This image was taken from a car on the Mexico side of the Paso Del Norte International Bridge border crossing where U.S. immigration officials are reportedly turning away migrants before they get to the checkpoint at the U.S. border.

The Beaver Is Watching

Here are some things for sale at Buc-ee’s: dozens of varieties of beef jerky, jalapeño pepper jelly, fudge, yoga pants, gun cases, faux rusticated wood accoutrements, faux rhinestone belts, cowboy art, meaty kolaches, deer corn, American Hunter game feeders, artisan soap, camo tote bags, sports memorabilia, gummy worms, brisket, BBQ smokers, and just about anything else one could possibly want emblazoned with the portrait of the store's mascot, a cartoon beaver.

For the uninitiated, Buc-ee’s is a Texas gas station chain and so much more. Started in Lake Jackson, outside of Houston, by Arch “Beaver” Aplin III in 1982, the chain now has 33 locations throughout the eastern half of the

Ha Kuma Matata

KENGO KUMA’S ROLEX HQ IS ALMOST DONE. WE HAVE THE FIRST PHOTOS.

Another Kind of Bullet

It’s no hyperloop, but construction of a 200-mile-per-hour bullet train from Houston to Dallas could begin as early as next year. Add in the recently announced Amtrak partnership that will cover last-mile trips and tie into the rail company’s established interstate network, and Texas is looking at a major mass transit expansion.

Developers Texas Central Partners (TCP) will be privately financing the $15 billion, 240-mile-long high-speed rail line, and have been on a public outreach spree as they attempt to drum up support and garner feedback for their proposal. TCP argues that the Texas Bullet Train will bring in $3 billion in state and local tax revenue through 2040, in addition to the $36 billion in direct spending and tens

Reconsidering Houston and San Antonio

See page 30
KITCHEN PERFECTION

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Architects & Designers Building
150 East 58th Street, 3rd Floor, Suite 361
New York, NY 10155

LOS ANGELES
Costa Mesa Experience Center
695 Town Center Drive, Suite 180
Costa Mesa, CA 92626
When AN started its Southwest edition in November 2013, editor Aaron Seward set out to apply to Texas the AN methodology of examining a place through the built environment. As he stated at the time, “Texas—the home base of the Southwest edition, as well as the native land of its editor and publisher—is undergoing its most phenomenal period of growth and transformation since the 1970s.”

Much like the great state of Texas itself, here at AN we have also gone through growth and transformation, and one of the main changes is our new and improved national format. Instead of regional issues that ship locally to the four areas—East, West, Midwest, and Southwest—we feature all those places in one edition that goes out monthly.

While this is great for spreading Texas news across the nation, we miss the intense focus that the regional issue provided. Building on our all-Florida issue from April 2017, we are now excited to present our all-Texas issue.

Seward’s observation is as true now as it was then. We have seen massive urban projects such as Houston’s Bayou Greenway, Dallas’s Trinity River Corridor Project, and Austin’s Seaholm Intake redevelopment make huge strides toward completion.

Five years later, the reinvigoration of cities like Austin, Dallas, Houston, and many others around the U.S. is underway. However, the suburban and rural areas are also thriving. Whether in the suburbs of Houston or the hinterlands of Midland and Odessa, there is design in some of the farther reaches of Texas that has caught our eye.

Houston and the surrounding areas are still figuring out how to prepare for the next big storm that might hit. Some particularly interesting work is being done at Rice University. Rogers Architects, along with Houston-based engineering firm Walter P Moore (of Astrodome fame) have been working with the Severe Storm Prediction, Education, and Evacuation from Disasters (SSPEED) Center at Rice to develop strategies for a potential surge protection system that would protect Galveston Bay, the Houston Ship Channel, and thus vital components of the world’s seventh-largest economy (Texas). It is a massive scale project that would include building a series of protective islands in the bay.

Also, in this issue, we take a look at both the high-profile design projects underway, such as David Adjaye’s Ruby City, where a custom red concrete was developed in Mexico just for the project, as well as smaller projects like Houston’s new honkytonk Goodnight Charlie’s by CONTENT and Gin Design Group, where modern meets traditional. We are also excited about the new bullet train between Dallas and Houston.

We took a look at some off-the-radar places as well, such as the resource extraction infrastructures of West Texas, where photographer Leonid Furmansky risked life and limb to get incredible drone shots. In Alliance, Texas, shipping and logistics are king, and a city has popped up around them. And how could we make a Texas issue without looking at the U.S.–Mexico border? El Paso–based firm AECOM, which has been sending in Border Dispatches for the last year, has curated a special news section on the topic with six fresh essays from contributors around the country.

You may remember the old Pace Picante commercials where the cowboys complain that another salsa is “Made in New York Cee-tee.” It is our mission to not elicit that reaction when people read the Architect’s Newspaper Southwest edition, so we have solicited the support of a bevy of Texas sources, including Seward and Houston-based contributor Jack Murphy, both of whom supplied immeasurable support for this project.

Matt Shaw
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In Case You Missed It…

We corralled the top architecture and design stories from Texas buzzing about the internet over the past year—check out the highlights below.

For the full text and images for all of these stories, visit archpaper.com/tag/ICYMI.

Austin is getting its own “smart” street

Austin CityUP Consortium—an alliance of businesses, government agencies, nonprofits, and other organizations—is behind the Smart 2nd Street Living Lab, an effort to bring a smart city network to five blocks of Austin’s 2nd Street. This system will collect and analyze data to make the street safer to navigate.

Two Ai Weiwei sculptures come to Texas

Bike Austin currently boasts approximately 13,000 members—more than 1 percent of Austin’s population. So a sculpture titled Forever Bicycles has found the right home. The large-scale work from artist Ai Weiwei is part of The Contemporary Austin’s Museum Without Walls program and can be found adjacent to the Waller Creek Boathouse at 74 Trinity Street.

The Architecture Center Houston reveals designs for its new home

The Architecture Center Houston has opened its new location: the 1906 B.A. Riesner Building, located at 902 Commerce Street in the heart of the city’s original downtown area. Houston firm Murphy Mears Architects led the building’s renovation, but the center is currently closed due to flooding from Hurricane Harvey.

Morphosis tapped for Texas Tech expansion master plan

Morphosis is developing a master plan for the 40,000 square-foot expansion of the Museum of Texas Tech University, complete with new gallery space, a laboratory, and collection storage facilities. The “Universiteum” will showcase and reflect the school’s scope of research and creativity across the STEM disciplines, health sciences, humanities, and the arts.

North America’s largest eSports stadium is headed for Texas

Arlington has released plans to build the country’s largest eSports stadium, announcing the move in a joint statement with global architecture studio Populous and Esports Venues, LLC. The Arlington Convention Center will be converted into the 100,000-square-foot, eSports-exclusive arena and rebranded as Esports Stadium Arlington.

Santiago Calatrava’s second Dallas bridge faces engineering questions

The eastern bike and pedestrian lanes of the Margaret McDermott Bridge in Dallas remain closed after concerns came to light over the 1,200-foot-long, Calatrava-designed suspension arches. The bridge’s main span is self-supporting, and the arches hold up the eastern lanes.

For the full text and images for all of these stories, visit archpaper.com/tag/ICYMI.

Ellsworth Kelly’s “chapel” of colored light is realized at UT Austin

The Blanton Museum of Art at The University of Texas at Austin has finished Austin, the last Ellsworth Kelly project realized before his death in 2015. Austin is Kelly’s first built piece of architecture, and the T-shaped, secular sanctuary is flooded with multicolored light.

Santiago Calatrava’s second Dallas bridge faces engineering questions

The eastern bike and pedestrian lanes of the Margaret McDermott Bridge in Dallas remain closed after concerns came to light over the 1,200-foot-long, Calatrava-designed suspension arches. The bridge’s main span is self-supporting, and the arches hold up the eastern lanes.

After Calatrava initially proposed a $200 million bridge with four arches, the city was only able to wrangle $92 million, knocking the two interior archways off the bridge. The cost soon ballooned to $115 million, which the city promised to make up for through donations and value engineering. Engineers and the city of Dallas agreed to skip stress testing the arch’s cables over Calatrava’s protests, and combined with value engineering of the bridge’s adjustment rods, the cables have been vibrating wildly in the wind. Now those decisions may end up costing the city even more.

Seven months after the problem was spotted, engineers are still swapping emails with the city and haven’t given the bridge a go-ahead to open.
BIG unveils Austin’s first pro sports stadium

Austin Sports & Entertainment, with New York–based Bjarke Ingels Group (BIG) and STG Design, has released plans for a 1.3 million-square-foot, checkerboard collection of interlinked stadiums. The new East Austin District bills itself as Austin’s first pro-sports stadium and will host workspaces, convention space, retail, and a huge music arena.

Austin’s new public library reflects the city’s transformation

Austin’s new Central Public Library, designed by Lake|Flato with Shepley Bulfinch, opened last October. After some delays, the library, with a $125 million price tag, arrives as a major addition to downtown’s cultural landscape.

This review originally appeared in our February 2018 issue.

Chicago mocks Houston’s new Anish Kapoor sculpture, and a battle of words ensues

The Museum of Fine Arts, Houston installed a sculpture, Cloud Column, by Anish Kapoor, the same artist behind Chicago’s Cloud Gate (aka The Bean). The two works are remarkably similar, and writers in both cities took to the pages of their respective papers to throw serious shade and defend their hometown sculptures.

Mezzanines coming to Philip Johnson and John Burgee’s atrium in Houston tower

The owners of the Johnson/Burgee–designed Bank of America Center in Houston, a 56-story postmodern tower with a soaring atrium, want to glass in the lower level to create mezzanines that, while more low-slung, are infinitely more leasable.

Johnston Marklee’s Menil Drawing Institute to open this November

Houston’s Menil Drawing Institute will open to the public on November 3 and showcase the drawings of master artists from all over the world. Los Angeles’s Johnston Marklee designed the Drawing Institute’s home, while Michael Van Valkenburgh Associates will knit the building together with the existing structures.

Four mega-developments near Dallas make up the Five Billion Dollar Mile

With the recent wave of corporate office growth, Frisco, a city at the intersection of the Dallas North Tollway and State Highway 121, has seen a number of large developments take shape over the past five years. But the $2 billion Wade Park project has been on the brink of foreclosure four times.

The Contemporary Austin addition wins 2017 Best of Design Awards for Adaptive Reuse

Lewis.Tsurumaki.Lewis Architects renovated The Contemporary Austin, a museum formed from the merging of Arthouse and the Austin Museum of Art. The firm’s sensitive renovation was honored with AIA’s 2017 Best of Design Award for Adaptive Reuse in December.

Steven Holl–designed Glassell School of Art opens at the Museum of Fine Arts, Houston

On May 20, the Museum of Fine Arts, Houston opened the Glassell School of Art, designed by Steven Holl Architects. The building is the first of three to be realized in the museum’s $450 million expansion of its Susan and Fayez S. Sarofim Campus.

Border wall documents show path of destruction through Texas homes, wildlife preserves

Newly released records have cast light on the Army Corps of Engineers’ assessment of border wall plans in South Texas. Spanning 33 miles across the Rio Grande Valley, the 15 proposed walls would tear through wildlife habitats and RV parks, and involve costly legal battles.

Houston unveils post-Harvey downtown master plan

Downtown Houston released an ambitious master plan after Hurricane Harvey, following 18 months of work and input from hundreds of stakeholders. Creating walkable streets, a 5-mile green loop around the city’s core, new design guidelines, and more, the 20-year plan puts an emphasis on sustainable, resilient development.

First look at Michael Maltzan’s Moody Center for the Arts in Houston

The Moody Center for the Arts, designed by Los Angeles–based Michael Maltzan Architecture (MMA), is now complete. The 50,000-square-foot, $30 million facility at Rice University serves the campus and the general public as an experimental platform for making and showcasing works across disciplines.

This review originally appeared in our October 2017 issue.

Halprin’s Heritage Park Plaza in Texas will receive complete restoration

Landscape architect Lawrence Halprin’s postmodern Heritage Park Plaza in Fort Worth was closed to the public in 2007 due to deterioration, but that should soon change with the help of Studio Outside and the architects at Bennett Benner Partners.

This article originally appeared in our October 2017 issue.

Steven Holl–designed Glassell School of Art opens at the Museum of Fine Arts, Houston

On May 20, the Museum of Fine Arts, Houston opened the Glassell School of Art, designed by Steven Holl Architects. The building is the first of three to be realized in the museum’s $450 million expansion of its Susan and Fayez S. Sarofim Campus.
Working by calculation, engineers employ geometrical forms, satisfying our eyes by their geometry…their work is on the direct line of good art,” Le Corbusier described the engineer’s aesthetic. This kind of engineering expressionism is employed to interesting ends by Ennead Architects at the Engineering Education and Research Center (EERC) at the University of Texas at Austin’s Cockrell School of Engineering. The building features a dramatic glass-enclosed atrium that connects disciplines on a monumental staircase and provides sightlines into working laboratories, arranged like a page of comic book panels. A glass ceiling spans the 80-foot-wide space, and two towers on either side contain multidisciplinary research labs and electrical and computer engineering research spaces, respectively. The unification of disciplines in the atrium is expressed through a series of expressive parts: A trusslike bridge, a bespoke waterjet-cut spiral staircase, and slanted columns below the mezzanine level all show off the aesthetic of an engineer rather than one seamless whole. This honesty is a direct appeal to the students and engineering community who will inevitably congregate in the atrium.

Alex Wong

Imagine shopping for groceries in a LEED Gold–certified building on a site once occupied by Austin’s airport, and you can picture the Mueller H-E-B structure designed by Lake|Flato Architects. The glass-clad building is one of the many collaborations between the Texas supermarket chain and the San Antonio–based Lake|Flato. Triangular steel trusses support a soaring, curved roof made of corrugated metal.

The H-E-B Market’s design responds to Austin’s highly variable humidity with a vestibule that transports and expels heat out the top. The building is also a testing ground for many sustainable concepts, such as a rain garden that doubles as a water filtration system, rooftop sensors that monitor how much daylight the building gets, and smart air-conditioning—all aimed at reducing energy use and improving the interior environment for shoppers. In 2016, it was awarded the AIA Committee on the Environment Top Ten Award, recognizing the architects for their commitment to sustainability.

Alex Wong

The materials are still offgassing at Goodnight Charlie’s, but every great pair of cowboy boots was new at one point, right? Houston’s newest (and Montrose’s only) honky-tonk is more barn than Bauhaus, but don’t get it twisted, the design elements have a great rhythm. Texas is right here, so says CONTENT Architecture, with its take on the vernacular form both old and new. The rectangular structure, clad in rough cedar, provides a generous cut for the recessed entrance that is as welcoming as an East Texas shotgun house. The cedar is evocative of fenceposts that dot the countryside. Louvers run front to back and then up to the gable over the patio—the de facto front porch. Hefty posts carry the weight vertically, like the jacked-up beach houses of Galveston. Gin Design Group worked some boot-scootin’ inside, creating a glowing crescent moon for the stage and cheeky Alamo print wallpaper for the restrooms.

Elizabeth Blasius

Mueller H-E-B
Architect: Lake|Flato Architects
Associate Architects: Selser Schaefer Architects
1801 E. 51st Street
Austin, TX
512-474-2199

Mueller H-E-B

Goodnight Charlie’s
Architect: CONTENT Architecture
Interior Design: Gin Design Group
2531 Kuester Street
Houston
832-986-6511

Goodnight Charlie’s

Engineering Education and Research Center (EERC)
Architect: Ennead Architects
2501 Speedway
Austin, TX
512-232-2147

Engineering Education and Research Center (EERC)
Another Holl in the Wall

Steven Holl’s famed Stretto House, which was completed in 1991, is getting an update. When the home’s new owners found themselves in need of more space for their family than the original 2-bedroom residence provided, they tapped Dallas-based Max Levy Architects to design an addition that respected the iconic building without being devoid of personality. The new extension recedes from the original structure (which Levy also renovated), connecting to the original Holl house by way of a long gallery. Levy’s addition is a series of bedrooms and screened porches that continue Holl’s material language while taking on a new shape.

Three’s Company

Texas is about to get some more young talent in the academic world, as three new faces are headed to Texas A&M this fall to begin work there. AN has confirmed the three. Native Texan James Michael Tate has spent time in New York, Los Angeles, and Ann Arbor, at the University of Michigan. He tells AN he has been visited by the ghosts of Rowe, Hamilton-Harris, Slutzsky, and Hejduk in the past month. Marcelo Lopez-Dinardi comes from the Critical Curatorial Conceptual Practices (CCCP) program at Columbia University, and has recently taught at Barnard and Columbia, as well as New Jersey Institute of Technology. Andrew Tripp is currently at Mississippi State and has previously been at Cooper Union and Penn, and has been researching modernity in the Deep South. The trio should provide some fresh perspectives on the rural Texan landscape and its diverse building culture.

Making a Run for the Border

During the spring of 2018, 13 architecture studios in Mexico and the U.S. undertook an ambitious shared project to examine U.S.-Mexico topics in architecture. The studios investigate the many ways that the two countries perform as a region with shared economies, infrastructures, languages, and histories. The exhibition focuses on student work from the 13 studios along with photographic documentation of the studios’ sites by Iwan Baan, divided into five topic areas: territorial economies, migration, housing and cities, tourism, and creative industries and production. Conceived by Tatiana Bilbao and designed by NILE, the exhibition provides an opportunity to spatially redefine a region so often distorted by politics. Two Sides of the Border will be on view at the Yale School of Architecture Gallery from November 29, 2018–February 9, 2019.

Send tenure applications and studio syllabi to eavesdrop@archpaper.com.

MS

HISTORIC LIONS MUNICIPAL GOLF COURSE IN AUSTIN IS NOW A THREATENED LANDSCAPE.

Civil Dis-course

FACING PRIVATIZATION, A CIVIL RIGHTS LANDMARK IN AUSTIN IS HOW A THREATENED LANDSCAPE.

The city decided not to renew the lease for Lions Municipal Golf Course in 2011.

When nine-year-old African American caddie Alvin Propps was arrested for playing golf at the newly desegregated Lions Municipal Golf Course in Austin, Texas, in 1950, it set off a firestorm that eventually made its way to the mayor’s office. As the first peacefully desegregated golf course in the former Confederate South during the Jim Crow era, the course became the center of controversy. But when the mayor’s office decided to drop the charges, it set a precedent, and Lions Municipal became open to African Americans from that day forward.

However, the course is now threatened by private development, after the City of Austin decided in 2011 not to renew the lease on the 1924 course just two miles west of the Texas state capitol. In 2019, it could be handed over to developers.

In a post by the Cultural Landscape Foundation, Glenda Gilmore, the Peter V. and C. Vann Woodward Professor of History at Yale University, said, “Historians searching for the impetus of the ‘classical phase of the Civil Rights Movement,’ preceding Brown v. Board in 1954 and the Montgomery Bus Boycott in 1955, have posited a ‘long civil rights movement’ that preceded those iconic struggles. In other words, Lions Municipal Golf Course is representative of the ‘birth of the civil rights movement.’” The city has floated the idea of preserving the clubhouse, but not the course. However, many critics say that because the structure wasn’t part of the site when the desegregation happened, preserving the clubhouse alone is not enough. The Congressional Black Caucus has voiced support for measures to protect the course, and the Texas House of Representatives, the City of Austin, and Travis County, Texas, have all passed resolutions acknowledging the historic importance of the site.

Facing privatization, a civil rights landmark in Austin is now a threatened landscape.
The Beaver Is Watching continued from front page state. Like a watering hole on the suburban savannah, these mega-size mini-marts serve as a social condenser. They provide a place where the diverse populations of Texas can graze together.

To generate anticipation, Buc-ee’s maintains billboards hundreds of miles out from its stores, inducing in travelers’ minds a yearning for a bathroom break and a bag of “Buc-ee’s nug-ees” before they know their desires themselves. The ads are meme-worthy and infectious: “OMG! It’s a beaver! LOL!”, “My overbite is sexy,” “The Top Two Reasons to Stop at Buc-ee’s: Number 1 and Number 2,” and “Only 262 miles to Buc-ee’s. You can hold it.” They lodge in the brain much like the chain’s corn nug-ees stick in one’s teeth.

Buc-ee’s are big. Full-size versions of the store sport over 100 gas pumps. They are truck stop–scaled attractions with no trucks, as big rigs are not allowed at the chain. The number of pumps makes for an absurdly long shade canopy, as if the plan of a normal gas station was enlarged in one dimension prior to construction. It is a gesture of logistical horizontality, and the form embodies the engulfing flatness of a state that takes 12 hours to cross diagonally. The structure captures the state’s vitality and artificiality; architecturally, Buc-ee’s inspires the same synthetic blend of patriotism and awkwardness as a stretch Hummer.

Some locations include car washes, built with the same strip mall vocabulary as the main building. At the recently opened Buc-ee’s in Katy, the conveyor belt apparatus is 255 feet long, and officially set the Guinness World Record for the world’s longest car wash. But there’s an ecological reason for this. According to Aplin, quoted in the Houston Chronicle, the car wash’s length and the number of brushes involved means that it uses less water than smaller operations:

“You’re not trying to do it in 50 feet. You have more time...it’s very eco-friendly.”

Inside, the store’s most valuable amenity is its clean restrooms. The bathrooms are immaculately maintained and generously sized, with fully enclosed toilet rooms that are finished, as Kevin Bacon’s character says in Tremors might describe it, in tile that might sell raw food materials. Square beige tiles cover the floors and walls everywhere. Above, the 2x4 pattern of fluorescent lights is a relentless perspectival companion, the grid against which the goods are seen and reflected on every individually packaged unit of merchandise.

Buc-ee’s is big business for its owners and a decent job for its employees. A sign advertises wages for cashiers starting at $14/hour, nearly the $15/hour rate recommended by some progressives as a baseline minimum wage. Municipalities, knowing the chain’s popularity, shell out to land new locations. This year, a Buc-ee’s will open in Denton, where the city agreed to $8.1 million in sales tax reimbursements in exchange for the new 38-acre development. The appeal is legitimate, as each location attracts scores of motorists and generates up to 200 jobs, all contributing to the state’s strong economy.

Buc-ee’s bustles at all hours in its performance of consumer culture. Here, people from all walks of life, about to partake in all kinds of activities, arrive in hot pursuit of sustenance and supplies. Much as Buc-ee’s creates its own network of road trip destinations today, in the early 1970s the Truckstop Network, a project by the briefly Houston-based Ant Farm, reimagined the American freeway system as an infrastructure for “media nomads.” They proposed a set of support modules that would provide essential services for travelers, as well as communication services to allow for the broadcast of original content directly to the public. But now that unlimited streaming is the norm, the mediated aspect of Ant Farm’s dream feels outdated. What endures are the creature comforts that still spur us to pull over and join the masses in search of junk food and cheap fountain drinks.

In New Braunfels, Texas, near San Antonio, is the world’s largest gas station, which includes 60 gas pumps, 1,000 parking spots, and a 67,000 square-foot convenience store with 80 soda fountain dispensers.
Queens’ new Elmhurst Community Library serves one of the most diverse and vibrant communities in New York. Designed by Marpillero Pollak Architects, the LEED Silver-rated facility features two structural glass-encased reading rooms that allow light to flood in during the day and offer glimpses of the state-of-the-art library setting at night. Erected by W&W Glass, its glazed features have become beacons for the community, drawing its knowledge-hungry members to the wealth of information within. Read more about it in Metals in Construction online.
UNVEILED > OFFICE

Architect: Neil M. Denari Architects
Client/Developer: Sotoak Realty
Location: El Paso, TX
Expected completion: 2020

Los Angeles–based Neil M. Denari Architects (NDMA) has unveiled plans for a 10,000-square-foot office and gallery addition slated for the Sotoak Realty company in the Union Plaza District of El Paso.

The adaptive-reuse project aims to add a sculptural rooftop pavilion to an existing three-story red brick warehouse. The proposed addition cantilevers 18 feet over an adjacent street, and features a red aluminum panel soffit designed in homage to the region’s clay-rich soils.

For the project, the designers have created a north-facing window wall that will capture daylight, a feature that compliments an interior light well connecting a rooftop terrace with the building’s main stairs and a lower level gallery. Renderings for the project depict a bright open office area flanking a cluster of executive suites, with perforated metal panel window walls lining the eastern-facing portions of the space.

The project is currently entering the construction documents phase, according to the Texas-born Neil M. Denari, principal at NMDA. The project is expected to be completed in 2020.

Antonio Pacheco

UNVEILED > OFFICE

Architect/Landscape architect: West 8 Urban Design & Landscape Architecture
Client: Houston Botanic Garden
Location: Houston
Expected completion: 2020

Renderings have been revealed for the forthcoming Houston Botanic Garden. The 120-acre garden will be separated into tropical, subtropical, arid, and Mediterranean climates, and will include a variety of zones such as a Glade and Events Garden, an Edible Garden filled with a diverse array of plants, and a 4-acre Global Collection Garden. The project is being overseen by the Dutch firm West 8 Urban Design and Architecture, which has worked on projects such as New York’s Governor’s Island master plan.

Visitors will enter the garden by crossing a bridge over the Sims Island oxbow onto the tree-lined Botanic Boulevard. Shading structures, described as “living alcoves,” will populate the garden, giving visitors a reprieve from the Texan sun. Framing the more formal interior are natural ecosystem gardens that run along the boundary bayous and display the diversity of flora within Houston. The Houston Botanic Garden plans to open its first phase, fittingly titled “Botanic Beginnings,” to the public in 2020.

Drew Zeiba

UNVEILED > BALLPARK

Architect: HKS
Client: Texas Rangers/City of Arlington
Location: Houston
Expected completion: 2020

The Texas Rangers will move to a “game-changing” HKS-designed stadium in Arlington by 2020. The 1.7 million-square-foot ballpark will hold 41,000 seats, and will be home to games ranging from high school and college-level sport tournaments to international events.

The $1.1 billion baseball park broke ground in September 2017 and is now under construction. When completed, Globe Life Field will join the Texas Live! entertainment district as a new destination for entertainment tours.

HKS took into consideration the hot climate of the Metroplex. The massive retractable roof is one of the examples of climate-controlling infrastructure in the stadium designed to improve the experience of watching games.

The design of a large plaza and level-changing landscape outside the stadium was inspired by Texas farmhouse porches. The project also borrowed elements from other ballparks; for example, the 18 arches in the north wall were a tribute to the old Globe Life Park, located just a few hundred yards away.

Alex Wong
Another Kind of Bullet continued from front page of thousands of projected construction jobs.

TCP is still hashing out the exact station locations, but planning to build the 60-acre Dallas stop south of the Kay Bailey Hutchison Convention Center, with a footbridge from the station to the convention center. On the other side of the 90-minute trip in Houston, TCP has chosen the city's Northwest Mall as the preferred location for its station. The mall site will give way to a 45-acre, multilevel train complex with easy access to I-610 and U.S. 290. Additional stops between the two cities, such as in the city of Bryan/College Station, have already been confirmed.

Still, not everyone is on board with the rail plan, and landowners along the proposed route have fought and lobbied their state legislators over the company's possible use of eminent domain to acquire their property. TCP has outlined its process for picking up the required properties, including offering market value for parcels in the Bullet Train's path and pledging to minimize the impact on landowners. That hasn't stopped the opposition from filing a flurry of bullet train bills in the state senate, though only two of the proposed 20 measures managed to pass. As a result, the state will not use taxpayer funds for the project, a move that TCP did not oppose.

The free-market funding requirement hasn't slowed down the Bullet Train's progress, and the Federal Railroad Administration (FRA), a subsection of the United States Department of Transportation, has given the draft environmental impact statement (DEIS) the green light. The FRA also proposed an optimal route that would disrupt the least amount of people, and engineering and construction firms WSP, Fluor, Bechtel, and Lane Construction are now all helping to lay the groundwork for the project's eventual construction.

The Amtrak tie-in certainly won't hurt the project's chances, but high-speed rail remains notoriously expensive. Although high-speed rail has historically floundered in the U.S.—such as the $77 billion north-south bullet train currently under construction in California—TCP's business plan, and the use of private funds, combined with the high level of government support, has helped the project avoid the hurdles plaguing similar projects. Jonathan Hilburg

In New York, passing subways can shake entire buildings, but that wasn't an option for Columbia University's new Jerome L. Greene Science Center. Home to sensitive laboratory and imaging equipment requiring exceptional stability, the design by Renzo Piano Building Workshop relies on a steel structure to reduce floor vibrations to a miniscule 2,000 mips. Even as the elevated No. 1 train roars past, this helps ensure that nothing distracts from the scientific advances being made within the center's unshakable walls. Read more about it in Metals in Construction online.

Stein Institute of New York
WWW.SINY.ORG
Volleybar Ball

HOUSTON IS NOT NECESSARILY KNOWN FOR URBAN PLACES: CAN A VOLLEYBALL BAR FILL THAT ROLE?

Houston is a city that revels in the intersection of event and space—it certainly has an abundance of both. Adjacent to one of Houston’s meandering and often overflowing bayous in what was once an empty lot turned parking lot, Sideout Volleybar responds to the city’s social pressures and urban conditions. This volleyball social club opened in the Northside neighborhood in June 2017 and combines casual sports, bright lights, and beer.

AN contributor Jack Murphy and I decided to do a bit of participant observation on a recent Wednesday and headed over for burgers and beer. Sideout has three courts lined on two sides by a covered observation porch along with a bar house, a bean bag toss court, a dog area, and a food truck parked outside. “It’s like an athletic ice House,” Jack observed, referring to the open-air beer joints that have long dotted Houston’s meandering and often overflowing bayous in what was once an empty lot turned parking lot pylons poking out of the sandy courts, which were installed on top of the parking lot surface, like a Houston version of “Sous les pavés, la plage!”

This particular evening was both a trivia night and a league night, so the jarring patter of trivia questions layered over the chatter of various teams on the courts, all atop the soundtrack of greatest hits from the early 1990’s. The music of 311 was on heavy rotation. It was a ball. Sideout is a bar for beach volleyball and this seemed simple enough. The venue calls itself a “volleybar,” but the place is alive with activity: What we discovered was a veritable volleybar ball.

“I think we are in the 1 percent of people not wearing an obnoxious league shirt,” Jack comments. The team players wear generic loose fitting league T-shirts, distributed by Houston Sports & Social Club. For experience, the graphics on every shirt are the same, so the 20-odd teams are differentiated by a range of colors that evokes a middle-school summer day camp. What is illustrative to the architect in this situation is that what is happening is really an event-based urban choreography. Houston is a city of unparalleled diversity with very few circumstances that allow for the public to appear together—but here, people come in droves. By our rough count, there must have been nearly 200 players at any given time in the complex: trivia sharks, volleyball players, dog-walkers, and even a few just plain barflies. I can’t help but imagine the league T-shirts as some type of Situationist uniform à la Constant’s Homo Ludens.

Will Thomas, one of Sideout’s owners and a local musician, cited many of the Tex-Mex establishments of his youth and their “organic informality” as his inspiration for the place. Thomas is a partner in W2 Development, a company responsible for many of the recent commercial developments in the neighborhood.

Nearby, there is a new metro light rail stop, the White Oak Music Hall, designed by Schaum/Shieh (see page 28), a dramatic bridge over a river (a bayou, upscaled), and a hike and bike trail in the works, all set in a loose assemblage that doesn’t quite amount to an urban system until you see it activated through its events. Whether it’s an outdoor concert, a cinema screening, or, of course, league night at the Volleybar, each time you visit, you might find yourself in what feels like a different city.

If you don’t mind the sartorial constraints of the league T-shirt and would enjoy the feeling of standing at the center of a sociality you can’t quite perceive the edges of, then come over to the Sideout Volleybar. If bumping, setting, or spiking isn’t your thing, then at least you will find a unique place to imbibe and watch the sun set against the Houston skyline. Kris Kelvin
IF YOU HAVE ANY INTENTION OF BUILDING OVER 40 FEET

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A SCULPTURAL CONCRETE CANOPY MADE WITH DIGITALLY DESIGNED AND FABRICATED FORMWORK CREATES SHADE AND CAPTURES RAINWATER IN A SAN ANTONIO PUBLIC PARK.

As implied by its name, Confluence Park overlooks the meeting of San Pedro Creek and the San Antonio River. Located about three miles south of downtown, the park acts as a gateway for the historic Mission Reach section of the San Antonio River. The $13.7 million project includes an education center and extensive landscaping that illustrates the diverse biomes of Texas.

But what most visitors will remember about the 3.5-acre park are the nearly 30-foot-tall concrete petals that emerge from the ground to form a sprawling overhead canopy. Twenty-two of these sculptural panels are clustered together to form a single, large, open-air pavilion. Another six are paired together to form three smaller gathering areas. In addition to providing relief from the South Texas sun, these panels are paired together to form three unique petal shapes. These three forms were refined digitally using Grasshopper and Rhino. The resulting computer files were then used to manufacture the fiberglass “negatives” that were shipped to San Antonio to be used as formwork for the petals.

Each of the park’s 28 petals was cast on-site but not in place. Given their complex geometry, a portion of the petal had to be exposed during the pour. This resulted in two contrasting concrete textures: a smooth finish where the concrete was poured into the fiberglass form, and a broom finish where the concrete was left exposed. As with many other aspects of the project, a custom solution was required here, too. A special eight-inch broom was used to apply the finish consistently to the petal’s curved form and to emulate the flow of water down the petals.

Despite the weight of the concrete petals—individual petals weigh between 15 and 20 tons each—the resulting structure feels remarkably light. The space between individual petals contributes to this feeling of weightlessness, while acrylic lenses embedded in the concrete add a bit of playfulness to the overall composition.

Confluence Park demonstrates what is possible when a highly collaborative interdisciplinary design team works with an educated client to create something truly unique. It is only fitting that a park built to celebrate the confluence of diverse bodies of water be created by a confluence of diverse design professionals.

Brantley Hightower

This article originally appeared in the July/August issue of Texas Architect magazine.
Counter-clockwise from upper left: Styrofoam molds were milled by Kreysler & Associates on their 5-axis CNC router in California. These were used to make fiberglass molds to form tilt-up concrete units. Neighboring petals were joined to one another with two steel pin connections. The finished structure has two finishes—a smooth finish where the concrete was poured into the fiberglass form, and a broom finish where the concrete was left exposed.

Opposite: 30-foot-tall concrete petals soar above the 3.5-acre park.

Resources

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**Roadside Spectacular**

**A BIG BROTHERS BIG SISTERS RISES IN DOWNTOWN HOUSTON WITH AN APPEAL TO THE STREET.**

New York–based studio Agency–Agency recently completed a new, light-filled headquarters for Big Brothers Big Sisters (BBBS) Lone Star in downtown Houston. Designed alongside local firm Method Architecture, the 20,000-square-foot structure increases the visibility of the national nonprofit and connects it with its core demographic of volunteers and lower-income families nearby.

Featuring a pentagonal plan, the muted, beige-gray building sits three stories tall and includes massive windows that cut through the facade, unveiling activity within. A full-height, yellow-walled atrium invites visitors into the facility while pops of coral and teal are painted throughout, adding to the interior’s playful atmosphere.

“An old idea of nonprofits is to lean heavily toward modesty and frugality to show philanthropists a greater sense of need,” Pierce Bush, CEO of BBBS Lone Star, told Texas Architect. “Here, the decision was made to go bold.”

BBBS Lone Star services Greater Houston, Dallas, and Tarrant counties, as well as West Central Texas. Agency–Agency wanted the design to speak to the organization’s leadership and influence across half the state. Creating dynamic views in and out of the facility was an important feature of the project. The interior program houses community spaces on the first floor, offices on the second floor, and a flexible event and activity space on the third along with an outdoor terrace. “The scale of the building responds to the need to be visible in that part of the city,” said Tei Carpenter, director of Agency–Agency, to Texas Architect. “It’s meant to be seen at the speed of traffic.”

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**Alliance for A New Urbanism**

Intermodal distribution centers, like this one in Alliance, Texas, create an interface between multiple modes of transportation, including tractor trailers and freight trains.

If you fly into the Fort Worth Alliance Airport (AFW), it is likely that you are some kind of cargo. You might be arriving from any number of foreign points of origin, and, upon touching down, you would then be transferred to a distribution center that would facilitate your delivery to an awaiting train car or tractor-trailer. While all of this is happening, you still have not yet officially entered the U.S., at least for import duty purposes. You’ve entered the Alliance Global Logistics Hub, notable because it is both original and exemplary. It remains categorically significant for its size and configuration: More than just an airport and intermodal distribution facility, Alliance is, in fact, a privately owned and managed master-planned community that includes housing developments, community centers, and other civic infrastructures. Alliance is also designated Foreign Trade Zone #198 and bills itself as the first exclusively industrial airport in the U.S.

The Alliance Global Logistics Hub, as well as the larger community into which it is integrated, might be read as the product of a purer logistical vision. The hub’s promotional material highlights the frictionless intermodal transfer of inventory from air to train or tractor trailer. Indeed, intermodality is the dream of the logistician—a world in which any misalignment or discontinuity has been anticipated and smoothed. It allows the material in transit to operate as information to be managed more than as material to be handled. This same impulse characterizes the ways in which Alliance explains its location: not in terms of relative distance, but in delivery times and access to populations. In two hours, an airplane can be in Chicago or Mexico City, and in 1,000 miles, a truck can be within reach of 153 million U.S. residents.

Hilliwood Properties, belonging to Ross Perot Jr., initiated Alliance, Texas, through a combination of well-timed land acquisitions and clever leveraging that anticipated both the growth of the region and the growth of the logistics sector. For example, as the Fort Worth airport’s capacity was at its limits, the Alliance Airport was there to absorb the extra traffic, but only in certain conditions that included future tax abatements and operating rights. This was the beginning of the partnership between Hillwood and the City of Fort Worth that, when manifested in urban form, can blur the distinctions between public and private investment and oversight.

The irony that the scion of one of America’s most ardent protectionists would find his fortune through international logistics, transshipment hubs, and free trade regulations is not lost on the coverage of Alliance. Perot Jr. has signaled his willingness to “keep building big logistics parks for American firms supplying U.S. jobs.” The logistics hub is indeed the anchor of Alliance, both financially and in terms of employment. However, for all the emphasis on how the Alliance logistics hub can obviate boundaries, promotional literature for Alliance’s residential sectors emphasizes locality, belonging, and inclusiveness, citing its “integrated housing solutions,” entertainment, and employment support services. But neither does Alliance appear to be a monoculture, with a nearby mosque, temple, church, and even a replica of Stonehenge made with segments of oil pipelines.

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**Jesse LeCavalier**
106 7th Ave Lobby, NYC
Aaron Scott Kirsten Interior Design
Walls: Neolith Estatuario

Cafetería Y Heladería Xoco, Spain
Floors, Walls, Countertops: Neolith Calacatta

Hotel SH Valencia Palace, Spain
Walls: Neolith Estatuario

The Dunhill Lobby, NYC
Walls: Neolith Iron Corten

Enigma Restaurant, Spain
RCR Arquitectes
Floors, Countertops, Walls: Custom Neolith

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In 2007 the late artist and philanthropist Linda Pace—of Pace jarred salsa fame—had a vision of a ruby-tinted arts city come to her in a dream. The city, as Pace dreamed it, would become a rough outline for the 14,000-square-foot Adjaye Associates–designed museum complex that will house her foundation’s art collection in San Antonio. Pace passed away in 2007; more than ten years later, her vision is being brought to life bit by bit, an endeavor that is currently in full swing ahead of the building’s projected 2019 opening date.

The $16 million dream is being translated into reality by architect David Adjaye and an international network of local architects, contractors, and fabricators who have made plans for a precast concrete panel citadel situated on the Texas plain. There, folded concrete surfaces and expanses of brut walls will house the 800 or so artworks collected by Pace and her namesake foundation. The pink complex is built out of a special concrete and aggregate mix crafted by fabricators across the border in Mexico that will result in a gleaming, rosy edifice.

As explained by Mike McGlone, principal at Alamo Architects, the executive architect for the project, most colored concrete starts out in either gray, beige, or white tones, with pigments added incrementally to tint the mixture to the desired color. But ruby red pigment is a particularly difficult hue to achieve. For one, pigment can only be added little by little, resulting in a blended appearance that can appear muddled when combined with cement’s natural coloring. The process is made more difficult by the inherent structural requirements of the materials involved—the more pigment is added, the less resilient the final product—so while Pace’s dream called for a vibrant, beet juice–colored edifice, tests using traditional methods yielded less spectacular results. That was the case until designers began looking south of the border, where concrete fabricators Pretecasa can produce concrete panels made with red rock aggregate and red sand taken from local quarries. There, instead of starting with beige or gray bases, the fabricators begin with white concrete and add colored materials and tints to change the hue of the mix from inside-out. The fabricators include materials such as recycled red glass and mica in the mix to boost coloration, while also creating a glittering finished surface that will reflect sunlight throughout the day.

Adjaye’s designs call for a collection of open galleries topped by a pair of sculptural light cannons that will bring light into the building. The complex will make use of several different concrete panel types, including rough surfaces that will line the upper sections of the building to better reflect the sun. Lower sections will be smooth to the touch, with a three-sided forecourt wrapping a sculpture terrace that features sandblasted surfaces. The folded concrete panel structure will also use cementitious panels along its roof, a system that will be supported below by a secondary weather-proof roofing system located directly below the outermost concrete layer.

The complex is expected to be completed in late 2018 and will open to the public in 2019.

Top: Construction photo showing the Ruby City complex, which is topped by a pair of sculptural “lanterns” that bring light into the precast concrete panel building.

Middle: Pretecasa-produced concrete panel samples for the project showing (left to right): An exposed light-colored aggregate mix tile, an exposed ruby-red aggregate mix tile, a polished finish tile, and an acid-washed finish tile.

Bottom: View of a triangular concrete panel being finished at Pretecasa’s concrete manufacturing plant outside Mexico City, Mexico.
As I drive down into the future lakebed, the terrain on either side of the gravel road becomes haggard and unkempt. Signs of the area’s past as farm and ranchland are evident, but shrubs and gnarled trees have grown high to create a desertified, post-apocalyptic landscape. This is the future site of Lower Bois d’Arc Creek Reservoir, a 16,800-acre lake soon to be constructed in rural Fannin County that will provide water to the North Texas Municipal Water District (NTMWD), serving Dallas suburbs in Collin, Dallas, Kaufman, Rockwall, and Hunt Counties. This lake recently received its permit from the U.S. Army Corps of Engineers, making it the first major reservoir in Texas since Lake Gilmer was constructed in 1939.

Reservoirs provide the majority of Texas’s drinking water. Texas has been building reservoirs since 1893 (Lake Austin), with the majority created in the 1940s through the 1960s. There are currently 188 in the state, according to the Texas State Historical Association. In the Dallas area, with the limited availability of river water and an aquifer too low to be practical on a large scale, reservoirs have been the main strategy for providing water to a growing region.

During a recent visit to Bonham, the Fannin County seat and nearest town to the proposed lake, a passive acceptance of the forthcoming project was evident among a number of residents. There are those who oppose it, most notably the landowners whose land will soon be flooded. However, in rural unincorporated areas, there are few options for organized resistance when a powerful water authority decides to plant a reservoir in your backyard. Yet the impact on Fannin County extends beyond the boundaries of the lake itself. The NTMWD is required to mitigate the habitat destruction caused by the new reservoir by creating new habitat nearby. Thus, an area slightly larger than the reservoir has been purchased to this end. In total, 33,441 acres of private land has been appropriated from local landowners (5 percent of Fannin County).

This situation in Fannin County magnifies a common but overlooked tension in the field. Despite the extreme impact, large-scale water infrastructure is strangely absent from the architectural conversation. Architects employ water conservation and collect stormwater at a building scale, but, like most, take the availability of water for granted. They know their project simply has to tap into the availability of river water and an aquifer in the U.S. Army Corps of Engineers makes it the first major reservoir in Texas since Lake Gilmer was constructed in 1939.

As architects strive to address the challenges of building in our current environment, a knowledge of the complex and connected relationship of water to development and construction is important. Architects and planners, water officials, and more will need to be creative in solving the complex problem of providing water to future populations. While American cities have not yet had to deal with the scale of catastrophic water shortage that occurred in Cape Town, South Africa, it should give us all pause as a similar situation in North Texas is quite possible. Andrew Barnes
Border Origins

The following essays offer perspectives on property, landscape, material, and infrastructure that shape the U.S.-Mexico border imaginary. The authors illuminate critical spatial practices which destabilize assumptions about the border and the seeming simplicity of its binary divisions and exclusionary logics. These perspectives argue instead for constructive transgressions of this destructive border myth, as it is being implemented to advance political agendas. These articles are offered as 

*origin stories* of a land, a people, and a space whose origins are routinely questioned and defied, entrenched and overcome.

The Fluidity of Borders as—We Have Seen in Past Weeks—Can Abruptly Change Course: Its infrastructures can mineralize political whims into seemingly permanent institutions and protocols. The border is a place where the abnormal and unimaginable routinely slip into normalcy. But it can also be, as we hope the following demonstrates, a cauldron where positive, alternative futures are forged.

**The Future/Past on a Monorail**

These days the conversation about the United States–Mexico border is dominated by the implications of building a wall between the U.S. and Mexico. But back in the mid-1960s, there were concerted binational efforts to build a monorail to further connect the commercial districts of two cities conceived as part of one binational community. A 1965 document outlining the proposal for a Juárez-El Paso Monorail System invoked the common origins of both cities. The river was referred to as an obstacle to be overcome: “No other metropolitan community of equal size has been so restricted and contained by so relatively a small item as a channelized river.” Recently, the idea for a monorail has surfaced again, but this time riding on top of a 2,000-mile border wall promoted by an American president to separate the U.S. and Mexico. The 1960s were a period when ideas for urban planning boomed in the Juárez/El Paso border area. This was the context of the 1965 proposal for a transportation project designed to move passengers back and forth across the border. Although the idea did not come to fruition, it gives a glimpse of how certain sectors viewed the future of Juárez/El Paso as an integrated border metropolis. A prototype of the monorail can be seen in the 1967 film adaptation of Ray Bradbury’s novel *Fahrenheit 451* by Francois Truffaut. It was built on the outskirts of Paris as a demonstration facility by SAFEGE, the company chosen to install the El Paso/Juárez monorail. Guy Montag, the main character, enjoys a smooth ride between the city and the suburban neighborhood where he lives. The suspended train featured in the movie, the San Jacinto Plaza and the Juárez bullring across the border. Although the idea did not come to fruition, it gives a glimpse of how certain sectors viewed the future of Juárez/El Paso as an integrated border metropolis. A prototype of the monorail can be seen in the 1967 film adaptation of Ray Bradbury’s novel *Fahrenheit 451* by Francois Truffaut. It was built on the outskirts of Paris as a demonstration facility by SAFEGE, the company chosen to install the El Paso/Juárez monorail. Guy Montag, the main character, enjoys a smooth ride between the city and the suburban neighborhood where he lives. The suspended train featured in the movie, the San Jacinto Plaza and the Juárez bullring crossed the border. Although the idea did not come to fruition, it gives a glimpse of how certain sectors viewed the future of Juárez/El Paso as an integrated border metropolis. A prototype of the monorail can be seen in the 1967 film adaptation of Ray Bradbury’s novel *Fahrenheit 451* by Francois Truffaut. It was built on the outskirts of Paris as a demonstration facility by SAFEGE, the company chosen to install the El Paso/Juárez monorail. Guy Montag, the main character, enjoys a smooth ride between the city and the suburban neighborhood where he lives. The suspended train featured in the movie, the San Jacinto Plaza and the Juárez bullring.
The Remittance House

In discussions of the U.S.-Mexico boundary region, what often gets lost is a full exploration of the geographic and social networks produced by the lives that span it. Taking in the meaning of the U.S.-Mexico border region, the largest migration corridor in the world, requires an understanding of both ends of the journey as well as what lies in between. One way to do this is to follow the money—in this case, migrant dollars earned in various locations throughout the U.S. that are channeled back to households in Mexico. The economic term for this capital flow is remittances, typically used by political scientists, demographers, and NGOs that investigate, among other things, how and if remittances alleviate poverty in receiving regions. I follow this capital flow to its material conclusions as manifested in migrant hometowns. The “remittance house,” a term I use to describe houses built in Mexico by workers performing unskilled or semiskilled wage labor (or migrants “from below”) in the U.S., reveals Mexican pueblos as distant hinterlands of American cities and as critical nodes in our understanding of the U.S.-Mexico borderlands at large.

I first became interested in the remittance house through the stories of my co-workers, Mexican male migrants who lived and worked in Berkeley, California, while investing a portion of their earnings into new homes in Guanajuato, Mexico. The Central Bajío state of Guanajuato and its neighboring state of Jalisco have historically high rates of both emigration and remitting. Economist Paul S. Taylor documented migrants using dollars to build or remodel homes in Jalisco as early as the 1930s. Jalisco is an epicenter of remittance construction that includes homes as well as communally funded public projects like rodeo arenas and cultural centers. Today, Mexico ranks as the world’s fourth-largest remittance economy after China, India, and the Philippines, receiving approximately $20 billion dollars annually, and new construction financed by remittance dollars is evident across Mexico’s 32 states.

Formally and materially, the remittance house has become a source of curiosity both for people who live in Mexican towns as well as for those peering in from afar. This has to do with the houses’ heavily articulated facades that present a dizzying array of representational strategies. Fluted columns, zigzagging concrete cornices, and repetitive pediment-shaped window frames grace facades topped with false fronts that represent gable roofs or brick battlements. These eclectic arrangements clash with the built fabric of small towns composed of adobe or fired brick buildings with teja tiled roofs—towns once marked by uniformity and homogeneity.

In the remittance house, architectural style carries great symbolic weight, as design ideas are pulled from various corners of migrant experiences and journeys. Homes with recessed yards, metal fences, carports, and picture windows are referred to as “estilo Californiano,” or “California style.” Yet they are hybrid forms, where the image of wooden stick-frame construction is translated into local masonry traditions, supported by migrants’ desire to have homes “built to last.” New migrant homes have created a maelstrom of commentary throughout small towns. A local architect in Jalisco described the migrant building style as “gangoleteado,” or excessively adorned, pointing out a lack of rhythm, proportion, and pattern in the use of generic classical ornamentation, while some neighbors described migrant homes as distinctly modern. Whatever their stylistic attribute, the homes, as defined by artist Walterio Iraheta, are autorretratos—or self-portraits—of their makers. They are a material transformation of the built environment directly linked to the interior world of the self.

But the remittance house is not primarily an opportunity for migrants’ personal expression but the material manifestation of the specific political and social conditions under which contemporary social mobility and immobility for migrants takes place. Structural inequality, an absence of access to legal documentation in the U.S., and diminishing opportunities for economic and social mobility in the U.S. and Mexico have produced the space in which the remittance house becomes a viable, albeit imperfect, option.

To understand these newly constructed homes as imperfect is to ask about the costs and consequences of binational building from below, building a dream home in one place while living and working in another. In order to remit, nuclear families are often separated or fragmented across geographies. For example, mothers and daughters live in a remittance house in Mexico, while fathers and sons work in and send money from the U.S. Meanwhile, elderly parents live in a home built with dollars on a street mostly abandoned or empty due to what neighbors refer to as “the floating population” abroad. Families split by gender or generation incur social costs as bodies are replaced by dollars, and living at a distance from one’s immediate family is normalized.

The project of building a remittance house—of attempting to secure and invest in a future for one’s family—is also susceptible to the complexities of living as a migrant in the U.S. Both documented and undocumented migrants might lose their jobs, build new relationships in the U.S. while attempting to maintain marriages or relationships in Mexico, become responsible for their ill parents in Mexico, or become ill themselves. Undocumented migrants are especially vulnerable as they live under the terror of apprehension, incarceration, and deportation, and are generally unable to return home without incurring great risk. For any number of reasons, homes may be incomplete or abandoned altogether.

Ultimately, the remittance house teaches non-migrants important lessons. They are evidence of migrants’ strengths, the discipline required to achieve personal goals. They are evidence of complex social patterns and costs for families fragmented by global capital, and for whom remitting has become a way of life. Scaling up, they are also evidence of the Mexican and U.S. governments’ unwillingness to enact binational protections and opportunities for a flexible and exploited labor force that the U.S. economy has depended on for over 100 years. Understanding the remittance house in its messy complexity can cultivate the public’s awareness of the extended and complicated spaces that “migrants” are enmeshed in and co-constituting. If Mexican migrants in the U.S. were collectively supported, the term “remittance house” would become obsolete. With the capacity to choose where to live and work, and with the ability to travel, those who build homes in Mexico would join the millions of elite Americans and Mexicans who have second homes or vacation homes. For now, the remittance house captivates, and its meaning reverberates within Mexico and across the Rio Grande.

Sarah Lopez, an architectural historian and migration scholar, is an assistant professor in the School of Architecture at the University of Texas at Austin.
Concrete Politics

In the border metropolis of El Paso–Ciudad Juárez, the power relations of international negotiation are not only performed through the apparatus of control over the movement of bodies, but are also embodied in a concrete architecture that exposes the calculus of separation and asymmetrical infrastructural development between the two countries. In the borderland, the control of water—as territory, commodity, and reproductive agent—produces its physical spaces. While the shared waters of the river and the underground aquifers contribute to the reproductive capacity of land within the desert climate, the infrastructures of water supply and sanitation are material evidence of the socio-spatial injustices and imbalances that structure and reproduce social relations within the border cities.

Negotiation
The geopolitical history of the river as a border and of the partitioning of its waters is inscribed within the built environment as a thick constructed zone. The international border between the United States and Mexico was defined by the 1848 and 1884 Treaties, which delineated that the border follow the Rio Grande (Río Bravo del Norte) from El Paso to the Gulf of Mexico. This rendered the border an unstable condition, as its line needed to be redefined by the International Boundary Commission each time floods caused the river to relocate. A treaty in 1933 attempted to “fix” the river by engineering it into a constructed channel. However, this location left several hundred acres of disputed Mexican territory to the north of the river—the result of a violent change in course in 1864. The 1963 Chamizal Agreement relocated the river and the international boundary once again, moving the Rio Grande back to its 1852 survey location. In this highly publicized moment of international diplomacy, the disputed land was “returned” to Mexico, and a new channel was constructed to reroute the Rio Grande north so that both river and international border aligned. The division between the two countries was now emphasized, further asserted by the open lands of the former riverbed on the Juárez side and a new elevated border highway on the U.S. side of the channel.

Management
The colonization of the U.S. would not have been possible without the massive campaign of dam projects in the early 20th century that commodified the waters of the West and irrigated the farms and settlements of homesteaders. Four dams manage and distribute the Rio Grande waters in the El Paso–Juárez region: Elephant Butte, Caballo, American Diversion, and the International Diversion Dam. Water is distributed according to the 1944 Water Treaty, drawn up when the population of Juárez was less than one-tenth its current size. In 1965, the binational Border Industrialization Program enabled maquiladoras, foreign-owned manufacturing plants, to be located within Mexico’s border zones, and to move materials and products with reduced tariffs and trade barriers. This propelled an influx of new residents who arrived to work in the Juárez border zone maquilas. The treaty, which retains the majority of the river water in the U.S., has not been revised since, and contains no provisions for sharing the rapidly depleting Mesilla and Hueco Bolson aquifer waters, which traverse the binational region underground.

The division of the river water produces politically charged urban spaces. The U.S. Franklin Canal materializes as a physical barrier within the U.S. border zone, flowing deeply and rapidly in a concrete channel alongside the Rio Grande. In Juárez, the diverted water flows along the Acequia Madre, which takes a diagonal course, traversing some of the city’s main public spaces. This once green irrigation channel and common space is now largely neglected and has deteriorated into a toxic line of sewage and trash.

Biopolitics
Water is not only scarce in the desert city of Juárez—it is also dangerous. The paper worlds of politics materialize as realities on the ground and in the tissues of bodies. Due to the explosive population growth of Juárez, large portions of the city have been rapidly and often informally constructed, typically without proper municipal sewage or drinking water services. The residents of these informal settlements, known as colonias, rely primarily on truck-supplied water, which has a much higher likelihood of being contaminated and results in high rates of water-borne diseases. Only about a third of the city’s sewage is actually treated. Some colonias have additionally encroached on the city’s drainage gulies and arroyos, putting residents at further risk during flash flood events.

In July 2010, the United Nations General Assembly “explicitly recognized the right to clean drinking water and sanitation as essential to the realization of all human rights.” If this mandate is taken seriously by the binational region of El Paso–Ciudad Juárez, new treaties and agreements will need to be negotiated that address not only the scarcity and distribution of its shared waters, but also the shared responsibility of water rights to citizens on both sides of the border. What remains to be seen is not only what shape these take in terms of political agreements, but also how they will reshape the physical urban spaces of the paired cities.

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Boundary Maintenance

The 1896 Heavyweight Championship in boxing was staged in an improbable location: on a sandbar in the middle of the Rio Grande River. Robert James Fitzsimmons knocked out Peter Maher in a fight that lasted 95 seconds and took advantage of the ambiguous administrative and enforcement conditions of the river boundary. Boxing, you see, was illegal in both Texas and Mexico at the time. After a series of territorial shifts and classic Texas wrangling, the fight promoters decided to stage the fight some 16 hours journey south of El Paso in a remote section of the river away from easy enforcement by Mexican police.

In a fight attended by 182 people enclosed inside a canvas tarp fence, Fitzsimmons led with his left, and a minute-and-a-half later, “Maher measured his length on the floor.” And it is indeed this figurative floor, this once and future bed of the river where the fight was held, that was both the legal loophole that allowed this spectacle to take place as well as the ongoing challenge to bright-line models of international territoriality.

In the contemporary media environment where border walls and military buildup occupy our imagination of the boundary, it is easy to forget that well over half of the length of this border is defined by the fluvial boundary of the Rio Bravo del Norte (Rio Grande). Article V of the 1848 Treaty of Guadalupe Hidalgo reads, “The Boundary line between the two Republics shall commence in the Gulf of Mexico, three leagues from land, opposite the mouth of the Rio Grande…from thence, up the middle of that river, following the deepest channel…to the point where it strikes the Southern Boundary of New Mexico.” Yet, as this and the dozens of subsequent treaties, commissions, and surveys attest, this very definition of the boundary is subject to the fundamentally dynamic and unsettled nature of the Rio Grande River.

In general, water law recognizes two categories of boundary change brought about by the changing forces of water: one gradual and slow, the other abrupt and discontinuous. The first, known as accretion, is defined as the gradual and imperceptible deposition of material along the bank of a body of water and the lands formed by this process. Its inverse, reliction, is the gradual uncovering of land caused by the recession of a body of water. In both of these cases, the morphology of ownership maps onto the morphology of the river—with alluvial accretions or relictions belonging to the owners of the coterminous land.

The second category, known as avulsion, is defined as the sudden and rapid change of a channel of a boundary stream. Such wholesale shifts in the river channel are quite common in rivers such as the Rio Grande that experience wide fluctuations in flow across the year, where oxbows and meanders are cut off regularly during the spring freshets. In these cases, the changes brought about by such large shifts do not easily map onto adjacent property and ownership structures, resulting in the potential for pockets of alternating ownership—and in the case of the Rio Grande, of citizenship—existing across the river boundary.

At the heart of these attempts to tame the river through surveyed lines and legal words is a fundamental irreconcilability of language and landscape—an irretrievable misfit between the map and the territory. Writing in his 1857 Report on the United States and Mexican Boundary Survey, surveyor general Major William H. Emory highlights this gap when he explains: “The [river] does not always run in the same bed; whenever it changes, the boundary must change, and no survey nor anything else can keep it from changing. A survey of that river, therefore, as it fixes nothing, determines nothing, is of minor importance. It forms of itself a more apparent and enduring monument of the boundary than any that can be made by art.” Against Major Emory’s advice, the International Water and Boundary Commission set out in the early 20th century to “rectify”—or straighten—the natural meanders of the Rio Grande in a futile attempt to make the world out there approximate the bright lines of boundary law. These so-called Banco Conventions, named after the riverbanks cut away by river avulsion, carried the additional political dimension of citizenship—where those who opted to remain on their original land could either preserve title and rights of citizenship of the county to which said banco formerly belonged or acquire the nationality of the country to which the territory would belong in the future.

Yet the engineer’s channelization of the Rio Grande could no more make the river act like the surveyor’s line on the plat than it could erase the fundamentally dynamic and relational qualities of being and belonging that mark this border region. Language and law, boundaries and territory, citizenship and rights—these are only a few of the fundamental correspondences that the fluvial geomorphology of the Rio Grande River both narrate and problematize.

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Prada Marfa: Immigrant Architecture?

Political Context
Prada Marfa is a building born out of the political tensions arising in post-9/11 America, in which Afghanistan, Iraq, and Mexico become scapegoats. In 2003, a United States-led coalition invaded Iraq, beginning an eight-year war, and in 2005, Duncan Hunter, who at the time was chairman of the House Armed Services Committee, called for the construction of a wall along the entire border between the U.S. and Mexico. This led to his amendment to the Border Protection, Antiterrorism, and Illegal Immigration Control Act of 2005, which called for 698 miles of wall along the U.S.-Mexico border. This paved the way for the Secure Fence Act of 2006, which President George W. Bush signed to “help protect the American people” from several purported threats, but primarily terrorism, which was the major focus of the era’s political rhetoric.

Borderlands Architecture
Prada Marfa is constructed out of traditional adobe bricks which have long been used in the region but are frequently perceived as an inferior material deriving from the region’s climatological responsiveness. Adobe bricks provide the foundation for the oldest extant buildings in the region, as well as many of the area’s most important cultural and heritage sites, including artist Donald Judd’s own Block compound in Marfa. Directly referencing Judd and the military building traditions he emulated, the adobe bricks are intentionally set in a cement-based mortar. Judd recognized that this was the technique employed in the construction of barrack, hangars, and forts in the region, and Prada Marfa is constructed to reflect this mistrust of local traditions that characterized the militaristic architecture that secures the border displays. Adobe brick was validated as a construction material, but not adobe mortar, which is more likely to be used on the humble houses of Mexicans and Mexican Americans on both sides of the contemporary border.

Material Lineage
While the adobe walls of Prada Marfa are indigenous, they are not perceived to be native to the United States, as the tradition is a spill of the Mexican-American war. The form of the building recalls a West Texas vernacular, which is influenced by the melding of many cultures at the border. The artists Elmgreen and Dragset are from Denmark and Norway, respectively. The details of the interior come from Italy. The specifications for the shelves, the typography (a variation of a type popular with American engravers and typefounders in the last third of the 19th century), the color of paint for the interior walls, the lighting, and the carpet were directly sampled from Prada’s own architectural details for retail outlets in Milan. The inspiration for the facade is sampled from German photographer Andreas Gursky’s photograph Prada II. The building is sprayed with an elastomeric white latex coating to reflect the powerful rays of the sun and withstand the extreme expansion and contraction of the building’s structure in the fluctuating desert temperatures.

Xenophobia and Cultural Assimilation
Prada Marfa was a very new kind of work. Unlike the reserved and apolitical work of Judd—who in Marfa had already laid claim to art and what it should be—Prada Marfa blurs the boundaries between architecture, art, politics, and culture. The very same night that Prada Marfa opened, xenophobes attacked the work, stealing the shoes and purses, destroying the building’s facade, and spray painting “dumb” [sic] and “dumb” on the inside and outside of the building. Prada Marfa represented a very new kind of artistic expression that was unfamiliar in the region and challenged conservative artistic sensibilities, calling into question the juxtapositions between wealth and poverty, the U.S. and Mexico, anglo and Mejicano, of the region that the building highlighted. Since Prada Marfa’s construction, it has had to evolve to survive in the political and environmental climate of both art and the borderlands. Since the first attack on the building, it has been vandalized several times—the glass windows were shoddily replaced by scratch-resistant and shatterproof acrylic to withstand bullets and the continual “peeling out” of cars in front of the building, which kicks up rocks and debris onto the facade. The fabric awnings had to be replaced due to smokers continually burning holes in the cloth with their cigarettes, and the font size of PRADA was increased to almost match the size of the letters on the black metal signs above, suggesting that the delicate typography on the original awnings may not have been good enough in a state where “everything is bigger.”

Many other forms of vandalism have taken place. Men’s underwear was shoved into the drain pipes, causing the roof to flood and inundate the interior, which required the shelving to be rebuilt and repainted and the carpet to be replaced. Most dramatically, an artist by the name of Joe Magnano was found guilty of two counts of misdemeanor criminal mischief and required to pay Ballroom Marfa, the owner and apolitical work of Prada Marfa, $10,000 and a $1,000 fine for attempting to paint the building blue and pasting TOMS, the logo of a shoe brand founded by Texan Blake Mycoskie, on it, perhaps in an inept attempt to make a structure perceived to be “not from around these parts” more Texan. The vandals who destroyed the building after it first opened, however, have never come forward, although it has been suggested that the borderland surveillance systems used to monitor immigrants traveling in the desert may be able to reveal these criminals.

Hajj
Prada Marfa has become a pilgrimage site where those making the journey to visit the building have left mementos as part of what has become a kind of hajj to this art Mecca. The various forms of vandalism at the Prada Marfa site have included visitors leaving one used shoe, placed around the building or atop the fencing surrounding the building. Perhaps this references the single shoe found in the faux shoe shelves of the store, or maybe the worn-out shoes of immigrants who journey by foot to the U.S. from Mexico until the soles of their shoes wear away, before being picked up in the landscape surrounding Prada Marfa. Not unlike the Jewish mitzvah where vis-\-iors leave small pebbles on a gravestone, visitors have also left small rocks, holding down a piece of paper with a name, message, or a business card, on the narrow ledge that surrounds Prada Marfa. This act reminds us of the harsh reality of a landscape where countless die in the desert, just as the wall has pushed people to greater extremes on their journey north.

The shoes and the pebbles left by art pilgrims were systematically removed as they were also perceived as a form of vandalism—a crime, rather than a new tradition—and a fence was constructed around the building made of welded wire mesh, reminiscent of the transformation of the U.S.-Mexico border from a barbed wire fence to stretches of welded steel. The construction of the fence surrounding Prada Marfa, however, has prompted another tradition of offering at the site. While called Prada Marfa, the building is technically just outside the small town of Valentine, Texas. Despite a population of 217, the town is inundated with over 100 people on Valentine’s Day, as well as hundreds of Valentine’s Day cards that are sent through the local post office, which has been known as a “love station.” Today, “love locks,” padlocks used by sweethearts to symbolize their love, are attached to the new fence surrounding Prada Marfa, and the keys are thrown away. Perhaps this, too, symbolizes the time we live in, mired in a national struggle between the fences that divide and the love that could bring us together in the borderlands.

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Top: The Fall 2005 line of Prada shoes and bags are on display.
Above: The adobes used to build Prada Marfa are set in cement mortar like the walls of Judd’s compound in Marfa.
"So much of what is built on the border is to contain, restrain, detain, constrain, restrict, wall off, fence up. When there is so much natural beauty there—the river, the desert, the mountains to enjoy and celebrate. So many families who want to be together, so many people who just want to be. I wish that we were building more bridges (flat, easier to cross and connect), tearing down the walls that we have. I wish that we had immigration and asylum laws that matched our values and our interests so that we weren’t locking so many people up. I wish that there were no more private prison companies so that there wasn’t a profit motive to do that.”

—Beto O’Rourke, El Paso native, U.S. Representative for Texas’s 16th congressional district, and the 2018 Democratic candidate for U.S. Senate in Texas

Texas Instruments:
Detention Prototypes in a Border State

Texas, the state with the longest continuous land border with Mexico, has been uniquely formative in the construction of spaces and narratives that define national dialogue in the borderland. The state is home to more ports of entry than any other state. These entry points are legible crucibles of biopolitical power, routinely collapsing spaces of speculative commerce, incarceration, and the projection of national identity.

Assessments for constructing a new border crossing, connecting Tornillo, Texas, with Guadalupe, Chihuahua, began in 2001. A new bridge, a 2,000-acre industrial park, and 300 acres of “border facilities” were initially meant to bring economic development to the remote area and improve regional health, reducing pollution from idling traffic at congested bridges in El Paso. A presidential permit was issued for the bridge in 2005, but its construction would be stalled, and its purposes changed.

In 2008, the Juarez Valley, a remote collection of agricultural communities in Mexico south of Tornillo, saw one of the highest murder rates in the world, gaining it the reputation as the “Valley of Death.” Victims of the violence would increasingly flee to Tornillo to seek asylum. Some speculate that the rampant violence was a scheme sponsored by the Mexican government to evacuate residents in the area in preparation for, and to expedite construction of, the bridge. In 2010, modular detention facilities in nearby Fabens, Texas, built to accommodate the flow, were over capacity. Violence in the valley eventually stabilized, and plans for the new crossing were rekindled.

The Tornillo-Guadalupe International Bridge opened in 2016, and was hailed as an achievement in cross-border infrastructure. The adjoining U.S. checkpoint exemplifies an architecture designed to manage, block, and process bodies, an outpost at the edge of empire. The architects of the LEED Gold facility describe the materials and performance as specially suited to the site’s desert context, with integrated technologies promoting the efficient monitoring of populations, noting that the design “inspires the spirit of place.” The optimism for the port to rapidly realize a future characterized by collaborative binational security efforts was captured in its christening. It was named for Marcelino Serna, the most decorated U.S. soldier from Texas to serve in WWI, who happened to be an undocumented migrant.

The anticipated traffic never came. Less than a year after its opening, U.S. Customs and Border Protection (CBP) had shut down the only lane dedicated for northbound commercial traffic. Without the economic engine to support the new complex, the overbuilt site quickly found new use in a growing economy of detention. Tornillo opened a temporary overflow center in 2016, typical of the isolated, anonymous, and placelessness of the remote facility. On Father’s Day 2018 and the following Sunday, floods of protesters descended upon the border checkpoint, appropriating the isolated node as a center of active resistance.

The site joins a growing host of detention sites in the border state, which index nationwide trends in detention. Taken collectively, the sites represent a growing impact of private speculation and profit models impacting the construction of detention facilities, all of which adapt—and therefore help to realize—a near future in which the remote, prolonged detention of families and children is commonplace. Since 2006, Texas has been home to the much-maligned T. Don Hutto Residential Facility, which, at the time it was built, was the only privately run facility used to detain families. The largest detention site in the U.S., the South Texas Family Residential Center in Dilley, Texas, can house up to 2,400 women and children. The site is part of a constellation of for-profit, superscaled sites on a stretch of interstate highway between Laredo and San Antonio dubbed “detention alley.” A new contract seeks a 1,000-bed center nearby—similar to a 1,000-bed facility built outside of Houston last year—which will be the eighth in the South Texas area. As military advisers advocate for additional centers on military bases to create even more “austere” and “temporary” environments, Texas leads the charge here as well. Lackland Air Force Base in San Antonio houses migrant children in 2014, repurposing a dormitory once used for recruits. El Paso’s Fort Bliss housed 500 unaccompanied Central American children in 2016. A June announcement revealed that two Texas military installations—Fort Bliss and Goodfellow Air Force Base—would be among the select sites to continue the trend. Other sites in the state, such as the now infamous former Walmart in Brownsville, signal a shift toward speculative investment in detention trickling down to private properties and actors.

At the Paso Del Norte International Bridge, connecting downtown Ciudad Juarez with downtown El Paso, CBP is pushing the edge of U.S. jurisdiction beyond the spatial limits of the bridge. Although due process of asylum claims is guaranteed within the port of entry, agents have ventured onto—and reportedly across—the bridge to deny access to the port. Uniformed border agents ask for documents on the bridge to identify and turn away Central Americans seeking asylum, a few hundred feet from their destination. On June 27, CBP confirmed to El Paso immigration rights advocacy groups that this prescreening and advance rejection has become official policy borderwide. Without access to the legal framework enabled by the ports, many asylum seekers cross in unsanctioned locations. Those caught crossing outside the ports, some with otherwise credible asylum claims, face criminal charges and deportation. Without the threat of a space that enforces the policy artificially amplifies the numbers of illegal crossings and a myth of increased illegitimate entry. The port thus transforms from a site capable of processing identities to an instrument which actively constructs and deconstructs citizenship.

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Like many of the most exciting young firms currently practicing across the United States, Schaum/Shieh, based in New York City and Houston, owes its existence to the financial crisis of 2008. In the immediate aftermath of the meltdown, Schaum/Shieh principals Rosalyne Shieh and Troy Schaum found themselves working as collaborators on speculative urban projects while attending graduate school at Princeton, where the pair shared studio space. Attempting to figure out “what happens when you ask a question no one tells you to ask,” according to Shieh, the pair was driven toward the “protected space” of academic work by prestigious fellowships—Shieh at Taubman College in Michigan and Schaum at Rice University in Texas—in an effort to bolster professional experiences that included stints at Abalos & Herreros and OMA, respectively.

After becoming licensed and spending their fellowship years incubating their practice, the pair fortuitously landed a spot exhibiting a project in the 2012 Venice Architecture Biennale, a platform that propelled their budding firm into the realm of client-based work. In the intervening years, a mix of bespoke design and meditative restoration work for institutional clients like the Donald Judd and Chinati Foundations—as well as commercially driven work for private clients—has kept the firm busy exploring multiple facets of architectural production. Driven by an intense curiosity and interest in the blend between high and low architectural culture, Schaum/Shieh continues to build its ever-elusive catalogue of offbeat work. Over time, the two architects have learned when to hold back. Schaum explains: “Restraint is [a] remarkable lesson for young architects to learn. [You realize] there are moments when we need to step back and not do certain things.” AP
White Oak Music Hall

One of the firm’s largest commissions to date is the White Oak Music Hall in Houston, along Little White Oak Bayou north of the city’s downtown. Completed in phases between 2016 and 2017, the multistage music and event center features a pair of indoor stages that can house a combined 1,400 spectators, and an 3,800 capacity outdoor amphitheater built into the natural topography along the Bayou. The bar-shaped clapboard and wood plank–wrapped structure spans across the edge of its urban infill site, and features balconies and open-roof decks that face toward the Houston skyline. An on-site industrial metal warehouse and steel tower were recently converted into a small music venue and bar as well.

Transart

The architects recently completed work on the 3,000-square-foot Transart Foundation for Art and Anthropology in Houston’s museum district, a complex that seeks to treat the “white box gallery as a problem” by introducing softness of form and visual instability to the otherwise staid building type. The private arts foundation and gallery is spread out across two structures, including a new three-story edifice crafted out of super-size stucco panels. The building’s stucco walls feature clipped corners and upturned edges that reveal triangular windows designed to bring direct light into the galleries and support spaces. The new structure is buttressed by a 1,200-square-foot studio and apartment located within an existing structure that was re-skinned with cement panels and a standing seam roof.

Judd Foundation

The multifaceted firm has worked for several years on collaborative projects involving the restoration and rehabilitation of several of Donald Judd’s studios and installed spaces in Marfa. What started as an effort to “responsibly finish and maintain” Judd’s architecture studio quickly morphed into a wide-ranging collection of restorations and long-term planning efforts led by Judd Foundation for more than a dozen buildings in the town. Over time, the high-profile, low-visibility restoration and conservation-focused work became an “invisible exercise that led to a conversation you can’t ever see,” according to Schaum. The architects sought to create a “Texas model” for restoration that was flexible enough to include off-the-shelf components as well as innovative solutions that stand apart from prototypical, white-glove restoration work.

420 20th Street

Always eager to take on diverse projects, the firm has also tried its hand at updating the ubiquitous strip mall. Their project at 420 20th Street in Houston aims for an understated refresh by converting an abandoned 1950s washateria into a collection of bespoke storefronts. For Shieh and Schaum—both children of American suburban landscapes—the discarded 5,200-square-foot laundromat represents a type of “common” architecture that many architects are too often happy to avoid. Instead, Shieh views strip malls like this one as “a type that can be transformed, developed, and worked with,” part of an amorphous urbanism that runs counter to “traditional urban legibility,” but in a good way. For the project, the team opted to replace the building’s storefronts with new components, including custom steel and wooden door handle elements. New planters were also embedded in each of the building’s exterior columns, while the structure’s historic brick detailing was brought out with new paint and a mural. Inside, each of the serially arranged shops is separated from the others by expanses of clear factory windows that allow views through the entire structure.
Late Arrivals: Initial Notes on Houston After Theory

“Houston is a different planet.”
—Lars Lerup, “Stim & Dross: Rethinking the Metropolis” (1994)

By Michael Kubo

We landed in Houston two weeks before the storm. For newcomers to Texas, Hurricane Harvey provided a terrifying crash course in the geography and hydrology of the city, its micro-differences in topography and macro-differences in resources across the city’s communities. We were told that after the water receded, nothing would be the same, that the magnitude and destruction of the storm would simply be too hard to ignore. Yet less than a year later, as rebuilding continues on the verge of another hurricane season, it is hard to see how much—if anything—has changed for the better. Money was spent reconstructing homes on their original sites, and large-scale infrastructures that were designed to flood, like Buffalo Bayou Park, have performed admirably well as examples for designing resilient landscapes in Houston and elsewhere. A slew of well-intentioned policy reports were issued in the wake of Harvey, many reiterating similar proposals that preceded the storm, seemingly to little avail. The heuristic measures of the so-called 500-year event were questioned in light of a new reality in which such mega-storms will now be separated by years, not centuries. And then the city went back, it seems, to the combination of development and dread that has apparently become the new normal.
I came to Houston expecting to tap into a rich body of urban writing from the late 1970s to the 2000s that placed the city firmly at the center of broader attempts to theorize the contemporary metropolis. These formed part of what Joel Warren Barna described as “a long American tradition of minority reports” in which the social, political, economic, and psychological dimensions of architecture and the city were probed. Houston’s horizontal field provided an ideal environment for such speculations. For Joe Feagin, it offered the example par excellence of the “free enterprise city,” a case study of the unceasing urban transformations wrought by capitalist development unburdened by zoning. For Doug Milburn, Houston was “the last American city,” characterized by its ever-unfinished status as process rather than product. For Lars Lerup, its diffuse ecology of mega-shapes and micro-stimuli heralded the demise of the traditional city: a fluid condition of natural and artificial strata, a metastasizing field of events and affects punctuated by moments of stimuli and dross. At its peak, metropolitan Houston served as a radical testing ground for new ways of understanding the relentless permutations of 20th-century urbanism at large.

Far from finding new extensions of these threads of writing the metropolis, probing their limits, or harnessing their potential for new speculations, instead, I encountered a city that seemed to have little nostalgia not just for its architecture, but also for its own prior organizations. While cities like New York and Los Angeles capitalize on the major authors of their urban histories, Houston by comparison has largely fallen out of the center of contemporary discussions of urbanism and its possible futures. The most significant attempts to characterize Houston ultimately left a shrinking footprint on the contemporary urban scene, perhaps condemned by their avoidance of fixed definitions in relation to a metropolis endlessly in becoming.

Buffalo Bayou Park (SWA Group and Page, 2015) provides a model for designing resilient landscape infrastructures for a changing climate. In the background, the skyline reflects the city’s growth during the petro-capital boom of the 1970s and 1980s.

Perhaps the major characteristic of Houston in the age of its most provocative theorizations was its lateness. An economy centered on petro-capital meant that its cycles of boom and bust happened a full decade out of step with urban development elsewhere in the U.S., with its peak following the spike in crude oil prices in the 1970s at the same time that the rest of the nation suffered from a deep recession. The city was similarly subject to the end of the oil boom in dramatic fashion, as plans to build the world’s tallest tower in Houston ran aground as prices crashed after 1983. The city’s authors reinforced the sense of Houston as late: for Milburn, the “last” truly American city in its combination of frenetic pace and untimely development; for Lerup, a model for what comes “after” the conventional city.

Inevitably, Houston became a capital of late modernism and its manifestations. These included lapidary icons of petro-development, like the faceted, symmetrical towers of Pennzoil Place (Johnson/Burgee, 1976), along with local masterpieces like Four Allen Center (Lloyd, Morgan & Jones, 1984), which MoMA curator Arthur Drexler praised as “absolutely staggering” in its mirrored-glass effects. Houston’s later corporate development encapsulated its seamless, stylistic transition to postmodernism in buildings often designed by the same architects, like Johnson/Burgee’s RepublicBank Center of 1984, just across the street from Pennzoil Place. Houston’s theorizations provided valuable frameworks for understanding these economic and aesthetic cycles together, from the city’s boom to the period that Joel Warren Barna called the “see-through years” in homage to the hollow, abandoned development projects that littered the city’s landscape in the 1980s, a begun a decade too late.
Houston has emerged as ground zero for what architecture and the city have become—for good or evil—in the midst of our national politics. The genuine multiculturalism of the country’s fourth-largest city—its greatest resource—offers conflicting signals with regard to architecture’s complicity with, or resistance to, the rise of xenophobia, racism, and nationalism in the U.S. This year provided welcome news of an international competition to design the country’s first official Ismaili Center, sponsored by the Aga Khan, with the hope of producing a distinguished building worthy of serving the nation’s largest community of Ismaili Muslims.

Emancipation Park, established in 1872 as the first municipal park for African Americans in a segregated Houston—but long fallen into disrepair since the 1970s amid the decline of the historically underserved Third Ward—recently reopened last year to much fanfare following an extensive program of renovation and new construction by a team of designers led by Phil Freelon. Meanwhile, the first federal contract for an immigrant detention center under the Trump administration was awarded in April 2017 to GEO Group, a private prison company, to build a $110 million, 1,000-bed facility in Conroe, a city just north of Houston. Such cruelties underscore the presence of the vast prison-industrial complex that underlies much of the financial landscape of the city’s politics, in parallel with the multinational conglomerates centered here—such as Halliburton—that have tied the city’s petrochemical industries to the construction of military detention facilities abroad. For one, future criticism and speculation on the city will have to become more intersectional, no longer centered around a dominant—white, male—set of voices. (Look again at the list of authors on the previous page.)

New recreation and community facilities mark the expansion and renovation of Emancipation Park (Phil Freelon/Perkins + Will, 2017), established in 1872 to commemorate the Emancipation Proclamation and for decades the only municipal park available to African Americans in a segregated Houston.

What lessons can we learn from Houston today, from its dissonant combination of the hopeful and the horrifying amidst the city’s current urban transformations? How can new thinking emerge from the multiculturalism of an expanding city? Perhaps Houston’s lateness can be redeployed in its favor: While it may be behind the beat in offering responses to climate change, urban development, and cultural conflict, Houston’s apparent condition of being out-of-time can be reclaimed as a mode of resistance, a slowness in relation to contemporary politics. In this context, what can we do differently, and what must we think anew?

Such examples offer the hope of a new Houston urbanism to come, one that expands the range of those who can participate in interpreting its transformations and reclaiming its prior theorizations toward new, untimely, and more humane futures.
This is San Antonio

Alamo City has a bright future that is illuminated by its past.

By Enrique Ramirez
When it comes to notable architecture in Texas, it would seem strange to place San Antonio on par with Houston or Dallas. As the second-largest city in the state, San Antonio seems to only mimic the kind of architectural largesse seen in Houston and Dallas. There are plenty of jewel-like late modern skyscrapers and austere civic buildings by Skidmore, Owings and Merrill, Caudill Rowlett Scott, and Marmon Mok in the city, but these are not the kinds of projects one would mention in the same breath as Houston landmarks like Johnson/Burgee’s Pennzoil Plaza and Williams Tower, Renzo Piano’s subterranean Menil Collection, or Dallas’s iconic Kimbell Art Museum by Louis Kahn.

A selective itinerary of San Antonio’s past and future architectural projects reveals a steady commitment to buildings with bold, expressive forms that reference the city’s unique environment, history, and culture. Alamo City warmed up to these compelling architectural additions as it expanded during the late 1940s and early ’50s, and became a home to energy and utility companies during the 1970s and ’80s. Funded by philanthropic organizations and influxes of oil cash, many of these buildings are now hidden by giant, swooping highway overpasses, corporate plazas, and other developer-driven projects. Despite the earlier innovative and controversial projects, San Antonio remains overlooked. This will soon change. Newly appointed mayor Ronald Nirenberg has reenergized discussions about creating new housing, battling gentrification, and committing to more public art. This will certainly place a spotlight on San Antonio’s rich architectural offerings while reminding us of how these and other past projects have embodied this city’s distinctive topography, Latino heritage, and dry, arid environment.

Emilio Ambasz’s Lucile Halsell Conservatory, completed in 1988 at the San Antonio Botanical Gardens, is a good starting point. Located on the city’s northeast side, Ambasz’s scheme took advantage of the sunken site with a series of prismlike canopies that appear to rise out of the bermed earth like upturned shards of glass. Each canopy creates its own kind of climate and features particular plant ecologies—architecture designed, as Paul Goldberger observed in 1987, for the interaction between plants and humans. The project is notable for its combination of building, landscape, and infrastructure into a seamless whole. The Lucile Halsell Conservatory accommodated some very particular environmental and topographical conditions, and did so with a formal and technological expressiveness unlike anything that had been built in San Antonio.

Mexican architect Ricardo Legorreta’s San Antonio Central Library, completed in 1995, continues in this vein. Here, cubic volumes are stacked at various angles, creating a series of triangular-shaped courtyards intended to be outdoor reading rooms. Legorreta’s debt to Mexican architect Luis Barragán’s minimalist polychromy is clear. Working with the painter Mathias Goeritz, Barragán created spaces framed by walls and surfaces doused in highly saturated reds, blues, yellows, oranges, magentas, and pinks. At his Central Library, Legorreta appears to invert Barragán with a simple, playful interplay of volumes that seem to be wrought from its own color palette as well. The reddish-brown colored cubes appear gutted in some places, revealing inner planes of yellow, blue, and purple. When viewed from the air, the Central Library appears otherworldly, framing circular plazas made from grass and limestone and located on a triangular-shaped site near the geographical center of the city, as if something from another time had arrived here.

That a Mexican architect was chosen for this project is important. As the seventh-largest city in the United States, San Antonio’s architectural landscape is still in flux. With its familiar “enchilada red” exteriors, Ricardo Legorreta’s Central Library, with its familiar “enchilada red” exteriors, is one of San Antonio’s most visually distinctive buildings.
Opened in May, the San Pedro Creek Cultural Park offers residents an alternative to the crowded Riverwalk and pays homage to the Alamo City’s Latino heritage.

Has one of the biggest Spanish-speaking populations. Over 62 percent of its residents are of Latino origin. The appeal of Legorreta’s Central Library stemmed as much from the need for more public libraries as it did from the desire to reflect the city’s heritage. Though this was the first building in San Antonio designed specifically to reflect the city’s Mexican-American heritage, there are older buildings that expressed the cultural richness so important to the city. The Alamo and the four Spanish Missions (recently designated as UNESCO World Heritage Sites) all combine Spanish and Catholic influences while referring to the rituals and structures of indigenous peoples. This is to say that San Antonio’s architecture continues to find a way to embody its venerable cultural geography.

It also incorporates its distinct environmental geography. San Antonio is a city hewn from mesquite-dappled hills, limestone quarries, and deep-set aquifers. Lake|Flato continues to be the standard-bearer among the city’s firms for a kind of tectonic and environmental sensitivity that is immediately recognizable for its ingenious references to these conditions. Imagine a version of John Lautner’s spacious geometric forms where large cornices made from corrugated metal peer over meticulous compositions of glass, limestone, slats, and brise-soleil made from local woods, all culminating in views that privilege the rolling, arid mesquite and per-simmon landscapes of the Texas Hill Country. This would not do justice to Lake|Flato’s work, but perhaps it is as close as we can get to a kind of South Texas regionalism.

Yet some of Lake|Flato’s current work points to something altogether different. Their recently completed pavilion at Confluence Park connects the joining of the San Antonio River and San Pedro Creek, to nearby Mission Concepción, an 18th-century basilica. This is a highly-charged site in predominantly Spanish-speaking South San Antonio. The most visually arresting parts of Lake|Flato’s project are the concrete “petals” that reference the local flora while reminding the most architecturally astute observer of Spanish-born Mexican engineer Felix Candela’s sweeping hyperboloid structures, like Los Manantiales Restaurant (1958) in Mexico City’s Xochimilco Park, or the Chapel Lomas de Cuernavaca (also 1958) in Cuernavaca.

Confluence Park is also part of the larger San Pedro Creek Cultural Park. This scheme is projected to transform a once-neglected 2.2-mile-long drainage spur into a cultural attraction with water features, public art, and areas dedicated to the preservation of local grasses and wildlife. In a nod to its aspirations, lead architect Henry R. Muñoz and others have embraced this project’s more common nickname—the “Latino High Line”—which may say more about Diller Scofidio + Renfro/Field Operation’s celebrated scheme than the actual goal of the project, which is to create a version of the Riverwalk devoid of its tourist traffic while celebrating Latino heritage.

Urban designers are finding new ways to move San Antonio forward while referring to curious artifacts from the history of American cities. Architect Antonio Petrov, who teaches at the University of Texas at San Antonio and is the founder of Urban Future Lab, is one of the most outspoken voices when it comes to redevelopment in the city. He is a proponent of bringing back skyrides, which were already used during HemisFair ’68 as a means of connecting the city’s downtown with San Antonio International Airport. Petrov’s proposal, though evocative of pie-in-the-sky urban transportation schemes, is to be taken seriously. Similar proposals were actually in use at the 1932 Century of Progress Exhibition in Chicago as well as in Disneyland and Disney World (which were, in a sense, attempts to
envision cities of the future.) Other schemes, though funded by corporate dollars and serious placemaking advocacy firms, are barely more pragmatic in their approach. A case in point is the proposed Alamo Plaza Redevelopment. Philadelphia-based Preservation Design Partnership authored one of the first master plans, a scheme that caused controversy when it called for relocating many of the businesses surrounding the Alamo and converting them to privately run cultural attractions. Current versions of the plan have done little to improve on the previous proposal. For example, the recent Alamo Comprehensive Interpretive Plan—spearheaded by St. Louis-based “placemaking” firm Peckham Guyton Albers & Viets; the heritage consulting firm Cultural Innovations; and landscape architects Reed Hilderbrand—still hinges on the creation of a pedestrian-friendly “Alamo District” designed to turn this historically charged site into an open-air museum. A previous scheme took this idea a step further by encircling the Alamo with a glass wall, as if preserving this architectural artifact in a kind of amber.

There are plenty of other projects that are reenergizing the architectural scene in San Antonio. The city is in a bit of a gut-rehab frenzy, as landmarks like the Pearl and Lone Star Breweries have been renovated as pricey hotels and higher-end restaurants, all with the end goal of molding San Antonio into a destination for design-savvy millennials with money to burn, in hopes they will ditch an Airbnb in the picturesque King William District in favor of the Hotel Emma’s posh industrial-chic.

It is in this milieu that Adjaye Associates’ Ruby City arrives as one of the most exciting projects to break ground in the Alamo City. This 14,000-square-foot gallery and contemporary arts center—scheduled to open later this year near the city’s burgeoning arts district—appears as a strange hybrid, part OMA Casa da Musica, part Legorreta Central Library. Adjaye’s building appears as a literal jewel, a faceted brick-red form whose speckled, punctured surfaces make it seem fleeting and otherworldly. But it is anything but that, for this building, which sits precariously on the edge of the one-acre CHRISpark in downtown San Antonio, will anchor the San Pedro Creek redevelopment scheme, and provide the Linda Pace Foundation’s extensive collection of modern and contemporary art with a bold, exciting home. Adjaye is still earning accolades for his groundbreaking National Museum of African American History and Culture in Washington, D.C., and with Ruby City soon to be completed, this will be the most significant architectural gesture for San Antonio—one that will hopefully inspire an influx of more commissions and projects of a similar caliber.

How should we look at San Antonio’s architectural legacies and gestures? It is tempting to stack them up against those in Houston or Dallas, but in doing so, we would risk ignoring how one of the fastest-growing cities in the United States is busy generating its own architectural identity. Don’t call it haphazard, however. The pace of architectural developments in San Antonio may appear slow, but like the city, its architecture is humming busily from what once was an undetectable purr to something greater. This sleepy South Texas city is anything but, and its architecture will demonstrate how this is the case.
Above: Adjaye Associates’ Ruby City will be the latest and boldest architectural gesture for Alamo City. Located near other arts attractions, this 10,000-square-foot gallery and contemporary art center will call attention to San Antonio’s burgeoning art scene.

Top: The Alamo Plaza redevelopment proposal envisions San Antonio’s most iconic and important building as part of a reenergized center with more space for pedestrian traffic and cultural programming.
In this special section we share the latest glass products—from windows to decorative and performance applications—that debuted at the AIA A’18 Expo, NAHB International Builders’ Show, Greenbuild International, and GlassBuild America. Furthermore, we explore how architects are employing these new glass typologies in a series of case studies, including a passive tower with a folded glass facade for Shenzhen Energy Company’s new headquarters (see page 40) and a dichroic glass facade for the Nano-Bio-Energy Technologies building at Carnegie Mellon University (see page 42). By Gabrielle Golenda
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Capture clarity.
Shenzhen International Energy Mansion

Long after the golden era of corporate modernist skyscrapers (think Mies van der Rohe’s Seagram Building, SOM’s Lever House, and so on), many contemporary office skyscrapers are still designed with traditional glass curtain walls that have low insulation and cause overheating from unnecessary direct sunlight. Bjarke Ingels Group (BIG) conjured an otherworldly passive alternative for Shenzhen International Energy Mansion: a sawtooth, zigzagging curtain wall comprising glass panels and powder-coated aluminum that blocks direct sunlight, thereby reducing solar gain by up to 30 percent.

The 1-million-square-foot structure is composed of two towers and a nine-story connecting block complete with a shared cafeteria, conference rooms, and various retail shops: The uppermost 13 floors of the 42-story north tower houses the Shenzhen Energy Mansion headquarters. As a starting point, BIG considered the subtropical climate in Shenzhen, gauging how they could create comfortable working spaces in hot and humid conditions while at the same time reducing energy consumption. The solution? A passive facade. “Our proposal for Shenzhen Energy Mansion enhances the sustainable performance of the building drastically by only focusing on its envelope, the facade,” said Andreas Klok Pedersen, partner and design director at BIG.

Collaborating with Transsolar, the design studio dedicated to addressing climate change, the firm employed various solutions to reduce solar-derived heat and glare without relying on machines or heavy glass coating (which would make views out seem gray and bleak). The building has achieved two out of three stars with the Chinese Green Building Evaluation Label and a LEED Gold rating. BIG and Transsolar developed a multi-faced passive program with a facade folded in an origami-like shape consisting of closed and open subsections. The closed sections provide high insulation values by blocking direct sunlight.

"With solid facade panels on the southeast and southwest side for shading, the glazed facade facing northwest and northeast is able to achieve high sustainability requirements with more clarity and less coating," said Pedersen. All in all, the effect enhances the environmentally sustainable performance of the building and creates an office mise-en-scène bathed in soft light reflected from the direct sunlight diffused between interior panels.

Meanwhile, the double glazing applied to the low-e tempered Super Energy-Saving Insulated Glass Units (IGU) by Shanghai Yaohua Pilkington Glass on the folded facade provides open views through the clear glass in one direction via a series of simple deformations in the geometry that allows for larger openings. These interjecting pockets of glass create cavernous folds that interrupt the smooth facade in various interior areas, including lobbies, recreational areas, and meeting areas.

This seemingly precarious arrangement of views is made possible by the aluminum claddings comprising full-height extruded panels that form a meandering profile. The setup enables the panel system to interlock smoothly, creating a uniform surface with almost seamless joints. A profile of twists and turns accentuates the reflections of light. In effect, these solid facade panels located on the southeast and southwest sides directly obstruct solar penetration. “The amount of insulation used in the curtain wall is a result of optimization between visibility and sustainability,” said Pedersen.
The vertical folds are fashioned from alternating panels of glass and powder-coated aluminum.

Inside, angled bamboo veneer fins emulate the sawtooth facade, minimizing solar heat gain by diffusing daylight.

Top: The facade is composed of full height extruded aluminum panels and glass panes that form a miniature zigzag profile.

Above middle: When the sun comes directly from the east or west, the solar rays are reflected off the glass due to the flat angle of the windows.

Above: The glazed element of the folded facade provides a view through clear glass in one direction while allowing for simple deformations to create larger openings.
Scott Hall at Carnegie Mellon

Portland-based studio OFFICE 52 Architecture designed the new 109,000-square-foot interdisciplinary Nano-Bio-Energy Technologies Building at Carnegie Mellon University with an apropos glass facade inspired by form, texture, and color. Materializing as a study of diachronic light, the skin that lines the 11,000-square-foot research “clean room” in the Sherman and Joyce Bowie Scott Hall wing features a facade comprising two interlocking geometric forms and a vibrant curtain wall. This combination of clear and frosted glass layers includes some with a micro-thin layer of metal oxide created by a process that echoes the nanotechnology work taking place in the facility. “It all has to do with protons, which is essentially light. We wanted to give the building a timeless quality in terms of the custom nanotechnology-inspired frit motif juxtaposed by the dichroic glass,” said Michelle LaFoe, principal of OFFICE 52.

In effect, Scott Hall’s curtain wall creates spaces that glow with saturated light that passes through the glass layers and diffuses into a plethora of colors—from warm amber to cool grape to saturated cyan—depending on the wavelength of the light beam. Lending the building an aura of luminance, a rainbow of color changes transpires throughout the day according to the angle the sun moves through the glass. These qualities are created by Schott AG fins—vertical in Narima Orange and horizontal in Narima Blue|Gold. Both are laminated between Vitro Starphire low-iron glass using DuPont’s SentryGlas laminate, a clever combination paired with the bird-friendly custom frit that employs a tetrachromatic visual system that creates heightened color perception.

The dichroic glass manufacturing process produces a film thirty millionths of an inch thick via a nanoscience-derived dip-coating technology developed by NASA in the 1950s. This causes the transmitted color to be different from the reflected color because only certain light wavelengths can pass through the metal oxides in the film. The custom glass frit motif is inspired by studies of nano-scale forms, including the carbon pentagon and hexagonal volumes pictured above. The pattern alludes to the activities taking place within the lab. At the same time, it functionally creates sun-shading.

Architect | OFFICE 52 Architecture
Location | Pittsburgh
Architect of Record | Stantec
Structural/MEP | Arup
LEED Consultant | evolveEA
Curtain Wall Glass Manufacturer | Viracon
Curtain Wall Manufacturer | United Architectural Metals
Dichroic glass fins | Schott AG
Fabricator | Triview Glass
Installer | D-M Products, Inc.
Insulated glass units fabricator and manufacturer | Viracon

Triview Glass’s subtle gray custom frit was designed as a dot motif that is a visual abstraction of diagrams of nanoscale form studies, it acts as a sun-shading device and alleviates solar heat gain and glare.

The dichroic glass manufacturing process produces a film thirty millionths of an inch thick via a nanoscience-derived dip-coating technology developed by NASA in the 1950s. This causes the transmitted color to be different from the reflected color because only certain light wavelengths can pass through the metal oxides in the film.
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Amazon Spheres

NBBJ designed a trio of connected glass orbs with living walls at the new headquarters for online retail giant Amazon. According to an announcement on Amazon's blog, the spherical design—a project seven years in the making—was "chosen due to its natural occurrence in nature and as a nod to historic conservatories, like Kew Gardens." This atypical meeting place away from the typical office towers provides a treehouse-like environment for employees, complete with terraces, water features, soaring staircases, and wooden decking.

The construction required more than 620 tons of steel supported by a burly concrete base to buttress the triangular insulated glass units fashioned from modularized Vitro glass. The open floor plan comprised three spherical units enveloped in Ultra-clear Vitro Starfire low-iron glass, which allows for higher visible light transmission, heightening views from multiple angles. "Iron is what makes glass appear green. Low iron Starphire glass eliminates the 'green' hue of traditional clear glass so the only green that you see is from the 300 species of tropical plants inside of the Amazon Spheres," said Andre Kenstowicz, Vitro Glass manager on the project. There are around 40,000 plants in the project.

Like all three domes, the largest is glazed by the contractor Enclos with Vitro's Solarban Solar Control 60 Low-E coating in double laminate, measuring approximately 90 feet tall and 130 feet wide. All 2,643 panels of glass achieve 73 percent visible light transmission and a solar heat gain coefficient of 0.40 across the visibly sinuous surface. This film beneath the surface limits the amount of radiation entering and consequently helps the interior to remain a stable, cool temperature.

NBBJ designed this biophilic environment to "inspire creativity and even improve brain function," according to the company’s blog. Luckily the public also has year-round access to the stimulating habitat at the base of the garden in the visitor center. There, in the thick of it, Seattleites can experience biodiversity in the heart of the city.

| Architect | NBBJ |
| Location | Seattle |
| Structural Engineer | Magnusson Klemencic Associates |
| Glass Manufacturer | Vitro Architectural Glass |
| Glass Fabricator | Northwestern Industries, Inc. |
| Glazing Contractor | Enclos |

Unconventional work areas span five interconnected floors, including tree-house meeting rooms, waterfall and river features, and a four-story living plant wall.
620 tons of steel support the weight of over 2,600 panels of glass arranged as five-sided pentagonal hexecontahedron.

The glass-enclosed environment houses 40-foot trees and more than 400 species of plants from five continents and 50 countries.

A tightrope-like footbridge winds around the upper level, leading to a bench work area surrounded by a nest-like wall. Below, another refuge is outfitted with various cozy outdoor seating and surfaces.
Goldring/Woldenberg Business Complex at Tulane University

Pelli Clarke Pelli Architects (PCPA) connected two preexisting buildings at the A.B. Freeman School of Business at Tulane University in New Orleans with a 46,000-square-foot addition. The overhaul also included the renovation of a classroom, two auditoriums, and two lecture halls, joining the complete sum of 85,000 square feet with the sweeping curves of a serpentine curtain wall that weaves around century-old oak trees and also loosely references the university’s team mascot, Tulane Green Wave, an angry-faced cartoon wave holding a megaphone. Bathed in natural light, the distinctive skin provides transparency and openness to enhance the sense of community and collaboration in the new and existing spaces throughout, including the classrooms, an incubator space for student startups, breakout stations, a new financial analysis lab, and administrative offices.

Designed to meet LEED Gold criteria and withstand local weather conditions, especially hurricane impact, the unitized, hurricane-resistant YKK AP YUW 750 XT curtain wall and the Viracon glass hybrid system were fashioned in factory-controlled conditions so as to mitigate risks relating to quality control. YKK's thermal sunshades and light shelves were assembled as complete curtain wall system units, allowing for a climate-controlled environment that eliminates interior moisture and thermal transfer. The glazed exterior also features a custom frit pattern by Viracon that maximizes the visibility of the structure for birds.

Achieving the associated performance standards and sinuous construction was not an easy feat. The design, development, and construction process was a multiphase project. Beginning with the layout, the serpentine steel curtain wall was preassembled in CAD while the structural steel beams and concrete were put in place on-site. This separate undertaking proved to be problematic, as areas in the curtain wall that didn’t line up with the prescribed 90-degree angle of the field layout had to be adjusted before fabrication. Speaking of shape, the whirly glass wall required an intricate five mullion support system composed of two convex and two concave structural supports. This then necessitated the sunshades and solar fins to be correctly positioned at various angles along the multifaceted surface, calling for many custom permutations of anchor brackets machined for specific locations. Other customization was necessary for the sunshades and fins, which had to be miter-cut due to the ever-changing nature of the undulating configuration, resulting in massive variation opening-to-opening.

The thermal performance of the custom YKK AP YUW 750 XT curtain wall fitted with Viracon glass is enhanced by the design of the custom frit pattern—all factors that contribute to the ability to achieve LEED Gold certification.
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The Residences at Prince

This Federalist-style four-story building across the street from the Basilica of St. Patrick’s Old Cathedral was the church’s former school and convent for nearly 200 years. Built in 1826 to replace an orphanage and parochial school founded in 1822, Old St. Patrick’s Cathedral School educated generations of locals and immigrants (including Martin Scorsese), according to a New York Times article he “struggled under the merciless ministrations of the Sisters of Mercy”) before closing in 2010. In 2014, the archdiocese sold it to Hamlin Ventures and Time Equities, who hired Marvel Architects to design the Residences at Prince, a seven-unit condo attached to a 6,100-square-foot space still retained by the church for its offices and community space.

Because the structure is a landmark, the exterior elements—namely the windows—were restored. “Integrating glass into historic facade, we supported the architect to update the aesthetic,” said Spencer Culhane, building envelope specialist at Schüco.

Preservation consultant Higgins Quasebarth & Partners and Marvel completed the restoration using two styles of windows, since the building was built in two different time periods. “The new wood window sashes are shop painted with a durable finish to provide a long-term protected finish,” said Nebil Gokcebay, associate at the firm.

In the interior courtyard, new expanses of glaze and thermally broken windows were installed. Having undergone numerous revisions, the south-facing 200-year old facade is patched up by bricks fill up what were previously windows. This playful window arrangement (lower level windows occupied by the church are opaque) inspired the new north facade. A similar asymmetrical composition was made with Schüco’s AWS windows throughout. “Between the design starting point and in contrast to the historic double-hung windows in a pre–Civil War wall, we developed an all-glass vocabulary,” said Jonathan J. Marvel, principal at Marvel.

To complete the restoration of the windows on the historic facade, Marvel researched vintage photos with Historic Preservation Consultant Higgins Quasebarth & Partners and found remnants of the existing frames and configurations on-site.
Schüco’s AWS window system fitted on the historic north courtyard facade is also used throughout the addition and penthouse. In this diagram of the penthouse windows, custom extra large windows are thermally broken by insulation and zinc spandrels.
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Pictured here in a retrofit at Sherzer Hall at Eastern Michigan University, Vacuum IG is paired with Guardian’s SunGuard coated glass to create a hybrid, low-e vacuum-insulated glass that provides thermal insulation and minimizes the amount of ultraviolet and infrared light passing through without compromising light transmission.

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Glas Italia

The French fraternal design duo, Ronan & Erwan Bouroullec, conjured a colorful crystalline modular screen with stratified hinged panels. The folds of transparent glass feature horizontal and vertical veins that light filters through in a wonderfully lucid way. Meanwhile, the individual panels vary in size, allowing for compositions that divide, but don’t separate.

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Nathan Allan Glass Studios

Convex partitions line the kiln-formed glass that is shaped like the movement of water. It is available in a maximum panel size of 6 by 10 feet and in six depth profiles.

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↓ Direct Glaze Corner Window
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Look out of the corner! Sitting flush with the exterior, this window conveniently opens up two sides of the facade at the same time. Many applications are possible, with sizes made up to 76 inches by 146 inches in vertical or horizontal orientations.

marvin.com

↓ OBE PDR-225 Window Wall
Oldcastle BuildingEnvelope

Prefab-ulous! This glazed window wall system is assembled and sealed in industrial-grade factory conditions, which minimizes labor costs and maintains quality control that might be compromised in on-site assembly. The assembly includes an oversize thermal break complete with an anodized finishing.

obe.com

↓ 400T Series Thermal Curtainwall
Tubelite

Looking to get LEED Gold? This thermally broken curtain wall is designed to meet the strictest energy codes. The expanded thermal break and thicker gasketing system reduces solar heat gain and condensation.

tubeliteinc.com

← Furniture-grade finishes
Weather Shield

Looking to add a bit of color? Weather Shield paired with Sherwin Williams to offer the entire selection of windows or doors in ten new furniture-grade hues for the Contemporary Collection, Premium Series, and Premium Coastal collections. The finish is factory-applied, preventing inconsistent or blotchy post-installation paint jobs.

weathershield.com
Top of the Glass

These are the applications that make use of glass in pleasantly unexpected configurations. While the glass itself is secondary to the space it occupies, it adds a certain panache or creates an ambience.

Warren Clinic of the Saint Francis Health System

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<tr>
<th>Location</th>
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<tr>
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Banc of California Stadium

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Amazon Expanded Headquarters

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2019 LINEUP

ATLANTA
JANUARY
DALLAS
FEBRUARY
SAN FRANCISCO
MARCH 8
CHARLOTTE
MARCH
NEW YORK CITY
APRIL 4 + 5

BOSTON
JUNE
MINNEAPOLIS
JULY
DENVER
SEPTEMBER
CHICAGO
SEPTEMBER

TORONTO
OCTOBER
LOS ANGELES
OCTOBER 24 + 25
PHILADELPHIA
NOVEMBER
SEATTLE
DECEMBER 6

STILL TO COME IN 2018

CHICAGO
SEPTEMBER 21
MIAMI
OCTOBER 4

LOS ANGELES
OCTOBER 25 + 26
BOSTON
NOVEMBER 9

SEATTLE
DECEMBER 7

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The Summer Studios residency at Project Row Houses (PRH) is a mentorship program for local emerging artists to work on art that engages with community. Art houses will be transformed into temporary, interactive studios for the opening weekend workshop to Wednesday, and a showcase of their individual practices and ongoing work. The project is mentored by Regina Agu and Eyakem Guillot, and the residents include students from Texas Southern University, University of St. Thomas, University of Houston, and Rice University. The open studio will be a showcase of their individual practices and ongoing work. As part of the scheme, students will spend six weeks in the summer visiting organizations within the city and studying readings and critiques to further develop their work.

Jessica Stockholder: Relational Aesthetics
The Contemporary Austin, Jones Center
700 Congress Avenue
Austin, TX
September 15, 2018–January 13, 2019

Relational Aesthetics is the solo exhibition of Chicago-based artist Jessica Stockholder, installed in both of the Contemporary Austin’s venues. The show includes an outdoor exhibition at Jones Center and an outdoor sculpture at Laguna Gloria sculpture park. Stockholder is known for blending painting, sculpture, and site through color and form, turning everyday objects into space-transforming pieces that challenge an audience’s ideas of seeing. Relational Aesthetics features a brilliantly colored, site-specific architectural installation, alongside recently completed sculptures created from electronic scraps. She also invited leading Haifa artist painter Robert Davidson to exhibit within her installation. The colorist’s show will surely touch on diverse styles of abstract expressionism, color field painting, and minimalism.

Big Bambú: This Thing Called Life
The Museum of Fine Arts, Houston
1001 Bissonnet Houston
Through September 3, 2018

Big Bambú: This Thing Called Life is a monumental bamboo installation by Mike and Doug Starn that spans the floor of Cullinan Hall and the balcony of Upper Brown Pavilion in the Mies van der Rohe–designed galleries at the Museum of Fine Arts, Houston. The installation mimics the form of a crested wave and is accompanied by large-format prints of previous Big Bambú iterations. This is the first indoor version of the series and visitors are invited to enter the structure via a bridge and experience "the architecture of nature," as the Starn brothers call it. The duo is known for their conceptual photographs and their public bamboo installations, which began with their 2010 commission at the Metropolitan Museum of Art.

Making Africa: A Continent of Contemporary Design
Blanton Museum of Art
200 E. Martin Luther King Jr. Boulevard
Austin, TX
October 14, 2018–January 6, 2019

Making Africa: A Continent of Contemporary Design shows work from over 120 African and Africa-based artists, entrepreneurs, and designers that addresses the economic, social, and political shifts within the continent and beyond. Through sculpture, fashion, graphics, and videography, the artists present designs that challenge the traditional limits between disciplines and generate new ways of representing the culture and happenings in the region. As Africa emerges as the newest nexus of experimentation in the global design industry, the exhibition will focus on how African design addresses worldwide issues. The exhibition is organized by the Vitra Design Museum and the Guggenheim Museum Bilbao, and will be on view in the Butler Gallery of Blanton.
Culver City, California–based SPF:architects (SPF:a) recently unveiled plans for the Anaheim Performing Arts Center (APAC), an agriculturally inspired 11-acre complex in California’s Orange County. SPF:a’s vision includes a 2,000-seat concert hall, a 1,700-seat opera house, and a 600-seat black box theater, along with a museum, restaurants, and offices. For the project, SPF:a studied Anaheim’s most famous agricultural product: the orange. The fruit was the basis of the puckered geometries and the perforated copper-anodized aluminum panel cladding that wraps them. The site’s gridded layout follows that of an orchard as well, with each building representing a tree.

Judit M. Fekete-Pali, SPF:a president and CEO, said in a statement, “The design strategy helps break down the architectural masses — no more soulless, vast, and uninviting interior public spaces. Each program element operates independently and together.” The 500,000-square-foot campus is projected to cost $500 million and will be completed in 2021.

A New York entertainment company has tapped architecture and design firm Populous to design a Las Vegas venue with precision audio, full-surface video projections on the interior and exterior—all in the shape of a giant sphere. Will this be the world's most futuristic concert hall?

Though its unusual shape puts it in the same league as the firm’s other high-design arenas, the MSG Sphere, like most of Las Vegas, will especially dazzle the eyes—and ears. The 18,000-seat venue will feature what’s known as beamforming audio, an acoustics technology developed by the German company Holoplot that uses planar audio waves to send...
City, City Everywhere

The Continuous City:
Fourteen Essays on Architecture and Urbanization
Lars Lerup
Park Books, 2017
$39.00

Lars Lerup has published a new book. The Continuous City (Park Books, 2017) presents the Swedish-American designer and writer’s latest thoughts on architecture, cities, and the people who inhabit them by way of 14 disparate but interconnected essays. The handsome volume is bound in a matte cover featuring René Magritte’s painting Panorama Populaire (1928), which depicts buildings, a forest, and a seashore stacked atop each other, the ground plane of each upper level sawed away to reveal the strata beneath. The picture turns out to be a perfect signpost for what lies within, as its suggestion that these (and other) seemingly discrete realms are inextricably linked is precisely the crux of Lerup’s otherwise episodic inquiry.

Lerup’s two previous titles—One Million Acres & No Zoning (Architectural Association Publications, 2011) and After the City (MIT Press, 2001)—look on the postindustrial car city as a subject of serious study. They look beyond the European-oriented urbanist’s dismissal of such environments as merely “sprawl” to find and examine the often surreal juxtapositions embedded within that type of built fabric. Both books show Lerup’s fascination with Houston, where he first moved in 1993 from Berkeley, California, to take the job of dean at the Rice School of Architecture, a position he held until 2009. He is currently a professor there. Houston was to architecture in the 1980s what Dubai is to the field today—a petro-capital spending big money on ambitious development projects without paying much attention to the rules. Lerup’s championing of this subject matter in architectural academia (his has been one voice—one there are others) has done much to save the discipline from self-inflicted obsolescence, an observation driven home by the fact that approximately 80 percent of currently existing global urban environments are designed and constructed around the automobile. His leadership also supported and propelled other academics who have done important work in this area, including Rice colleague Albert Pope, whose seminal volume, Ladders (Princeton Architectural Press, 1996), laid the groundwork for serious consideration of the postwar American city, and former Rice assistant professor Keith Krumwiede, whose latest book, Atlas of Another America: An Architectural Fiction (Park Books, 2016), explores speculative futures of suburbia.

Another of Lerup’s preoccupations is subjectivity. In the 1970s, during a sabbatical from UC Berkeley, Peter Eisenman invited him to the Institute for Architecture and Urban Studies in New York (Rem Koolhaas was writing Delirious New York just down the hall). Lerup’s design work exhibits ties to that lineage of formal exploration and defamiliarization, but where Eisenman seeks to liberate architecture from the user, Lerup’s ambition has been to explore the problems of the urban inhabitant. For example, he did several years of research with the National Bureau of Standards in Washington, D.C., on how people in nursing homes panic and escape buildings that are on fire. The result was a series of publications compiled into Learning from Fire: A Fire Protection Primer for Architects, composed of a series of hand-drawn comic strips that depict nurses and patients reacting to infernos.

In Continuous City, Lerup says hello to the Anthropocene. Quoting from the introduction: “The Anthropocene brings with it the realization that we live in a new (catastrophic) geological era of our own making. This is no longer a squabbable between liberty or community, but a need to avert disaster. Lacking easy answers, we now seek opportunities for change, skipping the dark side of the new city, which the earlier books dealt with, to find in architecture a device for positive movement forward.” He argues that conceptual distinctions between urban and suburban, or urban and rural, are no longer productive. “The urban,” he writes, “is inescapable. The city is everywhere.”

Lerup’s hunt for constructive examples takes the reader on a journey that spans the globe and delves into the history of human settlement. He establishes links between the plan of Teotihuacan and OMA’s Seattle library, investigates the coexistence of natural and built environments in the work of Roberto Burle Marx, considers the synergies of Herzog & de Meuron’s Miami garage, and worries the nurses and patients reacting to infernos. The result was a series of publications compiled into Learning from Fire: A Fire Protection Primer for Architects, composed of a series of hand-drawn comic strips that depict nurses and patients reacting to infernos.

Aaron Seward is editor of Texas Architect magazine and an AN contributing editor.
Chasing Perfection

Chasing Perfection:
The Work and Life of Architect John S. Chase
Houston Public Library
Julia Ideson Building

Chasing Perfection:
The Legacy of Architect John S. Chase
The African American Library at the Gregory School

John Saunders Chase, FAIA (1925–2012) was a Houston architect who realized a large body of work in the city, throughout the state of Texas, and around the United States. At its peak, his office had nearly fifty employees in four cities: Houston, Dallas, Austin, and Washington, D.C. Chase, an African American, achieved many historic firsts during his career. His life, as seen via his personal and professional achievements and the work of younger architects who passed through his office, was on display this spring in Chasing Perfection, a two-part exhibit produced by the Houston Public Library.

Born in Maryland, John Chase moved to Austin in the late 1940s after receiving initial architectural training at the Hampton Institute in Virginia and serving in the Army during World War II. He applied to graduate school at the University of Texas at Austin (UT Austin) School of Architecture after the Sweatt v. Painter Supreme Court decision in 1950 that fought the “separate but equal” policy of racial segregation in college education. After graduation, no firm would hire him, so Chase established his own practice in Houston, and in 1956, he became the first African American architect to be licensed in the state. Throughout his career, he designed churches, homes, union halls, libraries, high schools, fire stations, and institutional buildings, including much of the campus of Texas Southern University. He was a founding member of the National Organization of Minority Architects (NOMA) in 1970 and received his AIA Fellowship award in 1977. In 1980, Chase was selected by President Jimmy Carter to join the Commission of Fine Arts and was part of that committee during the contentious process of realizing Maya Lin’s Vietnam Memorial on the National Mall. He was a founding member of the National Organization of Minority Architects (NOMA) in 1970 and received his AIA Fellowship award in 1977. In 1980, Chase was selected by President Jimmy Carter to join the Commission of Fine Arts and was part of that committee during the contentious process of realizing Maya Lin’s Vietnam Memorial on the National Mall.

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Chase’s early buildings in east Austin to renovations underway about touring the show at other institutions. She also said a brochure from Chase’s firm and drawing supplies from his office were recently acquired by the National Museum of African American History and Culture (NMAAHC) in Washington, D.C. Wilson added that she and Mrs. Chase are “going to go through his personal archives to see what materials might go to the NMAAHC, and the rest will be housed at the African American Library at the Gregory School.”

Chase’s legacy continues to be explored and celebrated. In February, UT Austin announced that it had purchased one of Chase’s early buildings in east Austin to renovate and use as a community engagement center. While Chasing Perfection closed in early June, Wilson says there are already discussions underway about touring the show at other institutions. She also said a brochure from Chase’s firm and drawing supplies from his office were recently acquired by the National Museum of African American History and Culture (NMAAHC) in Washington, D.C. Wilson added that she and Mrs. Chase are “going to go through his personal archives to see what materials might go to the NMAAHC, and the rest will be housed at the African American Library at the Gregory School.”

Chase is an important figure among the talented architects who practiced in Houston during the second half of the 20th century. His career opened the door for many architects of color to enter the profession, and he serves as an example of the countless ways in which an architect can effect positive change in the world.

Jack Murphy is a Master of Architecture candidate at Rice University and a regular contributor to The Architect’s Newspaper.
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