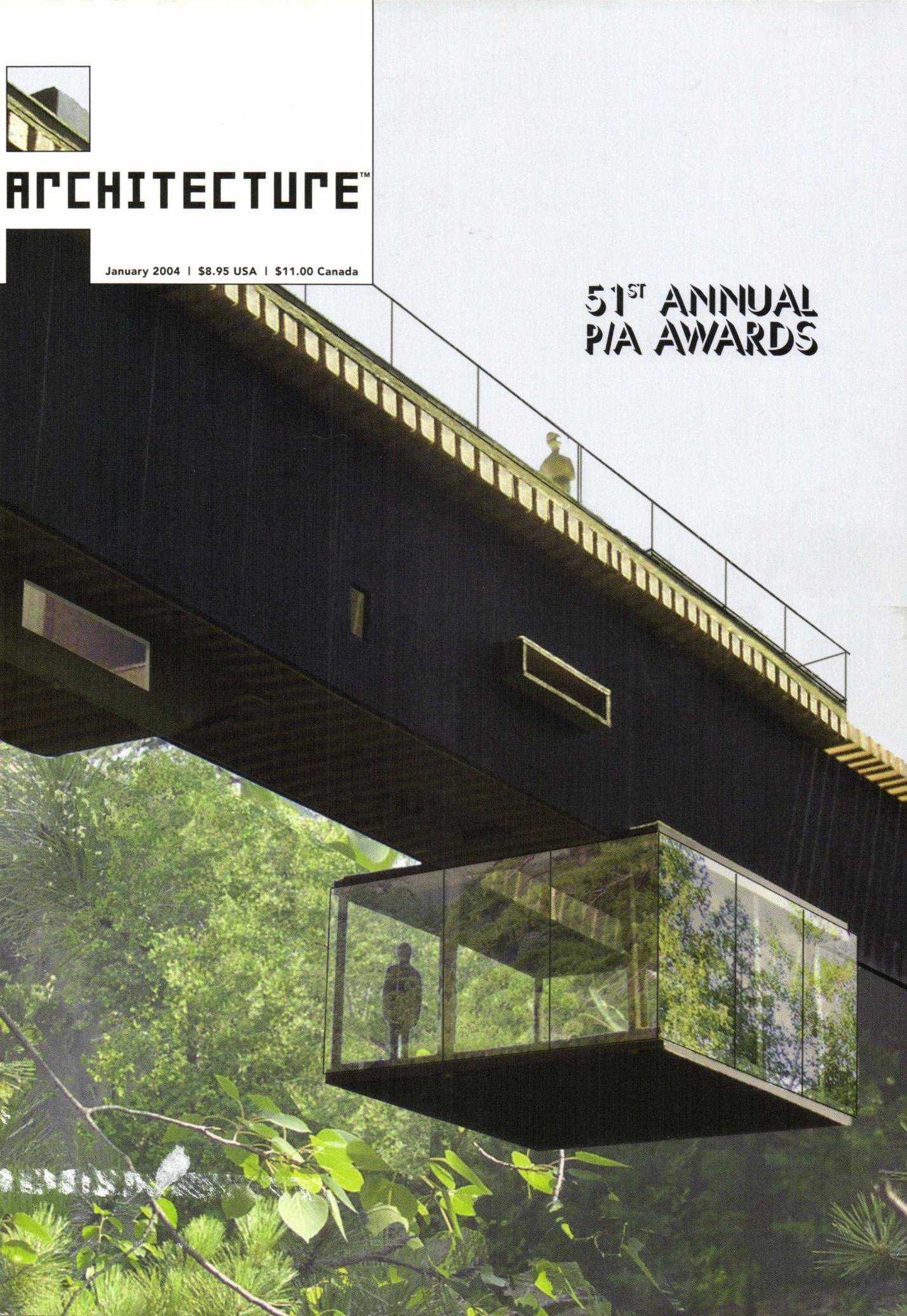




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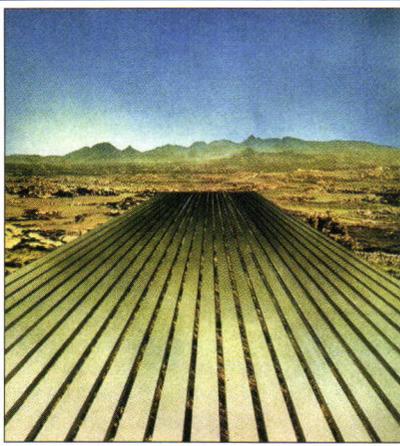


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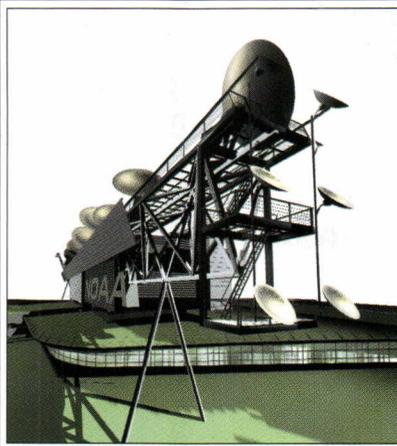


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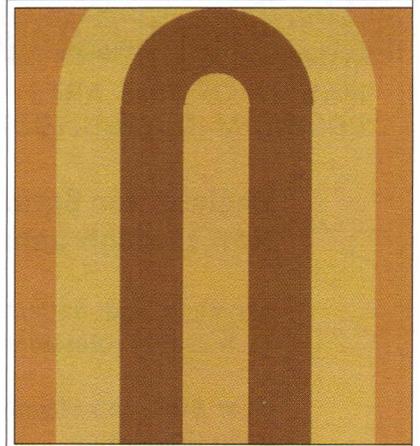
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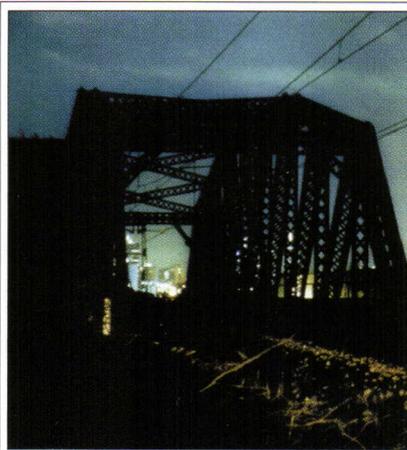
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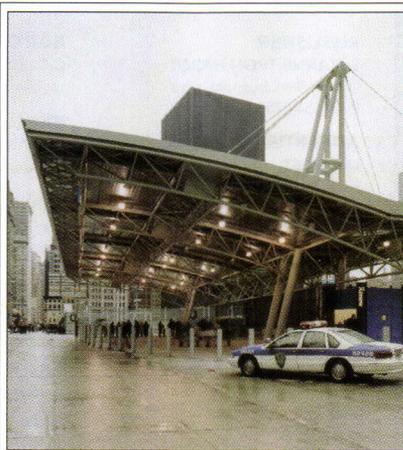
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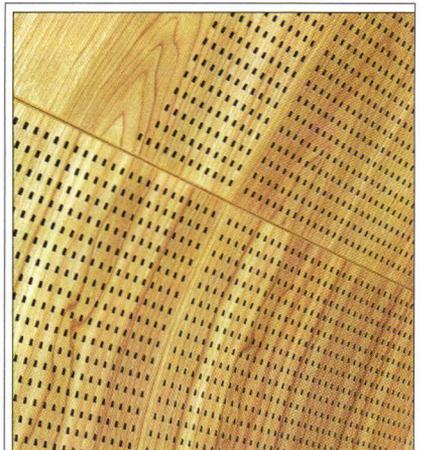
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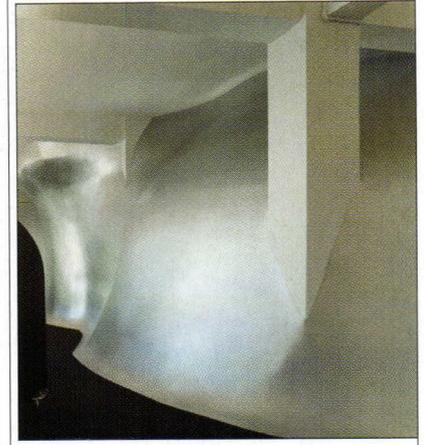


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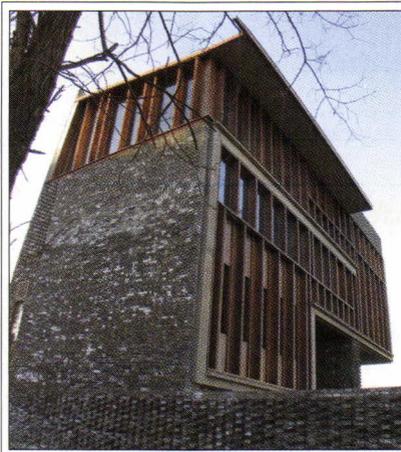


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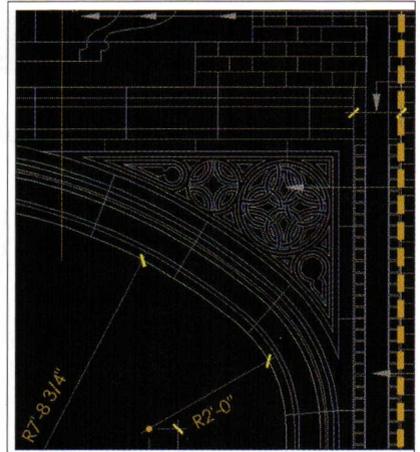
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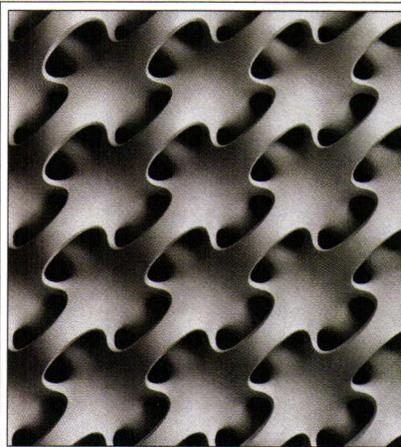
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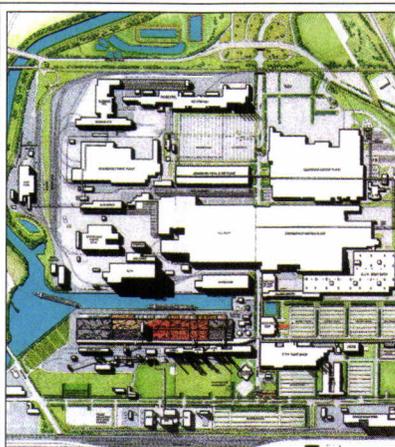
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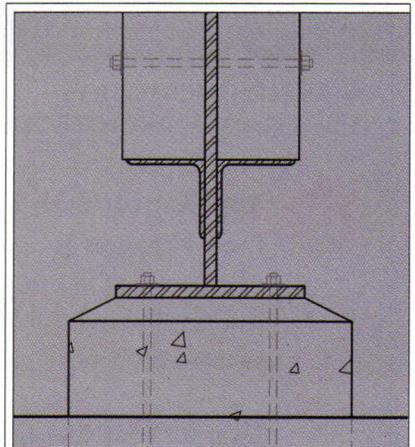
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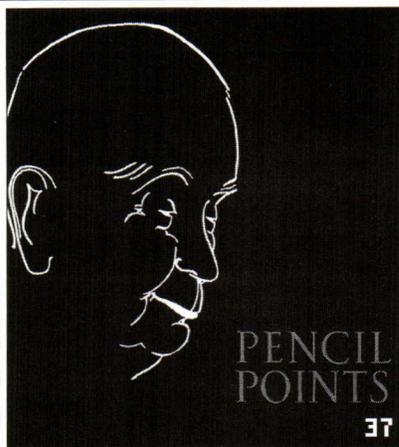
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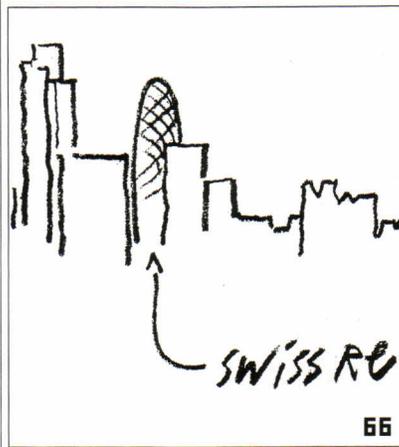
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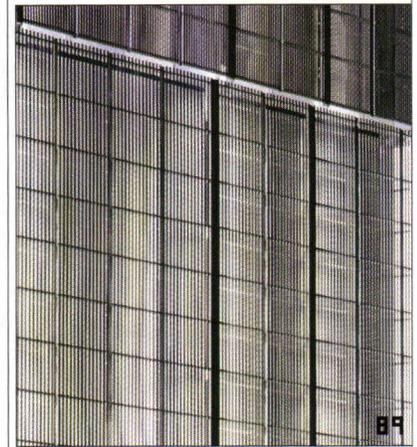
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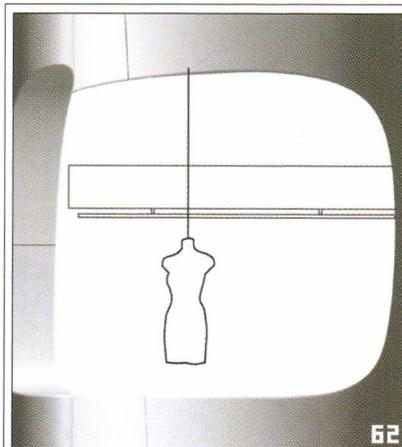
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To play host to the 2004 European Cup soccer tournament, Portugal went all out—building 10 new venues for the 31-match event, including Eduardo Souto de Moura's stadium for the northern city of Braga (cover and facing page). Images on this page (top left to right): the tennis arena for the Athens Olympics; the "Living Room" at the Seattle Library; and the Carlos Miele store.

→ COMING NEXT MONTH

Report from Berlin | Video game architecture | Barcelona's latest waterfront revitalization | An architect who promotes conservation development

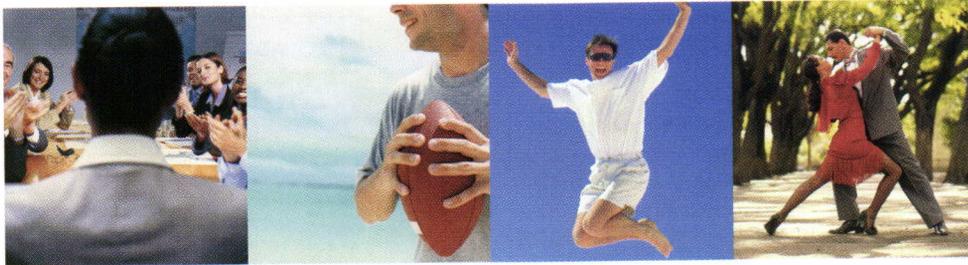
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Indications and Usage

Does your left eye twitch uncontrollably when performing boring, repetitive tasks? Do you experience verbal tics when your drawings require tedious revisions? Have you withdrawn from your favorite activities because you have to stay late to do your printing and plotting? If you answered "yes" to any of these questions, new AutoCAD 2005 is right for you.

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New AutoCAD 2005 is potent medicine that relieves all of the above symptoms with a single application. How? For the first time, a Sheet Set Manager lets you create, manage, and share entire sheet sets simultaneously. It lets you work smarter and faster because it automates many of the tedious tasks that slow you down, such as archiving, transmitting, creating, and updating the sheet index; creating tables, sections, and callouts; and placing and updating title block and page number.

There are many other cool features in AutoCAD 2005, like background printing and one-click publishing and plotting. Of course, since you'll be able to keep working while you're plotting, you'll have more free time to visit the water cooler. Remember, it's just as important to remain hydrated as it is to dish on reality TV.

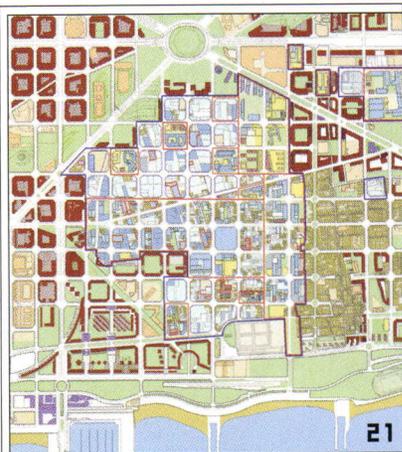
But we're getting ahead of ourselves. Chances are you're still using AutoCAD 2002 or an earlier version, so you've yet to experience our last release, AutoCAD 2004. How good was it? Robert Davis of the Benchmark Group says: "AutoCAD 2004... has the greatest and most compelling set of new features, functions, and enhancements of any AutoCAD release I have worked with. This release will be a must-have upgrade for every AutoCAD user." Taken together, the performance enhancement you'll get from these last two releases will blow you away. Almost every design and drafting task is simpler, easier, and faster, no matter what kind of work you do.

Possible Side Effects

With new AutoCAD 2005, you'll be more productive. Which means you can spend more time on the most rewarding aspects of your work. You may find yourself wanting to share your designs more often. Fortunately, new Autodesk® DWF™ Composer software works seamlessly with AutoCAD 2005 software. So you can keep the entire design review process digital—even overlay digital markups onto the native CAD file to reduce errors and cycle time. Or as we like to say "round-trip" markups directly back to AutoCAD 2005. As always, the Autodesk DWF file format ensures your work is seen exactly the way you intended. However, it doesn't ensure that the remark you made at work yesterday will come across the way you intended.

Precautions

Now comes the issue of what to do with your new free time. You could channel all your efforts into work. You'll also have more time for hobbies like watching online auctions. Maybe that beer stein with the moustache protector you lost to Foxy in Atlanta will come up again. Maybe you'll train for something. Like a triathlon or a hot dog eating contest. However, if abdominal pain still persists, we recommend cutting back on the Buffalo wings.



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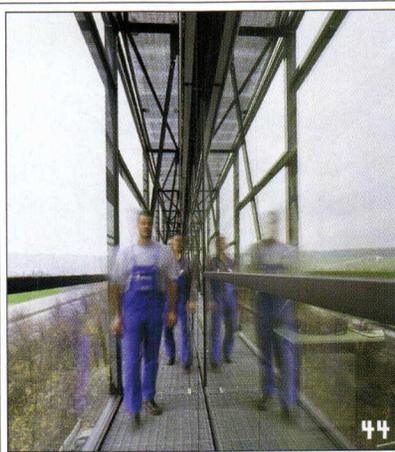
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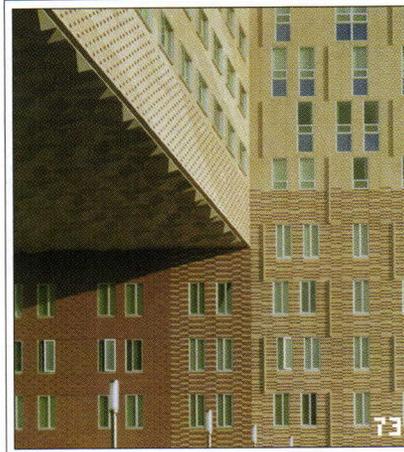
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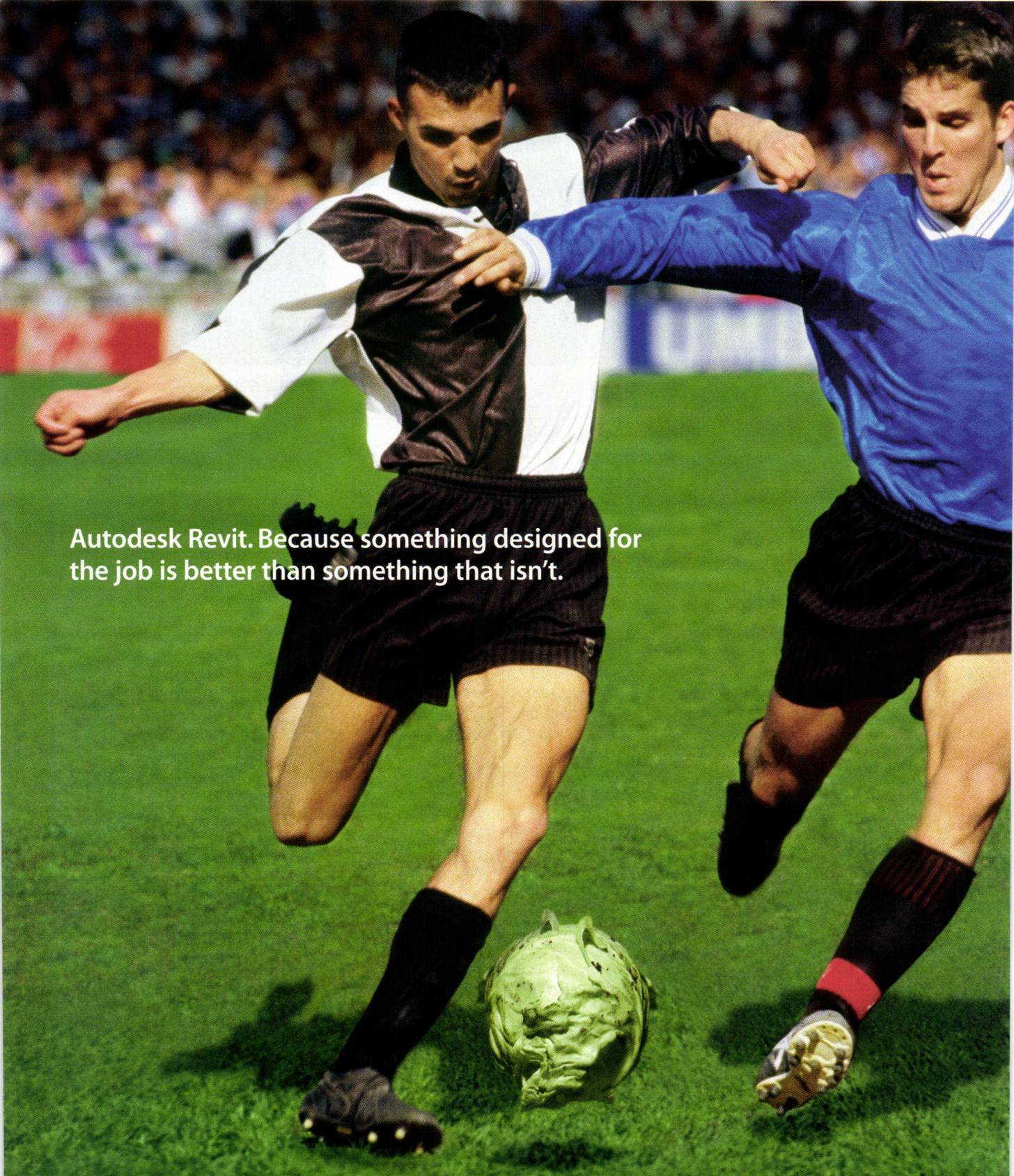
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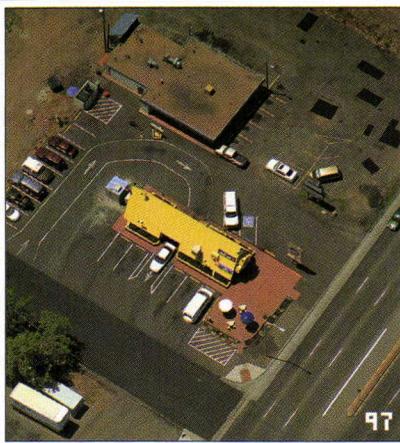


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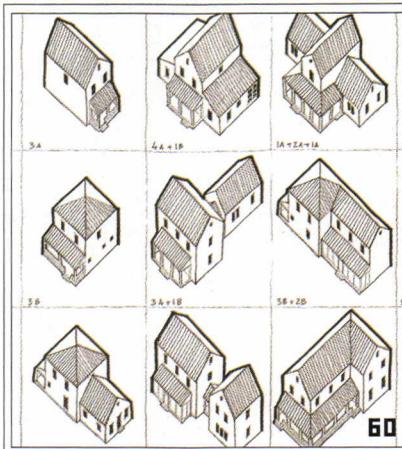
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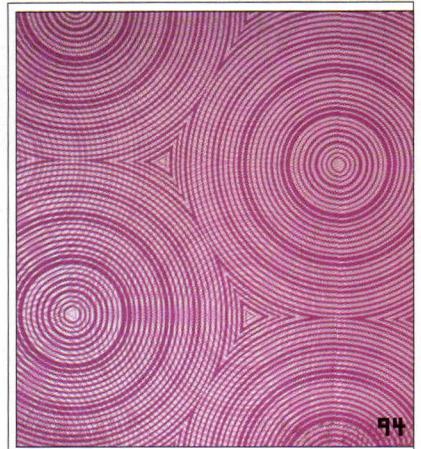
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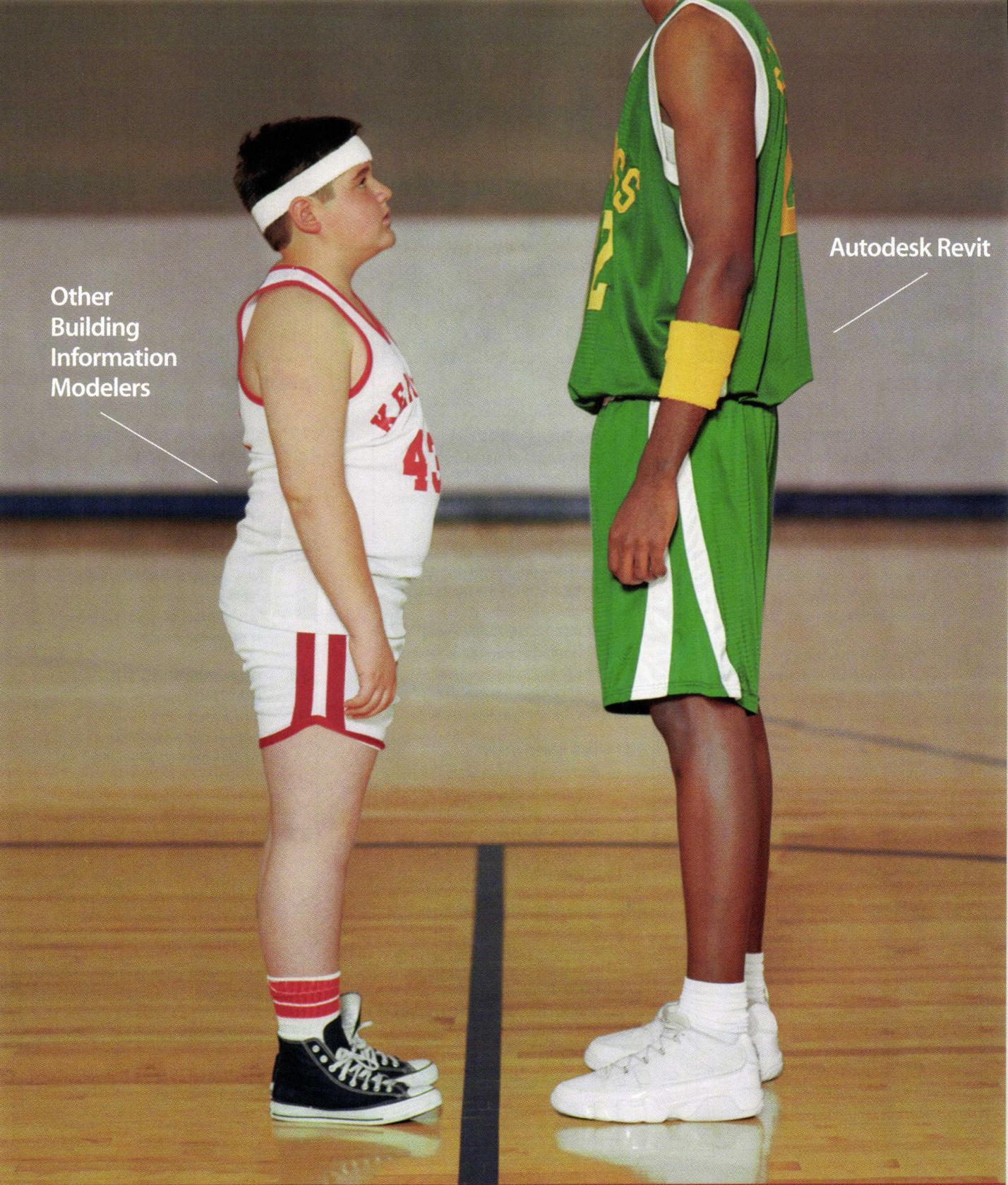
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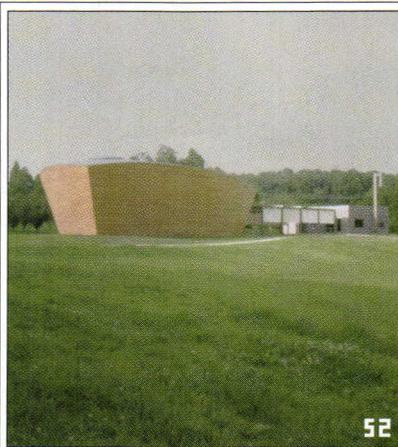
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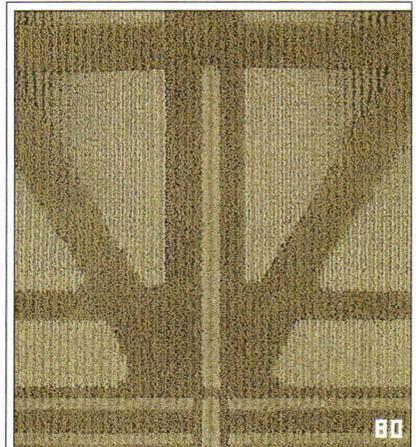
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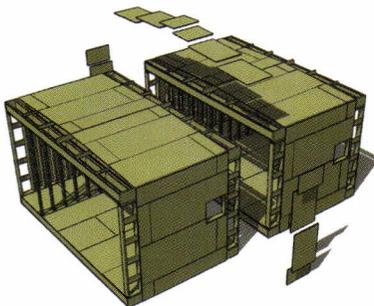
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Internet sites and Web-based applications provide better, faster communication.
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coLAB's Cedar Street remodel won a nod from the Home of the Year Awards jury for turning a 1950s ranch house into a live-work space with bedrooms, or "sleeping pods," transplanted to the backyard. Images on this page (left to right): the United Nations headquarters in its glory days; a sheathing diagram from Modular 1 House; landscaping at Canal House.

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Report from Chicago's new Millennium Park | a music library by Mack Scogin Merrill Elam Architects | a religious school by John Ronan Architect | a community center by Studio/Gang | fresh façades in Minneapolis

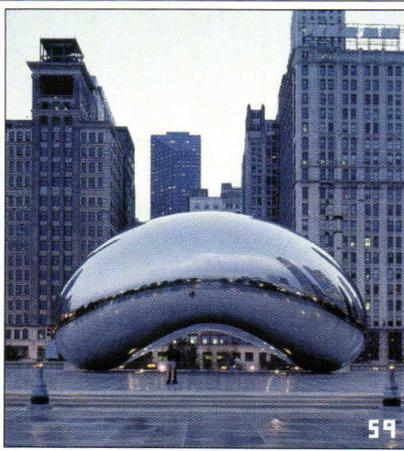
COVER: BILL TIMMERMAN; ABOVE LEFT: EZRA STOLLER/ESTO; ABOVE RIGHT: SHARON RISEDORPH; FACING PAGE, CLOCKWISE FROM TOP LEFT: NIC LEHOUX; MATTHEW MILLMAN PHOTOGRAPHY; TOM ARBAN PHOTOGRAPHY; ROBERTO CARDENAS CABELLO



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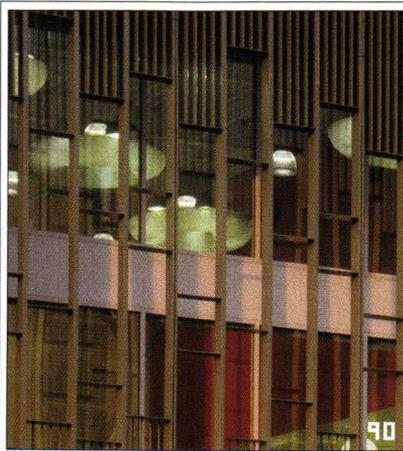


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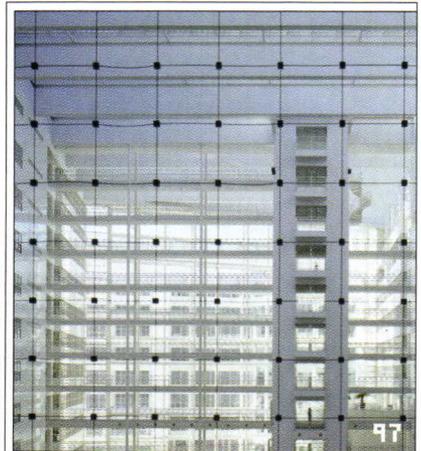
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Merrill Elam and Mack Scogin's Jean Gray Hargrove Music Library at UC Berkeley is set into a sloped site, connecting the arts quad to a playing field. Images on this page (from left to right): Anish Kapoor's installation in Chicago's Lakefront Millennium Park; Studio Gang Architects' Chinese community center; and Richard Meier's city hall and library complex in the Hague.

➔ COMING NEXT MONTH

The 52nd Annual P/A Awards | Reports from the Bronx and Newark, New Jersey | Better ways to manage office overhead | Expressive envelopes in Minneapolis

PHOTOGRAPHS ON COVER AND FACING PAGE: TIMOTHY HURSLEY; ABOVE LEFT: NATHAN WILLOCK/VIEW PICTURES; MIDDLE: GREG MURPHEY STUDIOS; RIGHT: HANS-GEORG ESCH/HENNEF/SIEG, COURTESY CARL STAHL.

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letters

New pants

Architecture owes me a new pair of pants. I read that the firm Resolution: 4 Architecture valiantly confronted the blandness and mediocrity of suburbia with a 5,000-square-foot "Dream House" that sits on a 3-acre lot, causing me to spew coffee all over myself [November 2003, page 36]. Come on. How does anyone "thwart traditional suburbia" with a residence that has more than twice the square footage and three times the acreage of the typical suburban home? The "2-Way House" by Keith Mitnick on the same page was unquestionably more successful at confronting the "suburban graveyards of complacency" by keeping to a modest size (2,250 square feet) and successfully responding to a tight and difficult site.

Total cost: one pair of pants (\$30), and a chuckle at someone with more money than design sense (priceless).

Patrick Stuart

Design Director
Neighborhood Design Center
Columbus, Ohio

Homes of the Year: Danger, danger!

Your Home of the Year winners were interesting, and generally appeared to be quite livable. I am curious, however, whether Zoka Zola actually got a certificate of occupancy for her house the way it appears [November 2003, page 42]. One photograph shows an open stair with no railing; another shows a raised walkway with no railing, and guards on stairs with openings far larger than those allowed by most codes.

Paul Sweet

Richmond, Virginia

From the editors: Since the project was photographed, Zoka Zola has modified one handrail design for child safety, but the rest of the conditions meet applicable codes and permitting requirements. In Chicago, single-family homes are not issued certificates of occupancy unless a bank asks for one.

It is disappointing to see Zoka Zola's house earn a Home of the Year Award as it perpetuates a neighborhood-destroying trend of much new infill housing in



11 | 2003 ↑

Chicago: omitting front yards and porches. Walking along a typical street in Wicker Park or Ukrainian Village, one is charmed by the varied spaces for neighbors to spend time in on warm summer days. Then one comes across a house like Zola's that is pushed "flush with the sidewalk to the north and to the west," creating an uninviting and cold corner in an otherwise delightful area.

James T. Biehle

Clayton, Missouri

The November 2003 issue is quite puzzling. On page 29, the subtitle asks, "When building near an architectural landmark, what does it mean to be a good neighbor?" Yet following this topic, you give prizes to Zoka Zola's house in Chicago [page 42] and MS-31's house in San Diego [page 54].

Robert V. Kennedy

Boston

Design-build on Prickly Mountain

I was happy to see a reference to the Yestermorrow School, run by Jersey Devil's John Ringold [November 2003, page 32]. I remember it as "Prickly Mountain": When I went there to do this design-build thing, the teachers and students all seemed too self-absorbed. In any event, in 1967 many architects were very frustrated with the material world in general, and we didn't want to keep reinforcing the old paradigm (not to mention the war and processed food). Getting out of the cities and picking up a hammer just seemed more relevant.

Edward A. D'Andrea

Malibu, California

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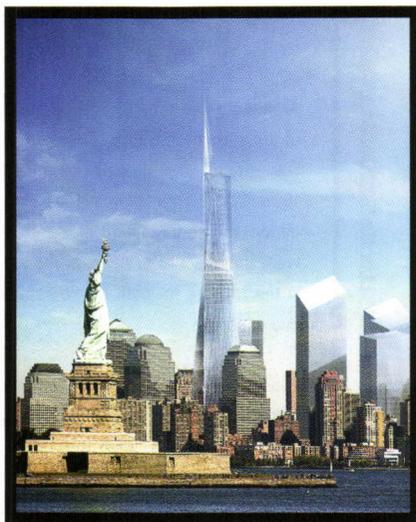
OFFICIALS UNVEIL "WORLD'S TALLEST" FOR WTC SITE



Less than a year after Daniel Libeskind was selected as masterplan architect for the World Trade Center site in Lower Manhattan, city and state officials have unveiled a 1,776-foot-tall office tower that is to be the symbol of rebirth on Gotham's skyline—"a height," a wishful Libeskind told an audience of press and dignitaries at the unveiling, "that will never be surpassed." Designed in what was by all accounts a strained relationship between its architect, David Childs of Skidmore, Owings & Merrill, and Libeskind, the Freedom Tower sits at the northwest corner of the 16-acre parcel, culminating the masterplan's ascending spiral of high-rises.

In plan, the building is a parallelogram, reflecting the way the orthogonal street grid meets the diagonal edge of the Hudson River. The glass-clad building twists and tapers upward as it encloses 2.6 million

square feet and 60 occupiable floors. A concrete structural core is enhanced by a steel "diagrid," which wraps the tower in a veil of elongated diamonds and provides



additional rigidity. Above the 60th floor and ascending to 1,500 feet is a shaft of light: An open web of steel cables supported by two circular concrete columns serves to minimize lateral wind loads while activating a series of wind turbines (estimated to produce 20 percent of the building's energy). Adhering to Libeskind's original patriotism-infused vision for the tower, a 276-foot spire rises from the top of the cable-net shaft, echoing the arm of the Statue of Liberty across New York Harbor.

Beyond sustainability strategies and skyscraping spectacle, particular attention has been given to life-safety systems, including biological and chemical filters in the air-supply system, concrete-enclosed paths of egress, ground-floor blast-resistant glazing, and areas of refuge. Officials plan to lay the tower's cornerstone on the third anniversary of the terrorist attacks. **Abby Bussel**

NEW OKLAHOMA CITY FEDERAL BUILDING OPENS



Nearly nine years after the bombing of the Alfred P. Murrah Federal Building killed 168 people, the new Oklahoma City Federal Building has opened. The 180,000-square-foot structure reassembles various federal agencies that have been scattered across the city since the bombing. "We wanted to restore the sense of community that had

been lost with the dispersal of the various agencies," says Kevin O'Connor, project architect for Ross Barney + Jankowski Architects, the firm that designed the building with the Behan Group.

The U-shaped building has a large elliptical courtyard with bollards that forms a public space in front of the building, which is set back from the street. Other security features include blast-resistant laminated glass and blast-resistant steel-and-concrete construction. In addition, Ross Barney + Jankowski included numerous green features, such as exterior light shelves, 11-foot ceilings for maximum daylighting, and a sophisticated underfloor HVAC system. "Studies show that daylighting and views make for hap-

pier, more productive employees," says O'Connor. "We felt sustainability was another way of making people feel more comfortable in the building." Still, many survivors of the April 19, 1995, attack have expressed reservations about moving into the structure.

The building is a block and a half from the site of the Murrah Building, which is now the Oklahoma City National Memorial. "[The new building] is the capstone to the memorial," says Kari Watkins, executive director of the memorial and its museum. "If you look at the Pentagon, those people had to return to the site immediately. Nine years is a long time. The sooner people return to their routines, the better." **Alan G. Brake**

RIBA'S DOUBLE GOLD?



Sharp-eyed observers of international architecture awards will have noticed that only eight weeks after naming Rafael Moneo of Spain its Royal Gold Medal Winner, the Royal Institute of British Architects (RIBA) bestowed the same honor on Dutch practitioner Rem Koolhaas. Has the venerable English body been seized with a fit of gifting?

Not at all, says the head of RIBA's press office, Melanie Mayfield. Moneo is the medal's 2003 recipient, while Koolhaas is the winner

for 2004. "We've rearranged all our major events," explains Mayfield, "to happen at the start of the year." The award—whose recipient is chosen by jury and ultimately approved by Queen Elizabeth—is given for lifetime achievement. Moneo received his medal in November; Koolhaas gets his in February. While Mayfield acknowledges that the near-overlap may "seem a bit strange," she is adamant that when it comes to the Royal Gold Medal, "there's definitely only one a year." **Jamie Reynolds**

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news

⇒ Preservationists have succeeded in saving the Farnsworth House. Mies van der Rohe's 1951 glass-and-steel masterpiece was sold for \$7.5 million at Sotheby's auction house in December to a group led by the Landmarks Preservation Council of Illinois and the National Trust for Historic Places.

⇒ Architects make for dangerous drivers, at least according to a recent study by U.S. auto insurers. In a poll of more than 100 million drivers taken over a 22-month period, the survey found that architects were the only professional group to rate in the top five for both traffic accidents and speeding.

⇒ The American Society of Landscape Architects (ASLA) has named Susan L.B. Jacobson as its 2004 president. A founder of Bartells/Jacobson Design in Glen Ellyn, Illinois, Jacobson has been involved with ASLA since 1982.

⇒ NYC2012, the committee leading New York City's campaign to host the 2012 Olympics, has announced five finalists for the design study of the proposed Olympic village to house athletes during the games: Henning Larsens Tegnestue A/S, of Copenhagen; MVRDV, of Rotterdam; Morphosis, of Santa Monica, California; Smith-Miller + Hawkinson Architects, of New York City; and Zaha Hadid, of London. Other cities hoping to host the games in 2012 include London, Istanbul, Madrid, and Moscow.

⇒ Matthias Sauerbruch and Louisa Hutton of Sauerbruch Hutton Architects (February 1999, page 98) have received the Fritz Schumacher Prize, an award given by the Alfred Toepfer Foundation recognizing outstanding works in architectural design or theory in Europe.

⇒ Aaron Schreier, the project director of the original World Trade Center design team and longtime collaborator with its architect, Minoru Yamasaki, died in December. He was 72. Milan Johnston, a structural engineer who worked with Marcel Breuer and Hammel Green and Abrahamson, has died at the age of 88.

SAMUEL MOCKBEE AWARDED 2004 AIA GOLD MEDAL

The American Institute of Architects' 2004 Gold Medal, the highest honor bestowed on an individual by the organization, has been awarded posthumously to architect-educator Samuel Mockbee (January 2003, page 19). The AIA has also announced the 2004 Firm Award, which has been given to Lake/Flato Architects of San Antonio, Texas, and the 2004 Topaz Medallion for Excellence in Architectural Education, which went to Stanford Anderson, dean of the Massachusetts Institute of Technology (MIT) architecture department.

The much-loved Mockbee, who passed away in 2001 at the age of 57, was by all reports an impassioned and tireless teacher who after building a thriving regional practice devoted himself to a new vision for socially conscious architectural education. The Rural Studio, which Mockbee ran at Auburn University in Auburn, Alabama, from 1993 until his death, challenged students to use unconventional approaches and found materials to build playful houses and civic buildings for poor rural communities. The Gold Medal will be presented to Mockbee's wife, Jackie Mockbee, at an annual gala for the American Architectural Foundation in March.

The firm Lake/Flato Architects is best known for its understated, sustainable projects in Texas. MIT's Anderson is the author of *Planning for Diversity and Choice and On Streets*.

Selected by the AIA Board of Directors, the Gold Medal recognizes an individual whose body of work has had a lasting influence on the theory and practice of architecture. This year's recipient, the 60th, joins a long line of visionaries, including Thomas Jefferson, Frank Lloyd Wright, and Louis Kahn. Last year, considering finalists Mockbee and Albert Kahn, who died in 1942, the AIA did not award a Gold Medal at all, prompting criticism from numerous circles and a call for the AIA to redevelop its award selection process. **Julia Mandell**

Grant Street, Pittsburgh, Pennsylvania

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HARRISBURG'S CAPITAL DEVELOPMENT



It's not just tax incentives that have made Harrisburg's architecture firms among the busiest in the country, but that's a big part of the story.

Topping the federal government's list of troubled cities in the 1980s, the capital of Pennsylvania seemed doomed to high unemployment, suburban flight, and dwindling cultural and commercial prospects. But two decades later, this city of 52,000 has finally emerged from the proverbial shadows of nearby Three Mile Island's cooling towers. Since Mayor Stephen R. Reed began his

campaign of tax reform and boosterism in 1982, more than \$3 billion in commercial and residential projects have been planned or built in this river city.

Last year, while much of the country suffered a recession, Harrisburg issued permits for \$300 million in new construction projects, an annual record. Like Reed's mayoralty, the tax incentives apparently work. In addition to abatements that gradually reduce assessed property values, Reed instituted a two-tier structure that taxes vacant lots at rates six times those for buildings. Used elsewhere in Pennsylvania, the split system pushes property owners to build rather than speculate, and it rewards developers for constructing densely occupied urban sites.

The result is nothing short of an urban renaissance. More companies have relocated to downtown. A thriving arts community, drawn by reinvigorated retail offerings and a scenic island waterfront, complements the robust business climate. Other positive indications, such as a \$222 million airport terminal set to open this summer, brighten the halo over the city. And while architects here might take issue with the less thoughtful changes to Center City's skyline, they can hold out hope: For the first time since the 1950s, Harrisburg's buildings department and planning bureau announced last month a comprehensive revision of the city's zoning and land-use regulations. **C.C. Sullivan**

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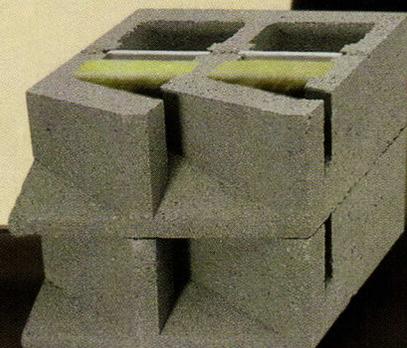
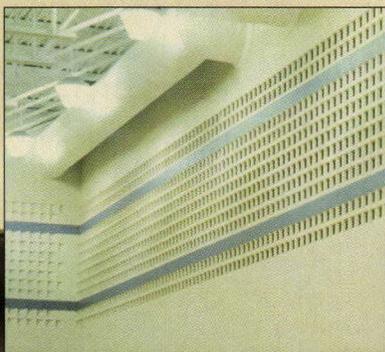
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THE YEAR AHEAD

An economist examines what to expect in 2004.
His prognosis: Be patient. by Edward J. Sullivan

By all counts, the American economy is set to move into high gear in 2004. Unfortunately, the arrival of more robust construction activity is still some ways off. This seems like a contradiction, but it can be explained by the prospect of single-family construction slowing under the weight of rising interest rates; a delayed improvement in commercial construction activity; and a public construction sector still coping with the fiscal crisis at the state level. All told, for 2004, building activity is expected to achieve only marginal growth.

Even though a spirit of optimism arrived on the economic scene as the U.S. labor market improved late last year, skeptics are still slow to forget that from the fourth quarter of 2000 until the second quarter of 2003 economic growth averaged a meager 1.9 percent. In reality, the U.S. economy is now poised for a sustained period of relatively strong conditions, with real growth in gross domestic product averaging between 3.5 and 4 percent annually, thanks to improved conditions facing consumers and business leaders.

BOUNCING BACK

Consumer spending accounts for more than two out of every three dollars of U.S. economic activity. Until recently, consumers were carrying the economy while other key sectors, such as business investing, went into decline. Oddly, stronger consumer spending came during a period of only mild income gains and large-scale job losses. This boom took place in part because extremely low mortgage rates allowed homeowners to tap into home-equity reserves. In fact, 80 percent of 2003 mortgage activity was home refinancing, which added nearly \$150 billion to consumer spending.

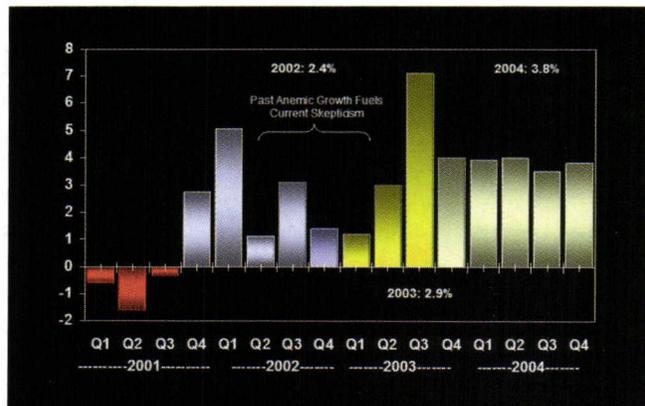
But debt financing of consumer spending causes concern: It can't be sustained when job numbers are going down. Fortunately, the job market turned the corner last August, adding 125,000 new jobs each month during the fourth quarter of 2003. This year, consumer spending will increasingly be fueled by traditional sources of strength: rising income and job growth. This is important because interest rates are expected to rise.

There has also been dramatic recovery in business confidence since the capture of Baghdad—increasing fourfold, according to various surveys, and spurring business investment activity. Better corporate profits and more favorable lending conditions created an environment in which investment spending surged in the third quarter. Continued growth is expected in 2004.

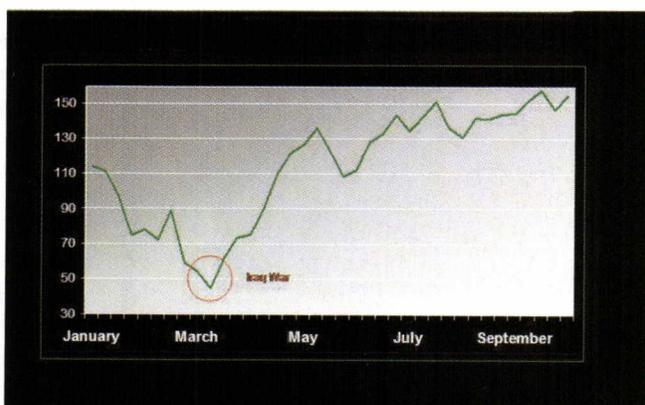
The strengthening demand picture also unfortunately supports rising inflation. If this happens, the Federal Reserve will be forced to adopt a tighter monetary policy, modestly raising interest rates beginning in mid-2004 and following with more aggressive increases later in the year.

HOMES, SWEET HOMES

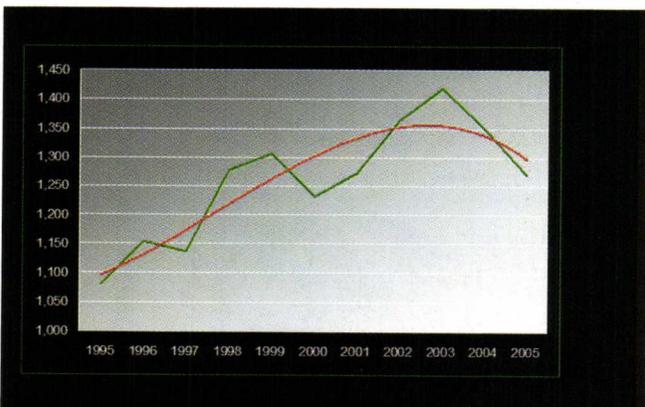
These conditions carry obvious implications for the construction market. The residential sector accounts for roughly 25 percent of overall



Economic Outlook: Annual Percentage Growth



Investment Environment: Business Sentiment (100 = Year 2000 Average)



Single-Family Construction: Building Starts, in Millions

construction activity, and the sector has been raging during the past two years. While the single-family construction sector will remain strong from a historical perspective (housing starts will remain near record levels during the first half of the year), economic conditions expected by mid-2004 are adverse. Mortgage rates will start going up, taking the edge off of the current strong market conditions. Without a more rapid increase in interest rates than currently anticipated though, a single-family housing bust is not in the cards.

Multifamily construction activity has been negatively affected by low mortgage rates. Low interest means less difference between an

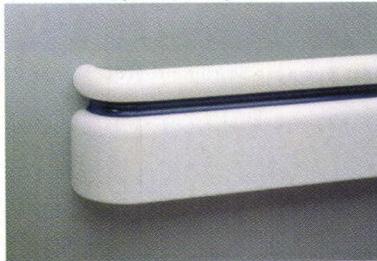
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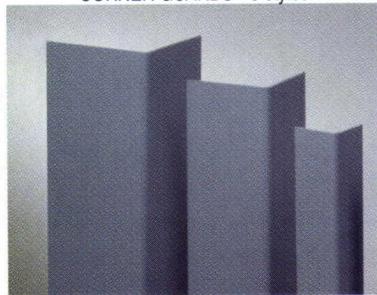
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average monthly mortgage payment and an average monthly rent. In 2000, excluding tax benefits, the average monthly mortgage payment was roughly twice that of the average rent; by mid-2003, the mortgage payment premium was only 25 percent. Thus, more apartment dwellers moved into single-family homes. Higher multifamily vacancy rates, landlord discounts, and lower rent prices materialized—a dismal picture for investors in this sector. Don't expect this to change anytime soon.

It will take the better part of a year before vacancy rates get low enough to spur an acceleration in multifamily construction. Even then, a revival would be very modest. Favorable demographics mean better conditions in such places as Southern California, Orlando, and Las Vegas.

THE PRIVATE SECTOR'S DOUBLE WHAMMY

Nonresidential, private-sector construction accounts for another 25 percent of overall construction activity. A slow economy has meant poor performances in three main areas: industrial, office, and retail. Low utilization rates and high vacancies have reduced the need for new investment, and poor corporate profitability and a harsh lending environment have further discouraged new investment. With the exception of retail construction, one or two quarters of good economic news aren't going to turn things around: Even once capacity utilization shows an increase, it takes a year for industrial construction activity to become positive, implying a late-2004 recovery for that sector.

The same lag applies to office construction, though slightly longer. Here, vacancy rates have yet to decrease. While a turnaround is possible in late 2004, an early 2005 turn is more likely. On the other hand, because of its short lag between improved economic conditions and a boost in activity, retail construction has already turned, and is expected to grow more than 5 percent during 2004.

PUBLIC CONSTRUCTION: ALTERED STATES

Public activity accounts for roughly half of all construction, and 90 percent of it is carried out by state and local governments. As a result, fiscal conditions of state governments, to a large extent, dictate their ability to carry out construction. It's no secret that the long period of weak economic growth has caused historic budget deficits at the state level. At the end of 2002, state budget officers estimated a total shortfall of \$60 billion stretching across 45 states. At the same time, most states had in place some form of balanced-budget amendment, forcing their legislators to deal immediately with the issue.

To cope with deficits, states laid off workers, raised taxes, eliminated what are sometimes seen as extraneous programs, and, as a last resort, cut capital construction projects. Many states believe that construction spending provides stimulus to the local economy and are hesitant to cut these programs. As the deficit issue worsened in 2002, though, even these programs were cut in many states.

Late last spring, however, potential job growth and income gains hinted at stronger state revenue; coupled with cost cutting and tax increases, this upswing reduced year-forward deficits from \$60 billion to \$20 billion. Unfortunately, there is typically a year's lag between improvement in states' revenue outlooks and the resulting expenditures. In 2004, state budgets were set with low revenue projections in mind. As a result, little reprieve from slim state construction spending is expected for 2004, but higher revenue projections are expected for 2005. Expect modest declines in public construction spending this year, followed by a rosier picture in 2005.

A former intelligence officer with the CIA, Edward J. Sullivan is the chief economist with the Portland Cement Association, a trade organization that promotes the use of concrete and cement.

MATURE FIRMS, NEW TALENT

Principals from large U.S. practices consider how to find—and groom—tomorrow's architectural leaders. by C.C. Sullivan

Principals of leading U.S. firms joined Architecture last year for a wide-ranging roundtable on issues impacting the profession (May 2003, page 40). In this installment, participants discuss how they hire architects and what they see in the next generation of talent.

MARILYN J. TAYLOR: I'm very heartened by what's coming in the next generation of architects and in our next generation of clients. They're the ones who chose Mac first for its looks and then for its performance, and who saved their money to spend \$100 on what they believe is a superior looking pair of sneakers. Their understanding of design is not like the one we grew up with.

RAY C. HOOVER: It's great because it has contributed to making design important.

WILLIAM E. VALENTINE: As architects, our place on this planet is to improve the situation, not just offer a new style of something.

ROBERT G. PACKARD: We shouldn't confuse the perception that the next generation is interested in design with the fact that they're interested in being consumers of products. In our profession, substance is a long-term thing. We're putting something out there that will last 50 or 100 years, and that's different.

SUMAN SORG: The younger generation is used to high-quality design, but they're also more entrepreneurial. They're much more aware of the market forces that will let them individually succeed in a firm or in the marketplace.

J. ROBERT HILLIER: It's a very self-confident generation, too.

TIMOTHY P. HARTUNG: I'd like to be optimistic about the younger generation too, but I've often gone to elementary schools to talk about architecture, and the kids have never even heard the word before. As responsible professionals, a part of our role is to try early on in everyone's life to raise that level of understanding of what architecture can do. Isn't process as much a part of architecture as the product?

TAYLOR: One of our frequently run training sessions is about striking every word that speaks of commoditization from your language: Don't say it's a product. We must continue to use a vocabulary that is all about service, even in the face of many people who want to view us differently.

VALENTINE: Service and value.

HILLIER: We serve developers, politicians, and contractors. But I think we really have to be the leaders.

TAYLOR: Leadership advocacy in some form is what got most of us into architecture in the first place.

HILLIER: One thing I suggest to architecture students is that they think about being a developer as well as an architect. Number one, it's more profitable, and, number two, you can get at those issues you're dealing with much more directly than having to negotiate a fee with some developer who's not doing it as well as you would do it.



Roundtable Participants

ROBERT L. CIOPPA Principal
Kohn Pedersen Fox Associates
New York City

ROBERT G. PACKARD III Managing Partner
Zimmer Gunsul Frasca Partnership
Portland, Oregon

TIMOTHY P. HARTUNG Partner
Polshek Partnership Architects
New York City

SUMAN SORG Principal
Sorg and Associates
Washington, D.C.

J. ROBERT HILLIER Founder & Chairman
The Hillier Group
Princeton, New Jersey

MARILYN J. TAYLOR Chairman
Skidmore, Owings & Merrill
New York City

RAY C. HOOVER III Senior Principal
Thompson, Ventulett, Stainback & Assoc.
Atlanta

WILLIAM E. VALENTINE President
Hellmuth, Obata + Kassabaum
San Francisco

HARTUNG: It's not just that architects are getting wiser; it's that our future clients are getting smarter.

HILLIER: Unless we get to the head of the parade, we are destined to just keep being diminished and diminished, which leads to commoditization. We give away our ideas at the interview, and then we're priced out of the market by sweatshops that will do the drawings for 10 cents an hour.

TAYLOR: When you come out of school, it takes about two years to realize that you're going to have to be incredibly smart, incredibly driven, and incredibly leadership-oriented if you ever want to use what the market offers you in a constructive way to pursue a theme.

NURTURING THE NEXT GENERATION

C.C. SULLIVAN: How can firms cultivate new leaders?

HOOVER: We established a 100-percent ESOP, or employee stock-ownership plan. And it certainly did satisfy all the pragmatic issues of transition—ownership, money—but the more profound benefit was that each member of the organization became a vested owner and realized that their professional and financial future depended on the organization's success. And the ESOP left the staff feeling like they're being mentored and trained.

ROBERT L. CIOPPA: In a succession, the mechanics of the stock transfers and those kinds of things are amazingly simple once you hit the right trigger points and get the economics to work. But the physical or psychological change is incredibly difficult, because of the clashes between the generations.

HILLIER: When you require an ESOP—we have one, too—you have to be transparent: Everybody knows all the numbers. Our policy is that we have no closed doors in our office.

SORG: Our firm is much more transparent than the one I used to work at, in terms of how we get work—it doesn't just appear on your desk—and in terms of how you can help or hurt the firm.

HARTUNG: For the last couple of years we've been trying to find ways to be more transparent as a large firm, through commu-

nications and special committees and getting lots of people involved in different things to empower them in the process.

HILLIER: We're doing what the accounting firms do; interns are assigned to shadow a principal. Two interesting things happen. Number one, these interns take on huge responsibility and ownership very early, and they work 80-hour weeks. Number two, the assistants become extensions of the principals, and the clients often go to the intern first. And the interns go to governor's receptions and meetings with CEOs and mayors, so at the same time you're training your next generation of leaders.

PACKARD: You're trying to find new young designers, too. So where a project opportunity might have automatically gone to a lead principal, somebody younger picks up the ball and runs with it.

FROM ACADEMIA TO PRACTICE

HOOVER: It doesn't seem that long ago that the profession and the academic world had no collaborative dialogue.

PACKARD: Three years ago they were adversaries. Today, the AIA Large Firm Roundtable's outreach to deans of architectural schools is starting a dialogue about these issues: Who's coming out of the schools? What are they getting when they're in school?

SORG: Why do some students come to work for larger firms? Is it because they have bigger projects?

HILLIER: When I ask young folks, they say that large firms have better training programs in place, and better organized internship programs. The small firms really can't afford to do that.

HOOVER: At certain times graduates seem attracted to boutique firms. They feel they can get a quicker education and a chance to express themselves sooner. At other times, the cycle seems to swing toward the security, training opportunities, and even project sizes of larger firms. The larger practice allows you to do more of what really floats your boat; there are resources to relieve you of things you'd rather not deal with.

SORG: That's true. When we hire people who've been working in large firms, we always worry about whether they're used to all that comfort and whether we'll be able to provide that.

HARTUNG: We prefer hiring people who come from smaller firms, because they've had more general experience and know what goes into a project, as opposed to someone who's used to focusing on one thing. In larger project teams, it makes them more perceptive of how they can contribute to that process. And when you get into hard times, the generalists are the most useful to you.

SULLIVAN: Are you trying to build a more diverse workforce?

CIOPPA: The overriding qualification is design quality of their portfolio. Diversity is actually supplied by the architectural schools, because there's such diversity now, as opposed to 15 years ago.

HARTUNG: It's easy for us to find local people to fill those positions, but we consciously try to bring in people from across the country and even around the world. Their education, the way they were brought up, adds a different kind of diversity that we find enriching.

TAYLOR: No matter how efficient we become, there is so much that's in the dynamic of the team interaction.

HARTUNG: We hire people that have good communication skills and are good people persons, as opposed to, for example, an excellent detailer, who has no ability to relate to anybody.

TAYLOR: We are a people-based industry—intellectual capability, problem-solving skills. Whatever your leverage power is, it still comes down to how many leaders you have.

HOOVER: The younger people coming up in our profession are so much better traveled, so much better read, and so much more worldly than my generation was. Their architectural schooling has been healthier, more balanced, and more multidimensional. It's a richer educational base for being able to express oneself graphically and solve three-dimensional problems. And they are much better prepared from a holistic standpoint for what we can contribute to as a profession. So I'm very optimistic about how the next generation will take us forward as more senior practitioners start to withdraw from the industry. ■

Future Designers and Design-Build

Advice to young architects: Embrace design-build. Participants in *Architecture* magazine's practice roundtable say that successful integrated delivery is a key to professional success.

"A lot of architects look down on design-build as a way to make a project as cheaply as you can," says HOK's William E. Valentine. "But many younger architects don't think it has to be defined that way at all."

"There's still fear on the architect's part," says Polshek Partnership's Timothy P. Hartung. "First there were construction managers, and then project representatives, and now the contractors. We keep getting pushed down, unless we have an understanding client who really respects what we do."

While many panelists agreed that partnering with a good builder is critical, others pointed to the downside of many design-build arrangements. "Often the client wants to marry you with the builder, and right away they set up a competition," says Hartung. "They want you to give the best possible design, and the builder is asked to make it as cheap as possible. So there's no partnership."

"We have one project that's a huge disaster because the builder is in front, talking to the client," says Sorg and Associates' Suman Sorg, recalling a contractor who submitted incomplete drawing sets without cornice details in order to save money. "Design-build is just like partnering with engineers. You have to avoid the guys that just want to save every dollar."

The structure of the contract is also important, adds J. Robert Hillier of The Hillier Group. "The best deal is when clients offer equal incentive fees to the architect and the builder," he notes. "In one case, we were getting 6 percent on the fee and 7 percent on every dollar we saved below the budget. So we went to our young designers and said, 'Here's the challenge: Deliver a class-A corporate headquarters, and if you beat the budget, there's money in it for you.' You would think they'd say, 'Oh, no, we're idealists.' Not so. We saved \$26 million on that project to share fifty-fifty with the builder."

"I have the best design-build project of all right now," says Sorg. "It's cost-plus, so neither one of us has an incentive to save any money." ■

BODY OF EVIDENCE

The Pebble Project is using evidence-based design to transform the healthcare sector. by Jamie Reynolds

A hospital switches to predominantly private rooms and finds average patient-stay time drops. Another healthcare facility installs potted plants and plays music all day and night on its audio system, and its chronic-pain patients require less medication. Redesigned nurses' stations—more curved surfaces, better sight lines, innovative color choices—at a cancer center seem to result in a sudden drop in staff-attrition rates. As architects and interior designers are acutely aware, smart decisions about the built environment can affect occupant mood and performance. But now, the Pebble Project, a long-term undertaking fostered by the nonprofit Center for Health Design (CHD) of Pleasant Hill, California, is attempting to measure just how much impact such design decisions can make in the healthcare industry. The framework for this research is called evidence-based design (EBD).

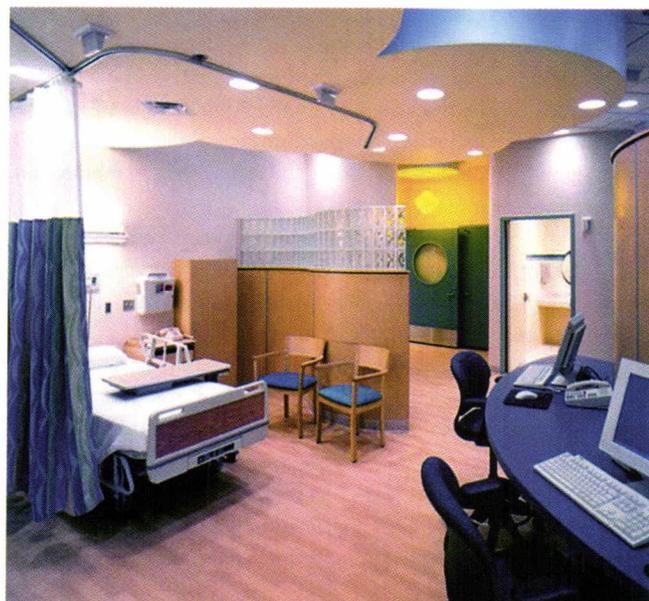
Like evidence-based medicine before it, EBD uses measurable results in past projects to inform decisions about new ones. "It's an attempt by a conscientious architect to take advantage of the best credible research information when designing a healthcare project," says Kirk Hamilton, principal at the 95-person Houston firm Watkins Hamilton Ross Architects and a CHD board member. Typically, EBD practitioners gather research on the effects of five categories of environmental design: access to nature (plants, gardens, and daylight—or reasonable simulations thereof); control (facility choices, privacy, wayfinding); positive distractions (music, art, play areas for children); social support (room for family interaction); and stressors (noise, poor air quality, harsh lighting).

THE RIPPLE EFFECT

Through its eighteen partner institutions, or "pebbles"—hospitals and care facilities ranging in size, location, and specialization—the three-year-old research project is trying to develop a set of hypotheses. Pebbles, which pay \$25,000 a year to the project with a three-year minimum commitment, are asked prior to new construction or renovation to develop a prediction about how design changes will affect a measurable aspect of their clinical, financial, or safety operations, and then to commit to publishing the results. By comparing data in periods before and after the alterations, the project can gauge the success of the interventions and share that information with other members and with the public at large through multiple meetings every year.

The benefits of such differences are felt by the patients and staffs of hospitals, but also by healthcare business managers. "To get attention, you've got to go to the bottom line," says Derek Parker, another CHD board member and the chairman of San Francisco's Anshen + Allen. By retaining staff and cutting costs, the benefits of EBD are gaining an audience with administrators as much as with physicians and nurses.

In many ways, EBD in the healthcare sector couldn't hope for a



As a result of design changes to their new facilities, the Barbara Ann Karmanos Cancer Institute in Detroit (above) has seen improved staff retention and a reduced need for medication in chronic-pain patients. They are participating in the Pebble Project, a long-term study using evidence-based design.

better time to get a prime audience. "The topic obviously hit a nerve," says Parker, attributing the movement's popularity to a growing interest in patient safety and tossing in some chilling statistics: In the United States, there are between 48,000 and 94,000 preventable hospital deaths each year. The country is also gripped with a nursing shortage; environments that are more comforting help keep nurse attrition rates down while reducing the risk of mistakes and injuries. (This is by no means limited to the United States: A recent study conducted by the U.K.'s Commission for Architecture and the Built Environment and the Royal College of Nurses showed that well-designed healthcare environments cut recovery times for patients and boost staff morale.)

HARD RESULTS

More hospitals are making EBD a cornerstone of new facility designs. For example, says Frank Sardone, president and CEO of Bronson Methodist Hospital, a Pebble Project participant in Kalamazoo, Michigan, in a recent \$200 million buildout of his facility, his staff implemented a number of EBD interventions. The list includes more private rooms for patients; an improvement in general ambience from the old facility, with an indoor garden that has become a destination point for patients and visitors; and the insertion of more corridors and rest areas, many with rotating art installations commissioned specifically for the facility.

Sardone is quick to point out that when preparing the EBD changes, the facility has the opportunity to address its own "cultural" values as well, which can contribute to patient and staff improvement. "As a result of these changes," claims Sardone, "we've had tremendous increases in all of our indicators." He cites a 25 percent increase in patient volume, a 9 percent increase in patient satisfaction following discharge, and a similar boost in staff sentiment while experiencing a drop in nurse turnover.

At the Barbara Ann Karmanos Cancer Institute in Detroit, administrative manager Dore Shepard renovated several inpatient facilities, with results she's shared with the Pebble Project. The center examined the impact of improved privacy, choice of color, and better lighting on patient accidents, staff retention, and medication administration over many months.

"In a nutshell, the vacancy rate for nurses went from 23 percent to 3.8 percent," Shepard claims. The number of medication errors dropped by 30 percent, while patient trip-and-fall incidents dropped 6 percent, she adds. And most intriguing, in a study Shepard did of a patient population suffering from sickle-cell anemia, a painful blood disorder, "what we found was that the total narcotic per day of 197 mg at the old unit went down to 90 mg per day on the new unit."

As the Pebble Project grows, Parker hopes that the next step will be to actually issue RFPs for facilities to undertake specific kinds of research, as opposed to letting hospitals pick their own areas of

EBD study. "Can you reproduce the studies from the same designs?" asks Parker hypothetically of the next batch of participants. Eventually, instead of merely gathering research, Pebble Project staff members could be retained by hospitals to prescribe changes that have been proven to work.

THE "FABLE" FACILITY

Toward that end, Parker hopes to find or develop a "fable" hospital, one in which "everything is done right" from an EBD standpoint. This wouldn't be a radical facility: "I'm told by very reputable physicians that only 15 percent of medicine is evidence-based," says Hamilton, the remainder being observation and practice determined. In the design analog, he estimates that only 5 to 10 percent of decisions would be determined by EBD.

Still, the project leaders believe that the results would be radical. "Investment cost could easily be repaid in one year," says Hamilton. The premium for developing this sort of hospital would be only 5 percent above normal construction costs, by Parker's calculation, in an industry in which 50 percent of a facility's capital cost can be eaten up in a year of operation.

Money matters aside, the Pebble Project aims to make design as much a part of healing as medications and X-rays, while having indisputable quantitative evidence to back up their claims. Says Parker, "We're seeking to show that this is a legitimate therapeutic modality." ■



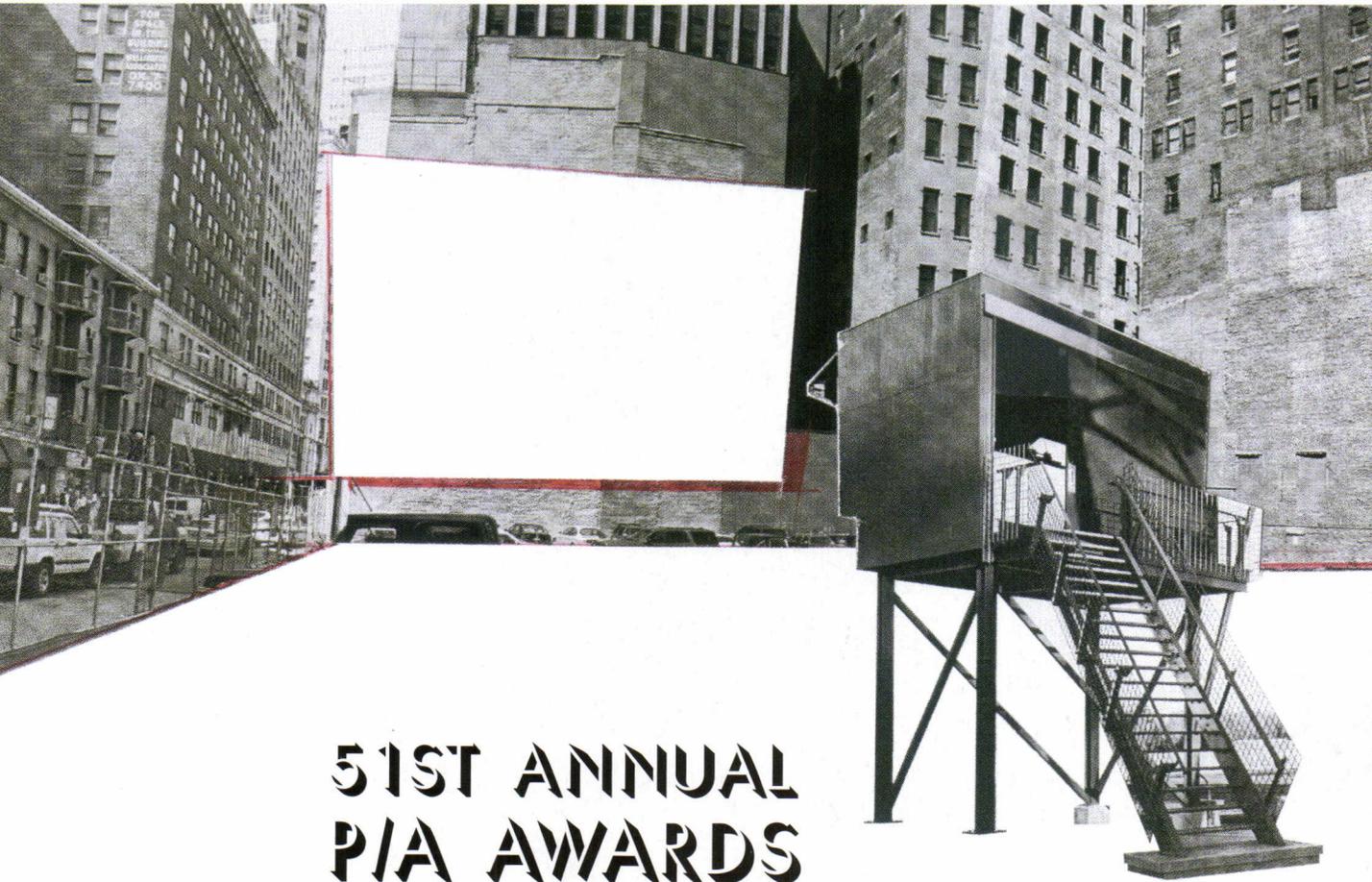
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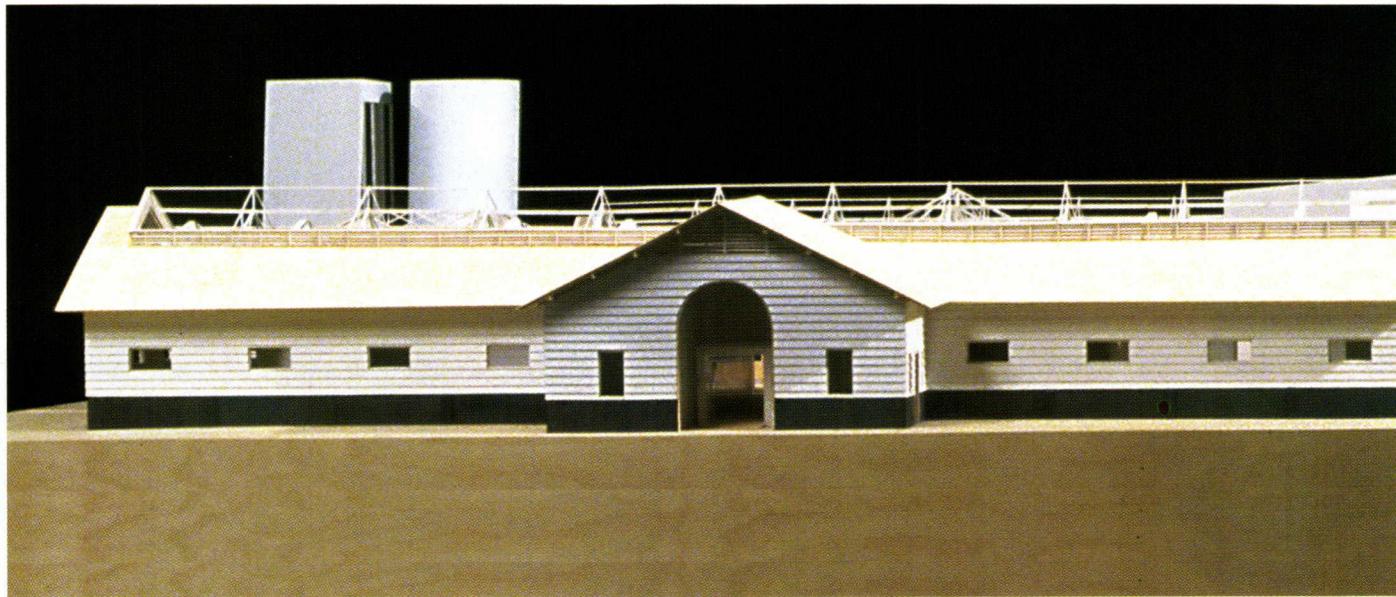
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51ST ANNUAL P/A AWARDS

The vehicles of progressive architectural work are new ideas and opportunities; inquisitive architects take the wheel. *Architecture's* Progressive Architecture Awards—P/A Awards, for short—bring into view the most skillful travelers. Two guideposts mark their course: excellence in design, and an uninhibited exploration of uncharted territory. Whether the architect's work has arrived is left to our jury to determine. Following two days of critical deliberations, jurors Craig Dykers, Edward A. Feiner, Vincent James, Peter W. Pfau, and Mónica Ponce de León celebrate our generation of explorers.



PROGRAM | A nonprofit museum in Pasadena, California, for children ages one to twelve that emphasizes interactive exhibits in the arts, sciences, and humanities. Exhibition spaces, classrooms, administrative offices, a 150-seat theater, and a café are housed in 15,000 square feet of rehabilitated structures and 30,000 square feet of new construction.

SITE | A 3.3-acre parcel in Brookside Park bordered by the Rose Bowl, baseball fields, and a wooded hillside. The land, which includes a historic, three-building former horticultural center, slopes upward to the north.

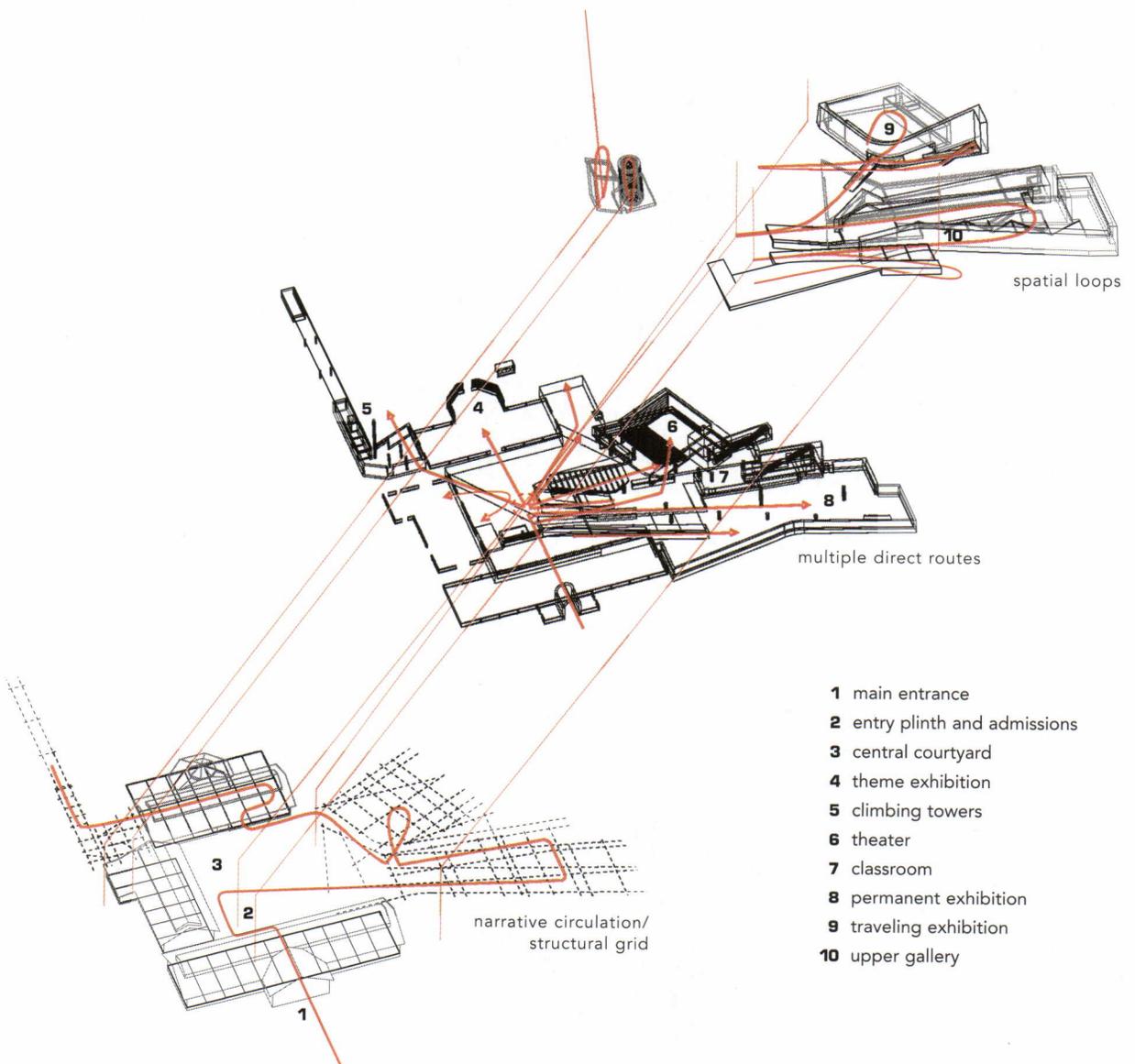
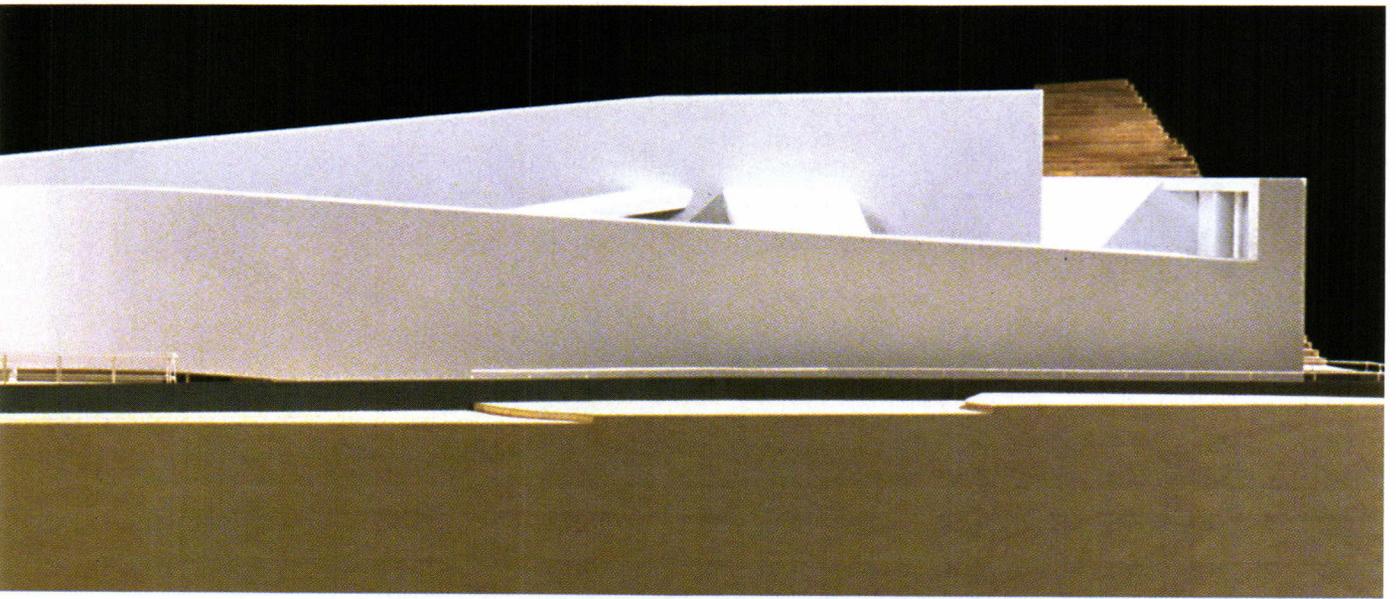
SOLUTION | Movement through the building allows for either a continuous narrative procession (entry to galleries to classrooms, for example) or a series of direct routes or "short circuits," such as entry to theater or entry to twin towers, where visitors can play on climbing structures and have a bird's-eye view of activities below. Old and new structures are woven together to create an inward-oriented landscape of ramps, stairs, and activity: A "tube" pierces the largest of the existing structures, delivering visitors from the park onto a new plinth that occupies the interior courtyard. Organized as bundled layers and slots, the scheme establishes long views through multiple volumes of programmed spaces, supporting both singular activities and the potential for spontaneous programmatic overlaps.

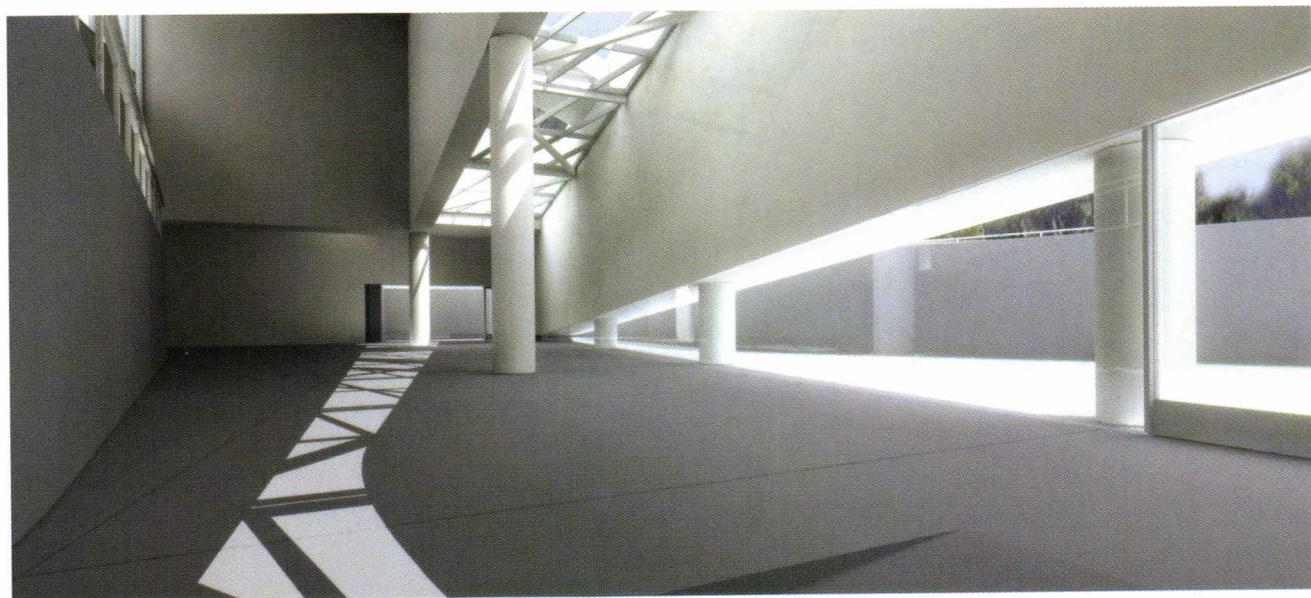
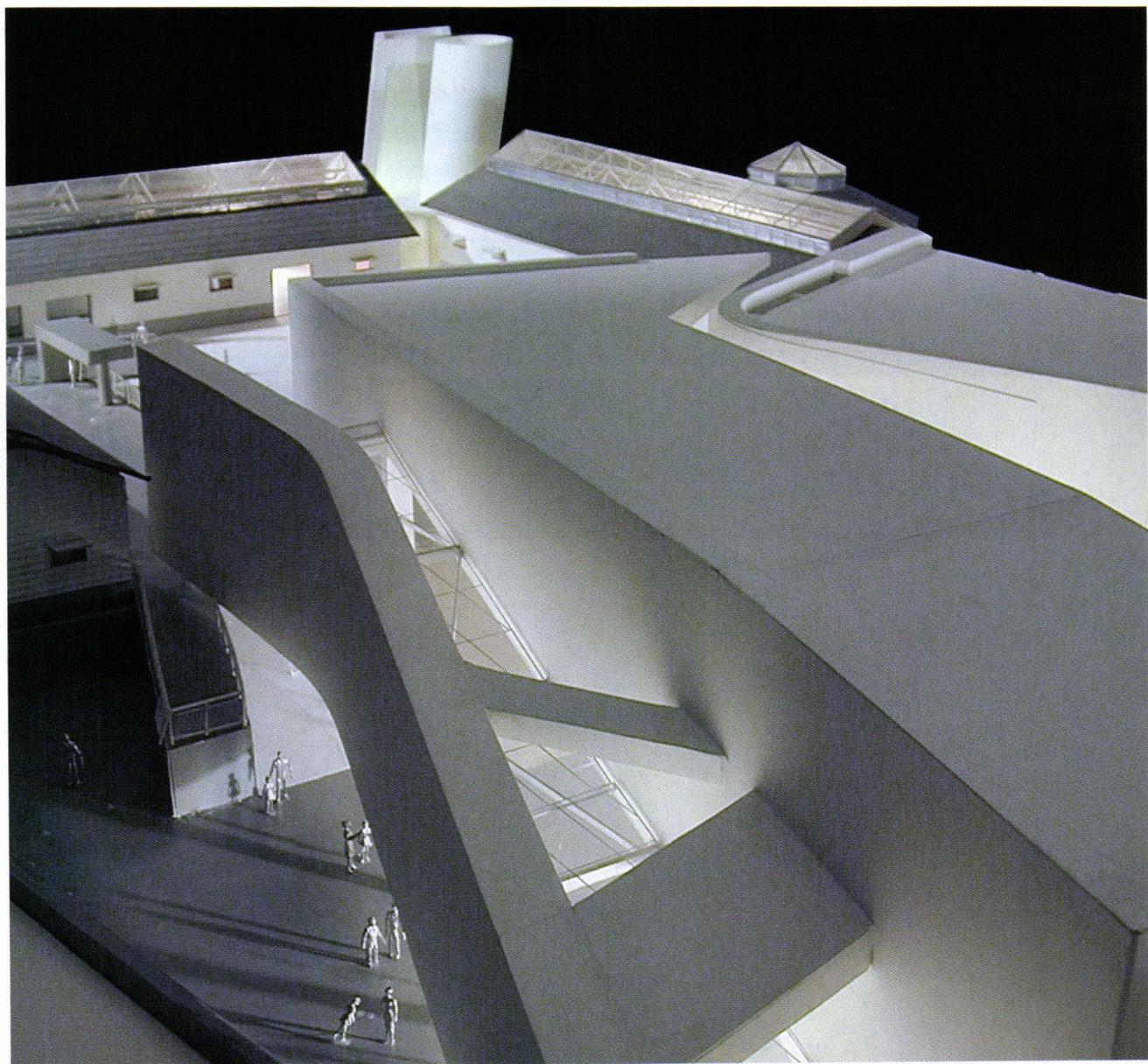
MATERIALS | Steel framing and shear-resisting braced frame and walls; three-coat plaster system; single-ply roof membrane; poured concrete floors; aluminum framing; frameless glass.

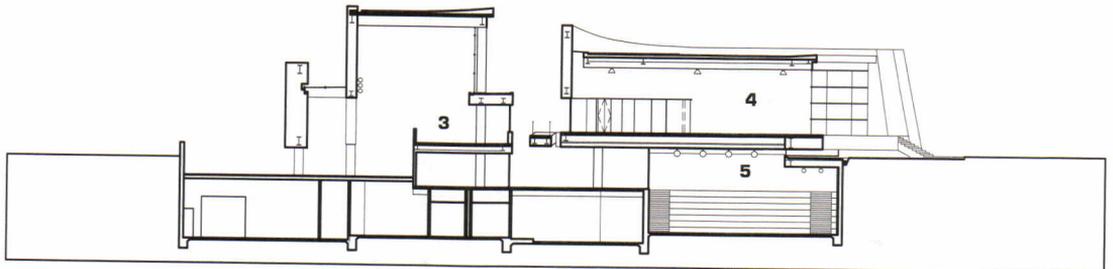
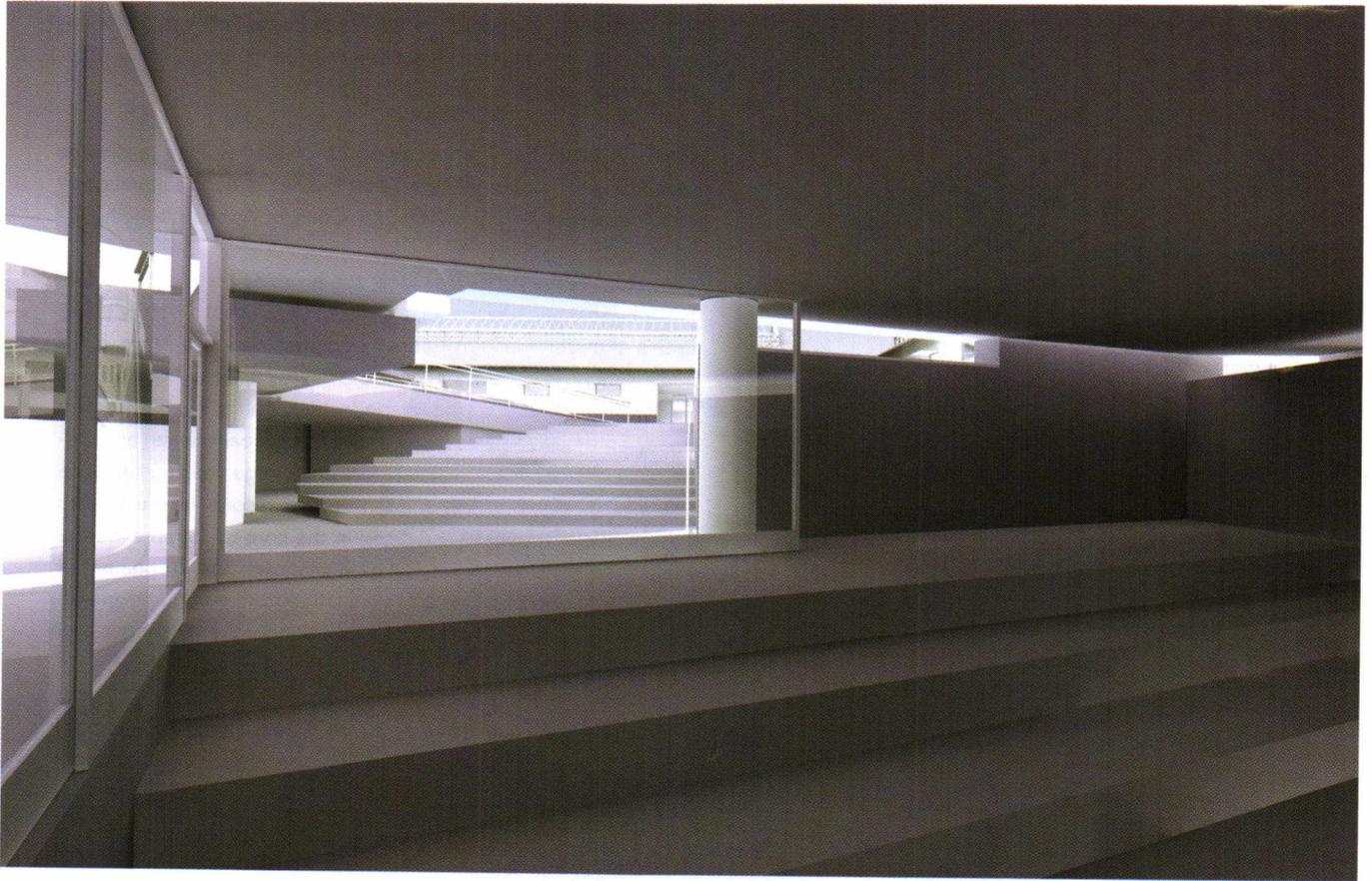
JURY COMMENTS | Impressed by the architect's atypical approach to children's-museum design, the jurors found much to admire in the "dynamic" weaving and "connectivity" of interior and exterior spaces. The design, pointed out one juror, "derives interest and excitement from the architectonics of the building rather than stereotypical colors and forms." Abstracted forms, in the jury's opinion, offer a malleable venue for both play and learning. "Can't you imagine kids running up and down those ramps and having a lot of fun?" asked one juror. "This building will make them want to run and crawl." The absence of exhibition installations in the submission material, however, was an issue of some concern for the jury. "In order to make this a truly great project," argued another juror, "they need to hire a really exceptional exhibition designer to work with." Then, "it'll be world class."

KIDSPACE CHILDREN'S MUSEUM, PASADENA, CALIFORNIA

CLIENT | Kidspace Children's Museum **ARCHITECT** | Michael Maltzan Architecture, Los Angeles—Michael Maltzan (design principal); Timothy Williams (project designer); Tom Goffigon (project director); Melanie McArtor (project manager); Stacy Nakano (job captain); Owen Tang (senior project architect); Yong Kim, Steven Lee, Rebecca Rudolph, Samantha Whitney, Manuel Blanco, Doug Heaton, Krista Scheib, Dana Bauer (project team) **ENGINEERS** | John A. Martin & Associates (structural); Virgil's Firm (civil); Innovative Engineering Group (M/P); Kocher Schirra Goharizi (electrical) **CONSULTANTS** | Lam Partners (lighting); Nancy Goslee Power & Associates (landscape) **CLIENT PROJECT MANAGER** | Renaissance Partners **CONTRACTOR** | Matt Construction **MODEL PHOTOS** | Joshua White **AREA** | 40,000 square feet **COST** | \$13.5 million

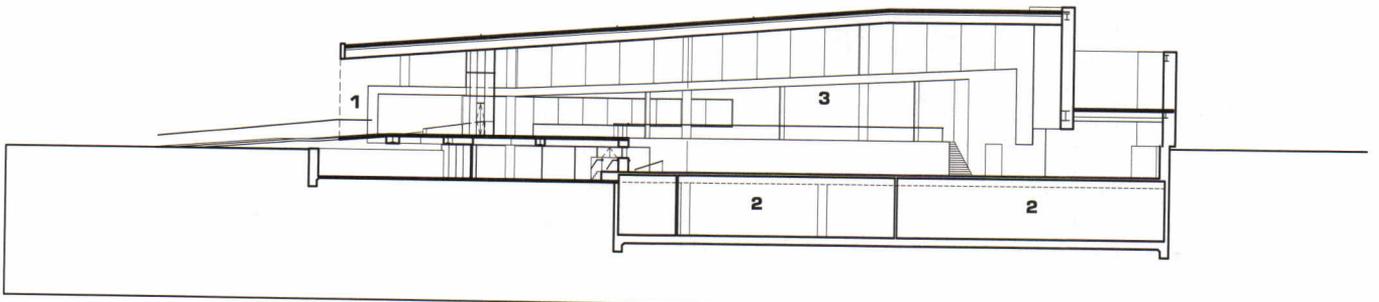






east-west section

- 1 entry porch
- 2 classroom
- 3 upper gallery
- 4 traveling exhibition
- 5 theater



north-south section 15'

CITATION **HEAVY/LIGHT HOUSE**

DAN HISEL DESIGN



PROGRAM | A 1,000-square-foot guest house with a full bathroom, a bed, a small kitchen, dining area, living room, and deck built into an abandoned railroad bridge.

SITE | The Cadyville Bridge, spanning the Saranac River near Plattsburgh, New York, and surrounded by woodlands. Built in 1879, the bridge rests near a functioning hydroelectric power station, on sheer sandstone cliffs 75 feet above the river.

SOLUTION | The architect focused on juxtaposing the notion of a bridge as a place of movement with that of a house as a place of rest. To delineate this tension, living spaces are demarcated by extruded apertures that connect them visually to their surroundings. The most striking of these is a glazed living room suspended below the bridge on the southern end. Beyond it is an untouched portion of the original structure. To enter the guest house, visitors slip below grade on the northern bank, descending beneath a pathway that leads out onto the railroad ties.

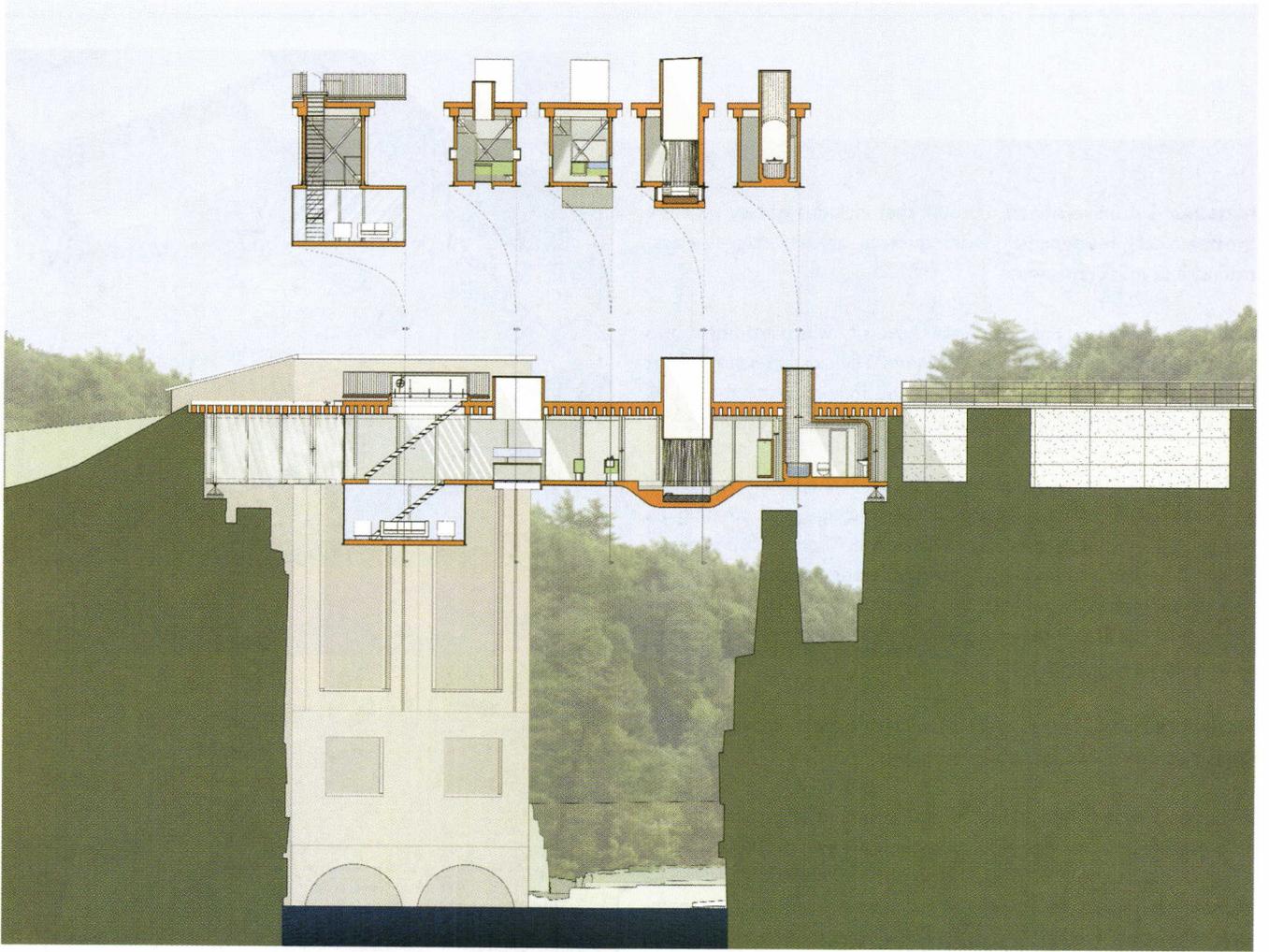
MATERIALS | Existing steel-girder bridge lined with wood panels; radiant-heat concrete floor slab over insulation and metal decking; insulated glass; sod roof system.

JURY COMMENTS | The jurors were impressed with what one called “the poetry of the project.” They praised the scheme for its discipline. One juror even compared it to Fallingwater, calling it “a remarkable solution for a phenomenal site.” The group also noted that each elemental experience is given a distinct form in the passage from north to south. All agreed that the idea of working with a found object was commendable, but that they wished the project had maintained more of the feeling of the original structure.

HEAVY/LIGHT HOUSE, CADYVILLE, NEW YORK

CLIENT | Tom and Christine Gerner **ARCHITECT** | Dan Hisel Design, Cambridge, Massachusetts—Dan Hisel, Ford Roberts (project team)

ENGINEER | Robert M. Sutherland **GENERAL CONTRACTOR** | Mitchell Rabideau **AREA** | 1,000 square feet



CITATION NOAA SATELLITE OPERATIONS FACILITY
MORPHOSIS

PROGRAM | 208,000 square feet of offices and data centers and 100,000 square feet of underground parking for the National Oceanic and Atmospheric Administration (NOAA), the U.S. agency that collects weather and environmental data to provide to government and private users.

SITE | 16 acres of slightly sloping wooded and grassy terrain in Suitland, Maryland.

SOLUTION | The scheme emphasizes both NOAA's focus on the environment and the highly technical nature of the organization's work by dividing the program into two zones, one on grade, and the other subterranean. The majority of the building's square footage—office space for processing, verifying, and redirecting raw data—is submerged below ground, minimizing the structure's presence and integrating it with the landscape. Atop this hidden realm is a narrow, two-story mass in which technicians download and transmit images and information. The building is crowned with 19 antennae that swivel and tilt as they track the movements of satellites.

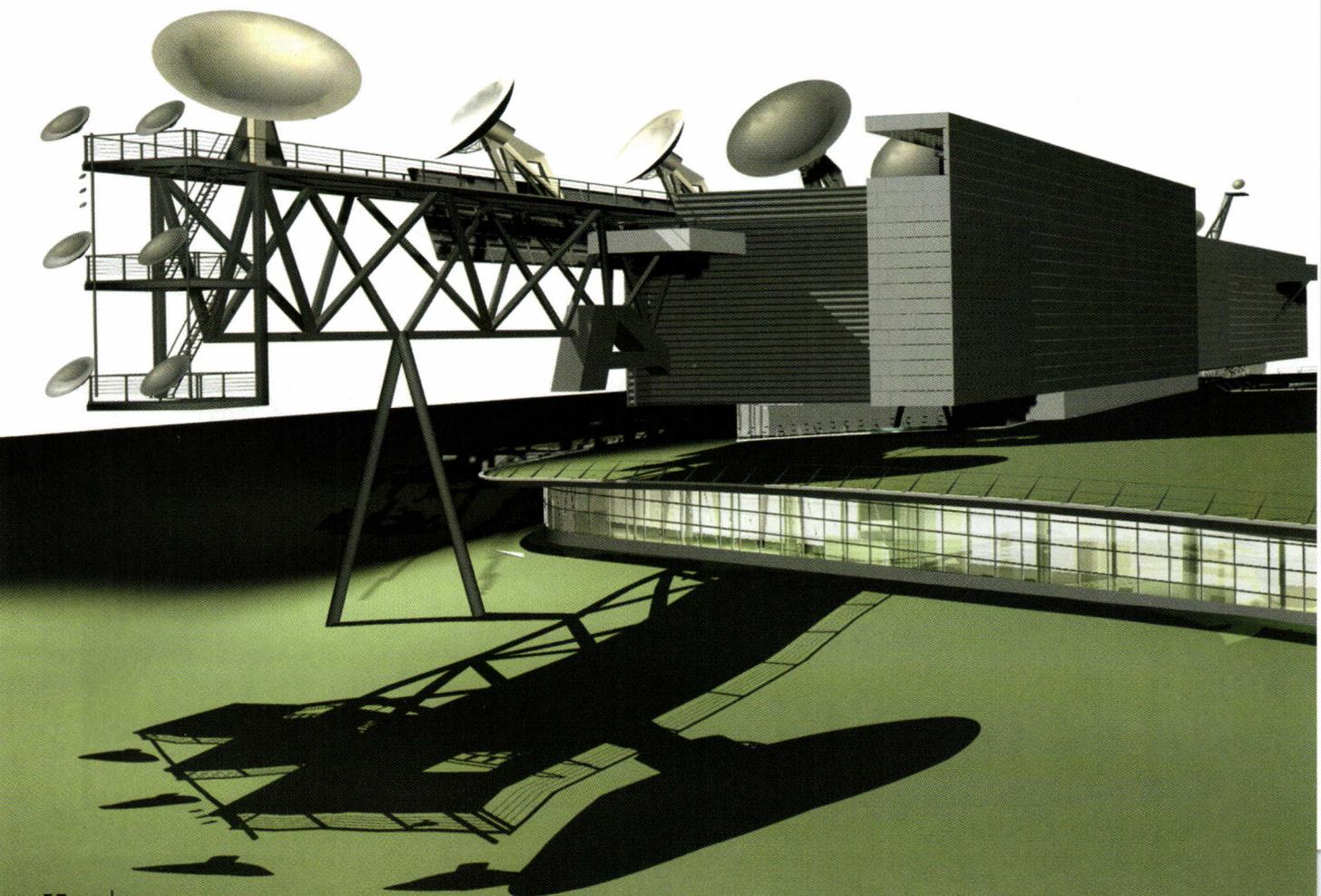
MATERIALS | Poured concrete structure; composite concrete/sod roof system.

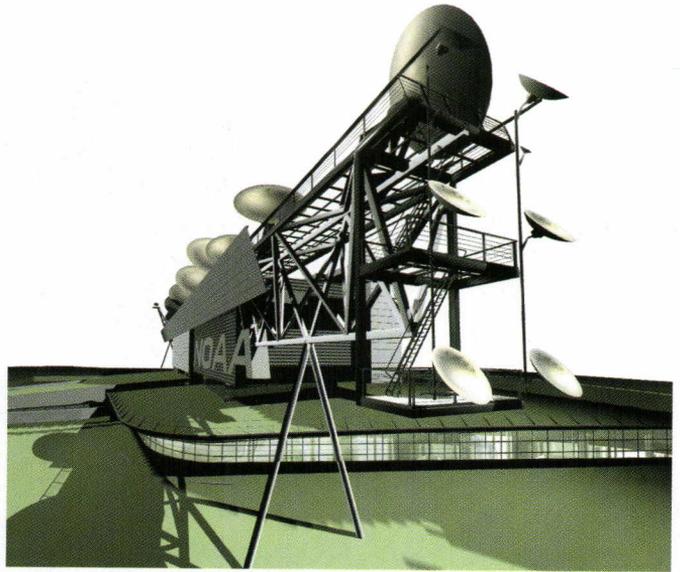
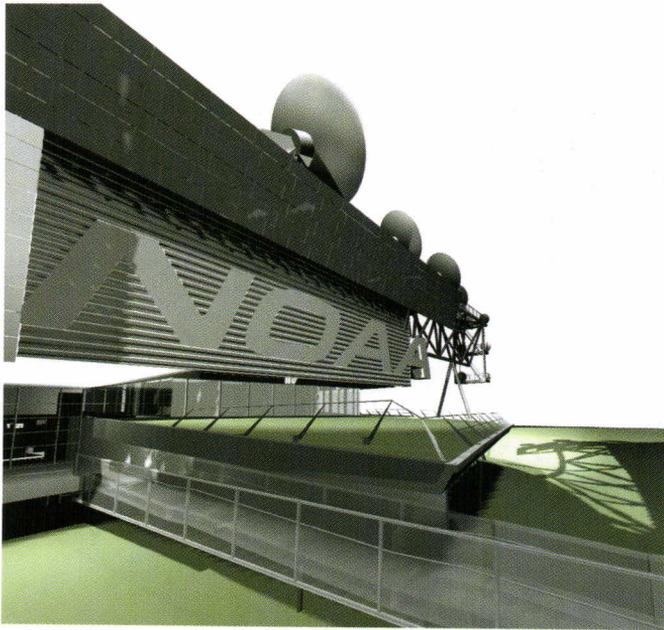
JURY COMMENTS | Most jurors agreed that this was "a very skillful solution to a complex technical problem" that turned "industrial objects that most people don't value—which are, in fact beautiful objects in their own right—into a formal strength of the building."

All applauded the decision to submerge the majority of the program and create a green space in a suburban area. There was some debate however, over the relationship between technology and nature put forth by the scheme. One complaint was that by isolating technological functions, the design may not fully explore "what it means to create technology and to create buildings for technology in a landscape." Another juror expressed concern that the result moves toward "a cartoon of what we think technology should look like." Others agreed that the building "suffers from its own romance with itself."

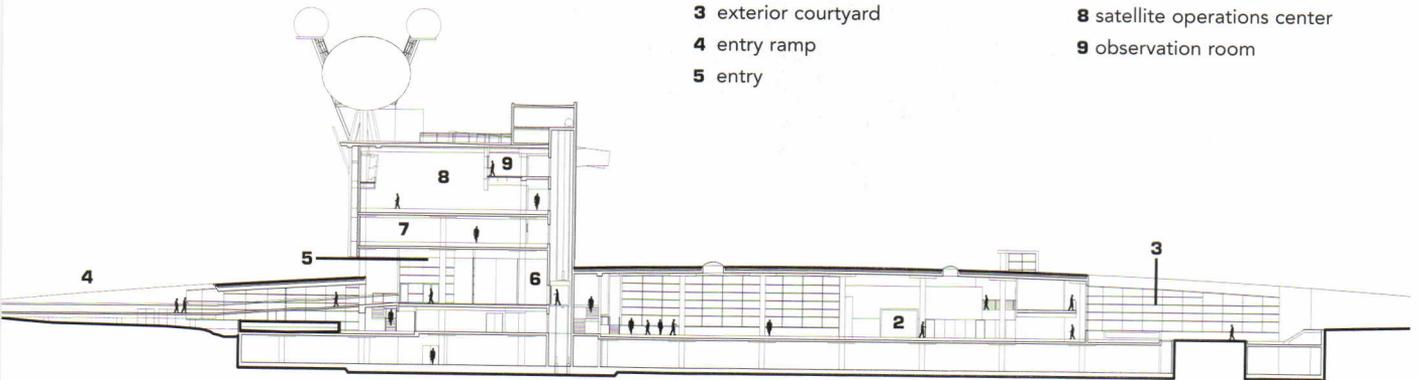
NOAA SATELLITE OPERATIONS FACILITY, SUITLAND, MARYLAND

CLIENT | U.S. General Services Administration, Capitol Planning Region
ARCHITECT | Morphosis/Einhorn Yaffee Prescott (joint venture): Morphosis, Los Angeles—Thom Mayne (principal, lead designer); Paul Gonzales (project manager); David Rindlaub (project architect); Edgar Hatcher, Salvador Hidalgo, Ted Kane, Jean Oei, Chris Warren (project team) **ARCHITECT AND M/E/P ENGINEER** | Einhorn Yaffee Prescott, Albany, New York—Doug Gehley, Ed Kohlberg, Bill Lavine (principals); Randy Wong (project manager); Eileen McNelis, Ken Roos, Jennifer Whitenight (project team) **ENGINEERS** | Cagley & Associates (structural); A. Morton Thomas & Associates (civil) **LANDSCAPE ARCHITECT** | EDAW **CONSULTANTS** | Horton Lees Brogden Lighting Design (lighting); Davis Langdon Adamson (cost estimating); Shen, Milsom, Wilke (audio/visual); Jaycor (security); CMS Consultants (specifications); Cini-Little (kitchen); Vertran (elevators) **CONSTRUCTION MANAGER** | 3DI **GENERAL CONTRACTOR** | P.J. Dick **AREA** | 344,480 square feet **COST** | \$50 million

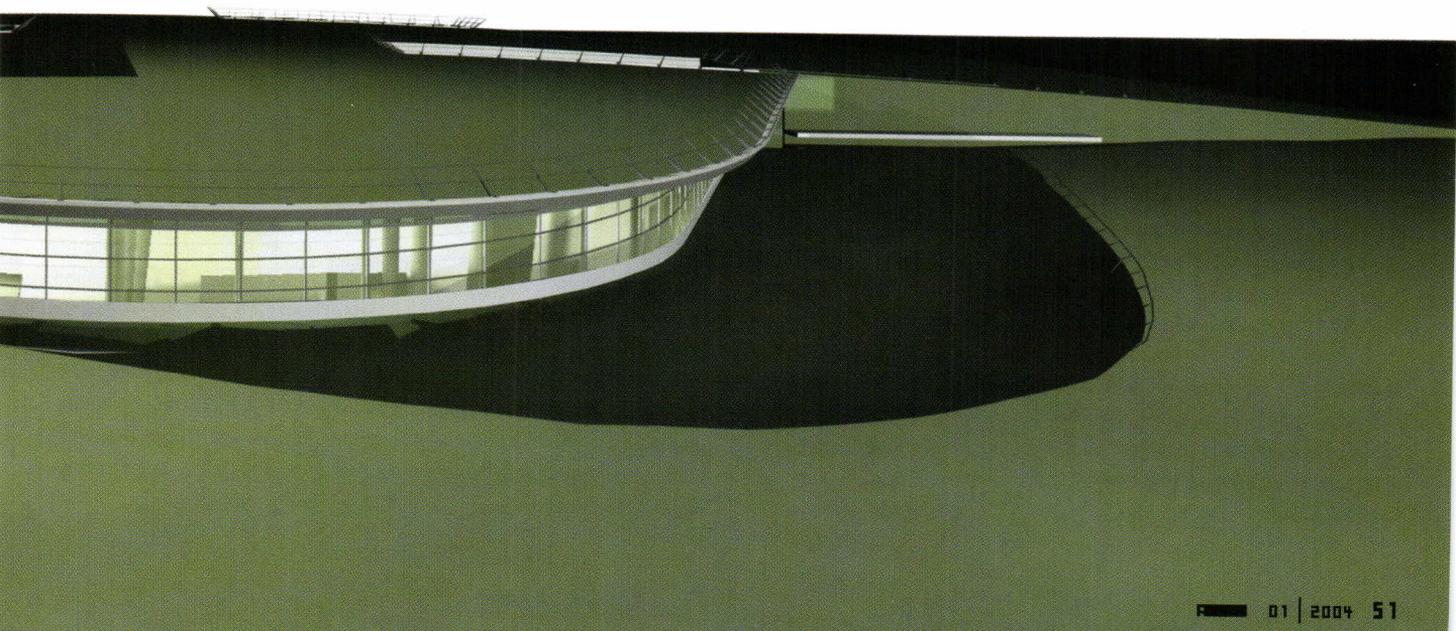


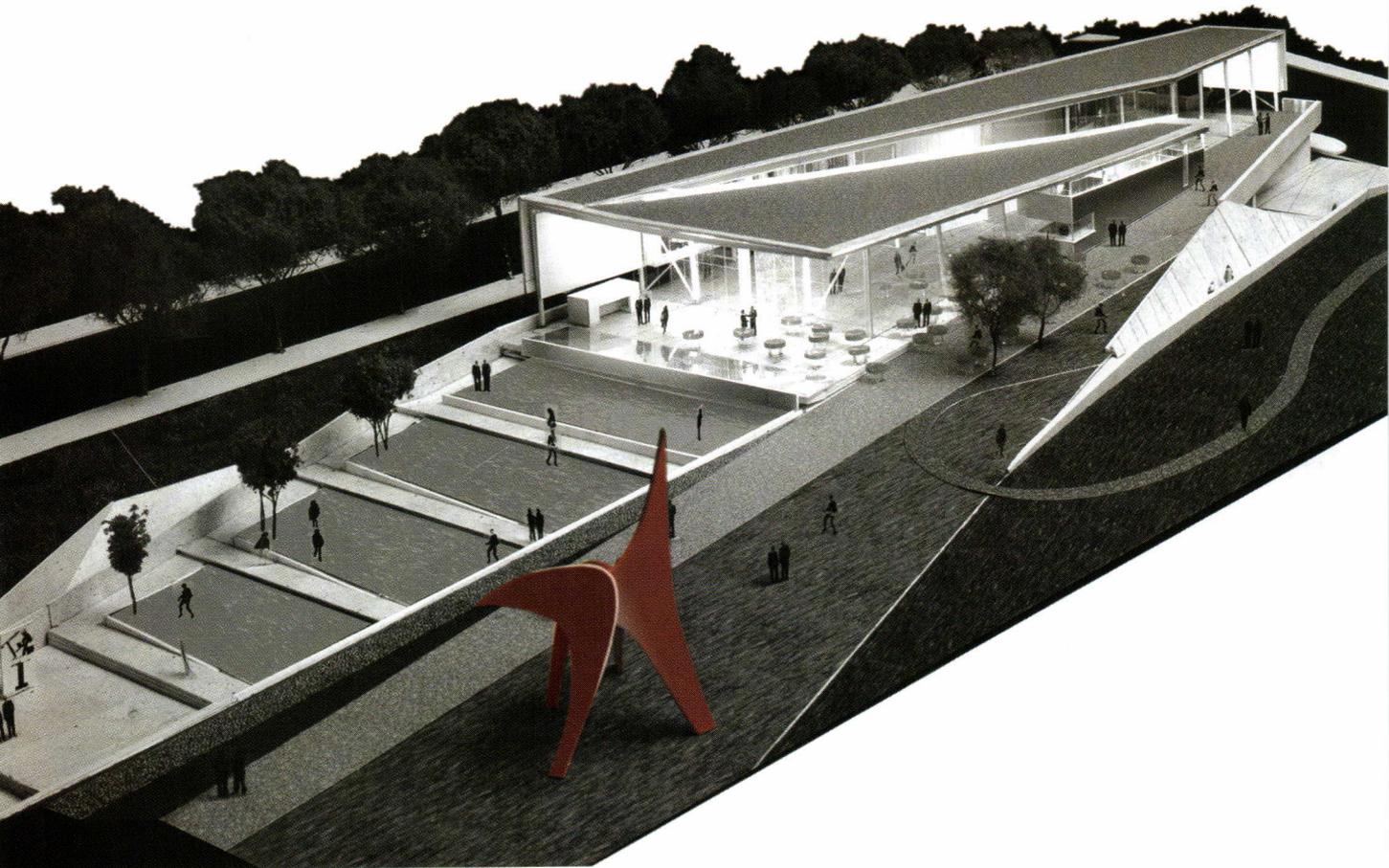


- 1 parking
- 2 main open office space
- 3 exterior courtyard
- 4 entry ramp
- 5 entry
- 6 elevator lobby
- 7 computer operations center
- 8 satellite operations center
- 9 observation room



east-west section ——— 28'





PROGRAM | A sculpture park, owned by the Seattle Art Museum, that allows visitors waterfront access to Seattle's Elliot Bay and provides a public space for performance, film, and dance events. A climate-controlled, 7,500-square-foot pavilion is to include a café, outdoor terrace, meeting rooms, and gallery space.

SITE | Three brownfield parcels separated by roads and train tracks. There is a 40-foot change in elevation from the water's edge to the eastern-most point of the site, allowing views of Puget Sound and the Olympic Mountains. The former owner, Union Oil of California, intends to install a low-permeability soil cap for environmental protection.

SOLUTION | A system of staggered landforms connects the three parcels by spanning the intervening roads and rail tracks, creating a meandering and continuous engineered landscape for art. The pavilion is located at the southern end of the park. It covers below-grade parking while integrating itself further into the site with its sod roof. A terraced area adjacent to the water in the north portion of the park provides expansive views.

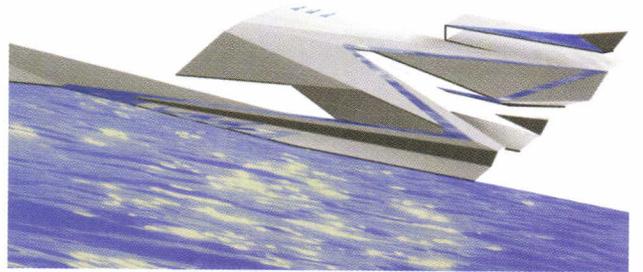
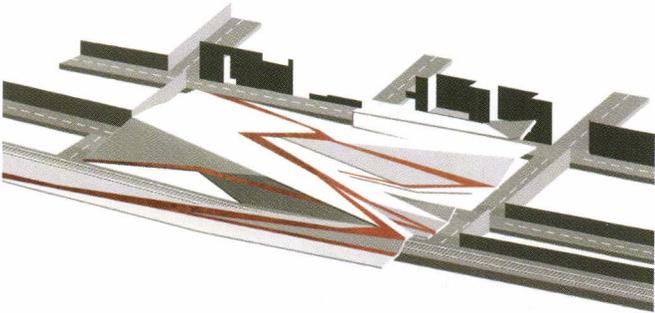
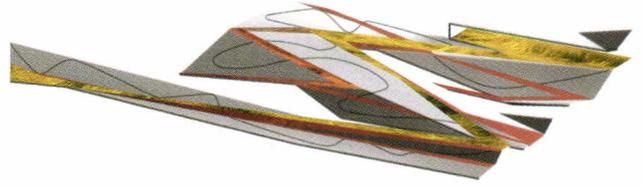
MATERIALS | Site: cast-in-place concrete retaining walls; prestressed concrete slabs; low-permeability soil cap with clay liner; paths of crushed gravel, local granite, and recycled plastic. Exhibition pavilion: cast-in-place and prestressed concrete; aluminum curtain wall; insulated glass.

JURY COMMENTS | The jurors all agreed that the sculpture park's site made for a challenging brief: As with many urban areas that are adjacent to large bodies of water, major automotive and industrial traffic routes act as "cognitive barriers" to the kind of unrestricted pedestrian traffic that the park must attract to be successful. On the one hand, jury members found that the project drew on a variety of approaches in addressing the site's needs, from landscape architecture and urban design to social research. "They're coming into a kind of mix [of methodologies] which is very rich," said one. And yet, as another juror pointed out, "This project is conceptually strong but also focuses on finding a buildable, practical way to address a specific large-scale urban design problem."

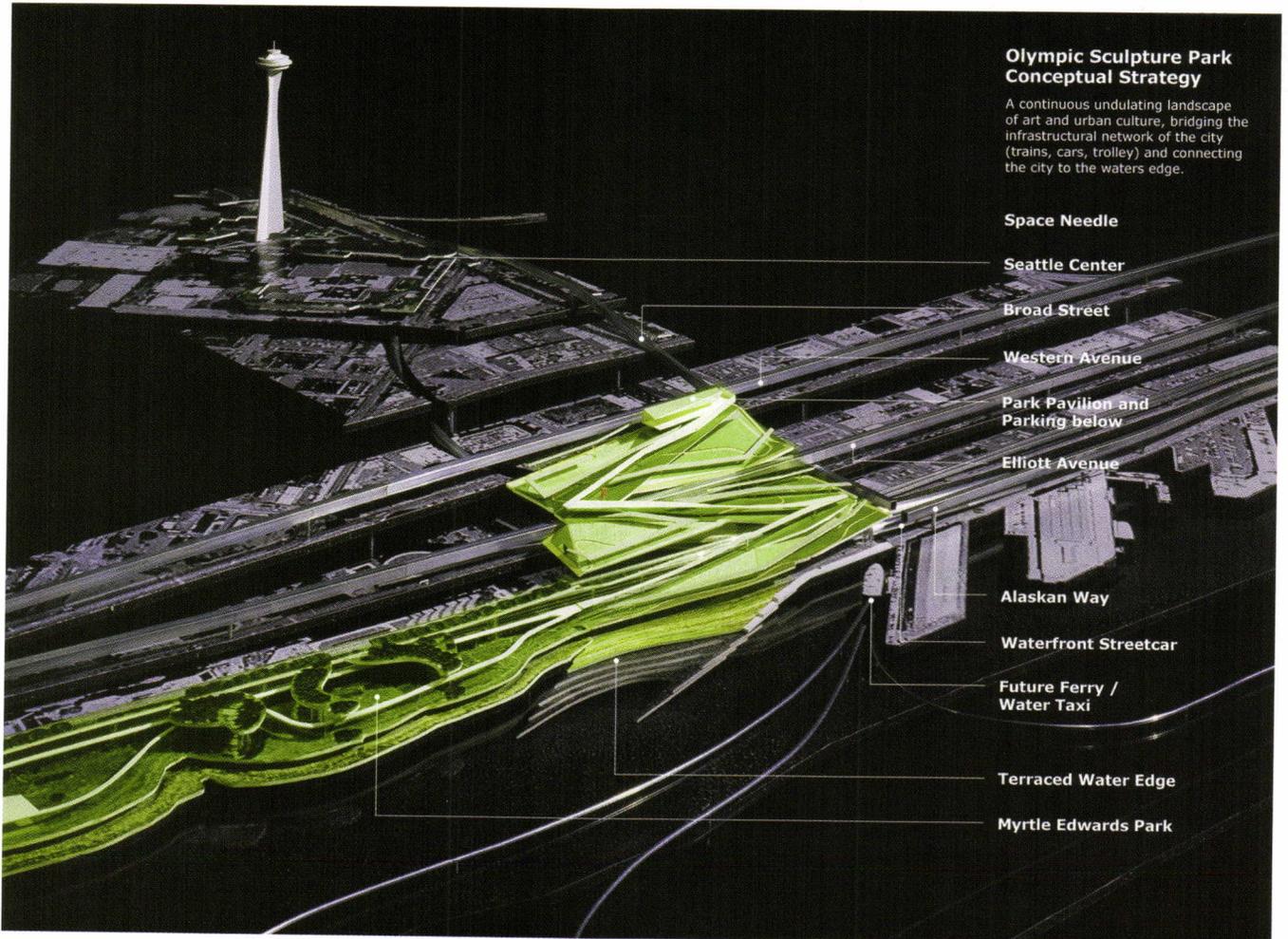
OLYMPIC SCULPTURE PARK, SEATTLE

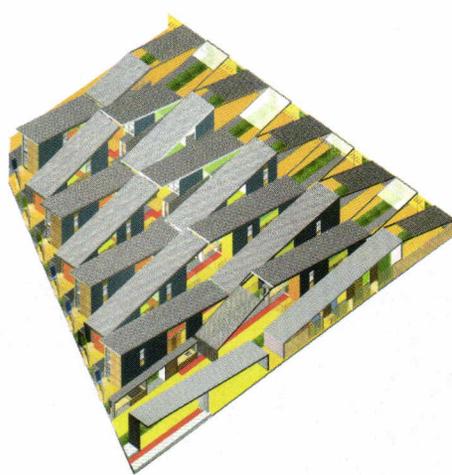
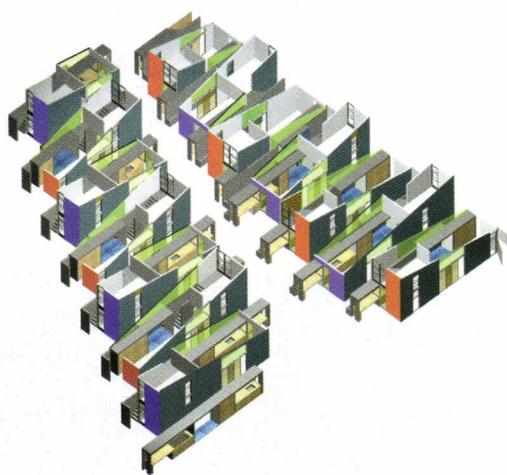
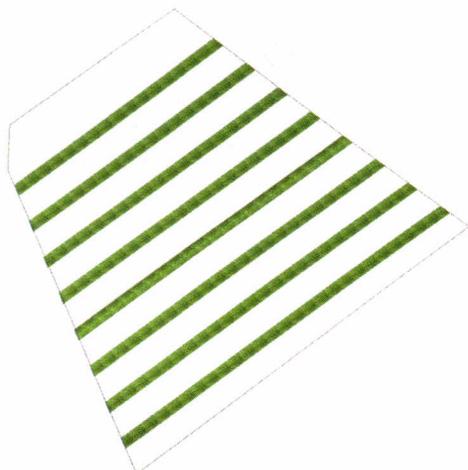
CLIENT | Seattle Art Museum **ARCHITECT** | Weiss/Manfredi Architects, New York City—Michael Manfredi, Marion Weiss (partners); Christopher Ballentine (project manager); Yehre Suh, Todd Hoehn, Kok Kian Goh, Mustapha Jundi (design team) **CONSULTANTS** | Charles Anderson Landscape Architecture (landscape architect); Magnusson Klemencic Associates (structural and civil engineering); Hart Crowder (geotechnical engineering); ABACUS Engineering Systems (M/E/P and fire-protection engineering); Anchor Environmental (aquatic engineering); Barrientos (project management); Sellen Construction (construction management)

AREA | 8.5 acres



axonometric diagrams of vegetation, walking paths, water, and infrastructure





PROGRAM | A community of 14 low-cost housing units for seniors, with an adjacent childcare facility for grandchildren. The client, a nonprofit community-development organization, seeks to integrate the starkly different urban fabrics that exist on either side of the nearby U.S./Mexico border.

SITE | An undeveloped suburban parcel in San Ysidro, a community in San Diego, California, less than a mile from Mexico.

SOLUTION | The project proposes densification strategies typical of Mexican urban settings—for example, spaces that can be alternately closed off for private use and opened to the community—and aims to weave internal circulation paths with existing city transportation lines such as trolleys. By bringing children and elders together, the scheme also suggests an integrated role for seniors in the broad social context. The development is designed to be built in layers as waves of funding become available, starting with pathways, communal green space, and electricity-bearing service walls that can be shared by neighboring residents.

MATERIALS | Concrete-block and masonry service walls; wood-framed housing envelopes; metal roofs; steel canopies with photovoltaic panels.

JURY COMMENTS | Jurors applauded the project's stated goal of bringing thoughtful architecture to a poor neighborhood, though some were concerned that the plan was too relentless in its pattern and that the narrow concrete alleys would feel confining. The development's treatment as an integral part of a greater community rather than an isolated zone received accolades as did its flexibility, which is intended to allow inhabitants to creatively appropriate the architecture. One juror described the project as being about "how existing urban morphology is disjointed from the way that people actually occupy space. These are Hispanics that have come across the border, and they're occupying a single-family 1960s urban fabric, and they appropriate it. What this agency tries to do is develop new projects that allow those forms of occupation to take place in a legal fashion."

CASA FAMILIAR: SENIOR HOUSING WITH CHILDCARE, SAN DIEGO

CLIENT | Casa Familiar **ARCHITECT** | estudio teddy cruz, San Diego—Teddy Cruz (principal); Adriana Cuellar (project coordinator); Jota Samper Escobar, Jess Field, Mariana Leguia, Alan Rosenblum, Daniela Talamante (project team) **LANDSCAPE ARCHITECT** | Leslie Ryan **ENGINEERS** | Envision Engineering (structural); Flores + Lund (civil) **AREA** | 14,600 square feet



PROGRAM | A study and improvement of the public open-space system in a high-rise, urban area.

SITE | A triangular area of 104 acres in the financial district of Lower Manhattan, in New York City.

SOLUTION | In the wake of the World Trade Center attacks, the firms were retained to examine and expand the number of public spaces in the area. By linking existing private open spaces—typically ground-level amenities associated with tall buildings—to a series of new public open spaces, the project aims to increase pedestrian activity. Among recommendations put forward by the design team are green corridors, wider sidewalks on selected streets, gardens, enhanced park areas, a “view corridor,” and a new tower of mixed cultural and residential uses.

MATERIALS | Concrete; plants and sod; rubber surfacing; furniture arrangements; mobile grandstands; glass canopy; theater seating.

JURY COMMENTS | Jurors were taken by the subtlety of the interventions and solutions that address the “visual chaos” of the urban landscape in this “timely document.” They also applauded the project for “becoming a canvas [that] actually brings forward life in the region rather than dictating it.” One jury member highlighted the entry’s site-specificity and care: “I am interested in the sensitivity and the delicate hand-making of urban spaces out of leftover spaces.” Other jurors noted the especially difficult existing traffic patterns in the project area, which predate the right-angled intersections characteristic of most North American cities. “This is a very European part of the city,” said one jury member. “There is no street grid. It’s cow paths.” Added another, “They’re trying to identify ways to make pedestrian movement more comfortable, more spacious—very subtle things that could really improve the street.”

S.O.S.: STRATEGIC OPEN SPACE/PUBLIC REALM IMPROVEMENT STRATEGY FOR LOWER MANHATTAN

CLIENT | Lower Manhattan Development Corporation
ARCHITECT | Smith-Miller + Hawkinson Architects, New York City—Laurie Hawkinson (principal-in-charge); Lindsay Smith (project manager); Nadine Berger, Luben Dimcheff, Katherine Slutts, Rodrigo Piwonka, Alex Parsons, Jason Carlow (design team)
URBAN DESIGNER | Ralph Lerner Architect, Princeton, New Jersey—Ralph Lerner (principal-in-charge); Don Schillingburg, David Moon, Luran Winn (design team)
LANDSCAPE ARCHITECT | D.I.R.T. Studio, Charlottesville, Virginia—Julie Bargmann (principal-in-charge); Kate Orff (project manager)
TRAFFIC PLANNER | The Sam Schwartz Company, New York City—Sam Schwartz (principal-in-charge); Michael Fishman (project director), Adam Lubinsky (project manager); Erich Arcement, Andre Leduc (traffic engineers); Mike Barelli (junior engineer)
AREA | 104 acres

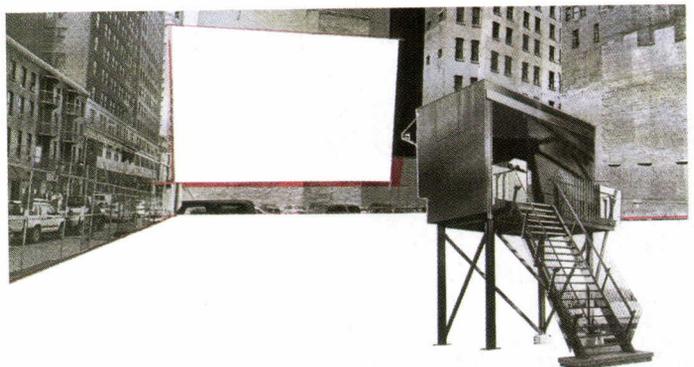


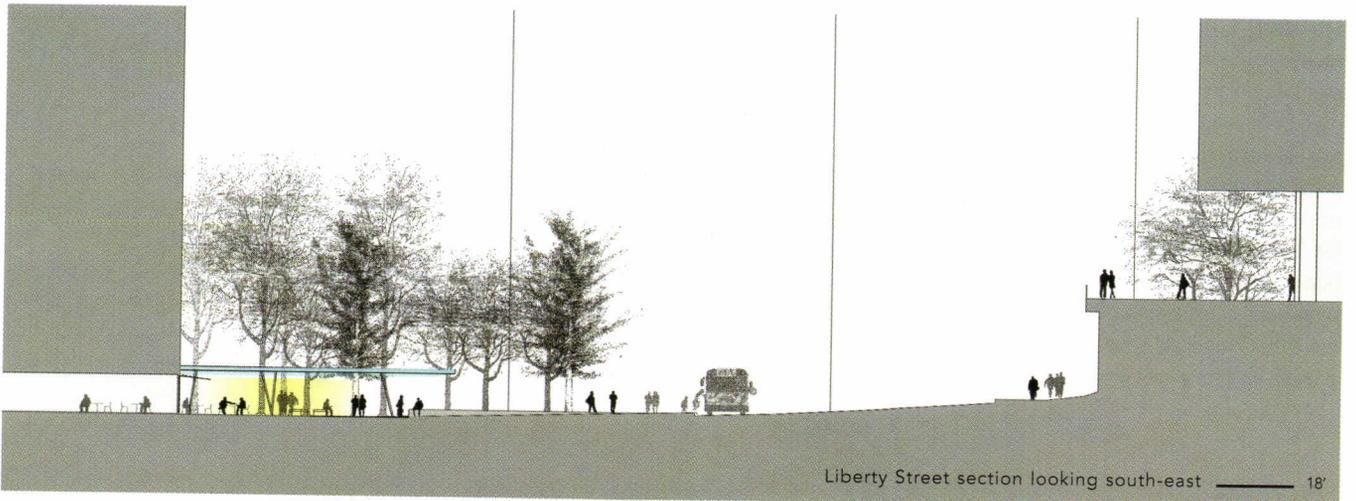
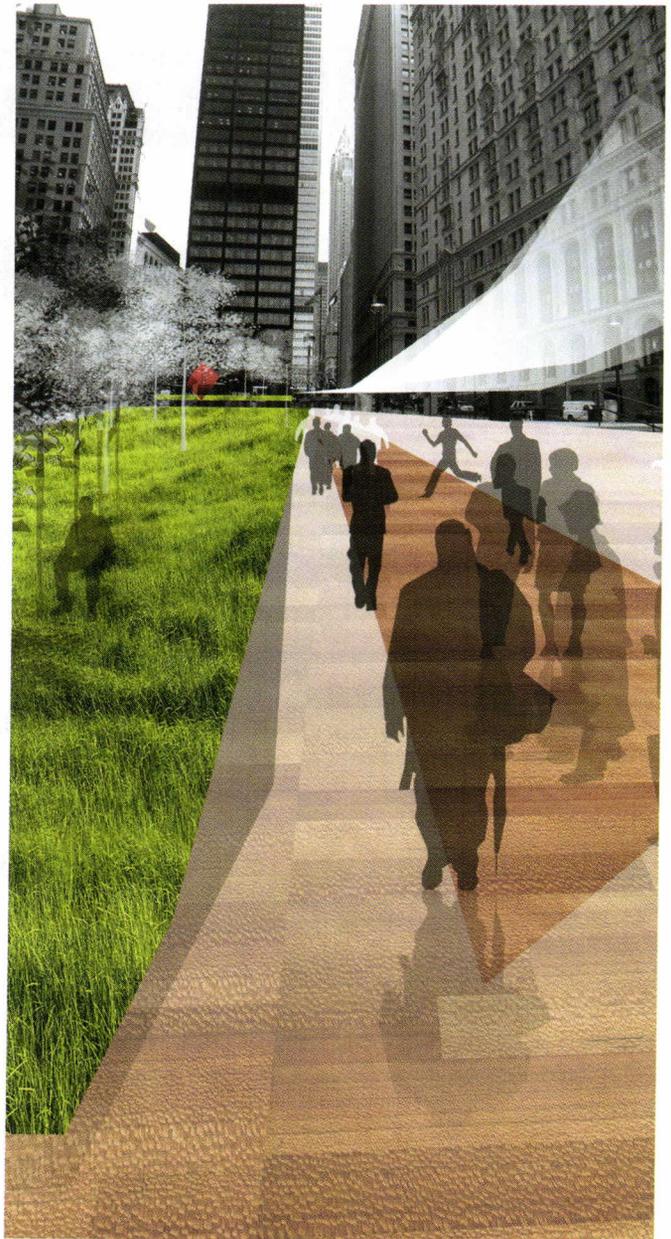
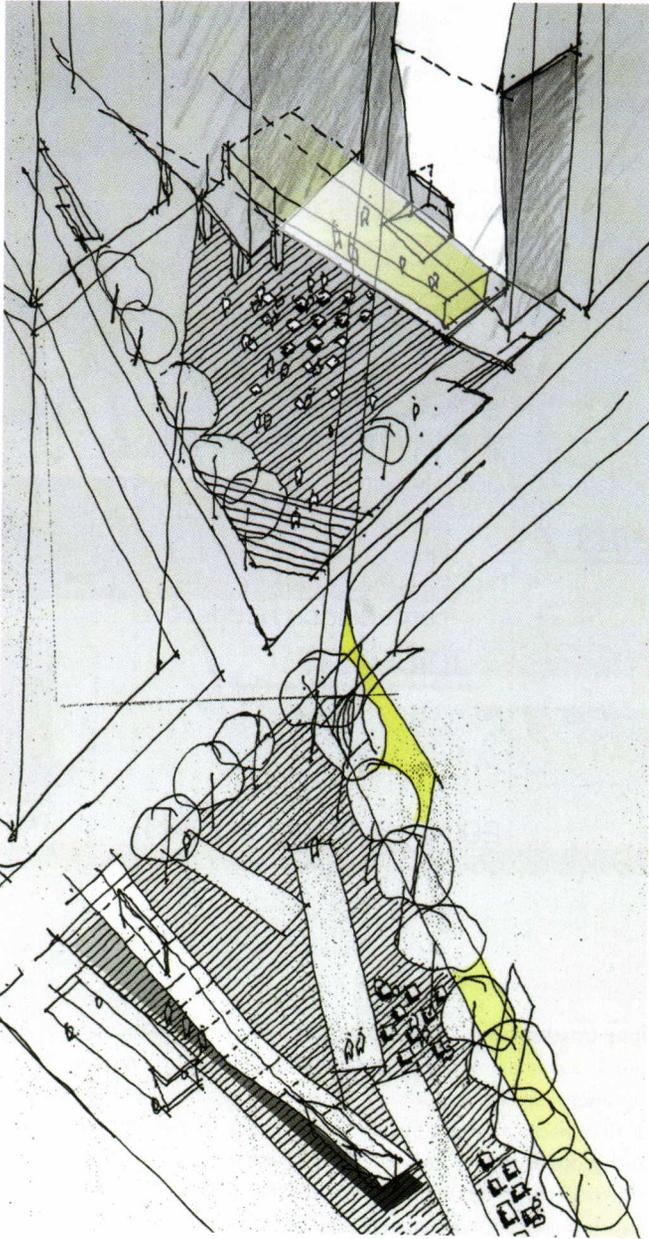
ON GOING PROJECTS

- 1 Memorial at WTC-Site
- 2 PATH - Terminal
- 3 Wedge of Light at WTC-Site
- 4 Fulton Transit Hub
- 5 Market Hall
- 6 Fulton Square
- 7 Proposed Liberty Street Room
- 8 Water Street Room at Wall Street
- 9 Water Street Room at Old Slip
- 10 Hannover Square
- 11 Water Street Room at Coenties
- 12 Battery Maritime Building Plaza
- 13 Battery Maritime Building
- 14 East River Waterfront Study Boundary
- 15 Battery Bosque
- 16 Bowling Green
- 17 Greenwich Square
- 18 NY Stock Exchange Streetscape Plan

LEGEND

- Open Space To Be Improved
- New Streetscape
- New Pedestrian Link
- Public Space To Be Added
- Existing Public Parks
- Study Area Boundary
- New Residential Development
- Proposed Green Loop (Mayor's Vision)
- Other Public Improvements Underway





Liberty Street section looking south-east 18'



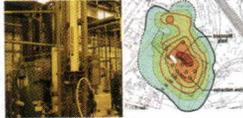
silresim chemical corp.



tanner street corridor



EPA . silresim superfund site



ground water treatment facility



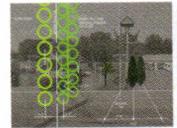
short-term occupations



gateway



events



remediation hedgerow

catalysts



remedi

1971

1979

1994

2001

2003

2005

PROGRAM | A redevelopment study of a brownfield site that addresses short- and long-term uses, especially light and “green” industries, and proposes phased implementation.

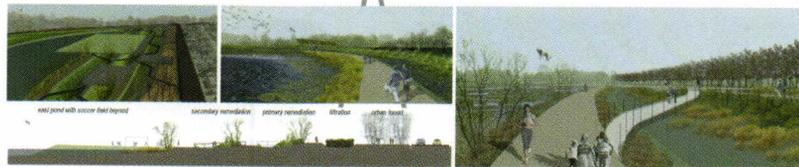
SITE | A 120-acre industrial and commercial district with an active water remediation plant and a 4.5-acre Superfund site, both near a highway, rail corridors, and a residential area in Lowell, Massachusetts.

SOLUTION | The designers propose a 20-year strategy for the environmental, economic, and social recovery of the site through implementation of a storm-water processing system and associated programming, which reveal remediation processes at work while leaving the nature of long-term uses open to negotiation. The aim is to both enlist community participation in redevelopment issues and increase political pressure to allocate funds for the site. The proposal involves five phased components: events (art festivals, movie nights at the Superfund site), catalysts (an interim ecopark, recreation trails), incubators (labor retraining centers), scaffolds (storm-water system, bioremediation terraces), and operational networks (coalitions of public, private, and nonprofit organizations alongside government agencies).

JURY COMMENTS | The progressive, sequential reactivation of the site found unanimous approval with the jurors. In a representative comment, one juror stated: “I think that the strength of the project is that each of the steps of the process makes the site viable and successful from the outset.” Equally appealing to the jury was the designers’ determination to retain the area’s original imagery, transforming what is typically negative space into positive space. “Architects [often] conceptualize landscape [as] hardscape,” said another. “It’s rare that you actually see the landscape for what it is—its mundane, simple character—without losing its conviviality.”

SILRESIM SUPERFUND REDEVELOPMENT STUDY

CLIENT | City of Lowell, Massachusetts, Division of Planning & Development **LANDSCAPE ARCHITECT AND URBAN DESIGNER** | StoSS Landscape Urbanism, Boston—Chris Reed (principal); Aki Omi, Anri Linden, Sarah Williams (project team) **SUBCONSULTANTS** | Niall Kirkwood, Center for Technology and Environment, Harvard Design School (brownfields planning); The Bioengineering Group (bioengineering); TRC Environmental (environmental engineering) **AREA** | 120 acres



east pond water processing park



eco-tech

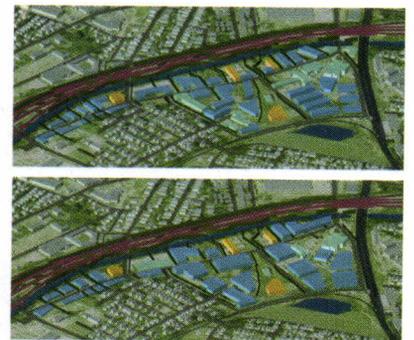
fold



incubator development



bio-remediation terraces . pilot site



development scenarios

2006

2007

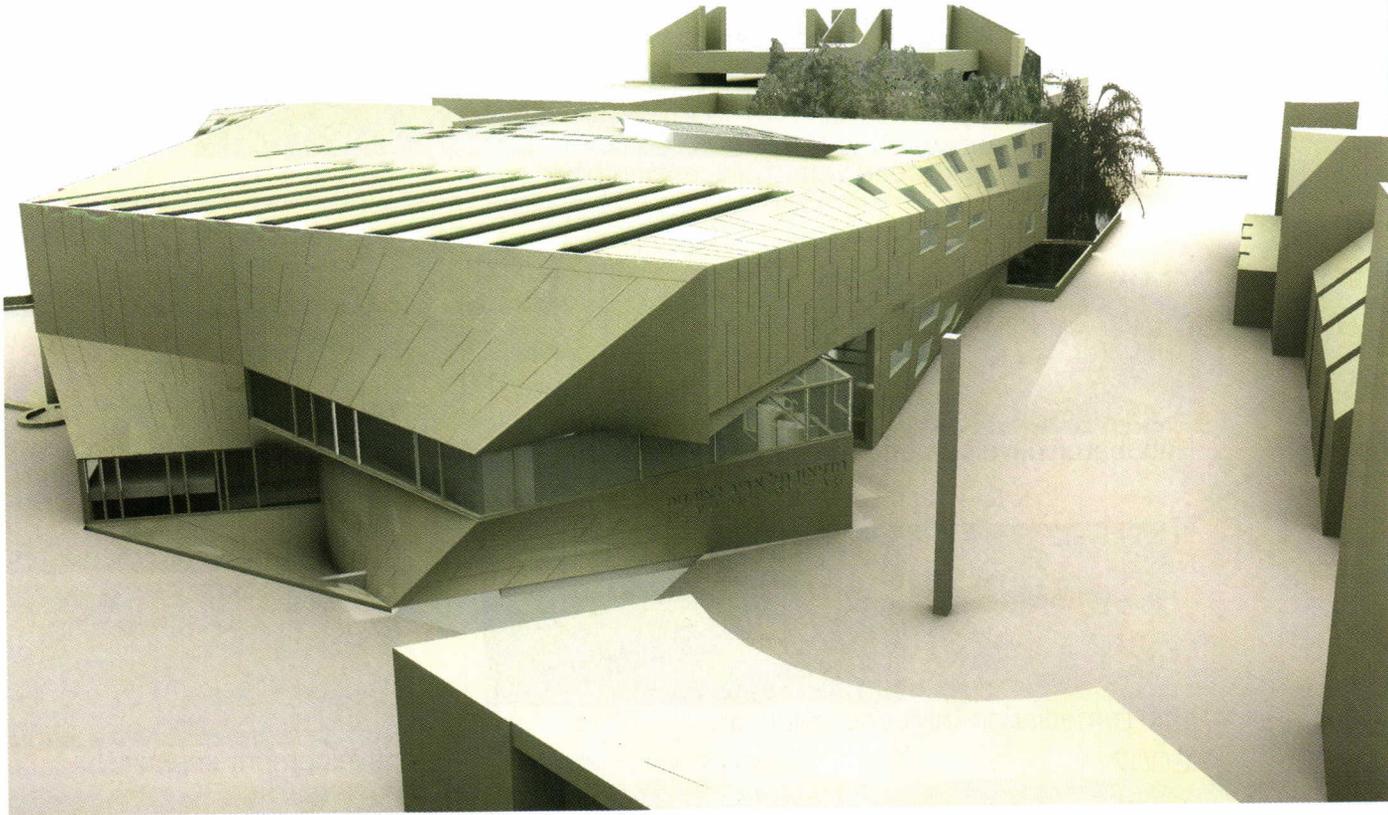
2011

2015

- 1 connector gateway corridor
- 2 bioremediation terraces
- 3 Silresim site/interim Park Eco-Tech
- 4 East Pond Park
- 5 recreation remediation trail



site plan with infrastructure 300'



PROGRAM | Expansion of a 30-year-old museum that calls for a new building with galleries, curatorial offices, restoration workshops, library, restaurant, auditorium, educational facilities, storage, and a loading dock.

SITE | In the cultural district of Tel Aviv, a 37,700-square-foot triangular parcel west of the existing museum and adjacent to its sculpture garden.

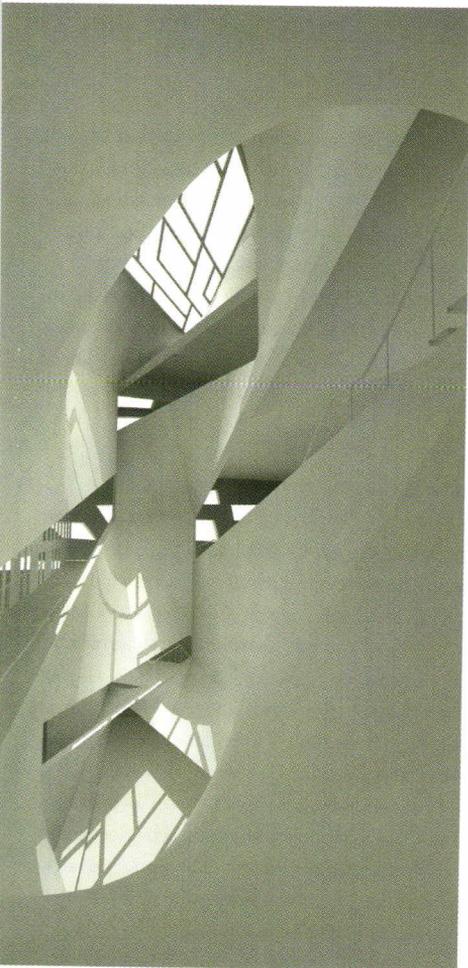
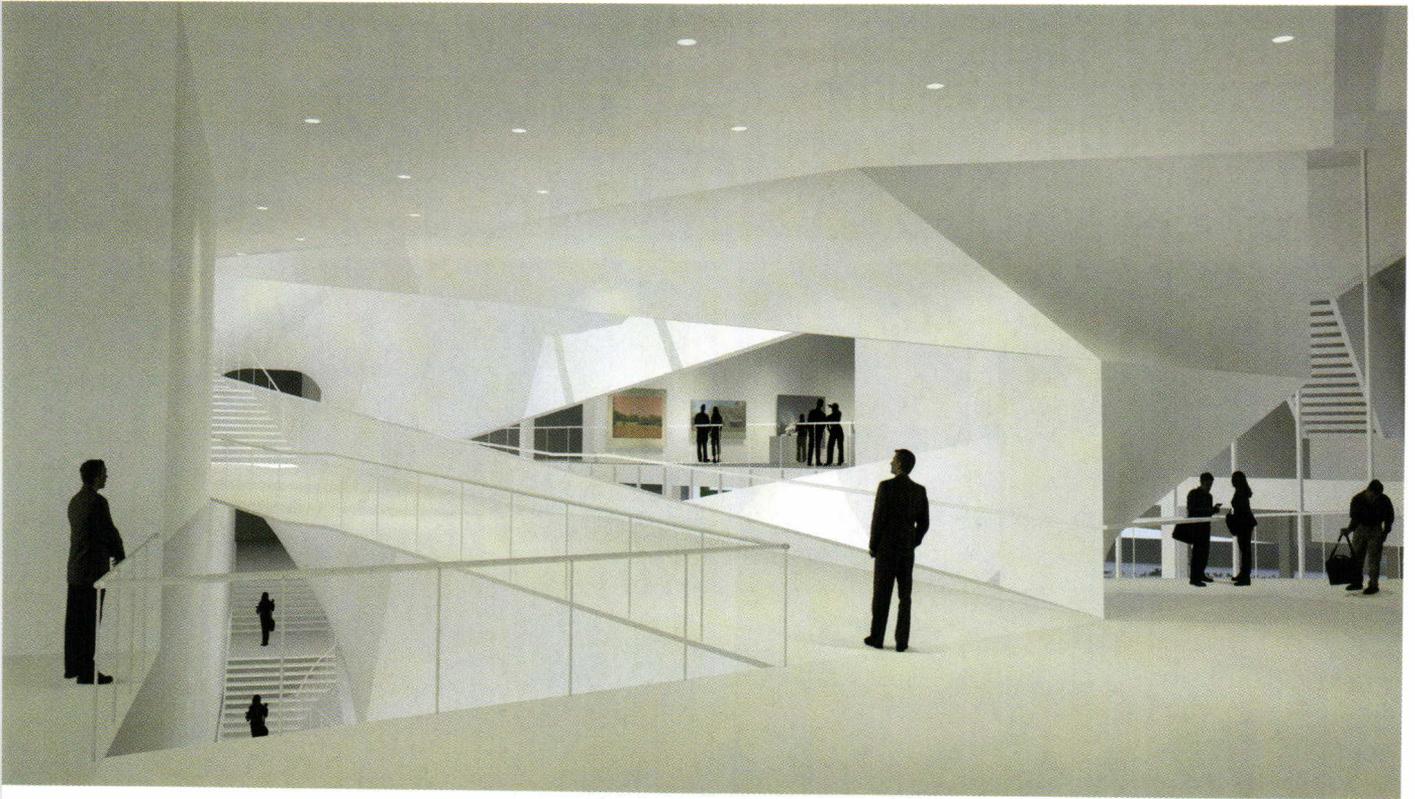
SOLUTION | A central light well of subtly twisting geometries defines the circulation core, through which stairs and ramps link major programmatic elements. Here, for instance, the galleries of the Israeli art wing on the fifth level and those of the wing devoted to international architecture and design on the fourth are visually and physically connected. The rectangular galleries are bounded by lobbies, reading rooms, and curatorial areas that look onto the surrounding courtyards and cultural district through glazed openings in the tiled concrete skin. Workshops, studios, and classrooms for the education department are stacked on three levels at the northwest edge of the site.

MATERIALS | Concrete foundation; steel frame; cast-concrete and glass façades; plaster and wood interior finishes.

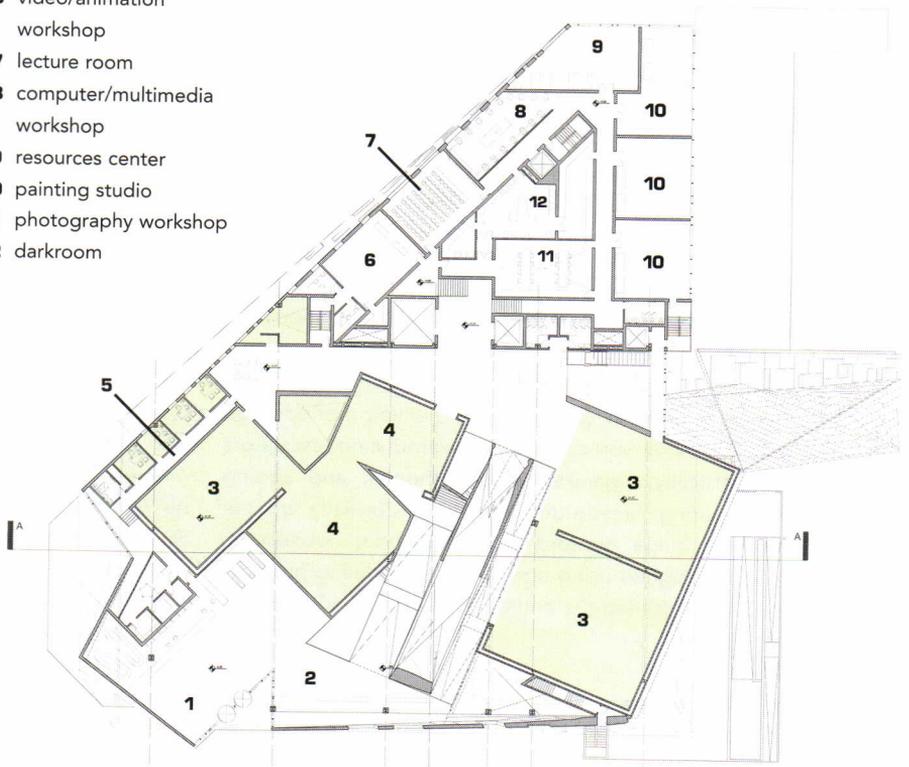
JURY COMMENTS | Site, social context, and interior organization occupied the jury for some time. There was no consensus, for example, on how the project engages its tight site. "I think this is a stronger building on the interior than it is on the exterior. There's a lot to be said about the complexities of the problem that this architect is grappling with in interesting ways," said one juror, "but the exterior needs to evolve." Another had a different interpretation: The proposal offers "a vibrant, lively character that [is] useful in a region facing an enormous struggle. It could have become an introverted building," this juror added, "but it chose to express itself in an open-minded way." All agreed, however, that the interiors promise to be "exciting celebratory spaces." A member of the jury even saw "mastery" in the way galleries and circulation are interlocked by the central atrium, deeming the scheme "a remarkable invention."

NEW BUILDING, TEL AVIV MUSEUM OF ART, TEL AVIV, ISRAEL

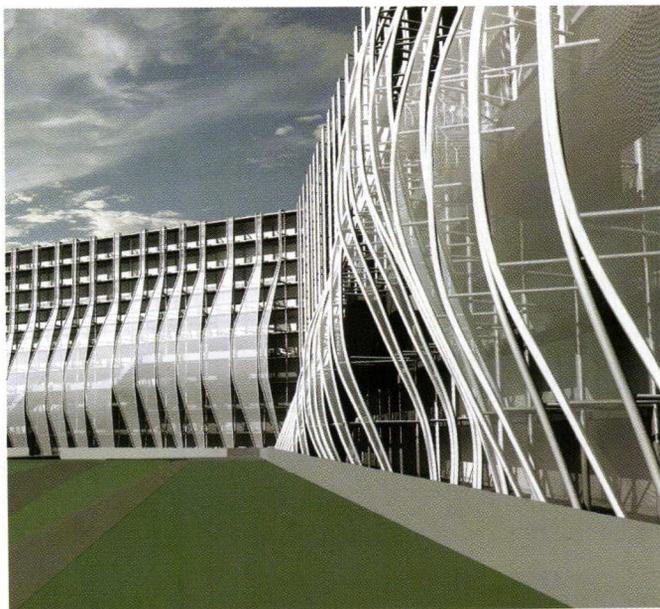
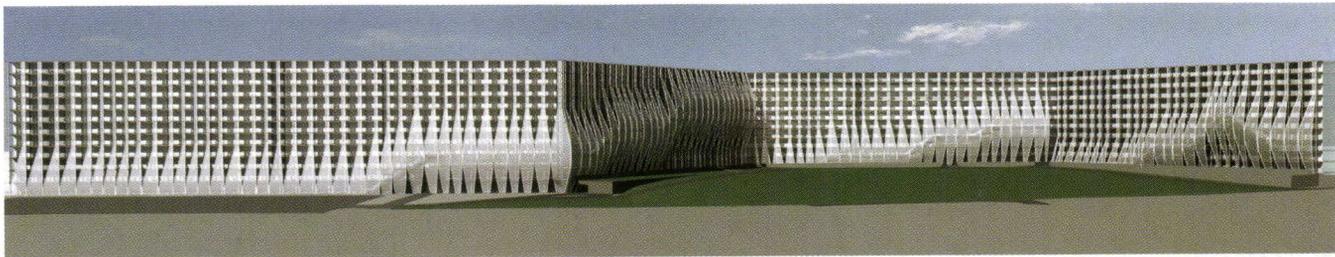
CLIENT | Tel Aviv Museum of Art **ARCHITECT** | Preston Scott Cohen, Cambridge, Massachusetts—Preston Scott Cohen (principal); Janny Baek-Canobbio, Andrew Saunders, Andrew Witt, Erik L'Heureaux, Leonard Ng, Cameron Wu (project team); Chung-Ping Lee, Jonathan Butt (presentation assistants); Ted Ngai (animation) **STRUCTURAL/MECHANICAL ENGINEER** | Ove Arup & Partners—Caroline Fitzgerald, Tom Dawes, Mark Walsh-Cooke (project team) **AREA** | 247,000 square feet **COST** | \$40 million



- 1 ticket lobby
- 2 tour meeting lobby
- 3 temporary exhibition
- 4 permanent collection
- 5 curatorial offices
- 6 video/animation workshop
- 7 lecture room
- 8 computer/multimedia workshop
- 9 resources center
- 10 painting studio
- 11 photography workshop
- 12 darkroom



architecture and design wing, level-four plan 30'



PROGRAM | Adaptation of an existing housing block including 250 mixed-income rental units and 220 for-sale units, a child-care center, building management facilities, storage, and parking. The building is in an area that is protected from demolition.

SITE | The Kleiburg Block, a residential building in the low-income 1970s-era Bijlmermeer development on the rapidly gentrifying southern edge of Amsterdam.

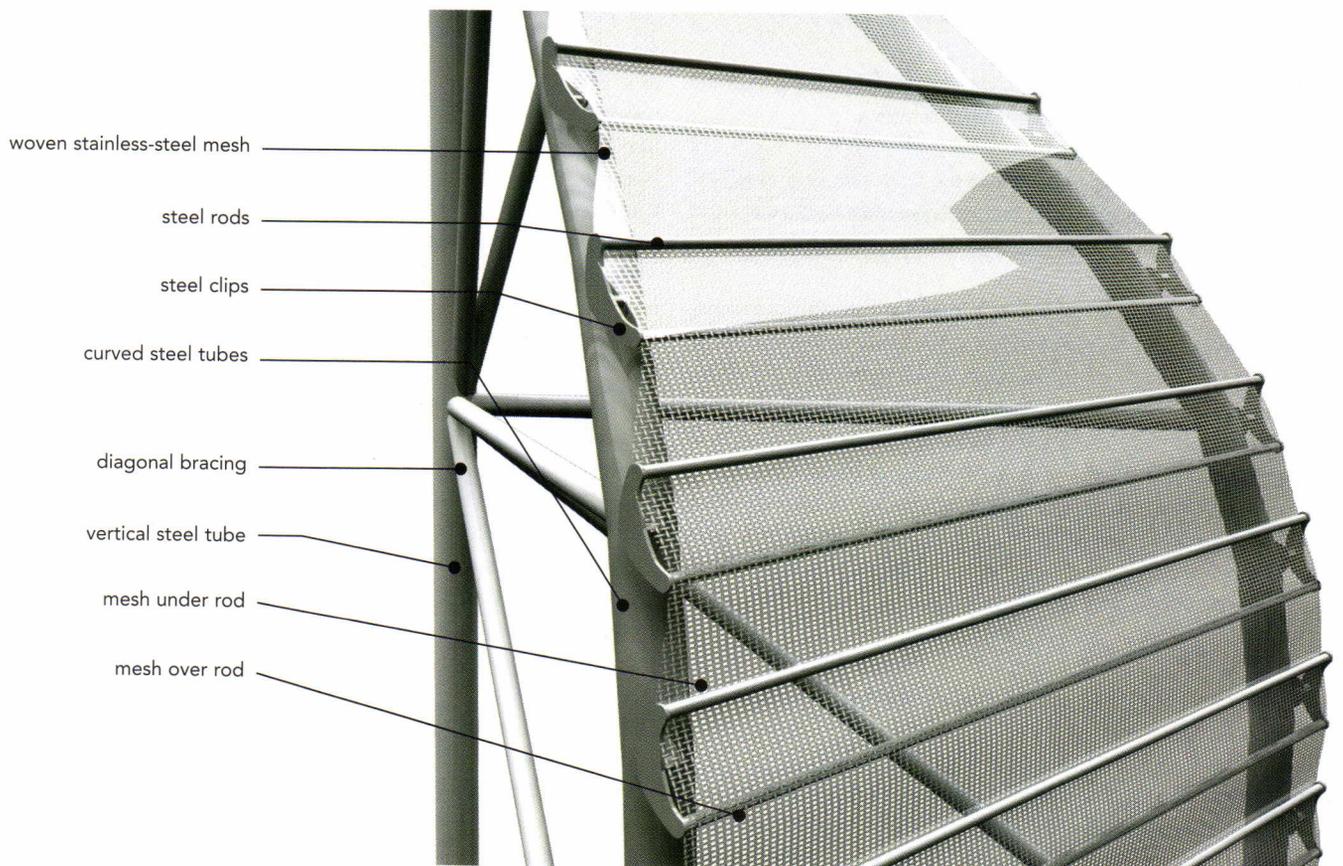
SOLUTION | The architect focused on removing unused, enclosed public space; grouping apartments into small “neighborhoods” to foster community interaction; reconfiguring circulation and storage for easy access; and creating safe and welcoming communal areas with good visibility. Key interventions include moving existing horizontal tenant storage, which monopolized the ground floor, into vertical masses; introducing escalators that service vertically organized neighborhoods; and adding a new, load-bearing façade made of 122 formally unique components that bulge outward to accommodate escalators. The façade was designed using a parametric modeling program that automatically modified the entire scheme when adjustments were made.

MATERIALS | Existing cast-concrete bearing walls; galvanized and painted bent-steel tubes; woven stainless-steel mesh; aluminum storefront and window walls; aluminum-panel cladding.

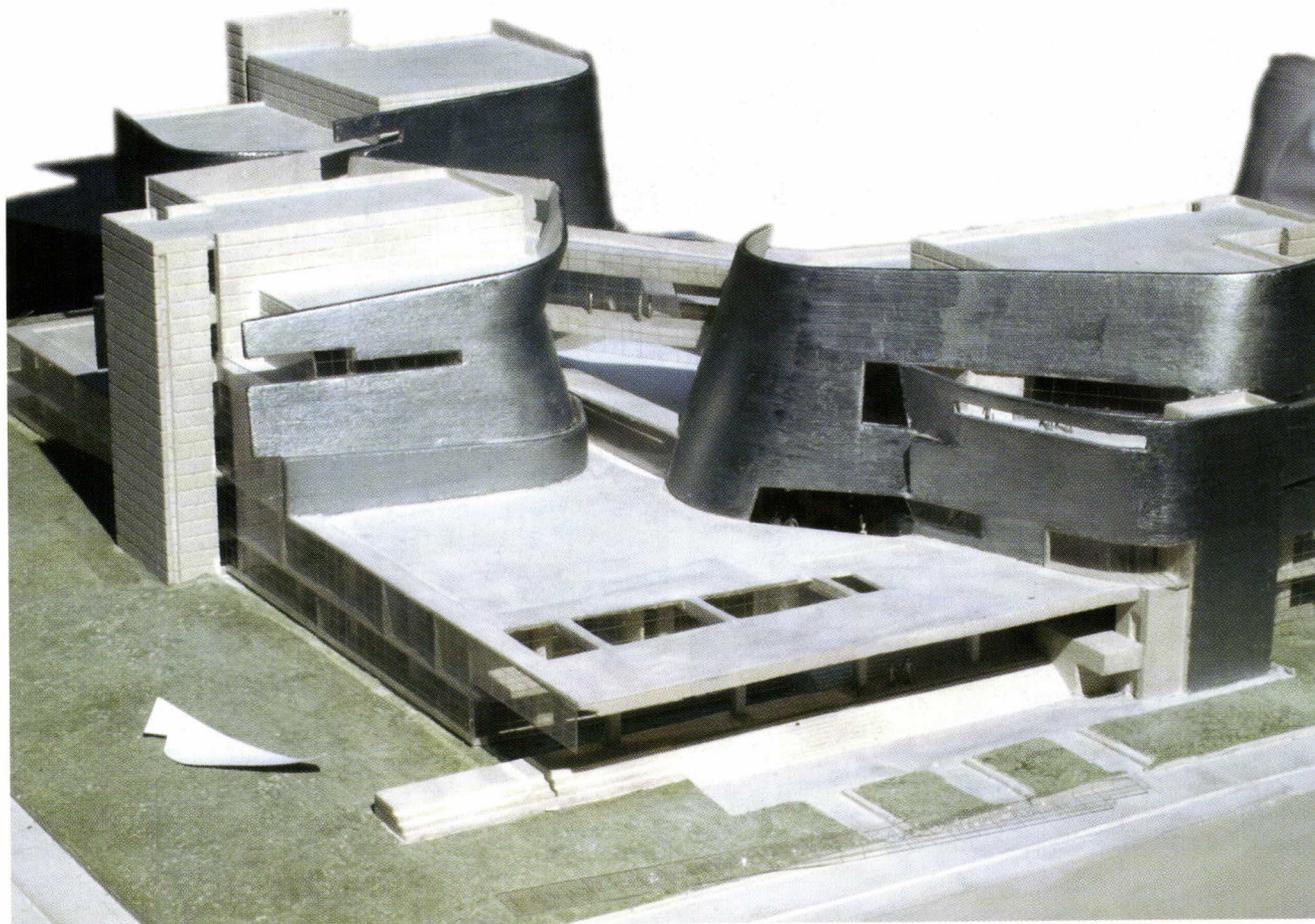
JURY COMMENTS | Jurors saw the design as an important precedent for how a housing block—a building type that is prevalent in the United States—can be transformed without being demolished, and admired the grouping of living units into vertical “neighborhoods” that inject the project with a sense of identity and community. They also applauded the designers for blurring the lines between architecture and urban design by treating the apartment neighborhoods as elements of an interior urban fabric. Some jurors betrayed skepticism, however, about the relation of the façade expression to the internal configuration.

TRANSFORMATION OF THE KLEIBURG BLOCK, AMSTERDAM

CLIENT | Woningstichting Patrimonium, Amsterdam—Hubert Möllenkamp, Willem Kwekkeboom, Gabrielle van Asseldonk **ARCHITECT** | Greg Lynn FORM, Los Angeles—Greg Lynn (principal); Jackilin Hah, Chris Kabatsi, Florencia Pita, Elena Manferdini, Patrick McEneaney, Jason de Boer, Nuri Miller, Amanda Salud Gallivan (project team) **ASSOCIATE ARCHITECT** | ABT/Adviesbureau voor Bouwtechniek, Arnhem, Netherlands—Gyuszi Florian, Marco van der Ploeg (project team) consulting architect | Kovos Architecten en Ingenieursbureau, Eindhoven, Netherlands—Frans Maas, Jos Verheijden (project team) **ENGINEERS** | Ove Arup NL, Amsterdam, Netherlands; Strackee Bouwadviesbureau (structural); ABT/Adviesbureau voor Bouwtechniek (M/E/P, civil) **CONSTRUCTION MANAGER** | Woningstichting Patrimonium **CONSULTANTS** | Bentley Systems (digital 3-D model development); Bikker Euro RSCG (marketing); Moerkerken-Broekzitter-Melis Bouwkosten (cost accounting) **AREA** | 710,000 square feet



façade component



PROGRAM | Six federal courtrooms with judges' chambers, support offices, a lobby, jury assembly areas, and cafeteria.

SITE | A full-block site at the edge of the Cartesian grid of downtown Eugene, Oregon, bounded by highway ramps to the west and railroad tracks and the Willamette River to the east.

SOLUTION | To create a more public profile for the judicial process than is typically found in monolithic courthouse buildings, three courtrooms are expressed as elevated, curving forms that are physically and formally autonomous from the day-to-day programs of the courthouse, which are housed in a two-story plinth. A thin layer of landscape atop the plinth serves to separate the ceremonial and quotidian functions. Each courthouse cluster is anchored to an edge of the plinth. Inside, the courtrooms are axially symmetrical, with high, contoured ceilings and side-aisle circulation, as found in Roman basilicas, with ample daylight and views to the landscaped terrace and the city beyond.

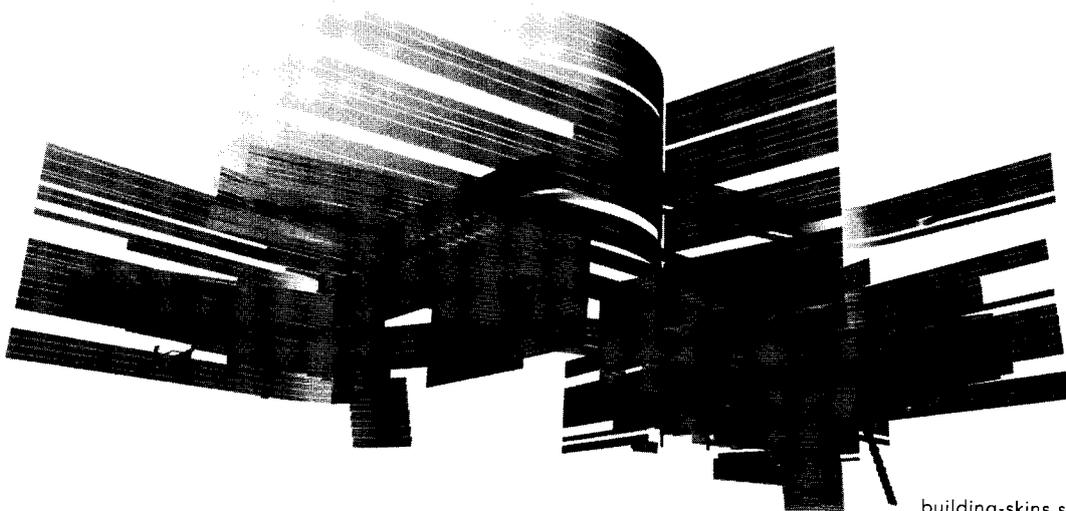
MATERIALS | Post-tensioned concrete slab for the first two floors; steel construction above.

JURY COMMENTS | By creating an "alternate identity for the courthouse"—or by breaking the typology altogether—the project drew the interest of the jury. The approach could help ameliorate the public's fear or remoteness from the judicial system, said two jurors,

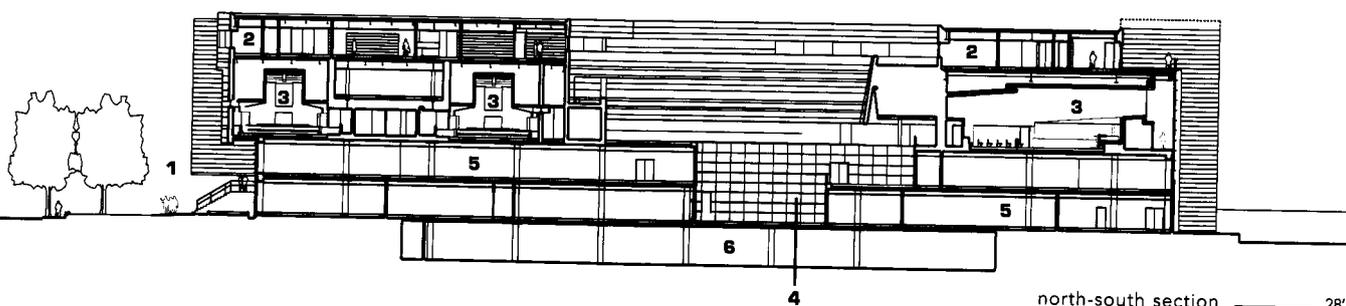
as it formalizes a unique notion of how people exist in relation to the courts, an idea that generated the shape of the building. The jurors also appreciated the figural quality of the courtrooms, not only because they allow natural light to reach the spaces but also because they use circulation to give form to the building. The strongest praise was for the design's "typological inventiveness" and careful treatment of "program and experience." One juror even commented that the courtrooms look so well designed that he would "want to break the law just so I could sit there."

WAYNE L. MORSE COURTHOUSE, EUGENE, OREGON

CLIENT | U.S. General Services Administration **ARCHITECT** | Morphosis, Los Angeles—Thom Mayne (lead designer); Kim Groves (project manager); Maria Guest (project architect); Caroline Barat, Linda Chung, Ben Damron, Martin Doscher, Ted Kane, Ung-Joo Scott Lee, Rolando Mendoza, John Skillern, Martin Summers, Patrick Tighe, Eui-Sung Yi (project team) **EXECUTIVE ARCHITECT/ELECTRICAL ENGINEER** | DLR Group, Omaha, Nebraska—Bill Buursma, Kent Larson, Joseph Haines (principals); Jason Wandersee (project manager); Michael LeBoeuf (court planner); Robert Esau, Joseph Hines, Jay Daubman (project team) **LANDSCAPE ARCHITECT** | Richard Haag **ASSOCIATE ENGINEERS** | KPFF (structural/civil); IBE Consulting Engineers, Glumac International (mechanical) **CONSULTANTS** | Horton Lees Brogden Lighting Design (lighting); ACSI (data/telecommunications); McKay Conant Brook (acoustics); Hinman Consulting Engineers (blast) **CONSTRUCTION MANAGER** | Heery **GENERAL CONTRACTOR** | J.E. Dunn **AREA** | 270,000 square feet **COST** | \$74 million

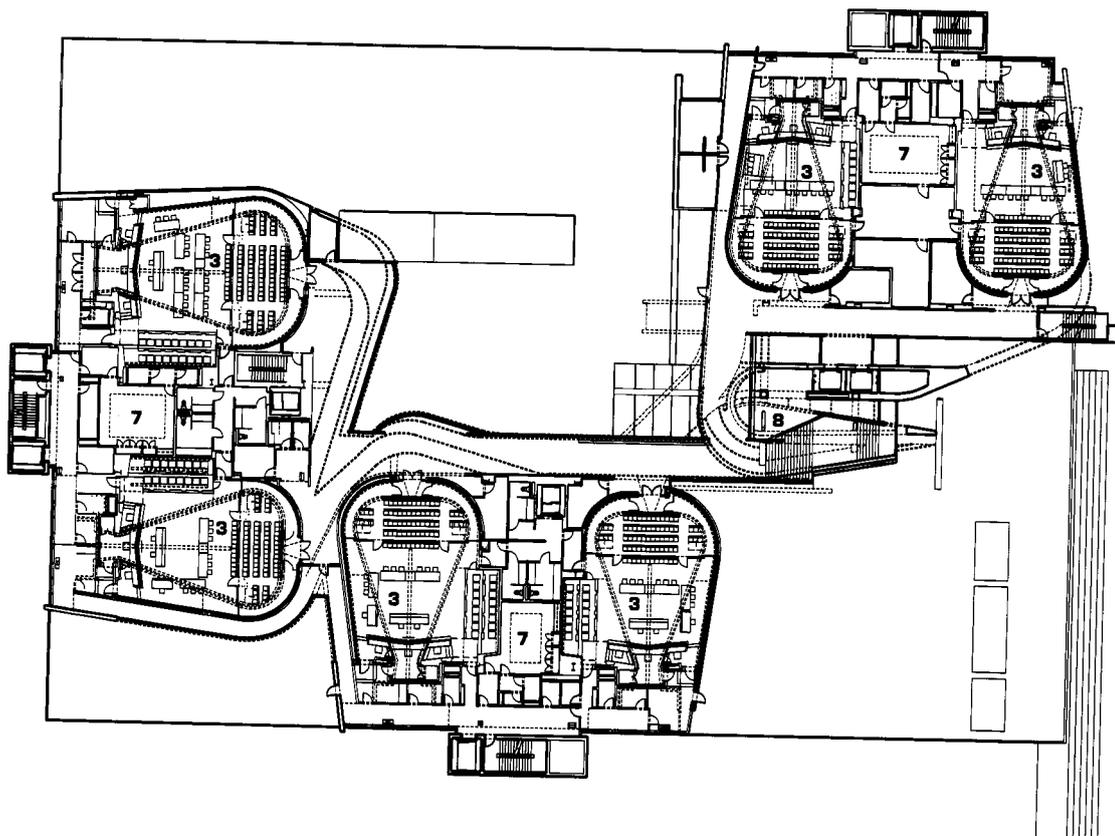


building-skins study



north-south section 28'

- 1 entrance
- 2 judge's chambers
- 3 courtroom
- 4 jury assembly room
- 5 offices
- 6 parking
- 7 ancillary facilities
- 8 atrium



third-floor plan 12' ←

01 | 2004 65

+ Hawkinson strung together the data points to create contour lines, and then in 3-D Studio Max and Lightwave, a rendering engine.

01 | 2004 67

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protest

DEVELOPERS JUST DON'T GET IT

Too often, large-scale commercial projects fail to go beyond contextual pastiche. by Peggy Deamer

The Time Warner Center in New York City by Skidmore, Owings & Merrill's David Childs, architect of the Freedom Tower at Ground Zero (see page 13), has a certain inevitable correctness: a base that conforms to the elliptical shape of its Columbus Circle site; two 750-foot-high towers that recall the Central Park West apartment building type; a historically sensitive profile that's stepped in the manner of traditional skyscrapers; a contemporary, detail-free façade that masks its bulk; and, above a central entrance, a slot between the towers that acknowledges the termination of 59th Street. Given that the developer-driven process—in this case, led by The Related Companies and Apollo Real Estate Advisors—left the architect with unfortunate parameters (set in 1997, by fervent predictions of unprecedented spatial demands on global cities), the design is as contextually responsive as a building can be.

Or is it? Doesn't Columbus Circle provide opportunities to think beyond its location at the intersection of Central Park, Broadway, and Eighth Avenue? As the most expensive building on American soil at \$1.8 billion, with the largest ever construction loan for a private development, and, prior to the World Trade Center reconstruction, the single most significant piece of property to be developed in this city, shouldn't the designers have broadened the notion of context beyond the building envelope?

BEYOND CONTEXTUAL CONVENTIONS

The most physically palpable contextual condition ignored by Time Warner is the transportation infrastructure that currently makes the experience of the circle incomprehensible—its vehicular mayhem and six subway lines together deliver an extraordinary number of people into Midtown Manhattan. Such a consideration could both clarify the distribution of cars and people and mine the dynamic spatial potential of a simultaneous view of subterranean travel and surface traffic. Entrenched as Childs's attitude is in an unresolved American concept of public space—we envy the figural space of Haussmann's Paris while espousing the commercial realm of Times Square and Las Vegas—this reductive notion of what constitutes a "site" prevents appreciation of the fact that public space is never made by form but by activity, and that Columbus Circle will always be predominantly a space of passage and movement, not of stasis and habitation.

The mixed-use nature of the Time Warner Center begs a rethinking of programmatic context as well. With 2.8-million square feet of restaurants, hotel (the first component to open, late last year), condo-

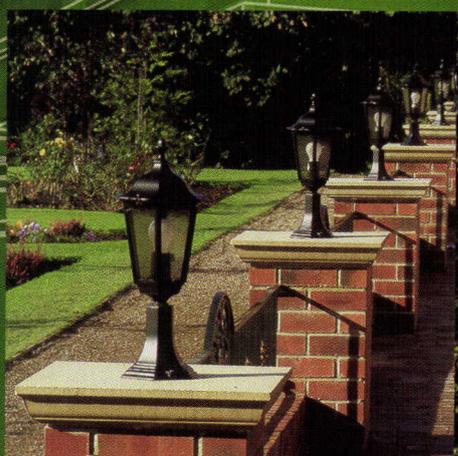
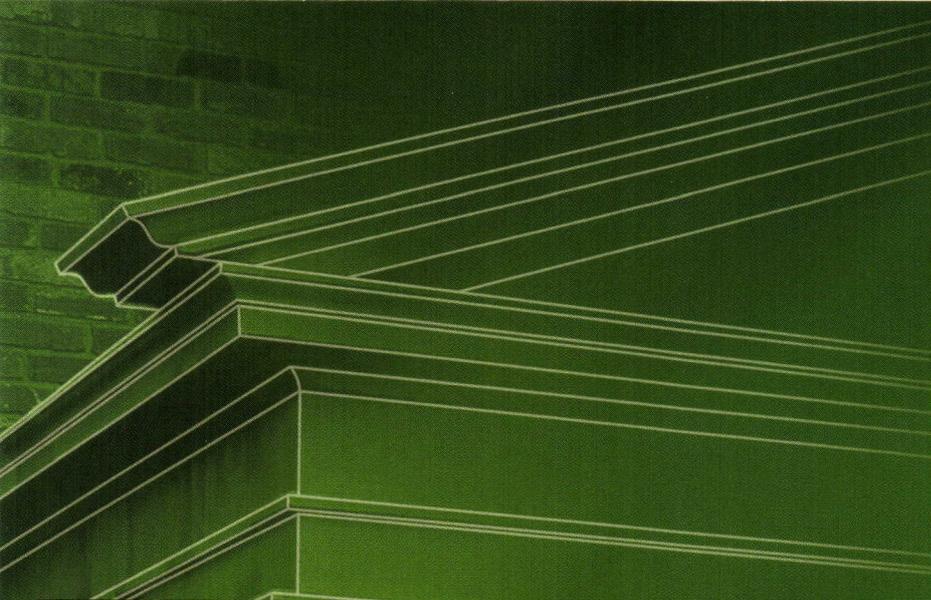


miniums, broadcasting facilities, and spaces for jazz performances, offices, and shops, the project was ripe for what Bernard Tschumi calls "trans-, cross-, or dis-programming," in which programs not only infiltrate one another but reveal and make spatial that contamination. Likewise, the scaleless bulk of the building is a failed opportunity to embrace the lessons of Koolhaasian "bigness," which would contrast spaces that are small with those that are large, juxtapose the scale of the body at the ground with the scale of the distant view of the top, and intensify tectonic tensions operating at the level of single rooms with that of infrastructure. In this more "global" framework, programs of differing public accessibility and unconventional size wouldn't be shoved together in a borrowed formal type as they are in SOM's building, but rather rethought within the realities of contemporary market pressures. We needn't be embarrassed.

The conventions that have yielded the "inevitability" of the Time Warner Center expose our provincial attitude toward contemporary American civic space. The point is driven home by the current debate over Time Warner's immediate neighbor, the former modern art gallery at 2 Columbus Circle designed by Edward Durrell Stone in 1964 for supermarket heir Huntington Hartford. The fate of the 10-story, city-owned building is being played out in a public argument that pits preservationists, who want the building granted landmark protection, against its future owner, the Museum of Arts and Design, which plans to alter the building to a design by Allied Works Architecture of Portland, Oregon. While there is much to admire in the new proposal, the landmarking of 2 Columbus Circle shouldn't be based on whether new or old contribute more or less to our sense of urban propriety, but rather on the boldness of the original vision.

At a time when conformity and politeness diminish public spaces across the nation, we ought to concentrate on the originality expressed by Hartford and Stone, who together built a proto-post-modern experiment worthy of historical analysis and landmark status. By doing so, we'd see more clearly what it takes to design a building on a prominent, urbanistically complex site that will be worth landmarking in the future. While the fault lies primarily in the developer-driven system that shapes our cities and demands the biggest buck for the least offense, the architect, instead of being at the mercy of this process, should redirect the terms of these assumptions and design a cultural provocation.

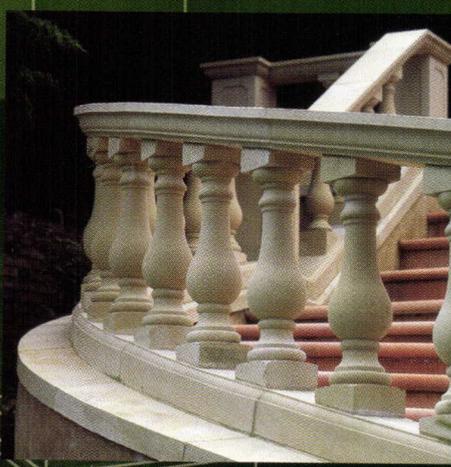
Peggy Deamer practices architecture in New York City and serves as the associate dean of the Yale University School of Architecture.



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