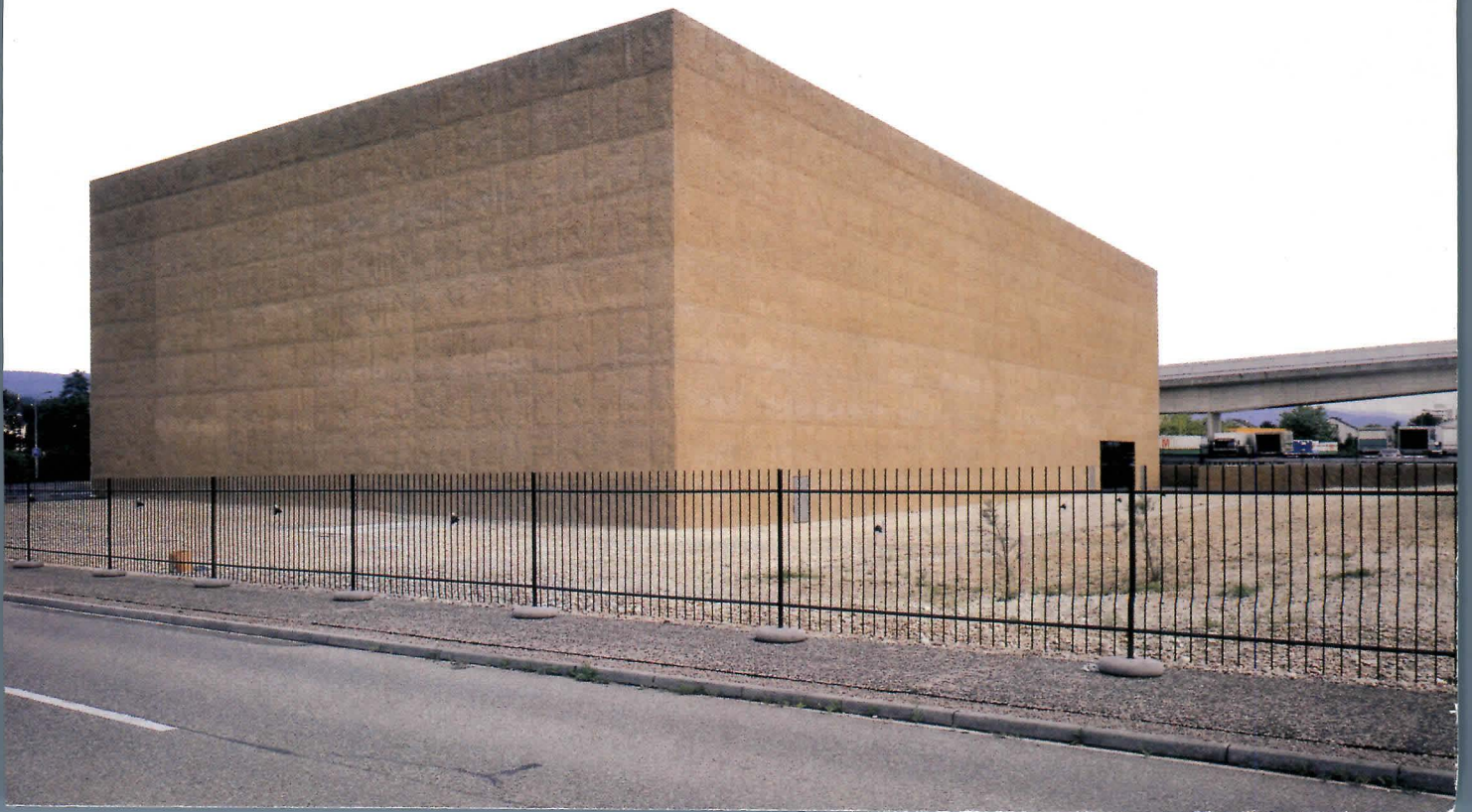


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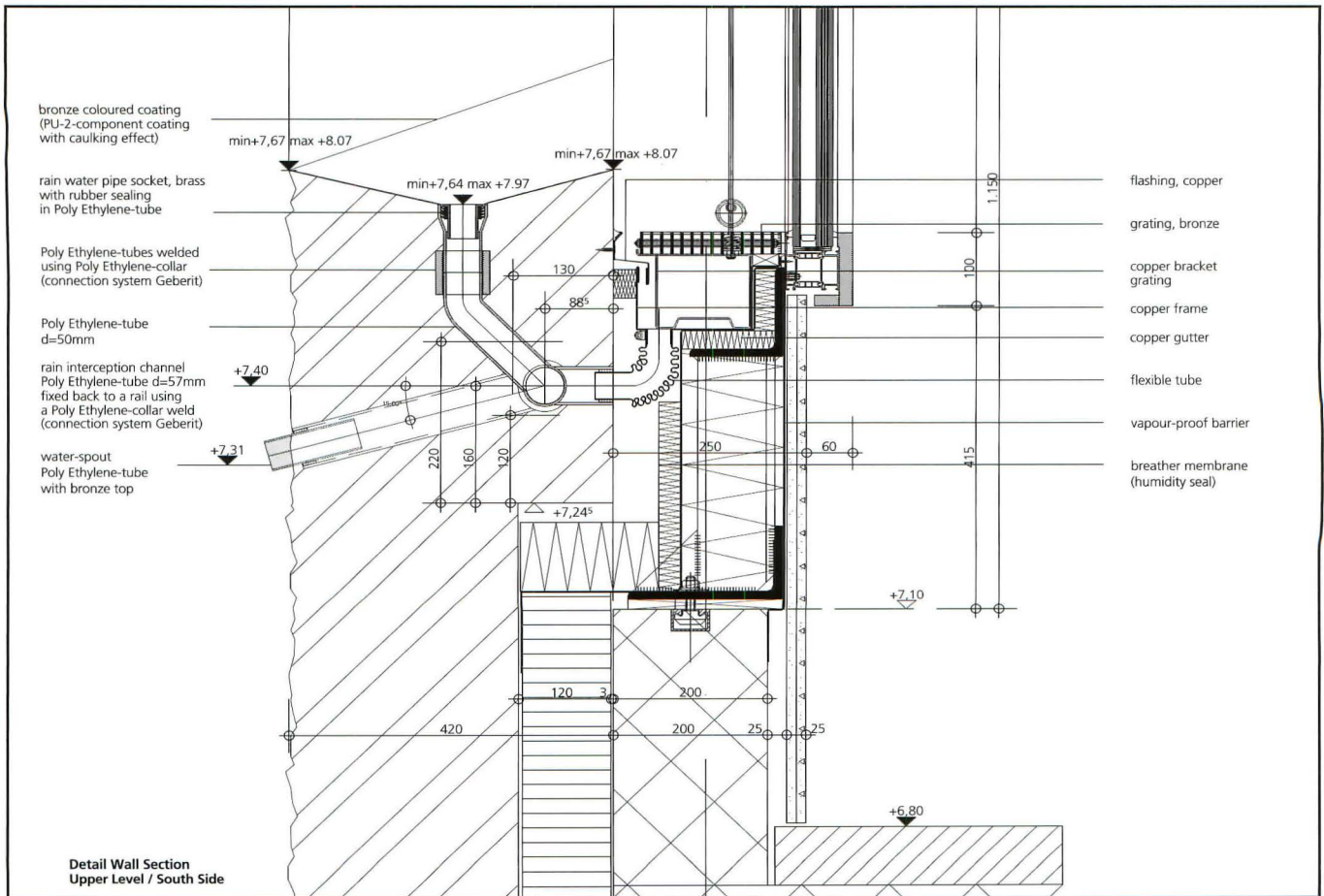
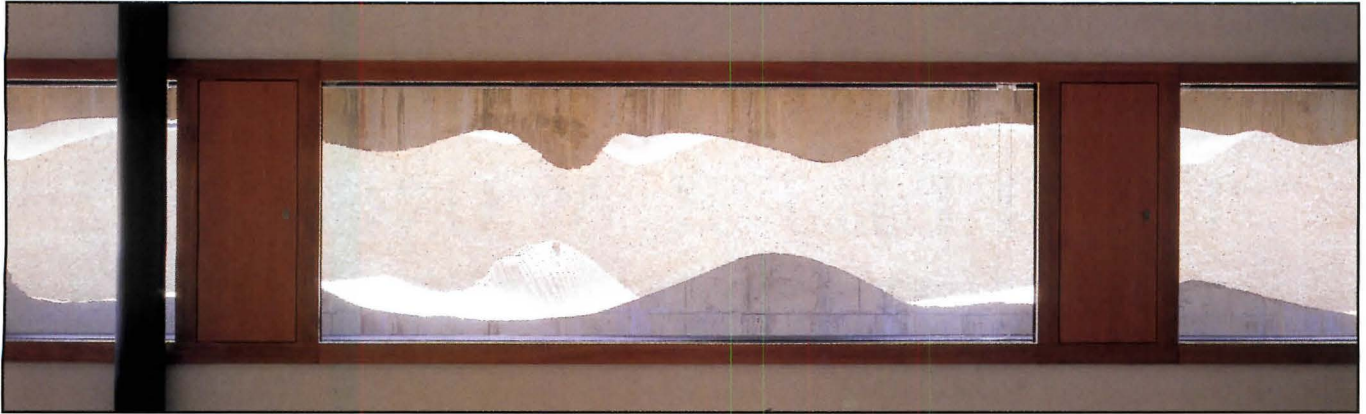
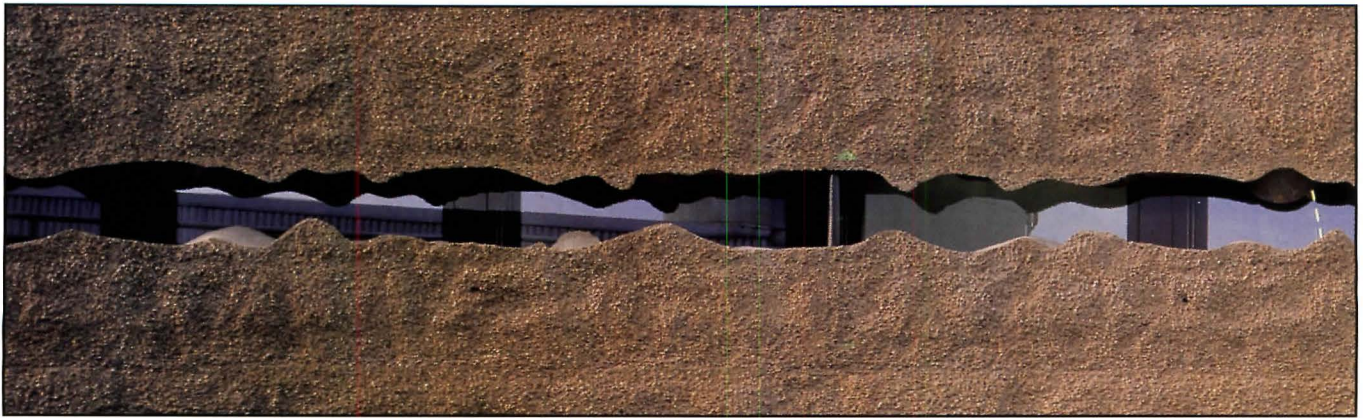
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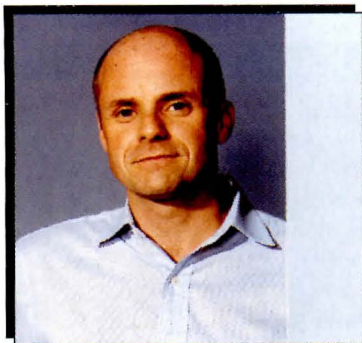
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## AMERICA'S SCHOOLS

### A CRISIS OF PLENTY

BY C.C. SULLIVAN

Why do our public schools seem like high-profile charities these days? In spite of what appears to be a big boost in the federal budget for education—\$9 billion more than 2001—school programs and construction rely more than ever on private-sector giving. A host of new philanthropic groups has been handing out hefty checks to K-12 districts, mostly in the inner cities, including much-hyped donations from billionaires George Soros and Bill Gates. Corporate patronage overall has decreased, but schools are getting a larger slice of the pie. Even rock sensation Dave Matthews played New York City's Central Park for an unlikely charitable cause: his host city's 1,200 public schools.

Like Matthews's guitar, the money comes with strings attached. The big-name donors are also big-time activists, openly seeking to spur reform through their largesse. For the corporations, of course, it's quid pro quo: They are more aggressive than ever in placing product or transmitting their messages in the very buildings they help fund. While many administrators and teachers worry about compromising their self-determination and independence, it's impossible to say no to money.

Last and not least, the vaunted No Child Left Behind Act, which requires more school reporting, student testing, and teacher training, seems designed to drive parents away from public schools. Besides taking resources away from the neediest schools—in effect, making the worst schools worse—the 2002 law will cost states \$29 billion to undertake. (The tab for student testing alone could be \$5 billion.) And the law allows government funding to be used for tutoring at private and parochial schools, and even for-profit agencies. But here's the kicker: Congress only allocated \$24 billion to the states. As written, the law forces states to increase their K-12 school budgets, usually their largest line item anyway, by as much as 25 percent. And the new costs won't fund any new programs or facilities.

Today, most local school districts rely heavily on state funding for modernization and construction projects. Ever

since 1978, when California voters made history with a little law called Proposition 13, the antitax fervor of our aging national populace has made it harder and harder for towns and counties to raise taxes or float bonds to fund new school programs. Some states have picked up the ball (as in California, ironically), but others are failing miserably (as in Alabama, where a defeated referendum for tax reform promises to keep its students in the nation's lowest ranking school systems in both academic achievement and in dollars spent per pupil).

Worse yet, all but six states are running budget deficits, gaps they are forced by law to close. If the feds won't fully fund their mandates and the states get squeezed, who will make up the difference to keep America's schools strong?

Any more billionaires out there?

#### BUILDING BETTER SCHOOLS

In part to spark dialogue on these issues and in part to improve our learning environments, *Architecture* has created a new conference series, "Building Better Schools," which brings together architects and school officials in four cities this year. (Our road show alights in Chicago and New Jersey this fall. See [www.architecturemag.com](http://www.architecturemag.com) for details.) While the main focus is on the nuts and bolts of excellent school design and delivery—we've covered acoustics, mold, and design-build—we're also learning how architects help schools "sell" projects to localities, promote bond referendums, establish public-private partnerships, and qualify for alternative financing.

For attending architects, these ideas offer new ways to mix professional discipline with civic activism. Many attendees comment, however, that the most amazing part of the conferences is seeing how creative and resourceful school districts must be to make their dollars match their need.

Right now, educational building is still one of the strongest markets for architectural services. For the sake of our future (and the kids), let's hope it stays that way.

**HAS YOUR FIRM HELPED EDUCATION CLIENTS INNOVATE?** If so, we'd like to hear about it. Send your process brief to my attention at *Architecture*, 770 Broadway, New York, New York, 10003.

**Cocooning**

The editorial on process (August 2003, page 9) went straight to the heart of how so many of us started, and what a wonderful experience that was. I, too, left that knowledgeable, nurturing cocoon for thinner, more lucrative work. Life seemed more ordered and personal then, and your insights brought back fond memories of a rich and meaningful time. Those early mentors treated us with patience and respect—rare commodities in the fast-paced petting-zoo offices of today, where crafting a mind is an anomaly.

However, regarding Zaha Hadid's Center for Contemporary Art in Cincinnati (August 2003, page 39): I don't get what the hoopla is all about. It seems to fit a program, but formally it's a yawner. It does, however, provide a space to throw a bash and be seen, finally replacing all the party spots the city used to have, such as the Hotel Gibson rooftop gardens, the Manor Inn, and the Hotel Sinton, among others.

**Robert-Pascal Barone**

*Cincinnati*

**Loos is more**

Thanks for the thoughtful editorial on ornament (July 2003, page 9), but please stop picking on Adolph Loos. Yes, he considered the ornamental decorating of his time, from cornices to corkscrews, as mass-produced, mass-consumed trash, but his purpose was to free architects from the limitation and exploitation of a useless past. His call for reason

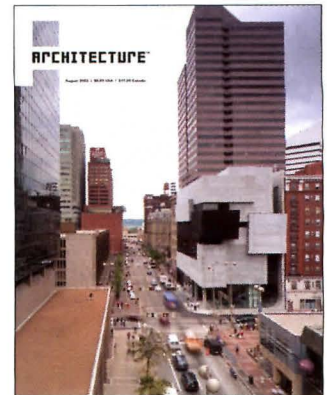
over emotion, truth over fakery, and simplicity over the arbitrary formed the basis for design in the twentieth century. We need an Adolph Loos of the twenty-first century to shake his finger at all of today's dreadful architecture whose only purpose seems to be entertainment.

**Peter Kramer**

*Minneapolis*

**Corrections**

The price quoted for the AIA contract-documents CD (August 2003, page 33) is for those that are not currently members of the AIA (\$779). For members in good standing, an annual license costs \$229.



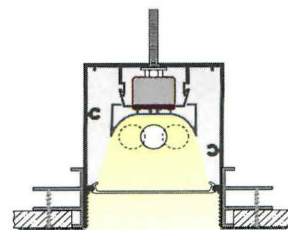
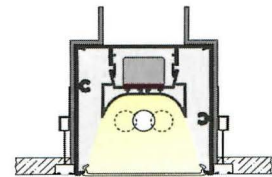
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## MOD SQUAD HITS HOUSTON



While the preservation of modern architecture is well established on both coasts of the United States, appreciation of our recent past is also picking up in many cities in between. Docomomo, the international preservation group focused on buildings, sites, and neighborhoods of the modern movement, now has six regional chapters across the United States committed expressly to twentieth-century design. Organizations and local government in a handful of cities have launched programs focusing on their metropolitan areas: Los Angeles, Palm Springs, Denver, and Miami. And with the establishment this summer of Houston Mod, a volunteer organization, the petrochemical capital has its own mod squad.

Citing what it considers "Houston's notorious ambivalence to preservation and modern buildings," the nonprofit group believes that many of the city's modern landmarks are in danger of disappearing. A number of buildings designed by two of the city's most important modernists, Donald Barthelme and Hugo V. Neuhaus,

already have been demolished, says architectural historian and volunteer Stephen Fox. And three 1960s Skidmore, Owings & Merrill buildings and Houston's major O'Neil Ford-designed building, the 1957 Texas Instruments Houston Technical Lab, have already been torn down. With few exceptions—the 1951 de Menil House designed by Philip Johnson that now belongs to the privately endowed Menil Foundation, and the Museum of Fine Arts, with its two wings designed by Mies van der Rohe, both of which have recently undergone extensive restoration—the rest of Houston is at risk, according to Fox.

Today, says Fox, some significant modern buildings in Houston are in danger of being lost forever: M.D. Anderson Hospital plans to demolish the Prudential Building designed by Kenneth Franzheim in the early 1950s (right) to make way for new office space; the Alley Theater is exploring extensively altering its 1969 Ulrich Franzen-designed landmark building; and Rice University may demolish three mid-century buildings on its campus.



Spearheaded by local architects and other sympathizers, Houston Mod is hopeful that through the documentation of cultural resources and preservation advocacy—and by providing public programs including lectures, publications, exhibitions, and tours—awareness may prompt preservation of the buildings at risk. **Bay Brown**

## "WATCH LIST" COVERS EVERY CONTINENT



What does Sir Ernest Shackleton's expedition hut in Antarctica (right) have in common with the Helsinki-Malmi Airport in Finland (left)? They are both found on the World Monuments Fund's (WMF) "watch list" of the world's 100 most endangered cultural and historical sites, which for the first time includes buildings or monuments on every continent.

For the 2004 list, a panel of experts convened to review 195 nominations. Of the 100 they selected, the list includes such well-known landmarks as the Great Wall of China, the Panama Canal area, and historic Lower Manhattan. Modern sites include the Ennis Brown House (1924), Los Angeles; Battersea Power Station (1932), London; and two buildings in Russia, the

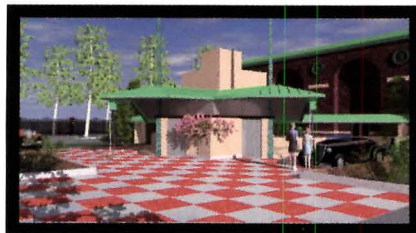


Narcomfin Building (1928) in Moscow and Perm 36, a Soviet gulag in Siberia.

Funded by American Express and other international companies, the list was conceived in 1995 to garner publicity and support for buildings or landscapes that are threatened by war, natural disaster, neglect, or inappropriate development. And sometimes it works: In 2002, the A. Conger Goodyear House in Old Westbury, New York, was listed after a developer threatened to demolish it. Built in 1938 according to a design by Edward Durell Stone, the house was saved from the wrecking ball by sympathetic modernists with deep pockets, who happened to read of the WMF listing in the newspaper. **Bay Brown**

- ⇒ The National Building Museum has given its 2003 Honor Award to Major League Baseball and the National Football League in recognition of the organizations' contributions to cities through the construction of sports venues.
- ⇒ San Diego's McCormick, Smith & Others in collaboration with Lloyd Russell have won a competition to design 50 units of sustainable and affordable housing for a 10-acre site in Long Beach, California, sponsored by the non-profit Livable Places.
- ⇒ Theorist and critic Mark Wigley has been named interim dean of Columbia University's Graduate School of Architecture, Planning and Preservation. He succeeds Bernard Tschumi.
- ⇒ Cornell University in Ithaca, New York, plans to offer a new master's degree in architecture for college graduates without prior architectural training starting fall 2004.
- ⇒ Architectural historian Vincent Scully has received the Urban Land Institute's \$100,000 J.C. Nichol Prize for Visionary Urban Development. Gerald Hines won last year.
- ⇒ John Storrs, the Oregon architect famous for his Salishan Lodge and his pioneering Northwest Regional style, died in September. He was 83.
- ⇒ Kanan Makiya, an Iraqi architect, has received permission from occupying American authorities to design and build the Iraq Memory Foundation in Baghdad, a museum cataloguing Saddam Hussein's atrocities. Makiya hopes to raise some \$100 million to cover the cost of the project.
- ⇒ Le Corbusier's Saint-Pierre church in Firminy, France, will finally be completed. The half-finished structure has sat idle since the 1970s. At a cost of \$7 million, the project will complete a complex that includes residences, an art center, and a stadium, all designed by the architect.
- ⇒ The Ralph Erskine-designed brutalist landmark Byker Estate, in Newcastle upon Tyne, England, was recently listed by the British government as a historic property. When it was completed in the early 1970s, the 10-story structure was the largest housing project in England and much derided by traditionalists.

## FILL 'ER WRIGHT UP



Two unusual Frank Lloyd Wright projects are undergoing important transitions: One is being built some 75 years after it was conceived, while the other is about to change ownership after 50 years of operation. Both are gas stations.

The first is under construction in Buffalo, New York, for the Buffalo Transportation/Pierce-Arrow automotive museum (above). Originally designed in 1927 for the Tydol Oil Company, the two-story structure features a lounge, overhead gravity-fed pumps, and an open fireplace. Because of the proximity of these last two design elements, the station will be non-functioning, serving instead as a visitors center for the museum.

Roughly 600 miles away in Poquet, Minnesota, Wright's only other known service-station design is for sale. Built in 1956 for the Lindholm Oil Company, the structure shares the concept of a second-floor lounge with the Buffalo project. Today it is a Phillips 66 franchise.

"Wright called the [typical] gas station of his day 'utterly vulgar in almost all its functions,'" says Patrick Mahoney of Lauer-Manguso Architects, lead architect on the

Buffalo commission. But as the number of female drivers increased, Wright saw the need for a more genteel setting for car service. Lounges, fireplaces, and bathrooms—all physically elevated about the menial service areas—were part of the architect's vision for transforming the crude stations.

Anthony Puttnam, who worked with Wright at Taliesin in the 1950s, agrees: "The idea then of ladies mixing with people who ran gas stations was rather onerous." Social segregation aside, Puttnam, who is working on the Buffalo project with Mahoney, points out some of the then cutting-edge developments Wright harnessed in these projects, including the now-vernacular canopy over the filling area, gravity-fed pumps, and a new kind of sign, illuminated by neon.

And despite the scarcity of this type of program in Wright's oeuvre, Mahoney claims the concept of the filling station was an important one for the master architect. "He thought that in order for America to decentralize, the automobile would be a central part," he says. "The gas station was something needed to propel that." Puttnam sees it in more simple terms. "Wright was a huge car buff," he says. "He really loved the idea of driving across the country."

Wright's Buffalo station is slated for completion in August 2004. Though a buyer has not yet been found for the Poquet property, the family that owns it has expressed hope that it will continue to operate as a gas station under new proprietors. **Jamie Reynolds**

## HOME, STEEL HOME



Touted as the country's first antimicrobial home, the Landry Residence near Los Angeles features 100 tons of steel framing, roofing, and finishes. The house features steel treated with a germ-killing sealant from AK Coatings, a division of Middletown, Ohio-based AK Steel, as well as other antimicrobial products from DuPont and Dacor. While the clients sought a steel house, the home's role as a model of cleanliness happened unintentionally when AK Steel came on board. As the project's architect David Martin of Los Angeles-based AC Martin Partners insists, "The owners are not a Howard Hughes kind of family." **Jamie Reynolds**





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## news

### REPAIRING A POMO PIAZZA



New Orleans, known for its heady mixture of history and culture, will soon enjoy the restoration of its foremost postmodern work, Charles Moore's Piazza d'Italia.

Designed 25 years ago as a place for the city's Italian-American population to celebrate festivals, the piazza includes a massive fountain, a pool shaped like Sicily, and highly colorful folly: pediments, arches, and columns strewn as if taken from an attic of classical antiquities. When it first opened, the project met with some disapproval for its combination of classical imagery and contemporary materials, such as aluminum cladding and neon signage. It also failed to attract businesses to its bleak neighborhood between the warehouse district, the riverfront, and Canal Street. In the years since, Moore's piazza fell into disrepair.

"It's a major example of postmodernism," says Neil Kohlman, executive director of the Piazza d'Italia Development Corporation. This time around, with the proximity of a new 250-room Loews Hotel tower—to open in December—Kohlman is hoping the public space will "bring high-traffic business back to the area." In exchange for construction rights, Loews is responsible for the piazza's restoration. Overseen by local firm Hewitt-Washington & Associates, the project, also slated for completion in December, is to cost \$1.5 million. **Jamie Reynolds**



### OFF THE GRID



The time seems right for selling cheap solar homes in Arizona. Thanks to last summer's blackout that paralyzed the eastern United States and a burst gasoline pipeline in Tucson that cut off nearly a third of the supply to Phoenix, consumers in that state might think that developments like GreenWood Ranch Estates are a veritable oasis—of energy, that is. The 487 modular homes on wooded, 5-acre lots near Kingman, Arizona, are all off the grid, relying entirely on photovoltaics for electrical lighting, appliances, and evaporative cooling. (Propane is trucked in for heating, hot water, and the unavoidable backup generators.)

According to the U.S. Department of Energy, this is the first large-scale solar subdivision in the nation that is entirely "grid-independent." A builder from Henderson, Nevada, named Doc Pethtel convinced a Swiss-led investment group in late 2001 to develop the 1,165-square-foot, three-bedroom houses with integrated 9-kilowatt solar packages rather than pay for expensive utility leads. Genesis Homes, a division of the manufactured-housing giant Champion of Auburn Hills, Michigan, built the \$99,900 units with Phoenix-based subcontractor PerfectPower, which coordinated the solar installations. Parts of Arizona enjoy more than 320 sunny days per year, helping to explain why more than 70 solar companies are located in the state. **C.C. Sullivan**

## OUTDOOR CLASSROOMS

Five schools in Massachusetts vie for attention by hawking their wares—in vastly different garb. by Max Page



After a generation with no significant new construction, Smith College has added two contemporary buildings that elegantly meld with the school's neo-Gothic and red-brick vocabulary: a new campus student center designed by Weiss/Manfredi Architects (left) and the Brown Fine Arts Center by Polshek Partnership Architects (right).

This fall, students at the so-called “five colleges” in western Massachusetts are unwittingly taking an extra course—architectural design on the American campus. Over the past year, all of the campuses have opened or restored structures that reveal diverging approaches to designing an educational community. Each college is building in a way that reflects, for good or ill, its own history and approaches to education.

Smith College in Northampton has been the busiest. In May, the Brown Fine Arts Center, designed by Polshek Partnership Architects, opened. It actually reopened: The building is officially a renovation and expansion (by nearly a third) of the 1972 structure designed by Australian architect John Andrews, who in the same year also designed Harvard's Graduate School of Design. A hundred yards down the street is New York City-based Weiss/Manfredi Architects' new student center, to be completed this fall. Smith, which has not built a significant structure in a generation, is trying to make its mark with contemporary architecture, but in a way that doesn't upset the delicate balance of the school's Victorian Gothic and red-brick vocabulary, and its numerous modest houses that serve as residences and department offices. As a result, while both new buildings are oriented toward the campus green, they fit unobtrusively along Elm Street, the main thoroughfare on the grounds.

In the case of the arts center, Smith was so careful to avoid overpowering the adjacent College Hall or getting closer to the street that design partners James Stewart Polshek and Susan T. Rodriguez had to find a way to add 36,000 square feet to the arts building while only expanding the footprint by 2.5 percent. But those who loved the brutalism of the original structure will have a hard time recalling it, submerged as it is beneath the elegant—if somewhat

cold—brick, zinc, and glass of the new building. At first, the student center seems like a dramatic contrast—a whipped-cream swirl frozen in space. But it, too, respects Smith's longstanding tradition of adhering to, at least on its public front, a domestic appearance. From an unassuming front entrance, the arcadelike building opens up to two-story lounges overlooking the campus and the surrounding Holyoke mountain range. On a recent visit, a maintenance worker complained that it looked like an airport terminal. But what a terminal—it would be a worthy successor to Saarinen's concrete eagle at Kennedy.

### EXPERIMENTAL VILLAGE

Hampshire College, in Amherst, has taken a completely different approach to expanding its campus. An experimental school founded in 1970, Hampshire is land-rich and cash-poor. So, under the leadership of president Gregory Prince, the college has decided to expand its campus—and the resources it offers its students—by creating a “cultural village” of independent nonprofit institutions. With no distinguished or distinctive architectural language of its own, the college has allowed the designers of these institutions free reign, with little or no review. That is how an apple orchard on the campus' edge has come to be home to the National Yiddish Book Center, a cedar complex comprising a series of low huts inspired by the vocabulary of an Eastern European *shtetl*. Designed by Allen Moore Architect based in Newburyport, Massachusetts, the 1997 complex with its stepped, gabled roof-form fits as well environmentally and visually in western Massachusetts as it might in the Pale of Settlement in Eastern Europe. Nearby sits the Eric Carle Museum of Picture Book Art,



In contrast to Smith, two new buildings on the edge of campus at the more experimental Hampshire College pay no heed to existing architecture: The Eric Carle Museum of Picture Book Art (top) and the National Yiddish Book Center (left).

privately financed and built off the main campus. Miller Pollin visually connects the structure with the town: Conference rooms and porches look out to the abandoned tobacco barns that dot the region, an early inspiration for the cedar-clad building.

#### BANKING ON THE PAST

The oldest of the five colleges—Amherst—offers nothing to this permanent exhibition of new design. The school may have been skittish about constructing bold contemporary buildings after its disappointing foray into new architecture with the postmodern Keefe Student Center (designed in 1987 by Perry Dean Rogers), but Amherst also has a number of early buildings and a central quadrangle that give the campus a visual coherence. So, while others have been building to make their mark, Amherst has been simply restoring its past. (Mount Holyoke College has also taken this path, with a \$18.7 million renovation of its 1899 Blanchard Campus Center). Last spring, the 1894 Fayerweather Hall by McKim, Mead & White reopened after restoration. Work continues today on the line of nineteenth-century brick buildings that were constructed above the town common. Good choices early on have allowed Amherst to sit out the rush to draw students (and donors) with sexy, new buildings.

Regardless of appearance or approach, each of the five colleges is trying to create that elusive “sense of community.” The economic boom of the 1990s allowed each, in their own way, to try to make those ideals tangible—whether through the constellation of institutions at Hampshire or the understated buildings of Smith. Now, as endowments and budgets have shrunk, students will have ample time to study these recently built lessons in educational design before another round of construction commences.

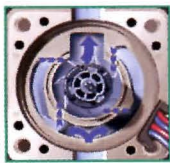
**Max Page, associate professor of architecture and history at the University of Massachusetts in Amherst, is a 2003 Guggenheim Fellow.**

designed by local firm Juster Pope Frazier and completed last year. Taking its cue from a blank white page, the museum serves as an early modernist-inflected home for the work of children’s-book illustrator Eric Carle (of *The Very Hungry Caterpillar* fame) and his fellow illustrators.

At the other end of town, the University of Massachusetts (known locally as UMass) appears architecturally, and financially, frozen in time. From the late 1950s through the early 1970s, the school had a significant growth spurt, commissioning many of the important architects of the period—Marcel Breuer, Edward Durrell Stone, Kevin Roche—to design its rapidly growing campus. Unfortunately, the only construction that has taken place since has been eminently forgettable. UMass may have turned a corner, however, with a new building by local firm Miller Pollin Architects. Gordon Hall, home to the Political Economy Research Institute, was

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## GREEN DOESN'T HAVE TO MEAN BIG BUCKS

Like anything new, from plasma TVs to electric cars, sustainable design gets a fair share of criticism. The most common complaint is that building green simply costs too much. Colorado Court, a 44-unit affordable-housing complex designed by Santa Monica-based Pugh Scarpa Kodama (PSK), which opened in June 2002 on a downtown site in the same city, debunks that myth. The five-story project has been showered with accolades not simply for its good design, but because the numbers worked.

Colorado Court was born of a unique partnership between the city, the Community Corporation of Santa Monica (a private nonprofit developer), and PSK. The project received a total of \$500,000 in grants from the city, the California Energy Coalition (a cooperative of large-scale end-users), the state energy commission, and the local gas utility.

"Building-orientation is the single biggest savings, and it's free," Lawrence Scarpa, principal at PSK, says of his firm's common-sense use of passive energy strategies. The firm arranged dwelling units in east-west bars with windows on the north and south façades and courtyards placed to receive maximum breeze. Other freebies include minimal use of west-facing windows and the inclusion of southern balconies that double as sunshades.

While PSK used green products and methods at every

opportunity, energy efficiency is the project's biggest money-saver. All but 8 percent of the project's electricity is generated on site through a combination of 200 polycrystalline photovoltaic panels on the roof and façades, and a 30-kilowatt micro-turbine fueled by natural gas. "Waste heat" produces hot water for each unit and to feed radiant wall heaters. Double-glazed windows minimize heat build-up from the sun, while blown-in insulation of recycled cellulose increases the thermal value of exterior walls by as much as 75 percent over traditional wall assemblies. The walls and roof have R-values of 22 and 30, respectively.

The final construction cost for the 29,000-square-foot building was \$4.5 million, including approximately \$500,000 in sustainable equipment and materials and about \$50,000 for special consulting fees. The green systems did cost more than traditional approaches, but their payback period is a mere 10 years—a good deal compared to paying utilities forever. And this doesn't take into account the grants the project received, which means that up-front Colorado Court came out cost-neutral. PSK has applied for the U.S. Green Building Council's LEED "gold" rating, which relies in part on a cost-budget analysis. If granted, the award of this rating would be arguably the ultimate proof of whether the project partners pulled off an economical green. **Bay Brown**

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## FINDING IDENTITY

**A new architecture grows in the land of bananas, coffee, and tourism, as Costa Rica grapples with modernity, ecology, and globalism.** by Cathy Lang Ho

Visitors to San José, Costa Rica, will be surprised to discover that its streets, by and large, have no names. This characteristic—more associated with a budding, informal city than a bustling, congested capital—means that the city must be navigated via landmarks, mostly buildings. Typical directions might sound something like: “Two streets south of the theater, head toward the hospital, and make a left at the gas station.” Given their added responsibility of serving as wayfinders, one might expect San José buildings to be especially distinctive. Instead, they are disappointingly dull and nondescript—low-rise, low-effort boxes that make desultory references to the country’s colonial past, agrarian roots, and tropical setting.

But Costa Rica is now experiencing an architectural efflorescence, long overdue, to be sure, but hopefully not too late to rescue the country from the bland hotels, malls, office complexes, and residential subdivisions that are eating up its lush natural landscape. Fueled by a push for tourism and multinational businesses (encouraged by lax tax laws), the country’s building boom could precipitate precisely what leading Costa Rican architects have been striving to achieve for the last several decades: more professional respect, higher design and construction standards, and the articulation of a critical, contemporary Costa Rican architecture.

Astonishing as it may seem, architecture did not exist in Costa Rica—as a profession, a field of study, or a cultural phenomenon—until fairly recently. The country’s first architecture school was founded in 1971, at the Universidad de Costa Rica, and a national licensing program was instituted soon thereafter. Even prominent San José landmarks, like the National Theater and La Plaza de la Cultura, have an air of expedience, owing to the country’s evolution as a middle-class agrarian society.

But all this is changing. The wealthy class is expanding, comprising old Costa Rican families with ties to tourism or big business, as well as expatriates drawn to the country’s beauty, safety, and economic accessibility. This new elite is feeding a demand for luxury homes, which are keeping Costa Rica’s best architects busy. In and around San José, where half the country’s population of 4.3 million resides, gated communities are cropping up as quickly as new *favelas* (shantytowns) are, inhabited mostly by Nicaraguans who are pouring in to fill service jobs that upwardly mobile Costa Ricans no longer want. New development has been so haphazard that government officials are just now realizing the need to implement a national plan that addresses population density, transportation, pollution, and other issues relevant to the state’s ambition to be an ecological idyll.

### APPROPRIATE MODERNITY

For architects, this current expansionary phase has as many burdens as opportunities. “While there’s been a lot of construction, most is



Javier Salinas’s Casa Calvo stands out as a Corbusian box in a sea of traditional homes in a gated community east of San José (top). In the city, architect Jaime Rouillon redesigned an old paper warehouse for an advertising company (bottom).



absolute garbage—pseudocolonial architecture that's a sorry style for Costa Rica today," says architect Alvaro Rojas, who was so frustrated by the status quo that he started an alternative design school in 1993, the experimental Universidad del Diseño. Leading architects concur that their greatest obstacle is to convince clients—from large retail developers to private homeowners—to abandon the "Rostipollo" style (named after a local fast-food chain akin to Taco Bell).

Edgar Brennes, one of the founders of the architecture school at Universidad de Costa Rica, has worked to develop an approach that marries modern building principles with lessons from historic building types that make sense for Costa Rica. For example, he admires banana plantation buildings (built mostly by American and European engineers in the nineteenth century) for demonstrating that foreign elements, such as lightweight metal frames and cladding, can be successfully adapted to a tropical climate. In his own work, he has paired what might seem to be incongruous materials: thatched roofs with steel open-web joists, and panels made of Corvintech (polystyrene with a sprayed mortar surface) with bamboo or farmed woods. Brennes bucks the idea that buildings have



**The J and R Building, an office building in San José designed by Bruno Stagno, embodies the architect's trademark high-tech glass and steel aesthetic.**

to be made of natural or local materials to be considered appropriate for Costa Rica. "Clients, especially for resorts, are always asking for 'Caribbean-looking' buildings with palm roofs and tropical woods," he says. "Someday, I'd like to build a whole house with metal—it's what makes the most sense here."

Architect Bruno Stagno, too, has taken an extensive look at tropical rural architecture, as well as pre-Columbian and colonial precedents, to help him organize his own architectural language. His polemic about building in the tropics has been published widely, and in 1994 he established the Institute for Tropical Architecture in San José, which hosts conferences and compiles research on the subject. Stagno's work ventures toward the low-tech/high-tech ideal that Brennes and others feel is fitting, ecologically and culturally, for their country. In particular, Stagno received much attention for his series of branches for Banco San José, radical glass-and-steel pavilions with stepped corrugated metal roofs. "Maintenance is a big issue in such a wet climate," Stagno says, explaining his use of hardwearing industrial materials.

Though most of Costa Rica's good recent architecture takes the form of private homes or resorts, Stagno has designed several commercial projects, like the *Holcim Cement Factory* in San José, cur-

rently under construction, and several office buildings, including his own, which stays cool naturally with simple measures like cross ventilation, aluminum louvers on windows, and a handsome metal trellis that turns a sun-beaten façade green with ivy, moderating the building's temperature. Stagno has come to be regarded as the country's green guru. However, he says, "I don't like sustainable architecture that's the result of formulas. For example, Norman Foster's work is all engineering and calculations, but this technology is too expensive for Costa Rica," says Stagno. "Here, we must use passive solutions."

#### **CUSTOM BUILDING AND CRAFT**

The struggle to develop a progressive architecture that's suitable for Costa Rica is compounded by a lack of resources and skills. For a minimalist house that Javier Salinas designed in a new high-end housing development, his major challenge was finding good contractors. "It's harder to build a simple modern house because local workers don't know how to detail," he says. "The people who pour the concrete floors mostly do factory work and don't care about imperfections." In their San José-based firm FoRo, Rojas and Sylvia Fourier, his wife and partner, have had similar experiences. "You must take into account how difficult it is to build here, even just to buy decent fixtures," Rojas says. "You end up having to custom-order or custom-build everything."

Architect Jaime Rouillon, too, ran into major problems in designing the headquarters of the Jotabequ advertising agency, a renovation of an old paper warehouse in an industrial part of San José. A generation behind Brennes, Stagno, and Rojas, Rouillon looked outward for inspiration, studying creative workplaces in London and New York, rather than inward, as many of his colleagues do. (His two years working at Arquitectonica in Miami are evident in his lively work.) Despite various mishaps—like having to tear out and repour a pigmented concrete floor—the results have been praised by the local architecture community, which awarded the project a prize at Costa Rica's 2002 Biental de Arquitectura y Urbanismo as a good example of urban infill, and by younger architects who are heartened to see local work that rivals projects shown in international design magazines.

Interestingly, one of the added pressures for Costa Rican architects is the expectation that they produce environmentally responsible work. The country's intensive "greenwashing" campaign—self-promotion as a cradle of environmental responsibility—has led everyone to believe that Costa Rica is a mecca of sustainable design, which is not the case. There are plenty of projects—by the country's most talented and conscientious architects—that may be criticized for an array of faults, like exacerbating suburban flight and sprawl, using air conditioning in a climate that doesn't need it, replicating historic styles or global trends without adapting them to local circumstances, lacking engagement with the public realm—in short, for not going far enough in articulating an architecture that's a product of its own place and time. Costa Rican architects are severe with each other about their failings, which is perhaps characteristic of a small community at such a pivotal moment in its development. But this harshness is a byproduct of high expectations, and it will hopefully ensure that the country's architectural awakening will be worth the long sleep.

**Cathy Lang Ho also writes for *Dwell* and *ID*. She is the coauthor of *House: American Houses for the New Century* (Universe, 2001).**



# INFORMAL CITIES

The housing crisis in Caracas inspires solutions by urbanists from around the world. by Anna Holtzman

From afar, the office buildings and hotels in Caracas, Venezuela's capital, look like a bunch of crayons crammed into a too-small box by the fist of a hasty child: some tall and beautiful, some stubby and battered with wear, none of them alike. Meanwhile, the *barrios*, or shantytowns, are comparatively uniform, and like parasitic algae, seep into the crevices of this valley city and spread up the sides of the surrounding mountains. Together, the interwoven sectors form a bizarre and unpredictable pattern analogous to the country's chaotic political climate.

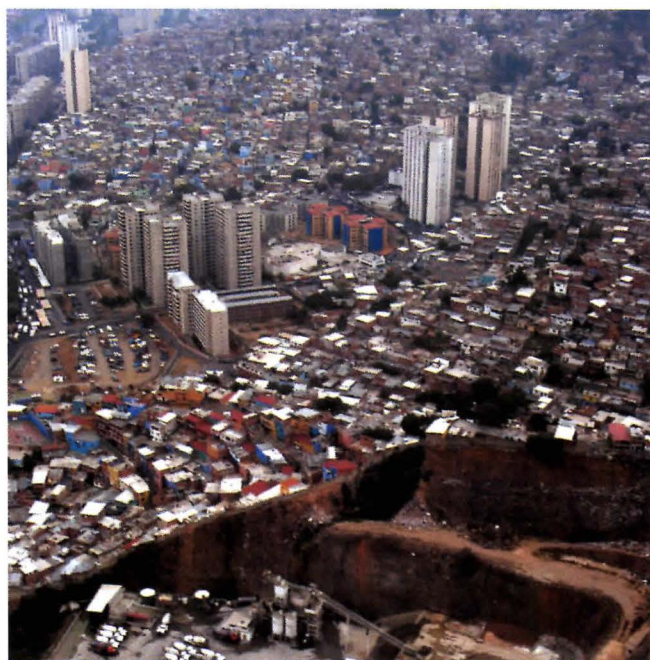
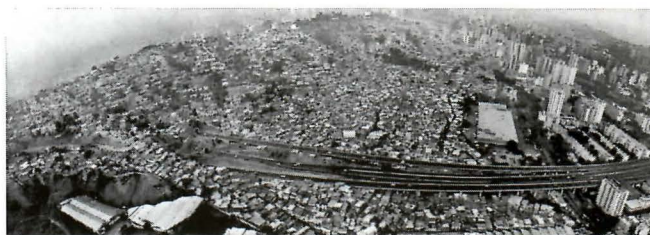
Caracas is in a state of housing crisis. Architect and critic Enrique Larrañaga defines the *barrios*, which house roughly half the city's population, as "unplanned settlements on typically unstable and illegally inhabited land, with no formal record of their use, occupation, or ownership, and with only partial, if any, services," such as water, sewage, sanitation, or electricity. Most *barrios* also lack public space and roads for vehicle access. Such slums are not unique to Caracas; economists, sociologists, and geographers describe similar developments in cities such as Rio de Janeiro, Shanghai, and Kiev as the "informal" sector.

It is easy to see Caracas as divided between the "formal" and "informal," yet this stark dichotomy is misleading. "We call the *barrios* the 'informal city,'" says Larrañaga, "as if opposed to the 'formal' one, supposedly planned, legal, and with appropriate services. But this is seldom the case." In fact, there is increasing overlap between the two. In supposedly state-regulated sectors, for example, there is a longstanding tradition of unlicensed additions and modifications to houses and other buildings. Tomás Sanabria, architect and elder statesman of Venezuelan modernism, calls this phenomenon "ranchification," after the *ranchos*, or shanties, of the *barrios*.

At the same time, there is currently a movement in Caracas toward incorporating, codifying, and legitimizing "off-the-grid" communities. These developments are being retroactively documented and legalized through steps including state recognition of existing community boards and distribution of communal land titles to the neighborhoods where leaders can provide proof that they are organized and have documented lot layouts.

## MIXED SUCCESS

Several government agencies address the problems of the *barrios*, to varying effect. More traditional programs have had little success, such as Nuevas Ciudades ("new cities"), which promotes the relocation of shanty dwellers into newly built housing projects. Often these developments are too costly and poorly sited far from existing city infrastructures, or they are too ambitious and are never completed due to frequently changing political regimes. One of the more successful programs is Caracas Mejoramiento de Barrios, or CAMEBA, a program of upgrades spearheaded by architect Josefina Baldo. Director of the Consejo Nacional de la Vivienda,



Roughly 50 percent of Caracas's population lives in informal *barrios*, self-constructed settlements usually on unstable, illegally inhabited land, lacking basic services such as water, electricity, and sanitation, as well as public space and serviceable roads.

## IDEAS FROM ABROAD



Last summer, the Caracas Urban Think Tank, a consortium of architects, artists, and urbanists, invited lecturers from around the world to speak at *Informal*, a symposium dealing with the problems of the *barrios*, or slums, of Venezuela's capital. Osaka-based architect Shuhei Endo presented some simple, low-tech propositions, such as creating community identity by adding specific colors to the rooftops of different neighborhoods. Environmental engineer Guy Battle of Battle McCarthy Consulting Engineers & Landscape Architects, London, suggested more scientific responses to basic needs like energy and water. One of his proposals was that the informal sector remain independent from state utilities by making their communities self-sustaining. Battle also suggested that communities, organized into a unified entity, sell emissions "credits" to countries like the Netherlands, which pioneered an accord in 2001, signed by 178 nations, mandating that industrialized nations cut gas emissions linked to global warming, but allowing them to buy credits from countries that fall below the reduction targets. Money earned from these credits could go back into the communities to improve services, says Battle.

Other speakers at the symposium included New York City-based architect and theorist Diana Agrest; economist and sociologist Elmar Altvater of the Otto Suhr Institute for Political Science in Berlin; Neil Smith, professor of anthropology and geography and director of the Center for Place, Culture, and Politics at the City University of New York Graduate Center; and the editor of Berlin-based architecture journal *Bauwelt*, Felix Zwoch.

As a result of the symposium, several real projects are in the works. The minister of ecology and the heads of waterworks and infrastructure in Venezuela approved the installation of the first composting toilets (an idea initiated by artist-architect Marjetica Potrc and architect Liyat Esakov, both fellows of the think tank) in the La Vega barrio. A multimedia exhibition on the political identity of the informal sector by Austrian artists and fellows Sabine Bitter and Helmut Weber has been installed in a Caracas metro station. And fellow Marco Poletto, an engineer at Battle McCarthy, is developing a web-based, user-friendly catalog of environmental engineering techniques, based on the work of Guy Battle, that can be used as a how-to guide by barrio dwellers. ■

the national housing council known as CONAVI, until two years ago, Baldo has championed the idea of integration of the barrios, rather than their eradication, through codification of existing community structures and the introduction of services and infrastructure.

### PRIVATE INITIATIVES

Another movement is now making waves under the auspices of two architects, native Venezuelan Alfredo Brillembourg and Austrian-born Hubert Klumpner. The duo are codirectors of the Caracas Urban Think Tank (known locally as CCSTT), an independent nonprofit founded by Brillembourg in 1993 as a forum for research on urban issues. Brillembourg believes that there is much to be learned from the barrios. Not only do they possess a valid existing culture, he argues, but the strikingly consistent construction vocabulary of the informal sector demonstrates an authenticity not present in the formal city.

For their current project, Caracas Case, funded by a grant from the Federal Cultural Foundation of Germany—a state institution that supports international cultural projects—the think tank invited a collection of international artists, architects, philosophers, and urbanists to spend a residency in Caracas studying different aspects of the barrios. The resulting projects range from art installations and theoretical papers to practical, problem-specific proposals: for example, Slovenian artist and architect Marjetica Potrc and Israeli architect Liyat Esakov created a test model of an ecological, waterless toilet as a response to widespread sewage problems.

In July, an international panel of renowned lecturers was invited to participate in a review of the CCSTT fellows' projects, and to speak publicly at *Informal*, a symposium on informal urbanism in general and Caracas in particular. The event, held at the Central University of Venezuela, drew a full house of mostly architecture students and professionals, and met with varied response (see "Ideas from Abroad," this page).

Critics have raised concerns that the think tank's approach romanticizes the poverty of the shantytowns, and that some of the fellows' projects suggest a reverse classism, which champions the authenticity of informal culture to the exclusion of the mainstream. Local architects, university affiliates, and politicians have also voiced criticism about CCSTT bringing in academics from other countries, rather than relying on the existing research of local experts. But whatever the skepticism, the think tank has greatly increased international awareness of the serious problems in Caracas's barrios.

One thing made clear by the Caracas debate is that similarly fast-growing cities need more accurate categories than formal and informal to describe the issues confronting them. Perhaps it would be more useful to identify a dichotomy between the ideas of flexible and rigid systems—such as new cities versus barrio integration programs—and to recognize that elements of both pervade all sectors of society. Like contemporary musicians who "sample" from classical music and rap on the same track, the new flexible planning strategies might consider the value inherent in all systems, and combine elements that have evolved informally over time with those that have been rationally derived, to fit a particular situation. Take indigenous construction methods, ecosensitive materials, and state-regulated planning strategies, for example, you might have a solution better than any one genre could support. ■

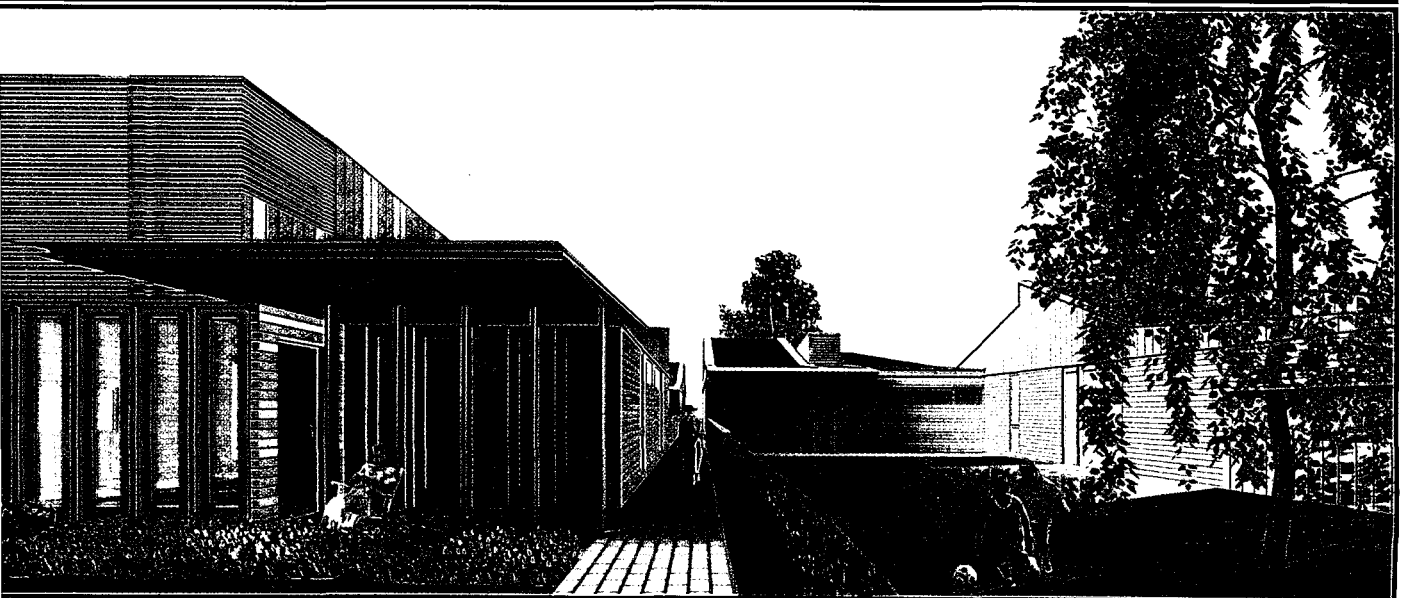
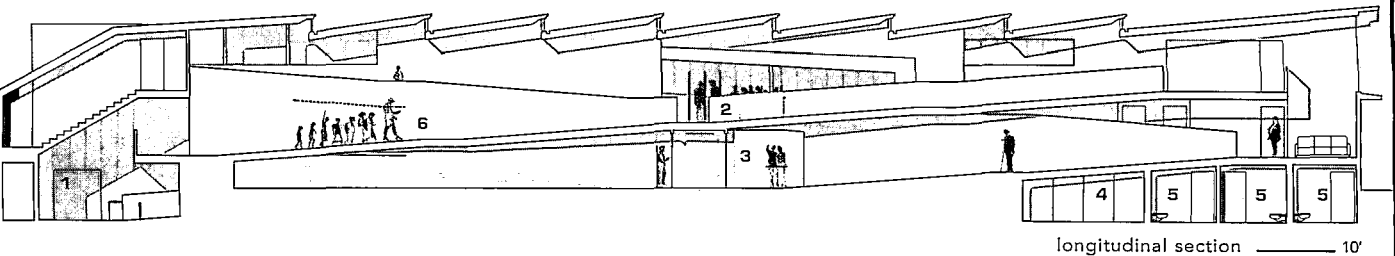
Some 47 architects and firms entered the city of Chicago's competition earlier this year to design Intergen, a housing and learning center for grandparents who've retained custody of their grandchildren. Sited at the corner of commercial Michigan Avenue and residentially flavored 104th Street, the 25,000-square-foot project has several nonnegotiable programmatic elements: a Head Start classroom, a

senior center, ten "Grand Family" homes (modeled on a rent-controlled custodial grandparent project in Boston), and universal design features for users of various ages and abilities. The field was winnowed down to five finalists. In addition to winner Office dA and the two firms shown here, 3D Design Studios of Chicago and Team O'Donnell/Freear/Rural Studio were on the shortlist.

OFFICE dA | INTERGENERATIONAL HOUSING DESIGN COMPETITION | CHICAGO

Boston-based Office dA's winning entry incorporates Intergen's context and site into its façades and roofing. The portion of the center adjacent to 104th Street features gardens and porches; the other axis is lined with more formal elements, including the name of the facility spelled out in large, sculptural letters. Green public spaces—designed for both social gatherings and ease-of-access gardening—striate the facility along a north-south orientation, and the landscaping extends to the sod-covered, multiplaned roof. The residential units themselves are designed with flexibility in mind: As tenants' requirements change, single units can be easily altered for double occupancy (branched M/E/P systems and structural elements anticipate such updating with a minimum of construction). Two other components—the Head Start school and the senior center—are woven together in a ramped spiral, further encouraging the age-gap-defying interaction that's at the heart of the competition's program. Jamie Reynolds

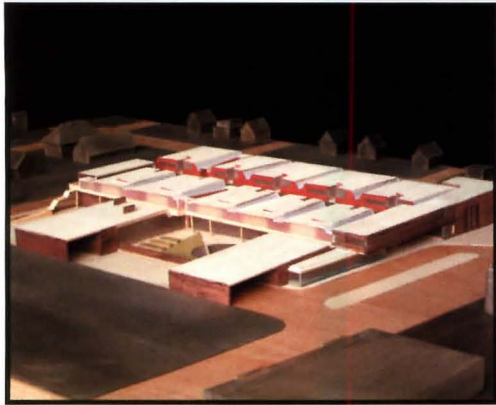
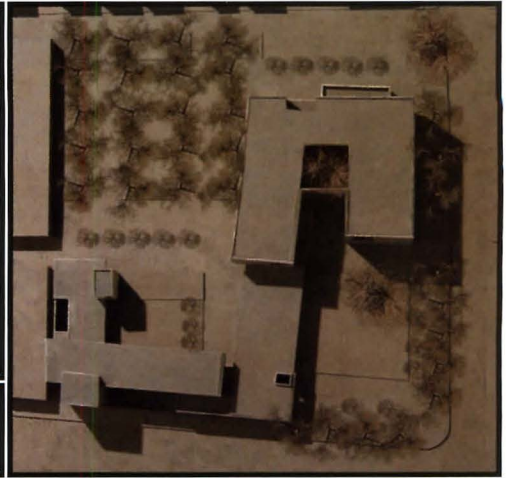
- 1 entry from garden
- 2 security gate
- 3 entry from street
- 4 classroom storage
- 5 classroom bathroom
- 6 ramp



➔ **BRIAN HEALY ARCHITECTS | INTERGENERATIONAL HOUSING DESIGN COMPETITION | CHICAGO**

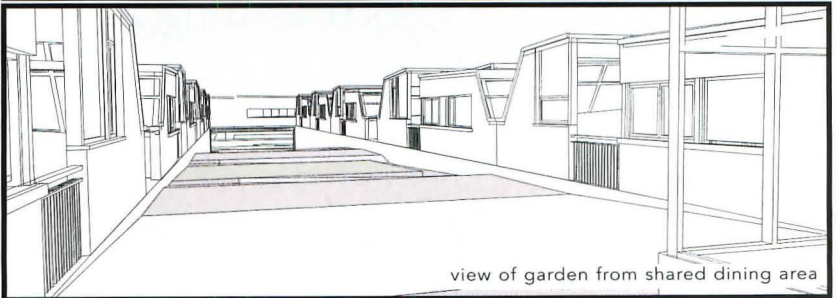
A roughly S-shaped footprint delineates a series of pavilions in this scheme by Brian Healy Architects of Boston. An open, public park space on the property's corner is afforded by stacking the structure's residential spaces into a mini-tower at one end of the complex; the circulation pattern flows from there through the single-story senior center to the Head Start school at the opposite end of the lot.

Within the residential node, private units in varying styles cluster around shared common spaces for eating, studying, and socializing. As grandchildren grow older and leave the comfort of the facility, units are easily subdivided for fewer occupants. **Jamie Reynolds**



➔ **CAPLES JEFFERSON ARCHITECTS | INTERGENERATIONAL HOUSING DESIGN COMPETITION | CHICAGO**

Caples Jefferson's plan calls for almost maximum use of the lot area. The New York City firm planned living units loosely modeled after ranch-style homes to be suspended in two rows on a concrete platform (many above parking spaces), all sharing "sky rooms" that capture the southern light. Communal spaces overlook three small plaza areas at the back of the property: a garden space for grandparents; a "mounded hardscape" with a half-basketball court for children; and an area for both generations to interact. Automotive traffic is directed to the back of the property where deliveries and visitors are received under two overhangs, one feeding into the senior center and the other connected to the Head Start facilities. **Jamie Reynolds**



view of garden from shared dining area



# CAMPUS = CONTEXT

THE CONTEXT OF A UNIVERSITY CAMPUS BUILDING REACHES BEYOND PHYSICAL RELATIONSHIPS TO INCLUDE THE INSTITUTION'S MISSION AND ITS PLACE IN THE WIDER WORLD. BY JOHN MORRIS DIXON

College campuses have long been great laboratories for testing the contextual relationships of buildings and spaces. Each offers a large tract under single management, with strong incentives for architectural excellence. Yet, any tendency toward consistency is countered by the pressures of the moment and the impulses of a changing cast of administrators, trustees, and donors.

Fitting new buildings into a campus is by no means just a matter of matching materials and cornice lines or enhancing the open spaces inherent in the word "campus." Architects must consider how their works will be perceived by many constituencies—students, faculty, administration, trustees, and patrons—and especially by prospective users and supporters. In today's competitive educational world, every building has become a recruiting and fundraising tool. Each project reinforces—or revises—the institution's "brand."

Consistency with the existing fabric is not always the answer, of course. Some situations—institutional as well as physical—call for exceptional treatment, even where

a sound architectural tradition is in place.

Midtwentieth-century modernists—newly admitted to the campus—were eager to insert buildings that defied stylistic consistency. All too many survive as an unfortunate heritage, widely referred to as "1960s buildings," even if they date from other decades. Expansion demands can sometimes help suppress this heritage. For instance, a 1972 addition to the main library at Vassar College in Poughkeepsie, New York, by Hellmuth, Obata & Kassabaum was mercifully swallowed up in a 2001 Hardy Holzman Pfeiffer Associates expansion, whose details and materials are more sympathetic to the original building's Gothic Revival.

Some modern campus buildings, however, were remarkably sensitive to their contexts. For Harvard's 1963 Carpenter Center for the Visual Arts, Le Corbusier inserted an assemblage of white angular and curvilinear forms into a setting of red brick boxes. At the same modest scale as its neighbors, the building is a lively counterpoint, visually appropriate to the avant-garde programs it

houses, while other modern buildings nearby look willfully disruptive.

The post-World War II expansion of higher education also led to construction of many new, entirely modernist campuses. While a blessed few of these complexes (Arthur Erickson's 1963 Simon Fraser University in Vancouver, Canada, for one) are exhilarating, most of them present bleak open spaces and numbingly repetitive façades.

At the University of Utrecht in the Netherlands, where undistinguished modernist blocks were erected at wide intervals, the solution has been to populate the spaces between with low but formally intense structures by Holland's current avant-garde firms. The economics and management building by the Dutch firm Mecanoo (1995), for example, responds to its still-too-vacant surroundings by turning inward toward a series of strikingly varied interior courts—a sand garden, a bamboo garden, and a water garden. Such distinctive incidents contribute to Utrecht's new identity.



## PIONEERS IN CONTEXTUALISM

It is surprising how early the idea of sympathetic response to campus context emerged among even dedicated modernists. A striking example is Paul Rudolph's Jewett Arts Center at Wellesley College (1957), where spiky skylights and vertical patterns of windows and grilles recall the school's prevailing Gothic Revival style.

A landmark in campuswide response to context was the University of Colorado's 1960 adoption of policies supporting its established vocabulary. The main Boulder campus had been developed in a "rural Italian" style, with rough stone walls and tile roofs, invented by Philadelphia architect Charles Klauder (who had given Princeton and Wellesley their best Gothic buildings). By 1960, the scale of the school's needs had greatly expanded, and curtain walls were beginning to disrupt a cherished imagery. The university appointed Sasaki, Walker Associates, along with Pietro Belluschi, as master planning and design consultants to ensure a sensitive expansion. The vast Engineering Sciences Center (1963), designed collaboratively by William C. Muchow and these consultants, was a key test of their approach. Winner of a citation in the 1963 P/A Awards, the design updated the school's revered brand to suit a campus of increased scale and density; its example is still followed today.

The development of multiple-building campus precincts in a single vocabulary has been rare in recent decades. But Pittsburgh's Carnegie Mellon University made an unusual bid for design consistency in 1987, when Michael Dennis, Jeffrey Clark & Associates won a design competition for a master plan that essentially replicated the school's original 1904 classical revival quadrangle on an adjoining site. Wrapped around a playing field

rather than a lawn, the new campus-within-a-campus (1990–1999) nevertheless adopts a similar beaux-arts composition. Buildings in a stripped version of the earlier classicism are executed in the same pale brick. The school's present visual brand, like the University of Colorado's, is a hybrid of two closely linked vocabularies.

Master plans typically have their origins in the politics of decision-making, says New York City's Alexander Cooper, planning consultant to Trinity College in Hartford,

### ▣ New policies at Princeton and Emory may encourage reversion to historicism at other schools.

Connecticut, among many other schools. Often, the president or a bloc of trustees will initiate a master plan to impose their vision of campus development over alternatives. Just as often, master plans lapse as soon as their chief supporters exit.

### STAR TURNS ON CAMPUS?

A building by a reigning or up-and-coming design star can draw favorable attention to a school, though it may or may not be a long-term asset. Often, the attitudes toward high-profile design among a school's decision-makers will seesaw: a period of blandly respectful buildings may be followed by a spate of individualistic ones, or vice versa.

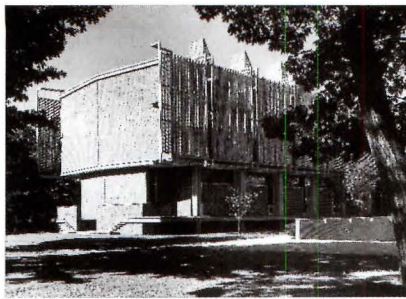
Massachusetts Institute of Technology, for instance, has recently commissioned avant-garde buildings after decades of giving higher priority to campus cohesion. Steven Holl's newly occupied dormitory and Frank Gehry's soon-to-be-completed science complex are the campus's first highly idiosyncratic structures since Alvar Aalto's Baker House dorm and Eero Saarinen's auditorium-chapel complex of the 1940s and 1950s.

In Atlanta, Emory University's design strategies have shifted the opposite way,

toward greater consistency. After a few decades of commissioning distinctive design statements from the likes of Michael Graves and Scogin Elam and Bray—plus an unbuilt arts complex by Peter Eisenman—this school is now taking a more restrictive view of the architecture suitable for its campus. A new master plan by Baltimore's Ayers/Saint/Gross stresses extending the pattern of intimate quads with structures compatible with its original classical revival buildings.

Last year, Princeton launched a split-personality policy. It announced the revival of the Collegiate Gothic style for the expansion of its residential colleges, with proposed buildings by the committed traditionalist Demetri Porphyrios of London, while it simultaneously proceeds with a science library designed by Gehry. Jon Hlaster, Princeton's long-time director of physical planning—who earlier supported a series of postmodern projects by Venturi, Scott Brown and Associates—has now endorsed the division of the campus into zones, each with a distinct architectural identity. As at Princeton, many schools have been loath to house undergraduates in modern structures, instead usually relying on scale and materials to evoke tradition (Ezra Ehrenkrantz's 1975 dormitories in Harvard's sacrosanct Yard come to mind), but Princeton's example may encourage reversion to historicism at other schools.

Response to context can be a subject of heated controversy. In 1999, the University of Texas at Austin commissioned the Swiss firm of Herzog & de Meuron as design architects for the Blanton Museum, sited at a campus gateway, close to the state capitol. An accretion of insensitive modern buildings around the core of fine classical revival buildings by Cass Gilbert and Paul Cret had inspired a master plan that calls for



LEFT: JOHN LOHRE DIXON; CENTER: WAYNE ANDREWS/ETCO; RIGHT: KEN ABBOTT/UNIVERSITY OF COLORADO

buildings and open spaces to honor the “Cret aesthetic.” After some early visualizations of the museum aroused vehement opposition from members of the board of regents, the Swiss avant-gardists resigned the commission. The university then chose Kallmann McKinnell & Wood, whose designers have satisfied the demand for contextual buildings on many campuses. Their homage to Cret is now under construction.

Of the campus buildings examined in this issue, the Harvard Business School’s new Spangler Center by Robert A.M. Stern Architects (page 44) is the only one that closely follows an established architectural style, the Georgian Revival set forth in the 1927 competition-winning McKim, Mead & White plan for this satellite campus. Stern maintains that a Georgian influence was essential for this central structure. The style here is more than skin deep: The building’s plan is assembled of narrow wings, like those of the past (none of the fat floor plates encouraged by today’s building economics and mechanical systems), laid out on the curve established by the original fan-shaped master plan, with interior rooms *en filade* in the classical manner. Spangler is also pivotal in reorienting the business school campus, whose buildings until now faced resolutely north toward Harvard’s main campus: It is the first building with a welcoming south front facing the rest of the city.

In Carleton College’s new Academic and Dining Building, Andersson-Wise Architects—one of Charles Moore’s successor firms—relates to a Collegiate Jacobean building on one side and an innocuous modern one on the other by literally offering some of each (page 48). A figural structure traditionally detailed in brick appears to stand in front of a long

neutral bar in a kind of Moore-esque modernism, the appearance of two distinct buildings cleverly disguising a volume much greater than either of its neighbors.

In DePauw University’s Peeler Art Center (page 52), Carlos Jiménez challenged the school’s preference for Federal Revival—in part a reaction to some unloved brutalist structures. Granted a bit of “leniency,” he says, because “artists do their own thing,” and supported by committed donors, he designed a complex that

▣ **Response to context can be a subject of heated controversy, as Herzog & de Meuron found.**

exemplifies functionalism in its original sense of expressing in its envelope the needs of internal spaces. A skin of red brick, with tinted joints to make it more continuous, serves both the architect’s objectives and the school’s desire for consistency.

At Brandeis University, which has built exclusively in the modern idiom since its founding in the 1950s, interpretations of modernism vary widely. The understated precision of Graham Gund’s museum addition (page 46) not only complements the existing museum well, but also introduces a note of restraint into the school’s rather motley building collection.

**GATEWAY GESTURES**

Some of the buildings featured here are in some sense gateways to their campuses. Trinity’s Admissions and Career Services Building (page 50), though situated at the heart of the campus, is the first place visited by prospective students and their parents. It is designed not only to give a favorable first impression of the school’s brand—relaxed, modern, respectful of tradition—but also to frame memorable views of the campus’s impressive chapel and playing fields. The introduction to the campus has been further enhanced with a

new entrance drive into an attractive quadrangle retrieved from once-pervasive parking lots.

The University of California, Riverside’s Fine Arts Building (page 56) is at a gateway only in the sense that it adjoins the main entry to the campus. But its welcoming gesture is conditioned by the fact that it wisely turns its back on the nearby freeway, shielding active open spaces on the opposite side from noise and afternoon sun. The gateway announcement here is made with strong sculptural forms, more akin to the nearby mountains than to the relatively bland vocabulary of the campus, implying a new boldness and breadth in the school’s outlook.

Some buildings stand outside what is generally perceived as the campus, but nevertheless belong to and represent the institution. A good example is the University of Pennsylvania’s chiller plant, completed in 2000 (December 2000, page 84). While located at the periphery of the school, this is a highly visible site along an expressway-lined river, shared with informal student playing fields. Recognizing the visual sensitivity of this outpost, the university held a design competition for it, yielding a much-praised structure by Boston’s Leers Weinzapfel Associates.

When a new campus building goes up, it ought to be a distinctive structure, memorable in its own right, that also reinforces the institution’s identity. The structure must function well internally, while making the optimum contribution to a sequence of open spaces and a pattern of circulation. It should delight those who use it while contributing to a favorable impression globally. The buildings featured on these pages offer instructive strategies in addressing—and meeting—these objectives.

**John Morris Dixon is currently at work on a book on late twentieth-century architecture.**



Seminal examples of context-related solutions on college campuses include (from left to right): the economics and management building at the University of Utrecht by Mecanoo; Wellesley’s Jewett Arts Center by Paul Rudolph; the Engineering Sciences Center at the University of Colorado, Boulder, by William C. Muchow with Pietro Belluschi and Sasaki, Dawson, DeMay Associates; Carnegie Mellon’s University Center by Michael Dennis & Associates with UDA Architects (1996); and the University of Pennsylvania’s chiller plant by Leers Weinzapfel Associates.



Literally conforming with the school's 1927 radial plan by McKim, Mead & White, Stern slightly plays the building's wings (top) to enclose a courtyard patio for dining and casual meetings (above, right). Stucco facades help cut costs, as they did on original campus buildings.





TOP: LANDSLIDES; BOTTOM: PETER ANDREW/ESTO



"When was it built?" That's a question likely to be heard from new arrivals at Harvard Business School's Spangler Center, a 122,000-square-foot campus center with dining and meeting rooms, study areas, an auditorium, and service facilities. In fact, the third-generation Georgian structure was completed in 2001. (Credit McKim, Mead & White, circa 1930, for what seem to be eighteenth-century neighbors.)

Yet its lushly ornamented red-brick-and-limestone exterior, white millwork interiors, and consistently posh detailing speak to a bygone era and the enduring power of the Harvard "brand"—a word used with few reservations by Spangler's architect, Robert A.M. Stern. Using both scholarly and on-site research, Stern and his classically trained designers created a highly deferential campus complement through a series of study models, starting with massing investigations and moving into large-scale studies of interior spaces and special conditions such as staircases and coffered ceilings, all expedited by a speedy laser-cutting machine. Designers used photographs of pre-1940s work on the campus to develop profiles, shapes, and ornament. "You have to master the brand and vocabulary and what it stands for," says Stern, by focusing on "the conceptual language behind the architecture" and not merely "ornamental programs"—a fault he finds with many classicists today.

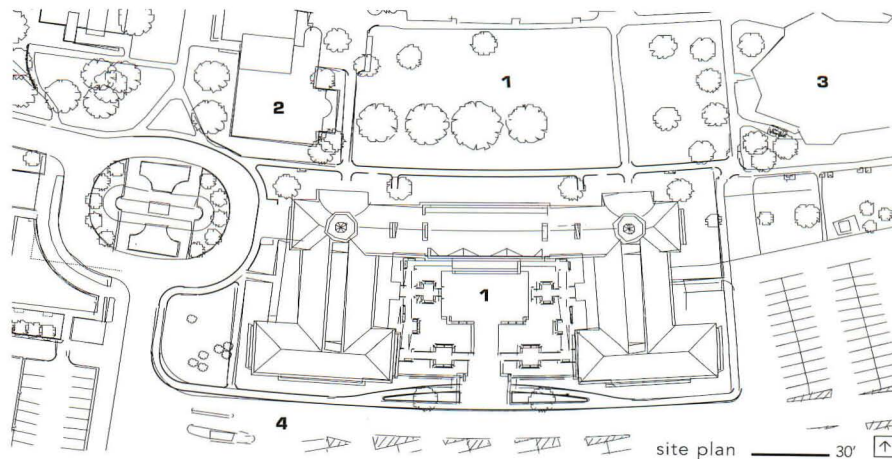
But at Spangler, it's easy to focus on the details because the building sits so comfortably on the campus. Stern strengthens the original 1927 master plan by McKim, Mead & White by subtly splaying the building's winged mass according to the radial campus concept, completing an adjacent quadrangle. Two campus-facing entrances align with the doors of a main classroom building to the north. The southern exposure offers the first campus façade that formally addresses its host city.

Neither a classroom building nor a dormitory, the building takes its cues from both McKim, Mead & White's boldly scaled Baker Library (1927) and nearby residence squares, with their U-shaped courtyards and orientation to light. (Even Spangler's cost-cutting stucco façades echo those found on the older buildings.)

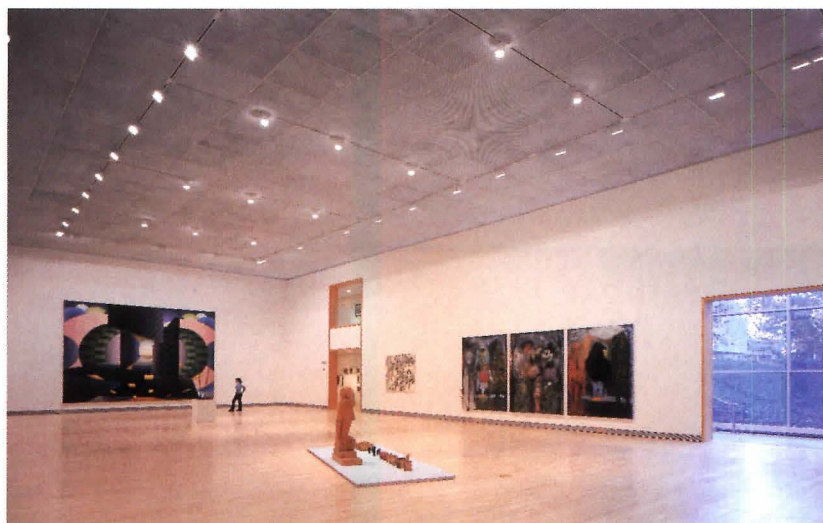
This is work within an idiom, not misty-eyed mimicry, and it sets new standards for proportion, scale, and harmony within its milieu. "It's a matter of what is appropriate," says Stern, whose mantra is "fitness to function, fitness to place."

The new work, however, leaves its owner with a kind of preservationist's dilemma—most visitors will have no idea when Spangler was built—and a different sort of quandary for the Harvard B-school brand. It's timelessness indeed connotes the school's history and legacy, but will it continue to suggest an institution on the cutting edge of modern business theory? **C.C. Sullivan**

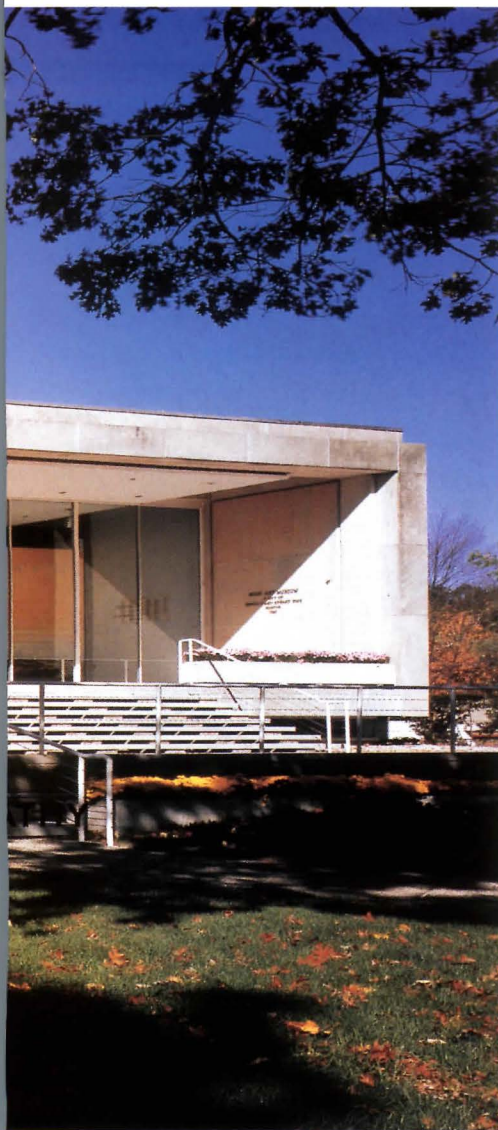
- 1 courtyard
- 2 campus health center (1974)
- 3 Burden hall (Philip Johnson, 1971)
- 4 parking



Forming a quad with buildings from the 1950s and the early 1970s (including Burden Auditorium by Philip Johnson), the Spangler Center brings a fully detailed Ionic order, replete with dentils and echinus (above left), to the Harvard Business School campus.



The new wing defers to the original International Style building by Max Abramovitz, in keeping with the 1948 campus master plan by Eero Saarinen that envisaged separate academic “temples” (top). The new wing adds a large, open display space (above, left).



TOP &amp; BOTTOM LEFT: JONATHAN HELLEVESTO; BOTTOM, MIDDLE: BRUCE MARTIN; BOTTOM RIGHT: CARLOSSA ARCHITECTURAL PHOTOGRAPHY

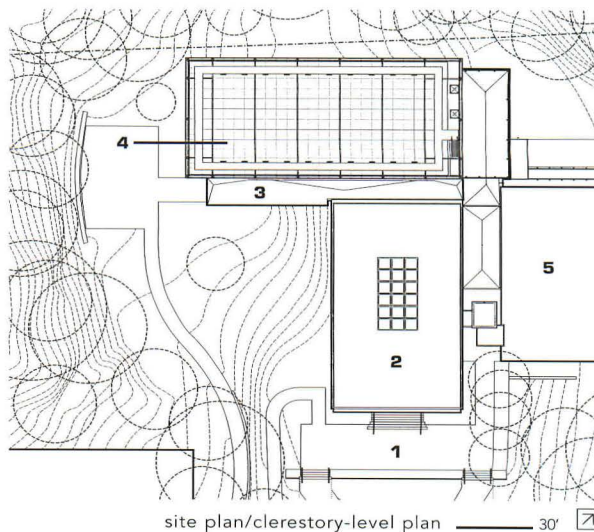
Sympathetic material choices and detailing result in a highly deferential extension of Brandeis University's Rose Art Museum, a 1961 study in the International Style by Max Abramovitz. The suburban Boston campus in Waltham, Massachusetts, presents a mix of building styles, but most of its structures were designed in the two decades after its opening in 1948. Following a master plan set by Eero Saarinen, individual "temples of learning" were dispersed throughout pastoral hills, oriented toward winding roads connecting the campus nodes.

Changes in the circulation routes and quick growth, however, had diluted the original campus concept long before Graham Gund was tapped for an addition to one of the temples, this one brimming with post-World War II American art. Yet, he embraced the original plan and worked to reinforce the notion of museum as consecrated space.

Adding 50 percent more floor area, the 8,800-square-foot project was the first step toward doubling the building's size. The program called for a large volume, a *kunsthalle*, that could quickly become pitch black, to accommodate video and large sculpture installations. (Abramovitz's building features low ceilings and admits light through its glazed main façade and skylights.) But while the interior would transform the museum's character, the exterior would not. "We wanted a closeness in feel to the original building: a box, with lines that were similar," says Gund, and a palpable relation with the wooded hillside and Saarinen's concept, in this case a visual-arts quad. Discussions with campus tenants and a series of sketches led to an overall outline; Gund's team then focused on materiality and detailing to make it work.

Echoing the limestone infill panels of the original walls, Gund developed a rain-screen of smoother 3-foot-by-4-foot ceramic panels. Aluminum fascia, slightly darker than Abramovitz's metal trim, stretches in two bands between the cladding and a clerestory of acid-etched diffusion glass backed by adjustable louvers, which usually read through the glazing. Along the main façade, a stairway follows the slope of the earth, enclosed by glass that—as at the original main entry—offers a peek into the exhibits. (A deep truss system with crossbracing cantilevers over the stair for column-free views.) Arriving at the new wing, visitors catch a glimpse of the new *kunsthalle* through a glass door and a balcony before descending the elegant stair, which brings the circulation sequence closer to surrounding trees and the topography underfoot.

Gund's work one-ups its host on several levels: It's a stronger box, more luminous and composed. In execution, this contextual response is more empathetic than reverent. From certain angles, it suggests a young sibling coyly peeking from behind her older sister's hip, awaiting an opportune moment to show off. **C.C. Sullivan**

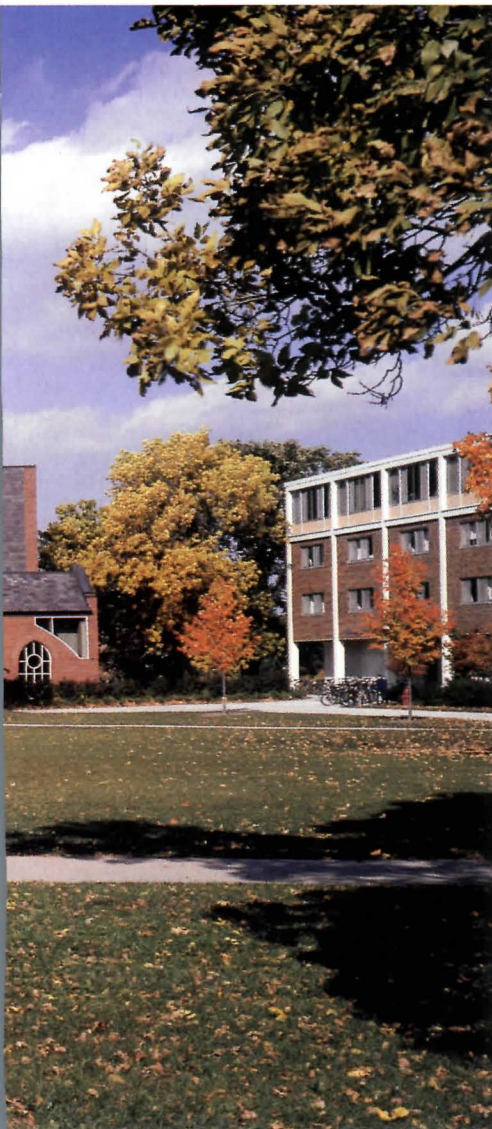


- 1 entry
- 2 original museum
- 3 stair
- 4 new gallery ceiling grid and catwalk
- 5 existing temporary support building

A glass-enclosed staircase follows the natural contour of the hill on which it sits (opposite, right). Lightweight ceramic tiles echo the limestone of the existing museum, and a clerestory of diffusion glass with louvers controls natural lighting in the new gallery (above, left).



In scale, profile, and materiality, a large mass and small mass on the new building's principal façade echo the traditionally detailed Collegiate Gothic and Tudor image of the original nineteenth-century campus master plan (top).



TIMOTHY HURKLEY

A new language and dining building at Carleton College by Charles Moore's former firm shows how much attitudes toward campus infill have changed since the 1960s and 1970s. Moore built his fame, in part, upon a number of conspicuous buildings, ranging from the faculty club on University of California's Santa Barbara campus to Kresge College on its Santa Cruz campus. Bright in color and bold in form, the projects marked the beginning of a now-common trend toward constructing buildings that stand apart from their contexts. That history makes this new edifice all the more significant. Designed by his successor firm, the structure exhibits extraordinary restraint, fitting carefully into its context while conveying its own quirky character.

In the 1980s, Moore and firm principal Arthur Andersson served as design consultants to Carleton. While it had a strong 1920s master plan, Andersson noted that "every architect working there in the 1970s and early 1980s decided that it was their moment to design a monument," resulting in an incoherent mix. Although Moore died in 1993, the firm received the commission in 1998 for a rare open site, flanked by Nourse Hall, a Tudor Revival dormitory, and Myers Hall, a modernist dormitory box.

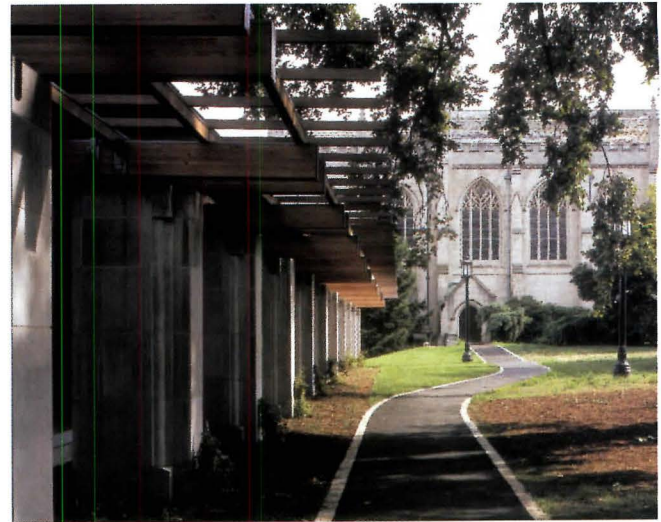
The new building's corner closest to Nourse matches its height, form, and materials, with a smaller one-story brick-clad wing on the opposite corner echoing both the three-story mass and the old neighbor. Affectionately called the "son" and "grandson" of Nourse, those projecting façades reduce the apparent size of the 54,000-square-foot building and connect, with their pointed-arch openings, to the historic core of the campus. A glass-faced dining room, with copper-clad clerestory dormers forming a gentle arch, visually bridges the two brick fronts. Behind them rises a slate-clad, flat-roofed box—the height of Myers Hall—containing offices, classrooms, and lounges for five language departments. Visually, the box reads as a roof and seems to recede, while its slate cladding, notes Andersson, "has a dark, shadowy quality" like the mature Douglas firs nearby. Tall, clerestoried windows in this academic block illuminate faculty offices and classrooms, while a notch in the east side brings daylight into the center of the building. Along the rear, the slate-clad box sits on top of a brick-clad base, with large windows overlooking the lakes on campus.

Moore's influence can be sensed in the inscribed oval of the entry vestibule, and in the eclectic mix of pointed-arch openings and modernist window walls; yet the edifice charts a new course with durable materials, such as slate and copper; subtle color, such as natural wood finishes; and substantial detailing, such as the thick vestibule walls and the deep returns on brick end walls. "Although academic buildings change a lot," says Andersson, "we're responsible for making them last." **Thomas Fisher**



- 1 new building
- 2 Nourse Hall
- 3 Myers Hall

The new building's receding rectangular mass suggests a closeness to the stylistically modern dormitory from the 1960s next door. Larger windows offer views from the slate-and-brick rear façade to the lakes and fir trees that ring the campus (above).



While all three levels of the new building are visible from playing fields to the east (top), only one level is seen from the new quad it delineates (above, right). Its limestone columns and rusticated brownstone cladding echo the predominant materials on the campus.



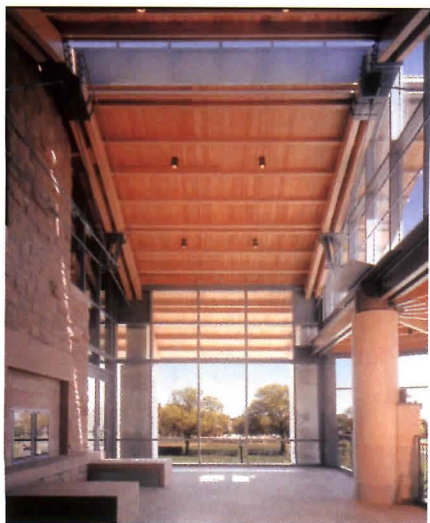
TOP: KARE BACOUS; BOTTOM, LEFT TO RIGHT: M. THOMAS, KARE BACOUS, M. THOMAS

Set on a hill, Trinity College in Hartford, Connecticut, is known better for its prominent Collegiate Gothic chapel in bone-white limestone than for its dark stone dorms built in the 1870s and 1930s, the older ones by the British architect who also advanced the school's original (and quickly abandoned) campus plan, William Burges (1827–1881). A new admissions building designed by Peter Bohlin, however, nods to both aspects of the school's legacy, by means of a cloisterlike edge defining a new campus quadrangle. To achieve this, Bohlin stretches the new building's program and footprint along an abrupt slope that separates the "outdoor room," as he calls the quadrangle, from playing fields to the east. Yet, the long building is more membrane than barrier, with multiple views of the campus beyond framed by a green slate roof and limestone piers that pick up the rhythm of the old chapel's ornate buttresses. And with the grade change, only the top level of the three-story structure can be seen from the quad. From the fields below, a more opaque façade of rusticated brownstone cladding with limestone window-fins is in view.

In scale, apparent mass, proportion, and materiality, this 87,000-square-foot building refers to and defers to Burges's classic dorms and Frohman, Robb and Little's 1932 chapel. Yet, somehow, it remains unapologetically Bohlinesque, with its identifiable structural articulation and expressive informality.

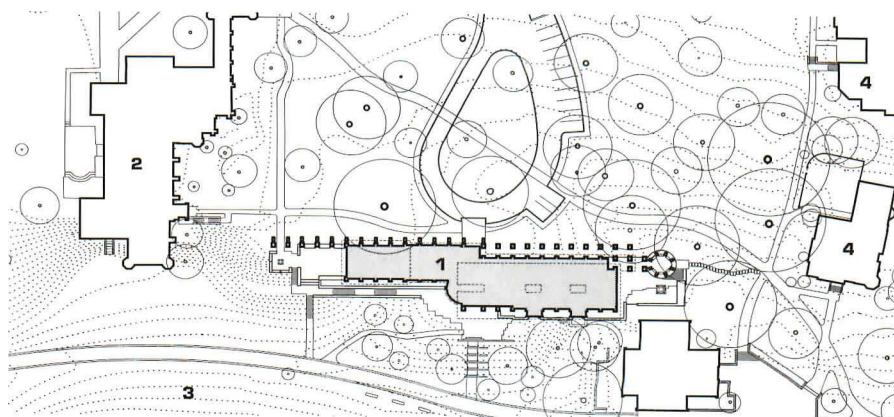
The result makes a strong impression on prospective students and their kin, but not by means of architectonic razzle-dazzle or heroic engineering (or institutional bombast, for that matter). Far from it: From the exterior, nature takes over. Hiding its bulk behind the hill, the transparent pavilion's visible columns echo the mature trees in the quad, and the trellises of a pergola on its south reach will eventually succumb to climbing ivy. Even inside, the building is laid-back, with weighty brownstone hearths, a processional stair, and spare, flexible spaces. The interiors are dominated by views of the campus; the columns and ceilings again serve as framework, receding from scenic views of a historic place. Its north-south circulation suggests the campus "Long Walk" along its several quadrangles.

Bohlin's solution is resonant of place yet highly personal. Still, his design approach—many site visits, sketches back at the studio, and a trip to see Eliel Saarinen's work on the Cranbrook campus in Bloomfield Hills, Michigan (1928–1942)—seems a good fit for Trinity. In fact, the school's latest campus master plan (by Alexander Cooper, with William Rawn and Ken Greenberg in 1997) calls for reestablishing "a compelling overall campus structure" with a "contextual approach" to its physical and cultural surroundings. **C.C. Sullivan**



- 1 new building
- 2 chapel

- 3 playing fields
- 4 existing buildings



site plan ——— 60' →

From within the quad and from inside the building, the admissions building frames views of the campus to impress prospective students and their families (above, left). An outsized stone hearth and a monumental stair anchor the airy interior spaces.



The new art center serves as a bridge between older portions of the campus and newer additions on its western edge. Brick and Indiana limestone, and elements such as a courtyard and a prominent arcade, connect the structure visually to original buildings on campus (top).





HESTER + HARDWAY

The Richard E. Peeler Art Center, a studio, classroom, and gallery building at DePauw University in Greencastle, Indiana, seems an unlikely contender for a culture war. Yet, it became the protagonist in such a conflict at DePauw after Carlos Jiménez Studio was selected to design the building in 1997. The determination of DePauw's art and art-history faculty, the commitment of administration members, and the confidence of the building's principal donors meant that the art center was designed and built as a work of architecture rather than as an exercise in thematic styling.

Since its formulation in the 1970s, the discourse of contextual design has tended to drift into thematic styling. At DePauw, a compact campus that merges gracefully with its small-town street grid, this interpretation of contextualism has entailed refacing banal brutalist buildings of the 1970s and 1980s with postmodern classical façades intended to assert collegiate identity. Jiménez and DePauw's art faculty resisted intense pressure from some university leaders to conform to this identity program. The spatial integrity of the new art center attests to their wisdom.

The 87,000-square-foot building bounds the campus' southwest edge, in sight of the tower of DePauw's oldest building, East College, a Victorian pile begun in 1871. Its studios and classrooms are organized in an L plan, aligned along cross streets to the north and west. A double-height entrance loggia and stair hall anchor the east end of stacked, single-loaded passageways outlining the interior of the L. Accessible from the entrance and stair hall is the University Art Gallery, a freestanding, two-level museum rotated to align with the street to the east, which is slightly skewed off the Greencastle street grid. Jiménez distributed Peeler's public spaces, including a 90-seat auditorium, along the northern portion of the ground floor. Ceramics shops and their complex support services fill out the windowless end of the west wing next to sculpture studios. On the second floor, classrooms, offices, and photography studios occupy the west wing, while painting and drawing rooms are inset behind big projecting north windows.

Jiménez shaped Peeler in response to how students, faculty, staff, and visitors inhabit the building. Passageways double as spontaneous social spaces; daylight and views of the interior courtyard subtly reinforce the implication that this is the building's center. Space is configured most dramatically on the second floor: In the painting studios, the intersection of the building's curved roof and the north-facing window bays results in faceted planes and curves that distribute daylight; in the gallery, curved wall planes bounce sidelight into the spaces while minimizing direct sun, and vertical light slots also expand visitors' perceptions of the gallery's size.

The modesty, purposefulness, and consistency of the art center are evident outside as well. Jiménez's one contextual reference is material: the red brick and Indiana limestone walls of East College. Taut brick planes sheathing Peeler's steel-frame structure, vertical stacks of limestone lining its entrance loggia and arcades, and bays of coated-steel panels work within contemporary construction practices to modulate and refine exterior surfaces. Jiménez avoids the inertness of DePauw's similarly constructed brutalist buildings by keeping the masses narrow in plan, introducing contours that activate its edges, and externalizing internal conditions, such as the north-facing window bays, the limestone strips tracing column lines, and vent registers that fill out the window band on the rear wing.

The Peeler's sense of place derives from the specificity and imagination with which Jiménez architecturally addresses orientation, site, program, and daily use. Instead of expounding stylistically on a DePauw context, he and his collaborators constructed an inspired spatial setting for making, studying, and teaching art. Quietly but insistently, the Peeler Art Center challenges the proposition that thematic codes are acceptable substitutes for architecture. **Stephen Fox**

**Architectural historian Stephen Fox teaches at Rice University and the University of Houston and is the author of *The Campus Guide: Rice University*.**

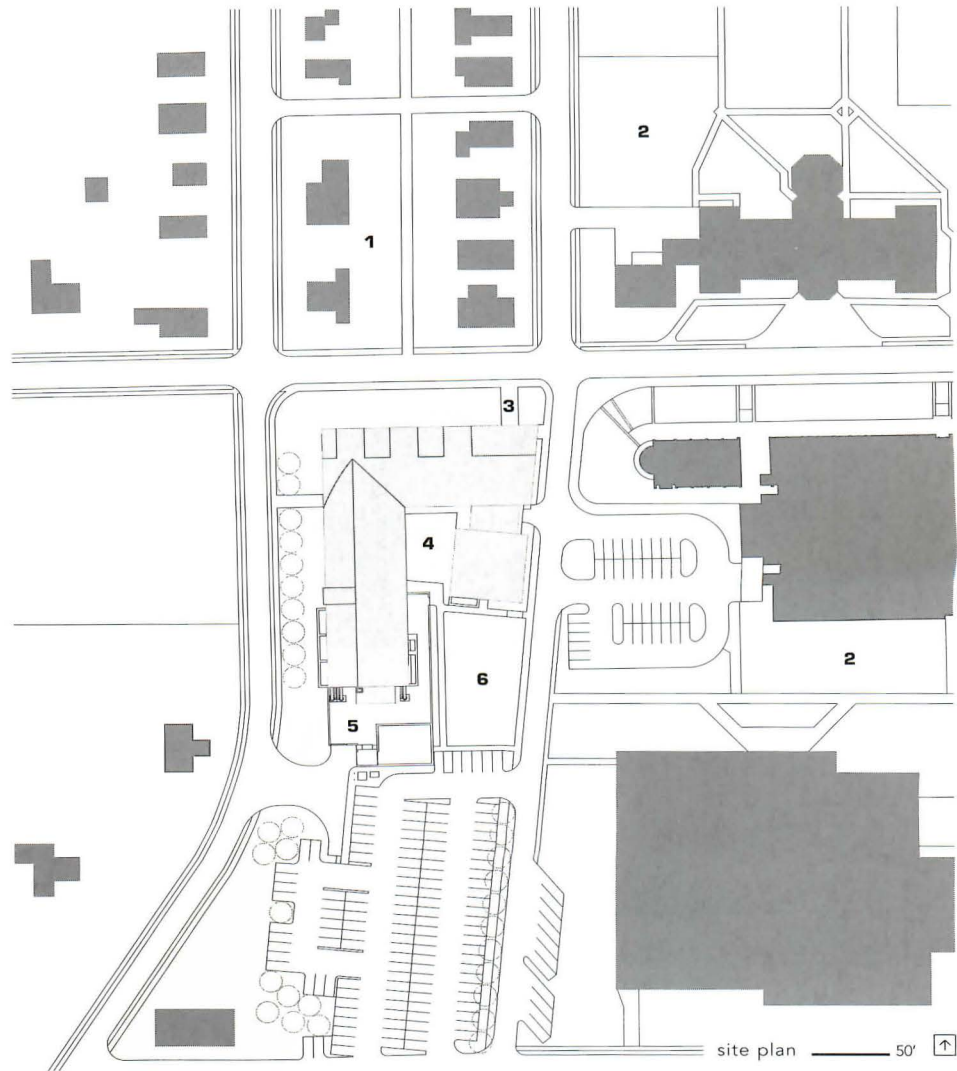
Two wings of the art center extend from the highly visible main corner entry, which feeds into the building's largest spaces. While a two-story structure, its height is the equivalent of a three-story classroom or office building.



A courtyard and sculpture garden establish preliminary connections with nearby campus buildings and grounds (above). Steel panels, brick veneer, and ribbon windows express interior functions and modulate the tightly drawn building envelope.



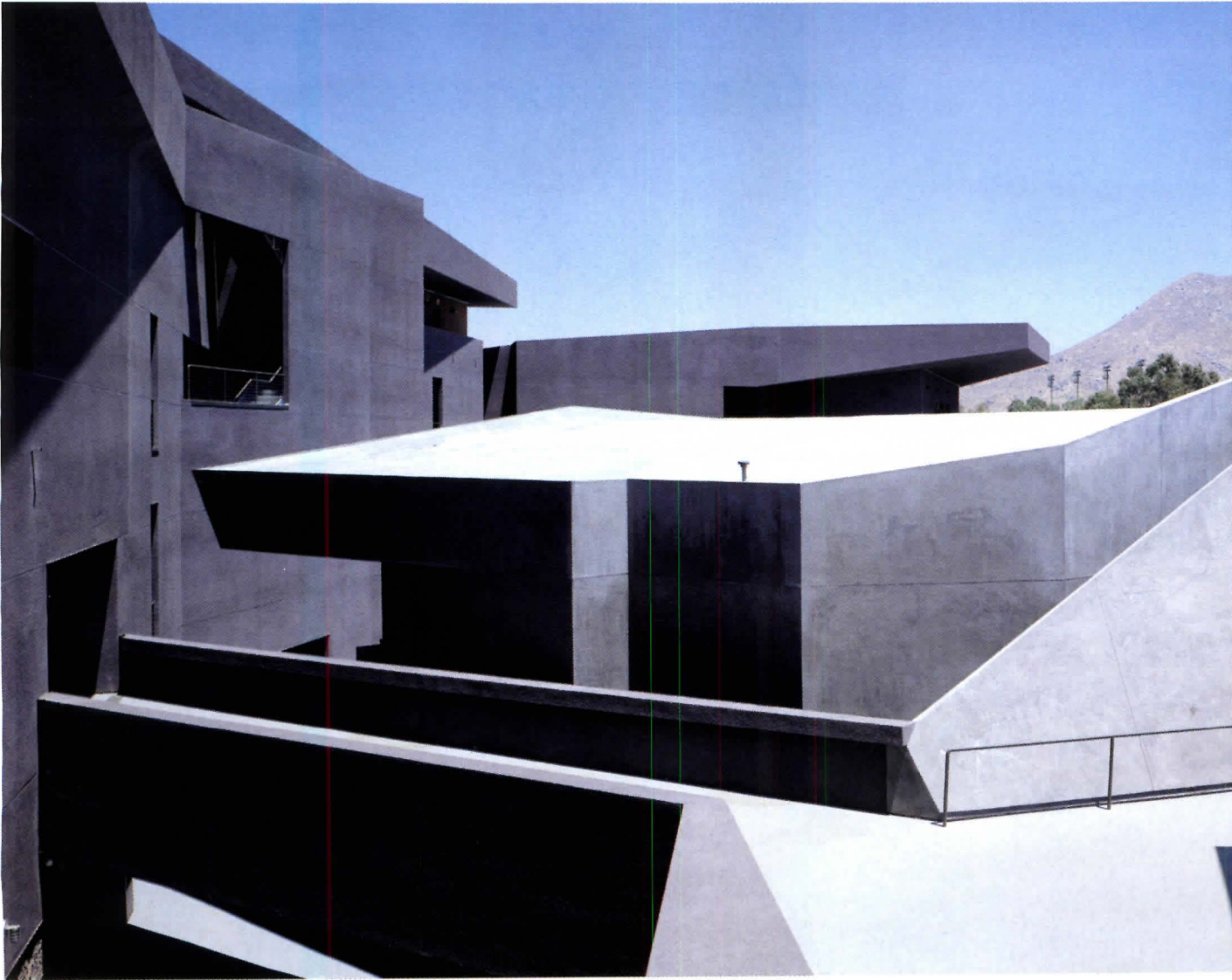
LEFT AND ABOVE, LEFT: HESTER + HANDBYWAY; ABOVE, RIGHT: CARLOS JIMENEZ STUDIO



- 1 private residences
- 2 campus
- 3 entry

- 4 courtyard
- 5 patio
- 6 sculpture garden

North-facing window bays illuminate painting studios on the second floor (top, left). A photograph from the architect's campus visits suggests relationships between the original campus structures and the new building's material and physical expression (top, right).



In color and form, the art center suggests the canyons and mesas of a nearby mountain range and the arroyo that runs through the campus. The connected buildings are essentially rectangular forms arranged with several overlapping and skewed structural grids.



Art is not only made in the Fine Arts Building at the University of California at Riverside (UCR) but it is accelerated, its production quickened by the building's kinetic forms and interdisciplinary, boundary-pushing program. Shifting geometries of roofs, walls, and ramps, multifunctional spaces, and multilevel courtyards and overhangs frame views of the campus, the building, and student work. Open since 2001, the building seems to dance across its 5-acre site in the Box Spring Mountains basin, says architect Barbara Callas.

Designed by Israel Callas Shortridge and Annie Chu of Chu + Gooding Architects, who served as project designer—and later, with Fields Devereaux as executive architect—the arts building houses UCR's dance, music, studio art, art history, and theater departments, which were previously dispersed throughout the campus. Located on a gateway site on the western edge of the university, the building aims to cross-pollinate the five departments while preserving their independent identities. (The building is one of the last designed by Frank Israel before his death in 1996.)

The architects began with a typological approach, presenting the university's forward-thinking design committee with a series of study models that evolved from bar, courtyard, and spine compositions to a "one-big-roof" scheme. Following a two-year budget-related delay, the project was revived—reduced in size—in 1996 as a landscape woven into its desert context. The new scheme emerged as a series of skewed orthogonal volumes knitted together by an undulating form whose logic lies somewhere between roof and landscape; the building's occupiable roofs, façades, and courtyards activate student life and generate its public image.

This search for a different breed of building resulted in an architecture that expands the concept of contextualism itself, finding relevance in the urban, geological, and pedagogical environment of the university. UCR has a midtwentieth-century modern campus with loosely organized, low-rise brick buildings and few strong axes. The arts building is "not the same typology seen on campus just scaled up or down," says Chu. She explains that the site and the program called for both a smaller-scale "DNA response" and a larger-scale "landscape response"—an effort to understand what makes "the place beyond the campus." The purple-gray stucco finish and the faceted forms of the roof approximate the character of nearby mountains on a hazy day. The main outdoor courtyard, or "canyon," as the designers refer to it, recalls the arroyo that runs through the campus. Exterior bridges, walkways, stairs, and platforms of the roofscape provide interstitial points of overlook and connection, with the main entrance ramp on the building's east side offering what Callas likens to a "handshake" with the existing campus.

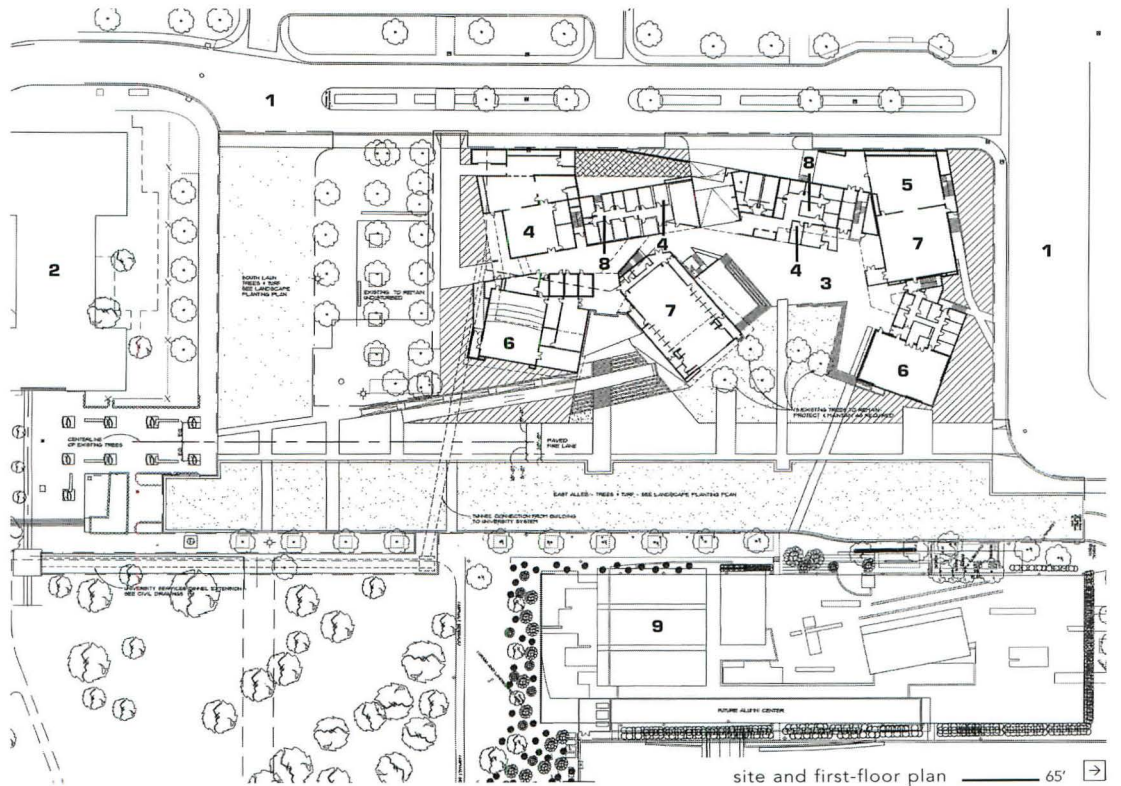
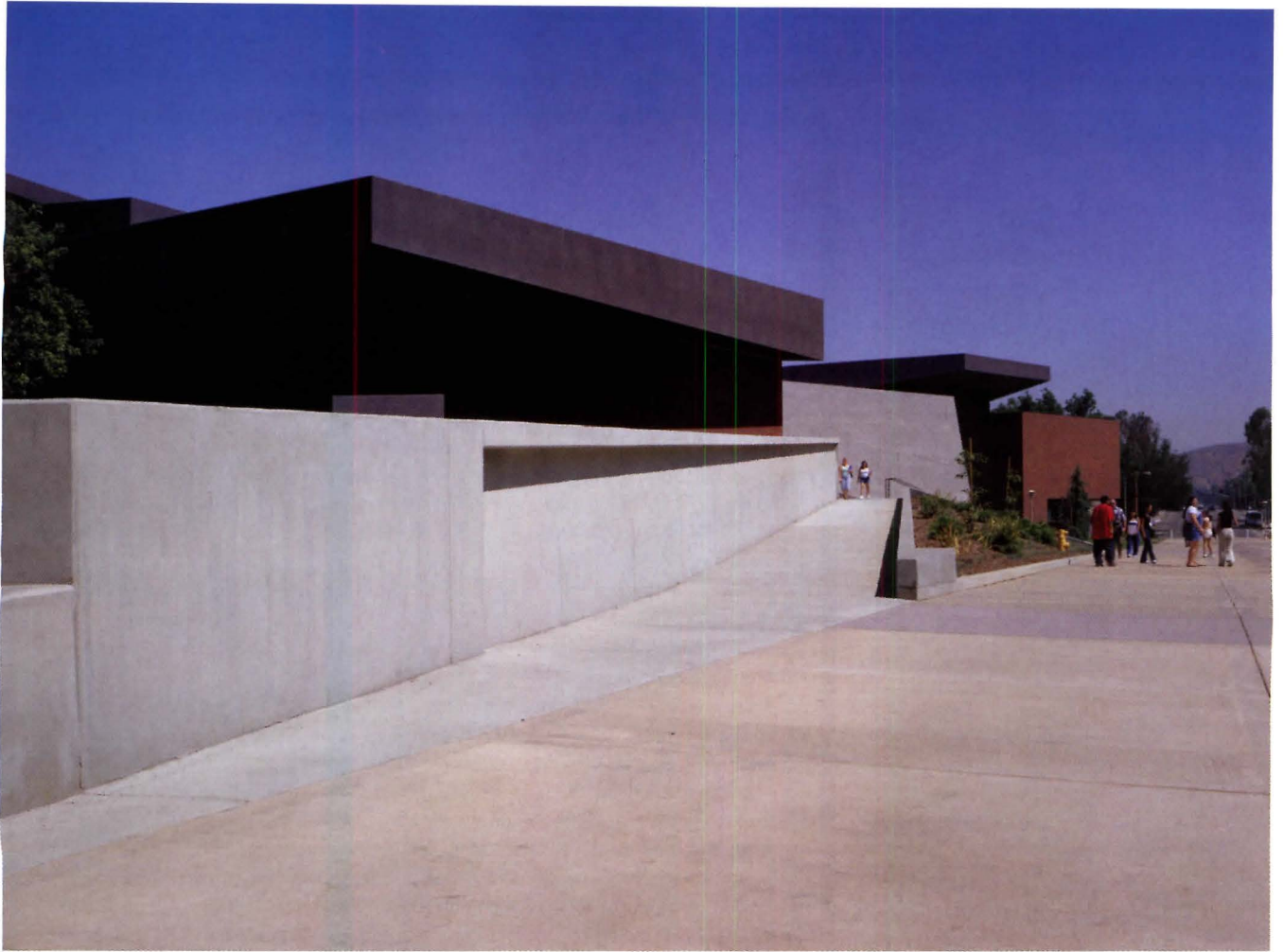
Though recollecting landscapes both near and far, the arts building's greatest success lies in the creation of an environment of exchange. Berlin-based architect Dagmar Richter, who served as urban design specialist on the project, developed the concept of a "public façade," which makes typically internal activities evident outside the building by externalizing circulation, thereby heightening informal interaction. Use of niches, internalized cavities, and private, landscaped outdoor spaces assigned to each department direct and accommodate eddies of activity: discussion, performance, installation. It is this exchange that directly ties the building to its context, ensuring a strong connection to the activities of the campus and the desert beyond. **Liz Falletta**

**Los Angeles-based designer Liz Falletta is currently studying real estate development at the University of Southern California.**

*For detailed project credits and specifications for the university projects reviewed in this issue, visit [www.architecturemag.com](http://www.architecturemag.com).*

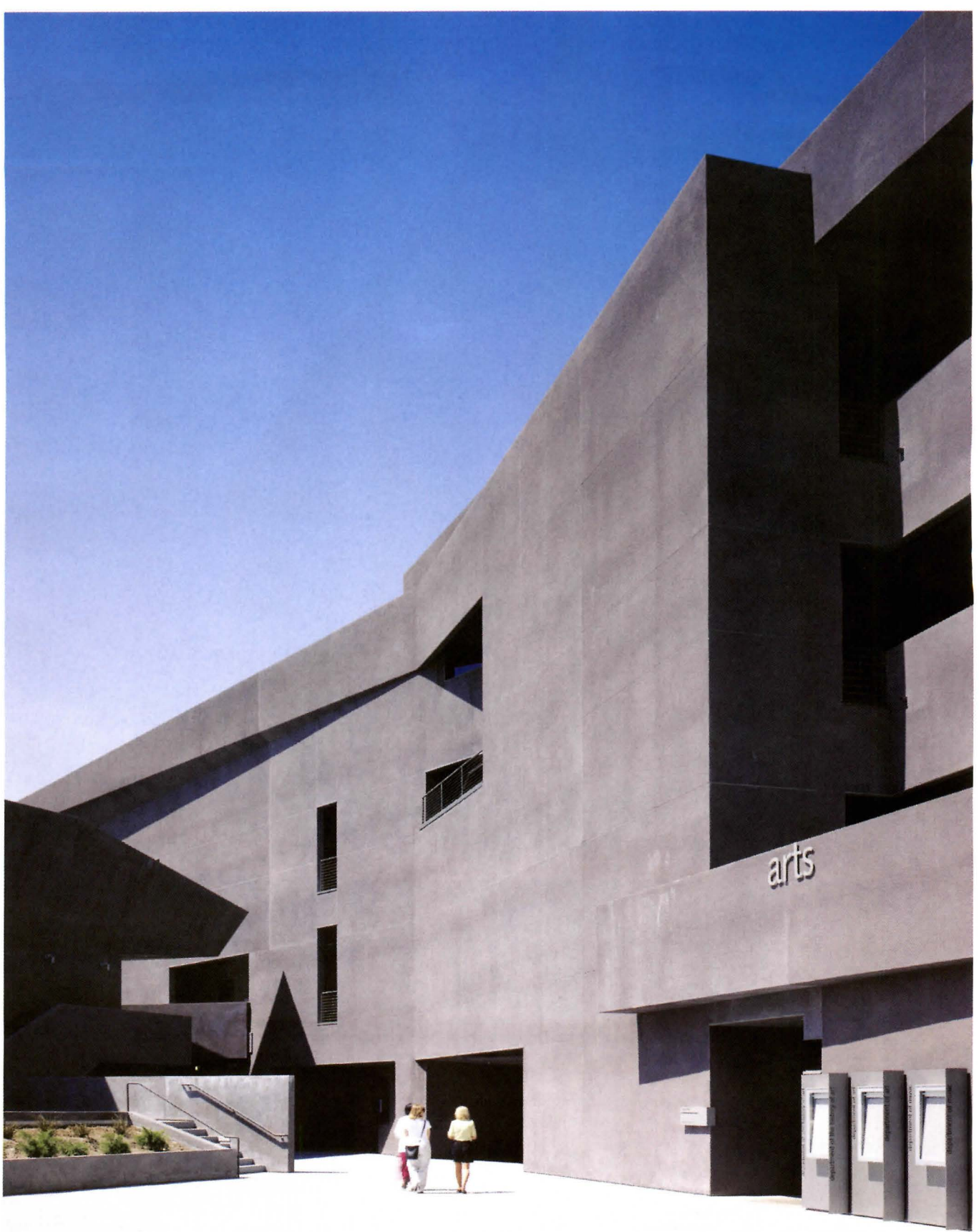
BENNY CHAN

Sparing use of brick, a thematic campus material, is found at key ground buildings and base conditions. A stitching of paved and planted landscaping crosses the lower plaza to allow future connections with new campus buildings (above).



- 1 road
- 2 existing administration building
- 3 courtyard
- 4 studio
- 5 shop
- 6 rehearsal room
- 7 theater
- 8 office
- 9 existing tennis courts

Landscape and building share the responsibility of engaging the campus and supporting the arts. Internally, the masses delineate a central courtyard, with connecting walkways and bridges to encourage interaction among the students in the various art departments.





## hybrid house

A warehouse by Herzog & de Meuron reveals the art it stores. **BY AARON BETSKY**

The Schaulager in Basel, Switzerland, is a simple, five-story box at the edge of an industrial zone. But, in the hands of architects Herzog & de Meuron, it has become a sublime warehouse. The importance of storage in a culture fixated on the continual movement of people, goods, and data finds here its first monument. The Schaulager can have such importance because it is a place to store art, not books for Amazon or furniture for Aunt Mabel.

Schaulager means “viewing depot” in German. The building’s client, Maja Oeri, invented the name. She is the founder and president of the Emanuel Hoffmann Foundation, which owns a trove of modern and contemporary art initially assembled by her grandmother 70 years ago. Most of the collection is

on view in Basel museums, but it continues to grow. Instead of funding an addition to one of those institutions—which Oeri points out, would be quickly outgrown and out of scale in this relatively small city—she set up a separate foundation to store the work in such a way that it would be accessible to scholars and students (and once a year, to the public, when part of the collection is displayed in a temporary exhibition). “The Schaulager does not withdraw art from the museum,” explains director Theodora Vischer, “but rather, releases it from the seclusion of the warehouse. It is the opposite of the art fair for which Basel is famous.” The Schaulager is also a center for research into techniques for the conservation of contemporary art, which often involves the use of unconventional materials.





The Schaulager appears as though it has been extruded from its site on the industrial southern edge of Basel. Its heavy walls express the program, which calls for art storage and conservation facilities, along with public exhibition spaces. The organic window forms were derived using digital tools and modeled after the site-excavated gravel pebbles used to produce the cladding.

#### NEITHER HERE NOR THERE

The site is what Jacques Herzog defines as a “nonplace in the seam between the city and the industrial suburbs.” To accommodate programmatic needs and the 46,000 square feet of exhibition space the client requested, the architects made a slightly pentagonal box pushed to one end of the property facing a tram station on the rail line south of Basel. They then constructed the building’s main bulk using concrete made with gravel excavated at the site. The result is a form that fits in with the surrounding warehouses, but also feels more archaic and more unfinished. It refers to a slower, geological timeline as trucks race past day and night on their way to and from the neighboring industrial park.

RENEE WALKER

The architects scooped out the Schaulager’s front, posing a lacquered white steel wall bent into a giant proscenium as an entrance piece. “Like a drive-in theater,” according to Herzog, it announces that this is a warehouse of images meant to be seen, not just stored. Two LED screens on the façade show various pieces from the collection. Visitors enter through a small gatehouse, a gabled monolithic form abstracted from the residences dominating the context north of the site, that acts “like a guard dog protecting the contents,” says the architect. A small forecourt slopes down to the entrance while the proscenium rises above an “eyebrow” of glass, leaving the bent white plane to balance with hidden steel trusses on two points at either corner of the façade.



A forecourt facing Emil-Frey Strasse comprises an indented polygonal façade on which two 473-square-foot LED screens are mounted. Art pieces commissioned by the Schaulager appear on the screens, altering the façade as they are changed over time.

Inside, the space explodes upward in the way you have come to expect from a contemporary art museum. Yet, unlike the Guggenheims in New York City or Bilbao, this public atrium does not revel in expressive form that announces a holy realm of art. Instead, visitors are overwhelmed by stacks of concrete floors held up almost tentatively by concrete columns 54 feet apart. Seemingly endless lines of fluorescent tubes score each ceiling. Here, the warehouse stands revealed in all its naked glory. It is not until you stop to think about the extremely long spans, the clean detailing (all HVAC and wiring is concealed inside the 10-inch-deep U-shaped concrete channels that stretch between the columns) and the

bravura of the poised steel façade piece that you realize how hard the architects worked to make you aware of the warehouse's simplicity.

While the public will never see the repetitive cells upstairs where the collection is kept in alphabetical order by artist, they can access the gallery on a lower level. They can also sit in a small café and watch activity at the loading dock from behind floor-to-ceiling glass walls or visit a cavellike auditorium. The café's walls and ceiling form a continuous, undulating white plastic surface. The pattern, which also shows up in the Schaulager's gates and in the auditorium's walls, is derived from the shape of the rear offices' slit windows. These cracks



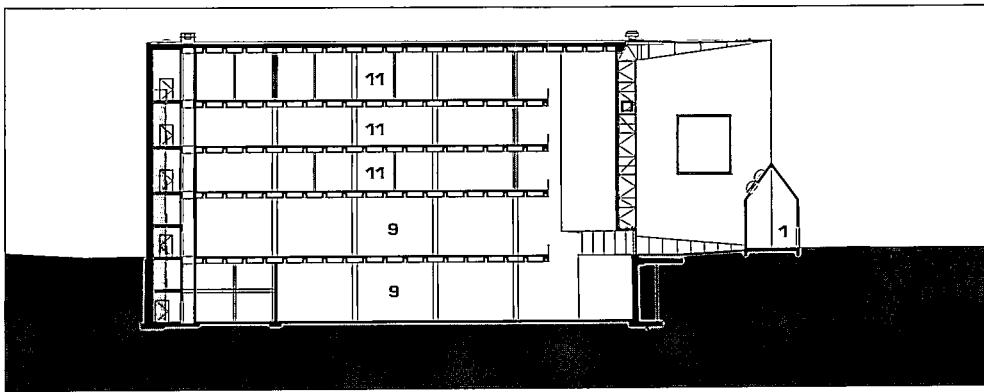
The tall, angular atrium expresses all levels of the building and their functions. The glazed lower portion of the polygonal façade provides a visual connection between the interior, the forecourt, and the street.

in the monolithic façade are themselves the result of computer scanning and reworking of the gravel pattern. This “digital archaic” form is a way, according to Herzog, of “creating an artificial landscape instead of the normal window.”

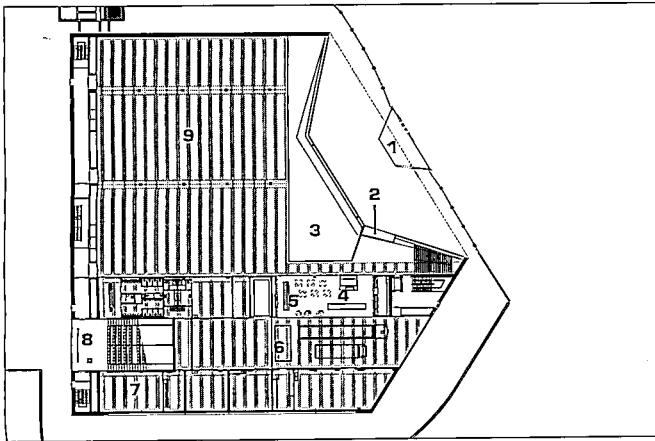
The building is just such an artificially archaic, digitally controlled landscape. It brings into architecture the aesthetic of a group of contemporary German photographers who document banal landscapes and then use computer technology and large-format printing to bring out heroic and slightly strange qualities. The Schaulager’s interior in fact looks a great deal like Andreas Gursky’s digitally remastered image of the John Portman–designed Marriott Marquis hotel lobby in

New York City, as Herzog readily admits.

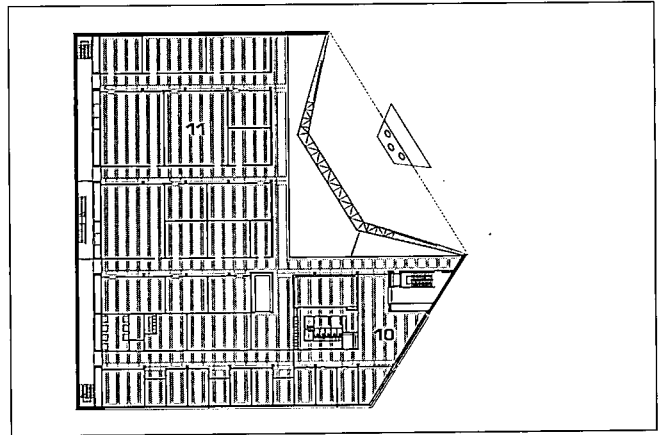
It all appears very stark and simple, but also a bit odd. Art, such as that collected by the Schaulager, deforms reality and gives it back to us. Architecture then takes this new, but almost indistinguishable, variation on the real world and turns it into a constructed place that houses more images of our world; an endless storehouse of references, possible interpretations, and mirrored images opens up. Herzog & de Meuron’s warehouse, in its very form, materials, and detailing both confirms and deforms its plain, pragmatic function, making it the largest piece of art in the Schaulager’s collection. ■



east-west section ——— 30'

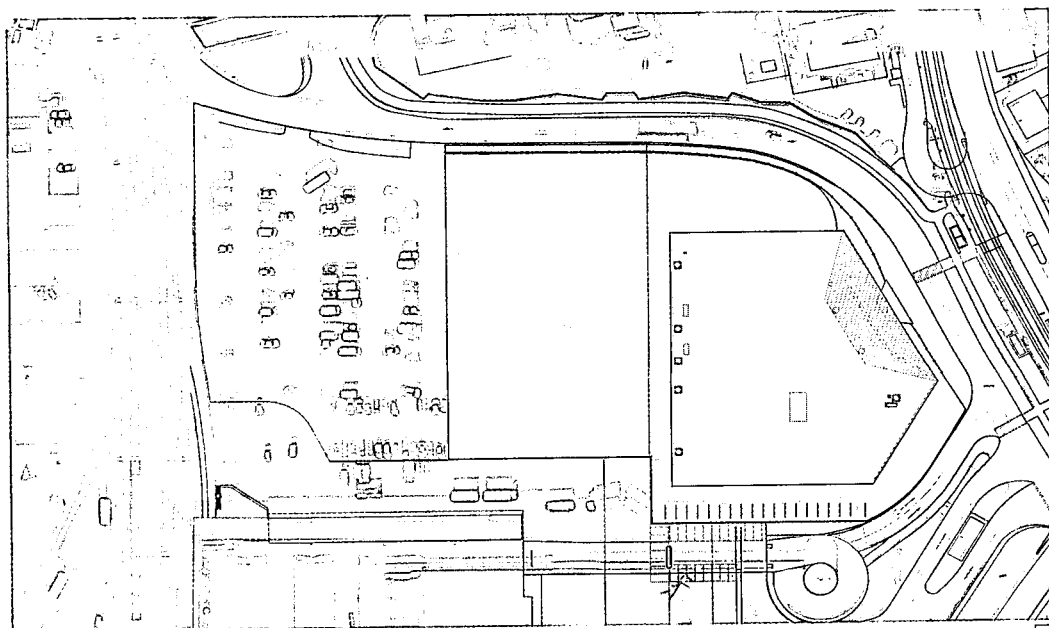


first-floor plan

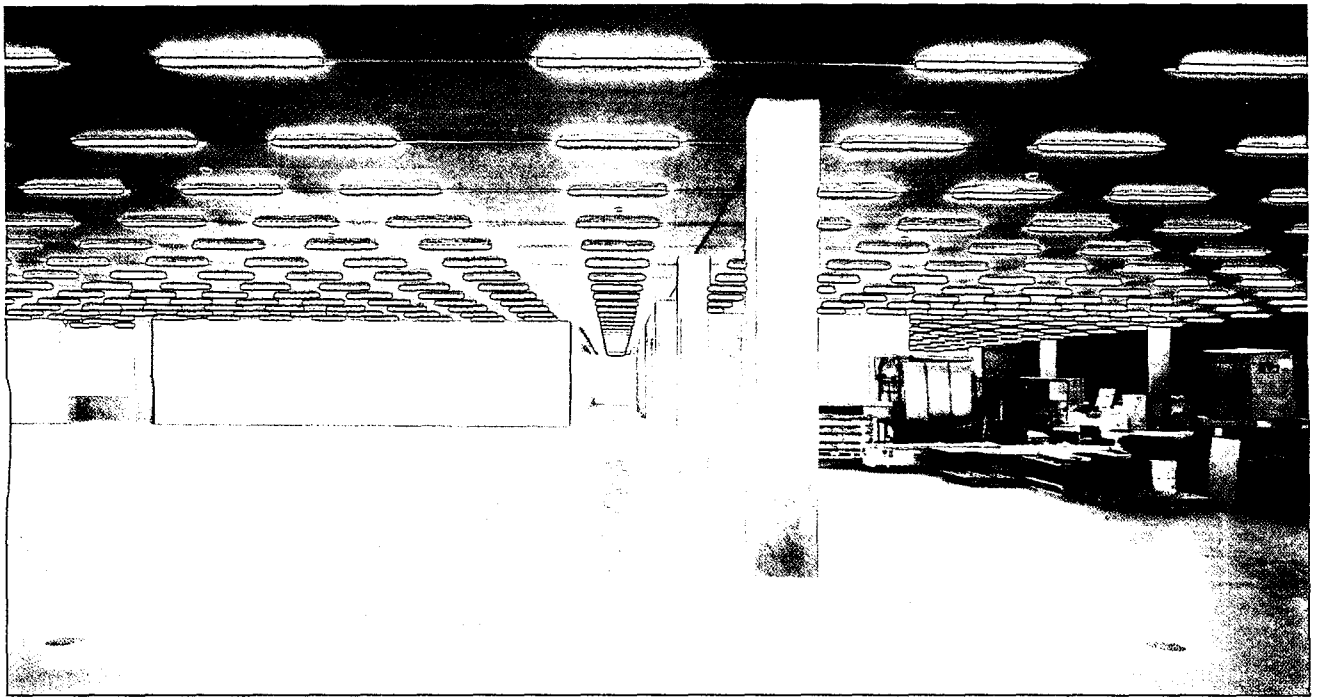
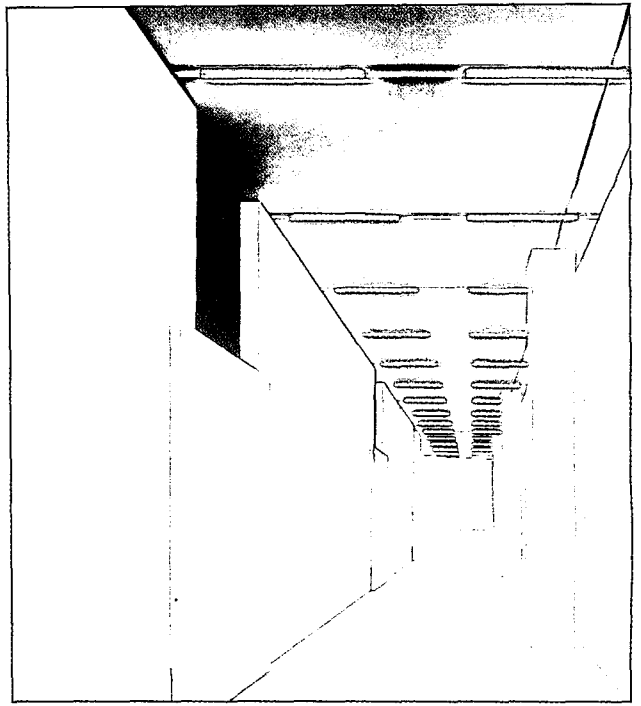
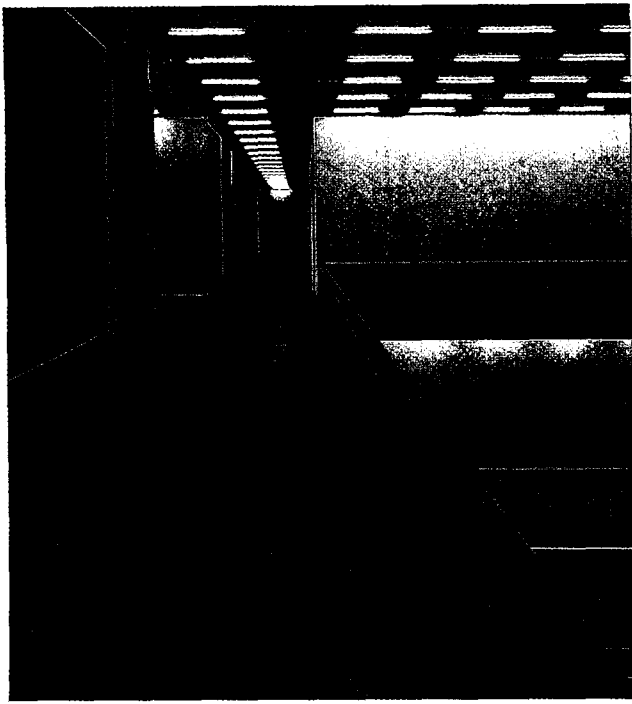


second-floor plan ——— 50'

- |               |                |                   |
|---------------|----------------|-------------------|
| 1 gatehouse   | 5 café         | 9 exhibition      |
| 2 entrance    | 6 deliveries   | 10 administration |
| 3 atrium      | 7 seminar room | 11 storage        |
| 4 ticket desk | 8 auditorium   |                   |



site plan ——— 60' ↑



While the architects had originally conceived of a storage/display facility dominated by a giant wall with art mounted on it as in a “junk-shop” and nonhanging art kept on a single floor without dividing walls, curatorial and technical necessities resulted in a true warehouse with sturdy floors, long spans, and individually climate-controlled cells.

Schaulager for the Emanuel Hoffmann-Foundation, Basel, Switzerland

client | Laurenz Stiftung architect | Herzog & de Meuron, Basel—Senta Adolf, Philippe Fürstenberger, Harry Gugger, Nicole Hatz, Jacques Herzog, Ines Huber, Jürgen Jöhner, Pierre de Meuron, Carmen Müller, Cornél Pfister, Katja Ritz, Marc Schmidt, Florian Stirnemann, Lukas Weber, Martin Zimmerli engineers | Zachmann + Pauli Bauingenieure (structural); Selmoni (electrical); Amstein & Walthert (lighting, mechanical) consultants | Emmer, Pfenniger + Partner (façade); Martin Lienhard (acoustics); Zimmermann + Leuthe (building physics); Rapp Ingenieure + Planer (traffic) construction management | GSG Projekt Partner area | 215,000 square feet cost | withheld

photographs by Christian Richters and Ruedi Walti



FEDERICO ZONAN

# AN ANIMATED AFFAIR

Walt Disney Concert Hall opens this month in Los Angeles, 16 years after it was commissioned. Was it worth the wait?

by Michael Webb

If Walt Disney were still alive, he might consider adapting for the big screen the 16-year saga of the hall that bears his name. It's a roller-coaster story, full of suspense and unlikely twists of fate, of vision and intrigue, agonizing delays and last-minute rescues, with a shamelessly happy ending. It starts with the \$50 million gift of Lillian Disney (Walt's widow) to the Los Angeles Philharmonic, and an outsider's surprise victory over three Pritzker Prize-winners (Gottfried Boehm, Hans Hollein, and James Stirling) in the 1988 competition. Over the next nine years, the project weathers a recession, urban riots, an earthquake, and a two-year shutdown, before construction gets underway in 1999. This month, the philharmonic presents its first public concerts in the hall.

#### CULTIVATED ACOUSTICS

From the beginning, the goal was to create a civic icon and the finest possible concert hall for the philharmonic, which had long performed in the cavernous, acoustically deficient Dorothy Chandler Pavilion, one of three theaters in the Music Center of Los Angeles County. Ernest Fleischmann, then the orchestra's managing director, advised the competing architects that he sought "a single-purpose hall, a space where musicians and concertgoers will feel totally at home, and the audience will embrace the performers, [with] acoustics that are rich, clear, and warm." Gehry designed what he described to the jury as "a building that invites you in ... the body language is welcoming." And Esa-Pekka Salonen, the orchestra's music director, worked closely with the architect in pursuit of "an open design that would stimulate, not intimidate; a complete departure from the American culture palace so popular in the 1960s and 1970s."

Then came a twist. Nagata Acoustics, the renowned Japanese firm that was appointed immediately following the competition, sent the architects back to the drawing board. Inspired by Hans Scharoun's Berlin Philharmonie (1963), Gehry had designed an auditorium in which banks of seats radiate from the stage, a configuration known as the vineyard concept. Nagata insisted that acoustical excellence could be assured only in a straight-sided box, like those of the Concertgebouw in Amsterdam or Boston Symphony Hall. Over the next three years, Gehry's team built scores of models and solicited the opinions of musicians and conductors, as well as Nagata. They listened and responded, explored alternatives, and, by 1993, achieved a synthesis of form, function, and feeling.

Gehry has accommodated the vineyard seating concept within Nagata's box. Seats surround the stage in steep banks with low dividers to create intimate groupings and reflect sound. There's a pent-up energy in the walls and the billowing vault of the ceiling, all clad in a thin layer of Douglas fir to achieve a sense of warmth without compromising the acoustic properties of the hard plaster beneath. A computer-designed floral fabric turns the seating into a stylized garden. Gehry designed the organ case as a constructivist sculpture, with wood pipes that provide a point of focus behind the stage.

The design of the hall was a model of collaborative problem-solving that yielded a functional work of art, but the rest of the

program was in flux during the first two years. A hotel, a ballroom, and a thousand-seat chamber music hall came and went. Only in 1991 could the architects focus on ways of unifying the disparate volumes of the hall, subsidiary performance spaces, lobbies and reception areas, rehearsal and dressing rooms, storage areas and offices. Gehry wanted the buildings to engage the street and to incorporate gardens (a priority for Mrs. Disney), but everything else was reconceived from the ground up—including a garden-level amphitheater.

#### BEYOND BILBAO

A new architectural language was taking shape in Gehry's office at the end of the 1980s, beginning tentatively with the Vitra Design Museum in Weil-am-Rhein, Germany. The clusters of orthogonal volumes that had been his signature began to disappear behind curvilinear metal planes. This development was accelerated by his adoption in 1991 of CATIA software, which generates complex working drawings from free-form models and allows fabricators to cut building elements in precise configurations. The 1993 design for Disney Hall was the first full expression of ideas that made their public debut in the Bilbao Guggenheim in 1997.

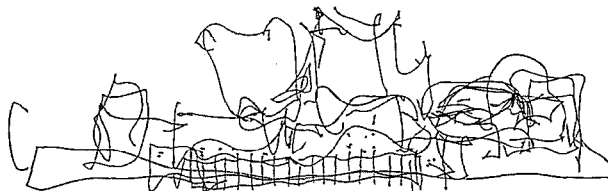
Despite the turmoil of its evolution, Disney Hall has emerged as an advance on the Guggenheim: in the taut assurance of its stainless-steel wrappers, the integration of exterior forms with interior volumes, and the dynamic flow of space through the building, from lobby to hall and out to the gardens. Still more expressive is the freestanding Founders Room on the north side of the site, clad in bright annealed steel and sporting a virtuoso vault likely inspired by the churches of Francesco Borromini. In contrast to this exuberance, Gehry designed REDCAT,

a black-box experimental theater for the California Institute of the Arts, within the parking garage at the southeast corner.

The site is a full block in the grid of streets that climbs Los Angeles' Bunker Hill and it drops a story toward the southwest corner. The east boundary is Grand Avenue, which links Rafael Moneo's new cathedral and the Music Center to the Colburn Music School and the Museum of Contemporary Art. (Gehry's principal façade reinforces this emerging arts corridor.) The hall can be entered from several points: from Grand Avenue through raised bifold glass walls, by escalator from the six-level basement garage, or up a ceremonial staircase at the northeast corner that evokes the Spanish Steps in Rome.

Once inside, the swirling planes of steel give way to soaring lobbies and an arched, fir-paneled preconcert area. The spatial experience is exhilarating, but the ultimate test remains the hall itself. Will its acoustics match those of the Concertgebouw, the Philharmonie, and Boston? Salonen has no doubts. He's been rehearsing the orchestra since July, and he describes his initial reaction as joyous: "It was a struggle to make the orchestra sound full and warm in the Chandler; you had to fight the acoustic properties of the hall. Here, we don't fight; we resonate together."

Michael Webb is the author of 20 books on architecture and design, most recently *Brave New Houses: Adventures in Southern California Living*.





The 3.6-acre Disney Hall site occupies a full block in downtown Los Angeles, the towers of the business district rising to its west (page 66). Increasing the city's stock of pedestrian-oriented spaces, the project includes public gardens and two amphitheaters (one for children). Frank Gehry's signature curves (here clad in stainless steel) seem to sprout from behind a limestone wall (below). The main entrance is reached by a grand staircase (above).

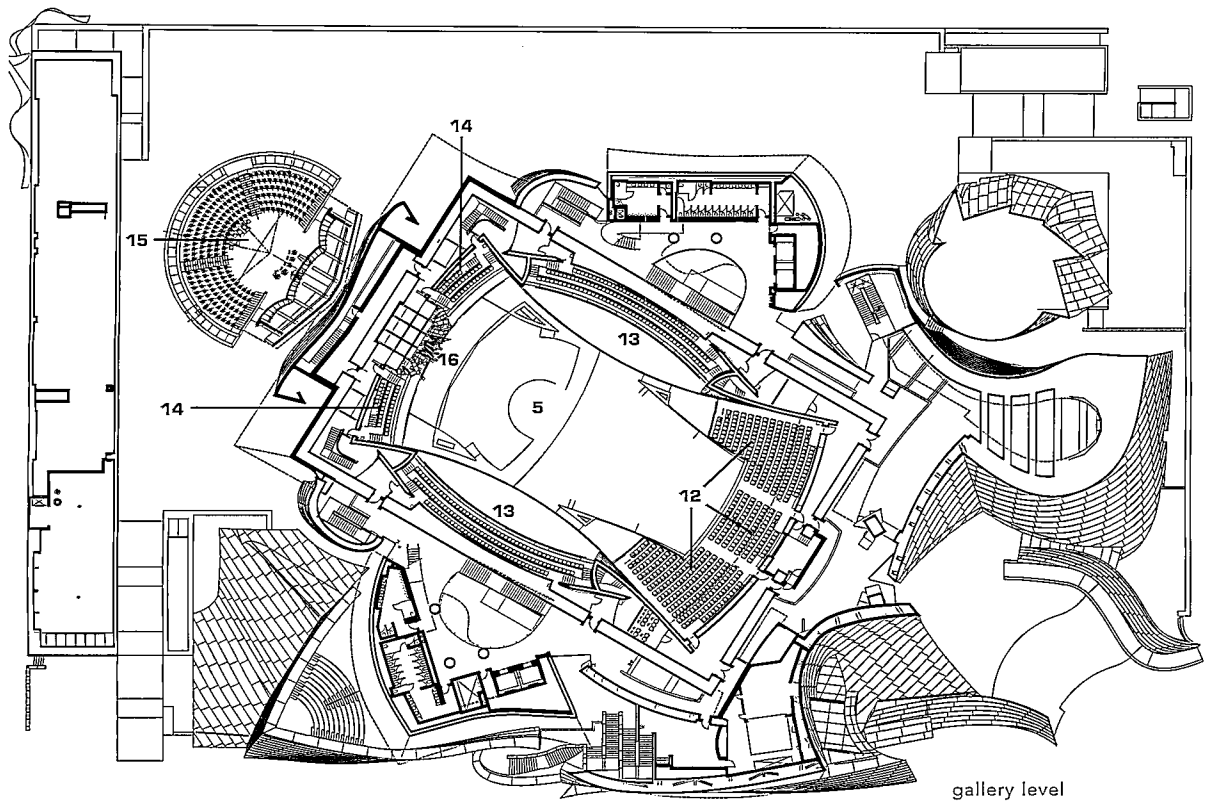




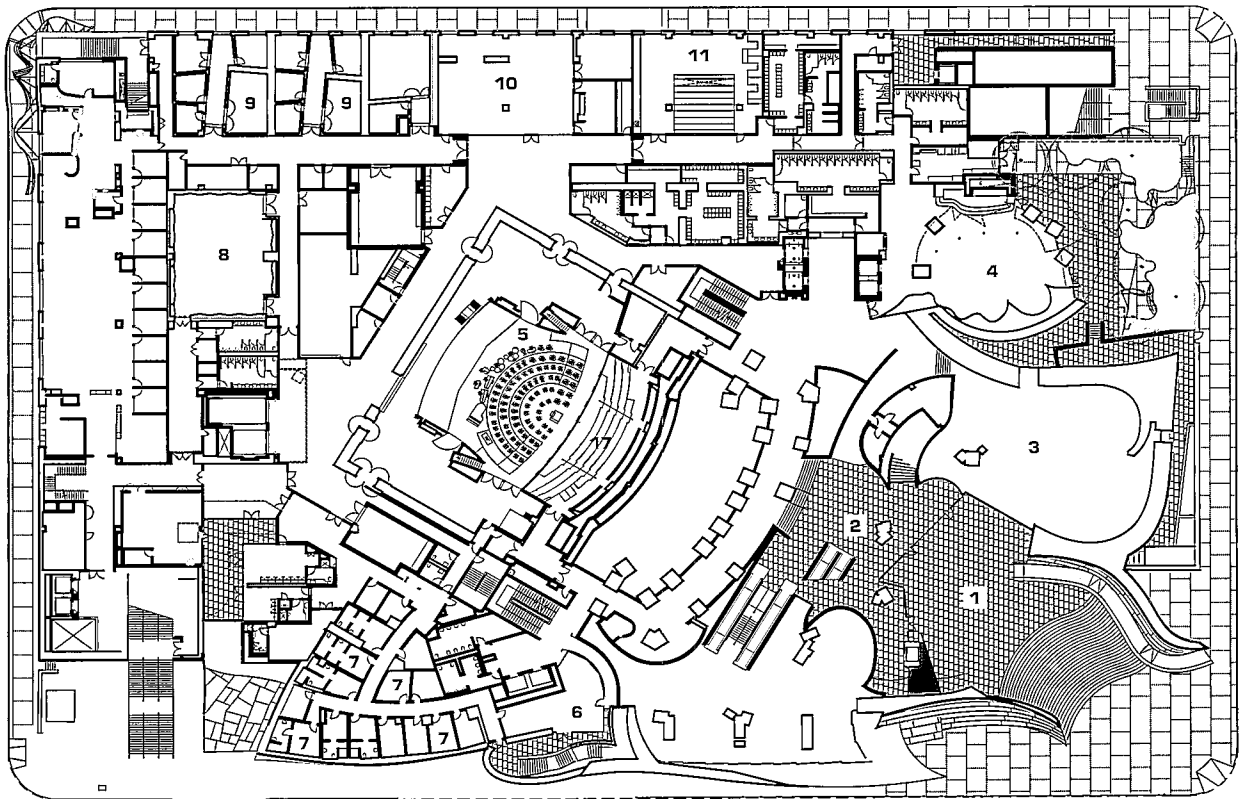



The Los Angeles Philharmonic will perform 150 concerts this year in the 2,265-seat hall, with its billowing ceiling of Douglas fir and skylights (above). The thicket of irregular wooden posts in the middle of the stage marks the location of the organ, which will not be in use until next year. An entry-level preconcert space is a multistory, skylighted area for receptions and lectures (below).



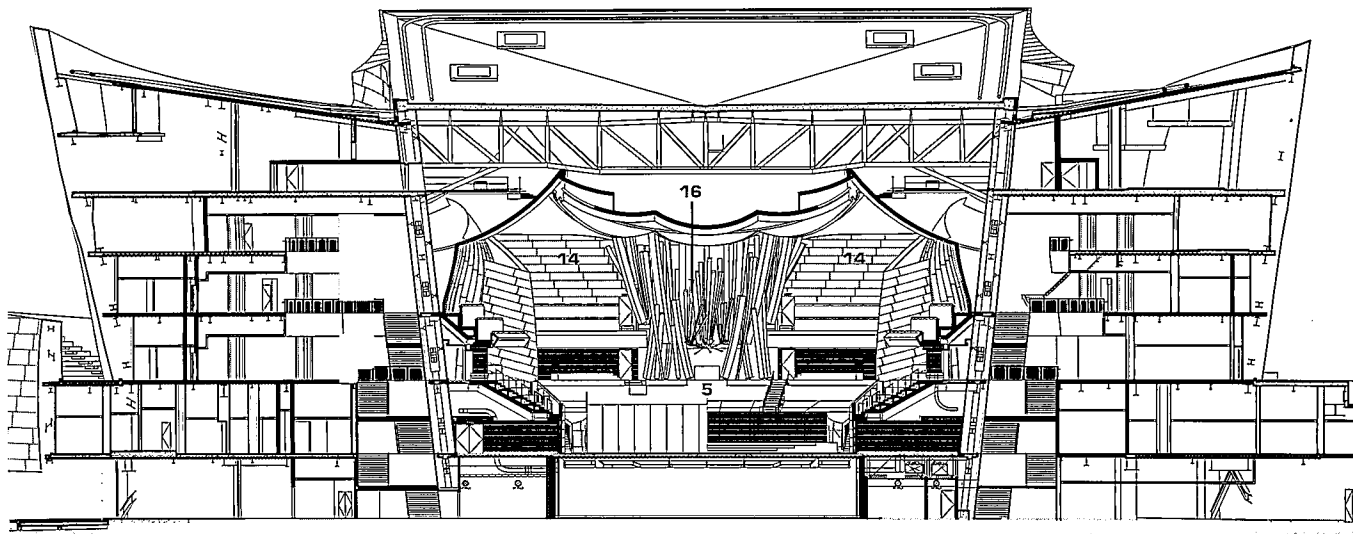


gallery level

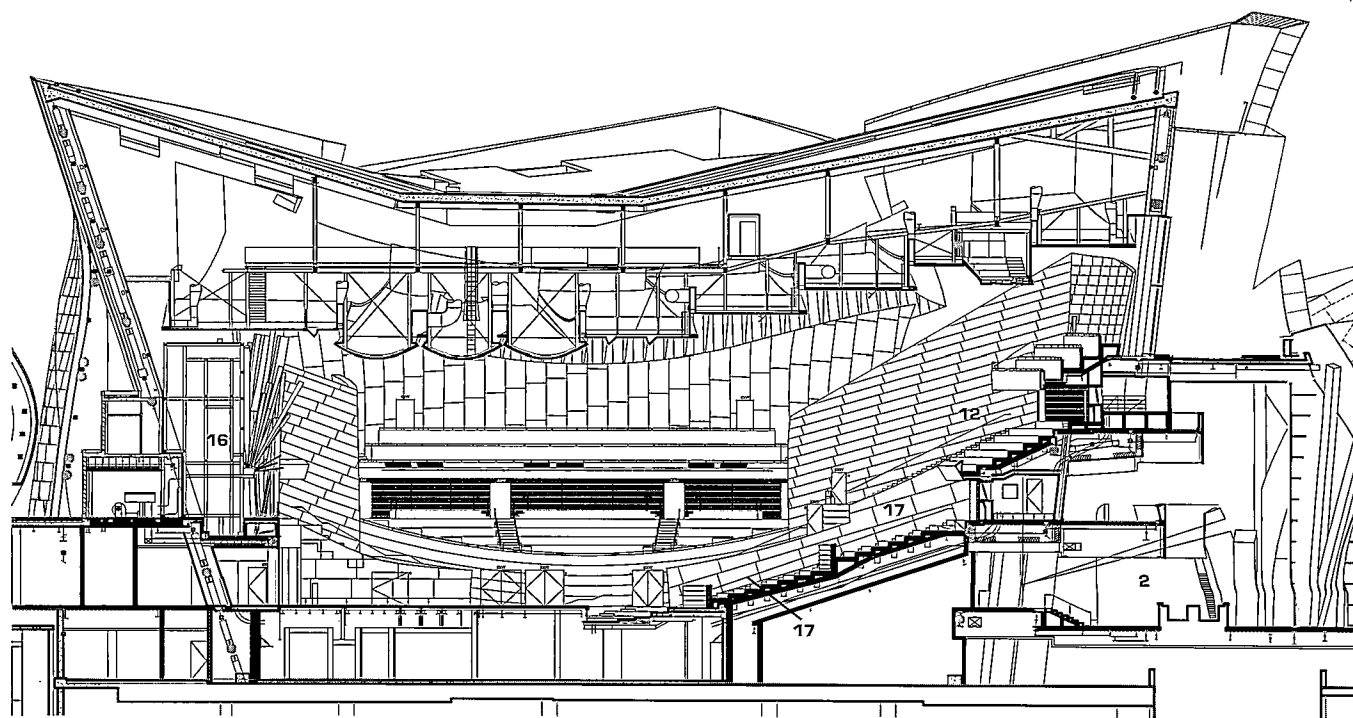


lobby level ——— 27' 

- |                    |                   |                      |
|--------------------|-------------------|----------------------|
| 1 plaza            | 7 dressing room   | 13 gallery           |
| 2 lobby            | 8 choral hall     | 14 chorus balcony    |
| 3 preconcert       | 9 practice room   | 15 amphitheater      |
| 4 founder's room   | 10 orchestra café | 16 organ             |
| 5 concert platform | 11 library        | 17 orchestra seating |
| 6 green room       | 12 balcony        |                      |



partial north-south section



partial east-west section ——— 27'

**Walt Disney Concert Hall, Los Angeles**

client | Los Angeles Philharmonic owner | County of Los Angeles architect | Gehry Partners, Los Angeles—Frank Gehry (design partner); James Glymph (project partner); Terry Bell (project manager); David Pakshong, William Childers, David Hardie, Kristin Woehl (project architects); Craig Webb (project designer); engineers | John A. Martin & Associates (structural); Cosentini Associates, Levine/Seegel Associates (mechanical); Frederick Russell Brown & Associates (electrical); Psomas & Associates (civil) consultants | Nagata Acoustics (acoustics); Charles M. Salter Associates (acoustical isolation); Theatre Projects Consultants, Fisher Dachs Associates (performance spaces); Gordon H. Smith (exterior wall); Lerch-Bates (elevator); L'observatoire (lighting); Engineering Harmonics (audio); Finish Hardware Technology (hardware); Bruce Mau Design, Adams Morioka (graphics); Melinda Taylor (garden design); Rosales Organ Builders, Glatter-Gotz Orgelbau (organ builders) landscape architect | Lawrence Reed Moline contractor | M.A. Mortenson area | 293,000 square feet cost | \$274 million

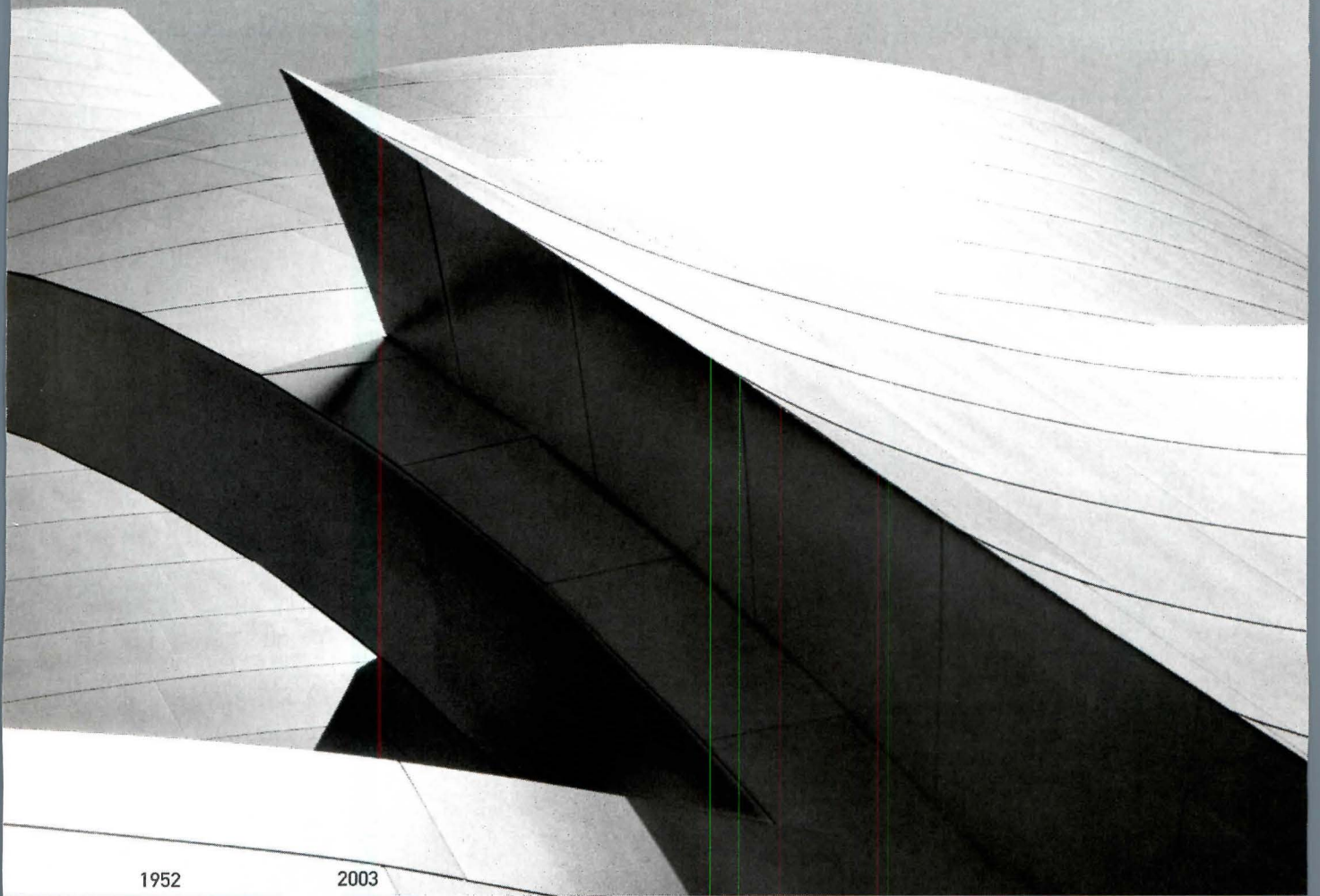
photographs by Tom Bonner and Federico Zignani

**Specifications**

wallcoverings | Hunter Douglas fabric panels | Decoustics carpet | Brittons light fixtures | Lucifer; Kurt Versen; Lithonia soundmasking | Johns Manville movable walls | Hufcor restroom fixtures/equipment | Stumbaugh & Associates security system | Johnson Controls door locks | Schlage; Von Duprin safety equipment | Skymaster alarms/sensors/building maintenance systems | Siemens hvac | PACE roofing | Siplast lighting controls | Strand ballasts/exit signs | Lithonia windows/curtain walls/skylights | Permasteelisa/Supersky glazing | Permasteelisa elevators/escalators | Kone

# WHERE DREAMS BEGIN

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The School of Architecture congratulates Frank O. Gehry, Bachelor of Architecture USC 1952, on the opening of Walt Disney Concert Hall in Los Angeles

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Photograph by Gill Garcetti from "Frozen Music"

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# A FLEXIBLE FACTORY

Steven Ehrlich Architects |  
University of California, Los  
Angeles, Kinross Staging Building

by C.C. Sullivan | photographs by  
Grant Mudford

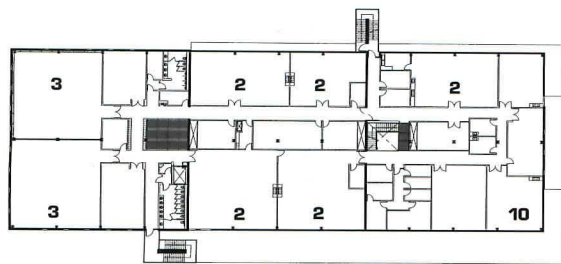
As at many schools on the West Coast, the University of California, Los Angeles recently had to lure two academic departments from the campus' attractive center to its untidy periphery to reside in "staging space"—temporary digs while their home facilities undergo seismic work (in this case, repairs for damage from the 1994 Northridge quake). The provisional location near Wilshire Boulevard abuts office buildings, parking lots, and industrial sheds, an unfamiliar setting that apparently freed UCLA to stray experimentally from their staid tradition of Mediterranean-style pitched roofs, brick, and terra cotta.

Working with Steven Ehrlich Architects, UCLA explored a more direct expression of function and materiality that met an aggressive budget and timeline: **\$150 per square foot** and eight months to completion. "Any delays would have held up \$100 million of other projects, including two funded by major donors with major expectations," says Susan G. Santon, assistant vice chancellor of UCLA's capital programs. "It would also have forced us to make program changes, *which puts a burden on the faculty.*"

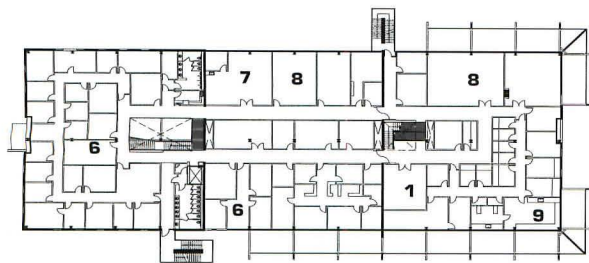
The dance and arts departments will inhabit a 75,000-square-foot building for less than three years, so the solution also had to be made easily adaptable to future tenants. To do so, design principal Steven Ehrlich crafted a tripartite arrangement, with a "head" of fully grouted, **split-face concrete masonry** oriented north toward the heart of the campus, and a steel-and-glass "body" to the south opening through **glazed roll-up doors** into outdoor support yards for use by performing- and fine-arts students. A second **fire-area separation wall** bisects the steel-framed zone, meaning the building need not be fire-rated. While this cuts costs, it also leaves structural and



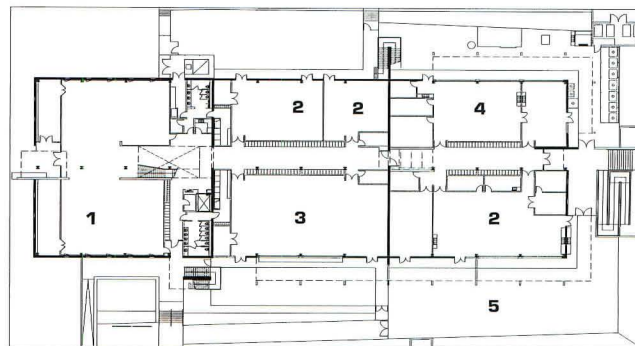
Located at the southwest periphery of campus, the staging building features a "head" of split-face concrete block to the north and flanks of metal cladding with deep overhangs (top) that meet a wall section of concrete block facing Wilshire Boulevard to the south (bottom).



third-floor plan



second-floor plan



first-floor plan ——— 40'

- |                      |                |
|----------------------|----------------|
| 1 gallery            | 6 offices      |
| 2 art studio         | 7 costume shop |
| 3 performance studio | 8 classrooms   |
| 4 ceramics           | 9 photography  |
| 5 sculpture yard     | 10 new media   |



The staging building responds to the UCLA campus with its masonry exteriors to the north, and to Wilshire Boulevard's commercial strip with steel cladding to the south. An exterior stair, for both egress and socializing, straddles the two (above). The first and third floors of the building host large studio spaces, and the second floor comprises offices, classrooms, and support spaces (top).

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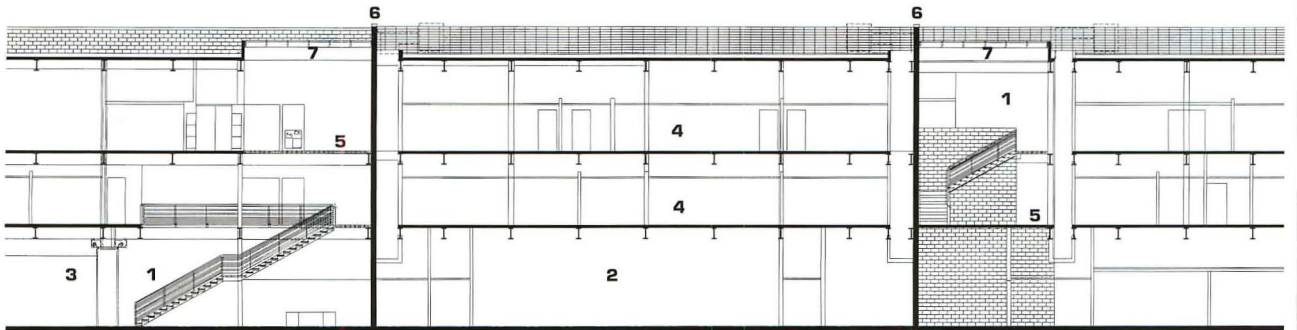


1 two-story atrium  
2 corridor

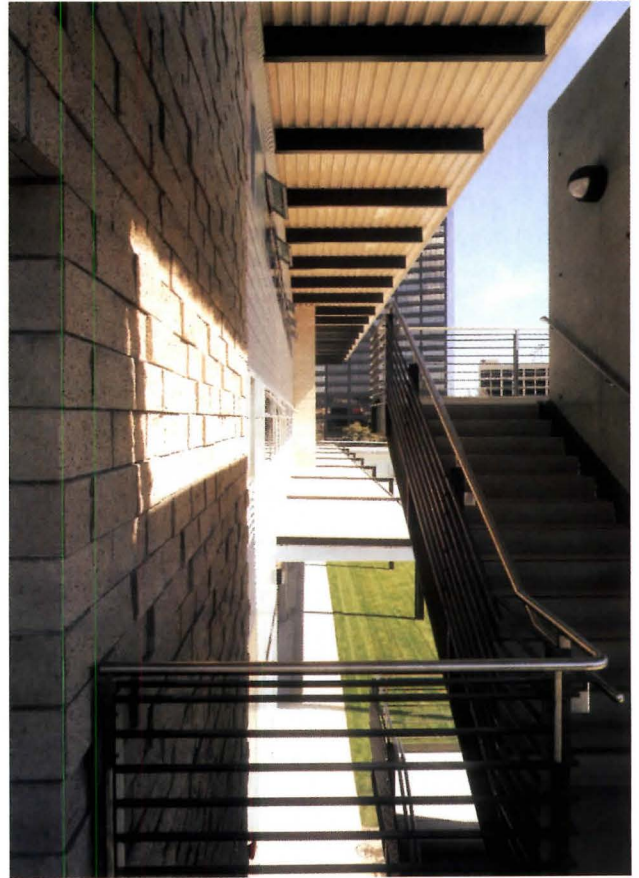
3 gallery  
4 office and storage

5 glass block floor  
6 fire-area separation/shear wall

7 skylight



partial north-south section ——— 12'



While exterior stairs include precast-concrete treads and risers, interior stairs feature perforated steel risers and landings made of glass block to maintain openness and light in the atria (above, left and right). Twin two-story atria connect both two floors of studio spaces, which are 18 feet from floor to floor, and 12-foot-high offices and classrooms in between (top).



M/E/P systems exposed to ease future tenant improvements.

Plus, the design allowed Ehrlich to indulge his penchant for raw steel and rich **metal finishes**. Exposed metal decks, painted in light colors, contrast with the warm charcoal hues of steel columns and beams inside. Wrapping the structure's southern flanks are corrugated, insulated steel panels finished with a silver-metallic Kynar coating, capped with a 15-foot roof overhang to cut the heat load and shelter outdoor performances and studios. Guardrails and balustrades inside are wrought of common painted steel, with brushed stainless-steel handrails on exterior stairs. Treads and risers are of perforated galvanized steel indoors, and precast concrete on the exterior.

Circulation patterns animate the structure inside and out. Ehrlich uses **twin two-story atriums** with glass-block floors to connect all three levels: the first and second stories link near the entrance, and the second and third floors open up toward

the back. (A three-story atrium would have required an expensive smoke-evacuation system.) A pair of three-story **exterior stairs** wrapping concrete wall segments offers vertical circulation, emergency egress routes, and surprisingly busy social hangouts.

In fact, the artsy occupants have taken to the industrial aesthetic of their short-term digs, with their garage doors, loftlike spaces, and urban-edge locale. But they'll have to move back home—into more lavish, traditional accommodations—in a few years. Too bad.



**University of California, Los Angeles, Kinross Staging Building, Los Angeles**

**client** | University of California, Los Angeles, Campus Capital Programs—Peter Blackman (vice chancellor); Susan G. Santon (assistant vice chancellor); Dan

Neuman (executive vice chancellor) **architect** | Steven Ehrlich Architects, Culver City, California—Steven Ehrlich (design principal); Nick Seierup, Thomas Zahlten (principals); Ursula Kachler; Mark Kim; George Elian; Haekwan Park; Daichi Amano; Wan-Chin Lo; Dirk Schlichting; Dirk Bell; Yvonne Mischker; Dara Douraghi; Dana Getman Yoshiaki Irie (project team) **landscape architect** | Marc Fisher **engineers** | John A. Martin & Associates (structural); Ove Arup (M/E/P); PSOMAS (civil) **general contractor** | Soltek Pacific **area** | 75,000 square feet **cost** | \$11 million

#### Specifications

**concrete masonry units** | Angelus Block **glass pavers and precast-concrete floor panels** | Circle Redmont **precast-concrete stair treads/risers** | Stepstone **exterior metal panel system** | Centria Architectural Systems **ornamental metal fencing** | Ametco **aluminum window system** | Wausau Metals **concrete floor color** | L.M. Scofield



## From whitewalls to green floors.

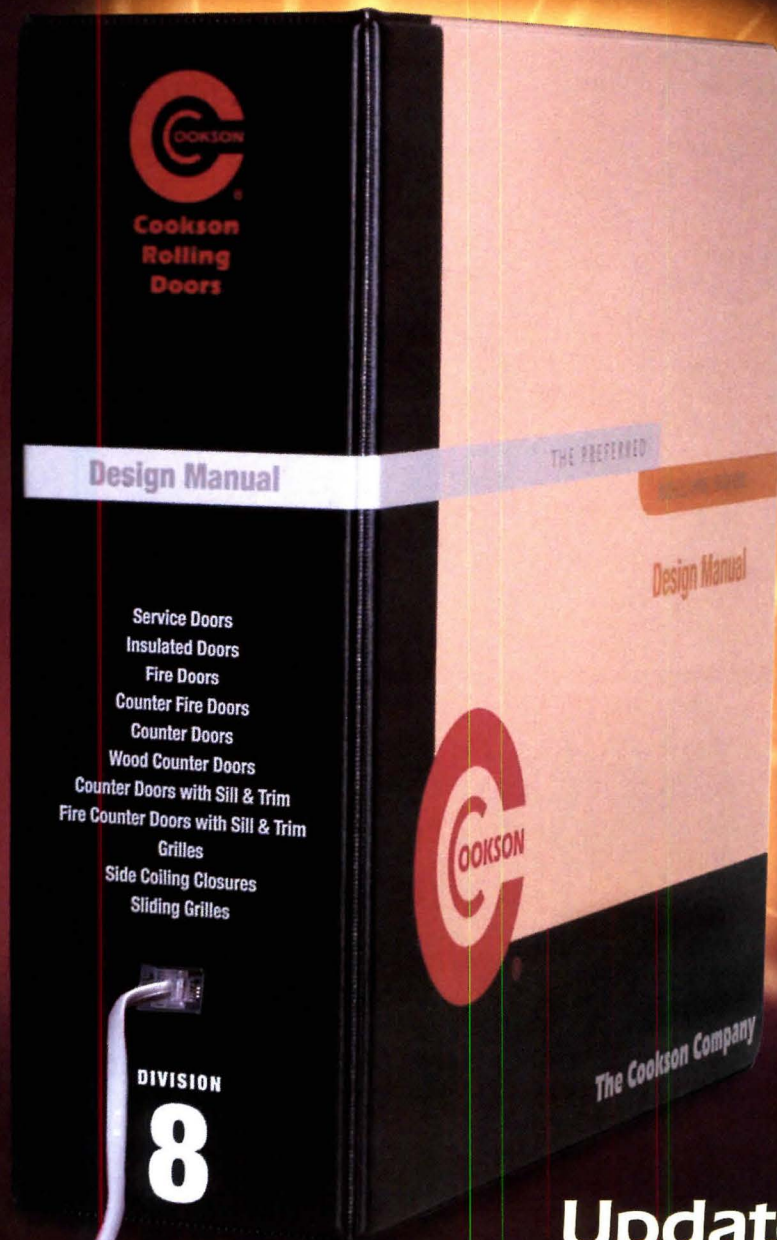
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## ➤ A Model of the Future

Fabbers and 3-D printers bring the scale model out of the wood shop and into the digital era.  
by Jamie Reynolds

Even in the age of high-quality renderings and fly-through CAD applications, the value of the old-fashioned scale model endures. For computerphobic clients, investors, or tenants, the ability to absorb the programming, layout, and themes of a miniature structure built in balsa wood or polyurethane foam is instantaneous, even comforting.

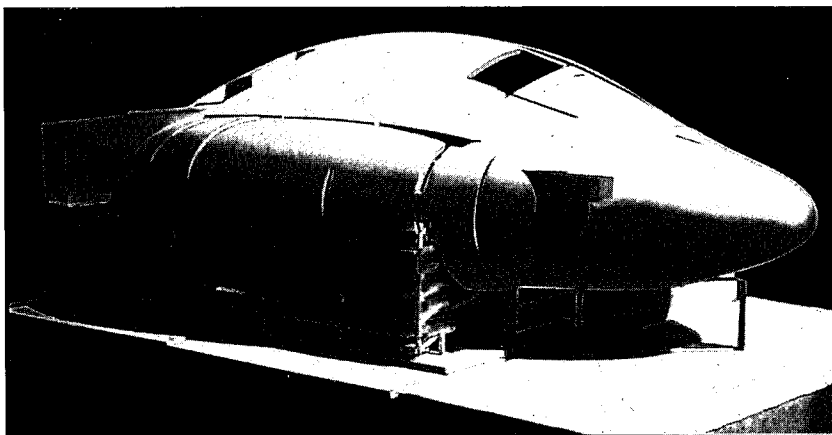
But as architectural forms become increasingly complex and clients used to the fast delivery of information expect revisions to be made even more quickly, the time required to extract dimensions for models from CAD files and to then meticulously construct landscapes and structures at scale—often repeatedly, with minor alterations each time—becomes prohibitive.

Enter the **fabber**. A clumsy shorthand for “digital fabricator,” the name refers to a variety of machines that take computer data sets and transform them into physical objects. Often used for the **rapid prototyping** of objects as diverse as perfume bottles, car parts, and lobes of the human brain, fabbers and their kin are increasingly turned to in the architectural arena.

### PRINTING IN 3-D

Fabbers come in one of three types: subtractive (portions of a block of material are carved, cut, or burned away); additive (matter is built up to form the desired structure); and formative (shapes are formed when existing material is bent, squeezed, or otherwise subjected to pressure). Additive fabbers are commonly referred to as **3-D printers**.

Ben Damron runs the 3-D printer at Morphosis Architects, the Santa Monica-based firm known for its digitally inspired, cutting-edge designs. Though the firm has always made extensive use of models, “We’d just implement them a little later” in the process, says Damron. Now the firm bookends



Morphosis Architects created this model—for the Rensselaer Polytechnic Institute’s Electronic Media and Performing Arts Center competition—using a 3-D printer.

their design procedures: Models are produced during schematic design and then again toward the end of a project.

The machines themselves resemble ovens, with a glass or plastic-enclosed “**print bed**,” where the model is constructed. Often a side-mounted computer terminal tracks the process. Typical models can be produced from CAD files in about 12 hours.

Applications for the technology are by no means limited to purely digital architecture; the team of architects completing Antoni Gaudí’s Sagrada Família cathedral in Barcelona, for example, has used a 3-D printer from 3D Systems ([www.3dsystems.com](http://www.3dsystems.com)) to help render scale sections of the famous edifice. (Though construction began in 1852, the cathedral’s plans were destroyed in the Spanish Civil war.) And engineering giant Arup uses a similar machine in their London office for structural design work.

### DOLLARS AND SENSE

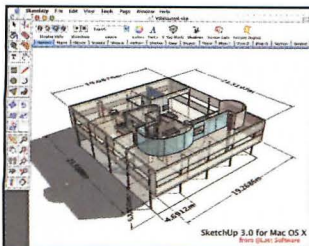
For firms of all sizes, the savings in time can be immeasurable, even if the initial

investment in the machine—often upwards of \$45,000—can be heavy. Damron still considers the unit in his office (manufactured by Z Corporation: [www.zcorp.com](http://www.zcorp.com)) to be “invaluable in the ease of communication,” adding that the consumables necessary for each “print” (i.e. model) often cost less than \$15. (Like several others, this 3-D printer builds structures using a combination of a **plasterlike powder** and a liquid binder.)

As with computer-driven equipment for other industries, the price of fabbers and 3-D printers is on the way down, while innovations continue to be made. Machines with multiple “**print-heads**” can inject pigment into models and build them in full color. Hewlett Packard ([www.hp.com](http://www.hp.com)) reportedly has plans to develop a 3-D printer that will retail for less than \$1,000.

These high-technology machines produce perhaps the most low-tech communication tool architects have at their disposal. After all, says Damron, “Not everyone is educated in reading architectural plans.” ■

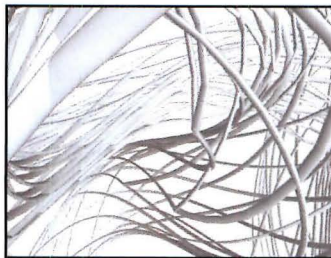
## High-Tech Sketch Pads



→ SketchUp  
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→ www.sketchup.com

More than 20 years into their development, 3-D computer-modeling programs are becoming both easier to use and extraordinarily complex. SketchUp, introduced in 2000 and as of last July in version 3.0, is the first CAD program to escape the often confusing labyrinth of complicated modeling tools and present a simple interface to

designers. Using geometric objects that can be adjusted by "pushing" or "pulling" on lines, surfaces, or points, designers can rapidly realize their ideas in 3-D space. Models can even be created with accurate dimensioning and exported to most CAD programs using DXF and DWG formats. Designing in SketchUp and detailing in a more traditional CAD program is already standard operating procedure for many firms who have snapped up this fun and helpful program.



→ Weaver  
→ PETER TESTA ARCHITECTS  
→ www.peter-testa.com

Moving in the opposite direction, the architect Peter Testa's Weaver software gives 3-D modeling a level of complexity and specificity above that of most programs on the market. Testa, a long-time professor at the Massachusetts Institute of Technology, has been investigating woven carbon

structures. The patterns he and his Los Angeles-based firm work with are digitally generated, and this software, designed by Simon Greenwold, was created to output complex woven structural designs. The C++ program applies one of a variety of patterns to a user-defined surface, producing a complex weave that is defined by attributes of the chosen pattern and material. Testa has used Weaver in a number of projects, including an experimental carbon-fiber tower.

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## sign design

- ☒ project: **MoMA Queens | New York City**
- ☒ design firm: **Two Twelve Associates**
- ☒ website: **twotwelve.com**



Signage can make or break a project. MoMA Queens uses exterior supergraphics as one of its major design elements. The wayfinding signage inside, meanwhile, had to not only defer to the exterior, but also continue the theme of graphics affixed to the structure. Two Twelve Associates used thoroughly modern type and symbols that mimic the graphic nature of the building's exterior form. Some of the firm's services include information master planning and mapping for public facilities, including transit systems and corporate campuses.

- ☒ project: **Basin | Bloomington, Minnesota**
- ☒ design firm: **Duffy Worldwide**
- ☒ website: **duffy.com**



Duffy Worldwide created the identity design and retail environment for Basin, a bulk bath-products store that offers soap and other goods by the slice or by the pound. The logo and signage provided the backbone for a simple Shaker-style environment. Duffy captured the unassuming identity of this project and let it shine with a clean graphic approach and subtly conceptual edge. Other Duffy efforts include work for: Ciao Bella Restaurants; Nordstrom In-House Cafés; International Truck & Engine and Starbucks.

FOR INFORMATION ON SIGNAGE, CIRCLE 148 ON PAGE 97.

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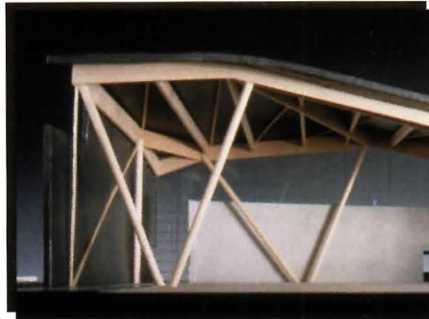
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## steep slope, not price

The irregular shapes so common in contemporary architecture may not be problematic for a designer with an unlimited budget, but what is one to do without access to exotic materials or large-scale customization technologies? Hanrahan Meyers Architects, a New York City firm, faced this question when they designed a uniquely shaped roof for Waveline, a new multipurpose theater currently under construction adjacent to a public housing project in Queens, New York. Essentially an acoustic shell, the principal design feature of the theater is a **creased metal roof plane** that folds up and over itself, from west to east. Inset stucco walls enclose the large open interior.

To stay within the municipal project's tight budget, principals Tom Hanrahan and Victoria Meyers designed a **custom steel**



A standard metal roof will cover Waveline's nonstandard steel frame.

roof frame and topped it with commercially available roofing that fit their parameters: a **standing-seam steel system** consisting of unfinished galvanized-steel sheets that fasten to **metal clips** above typical steel decking, insulation, and plywood sheathing. For

changes in angle, the roofing contractor formed the panels with a **custom creasing machine**, a process that worked just as well with the creases in the Waveline roof as it would in a more typical construction. **Gutters** were built into seams on the north and south roof edges, which empty into interior drains.

While the roof system is standard, the structural frame underneath it is not. But customizing steel on a small scale makes little difference in either cost or practical complications. "You can achieve some economy with an absolutely standard steel frame," says Hanrahan, "but it is always built by hand. There is only a small increase in cost for a strange geometry, and no one seemed thrown by casting or assembling it. It was by using basic systems above the framing that we saved money." **Julia Mandell**

FOR INFORMATION ON METAL ROOFING, CIRCLE 149 ON PAGE 97.

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Bob Day, President

*Bob Day*

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**carpet collaboratives**

- ☒ product: **Visio Collection; rbn Collection**
- ☒ manufacturer: **Lees Carpets**
- ☒ website: **leescarpet.com**



Visio was created in collaboration with Envision Design, a Washington, D.C.-based sustainable-design firm. The broadloom carpet contains more than half recycled content and is produced using environmentally friendly methods and materials. For the rbn Collection, design students from North Carolina State University helped develop a metallic broadloom line inspired by "the objects, materials, and technology of urban life." Made with Elumicolor metallic yarn, the rbn Collection comes in three textures and ten colors.

- ☒ product: **Antron Lumena; DSDN**
- ☒ manufacturer: **DuPont**
- ☒ website: **antron.dupont.com**



DuPont Textiles & Materials has partnered with Pantone to codify its Antron Lumena and DSDN solution-dyed nylon carpet fibers using the Pantone color system. Architects and interior designers can now color-match all carpet made with these Antron fibers using the familiar Pantone color charts and software.

- ☒ product: **Flux Systems Programs**
- ☒ manufacturer: **Shaw Carpets**
- ☒ website: **shawcontract.com**



Designed in collaboration with lauckgroup, a Dallas interior architecture firm, Flux is a "systems approach" to carpet, comprising ten related colors and five patterns, which are layered and mixed to create varying designs that evoke gradations of shadow and light. The flooring products are available in both broadloom and tile.

FOR INFORMATION ON CARPET, CIRCLE 150 ON PAGE 97.

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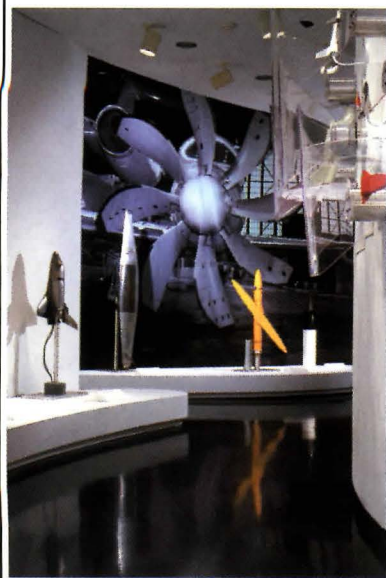




EXHIBITION **Aerospace Design: The Art of Engineering**

**from NASA's Aeronautical Research | Art Institute of Chicago | Chicago | Through February 8** In an episode of the 1990s television series *Mad About You*, Yoko Ono commissions the character played by Paul Reiser to produce a documentary about wind. After much futile chasing of air, Ono admits that her idea may have a fatal flaw: The invisible forces of nature are, well, invisible. She should have asked an aerospace engineer. Since the first wind tunnel was built in 1871, aerospace engineers have developed increasingly sophisticated ways of measuring airflow through investigation of the whirls, turbulence, and eddy patterns that occur when objects are in motion. The 65 exquisitely crafted wind-tunnel and test-flight artifacts now on display at the Art Institute of Chicago speak to the agile minds of NASA scientists and the architects who have designed facilities for them, including Albert Kahn Associates of Detroit and the Austin Company of Cleveland.

While frustratingly few architectural examples are exhibited, the model airplanes, wedges, cones, and other devices alone are worth a visit. And the clever installation by Chicago's Studio Gang makes the show a must-see. To protect the artifacts, curved transparent vitrines are mounted across the gallery's convex wall, suggesting what airflow might look like if only we could see it. **Abby Bussel**



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## views

BOOK

**The Urban Revolution | Henri Lefebvre (translated by Robert Bononno) | University of Minnesota Press**

Pioneering, ambitious, frustrating. The first English translation of Henri Lefebvre's critique of urban life simmers with the student revolts of 1968 Paris and with the genuine conviction that the forces behind that unrest could still change cities as we know them. Neil Smith's introduction comes as a blessing here, not only cueing us to the charged mindset Lefebvre was in as he sat down to write his 1970 work, but to the sometimes scattered rationale he harnesses to make his arguments. This is a



Henri Lefebvre

### The Urban Revolution

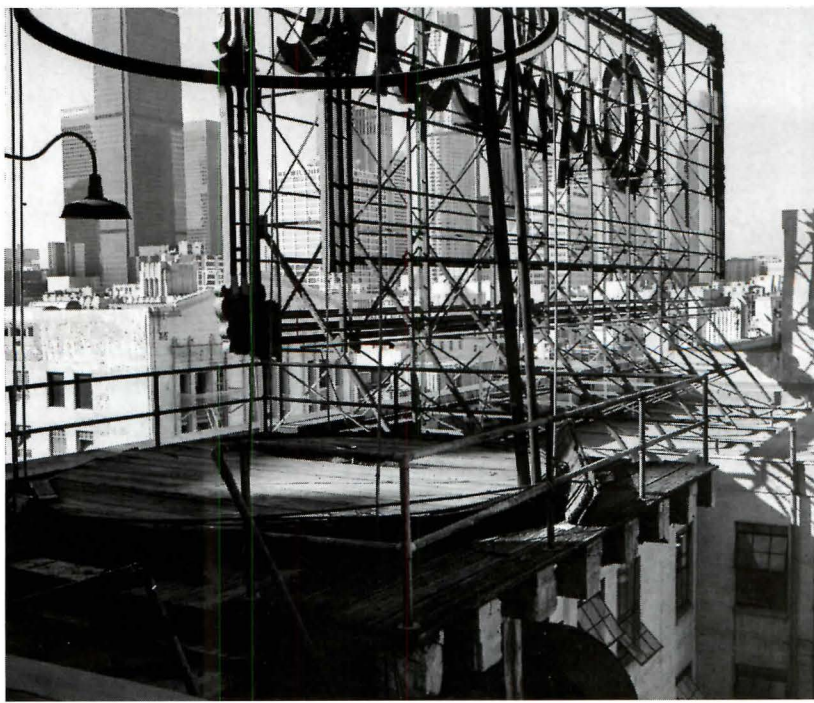
Foreword by Neil Smith  
Translated by Robert Bononno

heady and hard-to-follow stream of deconstruction, semiotics, and Marxist-influenced urban theory in which the role of architects is to reveal—but not implement—social change. Despite his cynicism (by Lefebvre's reckoning, we should have nuked ourselves off the planet by now), the author provides us with admonitions that are valuable even today: avoid socially stratified divisions in urban space, regard the street as a living thing, ensure public debate in urban planning, and be sure architecture rises above merely the novel "use of graphics and technology." We only can be left to wonder what Lefebvre would make of such phenomena as the new Times Square, Bilbao, and the ongoing World Trade Center debate. **Jamie Reynolds**

WEBSITE

**European Archive of Urban Public Space | The Center for Contemporary Culture in Barcelona | <http://urban.cccb.org>**

Last summer, the Center for Contemporary Culture in Barcelona (CCCB) launched this online survey of European public spaces. An invaluable reference tool, it catalogues sites throughout the continent, searchable by typology (plazas, parks, thoroughfares), kind of location (city center, new urban development, industrial area), and type of construction (new, renovation, integrated planning). Designing a waterfront development in Florida? Why not see how they do it in Holland? The only problem with this resource is that not all components of the website work with every Internet browser, and the frames seem particularly incompatible with Macintosh systems. If you can get it to work, however, this library of projects is the public architecture equivalent of *Roget's Thesaurus*. **Anna Holtzman**



## EXHIBITION

**Frank Gehry, Architect: Designs for Museums | Weisman Art Museum |**

**Minneapolis | Through January 4** Five years before the Guggenheim Bilbao catapulted Frank Gehry to international stardom, the architect saw the completion of his most daring design to date, a Midwestern art gallery. Last month, the Weisman Art Museum at the University of Minnesota celebrated its first 10 years in the gleaming, metal-clad facility—initially derided by locals as a “tin can”—with the opening of an exhibit on the typology that made Gehry a star: museums. The Weisman curators zeroed in on four finished projects: the Vitra Design Museum, Weil am Rhein, Germany; the Experience Music Project, Seattle; the Guggenheim Bilbao; and the Weisman itself. Plans on view for facilities in Jerusalem, Panama City, Washington, and Biloxi, Mississippi, hint at the architect's evolution. But it's the wall-sized photographs of finished museums that wow most exhibit-goers. Built several stories high with the finest materials, even tin cans can dazzle. **Joel Hoekstra**



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HIGH MUSEUM OF ART  
www.high.org  
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DEUTSCHES ARCHITEKTUR MUSEUM  
www.dam-online.de  
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## HOUSTON

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Zaha Hadid's winning projects for a car park and terminus in Strasbourg, plus projects by runners-up.

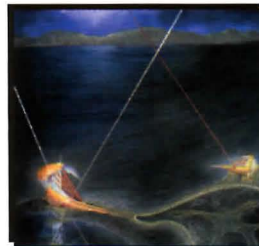
ROYAL INSTITUTE OF BRITISH ARCHITECTS  
www.architecture.com  
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## LONDON

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## EVENTS

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November 7

## LAS VEGAS

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www.nahb.org  
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EARLS COURT EXHIBITION CENTRE  
www.100percentdesign.co.uk  
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## COMPETITIONS

## IALD

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www.iald.org  
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www.grahamfoundation.org  
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www.nrca.net  
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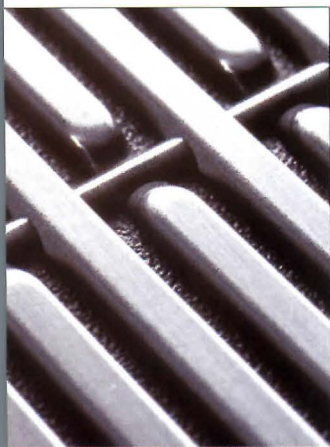
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## Opus by Prima Lighting

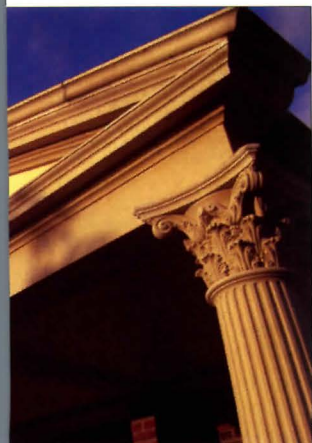


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## Technical Glass Products



The new Fireframes Curtainwall Series from Technical Glass Products is an interior or exterior framing system that gives architects the option of designing with large expanses of glass in locations that are fire-rated. The Curtainwall Series incorporates extruded steel frame components, pressure glazed with silicone gaskets. Custom exterior face caps offer a wide variety of appearances, including stainless steel. For more information about the Curtainwall Series, visit [www.fireglass.com](http://www.fireglass.com).

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## Owens Corning

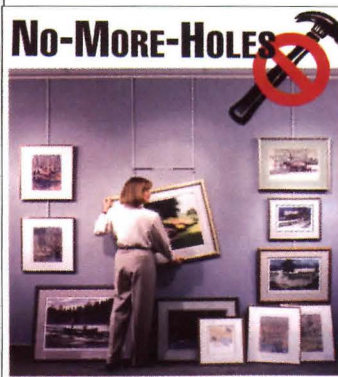


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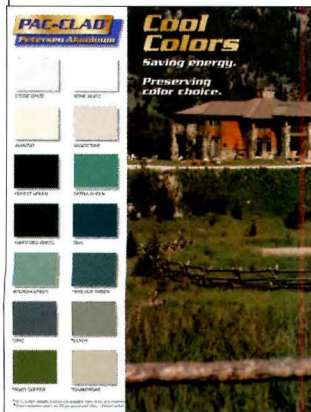
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department of architecture

The Department of Architecture at MIT announces a search for one tenure-track position in architectural design at the level of assistant or associate professor. Dedicated to a humanistic, socially responsible, and technologically sophisticated vision of design, MIT's department of Architecture is uniquely positioned in a larger institution which strongly supports innovation and entrepreneurial activity. Given this context, the Department of Architecture is explicitly committed to excellence in both pedagogical and research activities. Believing that the cross current between the two creates a charged atmosphere for study and a critical edge for research, we are seeking candidates with an ability to thrive within this context.

Primary criteria for the position are proven excellence in the teaching of design studios and strong promise of significant creative achievement in the field through design work, scholarship, professional practice, or a combination thereof. An ability to advance our teaching and research from among the following areas is desired: contemporary culture and theory, computational methodologies, sustainability, and innovation through material assemblies.

We are also seeking candidates with the character and energy to participate in the intellectual life of the department and readiness to teach both graduate and undergraduate studios. The role of Director of the Undergraduate Program would be considered for the appropriate person.

Initial screening will be conducted on the basis of: letter of interest that includes a list of possible references, curriculum vitae, and a ten page non-returnable portfolio of design work. We will begin reviewing applications in early October and continue until the position is filled. Please send all materials to:

Chair, Design Search Committee / Department of Architecture  
Room 10-491M, MIT / 77 Massachusetts Avenue  
Cambridge, MA 02139 / fax: 617 253-9407

MIT is an equal opportunity / affirmative action institution. Women and minority candidates are strongly encouraged to apply.



massachusetts institute of technology  
department of architecture

The Department of Architecture at MIT seeks to fill a tenure-track Assistant Professor position for an urban designer with a professional degree in Architecture. The successful candidate will join an established faculty group in Architecture and Urbanism who conduct research and teach professional and post-professional degree students in studio, lecture and seminar subjects dealing with the design of human settlements. The ideal candidate should have a sparkling design intelligence demonstrated in the formal design of, and reflection upon, urban places and systems. Such design interventions should be understood in the light of the processes by which cities are changed and the ways in which such changes can be implemented, and within the context of the history and theory of city form.

The successful candidate will teach students in both the professional (MArch) and post-professional (SMArchS) degree programs and will also be a member of the Joint Program in City Design and Development, a program of both the Departments of Architecture and Urban Studies and Planning.

Candidates should send a curriculum vita, examples of their practice work and publications, a short statement concerning the subjects they would be interested in teaching and their related research directions, and the names of three referees to: Chair, Architecture and Urbanism Search Committee, c/o Ms. Charlotte Russ, Room 10-485, MIT, 77 Massachusetts Avenue, Cambridge, MA 02139. fax: + 617 258 8081. Review of applications will begin in October 2003. For more information see: <http://architecture.mit.edu/people/employ.html>

MIT is building a culturally diverse faculty and encourages applications from female and minority candidates



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1, 103	Armstrong World Industries	C2-1, 92
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29	BetterBricks (Regional)	32A-32B
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159	Inclinor Company of America	87
81	Jomy Safety Products	84
66	Kepeco	95
—	Kolbe & Kolbe Millwork	36
35	Lantor BV	34
92	Merchandise Mart	85
44	Musson Rubber	8
19	Osram Sylvania	90
182, 109	Owens Corning	17, 93
77	Pemko	80
220, 113	Petersen Aluminum	C4, 94
37	PGT Industries (S.C. region)	32AA-32BB
4	PGT Industries (Florida region)	32AAA-32BBB
110	Prima Lighting	93
41	Prisma Architectural Lighting	C3
248	Rixson Specialty Door Controls	24
227	Selux	12
153	Sloan Valve	13
162	Sony Electronics	40
111	Technical Glass Products	93
82	Timely Industries	82-83
34	TOTO U.S.A.	23
21	University of Southern California	72
74	USG	4-5
240	Verizon Wireless	10
43	Visa	30
40	Visual Reference Publications	86
112	Walker Display	93
164	Wausau Tile	14
186	Wausau Window & Wall Systems	33
69	Wilsonart International	2-3

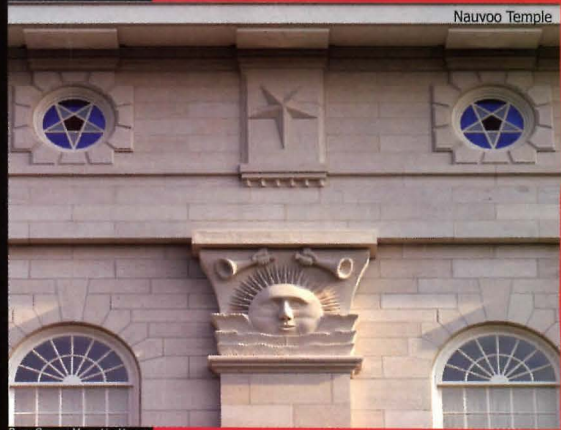
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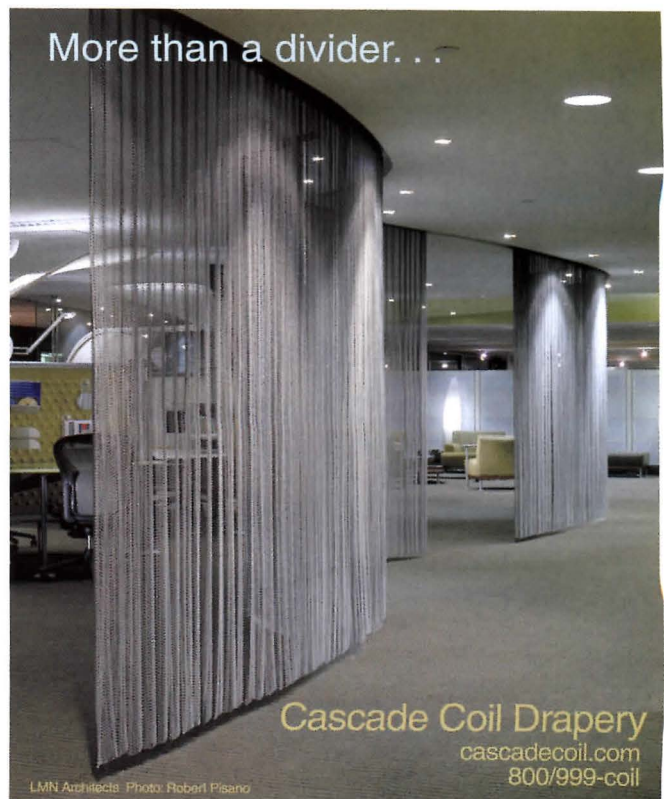
Nauvoo Temple

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protest



# JUST SAY YES

**Antidevelopment groups sometimes forget that they are fighting for the greater good. Can a social contract survive in an age of special interests?** by James McCown

In the 1950s and 1960s, urban renewal czars such as Robert Moses in New York City and Edward Logue in Boston took a lordly indifference to the concerns of neighborhoods. Don't want that freeway beside your house? Tough luck—step aside for the inevitable march of progress. But the pendulum has swung back over the past 40 years. Community groups across the country now have wide power to block developments, even those that most people would perceive as positive cultural, urbanistic, and environmental additions to their regional fabric. NIMBY has become NADA: Nix All Development Anywhere. Two current examples of NADA on opposite coasts show that even the most polite designs and programs can be shouted down, while a third, located in the waters off Cape Cod, suggests how resistant some smart-growth environmentalists are to projects on their home turf.

For most of the twentieth century, Harvard University treated its host city of Cambridge, Massachusetts, with something akin to the medieval concept of *droit du seigneur*—the right of the nobility to have its way, public sentiment be damned. In the early 1960s, for example, construction of Peabody Terrace, a high-rise student housing complex, earned the eternal enmity of the surrounding Riverside neighborhood for being too tall, too modern, and too inward-looking. Fast-forward three and a half decades: A “community-sensitive” Harvard hired Renzo Piano to build a museum in the same neighborhood that would allow a consolidation of its huge collection of modern art. Piano's scheme was an exercise in architectural deference: low rise,

shaped as two identical wings, formed largely of wood and glass, sheathed in a blanket of ivy and other plantings. Recalling his acclaimed Menil Collection in Houston, it would have been the only Boston work by this great architect in the autumn of his career, and a valuable cultural resource for the region, open to all.

But no. Riverside activists would hear nothing of it, framing their argument in vague terms about Harvard “not giving back to the community.” After almost five years of community meetings, public hearings, and architectural reviews, the university has essentially shelved the project.

Like Boston, San Francisco keeps a tight rein on development. Politicians consider neighborhood and community groups among their most important constituents. It's hard to imagine a more innocuous project than a small-scale, 15-unit residential project, with affordable housing (required by law), a neighborhood grocery store, and a public library. But that's exactly what developer David Prowler is trying to build in the Glen Park section of the city—and a group of activists is fighting him every step of the way.

“We've had more than 30 public hearings, and the majority of Glen Park is behind this,” says Prowler, who, as a former staffer at San Francisco's Human Rights Commission, hardly fits the stereotype of the rapacious developer. As of now, the NADA faction has the project tied up in court, trying to marshal allies to allege toxic problems on the site, thus making it a brownfield and subject to ever more layers of regulation and delay.

## COMMUNITY RELATIONS

Typically, environmentalists are antidevelopment, but a proposal off of Cape Cod is a case of green versus green. The privately financed Cape Wind project calls for construction of 130 wind turbines in Nantucket

Sound. It seems like a no-brainer: advanced technology in the service of clean energy, producing enough juice to supply three-quarters of the demand on Cape Cod and the nearby islands of Nantucket and Martha's Vineyard. But to the Alliance to Protect Nantucket Sound (a nonprofit coalition of businesses, towns, and citizens that was established to fight the proposal), it is developers storming the gates of Eden by building structures that would disrupt and endanger migratory birds and imperil the livelihoods of local fishermen. Robert F. Kennedy Jr., at odds on the subject with the Natural Resources Defense Council, where he once worked as a lawyer, argues that he's for clean energy—just not here. His uncle, Senator Edward Kennedy, is also opposed, as are many summer residents. To his credit, part-time resident Walter Cronkite has agreed to rethink the issue and is now officially “undecided.” But aren't the opponents many of the same people taking George W. Bush to task for his fossil-fuel-driven energy policies? Will advances in clean energy only be tested in less privileged backyards?

Too often today, the urban planning agenda is articulated in terms of what we don't want: No more buildings on the Charles River; no infill housing; no high-tech propellers to spoil our waterfront views. Architects have a special duty to resist this tendency. Yes, give opponents a hearing. But remember, too, that buildings going up provide places to live, learn, and work. The great Greek architectural patron Pericles said: “We have forced every land and sea to be the highway of our daring ... and left imperishable monuments behind us.”

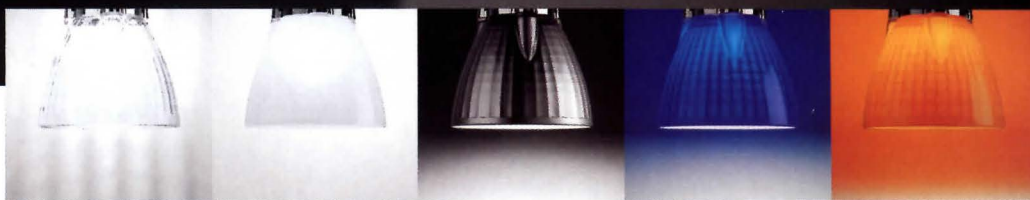
Let's not be afraid to dream, to dare—and to build.

**Boston-based writer James McCown contributes to *Art New England*, *Architecture Boston*, and *Metropolis*.**

[OPTA]



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