PLANNING MAGAZINE

A Business Case for Dropping Parking Minimums

In the smallest of towns and the biggest of cities, these new zoning reform policies help boost small businesses, promote housing development, and put people over parking.

Changing parking minimums can support economic development and sustainability. Photo by eyfoto/iStock/Getty Images Plus.

June 1, 2022

By JEFF SPIVAK

Auburn, Maine, is a quaint, picturesque river town dating back to the 18th century, with a Main Street historic district of Victorian-era homes. There's also a riverwalk, a hockey arena, and even a mall. But like lots of smaller towns all over America, COVID ravaged some of its businesses. A Ruby Tuesday restaurant closed. So did a locally owned brunch place. And a Chinese buffet. And a French café. And others.

Something had to be done to replace the restaurants and encourage new businesses.

So in June 2021, this city of 24,000 people eliminated all minimum parking requirements for commercial developments, thus reducing upfront costs for new businesses and expansions. It had an immediate impact. Later that autumn, the Olive Garden restaurant chain looked to open in Auburn and eyed the Ruby Tuesday's site, but the company wanted to build more square footage. Under the old parking regulations, Olive Garden would have had to supply more parking spaces. But now it didn't. The deal was done and approved.

"With COVID, we were searching [for] any way that could help businesses," says Eric Cousens, Auburn's longtime planning director. "This worked for us, and it's setting us apart from other communities."

Indeed, municipal parking reforms to reduce or eliminate parking minimums are such a major movement now across the U.S. that they're even spreading and taking off in small town America.

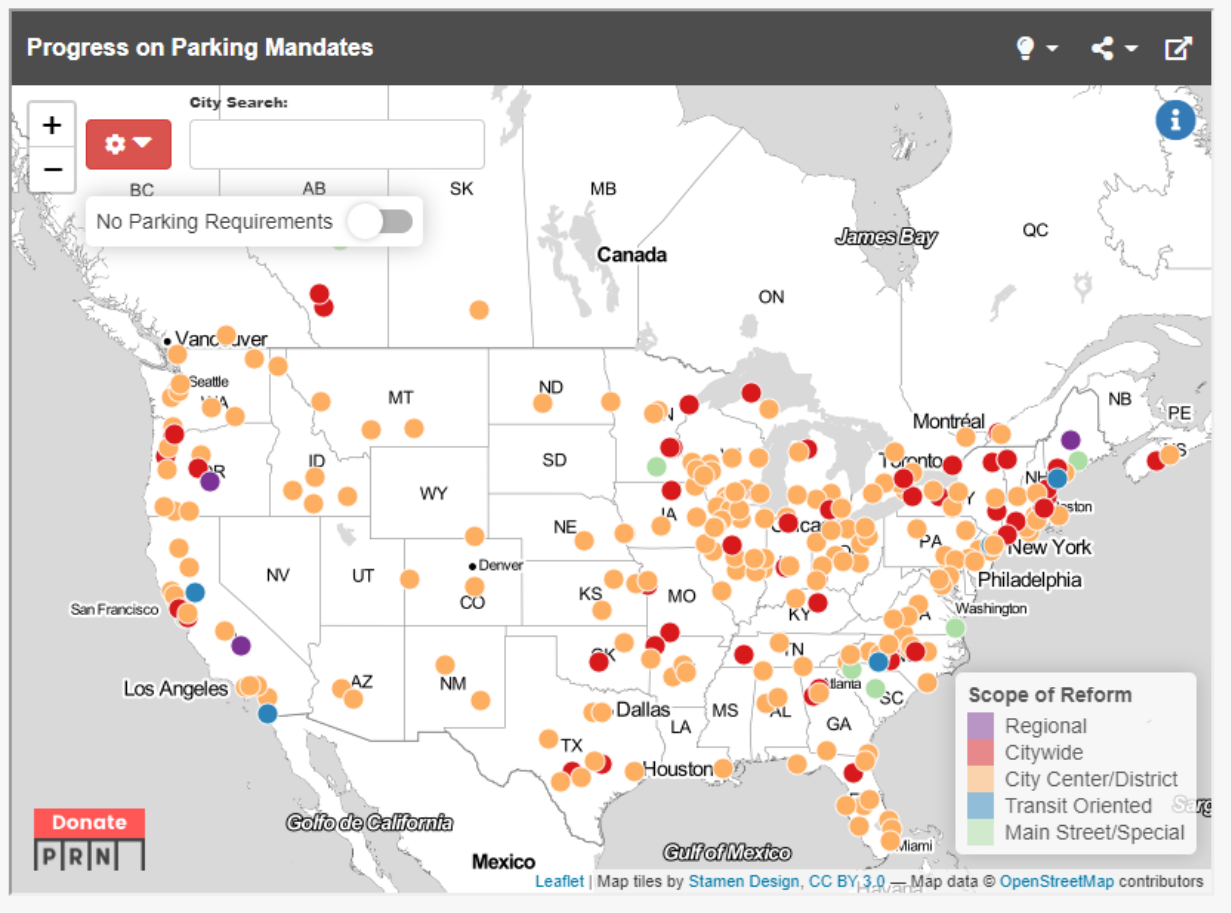
"It's such a small but significant step that any city can take to reduce development costs and encourage more commercial and residential growth," says Rachel Quednau, program director at a Minnesota-based nonprofit called Strong Towns that focuses on sustainable community initiatives such as parking reform. "I don't think there's any small town in America that doesn't want more businesses."

'A tidal wave'

To quantify the nationwide movement to reduce or eliminate parking minimums, a couple of advocacy groups — Strong Towns (https://www.strongtowns.org/) and the Portland, Oregon–based Parking Reform Network (https://parkingreform.org/), made up of planning professionals — collaborated to compile a list (https://parkingreform.org/resources/mandates-map/) of all the North American cities that have implemented or proposed parking minimum reforms in certain districts (like a downtown) or citywide.

The early-adopter big cities that were at the forefront of the parking minimums movement are all there: Buffalo, New York; Minneapolis; Portland; San Francisco; Seattle. So are the most recent big cities to join the movement: Boston; Raleigh, North Carolina; San Diego. Overall, a recent version of the Strong Towns–Parking Reform Network list contained 73 cities with populations of at least 200,000 people.

Parking Reforms in Big and Small Towns



Places of all sizes are eliminating parking minimums, whether it's just downtown or throughout the whole city. An interactive map (https://parkingreform.org/resources/mandates-map/) from the Parking Reform Network allows users to not just see where reforms are happening, but also click through to read the details about local parking regulations (users can submit data, too). Of the 200 or so communities on the map, more than half have populations of under 100,000.

The compilation of parking minimum reforms contained even more locales — more than 130 — with populations under 100,000. There are college towns, industrial cities, metropolitan suburbs, rural hamlets, retiree hubs, and resort communities. Some 40 states are represented, and Florida, Idaho, Minnesota, North Carolina, Ohio, and Washington have five or more communities on the list. It's a geographic cross-section of rural and suburban America.

"I've been surprised at how many there have been," says Tony Jordan, president and cofounder of the Parking Reform Network. "It's been a tidal wave."

Smaller cities may not have the same congestion issues or transit alternatives as big cities, but they're pursuing parking minimum reforms for some of the same reasons — to promote downtown and commercial development, reduce barriers to small business growth, and encourage more housing.

That potential is certainly what's led Cutler Bay, Florida, down the path of parking minimum reforms. A town of 45,000 people and eight senior living facilities, the AARP "age-friendly" community (/planning/2020/dec/age-friendly-rural-planning/) south of Miami has had a waiting list for senior units for years.

Town officials talked to developers about what was holding them back. One common refrain: parking costs. So, in 2019, the town reduced parking minimums for senior housing, cutting the requirements in half from two spaces per unit to one. This move immediately led to a 99-unit senior project proposal.

Now Cutler Bay is doubling down on parking reform. A new metro bus rapid transit line is being built on the edge of town, and in April 2022, the town council passed new reductions in parking minimums for mixed-use and multifamily developments in a special transit zone.

"This is the town's way of incentivizing development," says Town Manager Rafael Casals.

Benefits of reforms

So what's so wrong with parking minimums, anyway?

Parking minimums tend to be controversial because they can be inconsistent and unpredictable. The requirements in one city aren't necessarily the same in another city. And some standards aren't always efficient, such as locales dictating two spaces per chair at a barber shop when a barber's chair can only hold one person at a time.

In today's age of environmental sustainability concerns, there's also more awareness about the spatial costs of parking — the fact that suburban parking lots can be larger than the square footage of the buildings they serve, and a string of downtown parking lots can look like a mouthful of missing teeth on the face of a walkable public realm. There can also be water quality costs, as rainfall lands on all that asphalt and then runs off into nearby waterways or storm sewers, taking oil and other surface contaminants with it.

Then there are the direct costs of building parking — estimated by industry analysts at roughly $5,000 per surface space and up to $50,000 per space in multilevel garages. This of course escalates the costs of real estate developments, sometimes to a point of making a project financially unfeasible.

"Parking requirements do so much harm," says Donald Shoup, FAICP, a distinguished urban planning professor at the University of California, Los Angeles, and a longtime evangelist for parking reforms, as the author of several books on the issue (https://www.routledge.com/search?author=Donald%20Shoup). "They add costs to the building of housing, and they increase the usage of cars and greenhouse gas emissions. They seem to work against almost everything that planners want."

With Minimums: Higher Costs. Requirements can add roughly $5,000 per surface space, according to the National Parking Association. Photo by ideabug/ iStock/Getty Images Plus.

Even the National Parking Association (https://weareparking.org), the industry's trade group of parking operators, now supports reducing or eliminating parking minimums (https://weareparking.org/page/land-use-zoning) and instead favors allowing communities and developers to make market-based decisions on parking supply and demand.

But do parking minimum reforms actually produce their expected benefits? So far, there hasn't been much research on this topic, but some new studies have begun to be published that appear to answer that question with an emphatic "yes."

In Seattle and Buffalo, separate groups of academic researchers in 2020 and 2021, respectively, found that after policy changes concerning parking minimums, a large portion of developers did build less parking than previously required, and they particularly took advantage of the cost savings to build mixed-use projects. And in San Diego, another group of academic researchers in 2021 found that in the first year after parking reforms, proposals for affordable housing units (https://cal.streetsblog.org/2021/05/19/parking-requirements-are-not-a-useful-bargaining-chip-for-increasing-affordable-housing/) jumped fivefold.

Bottom line, these studies indicate that more commercial and residential development occurred after parking reforms than would have happened without the reforms.

As the Buffalo researchers — planning professors from the University at Buffalo — wrote in the *Journal of the American Planning Association* article "Minus Minimums" (/blog/9228532/driving-change-through-parking/) last year, "Cities of all types stand to benefit (https://www.tandfonline.com/doi/full/10.1080/01944363.2020.1864225) from undoing constraining parking policies of the past and allowing developers to transform parking lots into 'higher uses.'"

Smaller-city experiences

But all that parking research so far is from bigger cities. Can the same impacts occur in smaller towns? A couple of experiences in different parts of the country are already showing it can.

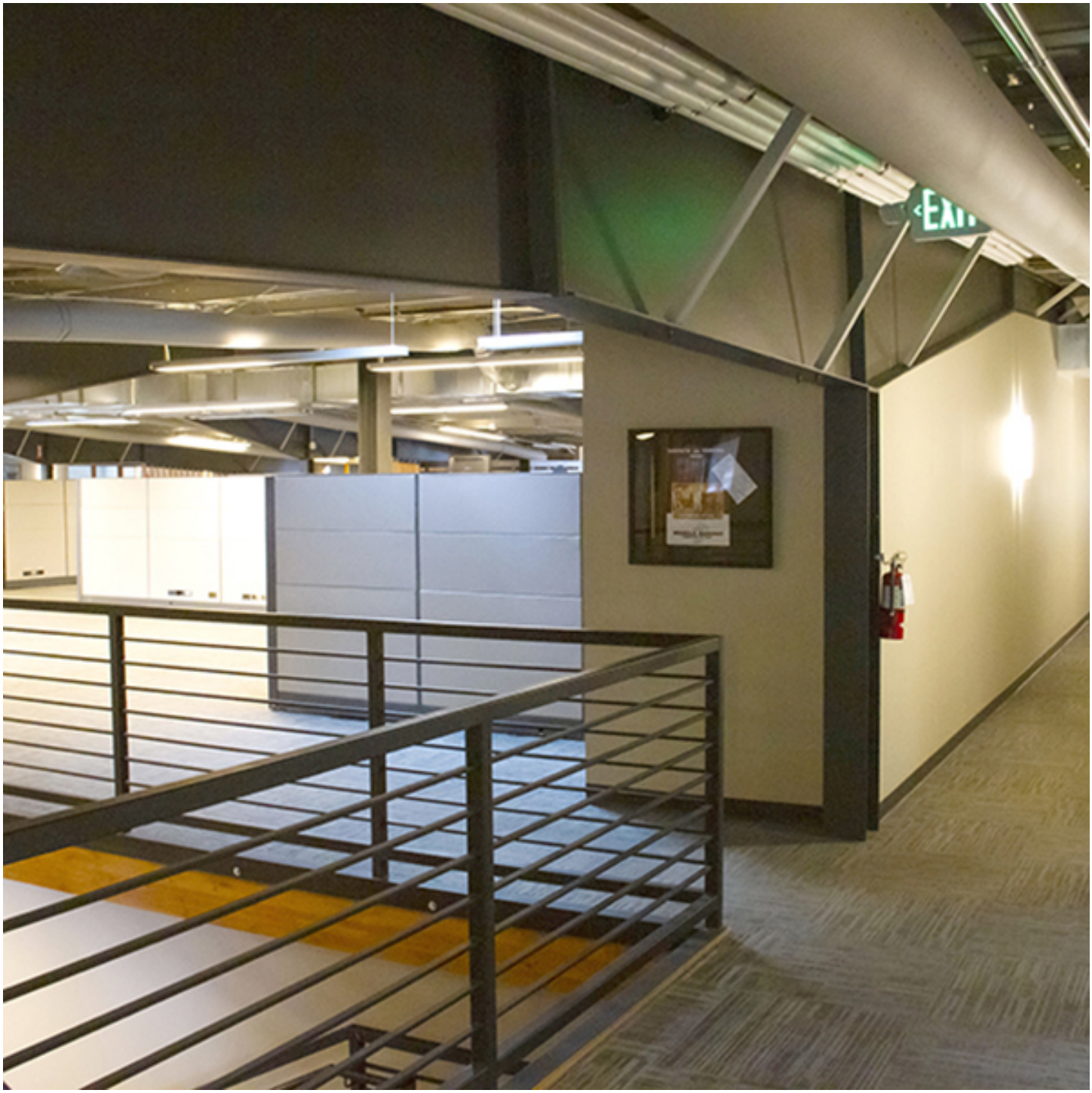
The college town of Fayetteville, Arkansas, is believed to be one of the first cities in the U.S. to have eliminated parking minimums citywide, which it did in 2015 for commercial properties. In the seven years since, Fayetteville officials don't claim that it spurred a frenzy of new development or redevelopment. But they do maintain it led to some projects that likely wouldn't have happened otherwise.

Take the Feed & Folly restaurant just off the downtown square. Its owners took over a building that had been vacant for decades, but the parking lot only had room for a half-dozen cars — some 30 less than the city's old parking regulations would have required. But under the new rules, it was able to open in 2020 while adding just a handful of parking spaces, and it instantly became a buzzworthy hotspot with its rooftop bar.

Similarly, Matthew Petty was on the Fayetteville City Council when the parking minimums reform was passed, and as a planning consultant and developer, he eventually wanted to take advantage of the rule change. He and his partners developed what's called 495 Prairie, a three-story project with nine apartments on upper floors, plus offices, a craft beer bar, and a smoothie shop at the street level. The project built just nine parking spaces — less than half of what would have been required before 2015.

"We wouldn't have been able to do mixed-use without the new parking policy," Petty says.

Without Minimums: Vacant Buildings Occupied. In Fayetteville, Arkansas, reducing the required spots from more than 30 to eight allowed one small business to turn a vacant building into a buzzy downtown hot spot. Photo courtesy of Feed and Folly (https://feedandfolly.com/).



Without Minimums: Tax Revenue Increases. In Sandpoint, Idaho, dropping the minimums encouraged tech company Kochava (https://www.kochava.com/) to renovate an old lumber storage facility, resulting in a tax value assessment increase of more than $2 million. Photo courtesy of Riley Emmer/Kochava.

A thousand miles from Fayetteville, a town in Idaho called Sandpoint experienced some of the same benefits from parking minimums reform.

Sandpoint is a resort town with less than 10,000 residents that swells with visitors who come for its lake, beach, and nearby skiing in pine forests. The town first did away with parking minimums for its downtown in 2009. Nine years later, it reduced the minimums citywide. Why? To make building renovations and redevelopments more affordable for small business startups.

Aaron Qualls, AICP, saw it all. From 2010 to 2021, he served as a planning commissioner, city planning director, and a city councilmember in Sandpoint, and he documented what he called "success stories made possible by parking reform." There was MickDuff's Brewery that remodeled an old library and Pend d'Oreille Winery that took over a vacant old furniture store. A tech startup renovated a dilapidated lumber supply building. And on and on — and Qualls says they wouldn't have happened under the old parking requirements, because local business startups often don't have extra capital to devote to parking.

"We've always assumed that more parking is better," says Qualls, now a project manager and planner for SCJ Alliance, an engineering and planning firm, "and what we found in Sandpoint is that's not always the case."

The lesson: A flexible policy

The countrywide parking reform movement is, of course, not a single-issue crusade. Boston and San Diego have also established parking maximums, or limits on how many spaces a new development can provide in transit-accessible neighborhoods. Los Angeles and Washington, D.C., have technology-driven programs that adjust parking rates based on demand (/planning/2021/summer/8-ways-to-launch-your-parking-strategy/), like higher rates during the morning commute. And Chicago; Kansas City, Missouri; Philadelphia; and several other cities have allowed businesses and neighborhoods to repurpose on-street parking spaces into restaurant seating, parklets (/planning/2017/jul/parklets/), and other public gatherings during the pandemic. In many cases, those temporary changes are becoming permanent (/planning/2021/spring/our-post-pandemic-future-could-be-a-lot-less-car-centric/).

But parking minimums are by far the most popular form of parking reform — they're even spreading to state legislative efforts in California, Connecticut, and Oregon — and they're usually the focus of smaller-town policies.

In Jackson, Tennessee, an industrial hub of 68,000 people, leaders are trying to encourage more infill development. Eliminating parking minimums for commercial projects last October was "an easy decision," Mayor Scott Conger says, because it didn't require any government funding or subsidies.

Nevertheless, it's not always an easy plunge for smaller cities to take.

Proposals to reduce or eliminate parking minimums are sometimes met with skepticism and apprehension in smaller towns. There, people are used to parking right by a store's front door. "There still is trepidation in these communities," says Carl Schneeman, managing principal of Walker Consultants, a Minneapolis-based parking design and planning firm that works with cities of all sizes. "A lot of them simply fear a change."

And it usually turns out that such fears are overblown and don't come to pass. "Every time these reforms are put in, people go to meetings and say, 'This is going to be terrible.' And it never is," says Parking Reform Network's Jordan. "The sky doesn't fall."

If there's a lesson for how smaller communities can avoid or lessen such fears of parking minimums reform, it's by providing flexibility in the new policy. That is, don't necessarily apply the reduced parking standards to all types of properties or all parts of town. Be targeted in the approach.

That's what Auburn and Fayetteville did, applying reduced parking standards for commercial projects. Same with Cutler Bay, which lowered parking minimums first for senior housing only, then for mixed-use and multifamily developments in a transit zone. And the city of Alameda, California, was one of the latest communities to officially join the movement, passing an ordinance (https://alameda.legistar.com/LegislationDetail.aspx?ID=5206101&GUID=429C9828-DBAE-483F-8696-D0D9B13E21A2) that eliminated parking minimums citywide in November 2021.

In Alameda, the Planning Board for years had been passing parking variances to reduce parking spaces for new projects. So the decision to eliminate minimum standards simply reflected the community's evolving attitude toward parking, plus the realization that this city — an island without room to sprawl — needed more room to devote to new housing growth.

"We have space for people and more buildings," says Andrew Thomas, AICP, director of the city's Planning, Building, and Transportation department. "We don't have space for more automobiles that need to be stored.

"We've come a long way."

Jeffrey Spivak, a market research director in suburban Kansas City, Missouri, is an award-winning writer specializing in real estate planning, development, and demographic trends.

ESTUDIO_ENTRESITIO NAVIGATES A WOODED LAKESIDE SLOPE FOR A FAMILY'S SECOND HOME, NEAR MADRID. **BY ANDREW AYERS**

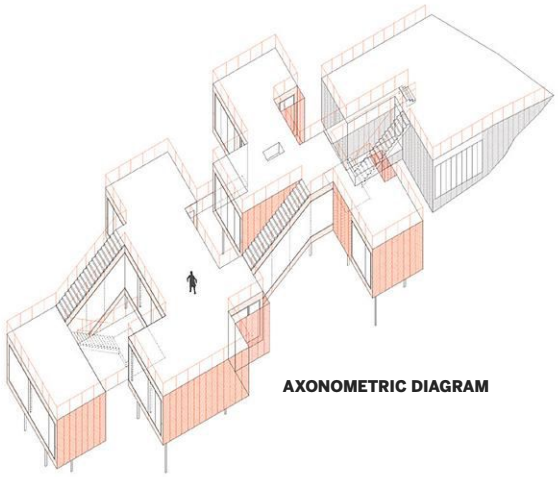
Entered from the top (opposite, bottom), the house steps down the hill (this image and opposite, top), with the primary suite above a terrace at the lowest level.

PHOTOGRAPHY: © ROLAND HALBE (ALL)

NESTLED IN pine groves 45 miles east of central Madrid, the nine-mile-long San Juan reservoir is the only lake in the region where swimming and water sports are permitted. As a result, a bucolic 1960s subdivision on the shores of its eastern extremity has become a sought-after location for upmarket weekend houses. In 2017, after acquiring one of the few remaining virgin plots, a Madrid-based client, who is a keen jet skier, commissioned four local architecture firms to draft plans for a family vacation home. "They were all very different," he says of this mini-competition, "and my wife and I liked more than one. But after 10 minutes' discussion, I knew we'd work with estudio_entresitio—they were so open, attentive, and patient." The feeling, it turned out, was mutual. "This kind of architecture is impossible with someone who doesn't care," says María Hurtado de Mendoza Wahrolén, cofounder alongside César Jiménez de Tejada Benavides of the 2007 Design Vanguard firm. "But our client is even more intense than we are!"

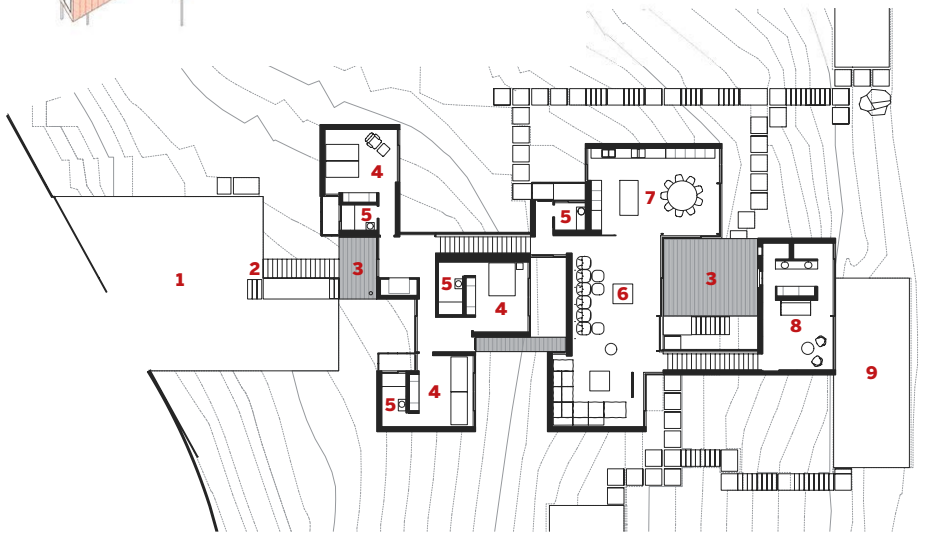
Though ideally located on the waterfront, the site was challenging: rocky, steep (a 45-degree incline), and bound by restrictive regulations that were subject to unpredictable interpretation by the mayor. Moreover, neighboring houses often flooded when the rare rains came. "To avoid administrative headaches," the client explains, "we made several decisions: minimal leveling; no concrete, except where unavoidable; just one story, to be sure we complied with the prohibition on rising more than 23 feet above grade; and timber construction, to minimize building time and water consumption." In addition, he specified accommodation comprising four bedrooms (primary, guest, two for children), a generous living/dining/kitchen area, parking (prohibited on the street), staff quarters, and, of course, ample outdoor space.

Sliding glass doors in the kitchen and living room (opposite, top and bottom) open to the deck (opposite) above the primary suite (left).



AXONOMETRIC DIAGRAM

1 PARKING PAD
2 ENTRANCE
3 DECK
4 BEDROOM
5 BATHROOM
6 LIVING
7 KITCHEN/DINING
8 PRIMARY SUITE
9 PATIO



COMPOSITE FLOOR PLAN

0 15 FT.
5 M.

Given the program's size (3,700 square feet), a single-level home would have been impossible within the constraints of the site. Instead, the house espouses the topography, cascading down the slope in a series of cross-laminated-timber (CLT) boxes linked by stairs. So steep is the terrain, the garden is purely ornamental, usable outdoor space being provided by spacious decks on the roof of each box. Steel micropiles driven into the bedrock avoid the need for leveling and, above grade, become slender pilotis that lift the CLT boxes into the air, allowing rainwater to flow beneath. Protected from the elements thanks to a sandwich of insulation, waterproofing, and chevron-mounted pine-plank cladding, the house is painted in Falu red, a souvenir of Hurtado de Mendoza's childhood trips to her mother's native Sweden (where this copper-mining byproduct is traditionally used on timber facades).

The one exception to the light touch on the terrain is the service-quarters/HVAC-machinery block, realized in solid raw concrete (board-marked in chevrons) so that its roof, which communicates directly with the street, is strong enough for parking. As a result, the house appears extremely discreet when first encountered, slowly revealing itself in time and space. An outdoor stair leads from the concrete platform to the first level of accommodation, containing the guest and children's bedrooms. From the entrance, a glazed internal stair descends to the L-shaped living area, while a similar stair accesses the lowest level, where the primary suite is isolated from the rest of the house. All the main spaces command splendid views, the primary bedroom enjoying a particularly immersive connection with the landscape. Mirroring the internal layout, the generous roof terraces are linked by external stairs that offer an alternative route around the residence.

At once simple and complex, the house appears beguilingly Escheresque when viewed from the upper decks. Inside, however, the spatial sequence is all fluidity and logic. "We worked very hard to decompose the space from within, so you no longer read the boxes," says Hurtado de Mendoza. The changes in level and the generous glazing afford multiple diagonal views that make the house appear far larger than it really is, while enormous sliding glass doors dissolve the living room into the deck above the main bedroom. Copious under-

floor heating and cooling, and ceiling-mounted ventilation and heat-recovery systems are entirely dissimulated in a total-design interior where every square inch has been custom made and detailed, from doors, railings, and lighting to the vast quantity of invisible closets. "This is the kind of project that allows us to do a lot of research and try things out," says Hurtado de Mendoza. "We designed or sourced everything except movable furniture. We wish we could have chosen that too!"

In this home, control is both an architect/client obsession and an abstract divinity. "The house is designed on a grid that you never see, but which everything relates to in one way or another," explains Hurtado de Mendoza. "We never know beforehand how a project will turn out, because we play by the rules of the grid, of geometry, and every result is a good one." Among the architects' favorite books, she laughingly admits, is Óscar Tusquets Blanca's *God Will See It*. ■

Credits

ARCHITECT: estudio_entresitio — Maria Hurtado de Mendoza, Cesar Jimenez de Tejada, Alvar Ruiz, principals

CONSULTANTS: Ignacio Aspe (structure); AlterMATERIA (CLT); Manuel Rodriguez (energy efficiency); Arkilum (lighting design); Planta Paisajistas (landscape)

SIZE: 3,700 square feet

COST: $1.5 million

COMPLETION DATE: March 2022

Sources

STRUCTURE: Piveteau Bois (CLT)

CLADDING: Lunawood; Rockwool; HECO-Schrauben Iberica

PAINT: Falu Rödfärg

HANDRAILS: Arc316 Mesh and Cables

INTERIORS: Knauf (ceilings and partitions); DuPont (Corian); Leicht (cabinets); Pavi-Navas (terrazzo)

LANDSCAPE

IN SHANGHAI, AN EVOLVING RIVERSIDE PARK GAINS AN OVERWATER PLAZA BY HÖWELER+YOON. **BY MATT HICKMAN**

PHOTOGRAPHY: © WU TAO/SHRIMP STUDIO (EXCEPT AS NOTED)

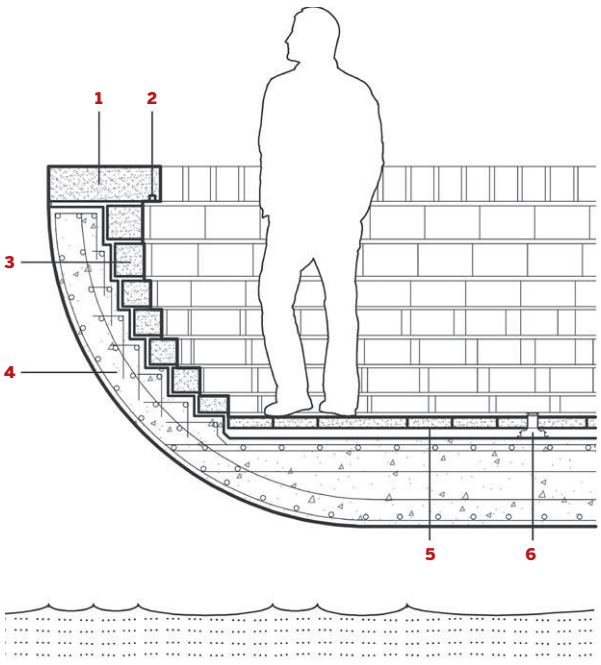
THE MOON GATE, an ancient Chinese architectural element that's essentially a nearly circular arched portal through a garden wall, has potent spiritual pull: originating at the homes of wealthy landowners, these circular stone or brick openings fuse together the celestial with the earthly and represent prosperity, good fortune, renewal—a threshold as a blessing, if you could afford it.

In 2022, a different sort of pedestrian passageway, a bridge, was completed along the east bank of the Huangpu River in Shanghai's Pudong district. While the bridge—more precisely, a 56,000-square-foot plaza with two irregularly shaped spans extending over a manmade waterway—evokes the moon gate in both name and form, its concerns are more egalitarian in nature. Designed by Boston-based architecture practice Höweler+Yoon (HYA), Moongate Bridge is a public gathering space and gateway to Shanghai Expo Park, coupling historical reference with contemporary reflection. Situated on the far northern edge of the park, at a narrow, bar-shaped artificial lake that itself is positioned over a subterranean parking garage, Moongate Bridge is directly opposite an elevated expressway that becomes the Lupu Bridge, a lengthy steel-arch landmark carrying six lanes of traffic over the Huangpu. More vitally, the sophisticated new bridge-plaza is adjacent to Shanghai Metro entrances, allowing for foot traffic to more slowly trickle in and out of the sprawling riverfront park.

While Moongate Bridge is chiefly a structure of conveyance, it's also a space for lingering. Lookout points—or "cavities" as HYA cofounding principal Eric Höweler describes them—formed by flat openings in the opaque semicircular guardrail that are fronted by glass give small groups and solo visitors a reason to pause.

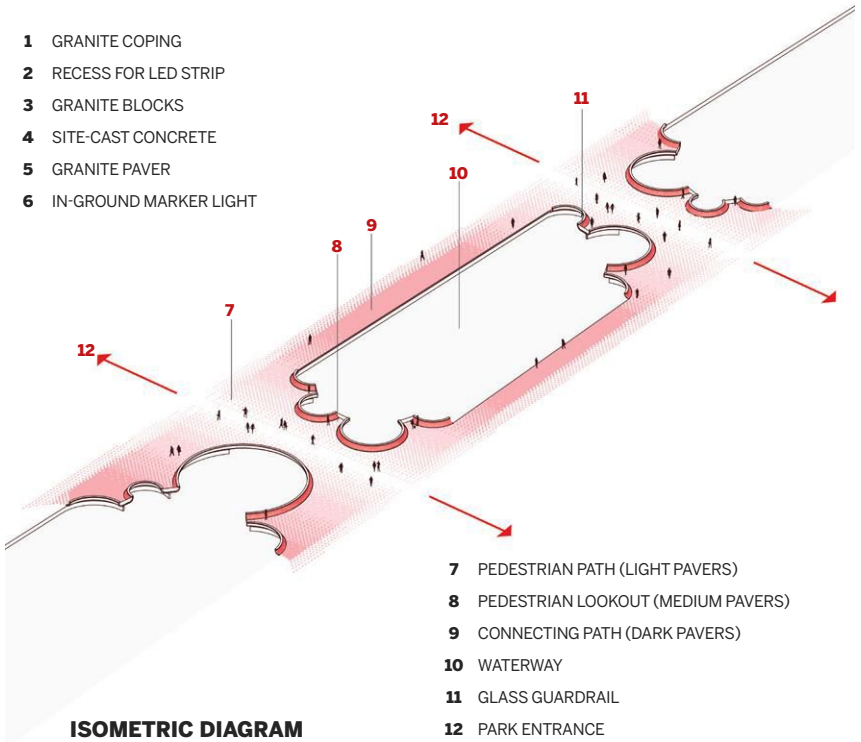
"The little overlooks are designed for contemplation, says Höweler. "Like the traditional Chinese garden, there's a pavilion with a scholar who sits and looks at that landscape and is inspired to write poetry. We had a sentimental kind of imagery in mind."

Stepping out of these cozy lookout nooks jutting over the lake, pedestrians find the spans that invoke moon gates are themselves spacious enough to accommodate considerable foot traffic. As Höweler notes, Moongate Bridge is "sized for the masses."



SECTION DETAIL

1 GRANITE COPING
2 RECESS FOR LED STRIP
3 GRANITE BLOCKS
4 SITE-CAST CONCRETE
5 GRANITE PAVER
6 IN-GROUND MARKER LIGHT



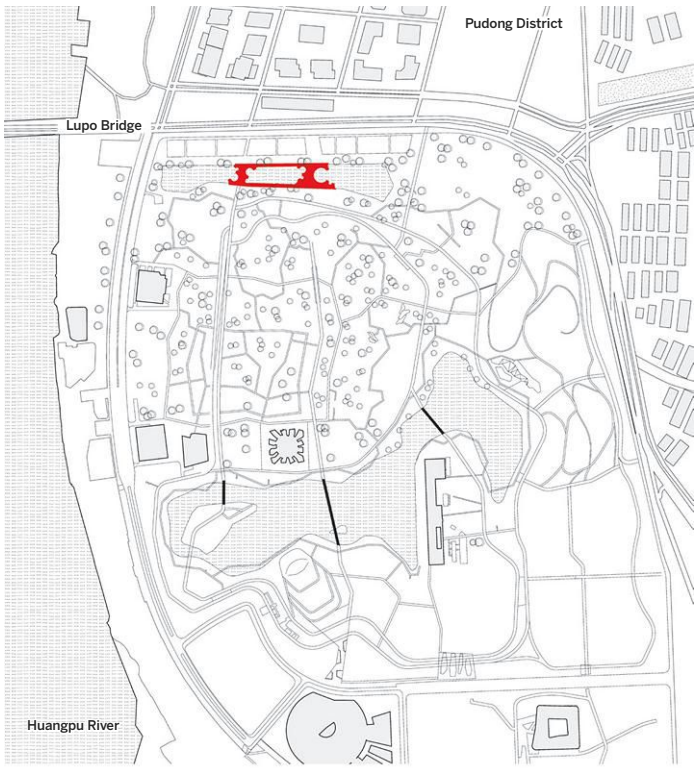
ISOMETRIC DIAGRAM

7 PEDESTRIAN PATH (LIGHT PAVERS)
8 PEDESTRIAN LOOKOUT (MEDIUM PAVERS)
9 CONNECTING PATH (DARK PAVERS)
10 WATERWAY
11 GLASS GUARDRAIL
12 PARK ENTRANCE

Moongate Bridge spans a narrow artificial lake at the northern entrance of Shanghai Expo Park in the city's Pudong district.

The Shanghai Land Company–commissioned project is HYA's second in China, following Sky Courts, an exhibition hall completed in the Sichuan capital of Chengdu in 2011. The firm, cofounded by Meejin Yoon, was selected for the pedestrian bridge at Shanghai Expo Park via an invited competition that found three contenders—HYA, Johnston Marklee, and local studio Archi-Union—working on bridge schemes for six different sites within the park.

Clad in multihued gray granite pavers, the floor surface of the site-cast concrete bridge has a pixelated effect, with different shades of gray suggesting areas where users should hang back and congregate on the water's edge (dark



SITE PLAN

Shanghai Expo Park is located on the former grounds of the city's Expo 2010, along the Huangpu River,

gray) and areas where they are encouraged to keep moving (light gray). "There's a kind of speed that's mapped into the paving pattern to designate zones for movement and then zones for eddies and slowness," says Höweler.

Ultimately, Moongate Bridge seems optimized for something most closely akin to ambling. "It's not made to speed you up or convey you quickly and efficiently," adds Höweler. "There's a kind of willful inefficiency to help slow you down."

Much like the moon gates of traditional Chinese garden design, Shanghai Expo Park itself is symbolic of new beginnings. Existing as natural wetlands before being scarred by decades of industry, the swath of riverfront now in the shadow of the Lupu Bridge was transformed into the grounds of Shanghai Expo 2010. The five-month-long world's fair drew more than 73 million visitors to the former brownfield site. Following the conclusion of Expo 2010, much of the area was set aside as urban parkland, with public gardens and a handful of recreational and cultural diversions. (Expo leftovers, including the Mercedes-Benz Arena and a small smattering of pavilions, remain in the park or its vicinity.)

Still, the transformed site is "mostly landscape," Höweler says, adding that Moongate Bridge's embrace of traditional Chinese landscape design through its emphasis on relationships, not objects, is "trying to stitch or connect back to a history that was lost during the Cultural Revolution."

Drawing parallels with HYA's earlier, Chinese courtyard typology–reimagining Sky Courts' commission in Chengdu, he adds that both projects aim to establish "some sort of linkage" to the past. "And that's been very hard to achieve in a way that feels authentic." At Shanghai Expo Park, the firm has reached for the moon—and seized it. ■

IMAGE: COURTESY HÖWELER + YOON (BOTTOM)

MEMORIALE DELLA SHOAH | MILAN | MORPURGO DE CURTIS

Past in Place

A memorial in Milan's central station retraces the journey many took to Nazi extermination camps.

BY NICHOLAS ADAMS

THE MEMORIALE DELLA SHOAH, a new Holocaust memorial, opened this summer under the Stazione Centrale (Central Train Station) in Milan. It requires our attention: not just inherently, because the subject is so important, but architecturally, because of the skill of the architects in finding compelling ways to bring this terrible period alive. The design is by Morpurgo de Curtis, a partnership founded in 2006 in Milan with a varied portfolio of housing, exhibition, and interior design. Guido Morpurgo previously worked for Vittorio Gregotti, Annalisa de Curtis for Umberto Riva.

Few passing through the Stazione Centrale (1912–31) know that underneath is an additional set of tracks used by the Italian postal service, but long abandoned. There, 80 years ago, Jews, Romani people, and enemies of the Nazi occupiers were sent north in boxcars to extermination and internment camps. Forced in through the postal entrance, they climbed into bare, unheated cars that were then shunted onto a hydraulic elevator and brought up to the main level, alongside trains bound for the rest of Italy. In all, approximately 1,200 Jews were sent from this spot north in 15 convoys between 1943 and 1945. Today this is the site of the Memoriale della Shoah.

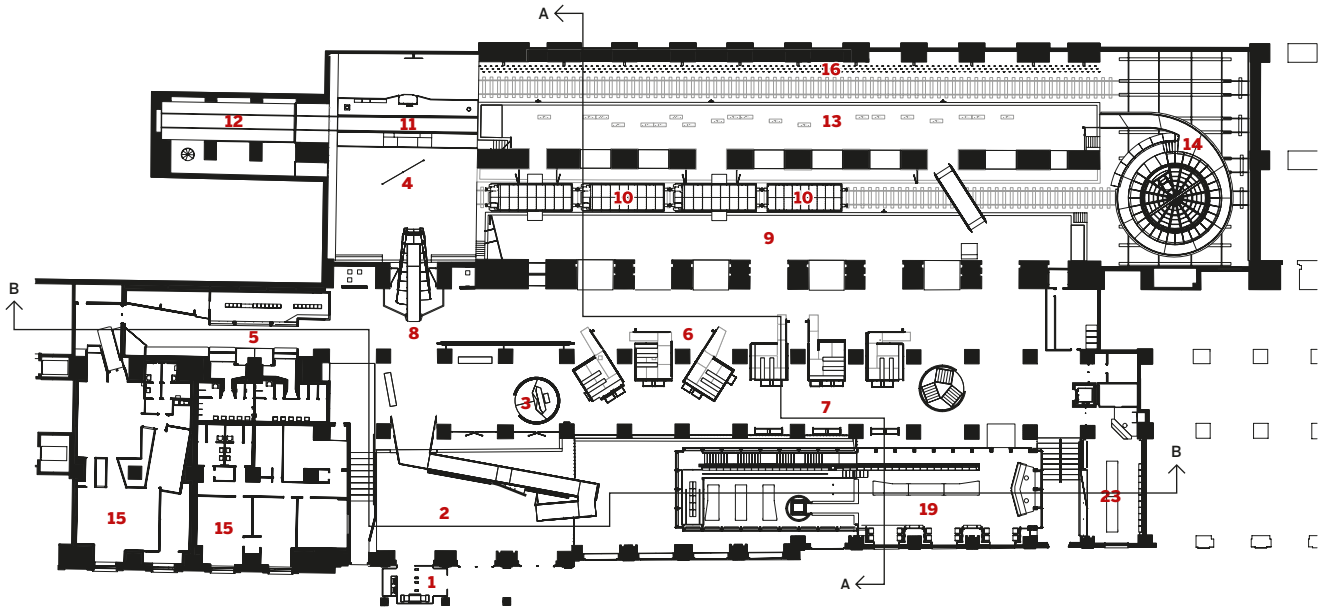
Following the same route as the deportees, one enters under a Doric portico, arriving in a hall dominated by the word "indifferenza" cut into a monumental freestanding angled concrete slab. Adjacent to that entry hall is a brightly lit two-story modernist library and archive of Jewish history, its books and desks visible behind steel and glass. This is a singular moment, with lessons both moral and historical. We are truly in the antechamber to hell, the place where Dante, in *The Divine Comedy*, confined those who in their lives had practiced *indifferenza*, doing neither good nor evil. We are left to reflect on the anxiety of the deportees, the horror of their ride to nothingness, and our own indifference.

The architects have made two major decisions for this underground space. First, they have stripped everything down to bare gray concrete. What remains is the texture of the formwork; damage, rough joints, and partially protruding rebars have been retained. We are in a darkened, partially ruined Brutalist hypostyle hall of piers and beams. Then, rather than giving us a direct path to the train tracks and its huge rail elevator, the architects have unsettled the route into the Memoriale with switchback steel ramps hidden behind the wall of *indifferenza*. At the top of the ramps, one might imagine a sculpture but, instead, there is a large cone and a pair of telescopic lenses looking toward the tracks, from which we can view film footage showing the opening of the station in 1931, bringing the past into focus. From there, a long hall stretches out between concrete piers and raised, pod-like steel rooms accessed by steel ramps. There, groups can sit on bare benches and watch film clips; of note is the testimony of Liliana Segre, now 93 years old and an Italian senator but, once, a 13-year-old deportee who left from this site with her father for Auschwitz. He did not return. Deeper into the Memoriale, and parallel to the hall, are the train tracks, with boxcars like those used for the deportees. At a lower level still is a lecture hall, classrooms, and offices—new spaces that recall the great Milanese Modernist design tradition.

And so we walk through the dry urban wound where, now as then, the sound of the trains from the station overhead fills the space. (Trains, after all, are symbols of deportation; boxcars from all over Europe brought human cargo to the gas chambers, themselves strategi-

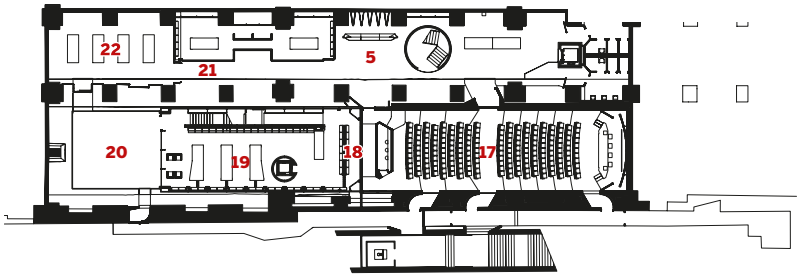
PHOTOGRAPHY: © ANDREA MARTIRADONNA; MATTEO PIAZZA (OPPOSITE)

A DORIC PORTICO from 1931 leads to the Shoah memorial inside the area once used by the Italian postal service (opposite). A library has been inserted on multiple levels, with an open "agora" at the bottom (this image).

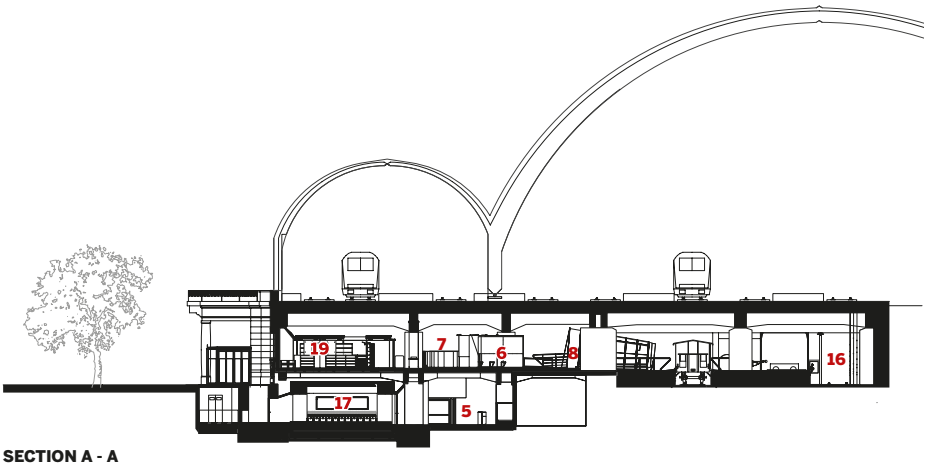


GROUND-FLOOR PLAN

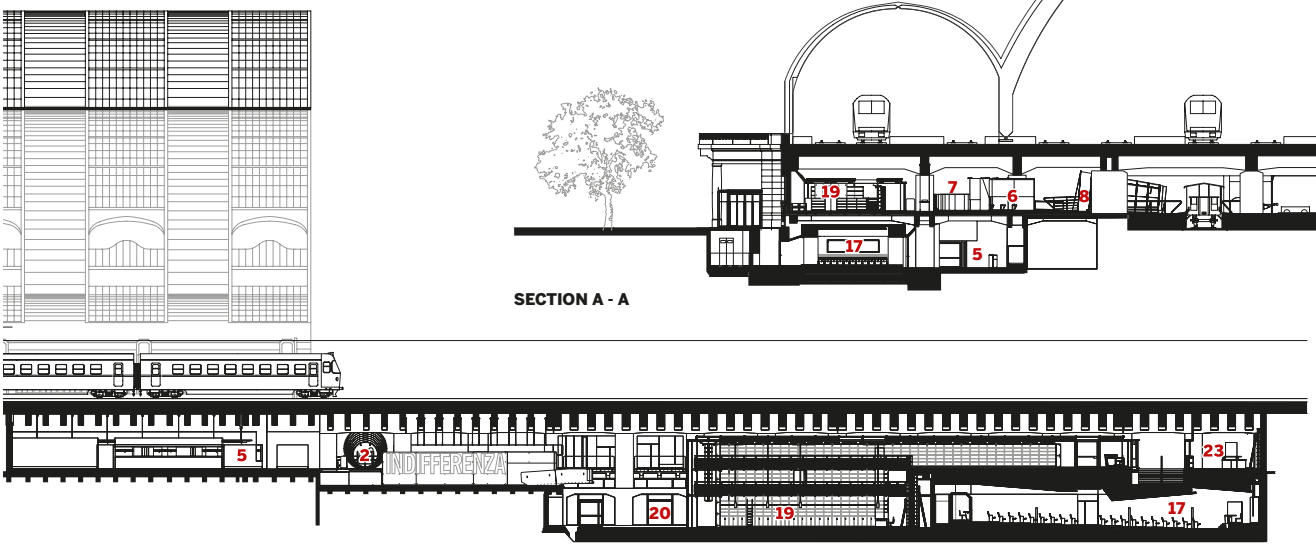
1 SECURITY CHECKPOINT
2 ENTRANCE HALL
3 WELCOME DESK
4 PROJECTION SCREEN
5 COAT CHECK
6 TESTIMONY ROOMS
7 TEMPORARY EXHIBITS
8 OBSERVATORY
9 TRAIN PLATFORM
10 BOXCARS
11 BRIDGE CRANE FOR BOXCARS
12 LIFT FOR BOXCARS
13 TIMELINE OF DEPORTATIONS
14 PLACE OF REFLECTION
15 OFFICES
16 WALL OF NAMES
17 AUDITORIUM
18 ARCHIVE
19 LIBRARY
20 AGORA
21 CATALOGUING OFFICE
22 TEACHING
23 BOOKSHOP



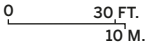
BASEMENT-FLOOR PLAN



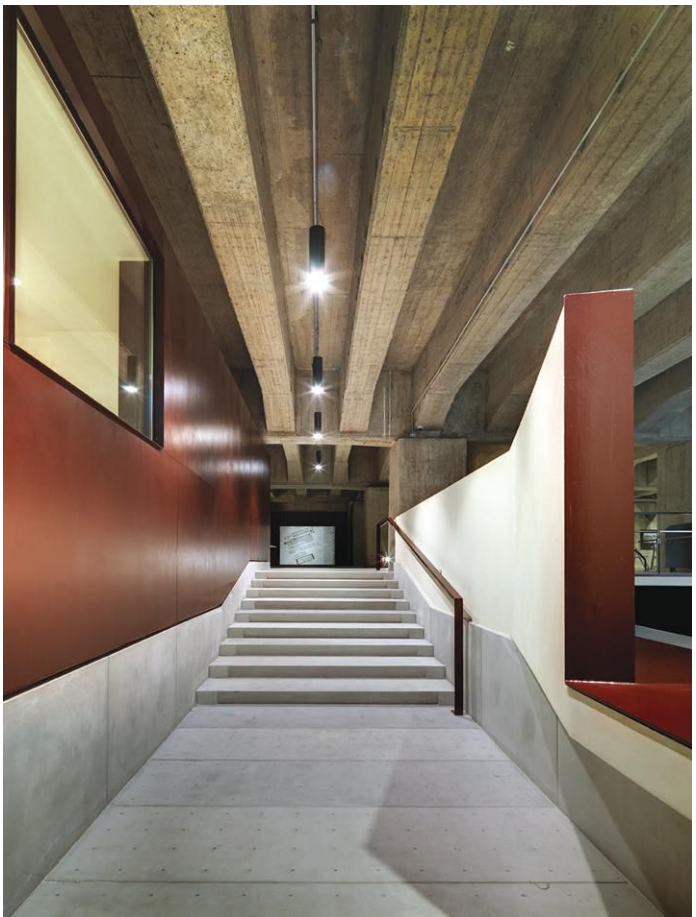
SECTION A - A



SECTION B - B



BOX CARS like those used to transport people to extermination camps populate the memorial. A wall with the names of victims can be seen in the background (above). Stairs off the entry hall lead to offices (right).



cally placed to facilitate the Final Solution.) Step inside a boxcar yourself? They are waiting on the platform. Imagine them with 60 to 80 people inside on a five- or six-day journey. All this is emotionally powerful, of course—how could it be otherwise? A sign along the back wall of the elevator states that it should not be used for human passengers. Along the far wall beyond the cars and along a wall overlooking the tracks are projected 774 names of the deportees from two of the convoys, in red for those few who survived, in white, those who did not, whole families seemingly wiped out.

The Memoriale is not a place that summarizes an institutionalized collective memory. The critical achievement of the architects is to bring visitors to contemplate their own indifference. Morpurgo de Curtis proposes to translate Bertolt Brecht's "alienation effect," the "*verfremdungseffekt*," into architecture. Through jolting reminders of the artificiality of the space, visitors are not allowed to submerge themselves in a narrative. (The Memoriale is not, the architects insist, a museum; the explanatory historical panels currently along the walls, important as their story is, are undersized and look trivial. One day, perhaps, they can be placed downstairs in an exhibition area.) The "distancing" is also literal: the new two-story library echoes Skidmore, Owings & Merrill's Beinecke Library at Yale in New Haven as if to say, "Here stands the past, a delicate Modernist box, in a dystopian

PHOTOGRAPHY: © ANDREA MARTIRADONNA (TOP AND BOTTOM); MATTEO PIAZZA (FOLLOWING SPREAD)


INDIFFER

THE ENTRY HALL introduces the memorial's message about the indifference that allows evil to happen.

concrete underground." Was Modernist order-making also part of the problem (as highlighted in works such as the 1989 *Modernity and the Holocaust* by Polish sociologist Zygmunt Bauman)? Machine efficiency diffused responsibility and made complicity painless: it is only infrastructure. Everyone, German occupiers and Italian enablers, followed the rules. The very banality of this evil space recalls the subtitle of Hannah Arendt's famous report on the Adolf Eichmann trial (1963). There is no comforting spiritual presence here, no relief mission of grace reaches us.

At one point, the architects offer a place for reflection. At the northern end of the Memoriale, beyond the platforms and the wall of names, is a meditation space inside a weathering steel cone. Entry is along a narrow winding path, the effect like snaking between the walls of a sculpture by Richard Serra. Inside, a low bench rings the interior; an oculus casts a low light. We sit, but all we see are our neighbors, our family, our schoolmates. What would we have done?

During the German occupation of northern Italy from 1943 to 1945, many Italians helped put Nazi plans into effect or profited from Italian internment camps, a bitter truth. Monuments to partisans and to fallen soldiers are found in towns and cemeteries across the peninsula, but remembering the Jews takes a special effort. The use of the Hebrew term Shoah in the memorial's name reminds us that the Memoriale is, first, a place to recall the Jewish Holocaust. In time, the Memory Wall, which now lists only the names of the Jewish

A CONICAL form contains a space for reflection (top), while a tubular "observatory" (above) offers views of a screen with projected images. A stair (left) leads to an auditorium. Cars could be lifted from tracks (opposite) to the main station.

PHOTOGRAPHY: © ANDREA MARTIRADONNA (TOP, BOTTOM LEFT, AND OPPOSITE); ENRICO MIGLIETTA (BOTTOM, RIGHT)

deportees, will include all the other victims as well. Architects will remember the name of Gian Luigi Banfi (1910–45), of the firm BBPR, who died at Mauthausen-Gusen, deported from Milan for antifascist activity.

Italy's best-known concentration camp survivor was Primo Levi, author of *If This Is a Man* (1947), a work of deep moral skepticism. The Milan Memoriale shares with Levi's work a hard message: we cannot avoid the past and its implications for the present. The architects are to be complimented for communicating this message with grace and restraint; they have turned the site over to us as individuals. Are such spaces still needed? When I was there, a guide explained to a group of schoolchildren Mussolini's promulgation of the racial laws of 1938. (Jews were fired from their jobs, forbidden to own property, and barred from schools.) Suddenly, the students' teacher stepped forward and asked to say a word. "Remember," she told the group—perhaps mindful of the recent Italian election of a right-wing government with roots in Italy's fascist past—"many people consider Mussolini a great statesman." Indifference is all around us. ■

Nicholas Adams is professor emeritus of architectural history at Vassar College.

Credits

ARCHITECT: Morpurgo de Curtis Architetti Associati — Annalisa de Curtis, Guido Morpurgo, partners in charge; Olga Chiaramonte, Matteo Isacco, Enrico Miglietta, Matteo Quaglia, Valeria Radice, design team

ENGINEERS: Lussignoli Associati (structural, first stage); Studio Genovesi (structural, completion); Giovanni Ziletti (mechanical/electrical, first stage); Carlo Gatti (mechanical, completion); Corrado Forner (electrical, completion)

GENERAL CONTRACTOR: SACAIM (first stage); Percassi (second stage); Ide Marco S.r.l. - financed by the Italian Ministry of Culture and Regione Lombardia (Local Government of Lombardia Region); Segretariato Regionale della Lombardia of Italian Ministry of Culture (contracting institution)

CONSULTANTS: Paolo Gasparoli and Maria Cannatelli (conservation); Gian Paolo Treccani (scientific advice on restoration); Ferrara Palladino e Associati (lighting); Cesare Trebeschi (acoustics); Kooa (multimedia)

CLIENT: Fondazione Memoriale della Shoah di Milano ONLUS

SIZE: 79,000 square feet

COST: $13.2 million

COMPLETION DATE: May 2022

Sources

GLASS: Saint Gobain

CHAIRS: Livoni

DOWNLIGHTS: Philips

Infrastructure Act
www.enr.com/articles/56007-us-dot-awards-185m-to-projects-to-re-link-divided-neighborhoods

One of the major grant recipients is a project to build a highway cap and tunnel for the Kensington Expressway in Buffalo, N.Y. The new grants are the first installment of a $1-billion, five-year program created by the IIJA.

Photo Courtesy of NYS DOT

US DOT Awards $185M to Projects to Re-Link Divided Neighborhoods

Tom Ichniowski
February 28, 2023

The U.S. Dept.of Transportation has awarded $185 million in grants to 45 projects that aim to undo the harm done to neighborhoods years ago by highways and other types of infrastructure that cut residents off from jobs, schools, food stores and health care facilities. The DOT awards, formally announced on Feb. 28, represent the first installment of the $1-billion Reconnecting Communities program launched in the 2021 Infrastructure Investment and Jobs Act.

“Transportation should connect, not divide, people and communities,” Transportation Secretary Pete Buttigieg said in a statement.

Of the 45 grants, six, totaling $138.2 million, are for capital construction; the rest are for planning projects.

As with other DOT discretionary grant competitions, including those that predate the IIJA, demand for the Reconnecting Communities money far out-ran the $185 million available. In all there were 369 unsuccessful applicants, which together sought about $1.7 billion from DOT.

The six new capital construction grants include: $55.6 million to the New York State DOT, to help construct a new highway cap and tunnel for Buffalo’s Kensington Expressway; and the City of Long Beach, Calif., which was awarded $30 million to redesign West Shoreline Drive, converting a freeway into a lower-speed roadway.

Among the other construction grants are: $21.7 million to the Michigan DOT to remove and replace a deck over Interstate-696 in the Oak Park suburb of Detroit; and $13.2 million to the New Jersey Transit Corp. for a pedestrian tunnel for the Long Branch commuter rail station on the north Jersey Shore.

A $12.3-million construction grant went to Kalamazoo, Mich., for a pilot project to upgrade Kalamazoo and Michigan Avenues with traffic-calming features; and Tampa, Fla., received $5.4 million for a project to lower an interchange ramp to street level, thus restoring a connection harmed by I-275.

The project receiving the largest grant, the Kensington Expressway in Buffalo, involves capping about 4,100 ft of the highway and restoring features of the earlier Humboldt Parkway, which was designed by noted landscape architect Frederick Law Olmsted.

Senate Majority Leader Chuck Schumer (D-N.Y.) said the project would help to correct a "50-year-wrong" and would "help reunite Buffalo's East Side and adjacent neighborhoods that were wrongly divided by the Kensington Expressway."

The federal grants only finance a portion of the selected projects' total costs. States, cities and other grant recipients can use other types of federal highway funds, including money from other IIJA programs. The recipients also can contribute their own funds toward the projects.

For example, the new federal Kensington Expressway grant only accounts for about 5% of the project's estimated $1.05 billion total cost.

Tom Ichniowski has been writing about the federal government as ENR’s Washington Bureau Chief since the George H.W. Bush administration, and he has covered at least five major highway bills. A recognized expert on government policy on infrastructure and regulation, Tom is also a Baltimore native and Orioles fan who grew up rooting for Brooks and Frank Robinson. He is a graduate of Columbia College and Columbia’s graduate school of journalism, where he once used “unrelentless” in a headline.