms; and a 16,000-sf outdoor sculpture garden that will display 3-D works from RCA's impressive permanent collection — a collection that was, thankfully, salvageable after Harvey.

The design proposes clapboard siding similar to that used on coastal precedents; however, the new structure is reinforced with concrete block, concrete columns, and an immensely deep



*Sawtooth roof monitors enliven the primarily orthogonal facade.*

**Below** *The central courtyard will house RCA's impressive sculpture collection, which includes works by James Turrell and Jesus Morales.*



foundation to protect against future storms. The building remains respectful of Rockport's low profile by packing RCA's myriad programs into a series of interconnected one- and two-story volumes. "Our goal is to create an arts enclave that is both strong and inviting," says Elizabeth Chu Richter, FAIA. The team paid careful attention to how the sculpture garden, which will be home to arguably the most valuable elements of the collection, engages with the street and welcomes passersby. Over a dozen northern-facing sawtooth roof monitors direct the eye upward to the various balconies and rooftop terraces connect-

ing the project and filter light into the galleries and classroom spaces.

RCA has expanded its reach immensely since its humble beginnings in 1969. What was then a group of local artists looking to create a place where their works could be exhibited is now a buzzing community hub full of opportunities to engage with, create, learn about, and immerse oneself in art. Come summer 2022, the Rockport community will have a proper unified home in which visitors can do all these things.

Sophie Aliece Hollis is *TA's* editorial assistant.



## Low Design Office Receives Prestigious 2021 Emerging Voices Award

The Architectural League of New York has selected Austin- and Ghana-based Low Design Office (LOWDO) as one of its 2021 Emerging Voices award winners. The League has been running the award program since 1982, each year recognizing several North American practices that exhibit “distinct design voices and significant bodies of realized work.” Over the years, the award has identified young practitioners who would go on to make defining contributions to the field, including Steven Holl (1982), Thom Mayne and Michael Rotondi (1983), and Jeanne Gang (2006). LOWDO is one of only 15 Texas-connected practices to receive the prestigious accolade since the program’s inception.

After meeting while pursuing master’s degrees in architecture at the Harvard University Graduate School of Design, Ryan Bollom, AIA, who is from Houston, and DK Osseo-Asare, who grew up in Ghana and Pennsylvania, founded LOWDO in 2006. The partnership is dedicated to addressing architecture’s most urgent dilemmas, such as climate change, energy consumption, design inequity, and the lack of affordable housing, with a “low design” philosophy, which is the source of their name.

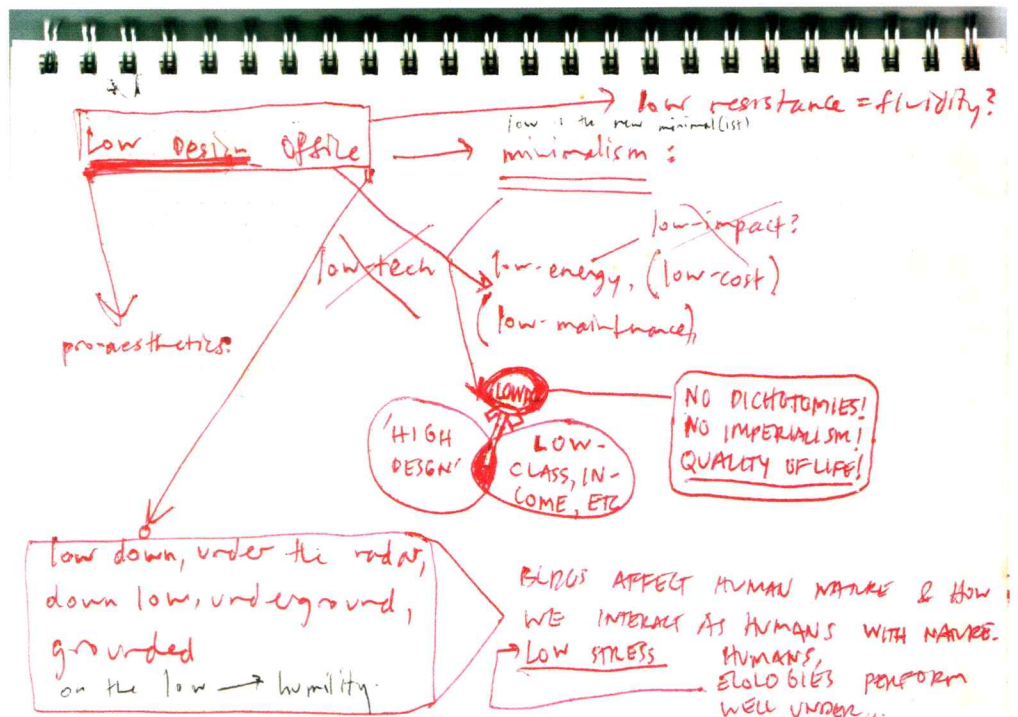
Low design seeks low-cost and participatory solutions to issues of injustice and environmental degradation, which is especially necessary in places with extensive histories of colonial and imperial exploitation, such as West Africa. But the philosophy is also relevant in places like Texas, where the high cost of design and construction typically puts architectural services only in the hands of the wealthy. According to Osseo-Asare, “It’s trying to have an alternative approach to the attitude that planetary abundance is unlimited — not trying to build up giant fortresses of architecture, but trying to think about it in ways which can be more open and inclusive.”

Low design aims to dismantle the systems that serve the interests of the elite, but Bollom and Osseo-Asare admit they do not have all the answers. “We’re not saying that our process is the perfect or the only process,” says Bollom. “We think it’s working toward doing something that’s important to us and needed.”

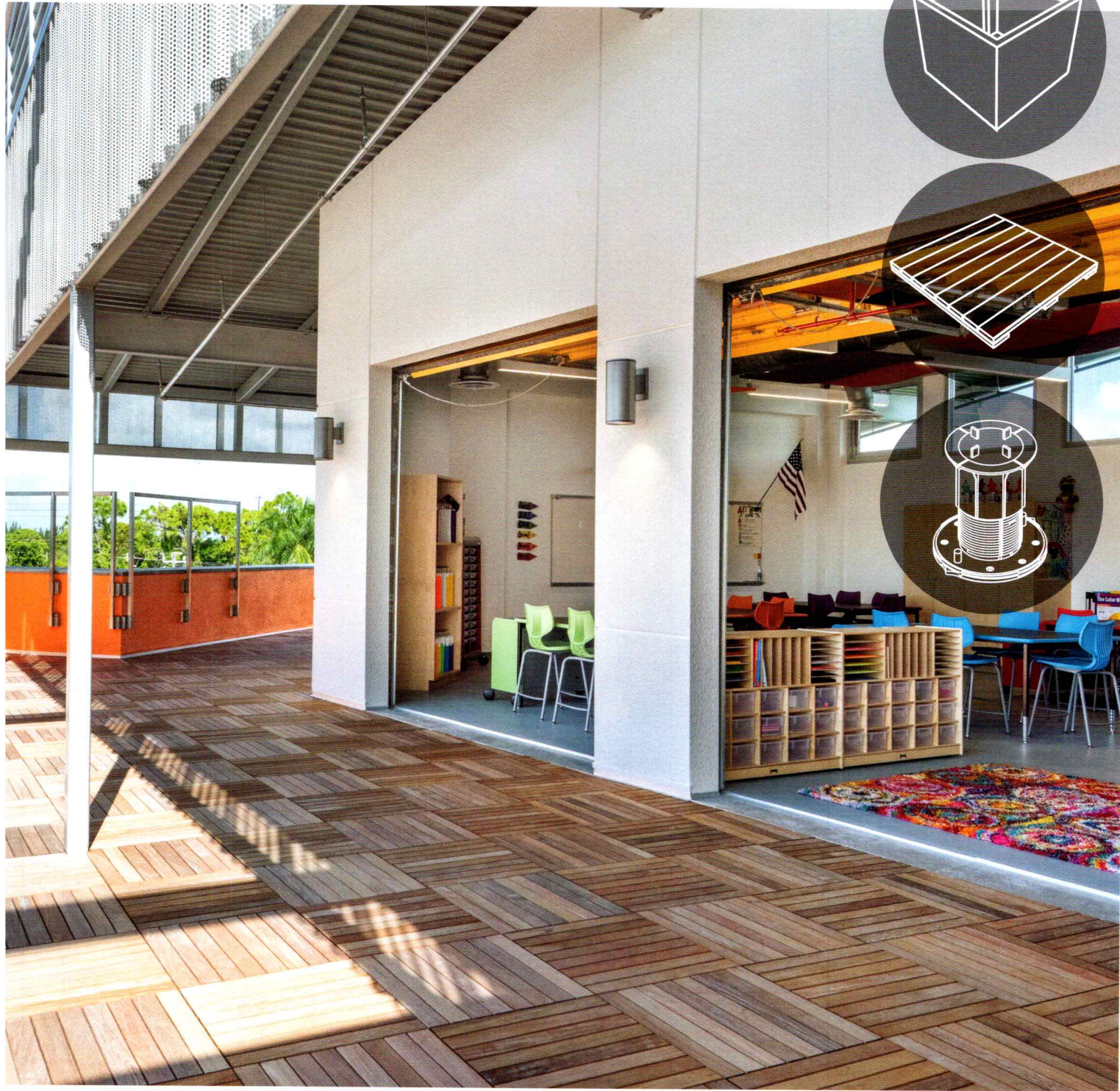
LOWDO has put their philosophy into praxis in projects recognized by the League, such as River House in New Braunfels; the Agbogbloshie Makerspace Platform in Accra, Ghana; and the Dakota Mountain Residence in Dripping Springs. All three projects have appeared in *Texas Architect* (see the Open House in the May/June 2020 issue, and Osseo-Asare’s profile in September/October 2020).

**Top** Bollom (far left) and Osseo-Asare (top) on site at Ravine House, a design-build garden house and guest house.

**Bottom** A sketch diagram depicting the many facets and ambitions of “low design.”







The Heights Foundation Early Learning Center, Fort Myers FL | architect: RG Architects | photographer: Amber Frederiksen

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*LOWDO's Adaptive House incorporates residential, commercial, and social functions to create an urban dwelling that supports both housed and unhoused populations.*

Up next for the firm is finalizing a typology of adaptive housing that meets a variety of commercial and social needs for urban residents and surrounding unhoused populations. With a flexible workshop, a retail space for local vendors, and a hub for existing city mobile services, the Adaptive House plan offers experiences open to the public while also providing housing that can transform to accommodate growing families. While the proposal was submitted to the Los Angeles Low-Rise design challenge, it also speaks to the housing concerns of fast-growing Texas cities like Austin experiencing shrinking markets, higher densities, and increased homelessness.

Recent Emerging Voices winners with Texas ties include SCHAUM/SHIEH (2019), AGENCY (2018), Bercy Chen Studio (2006), and David Heymann (2000). The honor has also been bestowed on Francois de Menil (1998), Carlos Jiménez and Gary Cunningham (1994), Lake|Flato Architects (1992), Lars Lerup (1989), Peter C. Papademetriou (1986), Lawrence W. Speck (1985), Robert James Coote (1984), Peter D. Waldman (1983), and Taft Architects (1982).

Kamryn Brownlee is studying journalism and architecture at The University of Texas at Austin.

**Q&A with Buell Prize Winners Michael Kubo and Matt Johnson, AIA**

In 2020, the Temple Hoyne Buell Center for the Study of American Architecture at Columbia University, in conjunction with the Association of Collegiate Schools of Architecture (ACSA), launched the Course Development Prize in Architecture, Climate Change, and Society, calling upon professors from across the country to formulate pedagogy that grapples with these pressing topics. In March, Matt Johnson, AIA, and Michael Kubo, two professors from the Gerald D. Hines College of Architecture and Design at the University of Houston, were awarded the prize for their proposal, “Gulf: Architecture, Ecology, and Precarity on the Gulf Coast.” Recently, *Texas Architect’s* Sophie Aliece Hollis sat down with the winners to discuss their proposal and what they anticipate will arise from this distinction.

**Sophie Aliece Hollis: Could you talk a little bit about the Course Development Prize and what exactly it requires?**

**Michael Kubo:** The goal of the Buell Center and the Course Development Prize is to produce trans-

formations in pedagogy at different architectural institutions across the country. So, their imperative is to look for innovative proposals that demonstrate a commitment from the administration to activate these changes so that these aren’t purely speculative ideas about things that you could teach, but that the winners of the prize will be committed, within a two-year framework, to actually teach it.

**Matt Johnson, AIA:** And as a part of the application for the prize, we mentioned that we would probably put on an exhibition and may produce a book of the coursework. Part of the excitement for us is that there could be products that come out of this that extend beyond the life of the course itself.

**The RFQ is centered around architecture, climate change, and society. Climate change design is a relatively new stream of thought in the practice. What previous experiences or interests led you two to embark upon creating a course around this subject matter?**

**MJ:** I have run several studios around questions of architecture, energy, landscape, and sustainability. Several years ago, I ran a studio with Peter Zweig,



FAIA, and Jason Logan that looked at Houston as a kind of locus of petro-culture and the ways in which we might transcend that as we move into the future in terms of urbanism and architecture. I also conducted a traveling studio that visited northern Europe and Scandinavia, where we looked at the possibilities for transitioning energy and renewable energy landscapes with architecture and the ways in which architecture could actually work symbiotically with those landscapes.

**MK:** I am an historian, and a big part of that has been my interest in the *longue durée* of petro-culture over the last century-plus, much of which has established Houston and the Gulf Coast as a central site for the global era of petrocene. So, looking at what's happening in Houston, for me, became part of this much bigger narrative about energy history, climate history, and all of those concerns centered on questions of environmental justice and precarity, especially now that I am in Houston seeing the on-the-ground effects that all of those things have on communities along the Gulf Coast, especially around the ship channel.

### **So how did the two of you come together to enter the competition?**

**MJ:** We were both interested in the idea of this continuum from the early and pre-history of oil and petro-culture through the present, where a city like Houston has been fundamentally configured by its relationship to the petrochemical industry in terms of sprawl, car culture, the lack of zoning, and so on, and looking forward through a projective lens in which we could explore what a future beyond oil would mean for the city of Houston. We were also drawn to the interesting ecology of the ship channel, which is relatively underexplored. The residential communities out there tend to be these neglected fence-line communities that are deeply affected by pollution and their relation to the neighboring industrial sites. So, we wanted to look at those communities as well, both architecturally and urbanistically, to see what the future holds for them.

**MK:** Matt and I had been talking about our shared interests for a while, and, at some point, we felt that they were intersecting heavily enough that it would be a good moment to explore how all of those things come together. We felt the best way to do this would be to blend our two different footprints in the program and create



something that would cross over between active studio practice and more history/theory/criticism-grounded work.

### **And where did you all begin?**

**MK:** We started to get to know and connect with a lot of the people who are doing work in different areas around all of this. There's been a rise in studies of environmental history and environmental justice as a field. So, when we decided that we actually wanted to structure a pedagogical research project around it, a big part of the interest for us was to build up a community of people

and start to connect the people working on these issues that may not currently be connected.

**MJ:** As we put the proposal together, we realized there was actually a lot of work being done: Air Alliance Houston, the Environmental Defense Fund, Texas Environmental Justice Advocacy Services (TEJAS), One Breath Partnership, and many other groups are already working very heavily on these issues, so our hope is to reach out to them and make this a much bigger collaboration that extends beyond the two-year timeline of the prize.



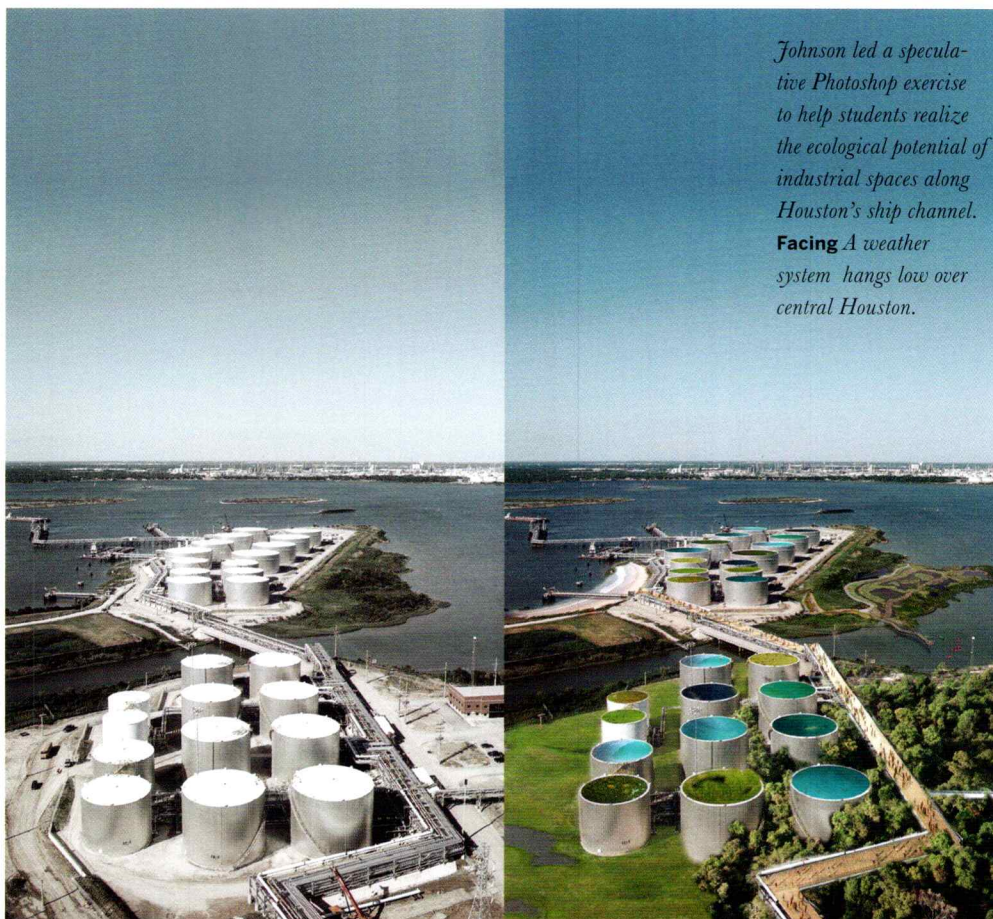
**What will the students' role be within this broad collaboration?**

**MJ:** We're thinking of the super-studio as a kind of archaeology — we want to explore the Gulf Coast both physically and in a research mode. So, as a part of this, I imagine we'll take a lot of field trips, perform field research, and spend time in a lot of sites closer to the actual coastline and among these industrial developments. We may take the students even further afield to Louisiana, or possibly travel beyond that. We want to create a body of research to draw from so that when students do begin to do more projective design work, there's a resource base available and they'll have both historical and anthropological knowledge to be able to pursue design work intelligently.

**MK:** Yes. And there are certain precedents for us in field work around the ship channel and Gulf Coast in general. TEJAS, for example, runs a "Toxic Tour" of the ship channel, which was incredibly eye-opening for me and hugely important in my own thinking about what you could do if you extended this thinking into pedagogy. Some years ago, Steve Rowell from the LA-based Center for Land Use Interpretation (CLUI) taught at the University of Houston and published a book of field work after taking students out to see the ship channel and understand all the different industrial sites and their relationship to the broader structuring of the city. There's also Kate Orff and Richard Misrach, the photographers who published a book called "Petrochemical America," which is based on a huge amount of field work in Cancer Alley.

**So how will this course be different than all the work that is already going on?**

**MJ:** While there are lots of people looking at the Gulf, I see it as a relatively underexplored region in academia. I think part of the reason for that is that there is not really a critical mass here of architecture schools and research institutions in the way that there is in, let's say, the Northeast. Architects tend to start with the problems in their own backyard, and, while Texas has a number of fantastic institutions, they are just a bit more spread out. So, our hope is that, since U of H is only five minutes from the ship channel, it will be a logical and convenient place for us to begin a thorough exploration of petro-



*Johnson led a speculative Photoshop exercise to help students realize the ecological potential of industrial spaces along Houston's ship channel. Facing A weather system hangs low over central Houston.*

culture and carbon culture and to begin thinking about post-carbon urbanism.

**MK:** Matt is absolutely right about how little of this work has come into academia. These resources and organizations and bodies of field work that we are really interested in don't appear on course syllabi; people are not assigning the book that CLUI published that was created by U of H students; they're not sending their students on the Toxic Tour; Robert Bullard is not being invited to come speak in classes. It's very much like the physical relationship between the ship channel and these fence-line communities to the rest of Houston: These bodies of work and the school are adjacent to each other, but they just aren't quite as interconnected as they could be.

**How will this "super-studio" benefit the architecture program at U of H?**

**MK:** The College of Architecture and Design is really interested in developing a lot more of these collaborative frameworks, especially ones that bridge active studio practice and questions

of history, theory, speculation. So the hope is that this is kind of a testing ground, not only for the topic, but also for the structure of this collaborative method. We would really like the College of Architecture and Design to become a center for these kinds of investigations, things that are about broader issues that extend far beyond Houston.

**MJ:** Definitely, and I think the pedagogy of architecture is kind of undergoing a bit of a crisis at the moment, trying to figure out what we're supposed to teach in architecture school. I think that architects should be engaging directly with issues of urgency — climate change, borders, migration — but with humility. Historically, we've tended to exist in a bubble, and it's important for us to reach out collaboratively to other professions and disciplines that have been dealing with these issues for a really long time. Architecture can certainly lend a hand, but trying to solve these problems entirely [through architecture] is a little bit out of step, I think. So, we want to address issues of climate change and development on the Gulf Coast, but collaboration is the primary mode in which we aim to do so.





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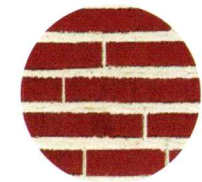
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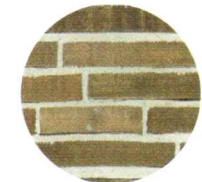
Black



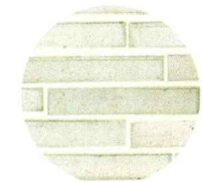
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## MAY

### Sunday 2

#### EXHIBITION OPENING

Concentrations 63:  
Julian Charrière,  
Towards No Earthly Pole  
Dallas Museum of Art  
1717 N. Harwood St.

Dallas

[dma.org](http://dma.org)

### Tuesday 4

#### LECTURE

DAF Lecture Series:  
Julie Eizenberg  
Horchow Auditorium, DMA  
1717 N. Harwood St.

Dallas

[dallasarchitectureforum.org](http://dallasarchitectureforum.org)

### Friday 14

#### EVENT

AIA Dallas LiA Sporting  
Clay Classic  
Elm Fork Shooting  
Sports  
10751 Luna Rd.

Dallas

[aiadallas.org](http://aiadallas.org)

### Sunday 16

#### EXHIBITION CLOSING

Wild Life: Elizabeth  
Murray & Jessi Reaves  
Contemporary Arts  
Museum Houston  
5216 Montrose Blvd.

Houston

[camh.org](http://camh.org)

### Wednesday 19

#### EVENT

Art with Friends: Art  
and Architecture  
Nasher Sculpture Center

Virtual

[nashersculpturecenter.org](http://nashersculpturecenter.org)

#### LECTURE

DAF Lecture Series:  
Michelle Delk  
Horchow Auditorium, DMA  
1717 N. Harwood St.

Dallas

[dallasarchitectureforum.org](http://dallasarchitectureforum.org)

### Thursday 20

#### EXHIBITION CLOSING

Something Tangible  
by Bryan Florentin  
Wright Gallery, Langford  
Architecture Building  
Texas A&M College  
of Architecture

College Station

[arch.tamu.edu](http://arch.tamu.edu)

#### LECTURE

AIA Houston Historic  
Resources Committee  
Speaker Series  
w/ Craig Garcia

Virtual

[aiahouston.org](http://aiahouston.org)

### Saturday 22

#### EXHIBITION CLOSING

Sterling Allen: No  
Visitors No Objects  
The Old Jail Art Center  
201 S. 2nd St.

Albany

[theojac.org](http://theojac.org)

### Sunday 30

#### EXHIBITION CLOSING

Liu Xiaodong: Borders  
Dallas Contemporary  
161 Glass St.

Dallas

[dallascontemporary.org](http://dallascontemporary.org)

## JUNE

### Thursday 3

#### EXHIBITION OPENING

The Sitter  
Blue Star Contemporary  
116 Blue Star

San Antonio

[bluestarcontemporary.org](http://bluestarcontemporary.org)

### Wednesday 9

#### EVENT

2021 Design Futures  
Forum

Virtual

[designfuturesforum.org](http://designfuturesforum.org)

### Friday 11

#### EXHIBITION OPENING

America's Impressionism:  
Echoes of a Revolution  
San Antonio Museum  
of Art  
200 W. Jones Ave.

San Antonio

[samuseum.org](http://samuseum.org)

### Saturday 19

#### EVENT

AD EX Form Follows  
Fitness 5K  
Klyde Warren Park

Dallas

[formfollowsfitness.com](http://formfollowsfitness.com)

### Sunday 27

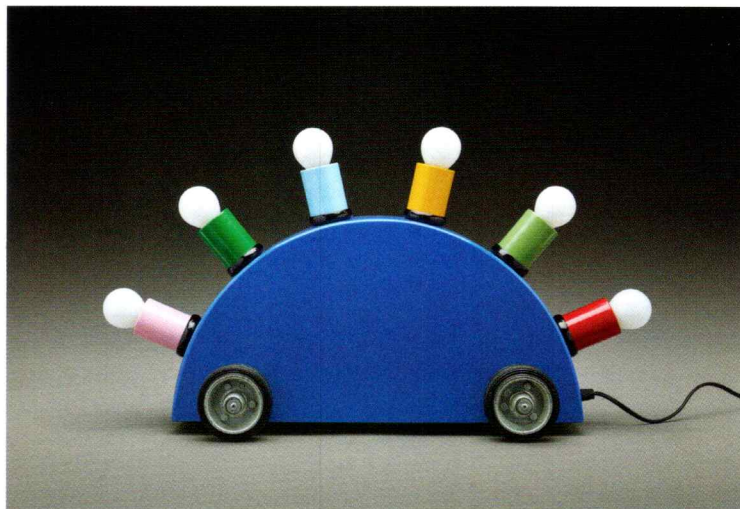
#### EXHIBITION OPENING

Black Is Beautiful: The  
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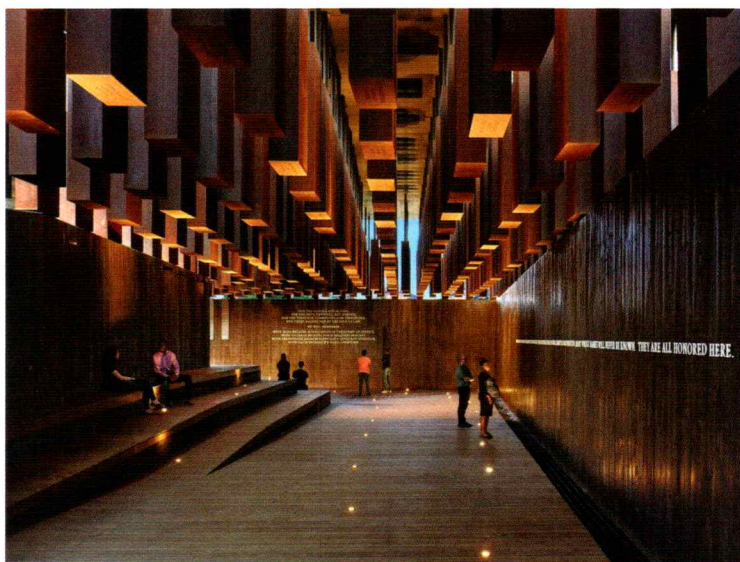


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Horchow Auditorium at the Dallas Museum of Art

LECTURE JUNE 2

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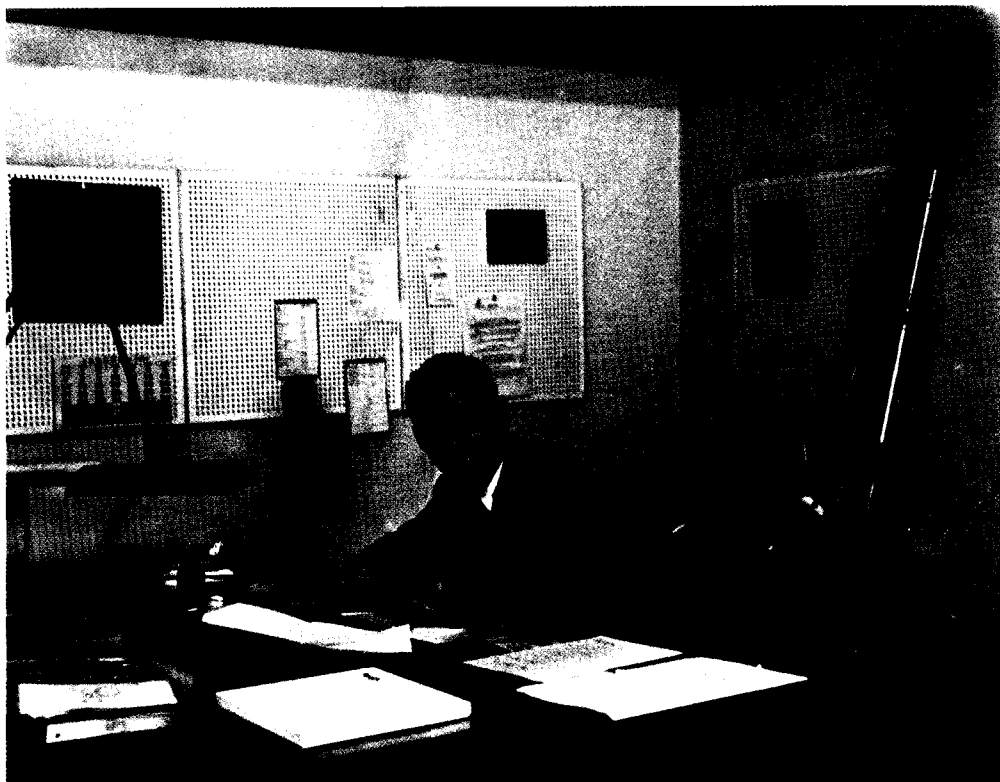
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*Howard Barnstone,  
FAIA, in his office at  
811 Lovett Boulevard,  
Houston, c. 1955.*

## The Barnstone That Was

**Making Houston Modern: The Life and Architecture of Howard Barnstone**  
Barrie Scardino Bradley, Stephen Fox, and Michelangelo Sabatino  
University of Texas Press, 2020

by Jeffrey Lieber

There is a curious genre of biography, which takes as a subject an obscure figure whose work is relatively inconsequential but whose busy life is a keyhole into changing styles and mores in a specific place and time. “Making Houston Modern: The Life and Architecture of Howard Barnstone” follows in this tradition. Howard Barnstone, FAIA, is all but forgotten today, outside a small circle of people deeply familiar with the history of modern architecture in Houston. He produced no canonical buildings and few Houston landmarks. In the introduction, Stephen Fox and Michelangelo Sabatino therefore pose the question, why does Barnstone matter? The book’s nine essays offer a range of answers. The essays in the first section make a case for the originality of his architectural practice — and the role he played as a local architect in the diffusion of a high modernist sensibility — but it’s the book’s second and third sections, focusing on

his clients and his biography, that get to the more fundamental issue of his milieu, specifically his decades-long close working relationship with John and Dominique de Menil. Driven by social as much as artistic ambition, Barnstone’s life was punctuated by depressive episodes and ended in suicide. Making use of a trove of archival and anecdotal materials, the essays testify to his charm, but they also reveal contradictions in his personality and, ultimately, what Carlos Jiménez, in the foreword, calls “a subtle, deep-seated sadness.”

When Barnstone arrived in Houston in 1948, he practiced an eclectic style of modernism, similar to that of Edward Durell Stone, who advised his B. Arch. thesis at Yale. At the time, Stone was designing elegant suburban houses by combining Frank Lloyd Wright’s Usonian models with International Style motifs. Drawing on his Ozark upbringing, Stone championed the architect’s “moxie” — inventiveness, and the assertion of individual character — over doctrine or dogma. This method appealed to Barnstone and became a basis for the boldness Fox detects in the architect’s early residential projects in Houston. In a lovely analysis of the Bloxson House (1952), which was based on Wright’s Usonian Solar Hemicycle plan of 1946-1948, Fox observes, “Barnstone’s cheeky method — appropriating the master’s design, and literally, turning it inside out — was one

way to generate new designs.” It was also arguably indebted to Stone’s example.

Nevertheless, by the early 1950s, Barnstone fell under the spell of Miesian aesthetics. The reasons for this change — and the predominance of Miesian-style modernism in Houston — are among the book’s main themes. In an essay titled “Translating Mies,” Sabatino points to the growing popularity of Mies van der Rohe’s architecture in the United States in the late 1940s — partly as a result of the Museum of Modern Art’s 1947 retrospective of his work, curated by Philip Johnson, and, to an even greater extent, thanks to the reproduction of photographs of Mies’ buildings in influential magazines. In 1949, the de Menils commissioned Johnson, Mies’s chief disciple, to design their new house in Houston. Hugo V. Neuhaus Jr., Johnson’s local associate on the project, eagerly adopted the style and made it the calling card of his own booming practice. In one of the book’s most important passages, Sabatino argues that Miesian-style modernism — especially once it was endorsed by the de Menils — represented a worldly ideal with which Barnstone longed to be identified, whereas “the egalitarian styles identified with Usonian modernism and Texas regionalism were insufficiently cosmopolitan.” No doubt, other local architects who began to work in the Miesian idiom had a similar mindset, and the style’s elite connotations must have appealed to their clients as well.

However, as he did with Wright’s Solar Hemicycle plan, Barnstone toyed with Miesian principles. Fox explores this theme in an essay titled “Barnstone’s Practice,” explaining how, in the Blum House (1954), for example, Barnstone and Preston M. Bolton (his partner in practice from 1952 to 1961) “cleverly dissembled Miesian symmetry,” while in a number of other houses they achieved Miesian effects through “sleights of hand.” Fox suggests Barnstone exploited the representational potential of Miesian aesthetics at the expense of structural precision. In fact, the houses were designed to showcase impossibly grand living rooms furnished with a combination of chic Knoll pieces and antiques. These spaces look spectacular in photographs — in another lovely analysis, Fox describes how Barnstone created “the perception of scintillating spatial brilliance” — and they were repeatedly

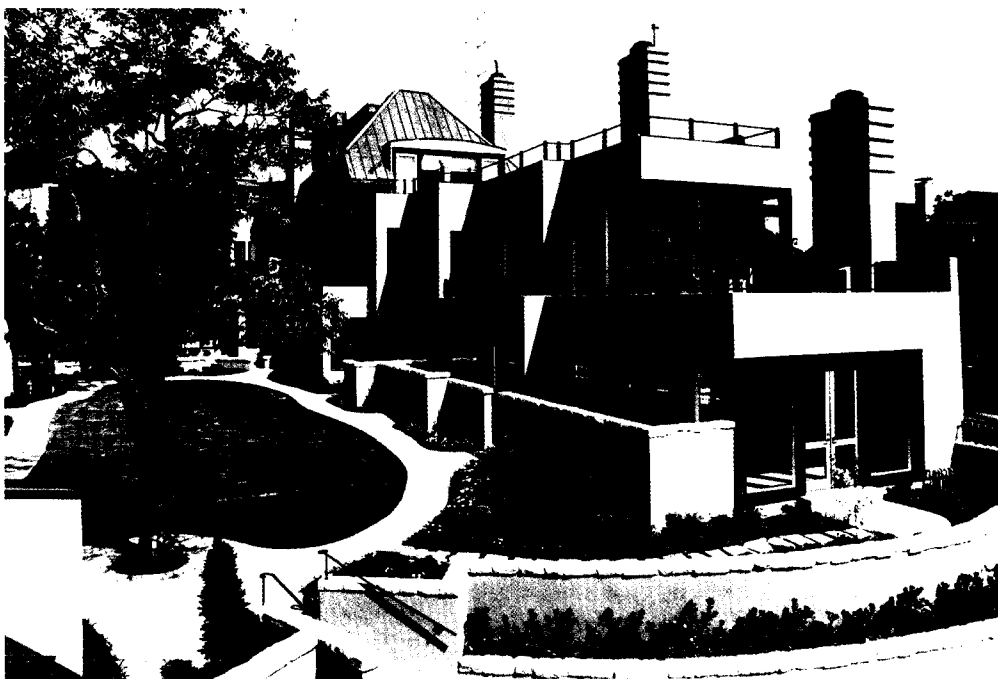


# Reviews

published in the leading trade magazines of the day. Examples include the double-height glass-walled and red brick living room of the Gordon House (1955), which appeared on the covers of both *Architectural Record* and *House and Garden*, and the double-height glass-walled and wood-paneled living room of the Owsley House (1961).

Many of these homes were designed for prominent Jewish clients. Barnstone himself came from a well-off assimilated Jewish family and grew up in Auburn, Maine, and on Riverside Drive on the Upper West Side of Manhattan. As Fox and Sabatino explain in the introduction, even though Barnstone “fiercely resisted identification with Houston’s Jewish communities,” Jewish clients nonetheless formed one of his core constituencies. In an essay titled “Barnstone’s Jewish Houston,” Joshua J. Johnson provides brief portraits of these clients and their homes, as well as a panoramic analysis of ethnic and racial demographic shifts in Houston in the postwar era, notably the migration of Jewish families from Riverside Terrace and Washington Terrace to the suburbs and exclusive neighborhoods formerly off-limits to Jews, e.g., River Oaks. This focus on the social and urban changes that facilitated modernist development is one of the book’s overall strengths.

But Barnstone’s relationship with the de Menils was the foundation of his professional and social life, and for this reason, Barrie Scardino Bradley’s essay, “A Constructive Connection,” is the centerpiece of the book. Johnson balked when the de Menils hired the haute couturier Charles James — known for his voluminous modern ball gowns memorably photographed by Cecil Beaton — to design the interiors of the de Menil House, and in the early 1950s, they needed a local architect to fine-tune it to their specifications. Neuhaus introduced them to Barnstone at a dinner party at his own palatial Miesian-style home. Recounting the episode, Bradley states, “Barnstone essentially became their in-house architect.” Bradley chronicles the projects Barnstone carried out for the de Menils, as well as their companies and extended family, over the next 35 years. Remarkably, they regularly called on him to take the edge off buildings they commissioned from Johnson. In 1961, Barnstone conceived an open-air barrel-vaulted canopy for the interior courtyard of the de Menil House, an unexpected, whimsical addition, and in truth, an improvement on Johnson’s original design. In 1967, when Johnson extricated himself from the prolonged Rothko Chapel project, Barnstone and Eugene Aubrey (his partner in practice from 1966 to 1969), completed the building. Ironically, Barnstone’s most iconic contribution to

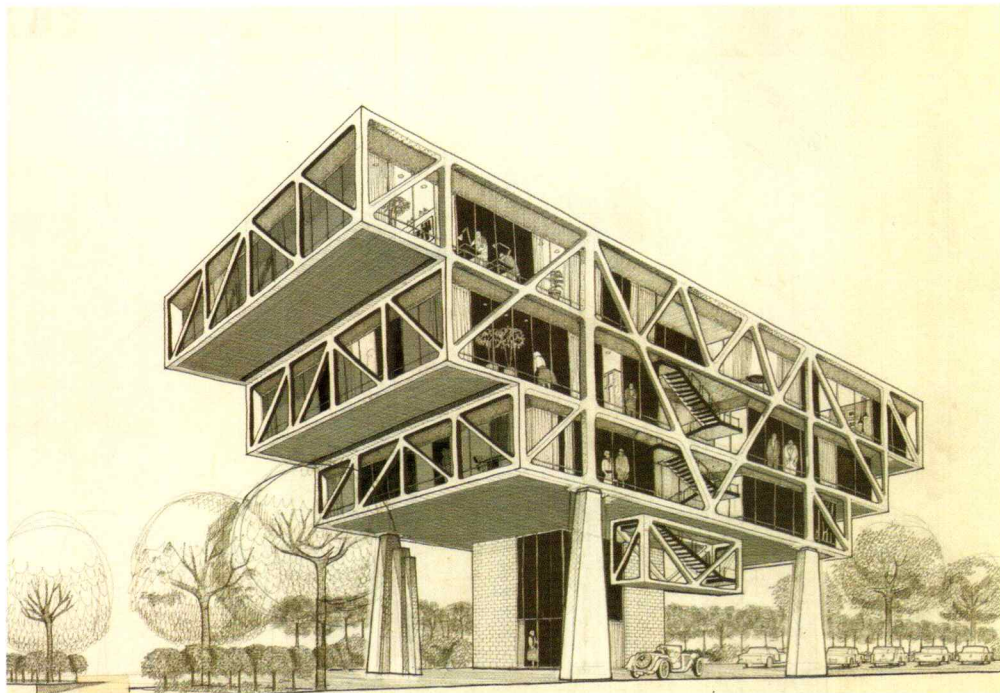


the Houston landscape is one for which he remains little known: In the early 1970s, he convinced Dominique de Menil to preserve the historic bungalows that now house the Menil Foundation and to paint them gray with white trim. The de Menils never gave Barnstone showpiece commissions, which they reserved for eminent architects. Rather, he handled a multitude of workaday projects (e.g., the renovation of their garage into an office space, Schlumberger-Surenco campuses in the Carib-

bean and South America, Manhattan office and apartment interiors, an East Hampton compound, a Scottsdale estate, Schlumberger research and systems centers in Texas) with a high level of competence, and often great flair, but without much fuss.

Another of the book’s main themes is the connection between artistic modernism and political liberalism in the milieu Barnstone inhabited. In the introduction, Fox and Sabatino write, “The liberal modernity with which Barnstone was identified





**Facing top** *Menil House with “barrel-vaulted canopy,” Howard Barnstone, 1962.*

**Facing bottom** *De Saligny Condominiums, Howard Barnstone and Robert T. Jackson, 1982.*

**Left** *Office Building for Howard Barnstone and Burdette Keeland, unbuilt, 1962.*

occurred in a racially charged atmosphere of intense conflict, in which Gertrude Barnstone became a key player.” In 1955, Barnstone married Gertrude Levy, an actress and artist, who became a pioneering national figure in the effort to desegregate Houston’s schools in the 1960s. In an essay titled “The Worst Thing That Can Happen: Gertrude and Howard,” Olive Hershey describes their life together as “glamorous and colorful, something like a Fellini movie being acted out on a Gulf Coast prairie” — a wonderful image. Hershey details the marriage’s unraveling after its early halcyon days: The demands of Gertrude’s political activism — and the racist and anti-Semitic reactions the couple faced as a consequence — took a toll, as did Barnstone’s jealousy of his wife’s rising profile. “Howard had begun having covert affairs with men,” Hershey reveals. The couple divorced in 1969.

Barnstone’s commitment to progressive ideas existed in tension with his even stronger obsession with social class. “He was transfixed by American patrician manners,” Fox and Sabatino note, adding, “In Houston, he bonded with people whose sense of identity was conditioned by their exposure to and participation in upper-class social life.” This helps to account for the role he came to play as a courtier in the de Menils’ inner circle, but it also highlights a paradox in his career. While Barnstone assimilated patrician manners into his persona — Jiménez refers to “his patrician smile”; Bruce C. Webb refers to his “patrician demeanor”; and Hershey comments on the “patrician guests at an exclusive party for an elite group of art collectors

and patrons” — he never really assimilated patrician style into his architecture. Barnstone’s buildings lack the formal severity, intellectual rigor, and historical allusions that characterize Johnson’s truly aristocratic architecture, for example. By comparison, they are merely fashionable.

That said, Barnstone integrated his patrician sensibilities and his liberal world view in his teaching, the arena in which he probably made his most consequential impact. In an essay titled “Barnstone and the University of Houston,” Webb chronicles his long tenure as a professor at the University of Houston’s School of Architecture. Webb, who taught in the school and eventually became its dean, gives an honest portrait of Barnstone as a “bona fide scholar and intellectual member of the faculty” but an often sour and bad-tempered colleague. In fact, Barnstone’s two books, “The Galveston That Was” (1966) and “The Architecture of John F. Staub: Houston and the South” (1979) are serious, beautifully written books of enduring value. Gorgeously produced with photographs by both Henri Cartier-Bresson (who was paid by John de Menil) and Ezra Stoller, “The Galveston That Was” helped to revive interest in Galveston’s historic houses and became a *cri de coeur* in the historic preservation movement. In an essay titled “To Be Modern in Texas,” Kathryn E. Holliday offers a vivid description of Barnstone’s lyrical but informative writing style. A few years before “The Architecture of John F. Staub” was published, Barnstone bought a Staub-designed house from 1926, which he remodeled. In both books, Barnstone indulged his fascination with the

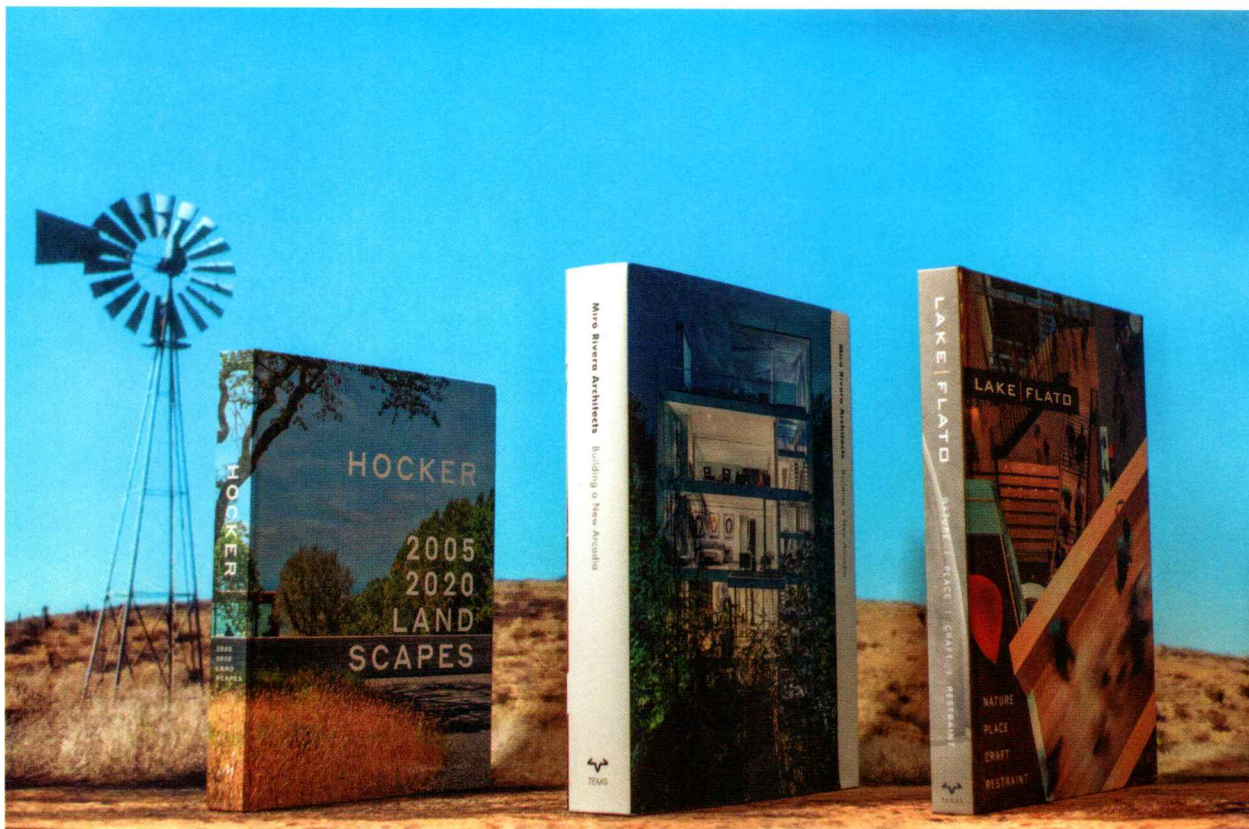
history of Houston’s upper class, while also bringing renewed attention to neglected subjects. Indeed, it is in these two books that Barnstone exercised all his best attributes (“he was an inspiration — ethereal, charismatic, imaginative,” in Aubrey’s words) and reconciled his ethical concerns, squaring his interests in social history and social class. The recovery of Barnstone’s books is one of the greatest contributions of “Making Houston Modern,” because, as numerous contributors to the volume suggest, more so than his architecture, they are a true lasting legacy.

The book succeeds in illuminating Barnstone’s milieu, and offers important insights into his architecture, but his inner life remains an enigma. The authors treat his depressive episodes (described as bipolar disorder) with great sensitivity and respect. But the essays hedge on the topic of his sexuality. Although he lived with men from the time of his divorce until his death in 1987, “he denied that he was homosexual,” according to Fox and Sabatino. Hershey quotes Gertrude as saying, “I always knew he was bisexual.” This raises a host of questions. How did his suppressed homosexuality mark his life and contribute to his depression? How did it manifest in his architecture, either consciously or subconsciously? Was it a part of his hero worship of Philip Johnson? Combined with his Jewishness, how did it factor into what Fox and Sabatino characterize as his feelings of “ambivalence,” his contradictions and oppositional attitudes? In what ways did it contribute to his becoming, in Aubrey’s words, “the ultimate social climber”? The book, as a whole, addresses these questions obliquely; the editors conclude: “In the same way that seeking Jewish cultural traces in Barnstone’s architecture seems futile, so too is the effort to isolate traces of a gay identity in his buildings.” This is too facile a conclusion for such a complex personality. A more forthright analysis of gender and sexuality and the role they played in the development of Barnstone’s sensibility could add deeper layers of meaning to his life and work, and help to untangle questions that, sadly, he himself was never able to resolve.

Jeffrey Lieber is an assistant professor in the School of Art and Design at Texas State University and author of “Flintstone Modernism and the Crisis in Postwar American Culture.”



*If books were billboards...  
or a hardback Cadillac  
Ranch.*



## Open and Closed

by Aaron Seward

Why do architects make books about their own work? Especially these days, when basically everyone has a website presenting their portfolio? Books are expensive to produce, take a long time, require specialty knowledge, and there's little hope that they'll be well received by what is, to be fair, a very narrow audience. During my time as an editor at *The Architect's Newspaper*, we reviewed maybe 30–40 titles each year but had a rule to never review a firm-produced monograph. They are, after all, nine times out of 10, overgrown marketing brochures with more bloviating than reliable and interesting information about the projects they document. The rule made it easy to say no and focus on scholarly and theoretical works. And yet, firm-produced monographs kept pouring in, mostly from large corporate practices with publications departments, where they piled up and collected dust until someone had time to take them to the used bookstore.

Firm-produced monographs are essentially self-published. Even if they appear on a respectable imprint, the firms are footing the bill and directing the outcome. Generally, a high-profile

journalist or critic is hired to pen an essay on the firm's work — a puff piece, usually; often, famous friends of the architects are asked to contribute testimonials; the manuscript and layout are prepared in collaboration with the architect to ensure that their vision is achieved. The resulting volume is, in varying degrees, part documentary, part marketing brochure, and part (if you're lucky) manifesto, enclosed within a fine binding capable of blending seamlessly with any respectable collection of art and design coffee-table books.

Great things have happened in the world of architectural self-publishing. Just consider what is probably the ne plus ultra of firm-produced architectural monographs: “S,M,L,XL” by Rem Koolhaas, Bruce Mau, and Jennifer Sigler, which documents 20 years of the work of Koolhaas' firm, OMA. This book's peculiar blend of projects, research, historical and theoretical musings, journal entries, dialogues, definitions, and poetry; its restless, ever-evolving design and diverse graphics, which include evocative photography from Hans Werlemann, snapshots, graphs, drawings, and archival images; its eagerness to grapple with historical, political, environmental, and infrastructural contexts; and, perhaps most remarkably, its openness about the shortcomings of the architecture and the architects themselves

set the benchmark for what a monograph could hope to accomplish: It has become a fixture on many architects' shelves and crossed over to captivate readers who would not normally be interested in architecture.

Three Texas design firms released monographs in 2020. While I see no need to revise my old employer's policy regarding these sorts of titles, it occurred to me that now might be a good time to check in on the publishing ambitions of the local design community, as an analysis of how these volumes present architecture may prove useful to future efforts at book making.

**Hocker: 2005–2020 Landscapes**

**Foreword by Gary Cunningham, FAIA**

**Text by Helen Thompson**

**The Monacelli Press, 2020**

Dallas-based landscape architect Hocker chose to work with Monacelli Press in New York (which, incidentally, was founded in 1994 to publish “S,M,L,XL”) on its first book. The studio also collaborated with lifestyle journalist and former *Texas Monthly* food editor Helen Thompson. This collaboration is most apparent in the book's form, which has the same trim size and cover treatment as Thompson's previous two titles with the photographer Casey



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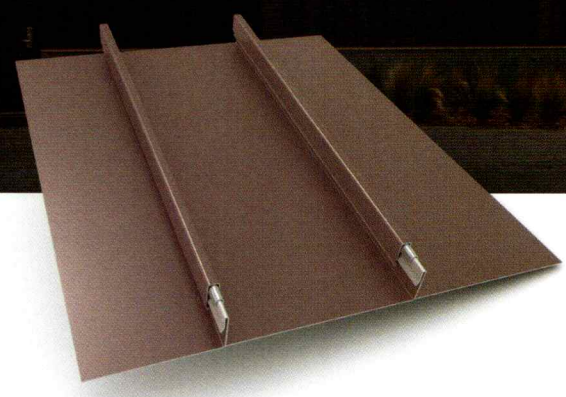




# Minor League, Major Appeal



LAS VEGAS



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-Devin Norton, project designer, HOK San Francisco

Las Vegas Ballpark, Las Vegas Contractor: Southwest Specialty Contractors Architect: HOK, San Francisco  
GC: Penta Building Group, AECOM Hunt Owner: Howard Hughes Corp. Photo: alanblakely.com

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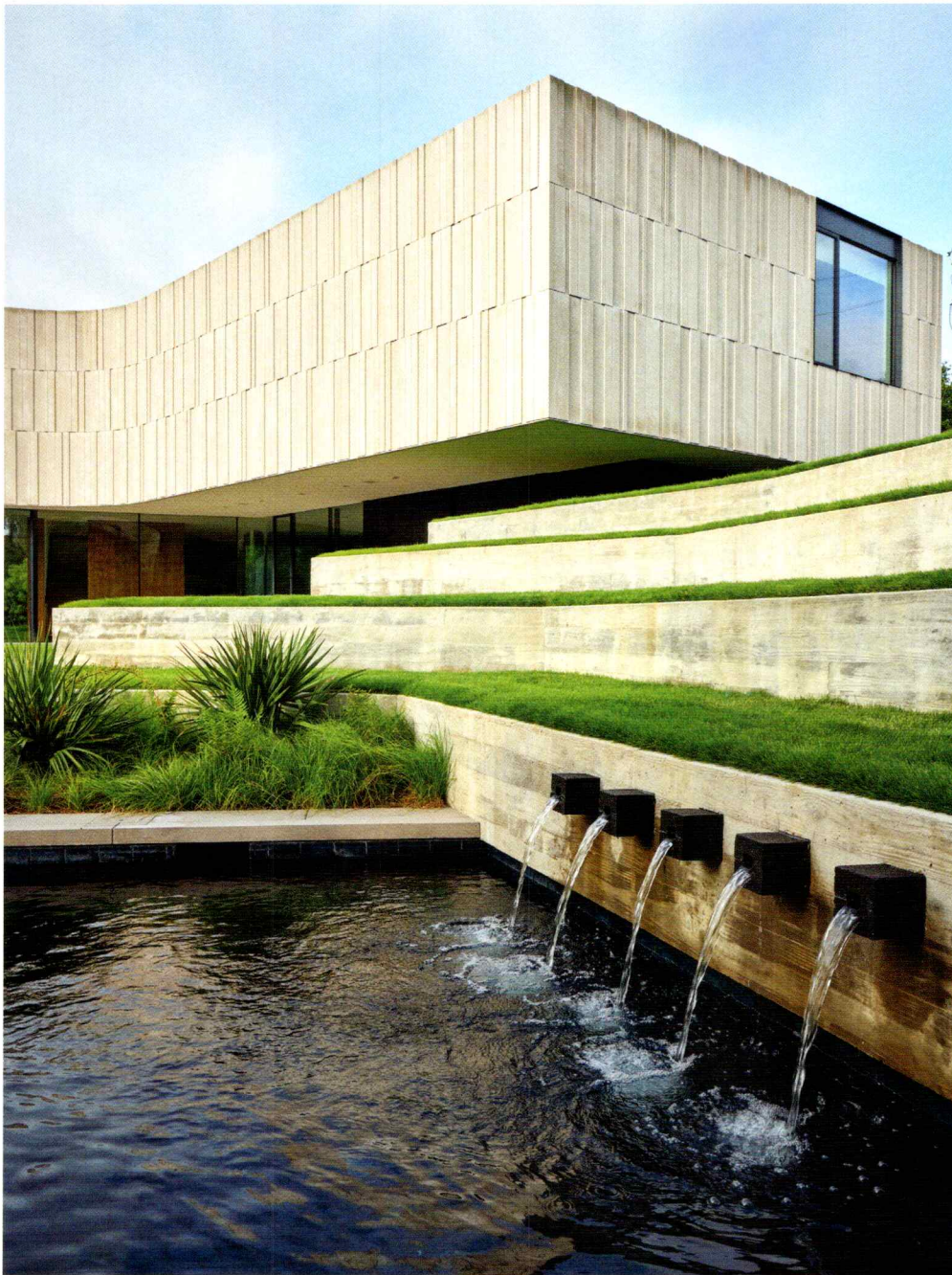


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*Highland Park Residence*  
by Alterstudio, Land-  
scape Design by Hocker,  
Dallas, 2018.

grasses and trees, concrete and stones, weathering steel and water look together, as opposed to how components of the plan relate to each other, or how the project fits in with the surrounding context, or how people might use these spaces. The result of this presentation is that all of the projects seem to merge together and evince their essential sameness. Only two projects — Forty Five Ten and the Dallas Museum of Art — show that they are connected to something like a city, and this seems to be simply because their location downtown made it hard to photograph them any other way.

The fact that only one site plan, at near-thumb-nail size, is presented per project with no other supporting process imagery indicates that this is less a book about telling the complicated histories of design projects and more about attracting a certain clientele. Indeed, the project texts set up what the customer wanted before describing Hocker's solution. These texts are supposedly by Thompson — she is credited on the title page — and sometimes they are told in the third person, as though that were the case, but more often they are told in the first-person plural, as though the Hocker entity wrote them. Whatever the reason may be for this inconsistency, it mars what is otherwise a slick though undistinguished marketing brochure.

**Lake|Flato: Nature, Place, Craft & Restraint**

**Foreword by Kengo Kuma**

**Introduction by David Miller, FAIA**

**University of Texas Press, 2020**

Dunn: “Marfa Modern: Artistic Interiors of the West Texas High Desert” and “Texas Made/Texas Modern: The House and the Land,” both also on Monacelli. Gary Cunningham, FAIA, contributed a foreword in which we learn that he designed a playroom for David Hocker when he was a baby; they went to the same Cistercian school in Dallas — something of the Cistercian world view may have influenced them both as designers; and the two of them have had several successful collaborations. Hocker's brief introduction breezes through his childhood in Texas, his education and experiences in Italy, where he

met his wife, and what motivates his practice: context, material connections, and collaboration.

The 15 projects in the book are each arrayed on 14–16 full-color pages and interspersed with 10-page black-and-white sections on matte paper in which Hocker explains what Material, Texture, Structure, Craft, and Layers mean to his practice. The photographs in the book, primarily by Millicent Harvey Photography, are highly composed, and the lens is kept close to the subjects, focusing on the textures and colors of the plants and materials that Hocker has blended in masterful ways. The fascination here seems to be exclusively with how

If Hocker's monograph is about wooing clients without boring them with what it's really like to do landscape architecture, Lake|Flato's new book is a classic example of architects talking to architects, or rather, architects talking about why they like Lake|Flato. The volume, per its title, is organized into four sections — Nature, Place, Craft, Restraint — around which are arrayed the firm's recent institutional and commercial projects. Each section features brief introductions written by prominent architects, most of whom are connected to the green and/or regional modernism movement, who ruminate on what these words mean and how they

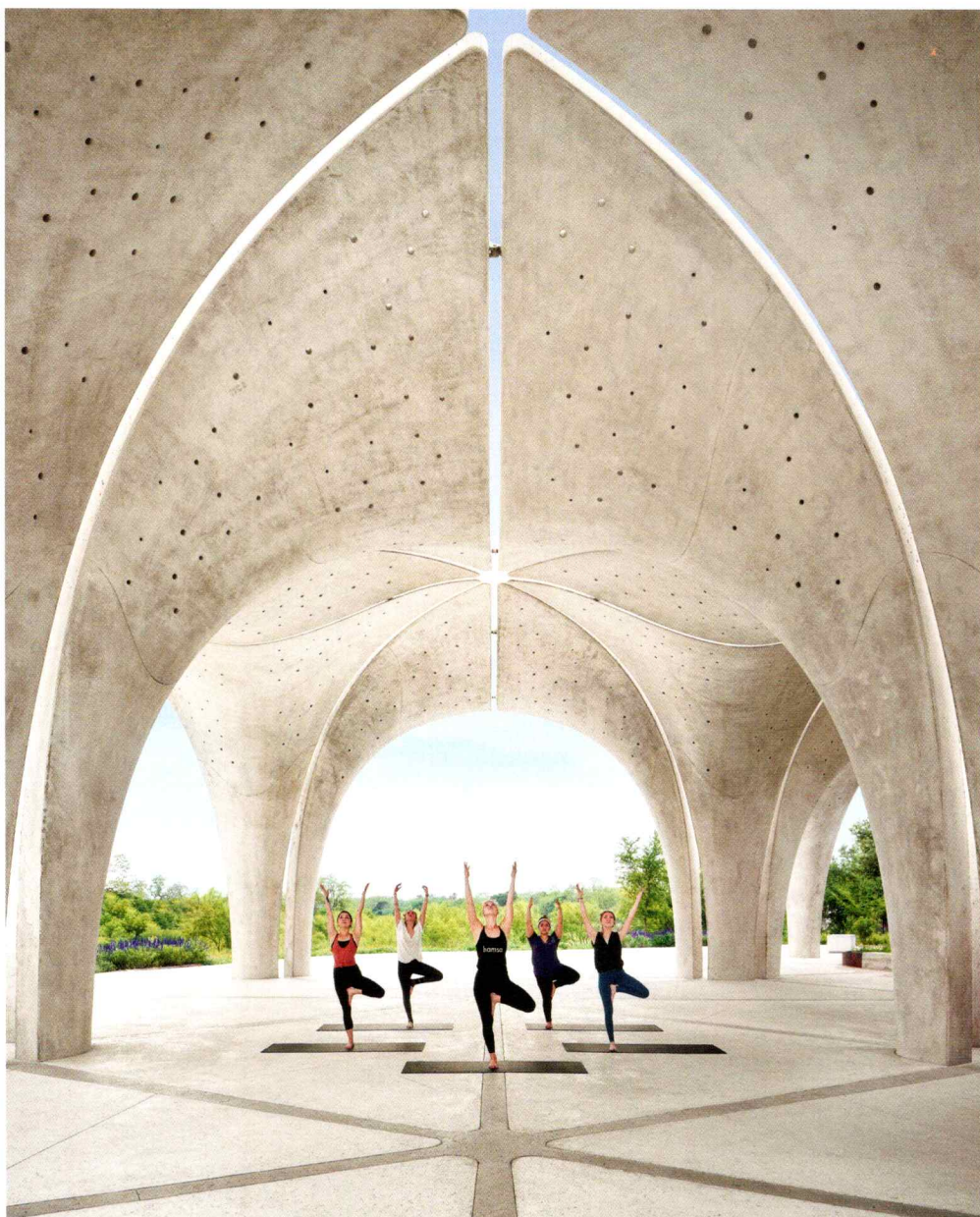


# Reviews

relate to the firm's work. The landscape architect Warren T. Byrd Jr., for example, tells us, "the work of Lake|Flato, like nature, is both gentle and complex...." Noted New Urbanist Stefanos Polyzoides writes, "Lake|Flato is one of the few firms that has produced both notable civic monuments and background housing buildings that exude the power of place." The academic Vivian Loftness explains, "the architecture of Lake|Flato is indeed a celebration of the breathtaking craft of architecture at the intersection of man and nature." Sustainability pro Lance Hosey, introducing the *Restraint* section, says, "Lake|Flato's work is somewhere between too much and not enough." (I suppose that means he thinks it's just right, making Lake|Flato the Goldilocks of architecture.) In his general introduction, Seattle architect David Miller, FAIA, makes the extraordinary claim, "Lake|Flato's architecture teaches us how to be better human beings." The firm liked that so much they repeat it as a pull quote further down the page. And there is a forward by Kengo Kuma, a classic bit of Japanese politesse in which he assures us the architects at Lake|Flato are "masters of total environmental response."

It's a lot of praise. Lake|Flato is the most decorated architecture practice in Texas history by about a million miles and one of the most lauded in the country. They've won nearly every important award out there, with the exception of the Pritzker Prize. Why would they need to publish a volume packed with panegyrics from friends, all accomplished individuals in their own right, behaving like nothing so much as obsequious courtiers at a king's birthday party? Let's face it: Who we really want to hear from is the king, about what's actually going on — why are things the way they are? Yet neither David Lake nor Ted Flato nor any other partner in the firm so much as pens an acknowledgement, let alone explains how their institutional and commercial work fits in with their legendary residential output.

Fortunately, things get much better with the presentation of the projects themselves. The project texts, by design communications consultant Kira Gould, are brief and don't offer much information, but the graphic layouts are thoroughly detailed and include a diverse mix of finished, construction, and archival photography (by a variety of photographers), sketches, watercolors, diagrams, site and floor plans, sections, elevations, axonometrics, heatmaps, models, and more. Looking through them, it's possible to get a sense of how Lake|Flato designs buildings.

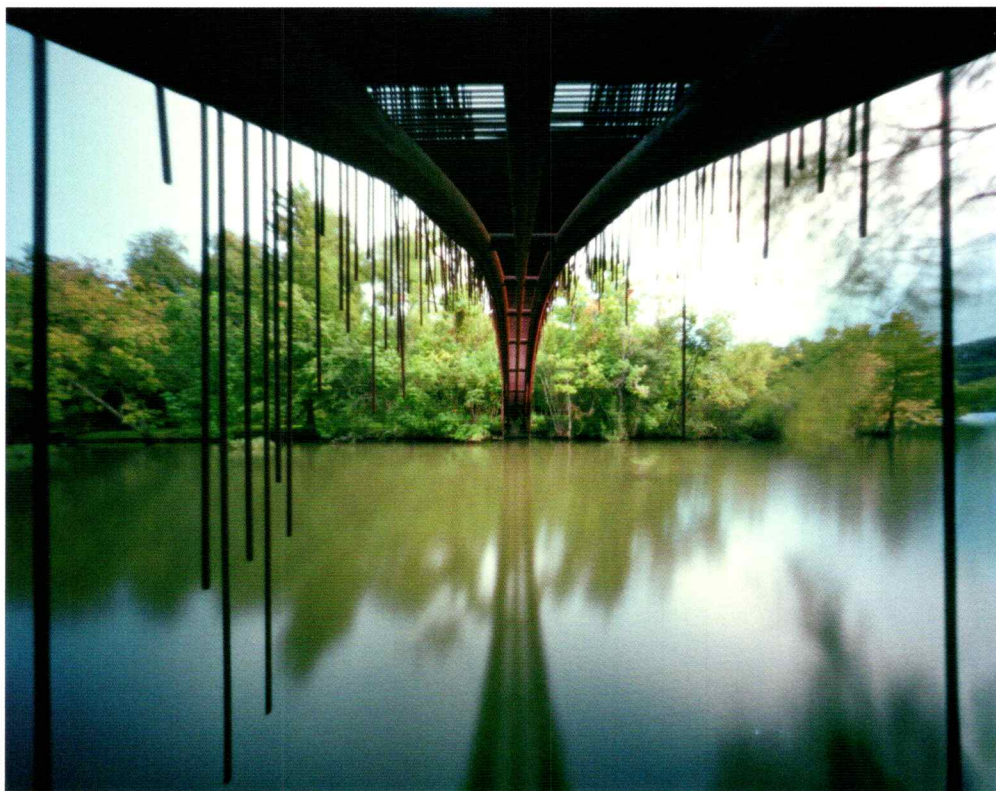


The cliché about architecture being a mix of art and science seems to hold true here. The images show that the firm gathers and analyzes data and creates a synthesis between conclusions drawn from that process and their well-known aptitude for composition, proportion, vernacular, tectonics, landscape, sustainability, and how people occupy and move through space. Thoughtful adjacencies — such as a concept sketch beside a finished photograph showing the same view, or stacked floor plans with lines pointing to co-located images in a grid of photographs — show how the design process results in the completed project. The fact that all of the projects are photographed with people is consistent with the firm's avowed humanist ethos and

allows the reader to better imagine what it might be like to experience these buildings.

That being said, the design of the book is fairly workaday. Lake|Flato is certainly capable of laying out a sequence of rooms where the crossing of each threshold leads to a new revelation about space, light, and materials, but that sophistication was not brought to bear on the succession of spreads in this volume. Images are grouped informatively, but without subtlety. And the choice of cover photograph — a shot by Nic Lehoux peering down into the vertiginous depths of the Austin Central Library's atrium — is puzzling. One might think of the architect's job as bringing order out of chaos. But this picture, showing as it does the lobby's riotous clash of materials, off-axis circulation path-





**Facing** *Confluence Park, Lake|Flato with Matsys, San Antonio, 2018.*

**Left** *Pedestrian Bridge, Miró Rivera Architects, Austin, 2005.*

ways, and frenetic, blurry figures who might be lost souls in one of Piranesi's prisons, seems to suggest otherwise. Meanwhile, the back cover is a photo of Confluence Park — perhaps the best project in the book — its graceful concrete “petals” arching above a group of women practicing yoga. This image, with its clear perspective and harmonious lines, would have done better on the front. It may smack of a wellness pamphlet, but that's quite on-brand for Lake|Flato.

**Miró Rivera Architects: Building a New Arcadia**  
**Essays by Michael Sorkin, Juan Luis de las Rivas Sanz, Juan Miró, FAIA, and Nina Rappaport**  
**Photo essay by Sebastian Schutyser**  
**University of Texas Press, 2020**

Arcadia is part of the Peloponnese region of Greece, but generally when the word is bandied about in books, the reference is to the mythological Arcadia, home of the ancient god Pan, who had the hind quarters of a goat and was known for his pipe playing and lechery. Since at least the 3rd century B.C., when Theocritus made it the setting for his influential bucolic verses, it has also been a place upon which erudite urban males have projected their fantasies about the countryside. It is generally depicted as an earthly paradise where man lives in harmony

with nature, herds flocks, plays pipes, and sings to his bros about cruising for nymphs — amorous adventures which are most often frustrated (Pan, for example, is said to have gotten his pipes when a nymph he was chasing, Syrinx, transformed herself into a growth of reeds rather than succumb to his embrace). It is through the lens of this mythological Arcadia that Miró Rivera Architects presents its work of the last 20 years and the city that it calls home, Austin.

At least that's what the title suggests. In reality, the book dwells less on Arcadia than does the preceding paragraph. At the start, firm partners Juan Miró, FAIA, and Miguel Rivera, FAIA, seek to dispel the cultural freight attached to the word they've invoked, explaining, “For us, arcadia is an evocative place of beauty and harmony with nature.... The goal of our work is to create those aspirational places for people to thrive.” What follows is less evocative theorizing about what a new Arcadia might be, and more a glossy presentation of Miró Rivera's impressive portfolio. It's a bit of a letdown, if only because the superb contributors the firm gathered for this project — which include Michael Sorkin, Juan Luis de las Rivas Sanz, Carlos Jiménez, and Nina Rappaport — really could have run wild with the new-Arcadia concept (perhaps a post-Me Too Arcadia that's more gender inclusive and consensual, or a techno-Arcadia where cyborg sheep bleat the one at the

other about reducing screen time). That being said, the essays in this book are by far the best in the three titles reviewed here.

Sorkin, who made a name for himself wielding a rapier-like pen as architecture critic for *The Village Voice* in the 1980s, kicks things off with “Monks and Cowboys,” an introduction that seeks to characterize Miró Rivera's architecture. He keeps his steel sheathed but unleashes his prodigious wit in a spirited game of it's not this (Prairie Style), it's not that (L.A. Modernism) — it's its own thing (lifestyle, Old West, grooviness). Rivas Sanz, who is a professor of urban design in Spain, comes next with the titular essay, “Building a New Arcadia.” Sober as a judge, he rolls up his sleeves to tell the story of the founding of the firm while contextualizing the work historically, geographically, culturally, and intellectually (Heidegger is quoted).

Miró, who is also a professor at UT Austin, rounds out the front of the book with “The Landscape City.” This text — accompanied by aerial photographs of Austin by Iwan Baan and 10 case studies of Miró Rivera-designed houses presented with site plans, floor plans, and photos (a convention carried through in the subsequent project portfolio) — begins to discuss Austin's urban condition and growing pains (one section is called “The Landscape and Compact City: Can We Have it Both Ways?”) before pulling



*Spicewood Barn, Miró  
Rivera Architects,  
Austin, 2004.*



short. “This book is not intended to offer an in-depth discussion of the wide range of urban strategies and planning policies needed to address the pressing issues confronting cities today,” Miró writes, before shifting the focus to the firm’s diverse clientele: “Despite their differences, there is a common thread that ties them together: a shared quest for a better, more beautiful life.” This, for me, is the second biggest letdown of the book, after finding out it wasn’t going to tell me about a new Arcadia. Don’t the clients’ quests for better, more beautiful lives largely depend upon solving the pressing issues confronting cities today, especially in Austin, which is in the midst of an affordability crisis?

The decision to invoke urban issues but not address them haunts the rest of the book, the vast bulk of which is a section titled “20 Years/20 Projects.” How one decides to arrange such a body of work in a book — whether chronologically, typologically, alphabetically, by size, etc. — is an interesting question. Here, they appear to be arrayed willy-nilly: The earliest appears three quarters of the way through, though no dates are disclosed for any project; a boat dock is followed by a mixed-use urban project, which is followed by a public restroom. What is this meant to tell us? Is this the first intimation of a new Arcadia? Is it a place where time, budget, and scale of ambition have no bearing? The book doesn’t say.

The project texts are broken into two parts: a brief intro in a larger typeface and a more detailed description following. Though none of these texts are bylined, the intros sometimes seem to be written by Miró and Rivera themselves, such as when they express enthusiasm for a project, a client, or an idea. In the intro to the Lakeshore Residence, it says, “We embraced the project as an opportunity to reflect on how to incorporate historical precedents into contemporary architecture.” Other intros, however, are in the third person. This is particularly glaring in the intro to Rivera’s own house: “Miguel Rivera intentionally sought out a dilapidated property to make his own.” Hearing the architects’ voices here is much more engaging, and it’s a shame this convention was not adhered to.

The book closes with a Q&A between Miró, Rivera, and the Houston architect and educator Carlos Jiménez, and an essay by the curator and historian Nina Rappaport. The Q&A is a chummy conversation that does reveal some interesting things about how the architects work. Rappaport’s piece briefly touches on some of the firm’s unbuilt work. I wish she had dwelt on these projects more and that they were described in more detail than a single image and a paragraph because they represent some of the most compelling work in the book, especially the Yaraui project, “a non-denominational necropolis floating in the Dead Sea,” where “the architects would employ the circle, an ancient and universal

symbol, to physically embrace potential relationships between people, nature, and the afterlife.” Similarly underplayed is a photo essay by the Belgian photographer Sebastian Schutyser, who documented a number of Miró Rivera’s projects with a pinhole camera. It is by far the most compelling photography in the book, and yet it is relegated to folios at the beginning and end of the volume, where it appears without comment.

Just as Austin can’t decide if it’s a small town or major metropolis, “Building a New Arcadia” seems torn between the disparate ambitions of enticing clients with a gorgeous brochure and having a serious discussion about architecture and urbanism. It will never be clear to me why those should be conflicting ambitions, but that seems to be the world in which we live. All of the titles reviewed here, in varying degrees, eschew the serious discussion in favor of the testimonial-laden brochure, but I advocate for the opposite approach. What we need is a hybrid of these books with something like “My Beautiful City Austin,” a collection of short stories by David Heymann, FAIA, about an architect and the hilarious/heartbreaking travails he goes through trying in vain to complete a well-intentioned project. To speak openly, honestly, and with the full weight of the architect’s authority about the difficulties that today face architecture, and thus society at large, would be refreshing and engaging — best-seller material.

It seems to me that the trend in architecture publishing to cater to perceived client expectations is part of the profession’s larger crisis of confidence. But there is good reason to believe that it would be beneficial for any practice to speak openly and critically, about themselves and the world in which they operate. Consider O’Neil Ford, FAIA, who built a successful practice in Texas while railing at key moments against the “vulgarians” who were destroying the built environment with untold acres of cheap, thoughtless development. Or consider Koolhaas, who produced “S,M,L,XL” at a time when OMA was near bankruptcy. He had this to say about it: “Writing the book was also a critique of the office, and also probably an act of aggression against the office, and to some extent a kamikaze effort around the office.” And yet, on the heels of its publication, Koolhaas was vaulted to starchitect status, and OMA went on to design a slew of era-defining projects around the globe. Perhaps if more architects spoke honestly about their work, opened up about their triumphs as well as their defeats, about what fascinates them as well as horrifies them, about their hopes and their fears, the world would start to listen.

Aaron Seward is editor of *Texas Architect*.



An aerial photograph of a small wooden cabin with a dark roof and a yellow boat on a lake, surrounded by dense green forest. The cabin is situated on a grassy bank, and the boat is in the water. The forest is lush and green, with sunlight filtering through the trees.

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# Products

by Rita Catinella Orrell

Here are some of the latest surfacing options for walls, ceilings, partitions, and commercial furnishings.



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[armstrongceilings.com](http://armstrongceilings.com)

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[newravenna.com](http://newravenna.com)

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## Camira StaySafe

Camira  
[camirafabrics.com](http://camirafabrics.com)

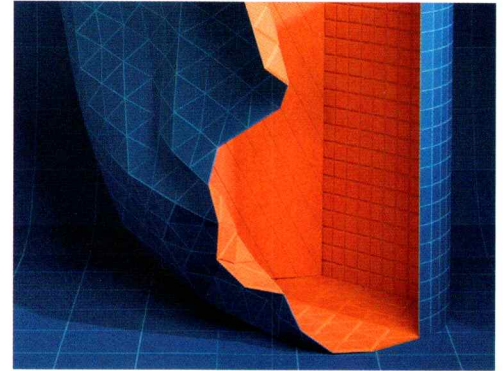
UK-based fabric manufacturer Camira has globally launched Camira StaySafe, an advanced textile treatment that destroys viruses and kills bacteria when applied to a fabric, ensuring upholstery does not act as a potential source of transmission. Independently tested to reduce viral activity on a fabric by 97 percent, the treatment is suited for commercial spaces that feature multi-occupancy furniture. Camira StaySafe is a combination of silver and liposome technologies that attract, attack, and then kill the entire virus.



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[durapalm.com](http://durapalm.com)

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## WOOD-SKIN

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[carnegiefabrics.com](http://carnegiefabrics.com)

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## Central Texas Chapter of National Organization of Minority Architects Forms Amid Pandemic and Protest

by Lucy Begg, AIA

As Agustina Rodriguez, Assoc. AIA, an architectural designer and public artist living in Austin, browsed her social media feed during the height of the Black Lives Matter protests last summer, she was struck by the lack of original commentary in her home city on the problems of minority representation within the architecture and design professions. “Everyone was just retweeting quotes from NOMA (National Organization of Minority Architects) National or NOMA Houston. There seemed like no leadership on the issues in Austin — we needed our own voice,” she said. Motivated to address a perceived vacuum, she reached out to the southwest region contact for NOMA about starting a chapter in Austin. Unbeknownst to her, efforts to do exactly that had already been brewing for a couple of years. Gregory Street, an architect at Overland Partners in San Antonio, was helping the effort, along with several others, including Donna Carter, FAIA, of Carter Design Associates and Ricardo de Jesús Maga Rojas, Assoc. AIA, a senior project coordinator at GFF, both in Austin.

The murder of George Floyd, along with the surge of activism and self-reckoning that followed, was the catalytic force that mobilized a loose association of like-minded minority architects in Austin and San Antonio into a formal steering committee, and then into a fully incorporated 501(c)3 organization early this year as NOMA of Central Texas. The mission of the chapter is to “sustain the legacy of NOMA’s founding members by deepening the visibility, support of, and solidarity of underrepresented people in the field of architecture and beyond.” At the time of publication, an inaugural donation drive was being launched to fund a series of activities in support of that mission.

NOMA Central Texas will be the third chapter in the state, alongside Houston NOMA, which was established in 2005, and DFW NOMA, whose 1989 charter was reinstated in 2014. The national organization was established decades earlier, in 1971, by twelve Black male



architects. One of those was John S. Chase, FAIA, who, in 1954, became the first licensed African-American in Texas and who subsequently established an influential practice in Houston. Today, NOMA has a membership of over 2,000 across a nationwide network of 33 local chapters.

The initial meetings of the NOMA Central Texas steering committee in the summer of 2020 attracted well over 50 people. Though there were some established relationships between participants, many were connecting with each other for the first time. Sophia Razzaque, AIA, an architect at Lake|Flato, described the level of energy and shared purpose as “reminding me of the dynamic conversations in my early professional career in New York and London.” There was a collective feeling of a call to action and an urgency to effect change within respective professional settings.

Consensus was achieved by the steering committee on key aspects of the organizational framework. One was a recognition of the benefits of creating a regional Central Texas chapter,

rather than distinct groups for Austin and San Antonio. This was driven by a pragmatic “strength in numbers” reasoning, as well as by the anticipated benefits of exchange between the cities. The other was the need to develop a unique value proposition for the chapter. Whereas NOMA chapters have traditionally focused on championing Black professionals, the agenda of this one would need to also reflect the strong representation of Latino and Hispanic members, particularly females.

Since the beginning of the year, the executive board has been filtering areas of focus for 2021 out of the broad conversations of previous years. Six specific initiatives have been articulated, some of which adopt nationwide efforts spearheaded by NOMA National, while others address issues of local concern.

Project Pipeline is one of NOMA National’s most well-established programs — a summer camp that introduces minority students to the field of architecture, with the goal of increasing the number of underrepresented licensed architects (for example, currently only 3 percent





**Facing** *The poster for the inaugural installment of the Empower Speaker Series, a quarterly event that began in November 2020 to showcase and elevate the voices and work of chapter members.*

**Left** *NOMA of Central Texas Founding Executive Board (from top left): Gregory Street, president; Ingrid Gonzalez Featherston, AIA, vice president; Sophia Hubbard Cartlidge, secretary; Mikel Bennett, treasurer; Denisse Valle Hudock, AIA, parliamentarian; Dyami Luster, AIA, membership committee director; Paola Fernandez, outreach and advocacy committee director; Agustina Rodriguez, Assoc. AIA, communications committee director; and Sophia Razzaque, AIA, planning and activities committee director.*



a result, all of these individuals are passionate about the chapter’s potential to provide a space of belonging for emerging minority professionals as they find and define their own voices.

Though the chapter is in its infancy, the executive committee is not lacking for bold visions of how the organization hopes to impact practice and the profession in the region over the long term in ways that include, but go beyond, increasing numbers of licensed architects from underrepresented groups.

Gregory Street, who is serving as president of the executive board, recalls his days as student president of the NOMAS (National Organization of Minority Architecture Students) chapter at UT Austin. “We were cobbled together and didn’t really know what we were doing, and part of that was due to a lack of professors in the department to mentor us or a local professional chapter to guide us.... Faculty would frequently tell me that they badly wanted to increase diversity in the department, but they just couldn’t find qualified candidates.” Street dreams of a program like Project Pipeline transforming academic environments for underrepresented students into ones that are rich in mentorship and diverse curricula. He sees a critical need for professionals of color who have the ability to bring lived experiences to the culturally specific circumstances of underrepresented communities, and to break from the “Eurocentric hegemony” that governs frameworks for design thinking.

On this theme, others imagined a NOMA-specific awards program that leads the way on critically expanding the criteria for what is considered award-worthy architecture. Ingrid Featherstone, AIA, vice president of the executive committee, aspires to build an increased awareness inside and outside the profession of the underlying policies that affect the built environment and how these can be influenced by community action. Sophia Razzaque, who is serving as the planning and activities committee director, referenced a panel at the 2020 TxA Conference in which a panelist asserted that diversity was overrated because everyone has access to equal opportunity. She said simply: “I hope that in 20 years’ time, someone could say that at a conference and it wouldn’t be controversial, because it would actually be true.”

Lucy Begg, AIA, is co-director of Thoughtbarn in Austin.

of licensed architects nationwide identify as Black and 0.3 percent as Black female). NOMA Central Texas aims to direct \$10,000 of its 2021 fundraising efforts to implement this program in Austin and San Antonio. Likewise, the 50 x 50 Challenge is a NOMA National endeavor to ensure that there are 50 new licensed Black architects in 2021 as the organization celebrates its 50th year.

In terms of homegrown initiatives, the Empower Speaker Series will be a quarterly event focused on elevating the voices and showcasing the work of chapter members. The inaugural event was held in November 2020 and featured Donna Carter, Austin’s sole female Black firm owner, who established her eponymous practice in the city in the 1980s. Cited by many on the executive board as their “spiritual leader,” Carter laid much of the groundwork, as a practitioner and mentor, that brought the chapter to fruition. Also in the works are: a symposium focused on affordable housing that will bring architects in both cities together with policy makers and housing scholars; an architecture/construction industry resource

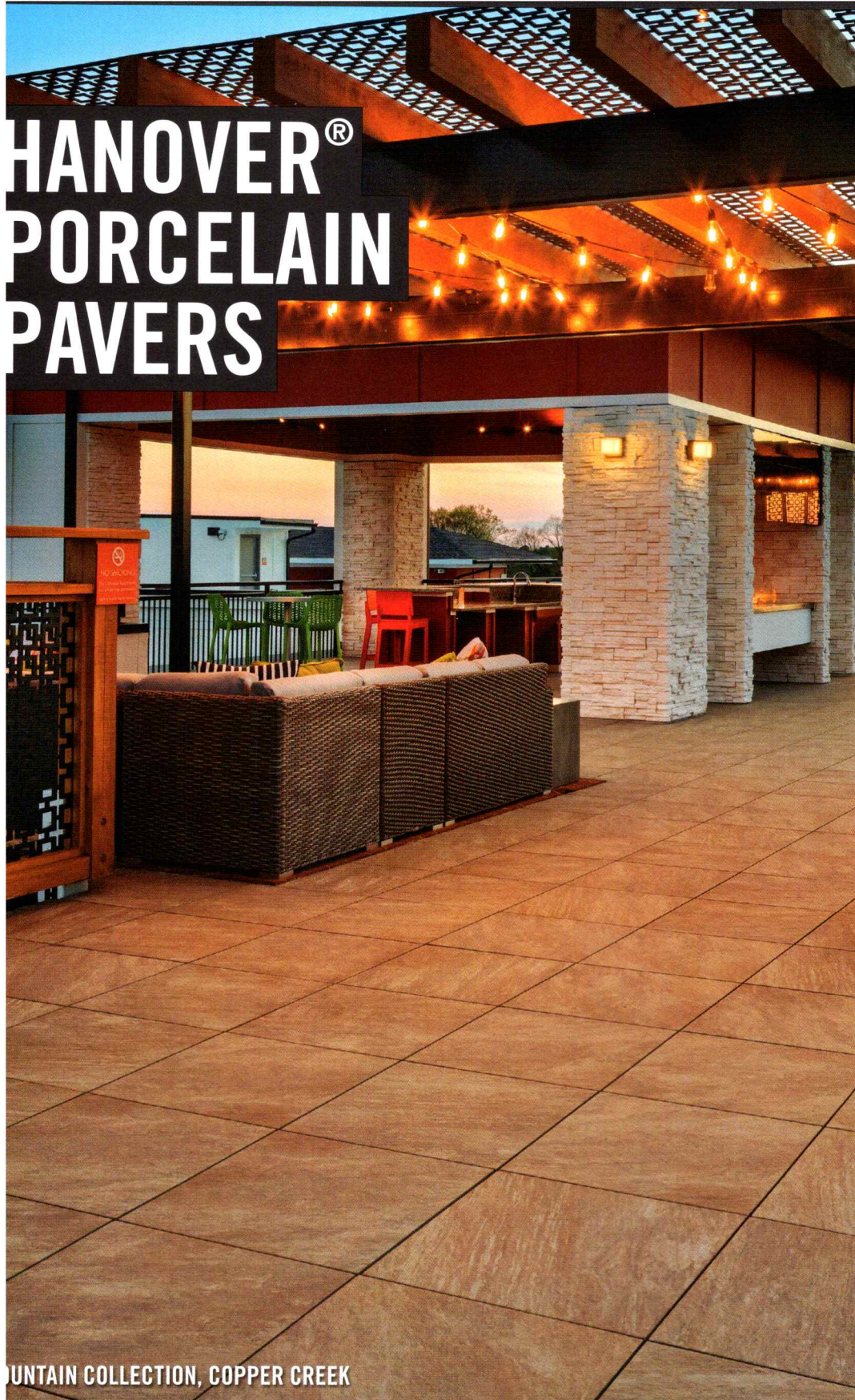
directory where industry partners, potential clients, and employers can search for BIPOC (Black, Indigenous, People of Color) professionals; and an Advocacy Day, modeled on the AIA tradition, where NOMA Central Texas will educate elected officials on issues central to the organization’s mission.

Many of the inaugural executive board members are already active on committees within other professional organizations, including AIA, the ACE Mentor Program, and ULI. All of these groups have increased their own efforts over the last year to address racial inequality in the fields of architecture and construction. To that end, the Central Texas NOMA chapter aims to serve as a thought leader for these peer organizations, sharing knowledge, amplifying and expanding efforts, and identifying where the gaps are.

Most importantly, the chapter is a means to build camaraderie, common cause, and support networks. Many of those interviewed described a lack of professional mentors with relatable life stories in the early years of their career. As



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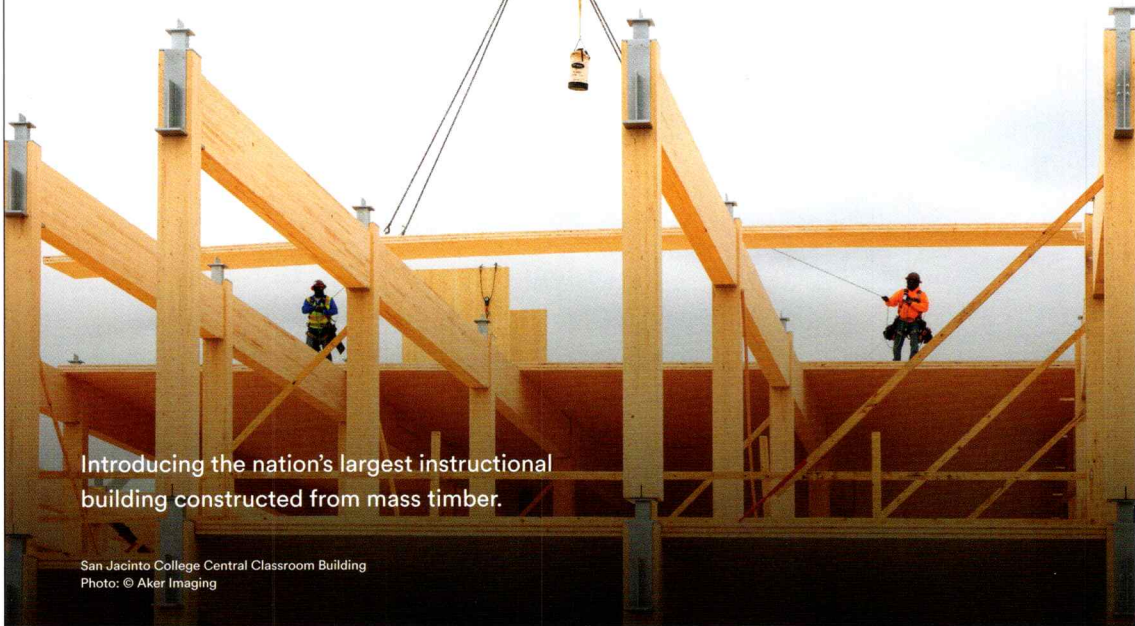
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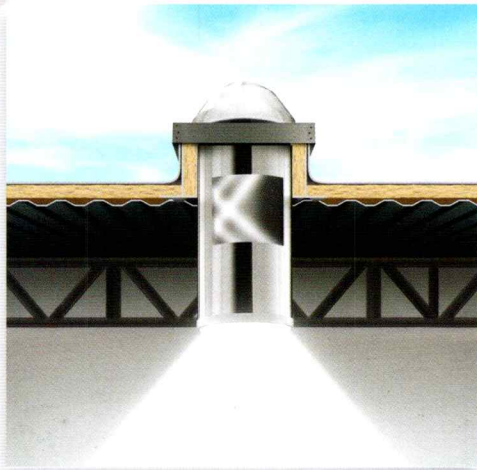


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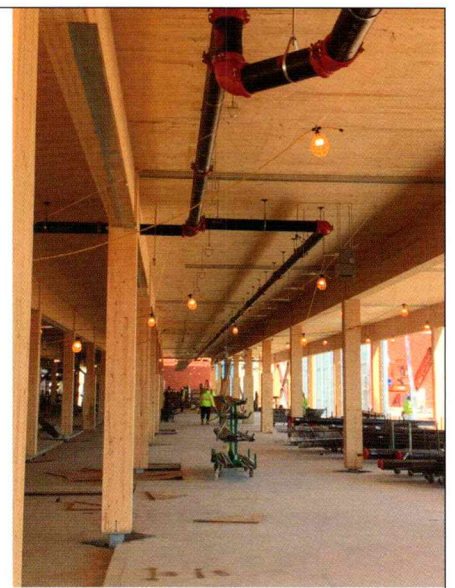
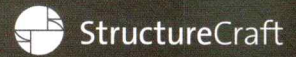


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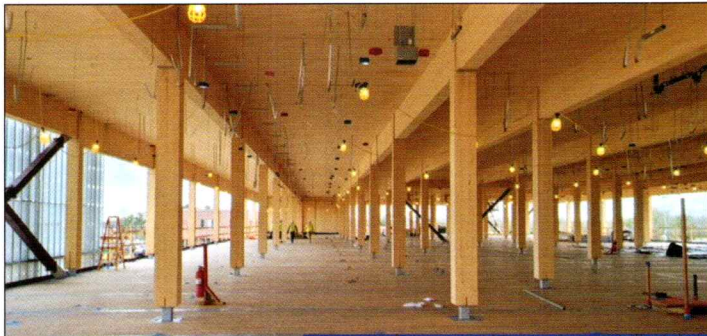
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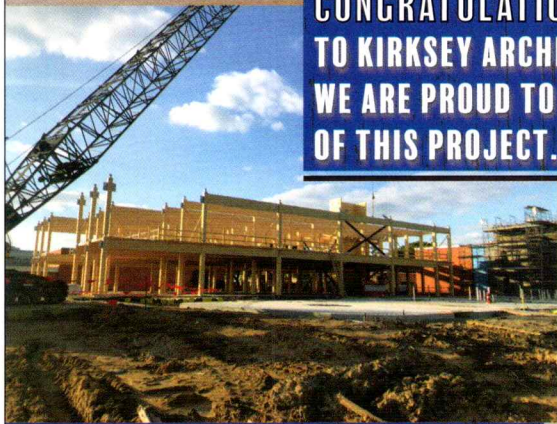
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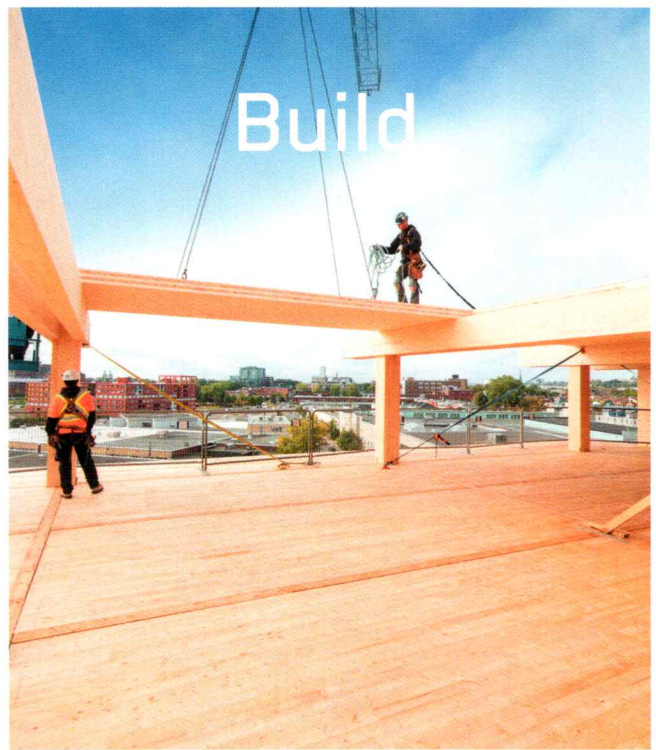
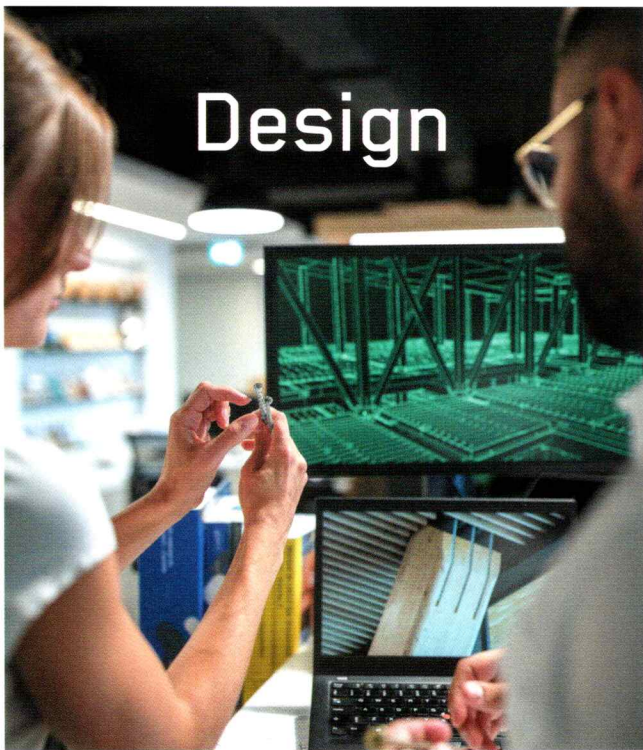
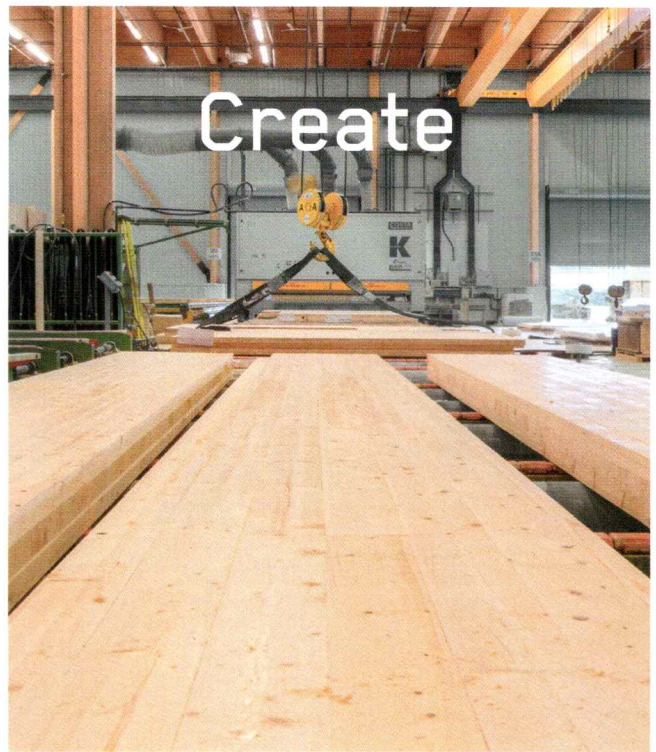
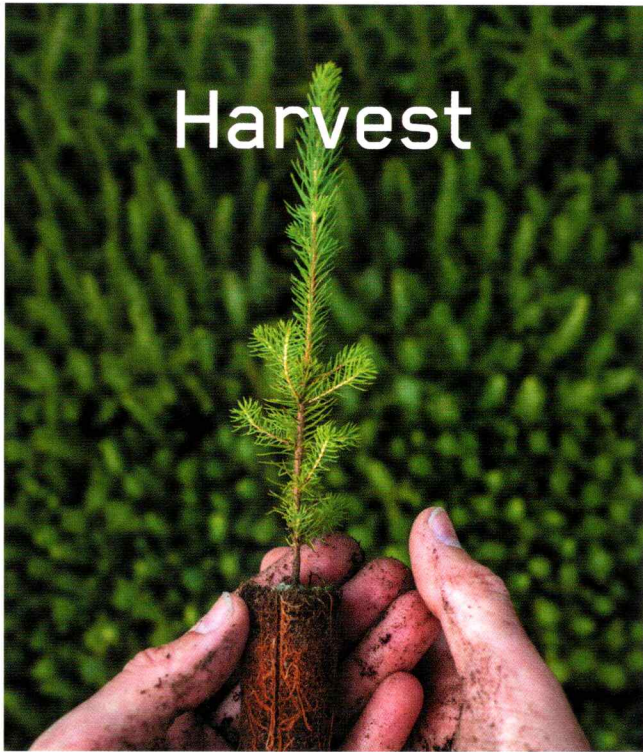
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*Derrek and I used the diesel exhaust pipe as a paint brush, or more precisely, an industrial paint sprayer in which the smoke is ejected in short bursts onto the canvas, controlled by a small dash computer that regulates the engine's idle speed, and released by rhythmically tapping the gas pedal. With this computer, Derrek can also monitor and manipulate the engine's fuel mixture, which allows more precise handling of the concentration and size of the smoke plume. Positioning a few two-foot-square linen canvases primed with white gesso in front of the exhaust pipe, we methodically searched for the best fuel mixture and plume size to apply burst patterns of a deep, velvety black soot.*

— Greg Lindquist, "Painting With Carbon," Log 47

It is impossible today to responsibly consider building materials without also considering their carbon footprint. And since considerations of carbon intensity are fiercely political, materials themselves are imbued with content that is as much about identity and worldview as it is about function. Therefore, when specifying materials, architects must not only consider how they work and how best to use them, but also their effect on the environment and how will they be viewed.

In this issue of *Texas Architect*, we learn a few things about some old materials while discovering new ones as well: Two architects tell us what they learned while designing their first mass timber building. A consultant briefs us on the forefront of carbon-negative materials currently available on the market. Finally, we hear from two Marfa residents about the sociopolitical transformation of adobe in the town from a material of necessity used by poor Mexican immigrants into the building block of choice for the well-heeled art set.

# Materials

**46**

## **Growing Architecture**

The State of Mass Timber in Texas

*Michelle Giuseppetti-Old, AIA, and Melika Mirzakhani, AIA*

**54**

## **Negative Positivity**

Innovations in Carbon-Capturing Construction

*Purva Chawla*

**62**

## **The Adobe Paradox**

Adobe in Marfa

*Beck Andrew Salgado and Stephen "Chick" Rabourn, AIA*





## Growing Architecture

Mass timber is dawning on the Texas market as a viable alternative to reinforced concrete and steel construction. Here, two Texas architects discuss their experiences working with the material.

by **Michelle Giuseppetti-Old, AIA, and Melika Mirzakhani, AIA**

**A** subcategory of engineered wood, mass timber refers to a range of products made by bonding small pieces of wood together to form larger structural sections that can rival the strength of steel and reinforced concrete. The system uses smaller trees efficiently and sustainably to produce a material that is more durable, longer lasting, and more fire-resistant than standard dimensional lumber. While mass timber's popularity — specifically, that of glued laminated timber (glulam) in combination with cross-laminated timber (CLT) — has been growing in Europe as well as in the northwestern United States and Canada for more than a decade, it is only in the last few years that the southeastern U.S. has begun to see buildings incorporating this material.

Texas' introduction to CLT came about when a handful of composite structures incorporated mass timber with steel and concrete. Austin's 901 East 6th Street, by Thoughtbarn and Delineate Studio, was one of these, as was The Soto in San Antonio, a podium mass timber building by Lake|Flato. According to the nonprofit WoodWorks — which educates designers, engineers, and construction experts and offers technical support for wood building design free of charge — there are currently more than 1,000 mass timber projects across the U.S. Sixty-nine of those are now underway in Texas.

Over the past two years, our firm, Kirksey Architecture, has had an opportunity to design two full mass timber projects, both of them for Houston-area college campuses: San Jacinto College's new 122,000-sf, three-story classroom building, and the Rice University Hanszen College dorm addition. Since mass timber is so new to the region, we faced a learning curve and had to do a fair amount of due diligence to use the material optimally. What follows is a synthesis of our research and lessons learned from the classroom building.





*Wood's natural warmth and appealing grain are on full display in the interior of the San Jacinto College classroom building.*

**Facing** *The three-story project is supported by a glulam and CLT structural frame.*

## Aesthetics

Perhaps the most compelling reason to use mass timber has to do with wood's time-honored visual and sensual appeal. Biologist Edward O. Wilson coined the term "biophilia" in 1984 and defined it as "the innate tendency to focus on life and lifelike processes." Research suggests that this connection became biologically encoded in humans as we evolved and is critical to our physical and psychological comfort: For building occupants, mass timber yields distinct though subliminal biophilic benefits.

A study at the University of British Columbia found that the presence of wood in a room helps reduce stress, boost productivity, and improve concentration. It compared wood's stress-reducing properties to a walk in nature. The structure of a building can create a space in which people want to work, live, and play.

When one thinks of a mass timber building, the image that comes to mind is exposed wood. In our projects, we want building users to see a pure wood ceiling, uninterrupted by mechanical and lighting systems, and a virtual forest of columns marching throughout the space. We also want to illuminate the material with daylight, so that people can experience the wood's natural grain. Expressing the structure reveals its simple construction and provides occupants with a warm, no-frills environment far away from the coldness of concrete and the industrial connotations of steel.

Achieving this appearance can be challenging. The things you don't see become as important as the things you do see. What would be the least visually disruptive pathway for utilities, for instance? Structural bay design helps us examine the possibilities. A one-way structural solution can easily create a path between girders, while a two-way structural solution might consider under-floor air distribution.

Mass timber components are held together by way of traditional steel connections, and designers must decide how much to express or conceal these essential details. The results can be a delicate and elegant surprise or a bulky and clumsy letdown. At San Jacinto College, celebrating wood is at the heart of the building's concept, but it is a refined and simple celebration that gives the structure an unassuming character. Each mass timber component, whether it be wood columns or steel connections, is designed to be part of a larger showcase expressing the authenticity of the materials.

## Sustainability

There are numerous environmental benefits to using mass timber. It reduces deforestation by relying on carefully managed forests and requires less energy to manufacture than do most contemporary structural systems. It also sequesters significant amounts of carbon for the life of the building and produces fewer carbon emissions during production. According to Architecture 2030, the embodied carbon of building structures is responsible for 11 percent of global greenhouse gas (GHG) emissions and 28 percent of global building sector emissions per year. As architects, we need to provide solutions that reduce these numbers.

In an initial study for San Jacinto College's classroom building, our project team compared embodied carbon between mass timber and reinforced concrete. The results showed that a reinforced concrete structural design would generate six times more GHG or carbon emissions than mass timber. This is not surprising. Chatham House, a London-based think tank and policy institute, states that more than four billion tons of cement are produced each year, accounting for around 8 percent of global CO<sub>2</sub> emissions. While sustainable innovations such as plastic-reinforced concrete





and carbon-fiber-reinforced concrete exist, they still need to prove their durability and reliability compared to mass timber.

Structural steel is also a large contributor to GHG emissions. According to the International Energy Agency, the iron and steel industry is responsible for 7 percent of global CO<sub>2</sub> emissions, and some estimates place it above 10 percent. While steel's high recycled content does reduce the material's embodied carbon by a factor of five, its production still creates a high level of emissions that could be avoided through reusing existing structures or designing with lower carbon intensity materials like mass timber.

### **Durability**

Wood materials for structural components, especially those we can feel and touch every day, can seem less durable to owners than painted sheetrock



or CMU block. However, mass timber can be remarkably durable as both structure and finish. Understanding how to treat the surface of the wood is an important part of learning about mass timber characteristics.

Protecting the mass timber structure is essential: Sun can fade the wood, and snow and rain can discolor it. Base sealers applied to the wood at the factory provide protection during transportation and against UV rays and fading. Different sealers applied in the field can vary the end result, so requesting samples of the particular species of wood used in the project is vital to ensure that the sealer does not yellow the wood or turn the surface too glossy. The type of building and the way its parts are intended to be used will determine which sealer is best. For example, in an educational building, it is important to plan for additional coats to protect the material from heavy foot traffic in the corridors, as opposed to inside the classrooms.



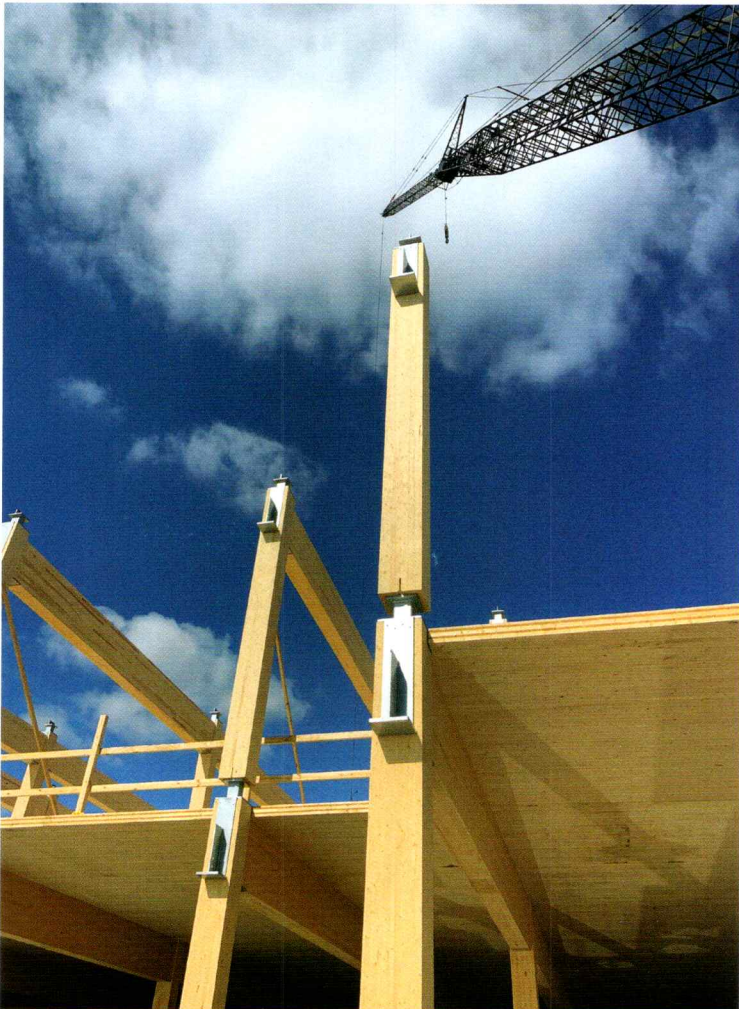


**Facing left** The structural load required the use of glulam double beams.

**Facing right** A typical perimeter connection between column, beam, and deck.

**Left** Temporary braces support the glulam framing before roof decks are craned into place.

**Bottom** Steel connections are attached to the wood members using dowels and wooden screws.



Working with other trades, transportation, and erection are all factors that can result in damage to the mass timber components, but dents and scratches can be sanded down and, in severe instances, individual members can be replaced post-installation.

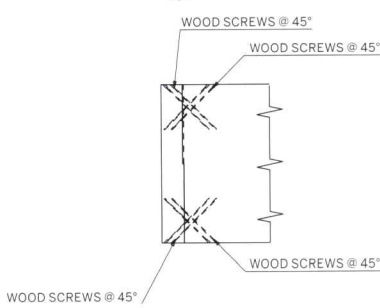
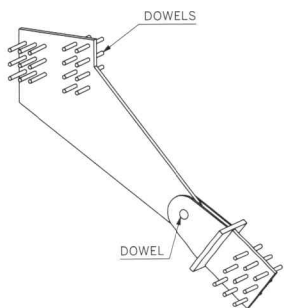
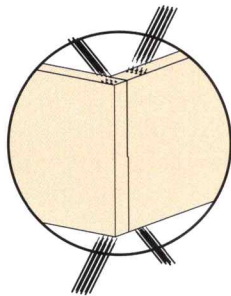
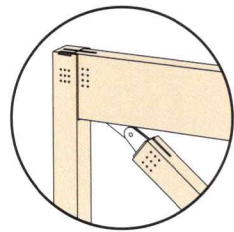
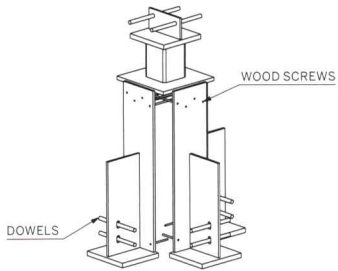
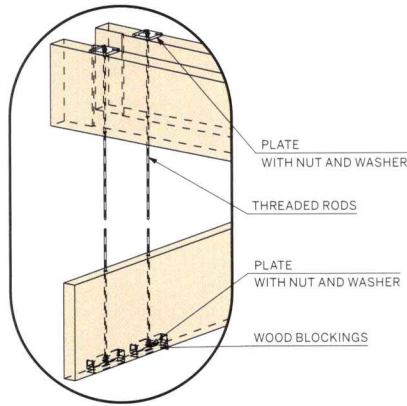
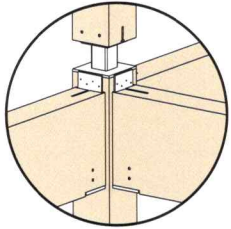
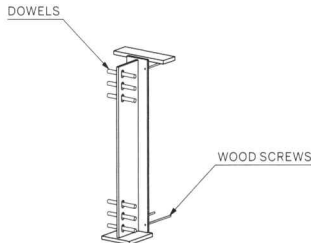
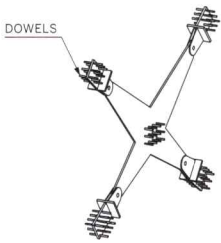
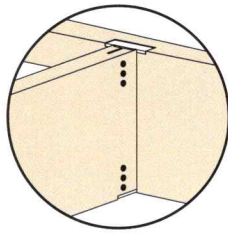
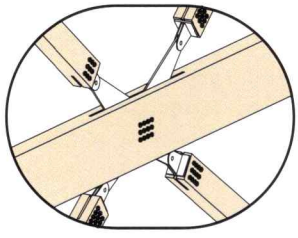
### Financial Benefits

Mass timber can significantly reduce project costs. Wood has traditionally been a steadily priced commodity, offering significant savings over steel. Less time is required to erect mass timber frames, primarily because steel erection must be thought of in two parts: erection and detailing. While the erection time may be consistent project to project, the detail time can vary greatly. In steel construction, a builder may have two large cranes and a truck-mounted crane and be able to erect the steel frame and decking within three weeks. However, an additional six or more weeks may be required to detail the steel. During this time, the subcontracting crews cannot begin the process of hanging ductwork or laying out conduit runs.

With mass timber, there is typically only one large crane on site. The erection crew is smaller, and overall movement is slower. However, as soon as the ground-level wood frame and deck are installed, subcontractor crews can start the installation process for pipe hangers, duct straps, and other MEP components. Since the material is the finished product and no extra detailing is necessary, other than sanding off marks from transportation and erection and sealing, other trades can begin work. This alone can result in significant savings in a project. There is no waiting for concrete supports to be removed or welding of steel components to be completed.

Since wood is lighter than steel or concrete, foundations for mass timber buildings do not have to be as robust. In fact, regarding the projects we have been involved with, and in our discussions with other firms across the country, foundation cost reductions appear to run in the 10–30 percent range when compared to conventional steel or concrete frame buildings. Reductions generally come from smaller point loads





for columns, lesser foundations for lateral systems, and a myriad of other project-specific conditions in below-slab pad preparations.

The success of a new mass timber market in the southeastern United States can be greatly affected by the development of new manufacturing facilities that can work with southern yellow pine (SYP). We anticipate that building owners will see future cost savings associated with these new facilities because of their location near the source of the fiber. This is a primary factor in mass timber becoming a cost-competitive product when compared to steel and concrete. New manufacturing facilities could create opportunities for private landowners, giving them options to sell timber. Furthermore, SYP as a market commodity has historically cost less than such traditional mass timber wood species as spruce, fir, or pine. Lastly, the shorter distance from factory to job site in the southeastern U.S. will speed up delivery, resulting in further price reductions while also lessening the carbon footprint. New CLT manufacturing facilities have recently opened in Alabama, Arkansas, and Texas, but more manufacturing is needed. For Texas markets, SYP is becoming readily available, which will ideally lead to more competitive pricing. The new student housing project at Rice's Hansen College will be made up of SYP components from a newly opened facility in Conway, Arkansas.

Achieving a cost-effective mass timber structure also requires establishing a structural grid that uses the least amount of material possible. There are many potential solutions, so analyzing different configurations of columns, beams, and deck thicknesses is important. According to Ethan Martin of DCI Engineers: "Optimization studies explore several grid layouts adjusting deck thickness, which affects beam sizes. As glulam is a highly priced component in mass timber, reviewing the best ratio of purlins to deck thickness needs an expert eye." Ultimately, these studies can help reduce the amount of material needed, saving tens of thousands of dollars.

Cost evaluations should also consider prefabricated connection types and the role of wood for lateral bracing in a building. The complexity and variety of solutions for prefabricated connections should be planned carefully. Slot, or dovetail, connections are quicker to install. Although more expensive, they may reduce the amount of time a crane is needed on site compared to the standard saddle or slotted connections. While using CLT panels would be possible for shafts and lateral bracing, steel or CMU would be more compatible with current building codes and allows for a more flexible design.

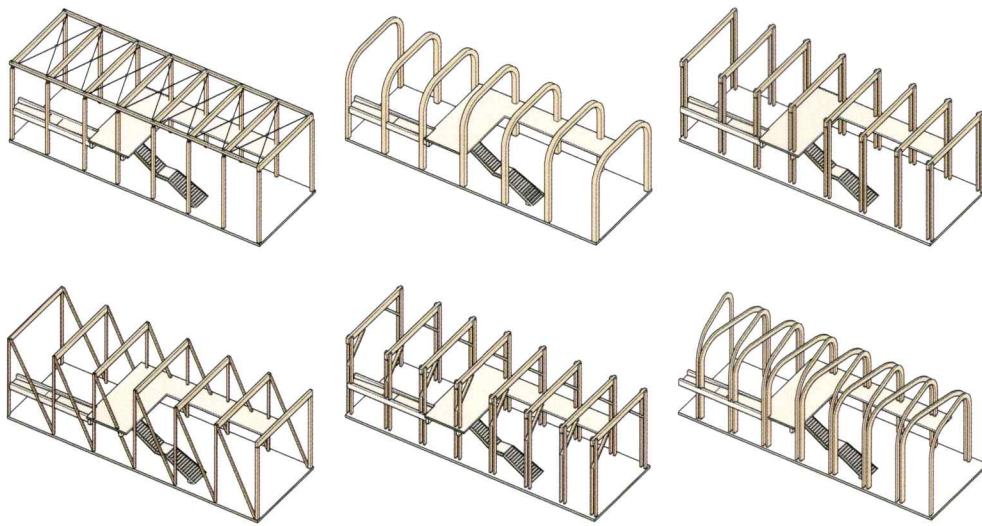
Another cost-saving measure is to use the manufacturer's standard sizes. A manufacturer's machinery requirements often determine the standard dimensions, and exceeding them can lead to material waste and extra cost in transportation.

## Coordination

Understanding the construction process and the sequence in which materials come together is invaluable when designing a mass timber building. As in any project, coordination is critical, but it starts earlier on a mass timber project; otherwise, efforts to bring warmth and elegance to the exposed deck can go awry. In a building with exposed concrete or steel structure, the industrial feel may be acceptable and even desired, but the same should not be the standard for mass timber.

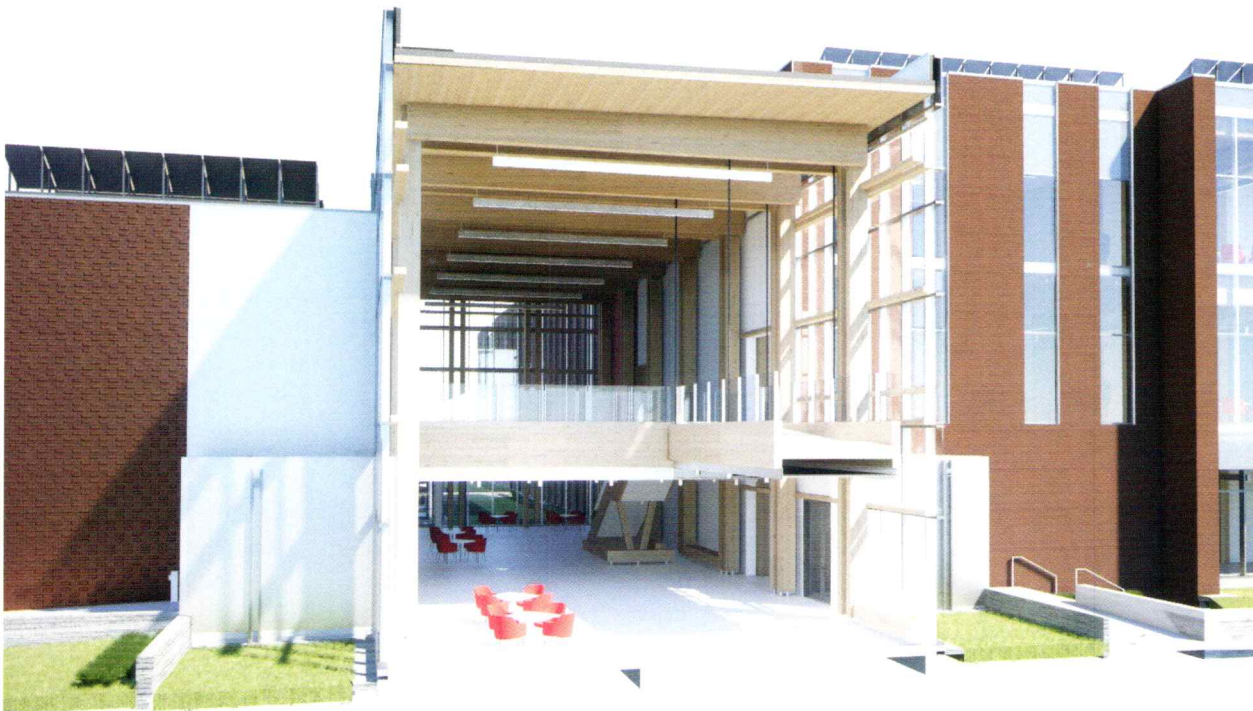
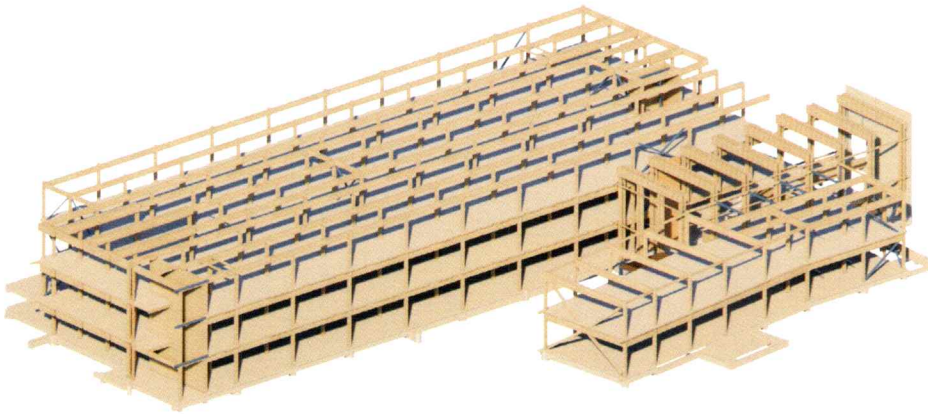
During conceptual design, it is important to set the intent of revealing the wood and then figure out where utilities will run. As the design advances, mechanical, electrical, plumbing, and fire suppression



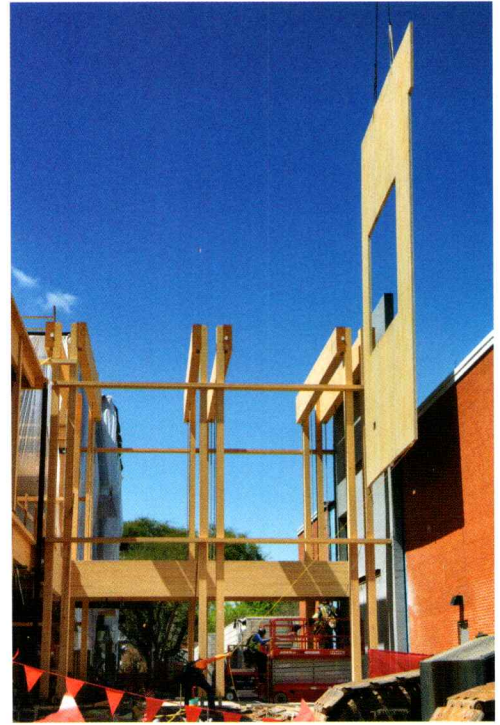
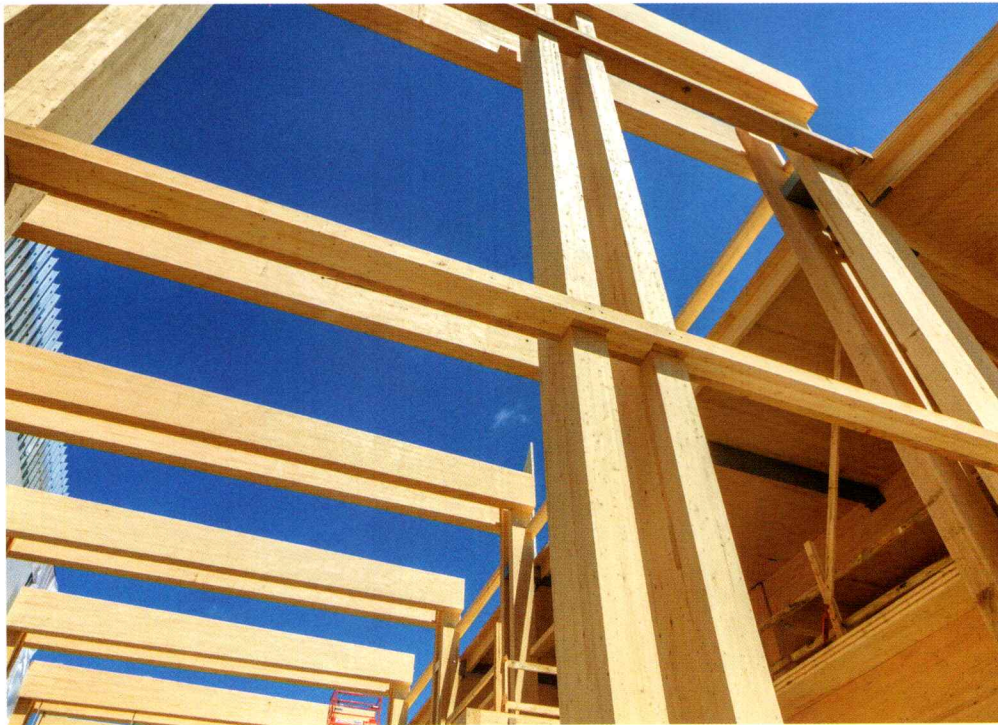


*The team considered a number of timber techniques for the lobby, arriving upon the orthogonal iteration shown in section below.*

**Facing** *Detail diagrams of the various steel and wood structural connections throughout the building.*











**Facing top** CLT decks are craned into place and then reinforced manually.

**Facing bottom left** Expansive girts allude to the coming curtain wall application.

**Facing bottom right** A CLT feature wall is lifted into the lobby framing.

**Left** Looking skyward through the CLT elevator shaft.

should undergo extensive coordination via building information modeling (BIM). One example of extensive coordination is trying to conceal the sprinkler system. It is vital to work with a subcontractor during the BIM process to plan beam penetrations so they can be made in the shop, as it is difficult to justify the time it takes to do so on site.

The prefabrication of penetrations can save valuable time in construction, but it is important to keep in mind the erection tolerance for each structural element. Almost all buildings sit on concrete foundations that set the stage for the construction tolerances of the superstructure. The fabrication of mass timber is extremely precise — typically within a margin of about 1/16 of an inch — but when these elements are erected on site, it is necessary to consider the tolerances of dissimilar materials, such as steel and concrete construction. Some fabricators will not charge for penetrations made during the CNC process, which saves hundreds of hours of manual labor creating penetrations through masses of wood. Still, in areas where there is no construction tolerance, it may become necessary to cut beams or decks on site.

With any new type of construction, stepping outside the box can be daunting. At San Jacinto College, throughout the design process, we explored a variety of ideas about how to express the lobby's mass timber structure. It was important that the design not be ornamental, but rather stay true to its structural needs. One of the most appealing ideas involved glulam columns that curved to form the roof beams, resembling a barrel-vaulted ceiling. Glulam is far more flexible in its design properties than most people assume, but to bring such a feature to fruition, a team needs to be united in directing the material to its

strengths. Ultimately, as the options were evaluated based on cost and speed of construction, it was determined that we could not be assured that erection of the curved members would go according to schedule, so the solution turned out not to be right for this project.

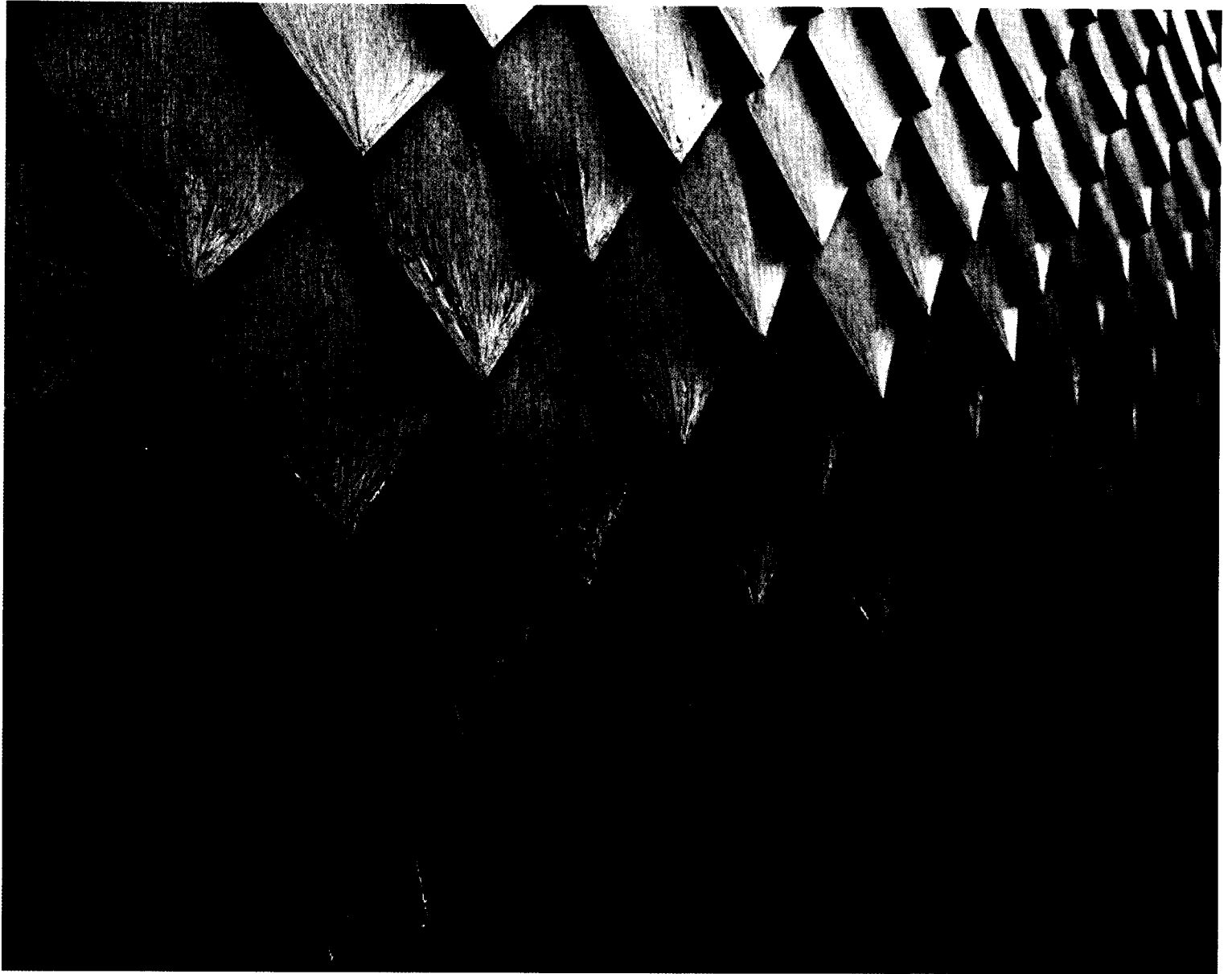
## Conclusion

At first glance, designing with mass timber may appear simple and straightforward, but the process exposes unseen complexity that is necessary to achieve the best results and truly celebrate the material's natural beauty. For architecture firms embarking on a new journey to design a mass timber project, research and communication with the engineering team and construction professionals are crucial. Developing and committing to a highly collaborative partnership can't just be a marketing slogan on your company's website. The success of a mass timber project is the direct result of ownership buy-in. Without a client's commitment, a hundred different reasons will appear out of the blue to lure you away from achieving the goal.

As Texas takes on more of these projects and our industry becomes familiar with the lessons learned by experienced design teams, a more efficient and predictable marketplace will be established. Along with providing a biophilic presence, mass timber will ultimately prove to be faster to install, inherently fire protected, and more sustainable. It is difficult not to "root" for its continued growth.

Michelle Giuseppetti-Old, AIA, and Melika Mirzakhani, AIA, are senior associates at Kirksey in Houston.





## Negative Positivity

Today, there is a wide range of carbon-negative materials on the market that can help building projects make a positive impact on the environment.

by Purva Chawla

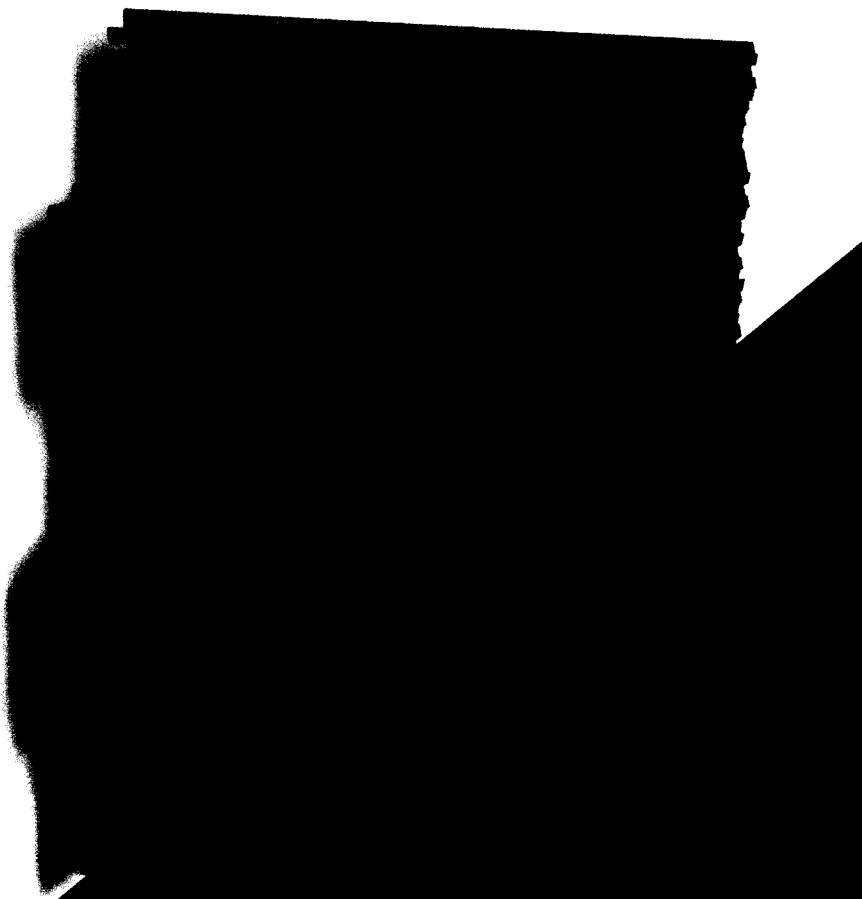
**C**arbon neutral. Climate positive. Carbon negative. Energy positive. Regenerative.

This medley of terms may be hard to grasp, and it may be difficult to distinguish one from the other, but the terms are appearing with increasing frequency in our conversations about the built environment and in the goals being set for architectural projects today.

As a starting point, carbon neutrality aims to balance an entity's carbon dioxide emissions with emissions that it either reduced or sequestered over the course of its life. Climate positivity and carbon negativity (often used interchangeably), on the other hand, tip the scales much further. Carbon-negative materials, products, construction, and systems actually draw away or reduce greater quantities of carbon dioxide from the atmosphere than they generate in the first place — leading to outcomes that are truly “positive” and regenerative for the environment.

With that in mind, architects and designers who set out to achieve carbon-negative status for buildings today are considering not only the





**Facing** *PrettyPlastic*  
upcycled cladding material  
made from old window  
frames, downspouts, and  
rain gutters.

**Left** *Made of Air (MOA)*  
produces a biochar-based  
thermoplastic that can be  
easily sculpted to create a  
wide array of sustainable  
building materials.

emissions generated during the construction, lifetime, and decommissioning of a building, but the embodied carbon of all materials used on the project. In their quest for a much lower carbon footprint, architectural studios are building the mechanisms for clean energy generation and reduced emissions into their designs, while actively seeking out and utilizing a palette of cutting-edge materials that are inherently carbon negative.

This is where things get exciting. Emerging from businesses led by interdisciplinary teams of scientists, engineers, architects, builders, artists, and biologists is a new breed of high-performing and climate-positive materials. Whether being crafted by established manufacturers or rising start-ups, these are materials whose ingredients or manufacturing processes have already sequestered or reduced carbon dioxide in the environment. There are still others in this growing field that are designed to actively capture emissions and toxins from the environment over the course of their lifetime and use.

The palette of such materials is diverse, from masonry blocks that have eliminated the need for heat-intensive firing and curing to boldly patterned concrete floor tiles whose colorants come from captured air pollution and soot, to robust panels for facades which have been molded from landfill-oriented plastic waste — to name just a few. The carbon-negative material solutions we are seeing today are scalable, inching closer to the price point of conventional materials, and suited for large and commercial applications. They include: substitutes for concrete (a highly polluting but essential material); new composites

for interior walls, floors, and surfaces; modular waste-based panels for facades; and even bio-integrated solutions that incorporate living matter such as moss, mycelium, algae, and bacteria.

As architects, designers, and builders practicing in Texas, we have a clear motivation for exploring all of these material solutions for use in projects in the state and beyond. For one, the state's carbon footprint is enormous: In 2016, Texas emitted almost twice as much carbon dioxide as the next-highest state in the country, California — 653 million metric tons compared with 361 million metric tons. While the Lone Star State tops the list of the nation's biggest carbon polluters, it is also home to some of the country's most prominent design firms, who are driving large-scale architectural projects in the state and globally. This presents an enormous opportunity to drive change, and to both test and implement a variety of carbon-negative material solutions. Presented here are a few product types and innovative materials that are particularly exciting to consider today.

## **Facades**

When it comes to cladding or panels for facades, there is a wealth of carbon-negative and low-carbon material solutions being developed. A personal favorite is the biochar-based thermoplastic material developed by Berlin-based Made of Air (MOA). The company taps into waste biomass, such as wood waste from the timber industry and crop residue, and then, via a process of pyrolysis in an oxygen-free environment, transforms this into a biochar and combines it with a bio-binder. The resulting material





(composed of 90 percent atmospheric carbon) is robust and suitable for all traditional thermoforming methods, allowing it to be used for detailed exterior paneling for facades, interior surfaces, furniture, automobile components, consumer goods, and more. The dense, smooth, fire-retardant material presents itself as a sustainable alternative for use in these applications. At the end of their life, these panels and three-dimensional forms cast from MOA's biodegradable material can be shredded and sequestered in the earth. This cycle can be repeated continually, allowing for more and more atmospheric carbon to be directed into the earth.

MOA's material is primed for use in the built environment, with several pilot projects already underway — one focused on facades and one on furniture. The company is currently working with Audi to develop panels for the facade walls at its iconic dealerships and has already tested the panels in a live project at Munich Airport intended to clarify how the material behaves in an external environment. What makes this material a double win in terms of climate positivity is the fact that the making of MOA materials also generates a surplus of usable heat and electric energy, in addition to the carbon captured by its raw materials. This energy can go on to serve other manufacturing processes or external applications, further reducing overall CO2 emissions.

In the Netherlands, Pretty Plastic has developed an eponymous, beautifully marbled, modular facade tile. This cladding is composed of recycled PVC material and gives discarded building products a second life. The recycled PVC is sourced from old window frames, downspouts,







**Facing top** *A colorful application of PrettyPlastic cladding on the People's Pavilion at Dutch Design Week 2017.*

**Facing bottom** *Hemp fiber-based corrugated panels by Margent Farm can be used for both interior and exterior wall cladding.*

**Left** *A bioLITH tile by Biomason consists of 85 percent granite from recycled sources and 15 percent biologically grown limestone.*

and rain gutters, among other plastic waste. The silvery and steely-grey diamond-shaped tiles are highly robust and suitable for facades and roofs; they are also easy to install and deinstall, as they are simply screwed onto a wooden framework. The design and materiality of the tiles capitalizes on the inherent longevity of plastic, delivering a product that has a long lifespan and can be removed and recycled again and again. In this way, the tiles are actively contributing to the circular economy and the goal of carbon negativity. The 100 percent recycled-material-based tiles are available in nine luxurious shades and, since their launch in 2019, have already been implemented in projects such as schools and permanent exhibition pavilions in the Netherlands.

Far from the world of plastics is the natural material hemp, the chief ingredient of UK-based Margent Farm's hemp fiber corrugated panels. Hemp is a plant that aggressively captures carbon dioxide as it grows, absorbing and converting it to biomass while releasing oxygen, a process that sequesters carbon and regenerates its environment by doing so. Hemp is also high in cellulose content (60–70 percent of the plant), making it a strong and durable ingredient for corrugated panels. Margent Farm's corrugated panels are made of hemp fibers that have been bound together in a bio-resin matrix, where the resin itself is made principally from farm waste such as oat hulls, bagasse, and corn cob. These hemp fiber corrugated panels offer a natural and carbon-negative alternative to corrugated steel, PVC, bitumen, and cement in architecture and interior design applications. The textured, rich brown panels can be used externally to create rain screen facades or as a ceiling or wall lining in interiors, and even as an acoustic treatment. Though being produced only in moderate quantities at Margent Farm, these carbon-sequestering panels are available in sizes as large as 1,200-mm-by-1,050-mm.

## Masonry

Several new masonry products today are trying to tackle the concrete — or, more specifically, cement — problem. The cement industry accounts for approximately 8 percent of global carbon dioxide emissions, which can be attributed to its manufacturing process and the massive scale of its consumption: Concrete is the most consumed substance in the world, second only to water. In an effort to reduce our dependence on concrete, while still achieving equivalent strength and durability, innovative new variants and substitutes are appearing.

North Carolina-based start-up Biomason is leading the way with their bioLITH tile. Eliminating the need for curing and firing, as in a traditional concrete masonry unit, bioLITH is a tile based on “biocement,” which has been grown using natural organisms. While traditional Portland cement releases carbon during production, Biomason's process captures and utilizes carbon instead, in a method inspired by nature — one much like the growth of corals. To achieve this, the team at Biomason combines carbon and calcium to produce a biologically formed limestone-like material which, even at ambient temperature, yields a structural cement. Their biocement material consists of roughly 85 percent granite from recycled sources and 15 percent biologically grown limestone they develop. The result is an array of precast bioLITH tiles, which can be used in both exterior and interior applications in a variety of building types. The tiles are already being offered in a number of natural and gray hues, brushed and polished finishes, and varied sizes. Most significantly, the bioLITH tiles are the lowest carbon footprint cement tile on the market today, actively contributing to architecture's battle against climate change. The tiles have already been used in residential and institutional projects, among them the Dropbox headquarters.



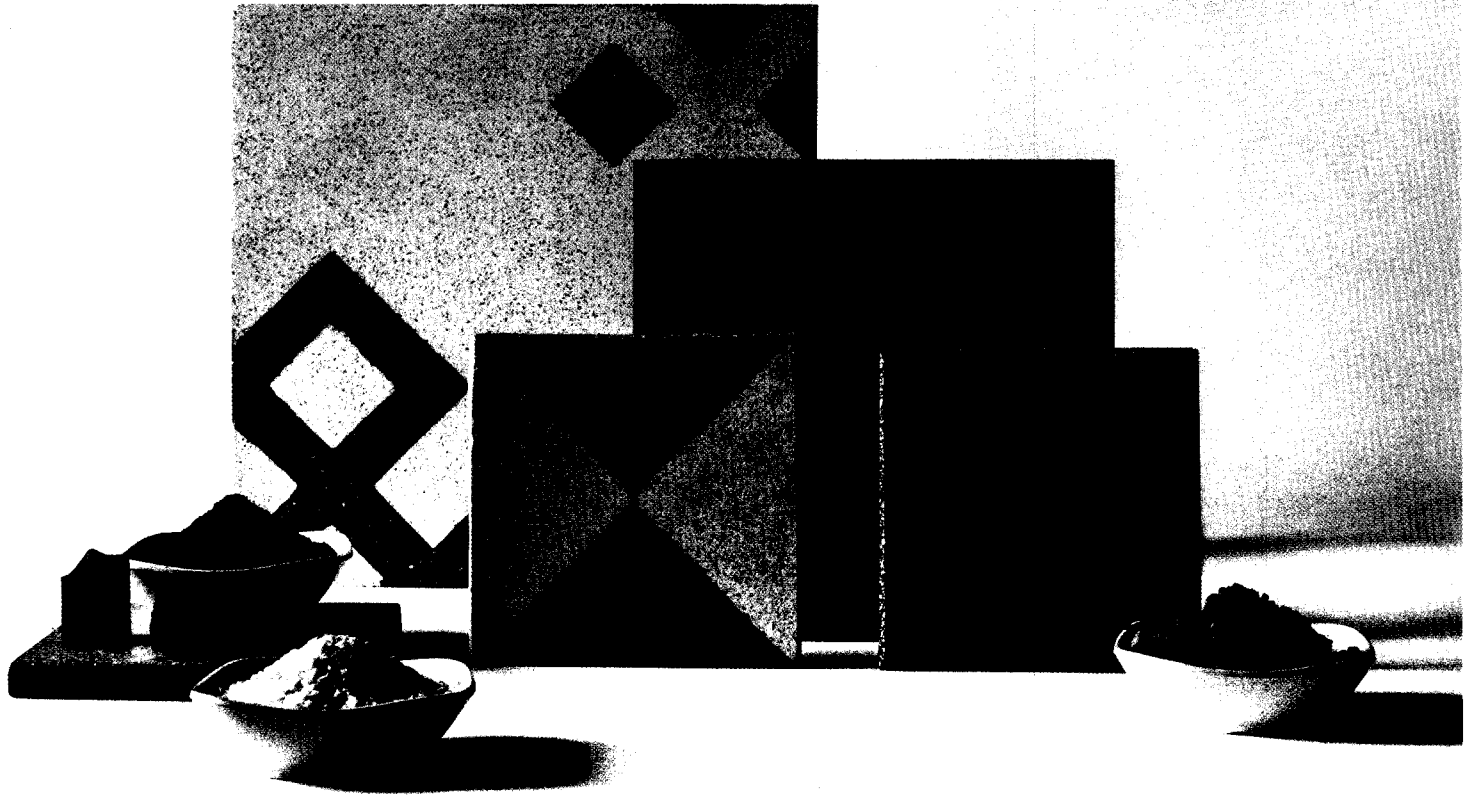
**Right** *WasteBased-Bricks from StoneCycling come in a variety of colors and finishes.*

**Below** *As the name suggest, the WasteBased-Bricks are made of waste, 60 percent of which comes from construction and demolition debris.*

**Facing** *Carbon Craft Design sells hand-made tiles, each containing the equivalent of 15 minutes of car pollution.*







Another pathway is to create concrete masonry blocks but use lesser volumes of conventional cement and turn to manufacturing processes with less embodied energy. California-based Watershed Materials has developed a market-ready product called the Watershed Block, which uses up to 50 percent less cement in its production and offers a 65 percent reduction in embodied energy when compared to conventional concrete masonry. Watershed Materials achieves this via a combination of the following: integrating 100 percent recycled, locally sourced materials as aggregate instead of virgin mined rock (which needs energy and water to prepare) and folding in natural mineral based geopolymers. A range of different colored blocks is created as part of the company's strategy to produce low-cost, low-cement masonry from a wide range of materials, including locally sourced minerals, quarry byproducts, and even recycled concrete. These Watershed Blocks have a significantly lower carbon footprint than do ordinary concrete blocks, yet they offer equivalent structural performance, while their textured, varied aesthetic is a bonus.

In the case of Netherlands-based StoneCycling, its WasteBased-Bricks address the issue of carbon footprints dually. As the name suggests, the exotically colored, shaded and speckled bricks and slips are made from waste — with all varieties made from at least 60 percent waste sourced from construction and demolition debris from the building industry. Preventing this bulky debris from going to landfills is a climate-positive step, which is augmented by the fact that the production of StoneCycling's bricks has been CO<sub>2</sub> compensated through

offsetting by the company. If the sustainability and waste content of these bricks don't draw you in, their sheer variety of hues, surface finishes and effects, and trendy names (such as Wasabi, Truffle, Nougat, and Pistachio) surely will. The bricks have already been used in projects around the world — for interiors and exteriors, in residential and commercial applications, and for both walls and flooring.

### Interior Walls and Floors

This is a rapidly expanding realm, where start-ups, individual designers, and large manufacturers are all constantly innovating to create products ranging from carpets to paints, to wall paneling — all with a lower carbon footprint than before. Nothing captures this trend better than the work that Mumbai, India-based design and material innovation start-up Carbon Craft Design is doing. In 2019, the company launched Carbon Tile, the first tile to be made with carbon emissions. They achieved this in collaboration with Graviky Labs, the makers of AIR-INK, who have been pioneers in recycling carbon emissions. Each beautifully patterned, graphic Carbon Tile is equivalent to cleaning 30,000 liters of air, providing a full day's worth of clean air for one person, or preventing 15 minutes of car pollution. To create the tiles, captured air pollution is first processed to remove harmful heavy metal impurities and then fused with a mixture of cement and marble derivatives. The whole process consumes less energy than do conventional tiles. The resulting products are robust, meet all specifications for cement floor tiles, and are suitable for both residential and large-scale commercial applications. Uniquely patterned in

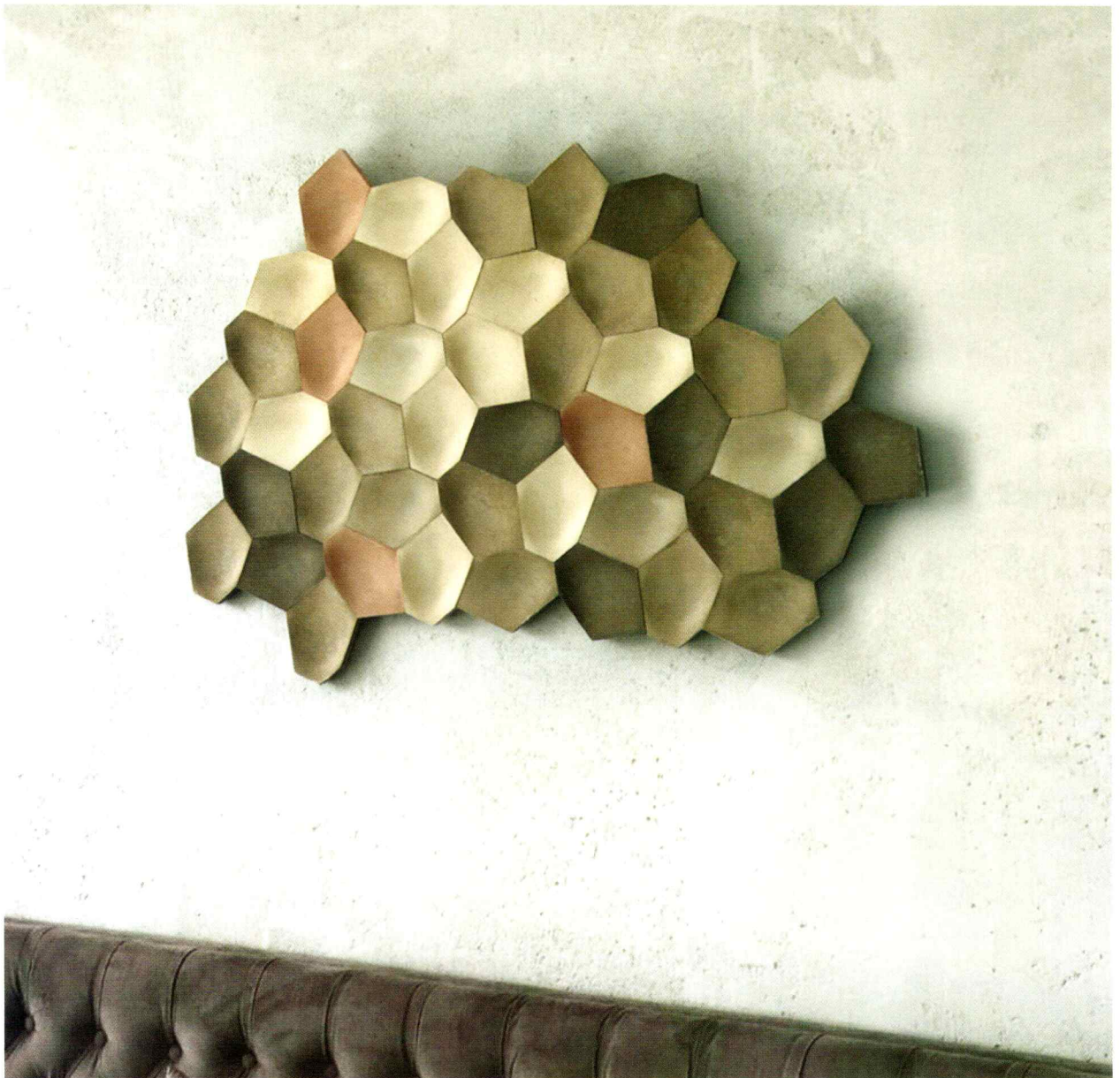


a combination of white, gray, and black hues, the floor tiles are offered in two series: premium range IndusTile and standard range IdenTile, whose patterns are designed to reflect the unique identities of cities like New Delhi, London, New York, and Beijing.

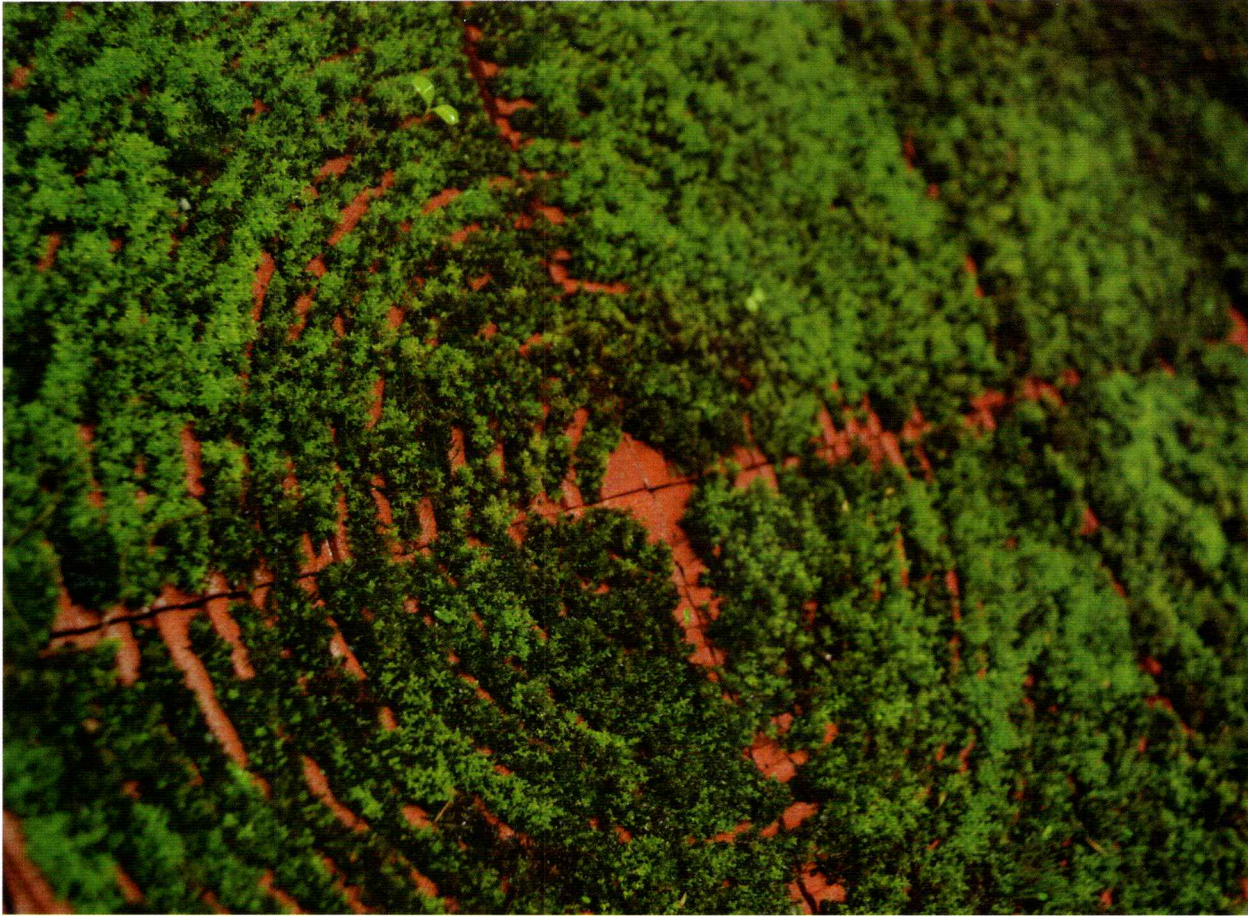
Another simple and easy-to-implement material solution involves Graphenstone's Ecosphere and Biosphere paint lines, which are suitable for use on interior and exterior walls and surfaces. By combining a natural, artisanal lime base with the supermaterial Graphene, the result is a highly resistant and long-lasting paint that is breathable, avoids condensation, is washable, does not yellow, and, most importantly, absorbs carbon dioxide. This is made possible because of its ingredients: Natural lime-based paint has existed and been used for hundreds of years and has always absorbed carbon dioxide during its carbonation process, helping reduce the volume in the air. By adding Graphene fibers to the blend, the paint becomes ultra-durable and can perform this role better and for longer. With the use of these ecological paints, the interiors and exteriors of homes or commercial

spaces start to perform the role of adult trees, removing polluting carbon dioxide from the environment.

Meanwhile, Israel-based materials company Criaterra has developed "Advanced Earth Technology" and is producing a range of wall tiles and three-dimensional forms made entirely from diverse natural earths, vegetal fibers, and minerals. The tiles offer the same strength as do their cement and ceramic counterparts, but with a fraction of the energy use and emissions. Instead of firing materials, Criaterra's manufacturing process aims at compacted "living" material that is pigmented with natural colorants and can simply biodegrade and return to the earth as nutrients at the end of its life. While catering to large-scale projects and offering aesthetic diversity in terms of colors, shapes, and textures, Criaterra's wall tiles and 3-D forms, such as blocks and furniture elements, are highly resistant and durable, and achieve a 90 percent energy savings when compared to ceramics and a 92 percent greenhouse gas savings when compared to cement.







**Facing** Criaterra's wall tiles and 3-D forms are colored naturally using a variety of earths and vegetal fibers.

**Left** Moss Tiles by Poppy Pippin are modular tiles made of grooved terracotta that encourages moss growth.

### **Bio-Integrated Materials**

From living walls to fungal mycelium-based acoustic treatments, the inclusion of biological elements in architectural products is becoming increasingly common. Working in tandem with nature and building in living raw materials allows these products to achieve higher performance with lower energy requirements and emissions, simply by capitalizing on the properties that nature has to offer. The presence of living material can actively draw out carbon dioxide from indoor and outdoor environments while helping improve the sense of health and well-being for building or space occupants through biophilia.

Among relevant examples in this category are the mycelium-based acoustic tiles from Italian company Mogu. Grown in molds and on a base of textile residue, these fungal mycelium panels match the acoustic and fire ratings of synthetic materials and are easily installed and removed, all while offering a new, beautiful aesthetic and a diversity of shapes. The energy use and emissions are strongly reduced due to a growth and waste-based manufacturing process, while the panels themselves can return to the earth at the end of their lives and biodegrade with ease.

At the other end of the spectrum is the work of the young UK-based designer Poppy Pippin, whose terracotta Moss Tiles are a beautiful representation of what living facades can accomplish. Cast in an arresting concentric ring pattern, the grooves in the tiles encourage the growth of moss, which in turn has the ability to draw out carbon dioxide in urban environments, making facades an active, living tool for carbon sequestration.

### **Moving Forward**

These carbon-negative solutions are inspiring and encouraging, but the question is, what next? The architecture and design community in Texas can start to consider which of these materials or similar innovations create the maximum impact while still offering viable volumes for real-time projects and a digestible price tag. The case for implementing these materials, even the speculative and early-stage products, is strong. According to numbers from the U.S. Energy Information Administration, Texas produces about 12.7 percent of the nation's carbon dioxide.

Putting aside the numbers for a moment, the unexpected and damaging winter storm that Texas experienced this February is undisputed evidence that the climate is changing. With greenhouse gas emissions as the chief contributors of such change, we can no longer wait to implement low-carbon solutions in every dimension of life in the state — from construction and infrastructure to manufacturing and transportation, to energy generation and use. Architecture in Texas offers the perfect canvas to test and roll out these solutions. There is not only a wealth of building opportunities but also plenty of patronage for innovative and prototypical architecture, which can pave the way for use of these materials at all scales, residential to institutional.

After contemplating these many globally and nationally sourced carbon-negative materials, it will be exciting to witness how and where they are implemented, both within the state and in design originating from here, and how their use will contribute to a broader low-carbon future.

Purva Chawla is founder and partner of the design consultancy MaterialDriven, which is based in Dallas, London, and Bilbao, Spain.



## The Adobe Paradox

Once a building material of humble economy used by autochthonous peoples of the Southwest, adobe has become fashionable among Marfa's affluent newcomers. Here, a student with roots in the town's Mexican-American community and an architect practicing in the region discuss the building block's complex cultural content.

**personal essay by Beck Andrew Salgado**  
**photography and notes by Stephen "Chick"**  
**Rabourn, AIA**





**W**hen my family settled in the United States from a small town in Chihuahua, Mexico, they did so in Marfa. Nearly since the town's appearance on the map in the 1880s as a water stop for trains, my family has been there — we even have a street named after us. My father grew up partly in Marfa, and he took me out west to experience the region in all its glory as frequently as possible.

My grandfather is a born-and-raised Marfan, who bought an adobe house many years ago primarily because of how cheap it was. He has since seen a nearly 500 percent increase in his taxes. He pays more in taxes for his Marfa home than for the suburban house in Pflugerville, where he currently lives. As adobe represents an obvious symbol of indigenous, Mexican, and Mexican-American peoples in the Southwest and Northern Mexico, its co-opting in Marfa by out-of-town elites, most of whom are white, is sparking a conversation about how this particular material should be respected in the United States.

In the late 1800s and early 1900s, Mexican migrants started to settle in Marfa because of its proximity to the homeland and its affordable housing. Most of the Mexican people elected to build adobe houses because it was what they knew, and it was easy and cheap to source the materials locally. Adobe is merely a mixture of dirt, straw, and water that is formed into blocks and cured in the sun. Many early adobe homes in Marfa were made from earth dug up from the backyard.

Meanwhile, Marfans who had come from farther east in the United States preferred to build their houses out of lumber or brick, more expensive materials that had to be imported by rail. This created a dichotomy in which the poor Hispanic people lived in adobe while monied whites did not — an arrangement that today, ironically, is undergoing something of an inversion. This arrangement, along with some other run-of-the-mill pre-Civil-Rights-Act behaviors such as segregated establishments, naturally led to occasional friction between white and Mexican communities, but its effects were mostly confined to dictating what kind of house you lived in or which side of town you lived on. However, violent encounters, such as the Porvenir massacre of 1918 in western Presidio County, illustrate the precarious nature of cultural relations in the region even well into the 20th century.

Before I ever knew who Donald Judd was or why everyone in town was obsessed with James Dean, Marfa represented family to me. It was where I would go to see uncles or cousins visiting from other parts of the country.

Being a Mexican-American from a family that aggressively assimilated in the '60s and '70s — my grandfather worked in education, and, because of this, he felt assimilation was important to success — my connection to my culture often felt tenuous growing up. However, Marfa always represented the most significant and intimate ties that were left to my Mexican heritage. When there, I would listen to Spanish music while eating chile verde con carne, and our visits were also a chance for my father to teach me more about my family's past as we drove around the Chihuahuan Desert.

As I have grown older, each time I go back to Marfa I feel less and less of that sense of culture I used to enjoy as a kid. I spent the better part of the last year living in my grandfather's home there, and, while the adobe walls that surrounded me will always be inextricably tied to family, the changes happening on the other side of those walls had me vexed. For the months I was there, I felt myself routinely “code switching,” internally and externally, between the binary aspects of my cultural identity.

While I was enjoying the “new” Marfa, the feeling that a sacred tie to my family and culture was possibly slipping away due to the town's evolution scared me. And so it was that during that visit I identified what I now call the “adobe paradox.” The town where my family built its life in America and spring-boarded into the American lifestyle would no doubt be just another dot on the map, or even less, if it had not been for the cultivation of the Marfa art scene and the influx of people coming to the town because of it. Yet this same influx is accelerating the eradication of Mexican culture from the area.

This sounds pretty straightforward, except when you consider that the very force that is sustaining the framework of where my family is from is also eroding its foundation. In essence, Marfa is staying on the map, but the town that I knew it as is rapidly fading. This is not unlike my family's decision to assimilate: It was predicated on the idea that doing so would help us become successful, but the cost of this assimilation was a subdued relationship with our Mexican roots.

Gentrification has seeped into the adobe blocks of Marfa. For people from the area, like my family, the town and the material represent our first experiences in America, and it could also represent one of our last physical ties to the beautiful and proud culture we left behind.

Beck Andrew Salgado is a journalism student at Marquette University in Milwaukee, Wisconsin, and a contributor to the Big Bend Sentinel.





## VERNACULAR

The older homes are not laid out in suburban typologies. They crowd the front property lines and often touch each other on the sides. They started small and were added onto, over time, creating L-shapes or courtyards that span entire lots, a technique far more efficient than the now-imposed 30-ft setback that defines an isolated, quasi-suburban order of driveways and landscaped-but-abandoned front yards. Frustratingly, this is now considered “traditional” and “family-friendly” by many locals, while courtyard schemes are banned.

The original adobes were primarily self-built within a community that understood the basics of building in a region unencumbered by building codes. Some have foundations; many do not. Room dimensions were controlled by the stabilizing force of corners and the spans of 2x4 joists — roughly 12-ft square — with modest door and window openings centered within. There are no hallways. Starting with a two-room module, families expanded in whichever direction they could with whatever materials were

available: first, adobe; then, concrete block; then, wood framing in a cascade of parapets and eaves until the ceilings become too low to keep going. Work sheds and carports were built at the back of their lots, now converted into studios and casitas by the current owners.

Front porches are essential, decorated with furniture, Catholic icons, and kitsch objects, and kept immaculately clean by those still living there who maintain a strict code of ethics about keeping up appearances. Weeds are the enemy. Older residents meticulously pull up fresh sprouts by hand or with hoes while working people wield noisy gasoline-powered trimming machines that kick up clouds of dust. In the evenings, families gather on their porches or in their side yards and wave at passing vehicles and pedestrians, familiar or not.

While the adobe layout expanded over time, it never really evolved and instead was subsumed by postwar suburban ambitions. The original adobes are reluctant relics not easily renovated or expanded. Many were abandoned for manufactured housing.

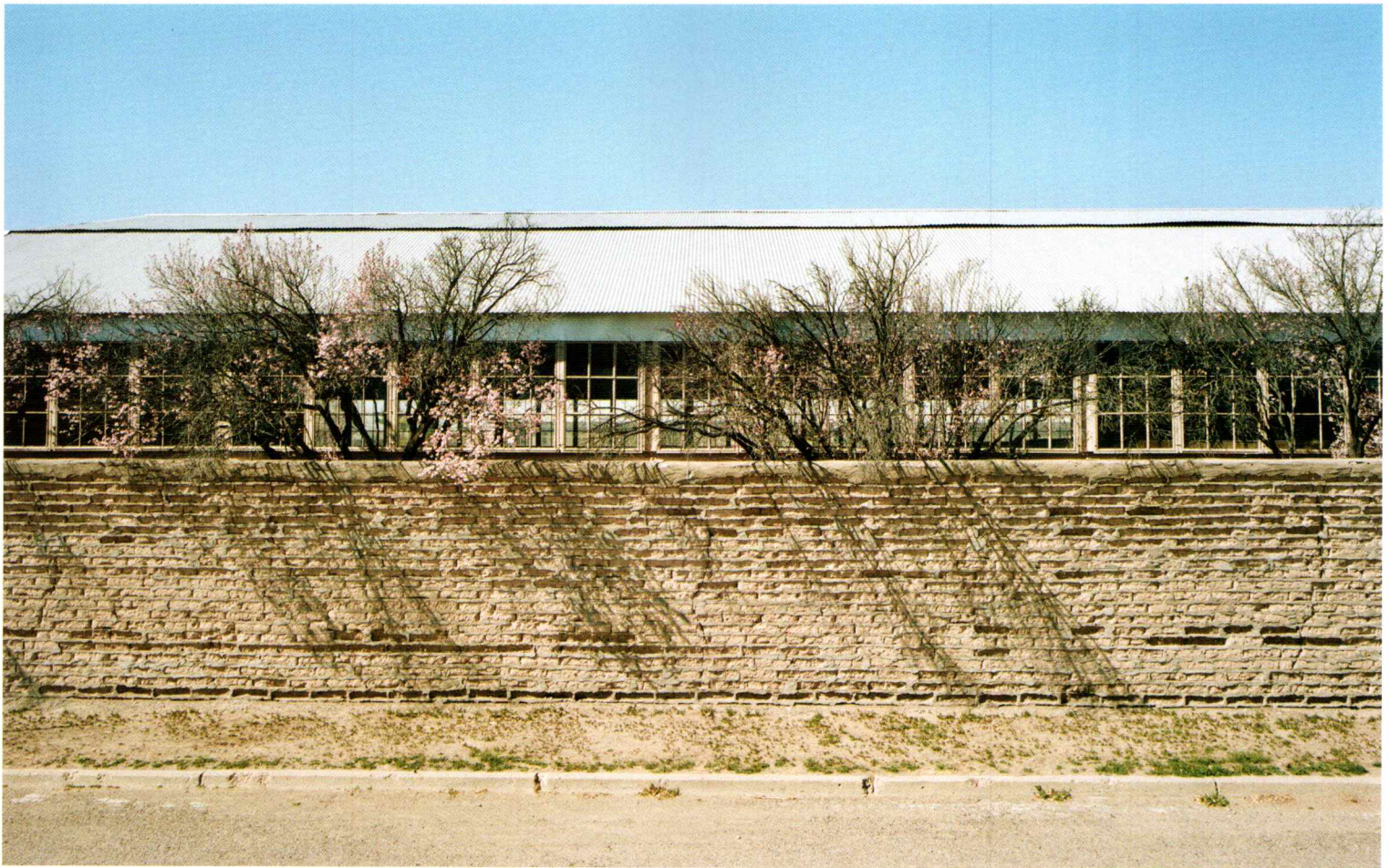












## JUDD AND THE NEXT WAVE

When Donald Judd arrived in Marfa in the early 1970s, there was no particular mystique attached to adobe as there is in northern New Mexico, where the Pueblo Revival thrilled East Coast tourists and West Coast commune builders alike. In Marfa, the material was used in the pragmatic and uncelebrated way that it is in northern Mexico, and that's how Judd used it as well. By then, Marfa's boom times had long since ended and people were building with manufactured materials, if at all, which is why there were stacks of adobes unused after the demolition of two local motels. Judd bought the material to build the nine-ft-tall walls surrounding La Mansana de Chinati, more commonly known as the Block. "Marfa is made mostly of adobes, but the town had forgotten that when I started using them. It was the obvious material," he wrote later in his essay "Marfa, Texas." Judd brought in Mexican tradesmen who still regularly worked with the material. He went on to dig pits on the property to build interior walls. The adobes used for the site walls of the Chamberlain Building and the Locker Plant were brought up 60 miles from Presidio. Those adobes are degrading more quickly than the ones from Marfa, which has the effect of producing a distinctive negative imprint when joined with cement-stabilized mortar joints.

Newcomers since have had no hang-ups about adobe, which now represents a regional authenticity that distinguishes it from buildings in New York, Los Angeles, or Houston. Adobe embodies an authenticity that bestows its own sense of status. There is a note of

progress here from the racial and cultural biases of the past when adobes were disparaged as primitive.

In the late 1990s and early 2000s, a handful of arts-minded individuals on tight budgets took cues from Donald Judd's restrained and practical attitude toward renovating buildings and quietly settled into inexpensive adobes using corrugated roofing and neutral color schemes over existing wood windows and rough stucco. When the fashion for minimalism became a signifier of taste among urban dwellers with second or third homes, the treatments became more severe. Then it was necessary to vault the ceilings, swap in aluminum casements, upgrade the roofs, and add on. The low-key color schemes and tasteful landscaping disguised the underlying transformation of family homes to pricey pieds-a-terre. Subsequent generations of home buyers paid prices well above those sustained by the local market. Around 2017, the State of Texas took notice and demanded Presidio County bring its assessments up to the new market values, which occurred across the board for all Marfans and caused a massive spike in tax bills for homes not protected by homestead or age exemptions. A new activism emerged in defense of long-time locals who want to stay in their homes and hope to keep them in the family for following generations. But because the Texas system relies heavily on property taxes, that will be increasingly difficult over time if Marfa continues to be a popular market — which seems likely, given the number of tourists and the amount of publicity the town continues to attract.





## **RUINS**

Marfa is strewn with the slow erosion of its past. A melting mass of earth and stucco is evidence enough that someone no longer living worked their arms and abdominals mixing and forming thousands of bricks by hand. Most likely, the same person and their family lifted each one of those bricks into place until stacks of dried mud under a roof became a home. People were born in those homes. The old-timers still point at the places where they and their parents were born. Sometimes, that place is an empty lot. The families built their own houses, delivered their own children, and cultivated gardens and livestock on their properties. It feels humane, just like the beauty of walls melting back into the earth in slow motion over decades, a sped-up geology. When the lots get scraped, they go quiet. The murky echoes of human occupation dissipate and fall out of communal memory.

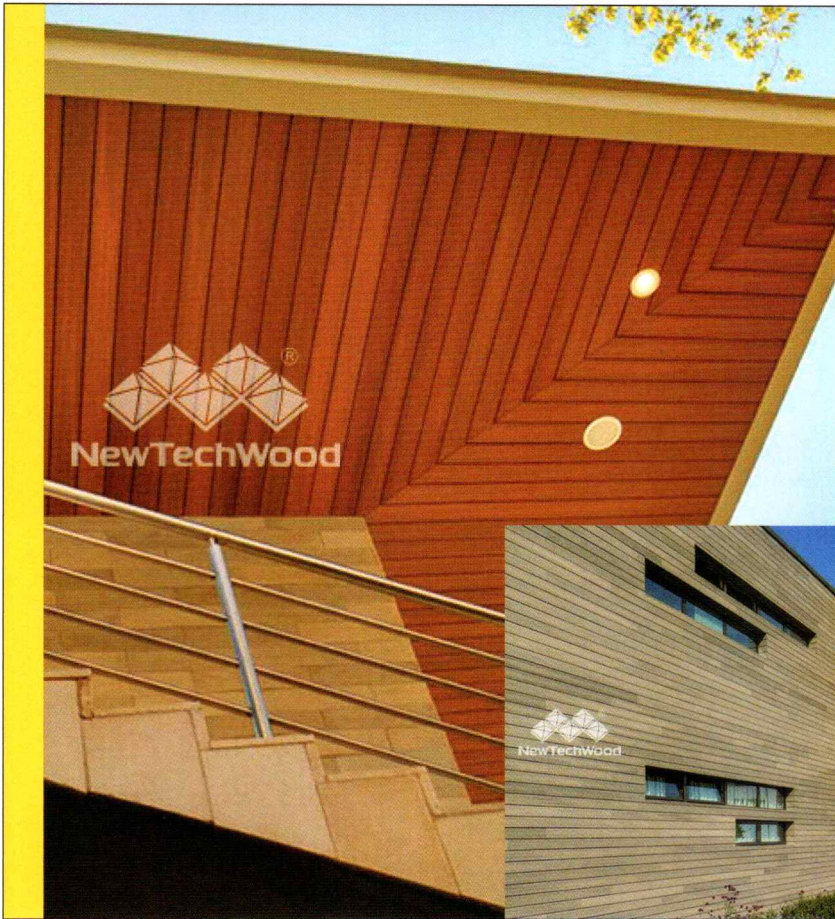
As property taxes rise, the families that own these lots will eventually be pressured into clearing and selling them for redevelopment, not necessarily a bad thing for a remote small town hemmed in by ranch land and currently unable to grow beyond its borders. With a trickle of new families moving to town, maybe some of the dynamic energy and sense of community can be re-established within the surge of second homes and vacation rentals currently dominating the market. Either way, I will miss the ruins when they're gone.

Stephen "Chick" Rabourn, AIA, is an architect in Marfa.









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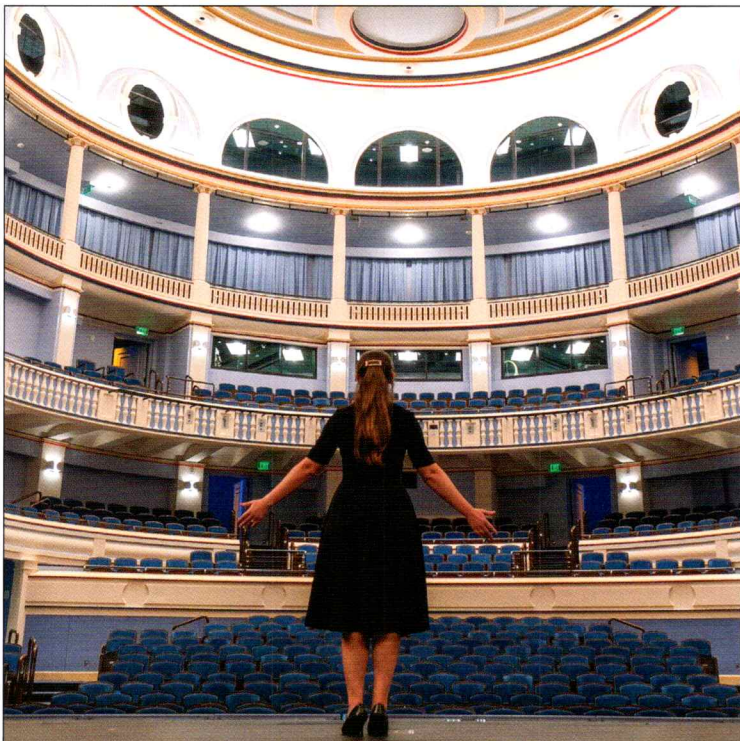


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*Tapping into the most up-to-date technology, the structural frame envisaged for the Fun Palace was configured to promote access to cultural activities such as theatre and concerts, courses and discussions for a mass audience. The design was therefore reminiscent of a machine. In keeping with this the Fun Palace's architecture was composed of standardized, sometimes mobile, elements that could be regulated mechanically, electrically or electronically. The vision that had previously informed [Cedric] Price's housing designs is apparent again here: an open room structure and technology to allow adaptable organization of space as a function of users' wishes. The Fun Palace mechanisms were configured to appeal to the desire for cultural expression and community.*

— Tanja Herdt, "The City and the Architecture of Change: The Work and Radical Visions of Cedric Price"

Throughout history, in performing arts buildings, new ideas about culture and society have merged with architectural and technological innovation. Texas has at least two excellent examples: The Alley Theatre (1968) in Houston, designed by Ulrich Franzen, whose brutalist design and first-of-its-kind light grid provide for novel staging and spectator experiences, and the Wyle Theater (2009) in Dallas, designed by REX and OMA, which is a literal transformer capable of reconfiguring itself from performance to performance, keeping the audience ever on its toes.

In this issue of *Texas Architect*, we consider two recently completed performing arts venues that are packed with technology but more conservative architecturally, though in distinct ways. Brockman Hall at Rice University provides opera students with an acoustically ideal venue and practice rooms to learn their trade in a Neoclassical wrapper, while Buddy Holly Hall in Lubbock accommodates multiple performance venues, a ballet school, a restaurant, and support spaces within an abstract building envelope that alludes to the landscape and weather of the Great Plains.

# Performing Arts

74

## **Fantasyland**

Brockman Hall for Opera  
by Allan Greenberg  
Architect

*Jack Murphy*

82

## **A Crazy Feeling**

Buddy Holly Hall of  
Performing Arts and  
Sciences by Diamond  
Schmitt

*Peter Raab*





## Fantasyland

The Brockman Hall for Opera at Rice University packs professional acoustics and audio/visual technology within a historicist shell inspired by the campus's original building.

**Architect** Allan Greenberg Architect  
**Construction Manager** Linbeck Group  
**Structural Engineer** Walter P Moore  
**Theater Planner** Fisher Dachs Associates  
**Acoustics and AV** Threshold Acoustics

by Jack Murphy

The Shepherd School of Music at Rice University is a prestigious institution that combines “a conservatory experience with the educational opportunities of a leading research university” for its 290 students. Among concentrations in performance, composition and music theory, musicology, and conducting, the school also supports an opera studies department. “Opera continues to be a thriving art form, requiring both individual and institutional support,” says Dean Robert Yekovich. At Rice, this commitment can be seen in the new Brockman Hall for Opera, designed by Allan Greenberg Architect (AGA).

Since 1992, the school has occupied the two-story Alice Pratt Brown Hall, designed by Ricardo Bofill Taller de Arquitectura with Kendall/Heaton Associates as the architect of record. The wide, flat building encloses the western end of the academic court established by the General Plan of Rice University and designed by Cram, Goodhue, and Ferguson Architects in 1910. The performance facilities, while excellent for concerts and recitals, limited the produc-

tions that the school could mount in its biannual operas: More space was needed. Rice began planning and fundraising for the project in 2005, and construction was completed in the summer of 2020. The building currently supports students (who already staged a socially distanced production last fall), but, due to the ongoing pandemic, it awaits its full unveiling.

The 84,000-sf new building, fully funded by philanthropic contributions, contains the Lucian and Nancy Morrison Theater, all relevant back-house facilities, a scene shop, rehearsal rooms, practice spaces, offices, and a prominent lobby. The hall itself is the central space in the building, with all others arranged around it across two main floors. The Brockman Hall for Opera is intended to complement the Shepherd School's existing facilities, which explains its orientation toward Alice Pratt Brown Hall.

The school understood the importance of assembling the proper team to achieve the best acoustic and theatrical results: It first prepared a shortlist of acoustic and theatrical consultants,



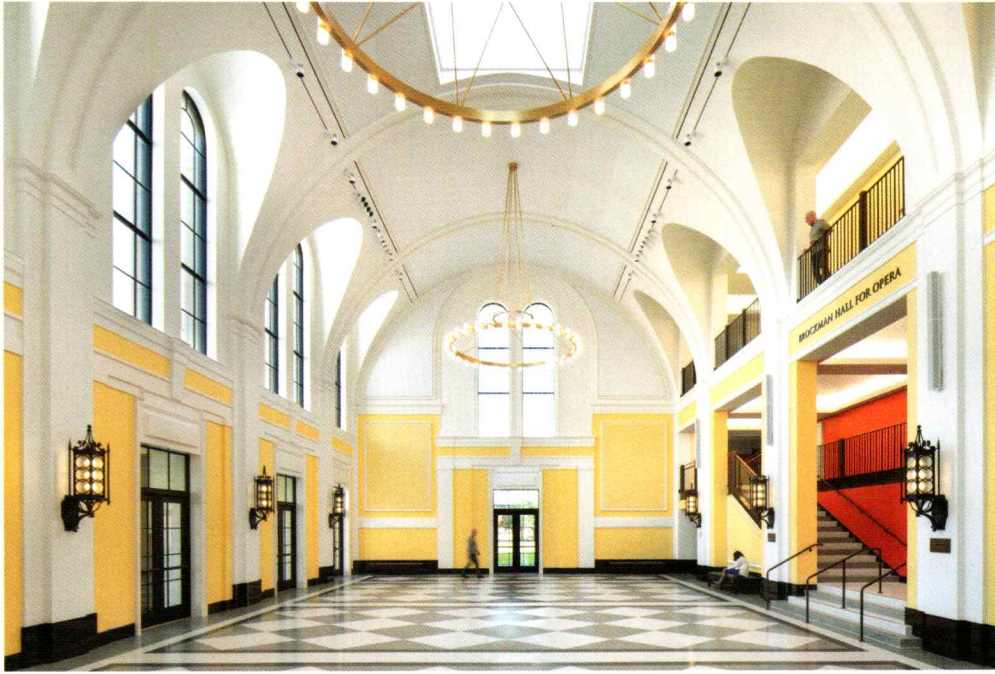


**Above** *The exterior facades combine banded brick and stone expressions with inset tile mosaics produced by the architect's daughter, Ruth Frances Greenberg, a ceramic artist.*

**Left** *The Brockman Hall Grand Foyer was enlarged during the design process to better accommodate the events and gatherings anticipated by the school. It is accented in yellow, with individual floors beyond marked in distinct colors.*

**Facing** *The primary facade of the Brockman Hall for Opera opens onto a plaza that connects with the existing Alice Pratt Brown Hall.*





**Above** The barrel vault of the Brockman Hall Grand Foyer creates a grand processional entrance to the facility.

**Right** The interior of the Lucian and Nancy Morrison Theater is realized in shades of blue and off-white, with yellow and red accents.

**Facing left** A view from the stage showcases the order and geometry of the hall, as well as its lighting capabilities.

**Facing right** The vestibule between the lobby and hall is dark and illuminated to dissociate viewers from the outside world. Greenberg likens this to Alice falling down the rabbit hole.







before selecting architects to form teams with companies from the list. The school initially hired New York-based Diller Scofidio + Renfro, whose involvement concluded at the end of schematic design. AGA, known for their classical expertise, was the architect for the project and partnered with consultants Threshold Acoustics, based in Chicago, and theater consultants Fisher

Dachs Associates, based in New York. As this was AGA's first theater project, the team worked in a tightly coordinated way to deliver a high-quality space.

The building's primary function is as training space for students learning their musical craft. To provide a healthy distance for younger voices to project without overextending themselves,



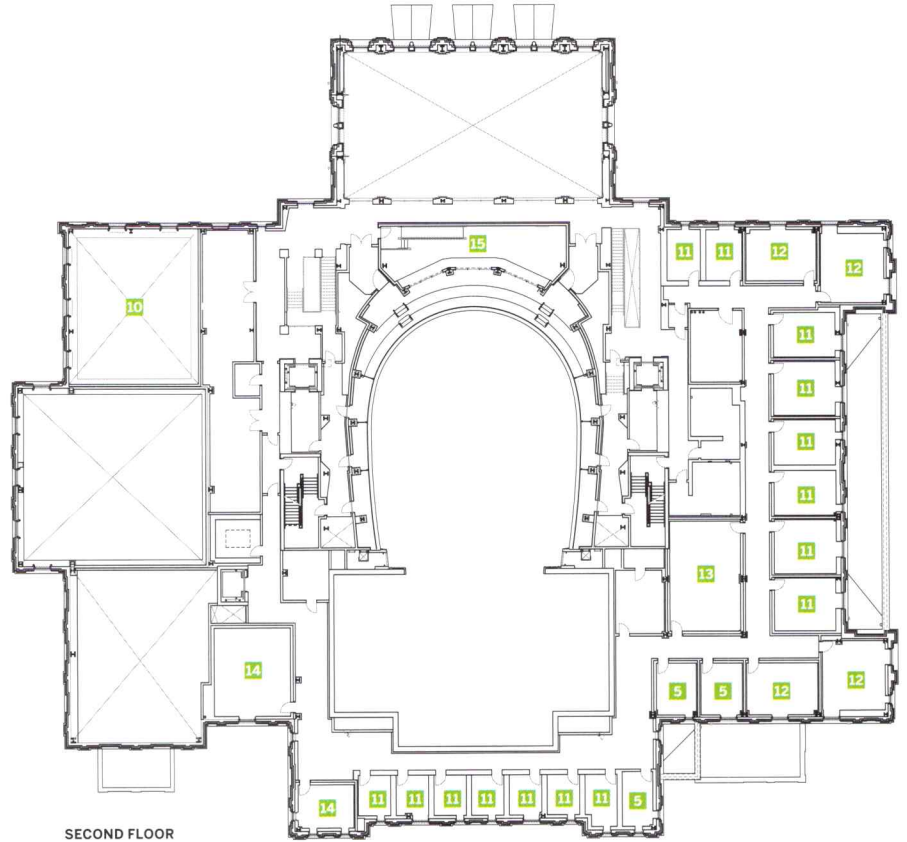
the scale was reduced to 600 seats across four levels — a “scale that was big enough to whet appetite but intimate enough to feel supported,” says Matt Brogan, a consultant with Fisher Dachs. (For comparison, the Winspear Opera House in Dallas by Foster + Partners, seats 2,200). On the other hand, the ability for students to perform with a full orchestra was also necessary, so the supporting pit, which operates in two lifts, accommodates up to 70 musicians. This combination of small hall with large pit is rare among venues. To balance sound levels between vocalist and orchestra, the hall needed to be very tall, according to Threshold Acoustics's Scott Pfeiffer. Here, the musical accompaniment, emanating from below the stage, is directed into the upper acoustic volume, while voices on stage are supported more directly by surfaces that surround the audience. The challenge was to meet acoustic needs while placing people close to the action — to “wallpaper the room with faces” for performers, Brogan says.

The project team considered various theaters as precedents and studied them closely by embarking on a benchmarking trip to Europe. The Royal Opera of Versailles was selected as the best model, and its influence is clearly seen in the tiering of the hall; in the way the levels step back in section (other opera models stack identical horseshoe-shaped concourses in plan); in the expressed free-standing columns on the uppermost level; and in the lunettes set into the curved upper corners of the room. The team tested the





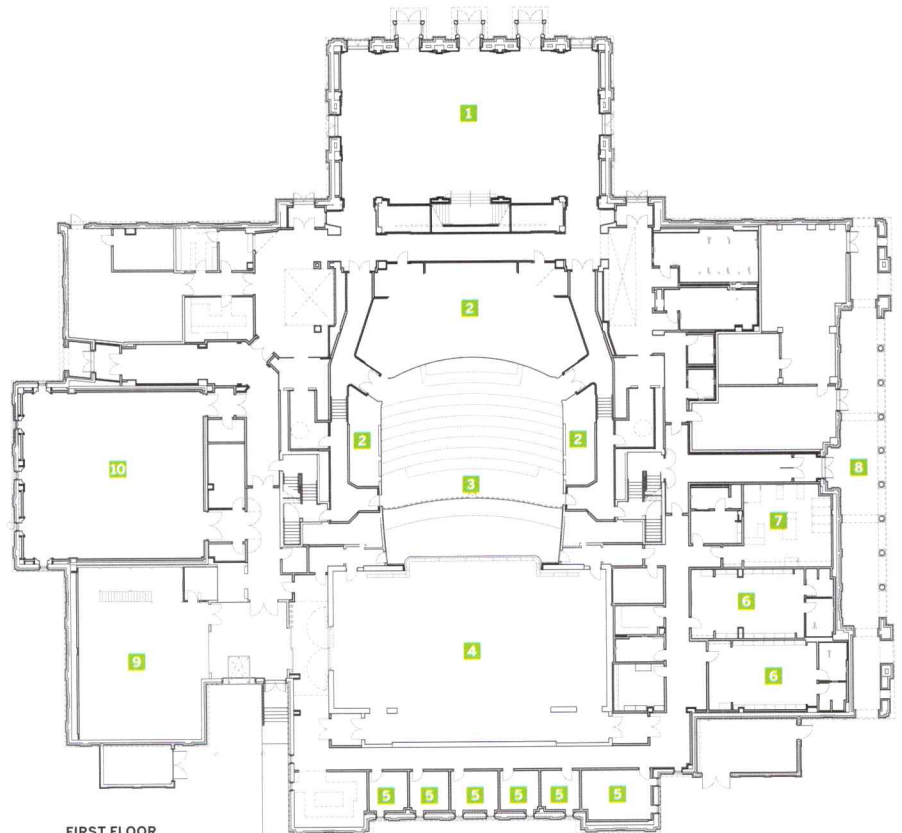
- FLOOR PLANS**
- 1 LOBBY
  - 2 PLENUM
  - 3 AUDITORIUM
  - 4 STAGE
  - 5 OFFICE
  - 6 DRESSING ROOM
  - 7 COSTUME SHOP
  - 8 ARCADE
  - 9 SCENE SHOP
  - 10 REHEARSAL ROOM
  - 11 PRACTICE ROOM
  - 12 OPERA STUDIO
  - 13 CLASSROOM
  - 14 PIANO LAB
  - 15 BOOTH



SECOND FLOOR

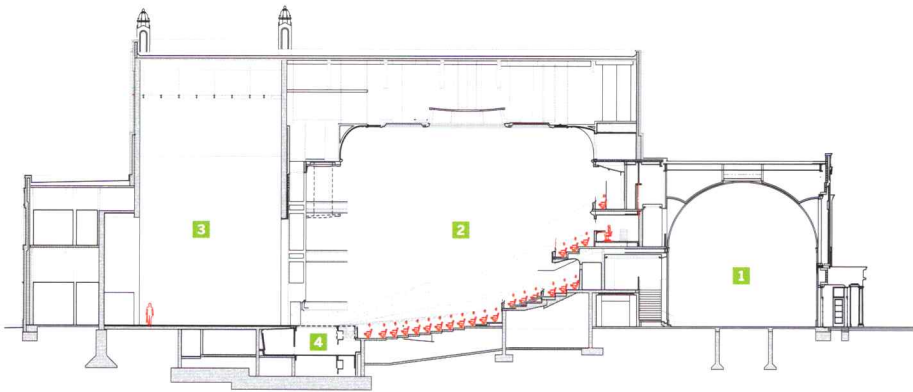
sound and sightlines together using VR headsets, through modeling techniques developed by Fisher Dachs, and inside Threshold Acoustics’s auralization room, which can “render” sound from different locations within 3-D models. A singer’s output is split between a head voice, for upper registers, and a chest voice, for lower registers. Pfeiffer says the selected theater scheme better supported the chest voice with a balance between presence and response: It’s like a “warm hug” for performers.

AGA’s surfaces in the main hall are classical in origin, but their articulations support acoustic performance. The lower level has large, solid surfaces, while the upper levels are increasingly ornamental — notably, in their use of balustrades — and the ceiling is largely solid. These choices best reflect sound to listeners. A custom orchestra shell for smaller ensembles can be assembled and then stored backstage. Operable panels, curtains, and a forestage reflector also help to tune the room. In repertoire where detailed dialogue is of primary importance, reverberations can be reduced to “dry up” the room and improve clarity. Concrete walls, grout-filled masonry, and plaster-filled GFRG are used, throughout. Exterior walls and room divisions use framing over CMU wall types, making for thick walls that minimize sound transfer. Practice rooms and offices are further isolated using special doors

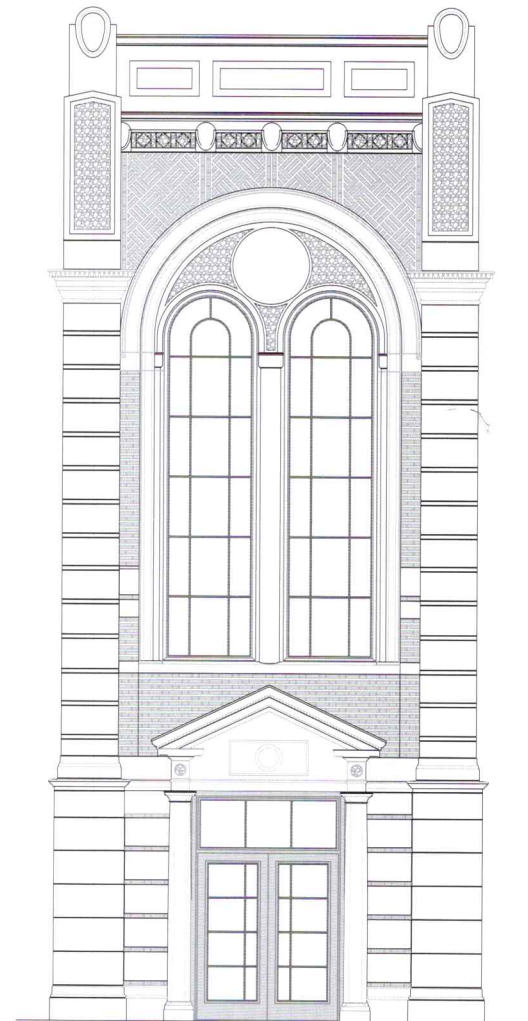
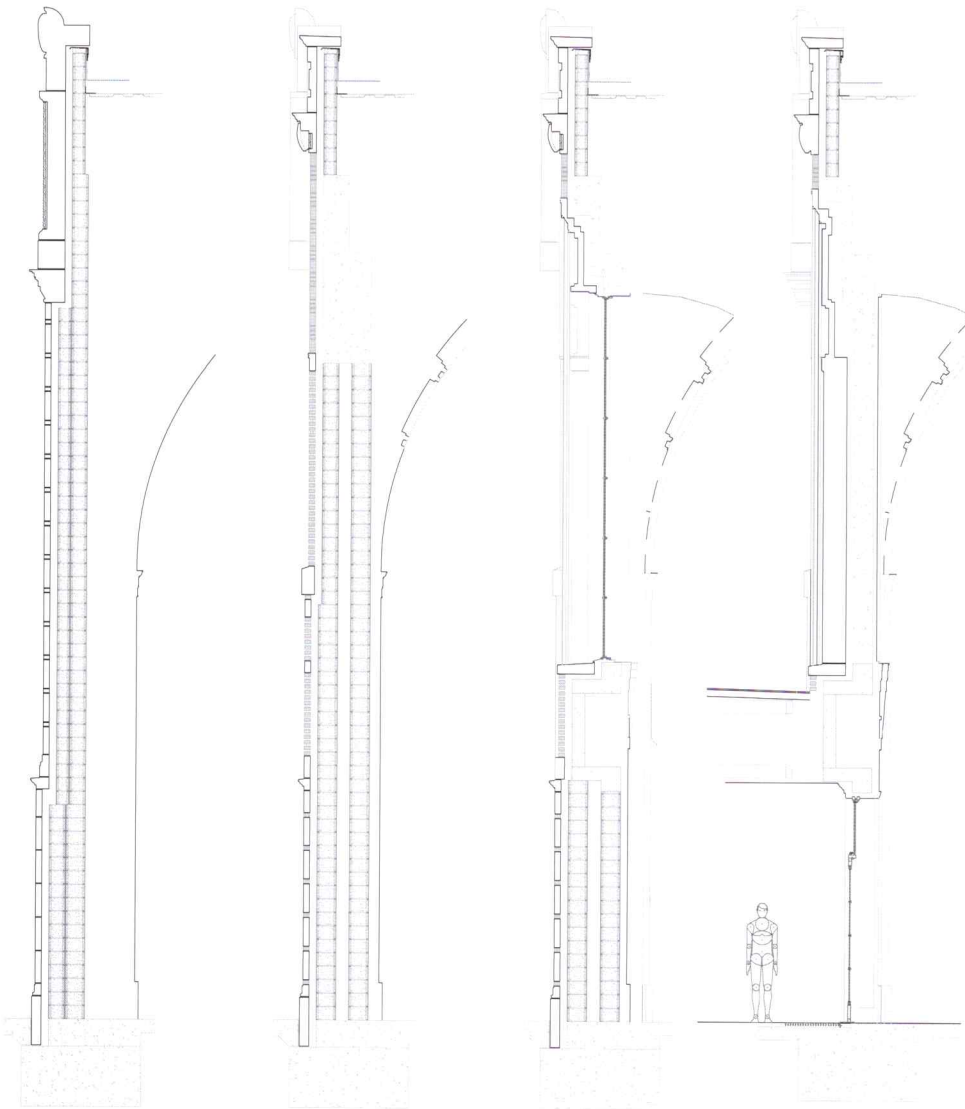


FIRST FLOOR





- SECTION**  
 1 LOBBY  
 2 AUDITORIUM  
 3 STAGE  
 4 PIT



**WALL DETAIL**





**Above** A double-height rehearsal space includes a tall wainscot of baffles, a coffered ceiling, and adjustable curtains.

**Right** A larger rehearsal space is exactly the size of the main stage and includes pipe-grid lighting, acoustic reflectors, and theatrical lighting controls.

**Facing** Though not sporting a red clay tile roof, the Brockman Hall for Opera continues a conversation with Rice's campus vernacular. A new semicircular roadway was also installed, a reference to the figure of the original campus plan of Rice.







that seal on all four sides. Support spaces are built similarly: Rehearsal spaces are handsome and balanced for handling loud and soft sounds. Construction quality matters, as vibration absorbs energy (sound) that could otherwise be directed toward listening ears.

AGA's finishes also conceal intensive technical systems. The building includes an estimated 80 miles of conduit, and state-of-the-art electronic systems are in place throughout, including a motorized rigging system with 30+ line sets in the stagehouse — only the second of its kind in Houston. The hall can support amplified performance, conference-style presentations, complex lighting arrangements, and multipoint video recording. An impressive shop also allows the school to fabricate its own sets, or to accept Broadway-scaled set rentals.

Color is used in the project's main hall, vestibules, foyers, lobby, and on the exterior of the building. The intensity of AGA's original vision for the interior, inspired by the polychromy of classical Greek architecture or Le Corbusier's work, was attenuated during the design process. Though the performance spaces were expertly crafted for acoustic fidelity, the hall's ornate

facades became a surface unlike any that has been built on campus in recent decades. Their model was the AGA-designed Humanities Building at Rice, completed in 2000, and Lovett Hall, the campus's first building, completed in 1912. Rather than facing outward, the opera hall's primary elevation faces east toward Lovett, while its secondary southern elevation is enhanced with symmetric towers and an arcade below. Lovett establishes the powerful axis that organizes the Rice campus and the opera hall ends it, capping the interior courts of the university and turning away from the vast parking lots beyond.

Greenberg, who worked with Jørn Utzon on the Sydney Opera Hall as his first job out of architecture school, says that opera invites viewers into a world of fantasy. That this new building is fantastic is deeply appropriate. In searching for a fitting language for the Rice campus, Ralph Adams Cram rhetorically asked: "In what style shall we build?" "The method," he wrote (as documented in Stephen Fox's 1980 "The General Plan of the William M. Rice Institute and Its Architectural Development"), "was to become familiar with what had been done around the shores of the Mediterranean: Syrian,

Constantinean, Byzantine, Lombard, Dalmatian, French, Italian, and Spanish Romanesque with a covert glance at the Moorish art of North Africa, and then try to put oneself into the spirit of enthusiastic builders of Southern race and see what would be the result." Rice's architecture, built over the course of 110 years, begins with this eclectic, imaginary source.

The Brockman Hall for Opera is more expressive than many contemporary institutional buildings — a notable distinction. It also opens deep conversations about context, style, and money that are beyond the scope of this text but deserve study elsewhere. For now, it's enough to champion the impact the facility will have on the education of young performers at Rice for decades to come. The hall's completion "feels like the culmination of my contributions to the School over my 18 years as dean," says Yekovich, who will step down as dean and return to the faculty in June. "As I benefited from those who came before me, my legacy will hopefully make it possible for those who come after me to succeed."

Jack Murphy is editor of Cite magazine. He lives in Houston.





## A Crazy Feeling

With winking formal allusions and well-tuned spaces, Buddy Holly Hall promises to connect Lubbock to the world beyond the Llano Estacado.

**Architect** Diamond Schmitt

**Architect of Record** Parkhill

**Associate Architect** MWM Architects

**Contractor** Lee Lewis Construction

**Structural Engineer** Entuitive

**MEP Engineer** Crossey Engineering

**Acoustics** Jaffe Holden

**Theater Planning** Schuler Shook

**Lighting** Consullux Lighting Consultants

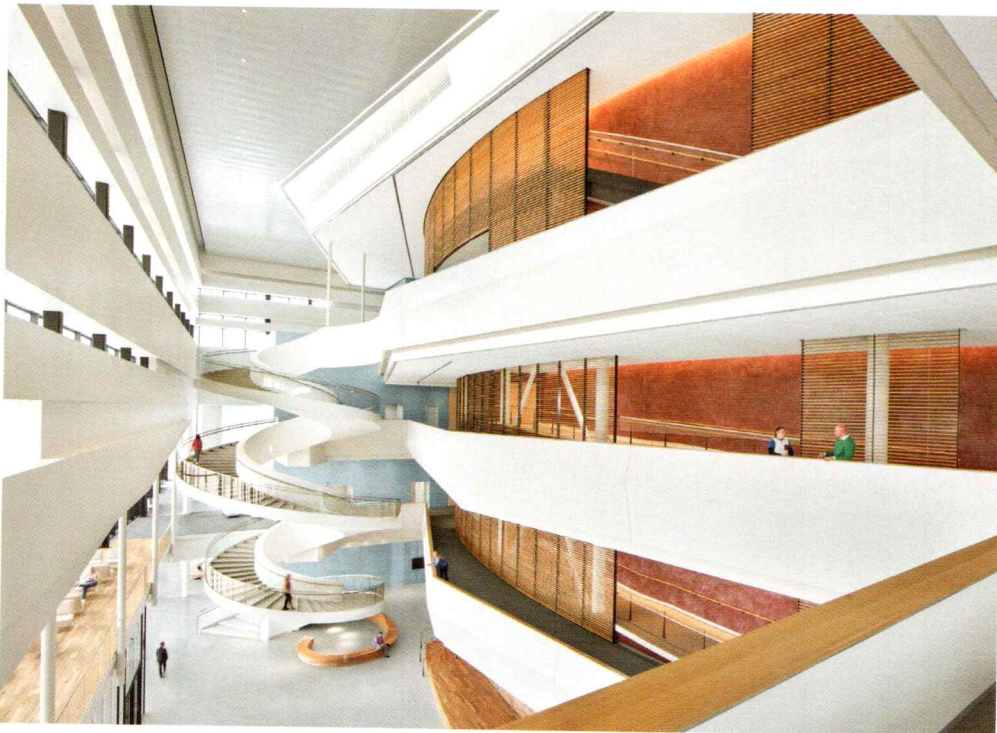
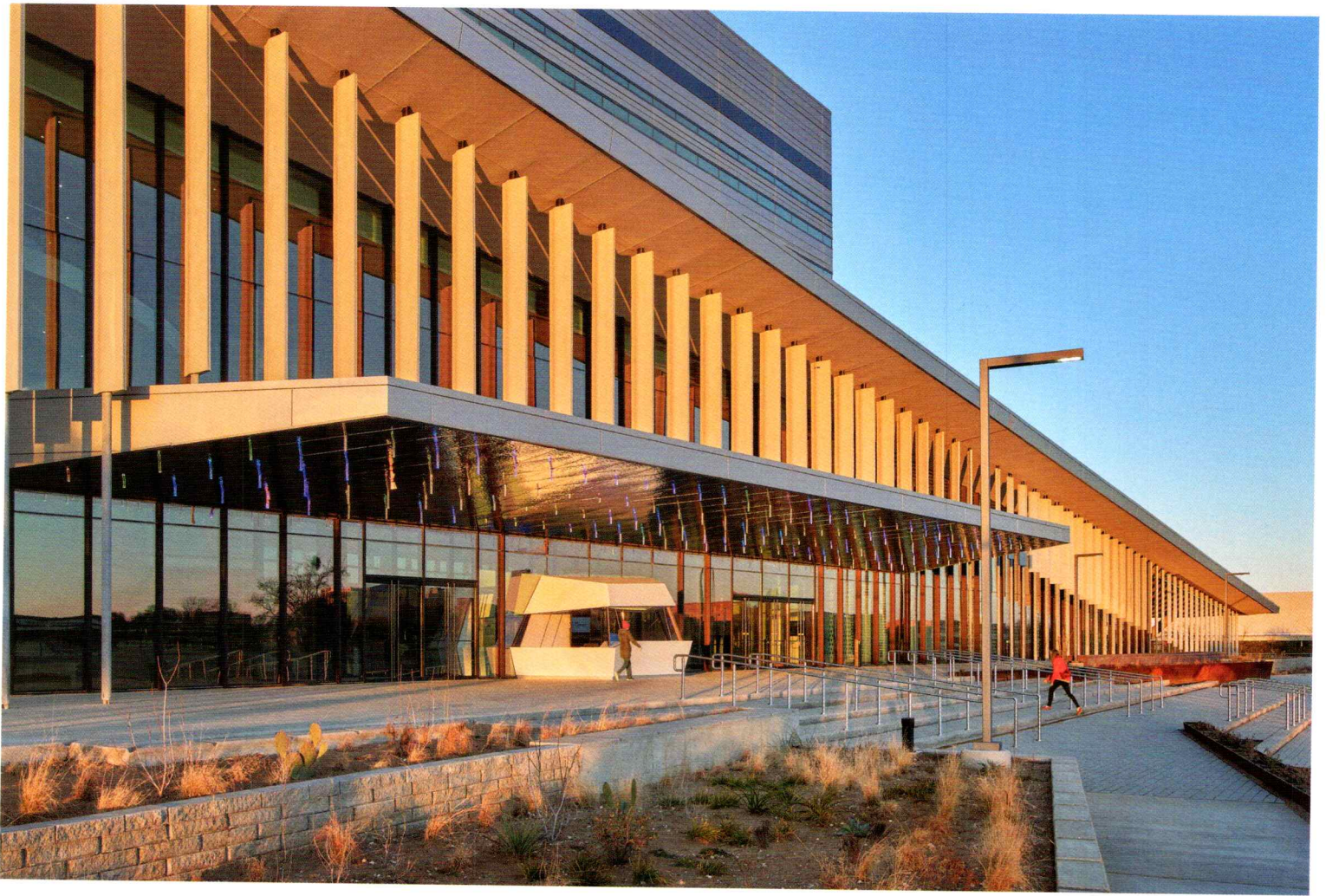
by Peter Raab

One summer night in 1970, two tornadoes cut a seven-mile swath from downtown Lubbock to the airport. While several large-scale civic projects emerged in their wake, much of the city's growth migrated from its center to the fringe. The Buddy Holly Hall of Performing Arts and Sciences is the most notable investment in culture and the arts connecting the Hub City to national and international acts in 50 years, and it's worthy of its namesake.

Located on the northern edge of downtown, Buddy Holly Hall provides a key component to the already robust Arts District in hopes of igniting a downtown resurgence in the form of future investments, all while increasing community engagement and opportunities for all ages.

At first glimpse from the highway, an unassuming banded gray facade wraps the boxlike form subtly rising above its low-slung surroundings. As one draws nearer, the two-toned, horizontally striated glass and metal envelope seems to echo the linear landscape of the Llano



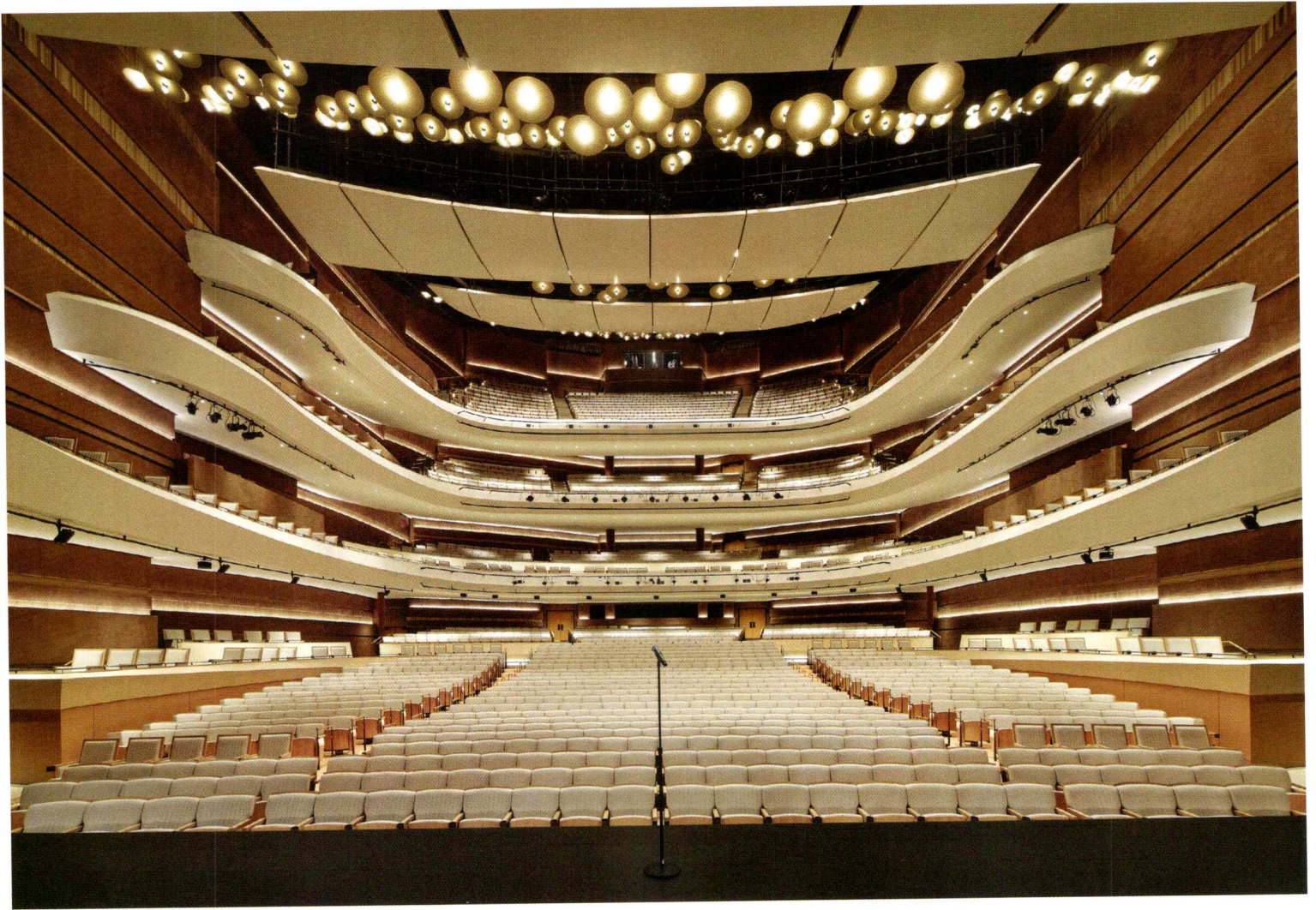


**Facing** *The structure exudes a strong linear presence in downtown Lubbock.*

**Above** *The primary entry and box office are nestled beneath vertical sunshades.*

**Left** *The four-story entry atrium is daylit by a skylight and expansive glazing at every level.*

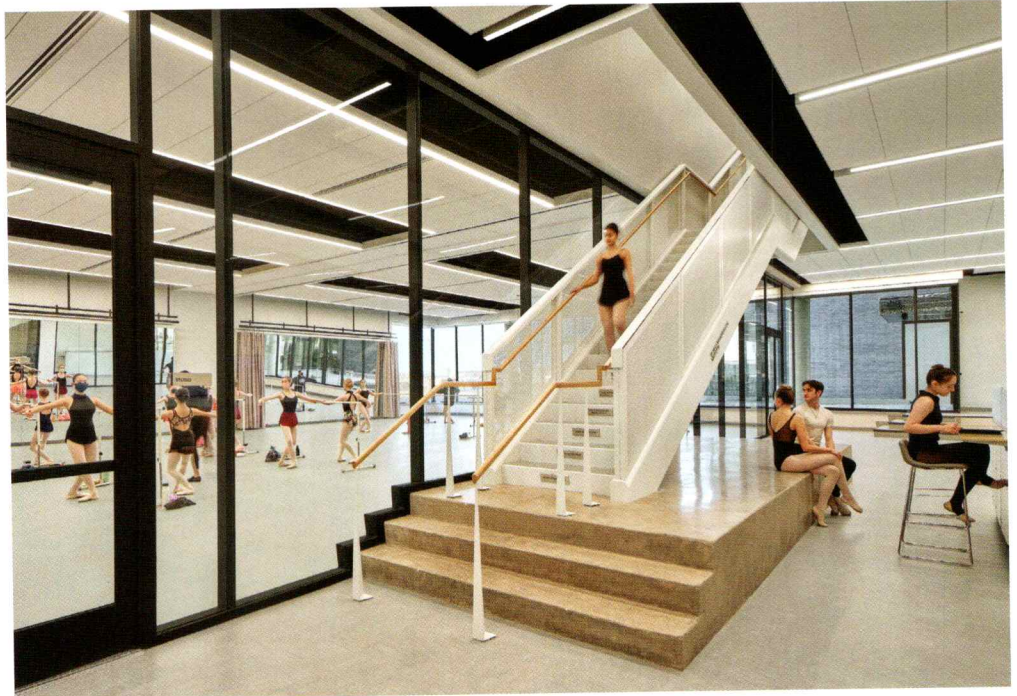




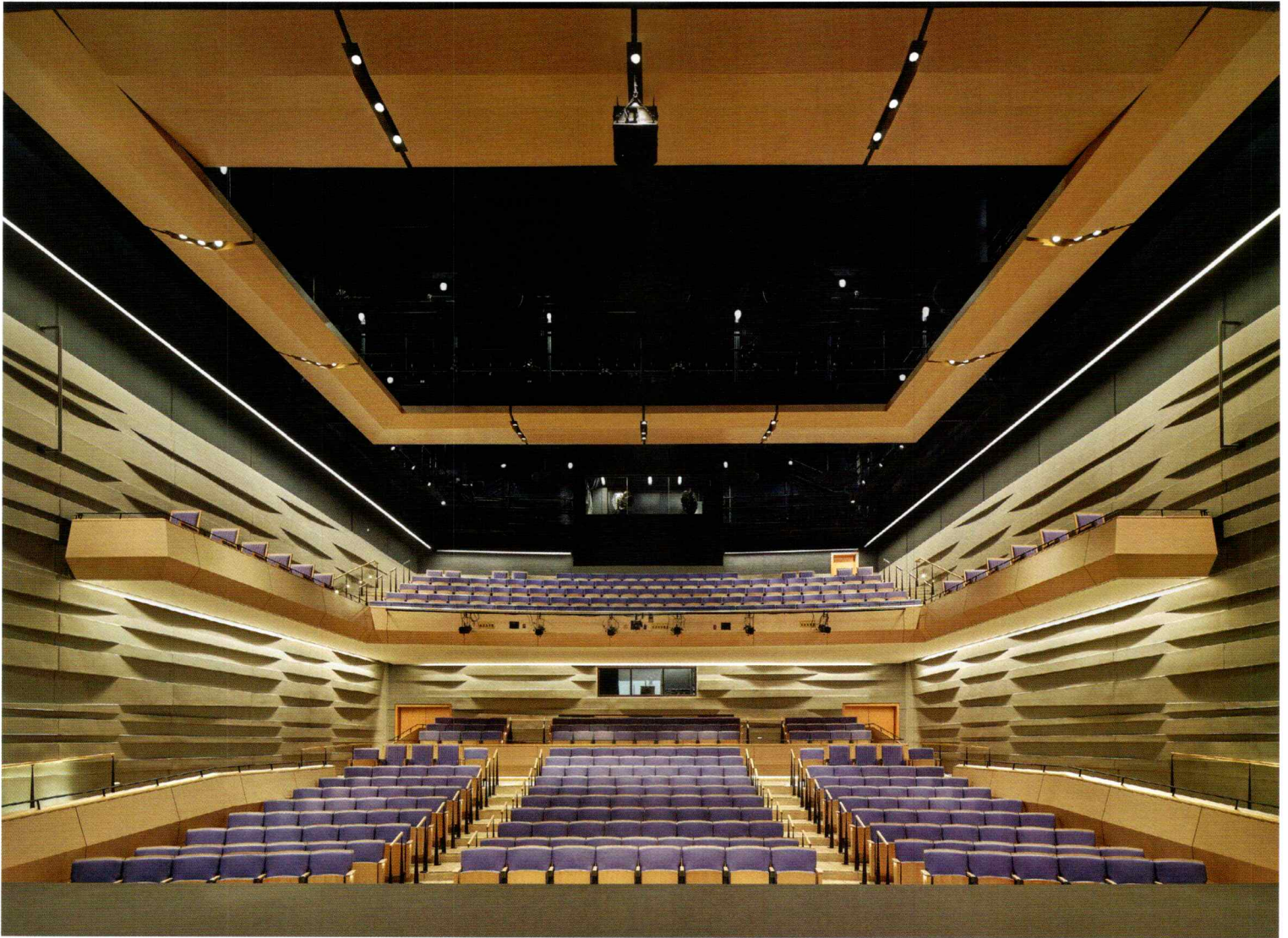
**Above** *The Helen DeVitt Jones Theater can support an audience of 2,297.*

**Right** *Dancers from Ballet Lubbock rehearse in their new practice space.*

**Facing** *The Crickets Studio Theater seats 415 guests.*







Estacado. The linearity is reinforced through the ribbon windows, which change from dark gray to bright white when the sun descends. This major mass becomes obscured at lower levels through an aggregation of several brick-clad volumes that are distinct from the banded core. The programmatic differentiation articulates the complexity within West Texas' newest center for the performing arts while permitting entry and facilitating multiple activities through its seams.

A long, sloping entry volume extends beyond the box and southward toward downtown while formally gesturing east in a "bird's tail," a reminder of its connection to the arts district. As one approaches the main entry, towering vertical fiberglass fins set at various rotations shade the promenade and the all-glass facade. Here, verticality and lightness contrast nicely with the heavier tone of the somber brick

and metal cubes. Where the fins stop, fritted glass is used to minimize heat gain.

Just past the single-story vestibule, white ribbons of stacked steel draw one's eyes to the skylit space. The obvious highlight is a four-story helical stair, fabricated from 110 tons of steel. Inspired by the 1970 tornadoes, the winding stair offers minimal risers that radiate from the voided center. The terrazzo treads hover, allowing oblique glimpses through the open risers and curving glass railing as one transitions vertically. This visual permeability contrasts with the sturdiness of the massive structure. The sinuous white stripe spins effortlessly up four levels, connecting to the main theater space beyond and memorializing the tragic event.

A counterpoint to the soaring stair on the western end of the four-story entry lobby is the beautifully designed and meticulously crafted

30-ft-by-120-ft donor wall featuring an iconic image of Buddy Holly playing a Fender Stratocaster. Imagined by Diamond Schmitt and designed by Texas artist Brad Oldham, the pixelated mural is rendered with nearly 9,000 guitar picks of varying sizes and prominently displayed through the transparent southern facade.

One subtle yet attuned detail is the handrail, which is shaped in the profile of a pick. Crafted in wood and elegantly supported by tapering cruciform steel verticals, the handrail creates an illusion of both lightness and warmth that unifies the lobby, stair, and main performance space in a solid handshake with the building. Another deft and subtle touch is the richly colored Venetian plaster walls, which enliven the central lobby while further distinguishing the three performance volumes.

The primary performance space, the 2,297-seat Helen DeVitt Jones Theater, occupies the



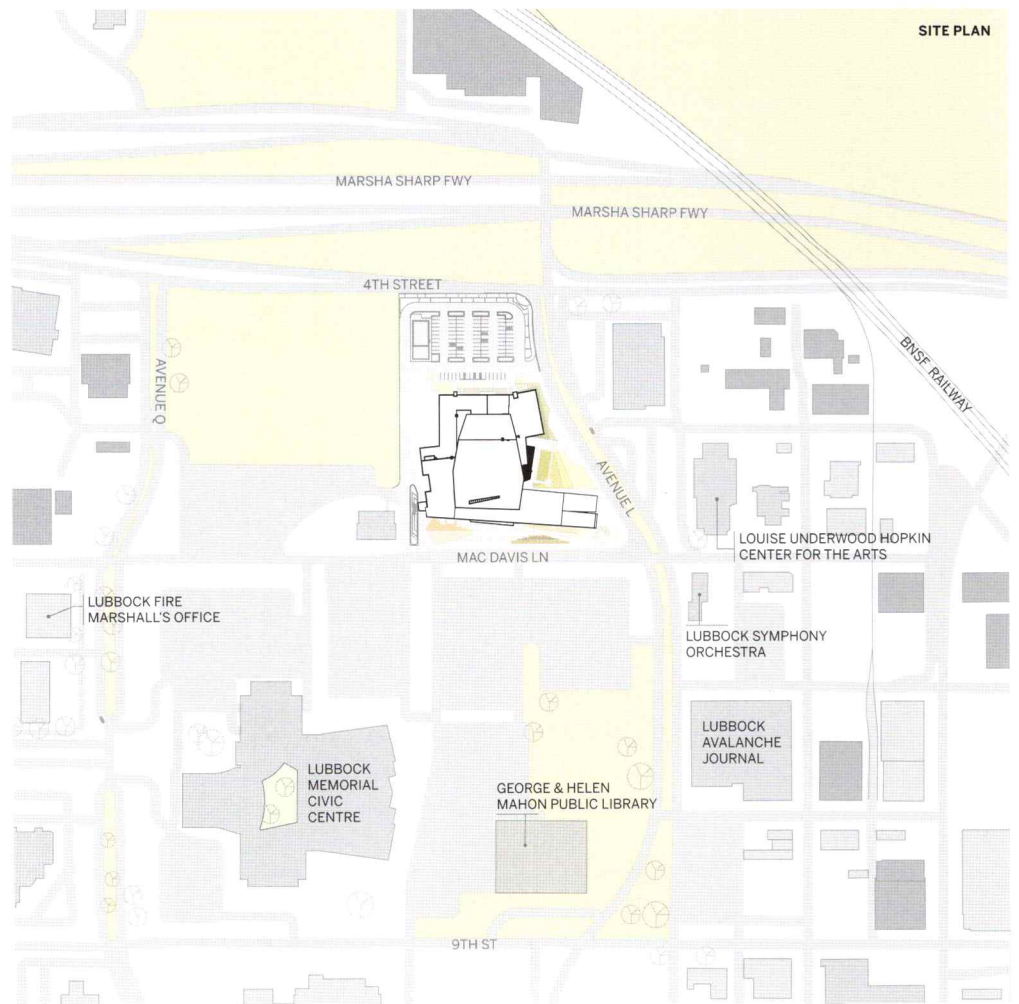
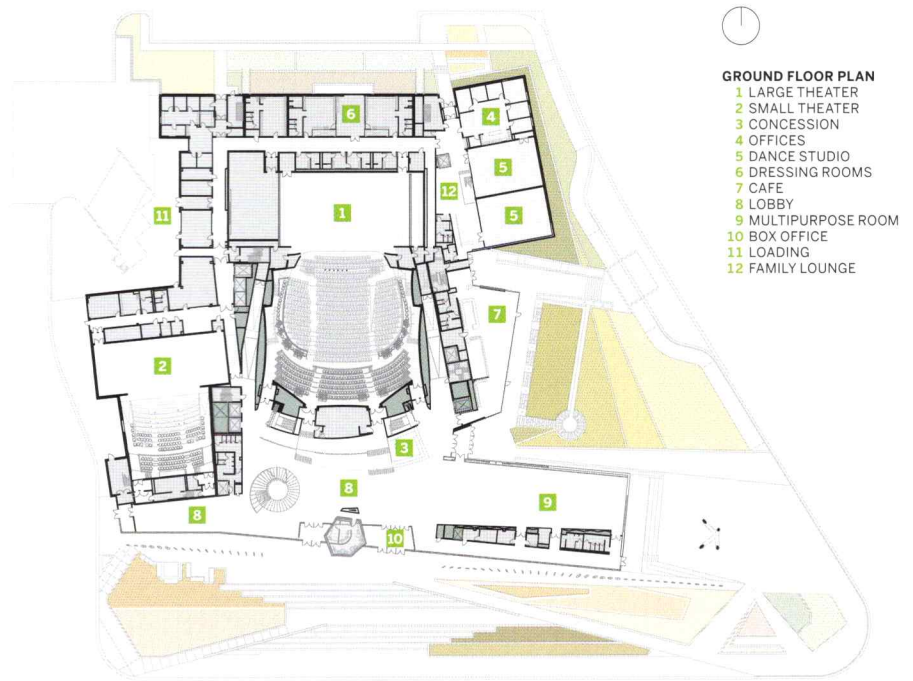
main volume and extends four levels in elevation. Wood finishes and light-colored cushions soften the seating area and steps, while an unpretentious use of steel flat bar turned horizontally creates a border for the balcony areas and maximizes views toward the stage. These two simple materials are juxtaposed throughout the project. A uniquely designed chandelier is suspended below a black ceiling plane, mimicking the large, star-filled sky typical of wind-swept West Texas nights.

The second, smaller performance space is the 415-seat Crickets Studio Theater, located at the building's western edge. The theater offers a high-quality orchestra space for local middle- to high-school students, including a practice and performance area. Tilt-up concrete walls, measuring 53 ft high, are formed with acoustically determined horizontal waves on the interior that perform structurally and act as the finished surface. An orchestra shell can be deployed for a fuller, richer sound and to help the space achieve its NC-15 rating. This theater is quite a gift to the Lubbock community, as it provides a venue where children can perform and dream of becoming "the next Buddy Holly."

Finally, the 6,000-sf Grand Hall flanks the eastern edge and offers a visual connection with the Arts District. The dividable, multipurpose space is tucked behind the guitar pick wall. Ventilated wood slats atop acoustic paneling clad the interior, and the space showcases large glass walls, which seem to extend the interior toward the bird's tail courtyard beyond.

Two additional spaces make up the lower northeastern corner of the complex, supplementing the performance areas: the bistro restaurant, Rave On, and the 22,000-sf pre-professional school and offices of Ballet Lubbock. These spaces communicate through well-placed windows across a xeriscape of native cacti, grasses, and yucca. The two-story ballet area has a separate, private entrance, and offers a large rehearsal room, numerous offices, smaller practice spaces, a physical therapy room, and a digital interface for parents to watch their children practice. The space is designed for future expansion, though it currently almost triples the footprint of this treasured institution's previous home.

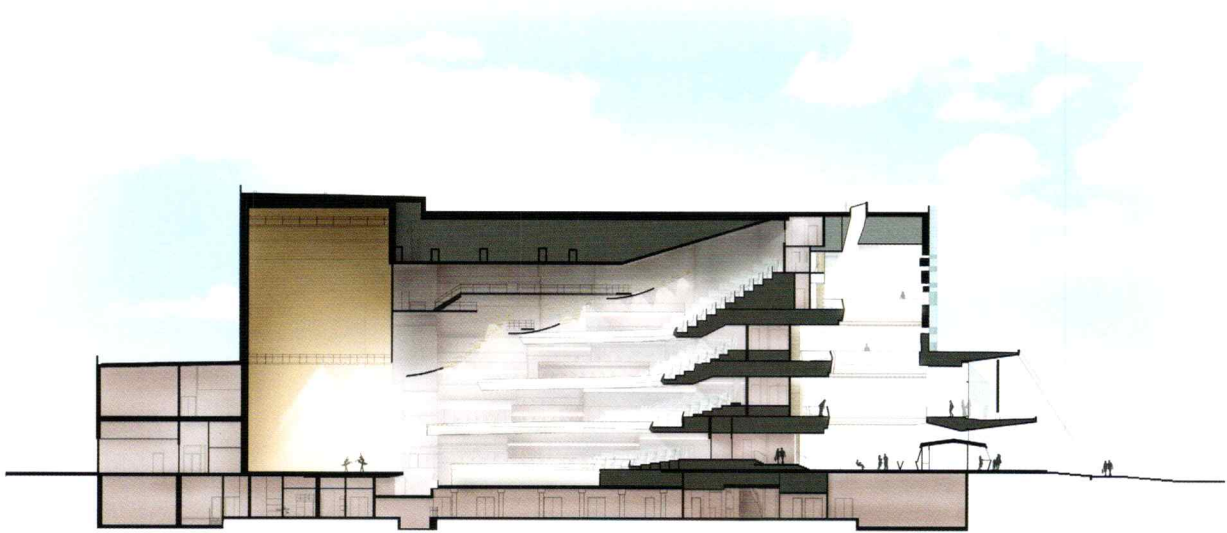
With each space having its own back-of-house areas — loading docks, dressing rooms, and entries — the Hall could feasibly support three simultaneous events, in addition to Rave On and Ballet Lubbock, without interruption.







SECTION THROUGH MULTIPURPOSE HALL AND DANCE STUDIO



SECTION THROUGH MAIN HALL



**Right** *The 110-ton steel helical stair references the infamous 1970 tornado that laid waste to downtown Lubbock.*

**Facing** *The structure and landscape design make full use of the project's atypical site.*







This flexibility demonstrates the architectural team's ability to tackle such complexities with dexterity and care. One such choreographic detail is a hidden, 20-ft-tall partition grille that slides out to separate the educational spaces from the larger theater space and restaurant, preventing alcohol sales to the underaged. This door is gracefully concealed within a Venetian plaster pocket and aligns with the vertical glass mullions of the southern entry when deployed. Another detail is the use of simple clerestory ribbons within the dressing areas. These admit soft northern light and a slice of sky into the dressing areas while gracefully blocking out the freeway just beyond view.

By way of critique, the Buddy Holly Hall project was over budget, did not open in January 2020 as anticipated, and has some underwhelming final touches. A close inspection reveals that several details are less precise than its \$600/sf budget could have afforded, and the finishes and

furniture of the restaurant fail to live up to the standard set by those of the main theater and lobby. This disappointment extends to the beverage/snack service carts deployed on the upper floors, which seem to be late additions, quickly conceived and constructed in rather lackluster white laminate.

All in all, however, this enormous investment in culture and the arts is worthy of its legendary name. Buddy Holly Hall promises the potential to connect Lubbock to the vastness beyond — it is a proper venue for performances by national and international acts and for community-focused programs that will help the ongoing rebuilding of a piece of city fabric flattened in 1970. Buddy Holly Hall is a much needed, unique performance center to guide and serve Lubbock's bright future.

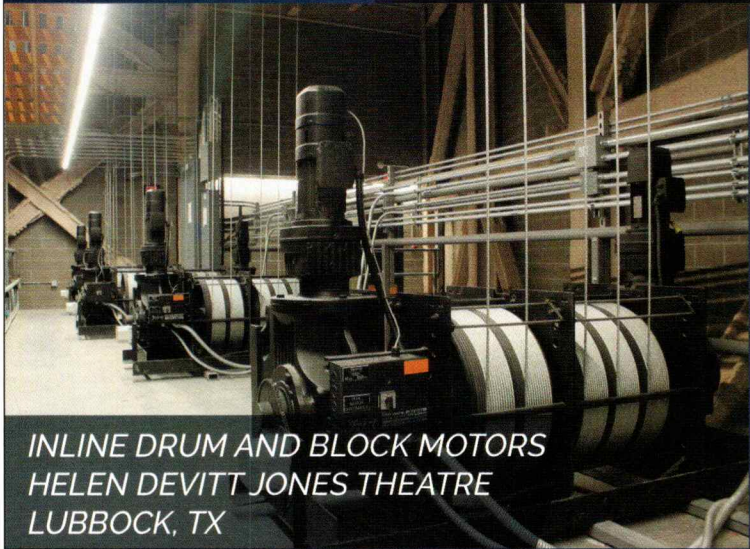
Peter Raab is an associate professor at the Texas Tech University College of Architecture.



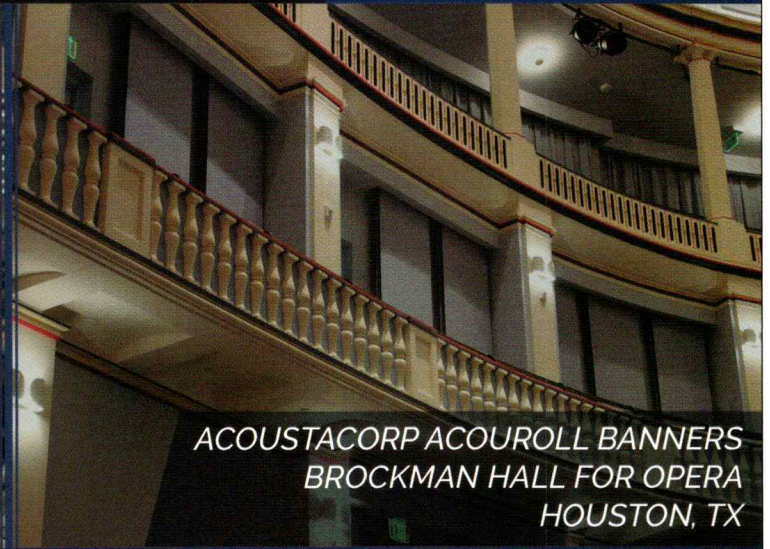


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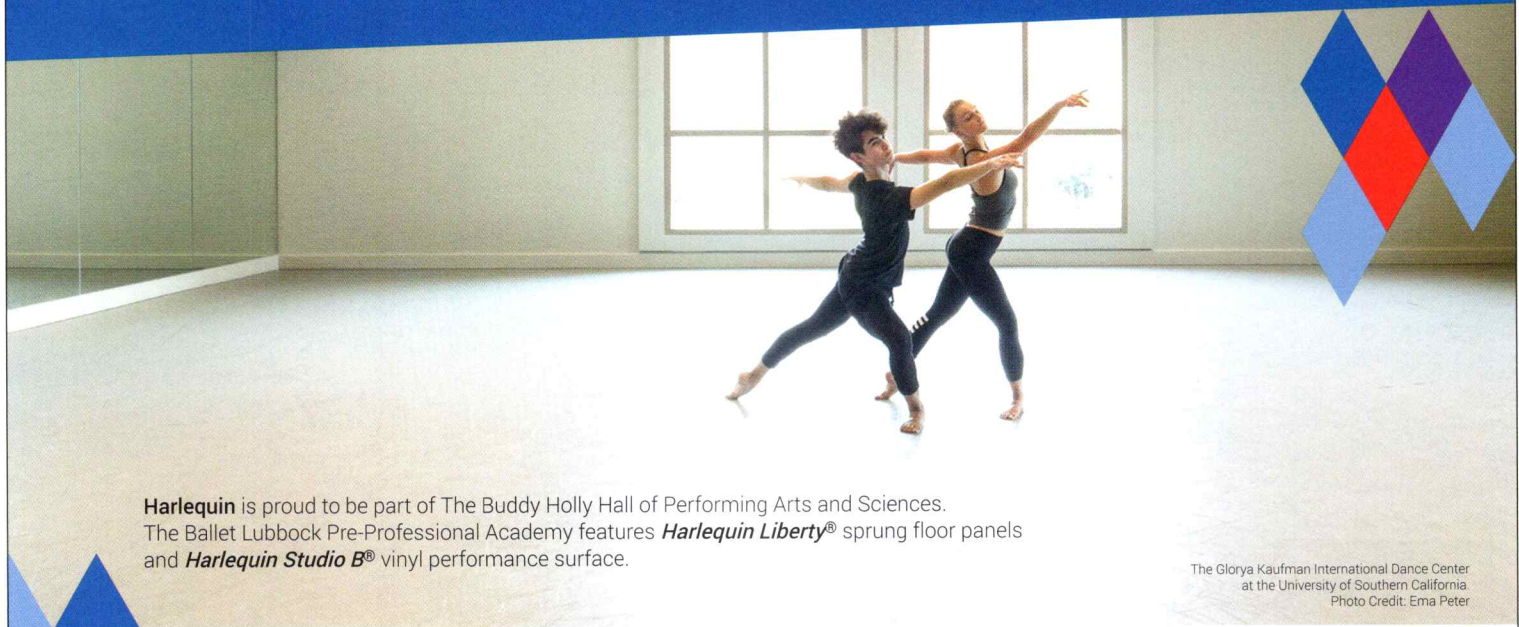


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The Glorvya Kaufman International Dance Center at the University of Southern California. Photo Credit: Erna Peter

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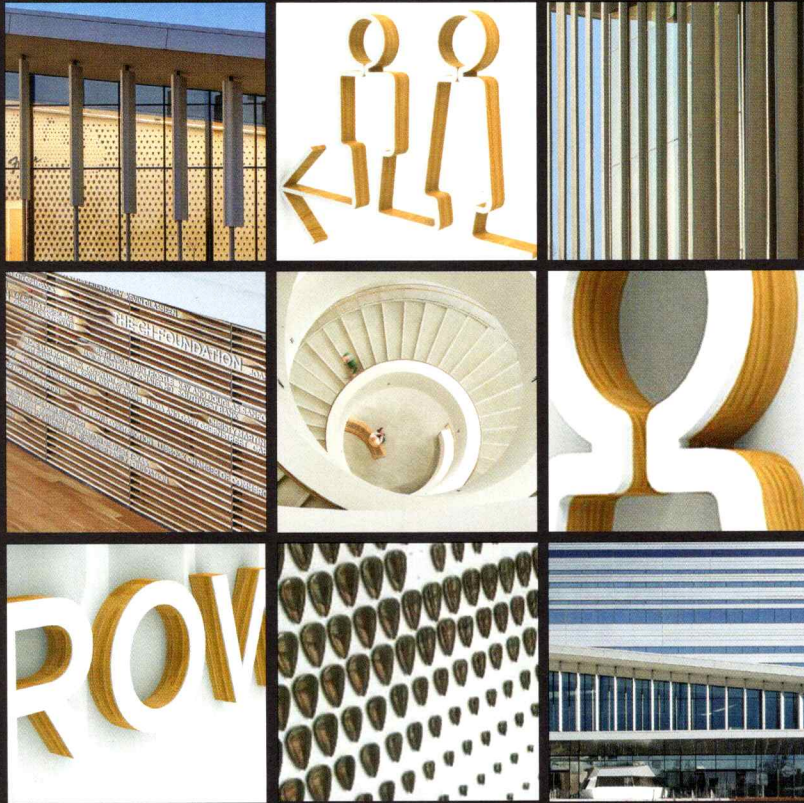
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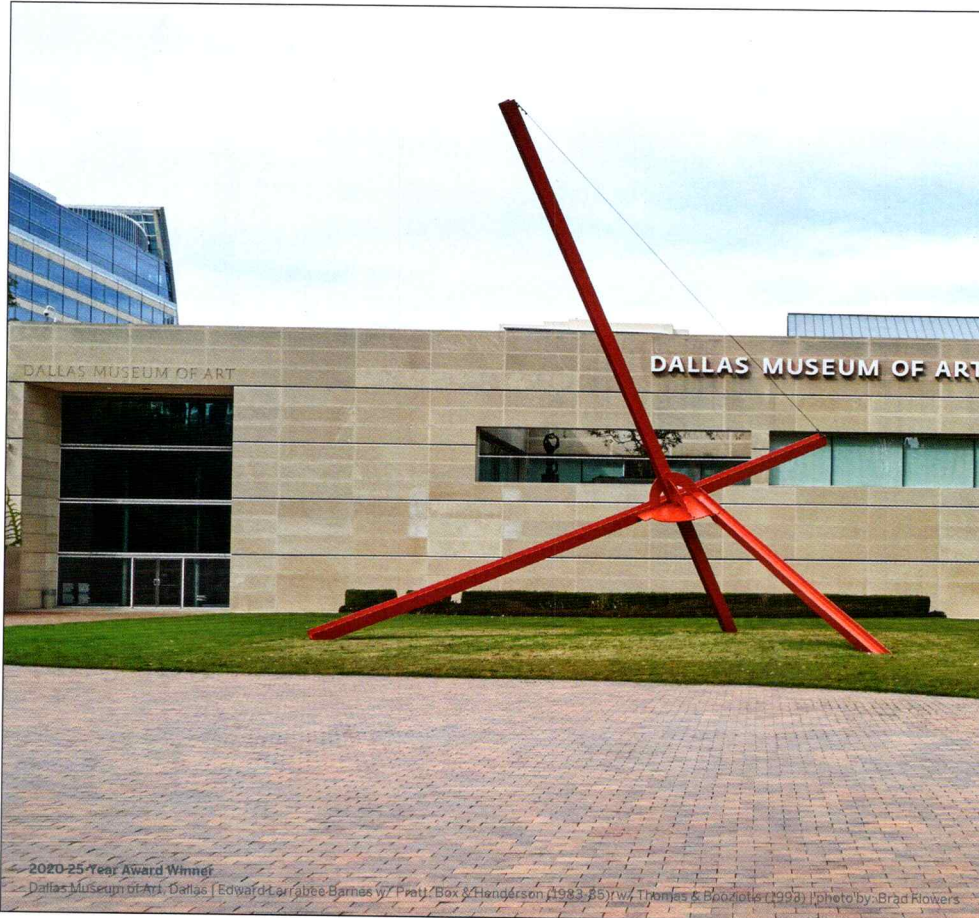




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**Consultants MEP ENGINEERS:** Jones DBR; **STRUCTURAL ENGINEER:** Walter P Moore; **CIVIL ENGINEER:** Duplantis Design Group; **LANDSCAPE ARCHITECT:** Kudela & Weinheimer Landscape Architecture; **TECHNOLOGY CONSULTANT:** Datacom Design Group

**Resources CONCRETE:** Cemex (BCS); **MASONRY:** ACME Brick Co (Veazey Enterprises); **CMU:** Texas LeHigh Cement Co. (Veazey Enterprises); **STEEL RAILING/MISC STEEL:** Myrex Industries; **COLD FORM STUD:** Baker Triangle; **MASS TIMBER:** Nordic Structures; **SHEATHING:** Georgia Pacific (Baker Drywall); **WATERPROOFING:** Tremco; **THERMAL INSULATION:** Roxul (Marek); **DOOR HARDWARE:** Allegion (Door Components LP); **GLAZING:** TriStar Glass Products (Vision Enclosure Walls); **CURTAINWALL:** Kawneer (Vision Enclosure Walls); **HOLLOW METAL DOORS:** Pearland Industries (American Door); **PAINT:** Sherwin Williams (LMI Painting); **ACOUSTICAL CEILING:** USG (Baker Drywall); **LINEAR METAL CEILINGS:** Hunter Douglas (Baker Drywall); **CARPET:** Bentley Mills (Architectural Floors); **TERRAZZO:** Southern Tile; **SPECIALTIES:** Solatube (Griesenbeck); **TOILET ACCESSORIES:** Bradley (Griesenbeck); **MARKER BOARDS:** Claridge (Griesenbeck); **FURNISHINGS:** FMG Haworth; **ELEVATOR:** Kone; **FIRE SUPPRESSION:** MLN; **PLUMBING:** Mitchell Chuoke; **PLUMBING EQUIPMENT:** A.O. Smith (Morrison Supply Co.); **PLUMBING FIXTURES:** Kohler, Chicago Faucets (Morrison Supply Co.); **AIR HANDLING UNITS:** Trane (Mechanical Piping Systems); **INTEGRATED AUTOMATION:** Siemens; **LIGHT FIXTURES:** LAI

## Brockman Hall for Opera, Houston

**Contractor** Linbeck Group

**Consultants MEP ENGINEERS:** Collaborative Engineering Group; **CIVIL & STRUCTURAL ENGINEERS:** Walter P Moore; **LANDSCAPE ARCHITECT:** Ten Eyck Landscape Architects; **TECHNOLOGY CONSULTANT:** Smith Seckman Reid;

**GEOTECHNICAL CONSULTANT:** Ulrich Engineers; **THEATER PLANNING AND DESIGN CONSULTANTS:** Fischer Dachs Associates; **ACOUSTIC AND AV CONSULTANTS:** Threshold Acoustics

**Resources CONCRETE:** TAS Concrete, Linbeck Group; **MASONRY:** Camarata Masonry, Dee Brown; **METAL:** W&W/AFCO Steel, Bosworth Steel Erection, Berger Iron Works; **WOODS, PLASTICS, COMPOSITE:** Brochstein's Millwork; **THERMAL & MOISTURE PROTECTION:** Chamberlin Houston, LS Decker, Certified Fireproofing, Marton Roofing; **OPENINGS:** Haley Greer, Overhead Door Company, Unified Door and Hardware, Noise Barriers; **FINISHES:** Drake Interiors, Marek Brothers Systems, Milam and Company Painting, Galindo and Boyd, Sigma Marble, Woodwright Flooring, Camarata Masonry; **SPECIALTIES:** Klingner Specialties Direct; **EQUIPMENT:** Gala Systems, Clemtex, Johnson Equipment; **FURNISHINGS:** Series USA, Longhorn Blinds of Austin; **SPECIAL CONSTRUCTION:** Texas Scenic, Wenger; **CONVEYING EQUIPMENT:** Otis Elevator Company; **FIRE SUPPRESSION:** Kauffman; **PLUMBING:** Mitchell Chuoke Plumbing; **HEATING, VENTILATING, AND AIR CONDITIONING (HVAC):** Letsos Company; **INTEGRATED AUTOMATION:** Siemens Controls; **ELECTRICAL:** Capp Electric; **ELECTRONIC SAFETY AND SECURITY:** RAE Security; **EARTHWORK:** AYG Construction, Environmental Allies, Construction Eco Services; **EXTERIOR IMPROVEMENTS:** B.Bell Builders, Houston Landscape.; **UTILITIES:** Diffco

## Buddy Holly Hall of Performing Arts and Sciences, Lubbock

**Contractor** Lee Lewis Construction

**Consultants ACOUSTICS, AUDIO/VISUAL AND INFORMATION TECHNOLOGY CONSULTANT:** Jaffe Holden Acoustics; **THEATER PLANNERS AND CONSULTANTS:** Schuler Shook; **STRUCTURAL ENGINEERS:** Entuitive, MWM Architects, Parkhill; **MECHANICAL AND ELECTRICAL ENGINEERS:** Crossey Engineering, Parkhill; **LAND SURVEYING:** Hugo Reed and Associates; **CIVIL ENGINEER/LANDSCAPE ARCHITECT:**

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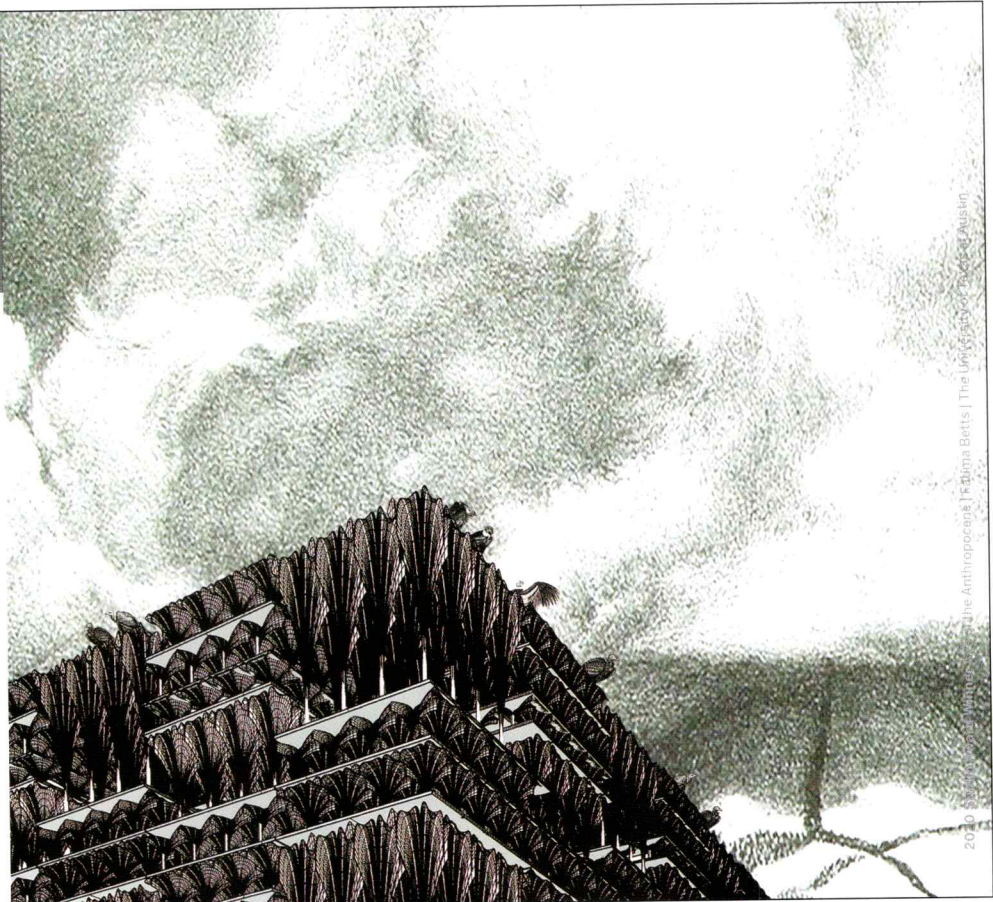
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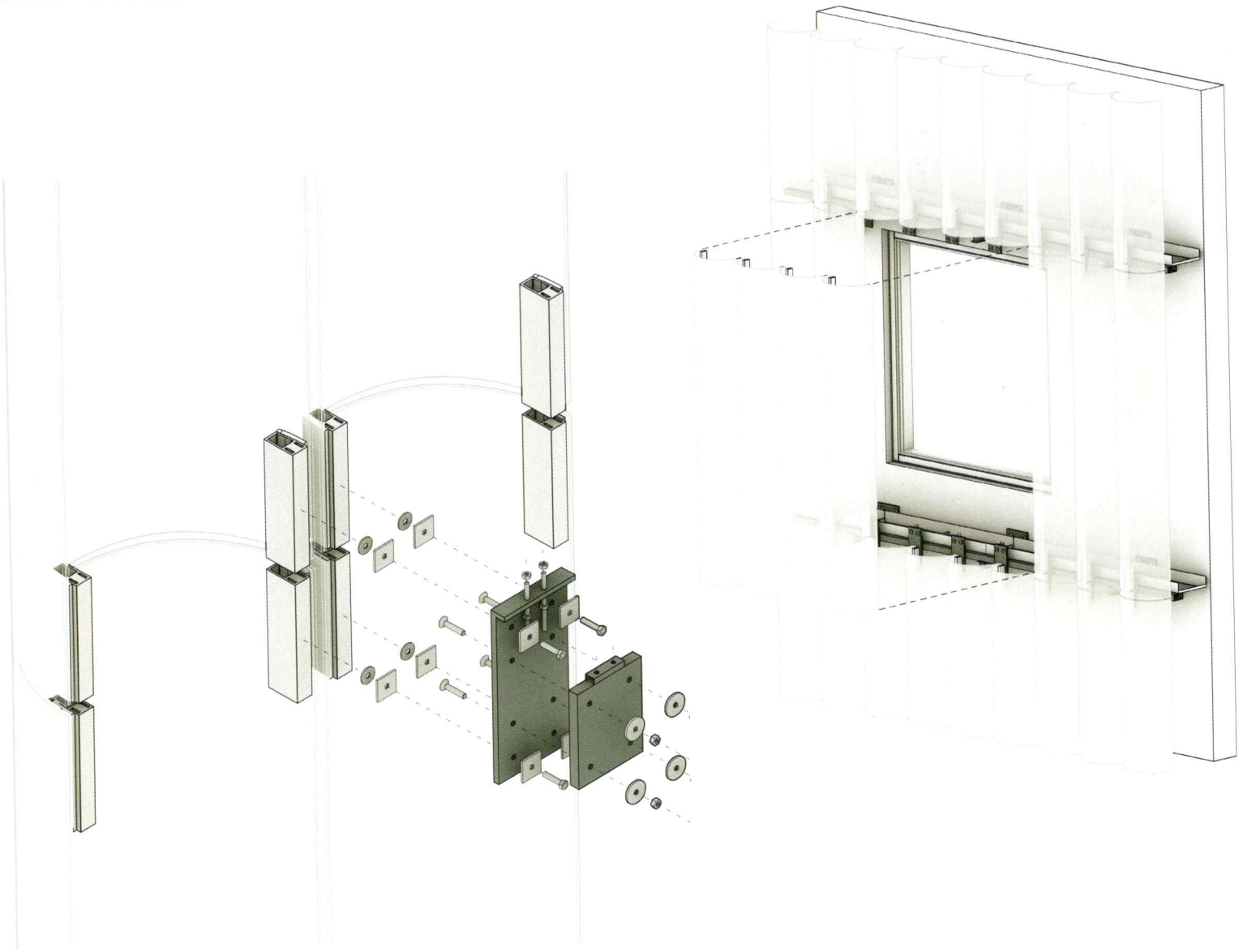
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## MFAH Kinder Building's "Cold Jacket" Facade

**T**he Steven Holl Architects-designed Nancy and Rich Kinder Building at the Museum of Fine Arts, Houston is clad with half-tubes of translucent glass that reduce solar heat gain by an estimated 70 percent. “Steven always had this idea of having a cold jacket outside the building to improve the performance and to articulate the facade,” says project architect Olaf Schmidt, “but the specific idea for the glass tubes came about when plexiglass rods were used in a study model during the design.” These rods inspired a full-tube design that proved too costly and difficult to imple-

ment and clean, so the architects pivoted to the half-tubes we see today — a solution that came with its own set of challenges.

Holl’s team partnered with German engineering firm Knippers Helbig to design an assembly that is elegant and sturdy. Galvanized steel outriggers anchored to the building’s concrete structure support a series of steel shelves upon which the weight of the glass tubes rests. Structural silicone attaches the glass half-tubes to aluminum clips that bolt to the steel frame and absorb lateral loads. Within the sizable cavity between the tubes and the concrete, there is also a catwalk for maintenance and cleaning.

Manufacturing the glass half-tubes also presented a challenge. Each half-tube, of

which there are about a thousand, takes multiple hours to form, starting as a flat piece of glass that is slowly heated until it droops under its own weight. After bending, pieces are laminated together in twos. Due to the large scale and quantity of the bent glass, manufacturing capacity became one of the selection criteria for the glass suppliers; the firm that was awarded the contract after supplying mock-up pieces, Shennanyi Glass in China, had the oven capacity to produce the tubes within the construction schedule.

White interlayers and an acid wash give the glass half-tubes a satin-like finish that exhibits a soft luminosity in bright sunlight, much like the clouds that inspired the building’s form. At night, they emit a fuzzy, mysterious light.