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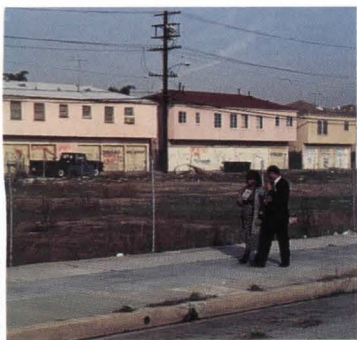
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Rebuilding Rebuild L.A.

RLA should consider housing as well as economic development to revitalize South Central.



TOM BONNER

SOUTH CENTRAL: Site of First Interstate's affordable housing competition.

This month marks the second anniversary of the Los Angeles riots, but little seems to have changed along the blighted boulevards of South Central. While the fires smoldered, former Mayor Tom Bradley turned his city's recovery over to Rebuild L.A., a much-touted organization aimed at remedying public ills with private money. But a year after the program was launched, few bricks had been laid to replace what was lost, and some of the pledges from corporate donors were withdrawn. Rebuild L.A.'s first chairman, Peter Ueberroth, left after that year, fielding accusations that he had been unable to accomplish anything more than the demolition of burned-out structures. For many Angelenos, Rebuild L.A. represented little more than the city's abrogation of its duties, despite its successful efforts to generate low-interest business loans and streamline building permits.

Now, a new CEO, former Deputy Mayor Linda Griego, has assumed leadership of the troubled corporation, renamed RLA. Griego has a solid reputation as a committed activist who embraces small-scale development. The incremental renewal that she advocates is already evident in South Central, but it has not come from the efforts of RLA. Instead, community organizers and benevolent corporations have initiated their own grass-roots programs to improve the riot zone, especially in the area of housing.

One example is the Design Professionals' Coalition, founded by Los Angeles architect Michael Pride-Wells (pages 78-81, this issue), a group of committed architects, planners, and construction professionals that provides pro bono design and planning services to South Central and other poor Los Angeles neighborhoods. Another is the First Interstate Bank of California, which is now holding a design competition for an affordable housing complex to be located at 80th and Vermont streets in the heart of South Central. Similarly, the Local Initiatives Support Corporation, a nonprofit group that

sponsors resident-led planning in 32 cities from Boston to San Diego, has generated funding for a mixed-use development, incorporating housing, retail, and a child-care center, to be built in South Central. The complex, codesigned by Pride-Wells, centers on the 1929 Dunbar Hotel, the heart of L.A.'s jazz community in the 1930s. "Our way of revitalizing the area is to anchor it," explains Stacie Sanders, project manager of the Dunbar Development Corporation. "You have to have a context, a reason for businesses to want to come back."

As RLA enters the third year of its five-year mandated life span, the organization has made economic development its top priority. "RLA's mission is not to rebuild the physical environment, but to improve the community's quality of life through more jobs and access to capital," maintains Jackie DuPont-Walker, RLA senior project manager. But RLA should look seriously at the context for economic development, especially the stabilizing influence of community-supported, affordable housing.

Job creation must remain a priority in South Central, given that its rate of unemployment is twice that of the rest of L.A., but economic revitalization alone won't fix the area. Community leaders must also be tapped to help plan social and physical improvements, such as the revitalization stemming from the landmark Dunbar Hotel, to visibly demonstrate progress. With the help of RLA, the grass-roots efforts already at work in South Central could flourish. They could demonstrate to the rest of the country that, despite public skepticism toward subsidized social programs, community development initiatives actually work.

Debra K. Diekmann

Defending Disney

Incredulously, I read your critique of the proposed Disney's America (January 1994, page 37). Your conclusion that intelligent stories regarding America's heritage cannot be told by an entertainment company is shortsighted and a little odd, since you referred to the very same company as having an "enlightened view of architecture" in your June 1991 issue.

Your conclusion that Disney's America will cause urban sprawl reveals a lack of knowledge of the planning principles fundamental to the implementation of the project. Your indictment is a little surprising, since, in your July 1992 editorial, you indicated that projects developed by Disney "provided significant lessons in urban design." In the same story, you referred to the Euro Disney urban design solution as "absolutely civilized" and concluded that "entertainment architecture can catalyze tourism and urban renewal, invigorating local economies, and restoring civic pride."

Disney's America represents a complementary addition to an existing tourism industry that hosts 19 million visitors annually. It represents a huge economic development opportunity, fulfilling long-term goals set by Prince William County. It represents thousands of new jobs, billions of dollars in new tax revenue, and a catalyst for transportation improvements. We also would have preferred that you wait for a developed design before judging the project's architectural content.

*P. Michael Reininger, AIA
Disney Development Company
Orlando, Florida*

Why has ARCHITECTURE lowered itself and jumped on the bandwagon against the proposed Disney's America project in Virginia's Prince William County? The Disney name is synonymous with education and entertainment, both of which can exist simultaneously.

*Frankie J. Campione, AIA
Spring Valley, New York*

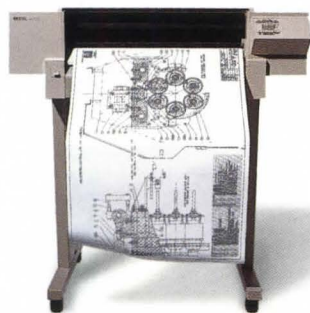
It is unfair to compare the proposed Disney's America project in Virginia to other Disney projects. Zoning regulations and citizen involvement will avert Orlando's type of sprawl.

As architects, we should spend more time working to improve the built environment—including proposed theme parks—and supporting commissions for architects.

*M.C. Stevens, AIA
Arlington, Virginia*

Editor's reply: We do not take issue with the architecture of Disney's America, but its content. Disney's new theme park attempts to blur the boundaries between entertainment and history, simulating important events through rides and attractions. Why re-create history in an unspoiled landscape next to where the real events took place? Disney's resources could be better spent on preserving our country's historic sites and encouraging Americans to learn about our history through original artifacts.

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Events

April 9-10

International Construction Colloquium, an annual meeting sponsored by the Graduate School of Design at Harvard University. Contact: (617) 495-9939.

April 22

Submission deadline for Public Space in the New American City, a competition focusing on postcompetition uses for Olympic sites in Atlanta, Georgia, sponsored by the Architecture Society of Atlanta. Contact: (404) 723-7210.

April 23

Symposium on Architectural Practices, sponsored by the Graduate School of Design at Harvard University. Contact: (617) 495-4315.

April 25

Entry deadline for Patterns for Head Start Facilities, a design competition sponsored by the Early Childhood Facilities Fund of New Jersey. Contact: (609) 730-1070.

April 25-27

Computers and Tall Buildings, a conference sponsored by the Council on Tall Buildings and Urban Habitat in Manama, Bahrain. Contact: (215) 758-3515.

April 28-29

The Building Envelope: Solutions to Problems, a symposium sponsored by Simpson Gumpertz & Heger in Atlanta. Contact: (800) 676-2324.

May 4-6

1994 LightFair International, a conference and trade show in New York City, co-sponsored by the Illuminating Engineering Society of North America and the International Association of Lighting Designers. Contact: (404) 220-2217.

May 13

Entry deadline for the 1994 Builder's Choice Design and Planning Awards competition, sponsored by *Builder Magazine*. Contact: (800) 241-2537.

May 13-15

International Bookfair held in conjunction with AIA Expo94 and the AIA National Convention in Los Angeles. Contact: (202) 626-7395.

May 13-16

AIA National Convention at the Los Angeles Convention Center. Contact: (202) 626-7395.

May 25

Construction Specifications Institute annual conference in Pasadena, California. Contact: (202) 626-3820.

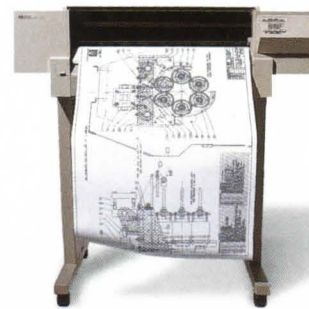
June 14

Deadline for Design America Accessible, a competition hosted by the National Institute for Architectural Education. Contact: (212) 924-7000.

June 20-23

Architecture/Engineering/Construction Systems '94, a conference on automation systems for building designers in Washington, D.C. Contact: (203) 665-0153.

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Pershing Square Reopens in Los Angeles

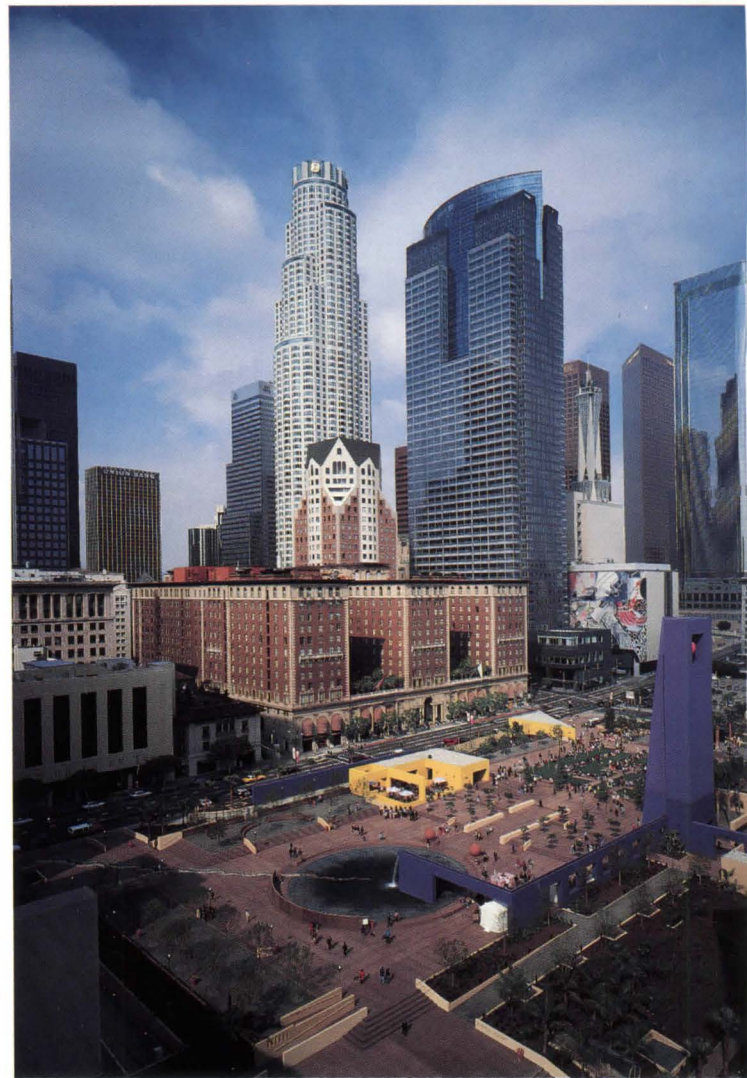
Pershing Square, the only public space with the potential to bridge the ethnic and economic fault lines of downtown Los Angeles, reopened in February. Architect Ricardo Legorreta and landscape architect Laurie Olin took a ragged, crime-infested park and turned it into an urban plaza with a purple campanile, hot pink columns, and a cascade of water to announce its presence. The civic-corporate coalition that sponsored the \$14.5 million make-over pledges a mix of security, maintenance, food, and entertainment to ensure that the square delivers on its promise.

The 5-acre block that was set aside by mayoral decree in 1866 evolved from cow-town pasture to picket-fenced garden to Beaux-Arts showpiece. In 1951, the landscaping was destroyed to create an underground garage, and it never grew back. As the residential population declined, and business moved to the west, Pershing Square was abandoned to drug dealers and the destitute. In 1986, concerned citizens organized an open competition for the redesign of the space. SITE Projects won with a visionary scheme that Principal James Wines described as "a magic carpet ... a symbol of civic unity." But it failed to win support from the surrounding property owners, who were called upon to fund the scheme but perceived the design as being too isolated, too expensive to build, and too difficult to maintain.

Maguire Thomas Partners sought to build a consensus and helped form the Pershing Square Property Owners Association. Members agreed to tax themselves between 6 cents and 12 cents a square foot, depending on location, to back an \$8.5 million bond issue—if they could have a square that was accessible, green, and secure. Maguire believed that a new approach was needed and proposed Legorreta and Olin.

It was an inspired choice. The Mexican aficionado of sizzling colors and the Philadelphia-based landscape designer proposed a square lawn at the north end and a circular pool to the south, divided by a terrace-restaurant that was later eliminated to keep the project within budget.

Olin drew on his personal experience of Rittenhouse Square in Philadelphia and the successful restoration of Bryant Park in New York. "We wanted to open the park



PERSHING SQUARE: Revived by Legorreta Arquitectos and Hanna/Olin.

up," he explains, "and convey the feeling that you are in a great bowl surrounded by buildings and not see the traffic. We eliminated two parking ramps and continued the sidewalk around the edge of the square."

Pedestrians are drawn in from the sidewalks through arches at the mid-block and little squares at each corner that serve as gently stepped entry halls. Ramps and steps are woven together through the shifts of level and link the two halves. Spaces are choreographed to lead one forward, but leave surprises. High-backed concrete benches offer a sense of enclosure; low, rounded walls define courtyards. The purple campanile with its electronic carillon serves as a marker and leads the eye up to the surrounding buildings.

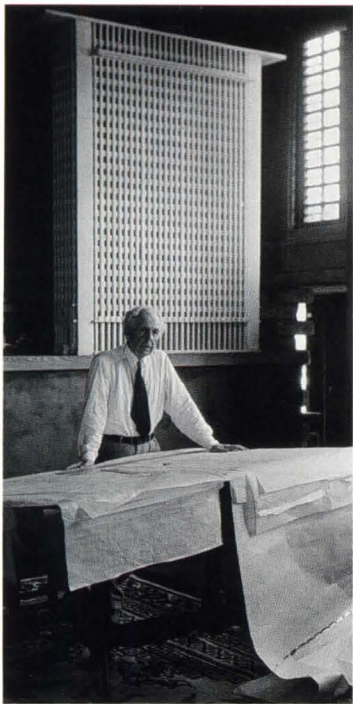
Will the square help bring downtown—and the rest of L.A.—together? Until now, the only spaces to

draw crowds in the region are shopping malls, theme parks, and the Venice boardwalk. Can the square flourish without stores and be more than a refuge for the homeless?

Legorreta hopes the square will be "a happy, inviting, and inclusive place," and he believes that if you give even the poorest people a sense of pride, they'll take care of it. Police patrols, counselors for the needy, and a crew of gardeners will help. But the architect understands that, ultimately, it's a matter of luck: "If people love it, it will succeed." Los Angeles badly needs a success to boost its self-esteem and tattered reputation. If Pershing Square works over the long haul, it should inspire a fresh approach in public spaces across the country.—*Michael Webb*

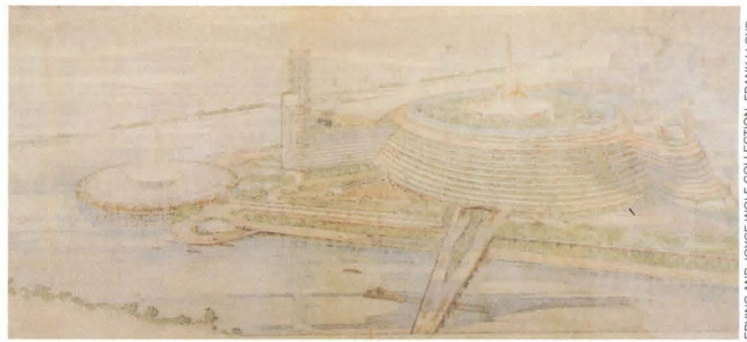
Michael Webb is the author of several books on Los Angeles architecture.

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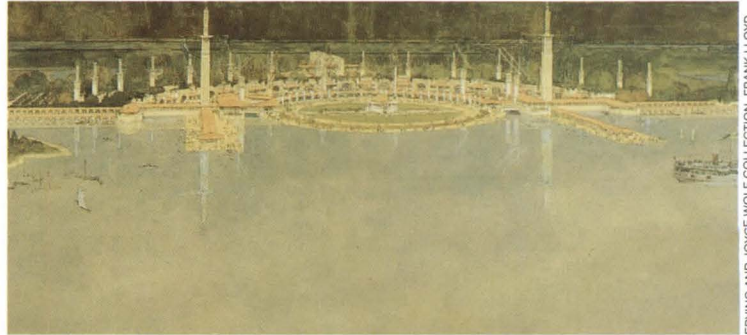
WRIGHT: Guerrero photo, 1947.

PEDRO E. GUERRERO



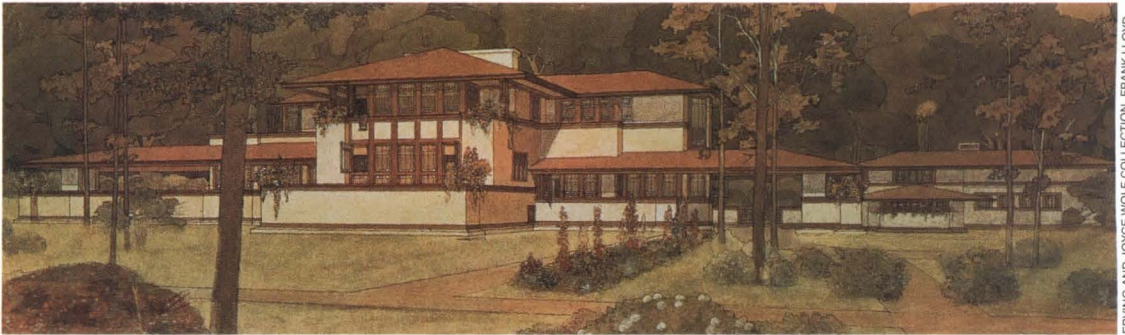
PITTSBURGH POINT PARK: Civic center, 1948.

ERVING AND JOYCE WOLF COLLECTION, FRANK LLOYD WRIGHT FOUNDATION.



WOLF PARK: Amusement park, Wolf Lake, Illinois, 1895.

ERVING AND JOYCE WOLF COLLECTION, FRANK LLOYD WRIGHT FOUNDATION.



WARD WILLITS HOUSE: Prairie house, Highland Park, Illinois, 1903.

ERVING AND JOYCE WOLF COLLECTION, FRANK LLOYD WRIGHT FOUNDATION.

Frank Lloyd Wright Exhibits in New York

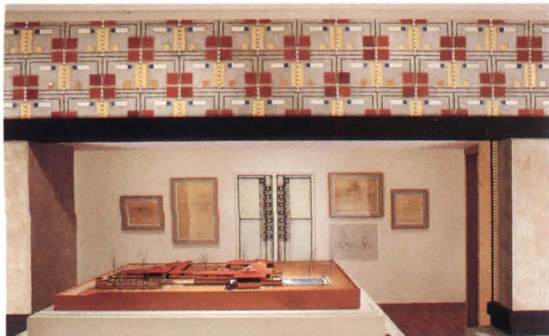
Like the Guggenheim Museum's giant corkscrew ramp, Frank Lloyd Wright's reputation continues to grow, reaching new heights this spring in New York. Through May 10, the Museum of Modern Art (MoMA) displays "Frank Lloyd Wright: Architect," a massive exhibition of more than 500 drawings, photographs, models, and full-scale reconstructions. In MoMA's wake, there are three smaller shows; symposia; lectures; a video program starring F. Murray Abraham as the architect; and a cornucopia of Neo-Wrightian ties, lamps, furniture, and jewelry. The result presents Frank Lloyd Wright as the multifaceted Mount Rushmore of Modernism.

MoMA offers the face we already know and justly love. Organized by

Terence Riley, chief curator of MoMA's Department of Architecture and Design, and Peter S. Reed, assistant curator, "Frank Lloyd Wright: Architect" is a grand treasure trove of top 10 hits that chronologically traces Wright's 72-year career as the century's most prolific fountainhead of formal invention. There are the epochal break-the-box Prairie houses, the comeback-kid Fallingwater, and the Jetsonian Marin County Civic Center. It's a prodigious performance by an architect who was buoyed by booming economies and brimming with optimism for the "American Century" and its technological prowess. Which all makes Wright seem sadly out-of-date. Today, when architects receive kudos for constructing their first building in their mid-40s, Wright by the same age had redefined middle-class domestic-

ity with 140 private houses, revolutionized the workplace with the Larkin Building, and given new expression to poured-in-place concrete with Unity Temple.

The MoMA show adopts a traditional, straightforward approach to Wright that's certainly justified, given the museum's public audience as well as the representational quality of the architect's color perspectives and models. Still, that same capacity to reach the public through an architect of unparalleled recognition offered MoMA a unique opportunity to present Wright's architecture in new thematic and critical ways. The environmental consequences of Wright's unqualified romance with the automobile, his role in giving visual authority to the suburbanization of America, and the subsequent degradation of our central cities, to name only a few



MOMA INSTALLATION: Coonley House model, 1908.



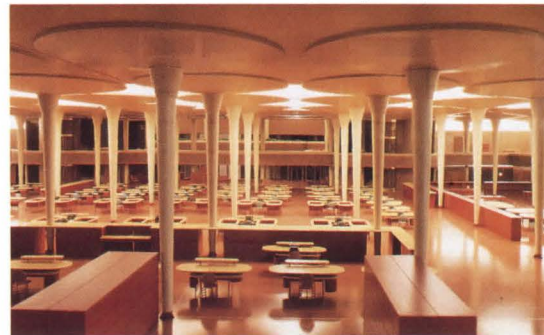
MODEL: Midway Gardens, Chicago, 1914.



MODEL: Unity Temple, Oak Park, Illinois, 1908.



BLOCK WALL MOCKUP: Storer House, Hollywood, 1923.



DIORAMA: S.C. Johnson Building, Racine, Wisconsin, 1939.

Details

Kohn Pedersen Fox has been commissioned to design the new \$92 million U.S. courthouse and federal building in Minneapolis. The scheme was selected over projects by **Ellerbe Becket, Allan Greenberg, and Kaplan/McLaughlin/Diaz**. Boston landscape architect **Martha Schwartz** has won the competition to design a plan for Rash Field on Baltimore's Inner Harbor. The AIA has awarded its 1994 Institute Honors for achievements in allied fields to New York restaurateur **Joseph H. Baum**; Miami-based architecture critic **Beth Dunlop**; curator **Mildred Friedman**; the **Historic Savannah Foundation**; the **Rhode Island Historical Preservation Commission**; the New York-based **Salvadori Educational Center on the Built Environment**; curtain wall consultant **Gordon H. Smith**; **Sunset Magazine** in California; and architectural photographer **Judith Turner**. An international committee has been founded to restore **Alvar Aalto's** 1935 Viipuri library in the former Soviet Union. **Centerbrook Architects** has been selected to design a new chemistry building at the University of Connecticut. **Gwathmey Siegel Associates** has been commissioned to design the new \$350 million campus of Nanyang Polytechnic University in Singapore. Vassar College, Poughkeepsie, New York, has commissioned **Roth and Moore Architects** to design a new observatory. The scheme was selected over projects by **Leers, Weinzapfel Associates** and **Sasaki Associates**. **Simon Martin-Vegue Winkelstein Moris** has been selected to design an entertainment complex at Yerba Buena Gardens in San Francisco. **R. L. Binder Architecture** is seismically upgrading John F. Kennedy High School in Los Angeles, severely damaged during January's Northridge earthquake. **Antoine Predock Architect** is designing the new Catalina Foothills Elementary School in Tucson, Arizona. **James Stewart Polshek and Partners** is designing the Flushing Public Library in New York. **Sasaki Associates** has been commissioned to design a redevelopment plan to convert the Charleston Naval Base in South Carolina for civilian use. **Ellerbe Becket** is designing the Boggy Creek Gang Camp for disabled children near Orlando, and Florida Hospital's Walt Disney Cancer Institute.

timely issues, are never seriously addressed. While MoMA celebrates Wright as form-giver, the Metropolitan Museum of Art revives Wright as decorative artist with an exhibition through September 4 of his furniture, ceramics, and textiles.

Two other exhibitions explored Wright as shameless self-promoter, placing him within a continuum of architectural production, marketing, and reception by the public. At Manhattan's Lobby Gallery, the photographs of Pedro E. Guerrero, who played Bruce Weber to Wright's Marky Mark, mythologized the architect by capturing him in Hollywood-esque poses, postures, and getups—from flowing capes to canes, berets, cravats, and other Byronic paraphernalia. Supporting Wright in these photos, which were from Guerrero's book *Picturing Wright*, is a cast of dreamy eyed stu-

dents and, of course, his flinty eyed wife, Oglivanna. A more scholarly show, "Frank Lloyd Wright's Wasmuth Folios: Representing the Ideal," at Columbia University, presented the famous 1911 monograph that introduced Wright to European architects and changed the course of continental Modernism. Wright himself financed the publication, which included sepia-toned drawings that he and his assistants created from photographs of finished projects. Organized by Anthony Alofsin, the Columbia University show paired photos and drawings, some of which transcribed quite literally their respective images. Others "perfected" them for public consumption by altering original buildings' settings, landscaping, massing, and proportion.

The recent series of exhibitions and events can't be faulted for bringing

widespread attention to architecture, but they do raise questions about what these events tell the public about Wright and the profession at large. Taken as a totality, Wright's oeuvre addresses important issues, from how life might be lived in modern democratic culture to the complex relationships between city and suburb, civilization and nature, man and machine. But even in his own lifetime, Wright often clouded his rational and communal message with a dazzling aura of zany egotism. The dilemma of Frank Lloyd Wright, the architect, thus remains the dilemma of Frank Lloyd Wright, the modern media blitz of blockbuster exhibitions and licensed goods. Sadly, these exhibits embrace Wright's prodigious individualism while blinding us to his equally powerful, and deeply needed, sense of social purpose.—*Donald Albrecht*

McDermott Named AIA's New CEO

On March 1, the AIA welcomed Terrence M. McDermott as its new Chief Executive Officer. McDermott, former President and Chief Operating Officer of the Cahners Publishing Company, Reed Elsevier USA, succeeds Executive Vice President and CEO James P. Cramer, who resigned after an 11-year tenure.

A search committee chaired by current AIA President L. William Chapin II selected McDermott from over 400 applicants. Members of the committee included Cramer, 1993 AIA President Susan A. Maxman, and AIA President-elect Chester A. Widom. The committee's choice of McDermott was unanimously approved by the AIA Board of Directors. "McDermott has worked closely with the construction industry and architects for over two decades," asserts Chapin. "He brings a wealth of business leadership and management common sense to the AIA."

The Institute's new leader is upbeat about the profession, despite the recession's lingering effects. "I think the profession isn't so much in a decline as it is at a crossroads," McDermott maintains. "We are concerned with the 56,000 hard-working, very professional, very talented members of the architectural profession and focused on their needs as businesspeople. By increasing the knowledge and information available to members, we can increase their core competence and improve their competitive advantage." McDermott advocates that firms tailor their practices for growth by targeting specific "niche markets." "In the future, the Institute must clearly focus on the business of architecture," he asserts. "We have to keep our members ahead of trends." Such attention to business stems from the new CEO's own background.

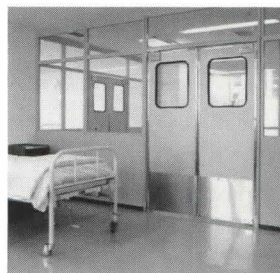
McDermott attended Chicago's Loyola University and received a bachelor of arts in organizational development from the National Col-

lege of Education in Evanston, Illinois. He began his career in publishing as a salesman in McGraw-Hill's Sweets Division in 1967 and joined Cahners Publishing Company in 1969, where he remained until last April. In his 24 years at Cahners, McDermott assumed several positions, including publisher of *Building Design & Construction*. In 1987, he was named President and Chief Operating Officer of the company. "My experience in publishing and involvement in over 100 magazines has given me a good background in a lot of markets, the same markets I am suggesting architects get into," explains McDermott. He is also a regent and former Vice Chair of the American Architectural Foundation, where he has played a significant role in promoting public appreciation of design excellence.

Now at the helm of the AIA's 55,800 members and staff of 220, McDermott faces ongoing challenges. AIA membership continues to grow—up over 2 percent between

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1992 and '93. But McDermott aims to improve resources available to existing members and to attract even more new members. He hopes to increase the role of the Institute's Professional Interest Areas in giving members valuable resources and information at all stages of their professional growth. McDermott is also committed to promoting continuing education. "We need to provide economic data and research, to let architects know what's going on in the profession and in regulatory agencies. We're in a world where value and enrichment will be related to the currency and immediacy of the information you control," he maintains. Additionally, the new CEO plans to increase the AIA's lobbying efforts and public outreach. "Few professions," McDermott notes, "are as dramatically affected by regional, state, and national policymaking as architecture. One of the first things I'd like to do is increase the amount of time the Institute spends on government relations."

McDermott takes issue with the characteristically low earnings that plague the profession and is concerned about the public's perception of architects. "For the contributions that architects make to the building process and the community, and for the risk and liability they assume, they should be better rewarded as a profession. Architects have a right to demand of themselves and equally of the AIA that the compensation for what they do be on a professional level, along with doctors, accountants, and lawyers. I think there is confusion out there about what the architect's role is. If the public doesn't value good architects and good architecture, then we're all out of business. As we increase the architect's role as a spokesperson for the needs of the community, that can only help the profession."

In addition to his concern for established architects, McDermott is keen on meeting the needs of students and interns. "My big interests in attracting new members are the

young and newly registered architects. I also want to spend a lot of time with the American Institute of Architecture Students, because I really want to know what young people want. Our Board of Directors has a real emphasis on architectural education, which is very important." But McDermott is also sensitive of the need to promote career alternatives outside private practice, as the market for architecture graduates becomes saturated. "I believe in developing better alternative career paths. We should provide good information that will help young people be affiliated members of the AIA while pursuing nontraditional careers."

After just one month in office, McDermott is optimistic about his contributions to the AIA and the future of the profession: "If I could improve the business of architecture so that it was an attractive career for everyone—including women and minorities—I would be thrilled. I would consider myself a successful leader."—*Raul A. Barreneche*



MCDERMOTT: New AIA CEO.

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In Remembrance: Pietro Belluschi

On February 14, AIA Gold Medalist Pietro Belluschi died at the age of 94. The following tribute is written by Robert J. Frasca, principal of Zimmer Gunsul Frasca Partnership, who attended Massachusetts Institute of Technology (MIT) in the 1950s, when Belluschi was dean of the architecture school. After moving to Portland, Oregon, after graduation, Frasca joined Wolff, Zimmer and collaborated with Belluschi on the second Equitable Building, as well as several other projects. Frasca became a partner of Wolff, Zimmer in 1966, and Belluschi consulted with the firm on Saint Joseph's Church (1968), Roseburg, Oregon, and the Portland Museum Art School Addition and Sculpture Court (1971). Their friendship continued beyond professional collaborations, resembling the closeness between a nephew and his favorite uncle, reflects Frasca. In 1975, Belluschi moved to Portland, not far from Frasca, who remembers celebrating Pietro's birthday every year.



BELLUSCHI: 1972 AIA Gold Medalist.

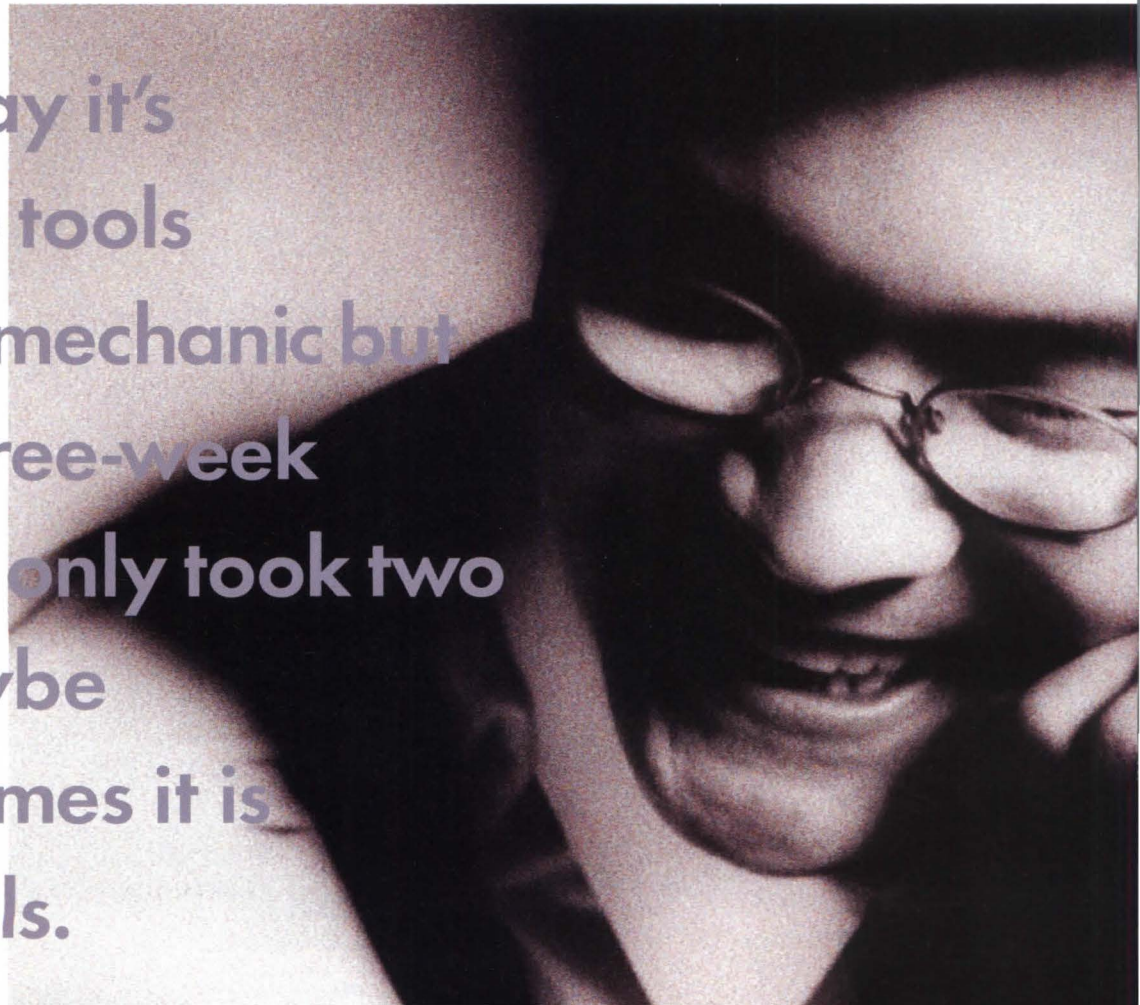
Pietro Belluschi participated in over half of 20th-century-American architecture, often on center stage. His remarkable career was distinguished by two distinct phases: In Portland, Oregon, he defined a regional style with a series of beautifully simple and serene churches, houses, and public buildings; as dean of the School of Architecture at MIT from 1951 to 1965, he obtained major commissions—both as principal designer and as consultant—and served as juror of the most important competitions, all of which helped shape the course of the built environment in the 1950s and '60s.

My first view of Pietro as a student in 1957 was at a distance, and it was central casting's image of an architect: handsome, urbane, accented, and articulate. Later as a friend and collaborator, he remained a modest, intelligent, and talented Modernist with an unerring eye and a passion for his art. Throughout his life, Belluschi's work was shaped by his European sensibilities that centered on

the classic ingredients of scale and proportion, color and material.

Born in Ancona, Italy, Pietro came to the United States in 1923 as an exchange student at Cornell University and, upon graduation, settled in Portland. Through a series of fortuitous circumstances, he inherited a thriving practice which led to his first major commission in 1931, the Portland Art Museum, the first of his works to draw national attention. The depression era yielded a few fine buildings, but the period from 1945 until he left for MIT in 1951 were Belluschi's most prolific in terms of quality and variety. Although there were more than a dozen projects that are noteworthy, the most conspicuous to me are the Cottage Grove First Presbyterian Church, a tiny, nonstriving masterpiece; and the Equitable Building, a taut curtain wall structure of aluminum and green glass, a liquid presence that still brightens our winter sky. (The latter was the recipient of the AIA 25-Year Award in 1982.)

They say it's
not the tools
it's the mechanic but
that three-week
design only took two
so maybe
sometimes it is
the tools.



Pietro's experience at MIT, by his own admission, was a mixed blessing. While it led to major commissions, it placed him in an environment and a scale of work where he was less at home. When Pietro received the AIA Gold Medal in 1972, it seemed that which he cherished most in architecture was seen to be of lesser value. That feeling culminated in 1981 with his outspoken opposition to the Portland Building, designed by Michael Graves. Yet he remained active. I visited him in his studio when, at the age of 90, he had designed and drawn three schemes for a synagogue, complete with color-rendered plans, elevations, and sections. It was a testament to the fact that work never killed anyone.

Last fall, a group of young architects in Portland took it upon themselves to create a splendid exhibit of Pietro's most notable work. It was a comfortable reminder that at least in this part of the world, his incredible value is not lost on the coming generation.—*Robert J. Frasca*



PORTLAND ART MUSEUM: 1931.



PORTLAND MUSEUM: Skylit interior.



EQUITABLE BUILDING: 1948 Portland tower pioneered curtain wall design.

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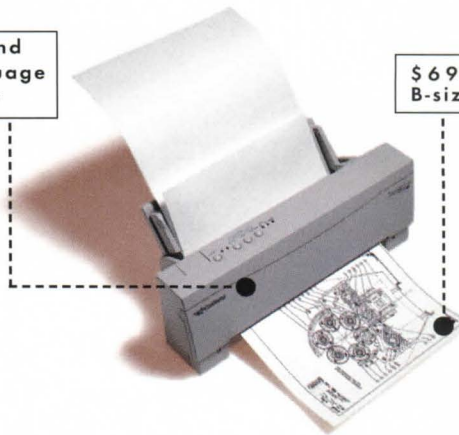
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PERFORMING ARTS CENTER: Moore Ruble Yudell's winning scheme for the University of Maryland.

Jury Selects MRY for Maryland Arts Center

Five nationally prominent architects staged virtuoso performances earlier this year—complete with an electric guitar serenade in one case—as they vied for a chance to design a \$97 million performing arts center for the University of Maryland's College Park campus. In February, five finalists—culled from a list of nearly 200

firms—each made 75-minute presentations before an audience at the university's School of Architecture.

After several hours of deliberation, a seven-member jury selected a comfortingly humanistic proposal by Moore Ruble Yudell (MRY) of Santa Monica, over more daring designs by James Ingo Freed and Antoine Predock, as well as thoughtful entries by Barton Myers Associates and Cesar Pelli & Associates.

The Maryland performing arts center represents the first major commission for Moore Ruble Yudell since the death last December of cofounder Charles Moore, and it shows the firm intends to remain an aggressive competitor while carrying on the Moore tradition. "The spirit of what we've done in the building is a real affirmation of the things that Charles stands for—humanism in architecture as opposed to pure ab-

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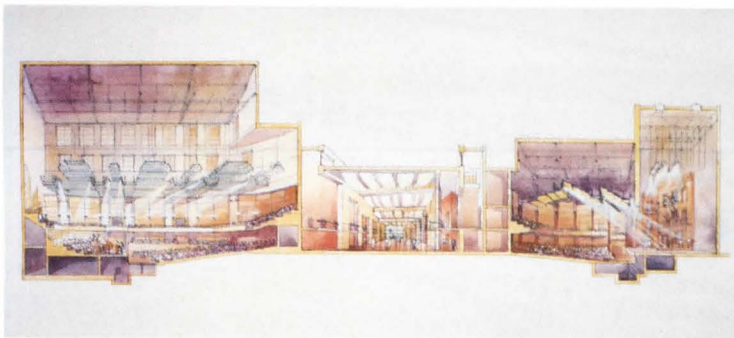
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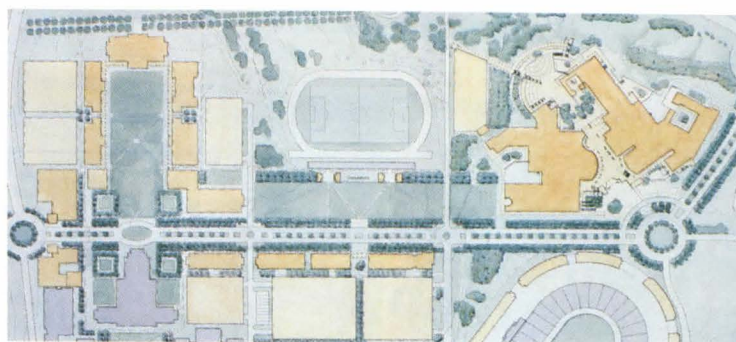
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MRY SECTION: Scheme comprises concert hall (left) and proscenium theater (right).



SITE PLAN: Performance hall to west of stadium (bottom right) forms gateway.

straction, places that celebrate human activity," explains Buzz Yudell.

Planned for a 24-acre site just west of the campus's football stadium, the Maryland Center for the Performing Arts is one of the largest and most complex in the university's 137-year history. The 295,000-square-foot facility will contain a 1,200-seat concert hall, a 350-seat recital hall, a 650-seat proscenium theater, a 200-seat dance studio, and a 200-seat ex-

perimental theater. There will also be classrooms, faculty offices, a library, a restaurant, and an amphitheater. In the MRY design, the performing halls line both sides of a covered arcade as if they were separate buildings on a meandering village street. This central circulation spine links the lobbies for the performing spaces and provides access to the teaching areas. The designers also suggested ways to employ the

university arts center to organize the west side of the campus and provide a new gateway to it.

In addition to MRY, the winning design team includes associate architect Ayers/Saint/Gross of Baltimore; Theater Projects Consultants of Ridgefield, Connecticut; acoustical consultant Kirkegaard Associates of Downers Grove, Illinois; and Virginia-based landscape architect Michael Vergason.

The jury found that MRY's design approach and philosophy "most appropriately responded to the university's and the community's needs," according to its final report to the state. "It promises a rich mix of humanly scaled forms and spaces."

Other finalists included James Ingo Freed of Pei Cobb Freed & Partners; he proposed to break the complex into its distinct parts, transforming the performing and teach-

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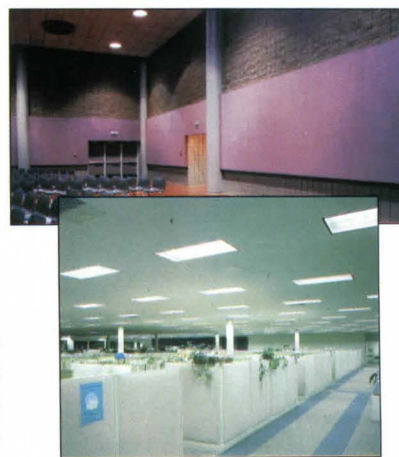
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L.A. TOUR: Leimert Park.



PATRICIA LANZA PHOTOS

DOWNTOWN SIGHTS: Pershing Square.

L.A. Conference Sets Urban Agenda

On February 10, the AIA's Regional and Urban Design Committee kicked off a three-day conference in Los Angeles to confront the Biblical scale of Southern California's latest upheavals: earthquakes, fires, riots, and immigration. Aptly titled "Restructuring Urbanisms: The Next L.A.," the conference united architects, urban planners, developers, historians, and city officials in a series of debates on the city's future and its search for a public identity. The conference emphasized a modest, community-based "restructuring" of L.A.'s diverse neighborhoods, with a grand consensus on the necessity for more public space, better mass transit, and cleaner air.

Historian Kevin Starr set the optimistic tone of the conference with an ebullient keynote address. "The adversity of the recent past," he declared, "will spur the city's renewal." On the first panel, University of California, Los Angeles, planning professor Ed Soja identified the city's ongoing changes: suburbanization; industrial decline; globalization; polarization of rich and poor; and an obsession with security. As a result of these changes, Soja pointed out, Angelenos are now seeking refuge in places like Universal CityWalk (page 41, this issue). Indeed, the most acrimonious discussion concerned Universal CityWalk's privately controlled simulation of public life.

Ironically, most panelists were quick to censure the city's dependency on automobiles, arguing that public transportation was not only an environmentally responsible alternative, but an emerging necessity. (After the conference sessions, however, most people drove away in their own cars.) The expansion of mass transit was nonetheless presented as a catalyst for change, under the assumption that its mere exist-

tence would lure commuters off the road, spur surrounding development, and unify L.A.'s disparate neighborhoods into one urban fabric linked by a common thread. In a passionate diatribe against L.A.'s proposed \$184 billion light-rail system, Antonio Villaraigosa, director of the city's Metropolitan Transit Authority, deplored the "Apartheid-like disparity of subsidies to transit riders." He referred to the staggering \$42 million required to build the proposed subway station at CityWalk, while bus service wanes in poor, transit-dependent neighborhoods.

The conference culminated in a comprehensive bus tour of L.A., from Santa Monica to the newly refurbished Pershing Square (page 21, this issue). Looking out from the bus, the full breadth of L.A.'s communities is understandable, but deceptive: "Our ghettos may look better than those on the East Coast," noted AIA L.A. President Kate Diamond, "but the pain here is greater." To mitigate that pain, the conferees argued for more public open space in the heart of the city's urban sprawl. The conference, therefore, portrayed an image of the city verging on apotheosis, not apocalypse. As Committee Chair William Fain, principal of Johnson Fain and Pereira, surmised from the proceedings: "L.A. just entered a new age of enlightenment." —*M. Lindsay Bierman*

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AN ENLIGHTENED ARCHITECT CALLS ON ROME AND ANDERSEN TO HELP A CHURCH

As a student in Rome, architect Al Fitzpatrick studied the design of St. Peter's. "Daylight was used as a source of inspiration and tranquility," he said.

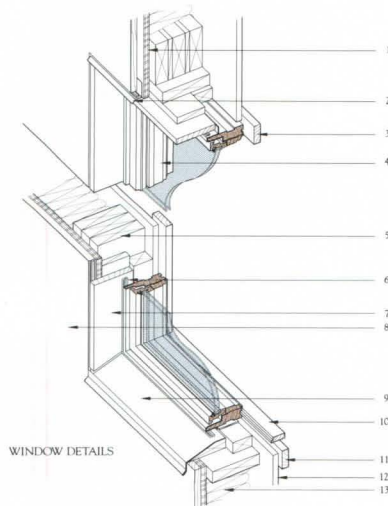


He wanted to bring that same light here to St. Joseph's—create a sanctuary in a hectic world. So he specified Andersen® windows. Said Fitzpatrick: "Andersen enabled us to use many sizes, configurations and special effects."

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designed to produce high densities on a network of points, while L.A. is a city of moderate densities along a network of lines. These lines are the city's boulevards, the vital definers and connectors of the city's countless neighborhoods. As the initial costs of the rail system begin to reach staggering levels, and as revenues for rail construction continue their current decline, we should seriously consider the advantages of continuous development along the boulevards over rail station development at major intersections.

Nation's bus capital

The great advantage of such development is that the boulevards are already served by transit. Though L.A. is often referred to as the nation's car capital, it is also the nation's bus capital, carrying more than 1.3 million passengers a day, along more than 4,000 miles of boulevards. A rebalancing of the transit policy from rail to bus would therefore offer the following advantages:

There's already a huge bus-riding public; even the most optimistic projections show that rail, though far more expensive, will have fewer than half the number of bus riders. The bus system is comprehensive: It covers the city. There is almost no place in the city grid more than a 10-minute walk from a bus line. Rail can never come close to that; it's just too expensive. The entire rail system will service only 10 percent of the boulevards that are now served by bus.

Bus routes are continuous in the urban fabric; they don't disappear underground and pop their heads up every half mile; improvements to the bus system therefore cost less and have a more visible impact on the city.

Buses easily share the boulevards with other forms of transit like walking, biking, and jitney service. And the buses themselves can become signature elements of the streetscape, like London's double-deckers, thereby enhancing the image of bus transit.

The critical link between transit, housing, and jobs would fall into place. The boulevards, which bound the single-family neighborhoods, are generally underdeveloped: one- and two-story commercial buildings or surface parking lots for block after block. They offer a vast supply of sites, already served by transit, for mixed-use development.

Is this image of the New Boulevard a daydream? Hardly—it already exists in bits and pieces around the region. The mixed-use projects along the Third Street Promenade in Santa Monica, the crowded sidewalks of Old Pasadena and historic Broadway in down-

town L.A., the neighborhood shops of Larchmont, the lively street markets of East L.A., the jazz clubs of Leimert Park, and the new plans for Sunset Boulevard in West Hollywood are all fragments of a potential reconstruction of the boulevard system.

To catalyze the urban fabric of the New Boulevard, the bus system itself would have to improve dramatically in terms of convenience, safety, and amenity. The implementation of electric vehicles—cars, trucks, and buses—would have to be rigorously promoted in order to transform roadbeds into relatively clean and quiet flows of traffic, with companion transit modes such as bike paths and high-tech jitney service.

Encourage mixed-use

Zoning regulations, parking requirements, and bank lending practices would have to encourage rather than inhibit mixed-use development. Apartment and townhouse units must target likely markets such as retirees and nontraditional families; and they must compete with single-family houses by offering shopping, terraces, and views.

None of this precludes the concurrent development of rail—light rail, monorail, or

subway—along the boulevards. But the New Boulevard would not have to depend on the high cost and lengthy planning and construction of rail. Instead, by building on the existing structure of the city, the existing transit system, and the existing demands for more housing and better public space, we could create boulevards that are sources of pride rather than dismay for communities.

The day may come when visitors to Los Angeles will eagerly buy bus passes to traverse the city. We'll watch them looking out the window and take pleasure in their discovery that the "city of sprawl" is really the city of boulevards and neighborhoods.

But it's a discovery that Angelenos first have to make ourselves. After the punishing events of the past two years, it may be just the right time to revisit our city. Expensive subways may burnish our pride as a world metropolis, but our real strength and character lies in the hundreds of diverse communities that make Los Angeles their home. And where is home? It's near the boulevard, and you can get there on the bus.—*Doug Suisman*

Doug Suisman is Principal of Public Works Design, an urban design firm in Los Angeles.

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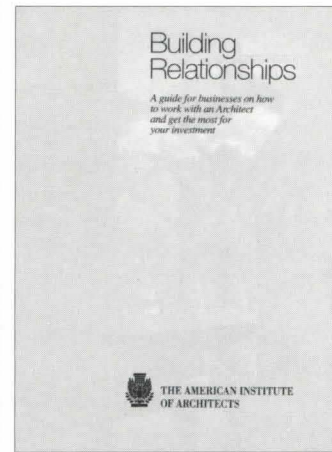
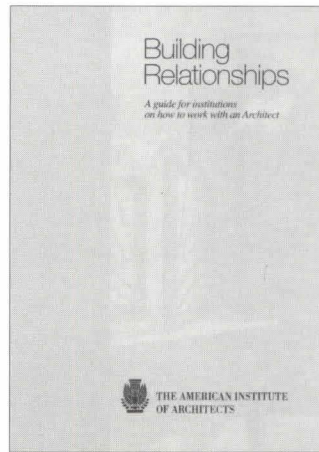
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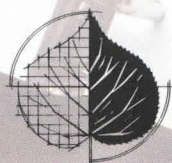
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Los Angeles Architects



GEORGIANNE DEEN

Freedom from tradition and conformity have always characterized architecture in Los Angeles, the site of next month's AIA convention. So it is not surprising that local firms already embrace the profession's latest trends: a push for minority and community involvement, cross-disciplinary practice, and an increased awareness of environmental issues. This issue profiles several L.A. architects whose work embraces these trends, suggesting an age of renewal despite the city's prolonged recession and social upheavals. ROTOndi and Rios Associates strive for an inclusive discourse, opening the design process to clients, contractors, and consultants and integrating the disciplines of landscape architecture, furniture design, and graphics. Michael Pride-Wells similarly encourages residents of South Central to work side by side with architects and plan their own community's future. Angéilil/Graham adopts a more environmental and engineered posture, proposing to line L.A.'s buildings and freeways with photovoltaic panels to harness the ever-present sun. Kanner Architects may be the only firm in this issue whose work (above) typifies the funky 1950s architecture long associated with L.A. Reaffirming the city's populist verve, Chuck Kanner asserts, "We need a shot of that optimism now, in these more downbeat times."

Angélil/Graham Architecture

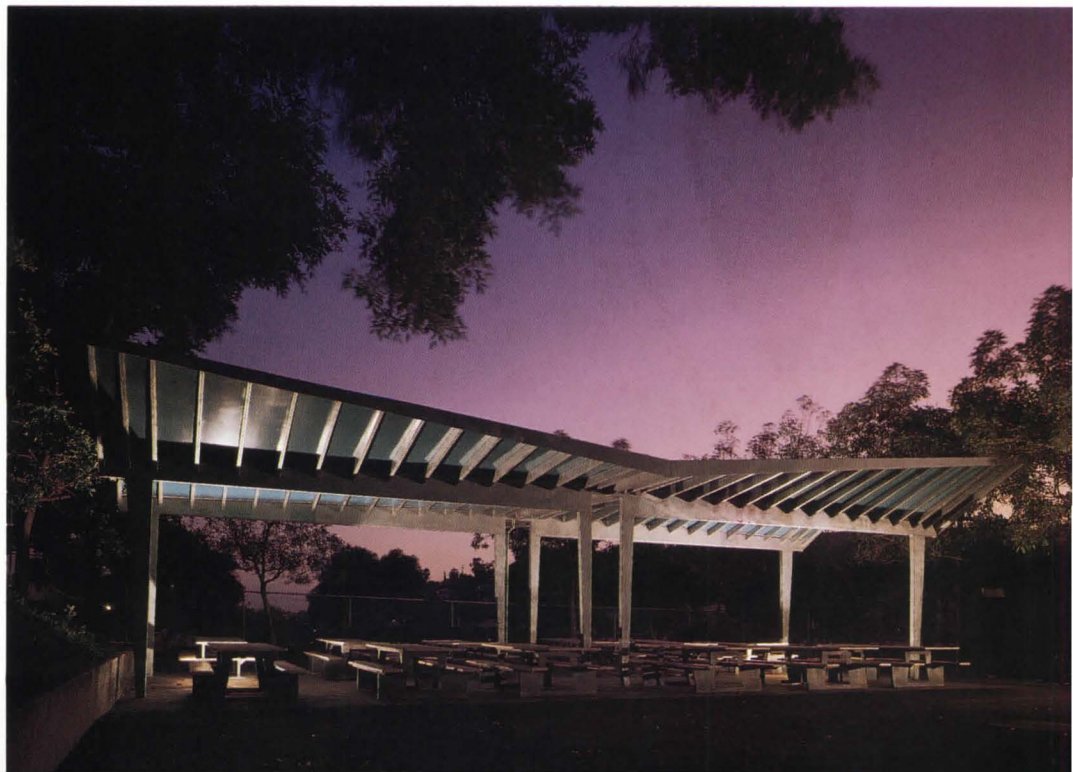
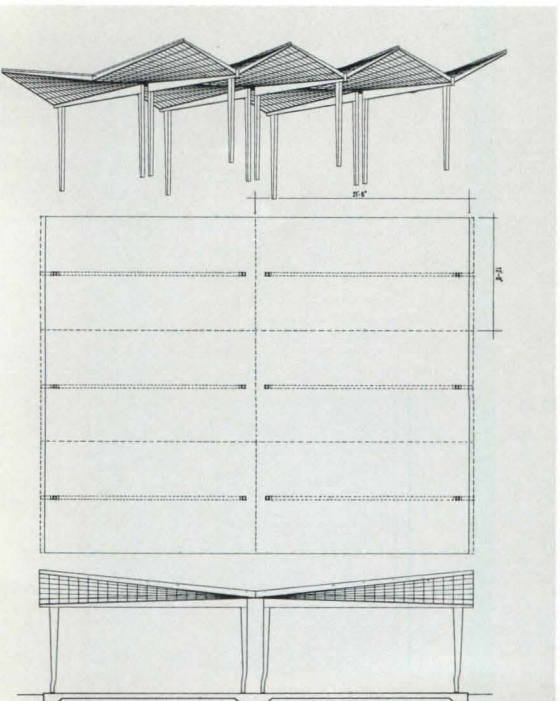


PATRICIA LANZA

ABOVE: Partners Sarah Graham and Marc Angélil practice in Los Angeles and Zurich, Switzerland.

BELOW: Prototypical lunch shelter for 50 L.A. schools protects children from sun and rain. Structural-steel kit of parts adapts to various site conditions.

FACING PAGE: Assembly of roof elements allows a different size, configuration, and orientation for each shelter.



Compared to L.A.'s fashionable array of tilted planes, twisted supports, and disjointed volumes, the exacting, structural rationalism of architects Marc Angéilil and Sarah Graham looks nobly restrained. Unlike Frank Gehry, whose sculptural collage magnifies and celebrates the roughness of L.A.'s building industry, Angéilil and Graham synthesize a California Modernist vernacular with contemporary engineering and environmentalist tactics. For them, architecture is not an isolated discipline; and the couple's work, like that of the ancient Greeks, expresses fundamental structural laws and material properties. "We are not part of the Santa Monica boys' club," Graham avers, referring to Gehry's reigning progeny. "We want to do something different."

Graham, a 42-year-old native Californian, left a career as an industrial designer, ceramist, and construction worker in Portland, Oregon, to study architecture at Harvard's Graduate School of Design. She graduated with a master's degree in 1982, the year Angéilil, now 40, left his native Switzerland to begin teaching at Harvard. Before moving to the United States, Angéilil studied and taught architecture at Zurich's Federal Institute of Technology; and upon his arrival in Boston, was surprised to find, as Graham puts it, that "Postmodernism was the only game in town." In 1987, after five years of collaborating on additions and renovations, the husband-and-wife team left conservative Boston for freewheeling L.A., leased a studio

behind a Melrose Avenue storefront, and launched Angéilil/Graham Architecture.

Lest anyone accuse Angéilil or Graham of formalist impulses, neither one of them readily concedes any direct sources of inspiration. Yet the couple's mentors are manifest in the newly completed, Eamesian box they designed as their own house, set onto a steep, terraced slope in the foothills beneath the famous "Hollywood" sign. The house recalls the work of an earlier, more visionary generation in Los Angeles, not only by Charles Eames but also Pierre Koenig, Richard Neutra, and Rudolph Schindler. Angéilil nonetheless insists: "We are not Modernists. We do not strive for perfection."

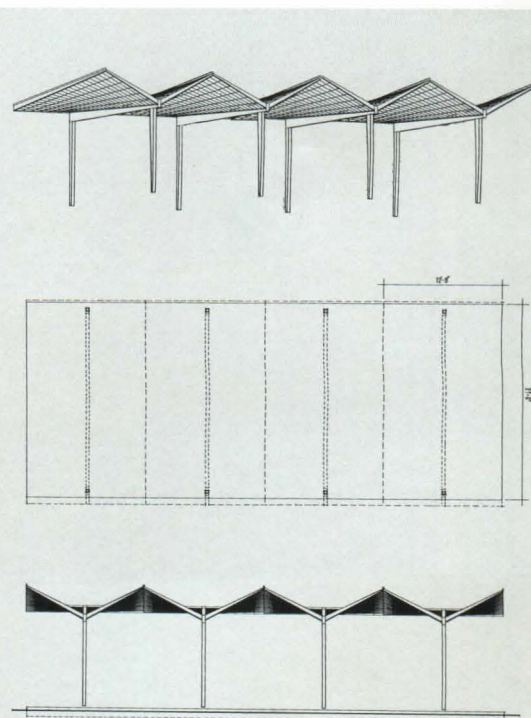
Angéilil's assertion is difficult to believe, especially if one considers Graham's penchant for detail and the couple's ongoing collaboration with structural engineers. For example, Angéilil and Graham designed their first public commission in association with the L.A. office of the renowned engineering firm Ove Arup & Partners: an elegant series of steel-supported, open-air lunch shelters for 50 of L.A.'s neglected elementary schools. The engineers helped refine the structure of Angéilil and Graham's house, too, which, for all its tensile delicacy, sustained no damage in the 6.7 earthquake last January.

Indeed, the deceptive simplicity of both projects reveals the architects' elemental, systematic approach to design. Like Schindler, who experimented with tilt-up concrete slabs, Angéilil and Graham transform tectonic

ideas, rather than formal images, into art; they work in their studio as if in a laboratory. "Every commission is a research project," explains Angéilil. "We're always exploring new methods of construction." In the field, the architects' high expectations from contractors have led to a simplification of architectural form: "We used to fight for cleaner details, but everything just gets banged together," Angéilil deplures. "In L.A., the building process requires straightforwardness."

Angéilil and Graham work best on an urban scale, where they combine a search for elemental form and crisp detail with an enlightened environmental agenda. In 1989, the couple opened a Zurich office to manage the design and construction of a town center in a nearby suburb: Located at the edge of a broad, rural horizon, the project accomplishes a rare balance of the natural and man-made, with buildings adapted both to the forms of the land and the path of the sun.

Last year, Angéilil and Graham furthered their environmental cause with a proposal to incorporate photovoltaic panels into L.A.'s vast infrastructure, from freeway sound barriers to reflective ground cover for urban parks. Like Angéilil/Graham's individual buildings, this self-sustaining infrastructure sets an inspired precedent for L.A. architects: The project not only transforms the city's constant sunshine into an integral power source, but also suggests a more collaborative, and certainly inevitable, pursuit for the architectural profession.—*M. Lindsay Bierman*



Solar Infrastructure

BELOW: Photovoltaic-paneled canopy shelters a clearing in the landscape.

DRAWINGS: Modular system of steel frames and photovoltaic panels conforms to various site conditions.

FACING PAGE, TOP: Photovoltaic generator doubles as freeway sound barrier.

FACING PAGE, BOTTOM LEFT: Modular, screenlike application to existing building wall creates solar trap.

FACING PAGE, CENTER RIGHT: Rooftop shade frame covers existing building.

FACING PAGE, BOTTOM RIGHT: Photovoltaic panels form ground plane.

The Los Angeles Department of Water and Power estimates, alarmingly, that L.A. will consume as much energy in the year 2000 as the entire state of California consumed in 1970. Until the 1973 oil embargo, the city was almost entirely dependent on foreign gas and oil to generate electricity. Twenty years later, the city still relies on outside sources, importing electric power from as far away as Utah and Oregon through a wasteful process of transmission. Given the city's increasing population, L.A. must diversify its energy resources, both to generate enough power and reduce its burden on distant communities.

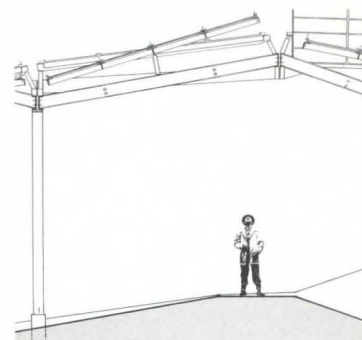
With this goal in mind, Angéil and Graham developed five ways to incorporate a flexible system of photovoltaic panels into the city's existing infrastructure: as a ground plane for urban parks; a free-form structure for the open landscape; a cladding for freeway sound barriers; a screenlike building wall; or a rooftop shade frame. By adapting this system to buildings, roadways, and parks, the architects transform unremarkable, planar surfaces into renewable and, indeed, elegant urban generators. Even on cloudy days, a photovoltaic system converts light into electricity; and its solar cells are derived from crystals of high-quality silicon—a plentiful resource in the earth's crust.

Although each of the five applications derives from a shared kit of

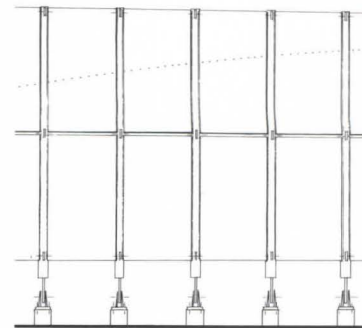
parts, some manifestations are more convincing than others. It is difficult to imagine, for example, photovoltaic panels underfoot, but when applied as a fragmented ground cover, the technology evokes a grand reflecting pool. More compelling is the proposal for paneled freeway sound walls, which elevate the drab functionality of concrete barriers to the realm of civic art.

Despite paltry federal funding for the research and development of diversified energy technology, Angéil and Graham's proposal invites further speculation. Bus shelters and rail platforms could be equipped with solar technology and double as power-supply stations; photovoltaic-paneled highway billboards could serve a more noble purpose than mass marketing; and architects could collaborate with engineers, landscape architects, and urban designers to develop and incorporate emerging solar technologies in the design of new neighborhoods.

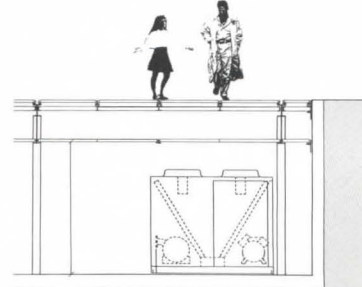
For now, the cost of fulfilling these dreams remains prohibitively expensive. But as Graham points out: "The Germans and the Swiss already have photovoltaic systems up and running. If the system can work in a place where it always rains, why can't it work in L.A.?" Indeed, Angéil and Graham not only recognize sunshine as L.A.'s most obvious and neglected power source, but also its potential to empower the city's static urban resources.



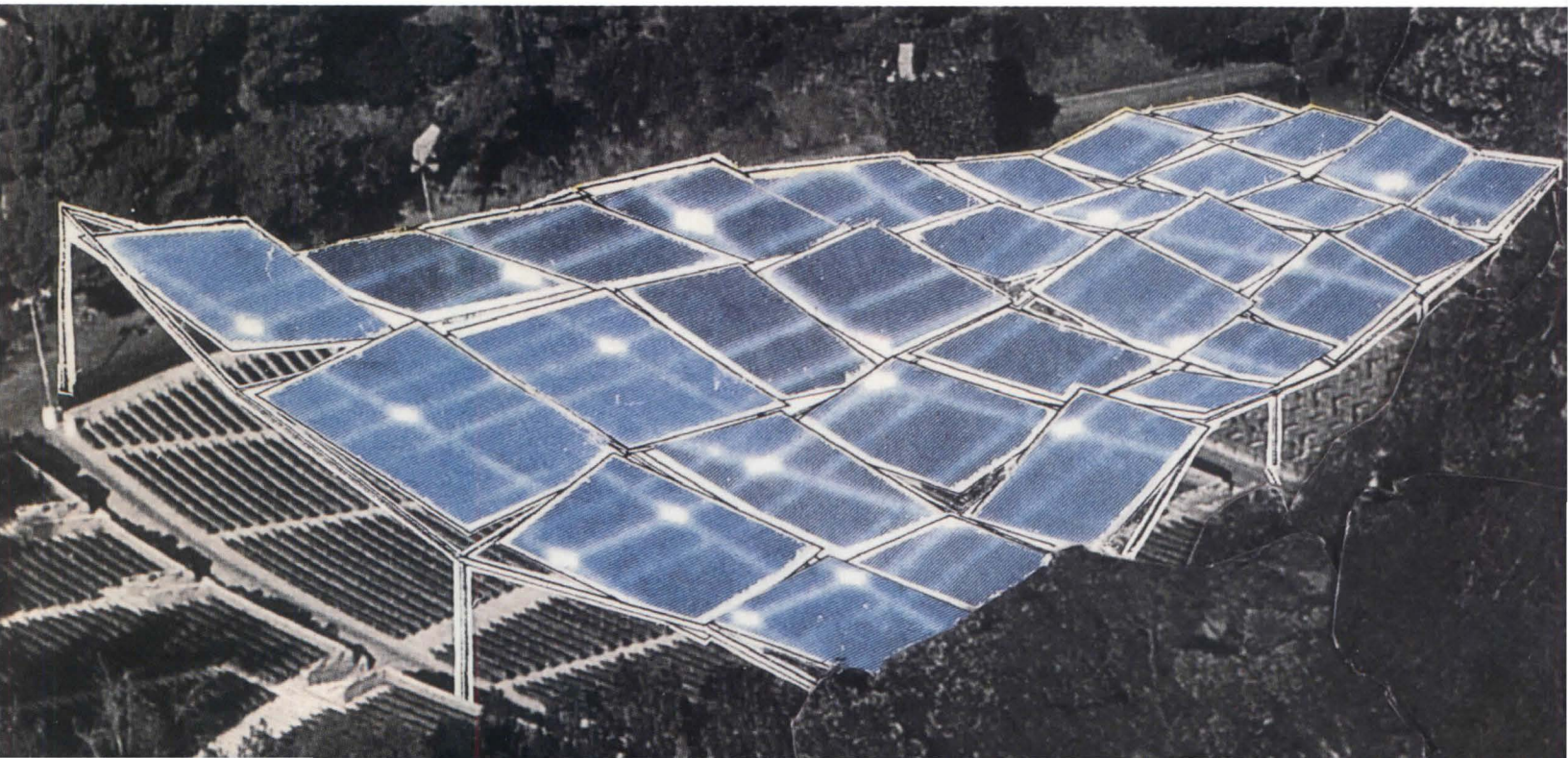
LANDSCAPE SHELTER

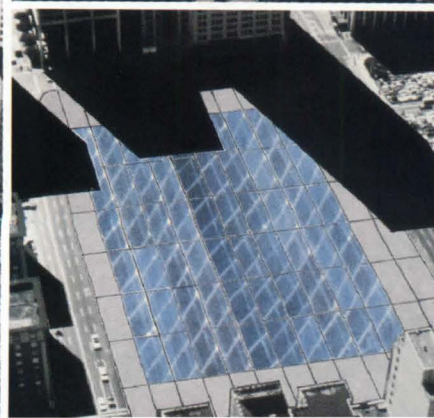
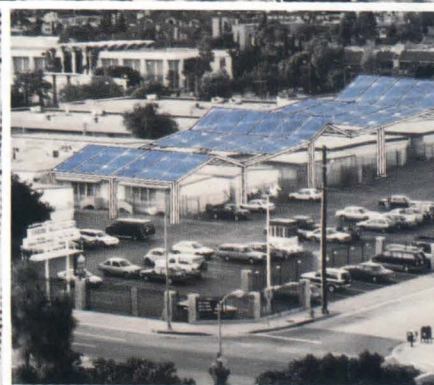
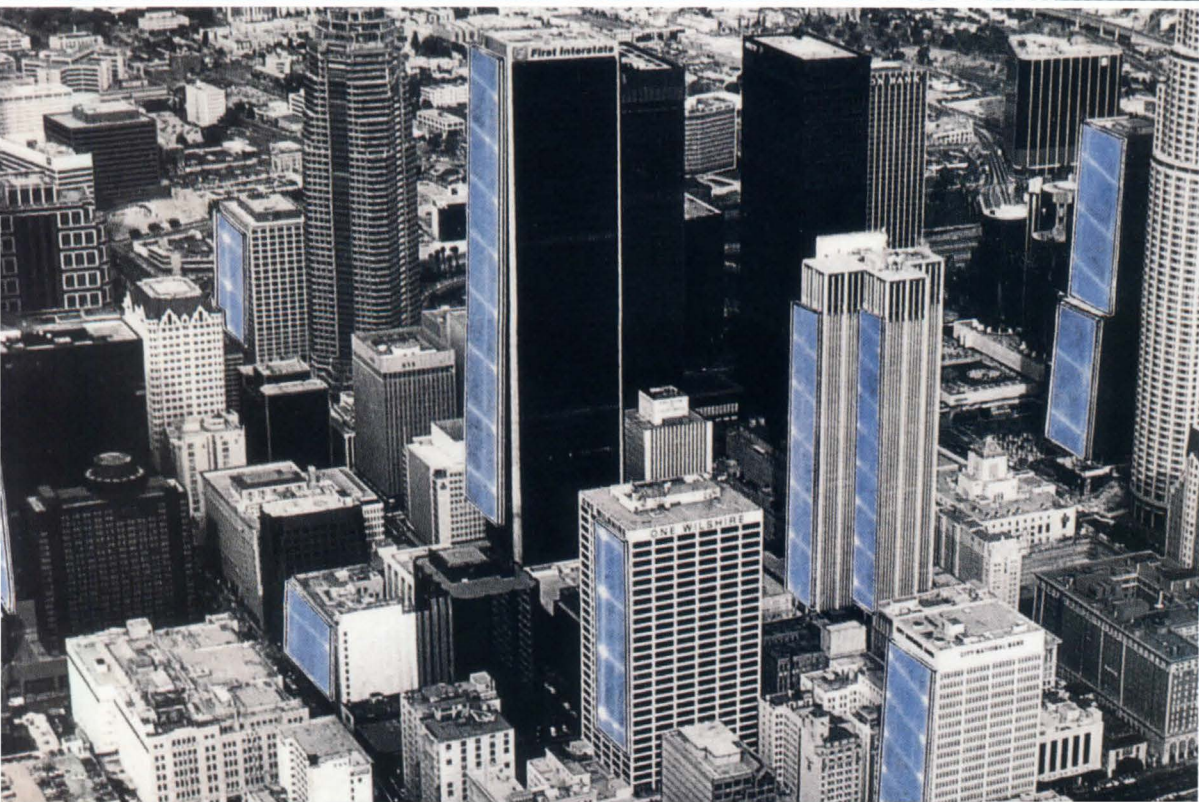
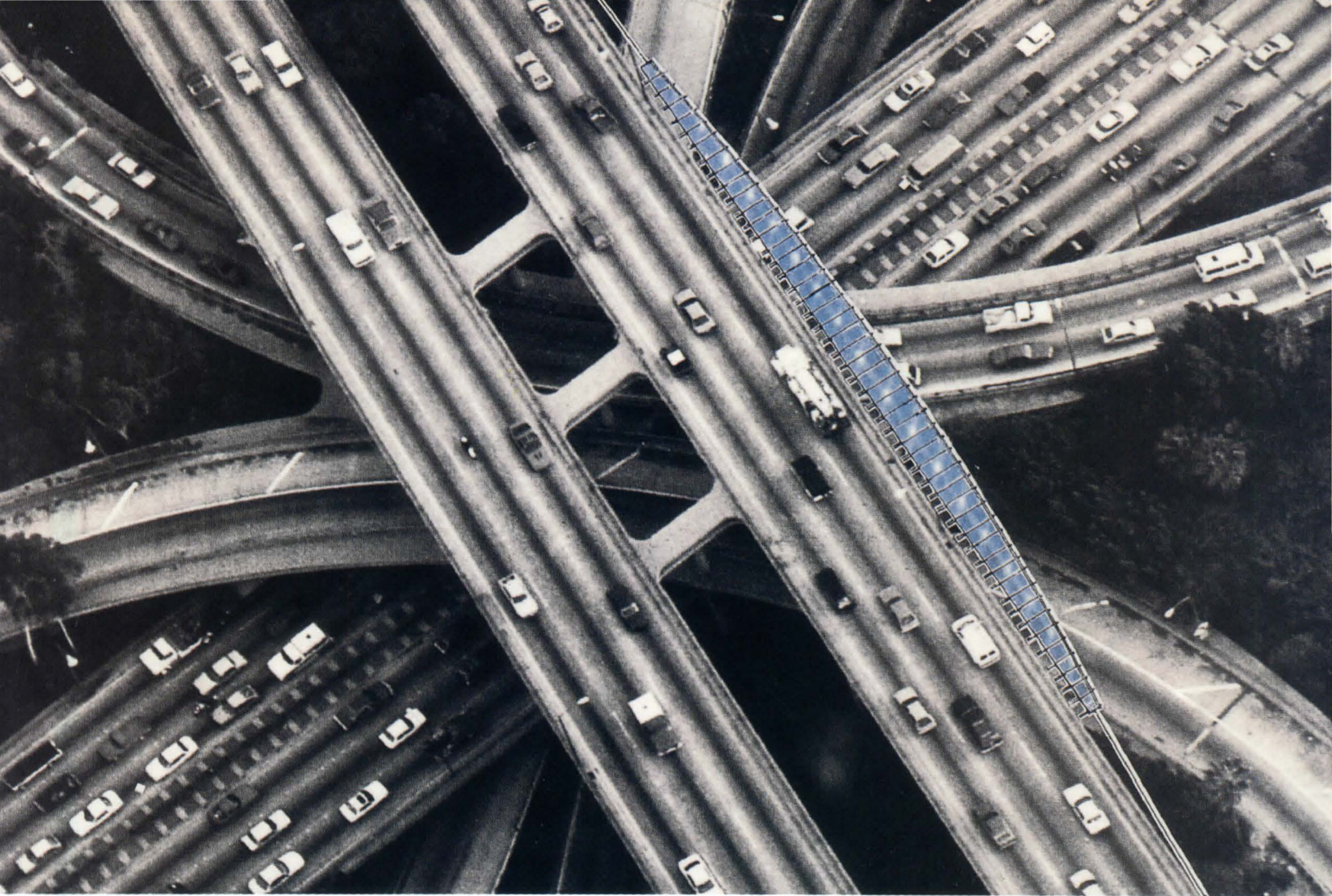


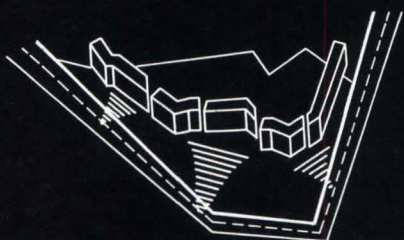
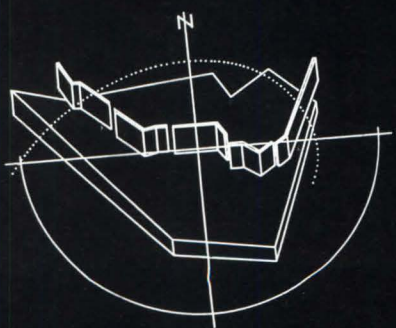
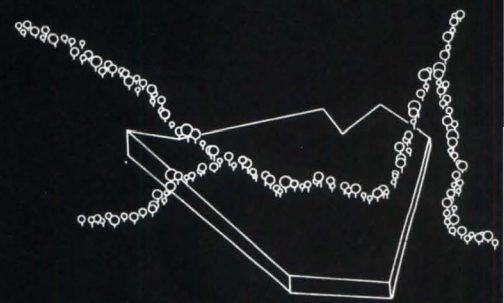
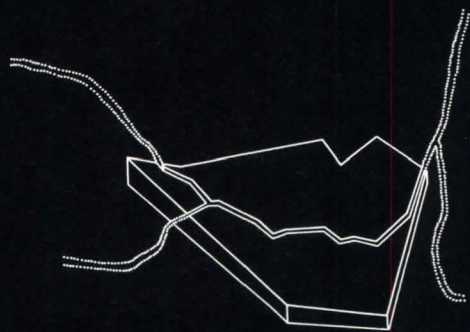
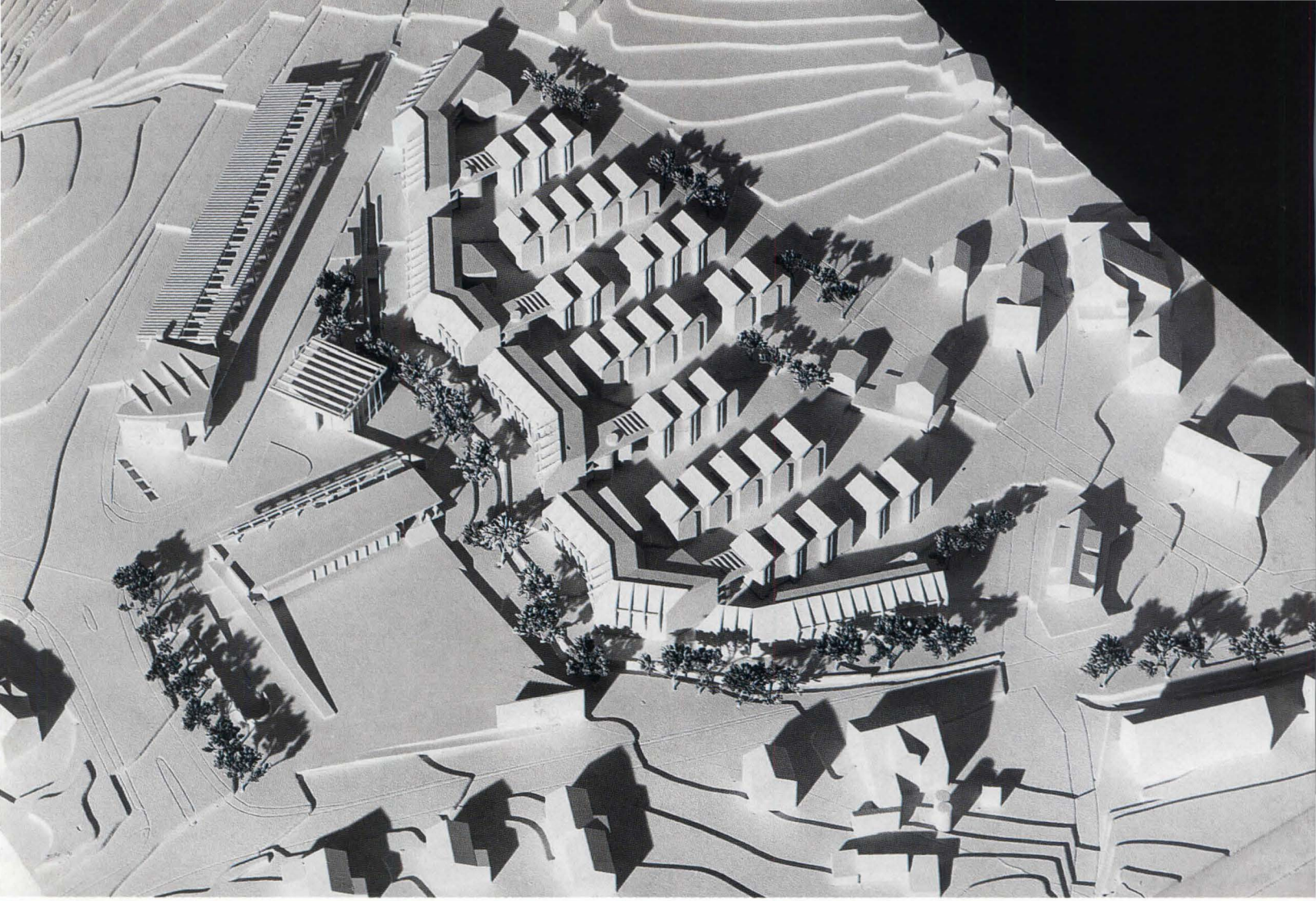
FREEWAY SOUND BARRIER



URBAN PARK GROUND PLANE







Esslingen Town Center

In 1989, Angéilil and Graham won a competition to design the town center of Esslingen, Switzerland, located at the frayed, outer edge of suburban Zurich. Here, at the threshold of a long, green stretch toward the Swiss Alps, Angéilil and Graham mediate between a benign landscape and nearly a century of suburban sprawl. The program called for an environmentally responsible mix of housing, retail, offices, light industry, and public buildings—including a rail station to reduce commuter dependency on the automobile. Although the architects' solution evokes none of the charm that characterizes a medieval Swiss village, Esslingen's buildings appear similarly indigenuous, like machine-made extrusions of the natural topography.

Angéilil/Graham's scheme derives from a series of analytical diagrams, beginning with a clear abstraction of the site. A creek dividing the property into discrete halves suggested a clear, natural divide between the town center's public and private realms. To reinforce this boundary, the architects flanked the water's sinuous edge with a thin bar of light industrial and commercial buildings, separating 50 units of housing to the north, from a train station, post office, restaurant, and farmer's market to the south. The housing extends uphill in dense, linear rows that recall the 1927 Weissenhof Siedlung; while, on the other side of the creek, the circumstantial grouping of free-

standing public buildings forms an intimate, open-ended square, marking the final rite of passage from Zurich to the mountainous landscape.

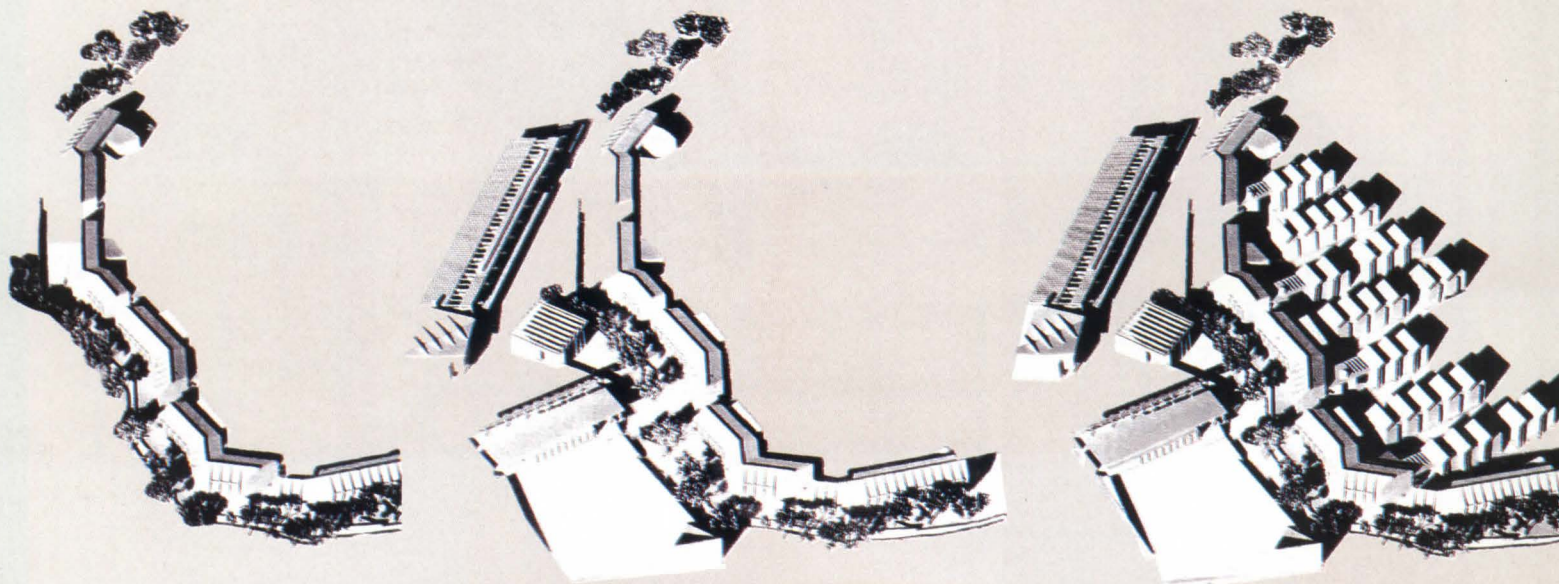
The elongated mass of industrial and commercial buildings not only creates a protective sound barrier between the site's public and private areas, but also a continuous solar trap in the facades facing south onto the water. With convincing resolution, Angéilil and Graham integrate active and passive energy systems into architectural form, including rooftop solar collectors and photovoltaic panels to generate electricity and hot water. Fortuitously, the architects' commission included a grant to research how Swiss laws must change to make sustainable architecture viable, from the design of advanced energy systems to the proper choice of materials.

The town center's public buildings are now under construction, ending a confrontation between the architects and traffic engineers over subtle but important distinctions in the design of the square. To save land, Angéilil and Graham were allowed to accommodate buses, cars, bikes, and pedestrians on virtually the same surface, evoking the human scale and vitality of a Roman piazza. Like its ancient Italian counterpart, the square gives Esslingen the identity of a real city; and the architects' economy of land, energy, and materials establishes a critical, alternative model for suburban development.

FACING PAGE, MODEL: Esslingen town center commands hillside between edge of suburbia and rural farmland.

FACING PAGE, DIAGRAMS: Angéilil/Graham's drawings describe existing topography (top left), creek (top center), and vegetation (top right). Location of commercial buildings is based on solar orientation (bottom left), sound protection (bottom center), and mountain views (bottom right).

BELOW: Models reveal Angéilil/Graham's incremental design process. Commercial buildings (left model) trace the north bank of an existing creek; freestanding public buildings form train station square (center model); and rowhousing extends uphill to north (right model).



Hollywood House

The Hollywood Hills are an unlikely place to build a new house, given the area's steep, shallow parcels, fire-prone vegetation, and active geological faults. Undaunted by these constraints, Angéil and Graham transformed what was considered an unbuildable slope into a sturdy plinth for their own house. From the winding, uphill approach toward the famous "Hollywood" sign, the newly completed rectangular pavilion towers precariously above a narrow intersection of streets. A grid of concrete grade beams climbs the hill like a warped ladder, bracing the thin, delicate structure against the brutal forces of nature.

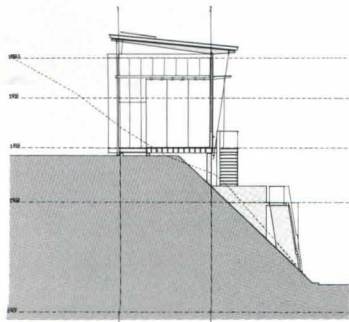
In the most abstracted way, Angéil and Graham's house can be seen as the flatbed of a truck parked beneath a metal carport. This design integrates three structural elements: concrete foundation, wood shear walls, and steel roof canopy. Set on the highest terrace formed by three parallel, concrete-block retaining walls, the house is an unconventional hybrid of ordinary wood construction (the flatbed) and precise engineering (the carport). On the front facade, for example, the architects stabilize the steel frame with rough plywood enclosures. This frame carries the compressive loads of the roof, which floats in ethereal, asymmetrical balance; with economy, mere threads of steel cable transfer the roof's tensile loads, anchoring the canopylike plane to the ground.

RIGHT: Angéil/Graham's house occupies a steep, shallow site in the Hollywood Hills. Steel-supported, canopylike roof extends south over terrace.

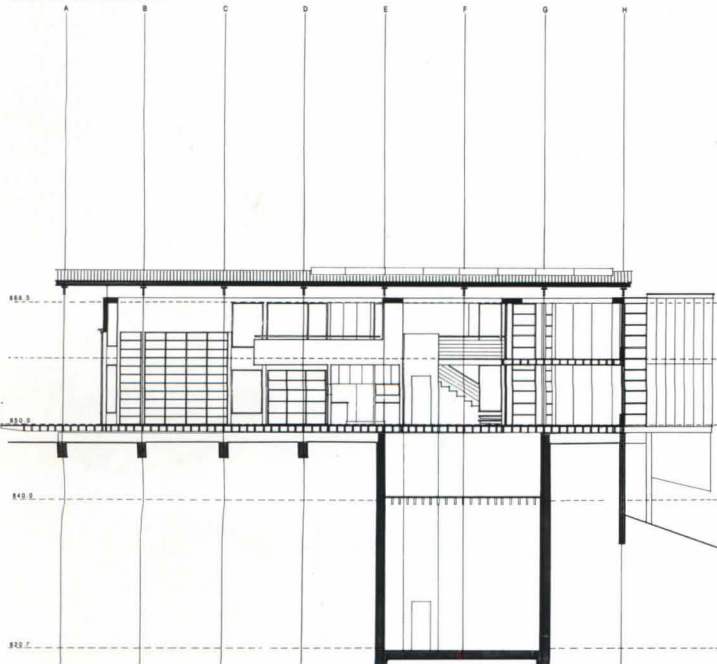
BOTTOM RIGHT: Bathrooms project from north end of house.

SECTIONS: Building is supported by a system of concrete grade beams and concrete-block retaining walls.

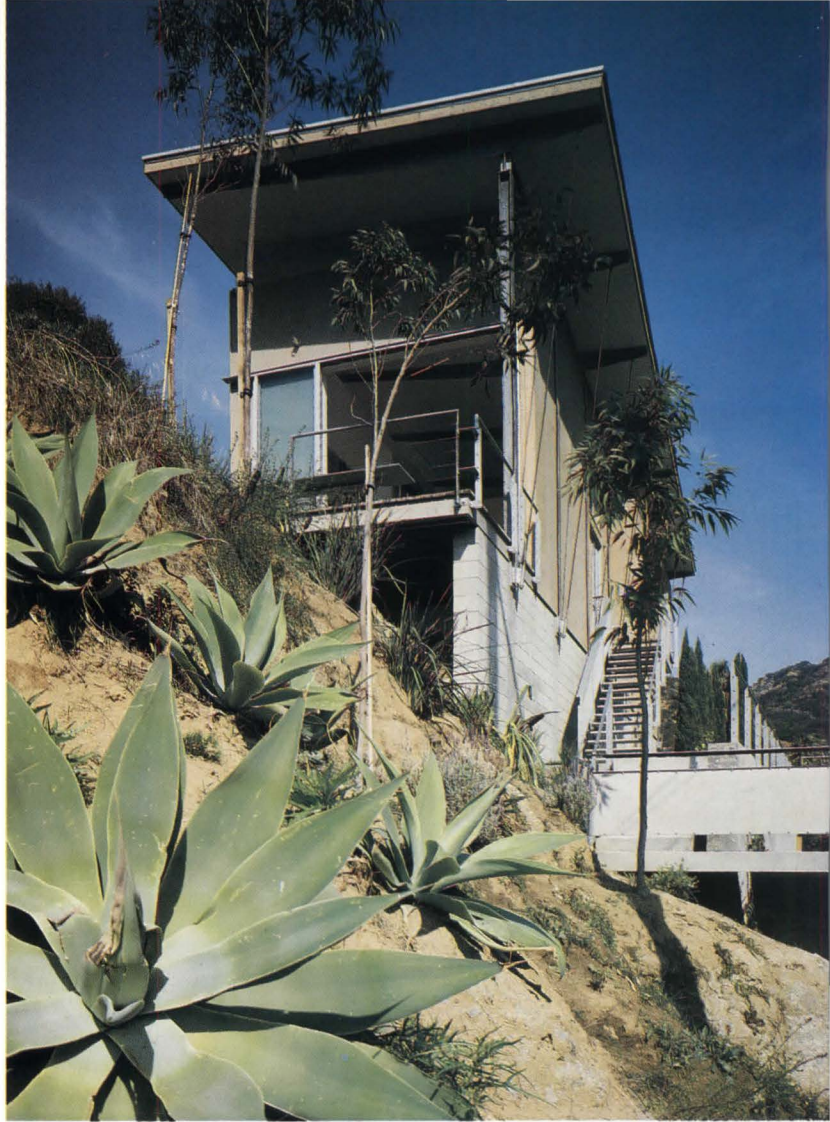
FACING PAGE: View of east-facing facade reveals proximity to famous "Hollywood" sign (far right).



WEST-EAST SECTION



SOUTH-NORTH SECTION





While the residence shares obvious tectonic and spatial qualities with Southern California's Case Study Houses, Angéilil and Graham's integration of raw wood and structural steel appears, in some places, consciously subversive. "We approached the project like an experiment," Graham admits. For spatial effect, the architects contradict the gridded framework of the foundation and roof by shifting the interior partitions and building envelope off this regular grid; along the top of the perimeter walls, a continuous plexi-glass clerestory disengages the vertical enclosure from the thin plane of the roof. The two-level interior, therefore, reads as an independent box with an open lid.

A clear spatial relationship between the interior and the cramped, shallow site is established at the east-facing entry. Here, the architects direct the eye away from the drab, rear retaining wall toward glazed openings at each side of the house. To the south, a massive sliding glass door suggests the continuity of the living area and the garden. On the north side, a corner window separates the front enclosure from the end wall, transforming the facade into a thin partition from the street.

Unlike many recent L.A. houses, Angéilil and Graham's house stands quietly among its neighbors. It evokes the soul of the Eames house, reviving L.A.'s tradition of rational form and ornamental restraint.

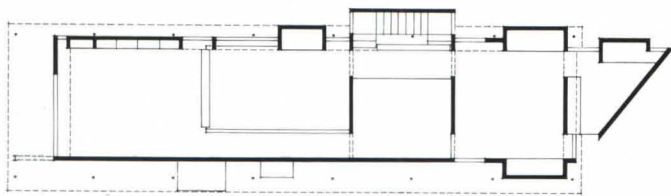
RIGHT: Shear wall conceals kitchen.

Floors are sheathed in particleboard.

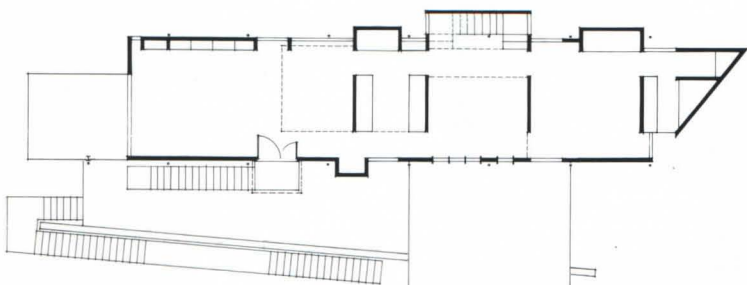
BOTTOM RIGHT: Stair to upper level projects from perimeter.

PLANS: Linear box encloses main living area to the south, kitchen in the center, and bedrooms to the north.

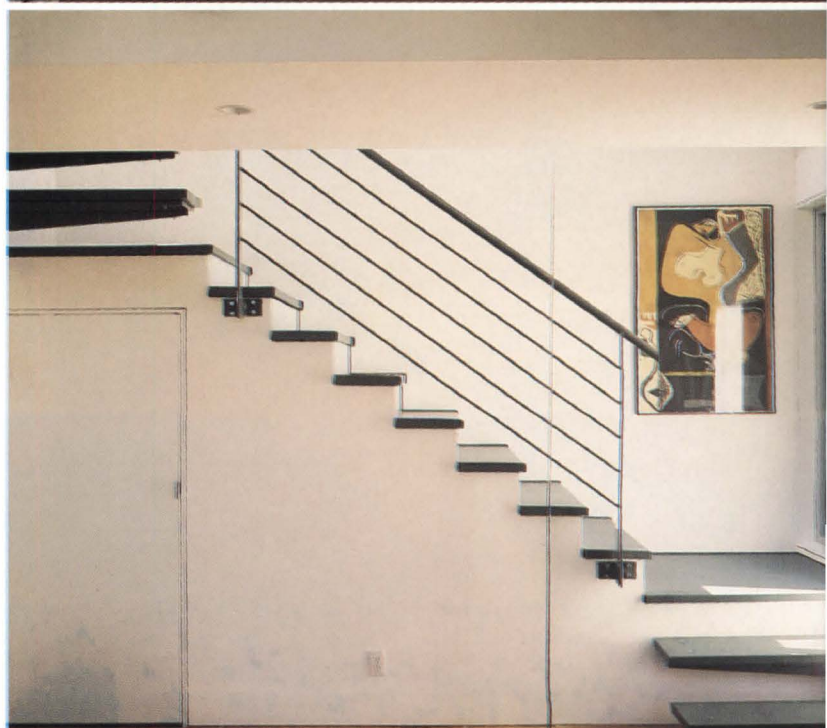
FACING PAGE: Upper level study overlooks main living area. Dining area opens to garden through garage door. Clerestories extend around perimeter.



SECOND FLOOR PLAN



FIRST FLOOR PLAN





Rios Associates



PATRICIA LANZA

Mark Rios might seem like a typical Los Angeles architect, with a list of entertainment-mogul clients that includes MCA/Universal Studios, Warner Bros., and Disney. But Rios doesn't design movie sets or glitzy, high-end houses. Instead, the 38-year-old architect is principal of a multidisciplinary practice that crosses the boundaries between architecture; landscape architecture; and interior, industrial, and graphic design, whose projects range from furniture, private gardens, and lighting to child-care centers and public parks. Rios explains, "One idea breeds another; whether it's a building or a landscape or a piece of furniture, there's a cross-pollination, and it makes whatever you're working on better."

Rios's 9-year-old firm employs 10 architects in a practice whose work comprises 40 percent architecture, 40 percent landscape architecture, and 20 percent furniture and graphic design. Architecture and landscape projects are about half commercial, half residential, Rios notes, and might include everything from a trellis for pole beans to a 10,000-square-foot residence on 5 acres. The L.A.-born, Harvard Graduate School of Design-trained architect and landscape architect (he is licensed in both) believes such interdisciplinary projects "keep ideas very fresh, freeing your mind and opening your thinking," allowing his staff to "create something they wouldn't have thought about otherwise."

The originality produced by this method is evident in Rios Associates' collection of



corporate-sponsored child-care centers. Since four out of five of the centers have similar programs, Rios could have given all his clients variations of his award-winning complex for Warner Bros. (ARCHITECTURE, April 1993 pages 70-75), which embraces its environment with angular buildings that pay homage to Richard Neutra. Instead, Rios crafted a series of fenced pavilions for Disney and a low-slung, boomerang-shaped complex for MCA/Universal Studios. Wherever possible, the architects design every detail, inside and out, from sturdy little tables and chairs to vegetable gardens. "One of the things I've learned from Mark," notes architect Julie Smith, project manager for the MCA/Universal child-care center, "is that no aspect of a project is too small for us. We are always designing—even if the building is under construction, we're improving the interiors or the playground. It's a fast-paced, intense office."

Mark Rios himself inspires this intensity, although he goes out of his way to play down his role, promoting the talents of his staff. "I look at the office as a whole as a design problem, just like the projects," Rios explains. "The personalities, the movement, the flux, how it changes—and I try to mold the practice around the personalities and needs of the staff." He views the office as a unified team of professionals who will, he hopes, mature together as a design studio.

A Los Angeles native whose mother is Scandinavian-American and whose father is Mexican, Rios travelled extensively in Mexico

as a child and recalls the influences of lush tropical landscapes, ruins, and monumental Modern architecture. He cites the inspiration of Luis Barragan, Richard Neutra, and Rudolph Schindler; landscape architect Roberto Burle Marx; and Mexican muralist Diego Rivera among his influences. Rios studied at Harvard with landscape architects Peter Walker and Martha Schwartz and counts himself lucky to have worked on a project by Dan Kiley, whose formal integrity he admires.

The landscape projects by Rios Associates exhibit a similar unpredictability of styles: a dynamic, competition-winning cultural complex and landscape design for the never-realized Artspark L.A.; a park that incorporates an historic house in West Hollywood; and a 3-acre maze of bluestone retaining walls that fortify, with moats and waterfalls, a new Frank Gehry house in Brentwood.

The diversity of his practice has also helped it stay alive during California's recession. "When one market dries up, there's another one to take its place," Rios maintains, adding that his firm's furniture and lighting designs are largely a response to clients who can't find what they want on the market. For example, an aerodynamic chair on wheels, which looks like it sprang from a Jetsons cartoon, is designed as a storytelling couch for day-care teachers, who like to seat several toddlers around them. "I hope the forms we explore show life, vigor, and spirit," Rios muses. "I want our designs to inspire people in a joyful way."—Heidi Landecker

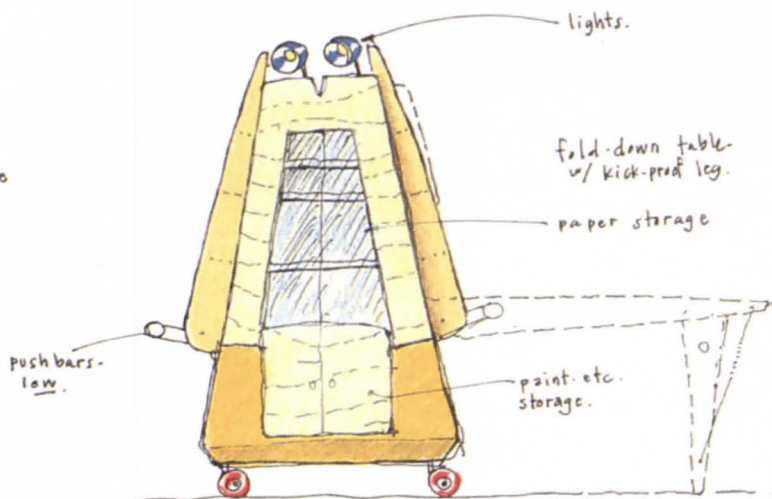
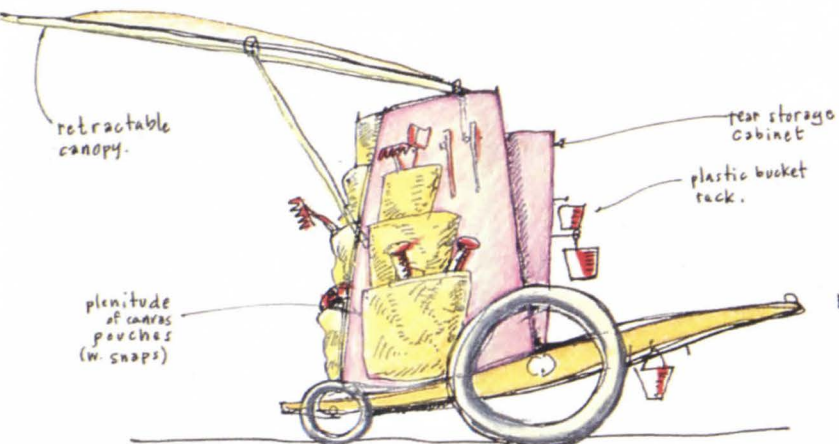
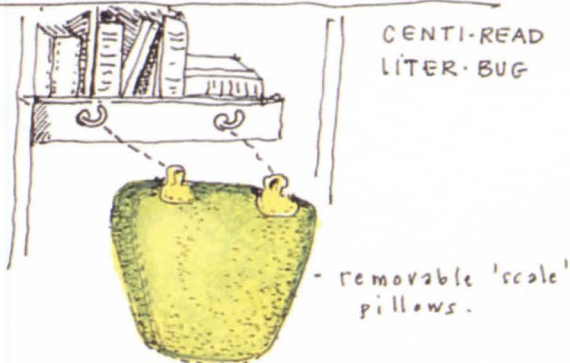
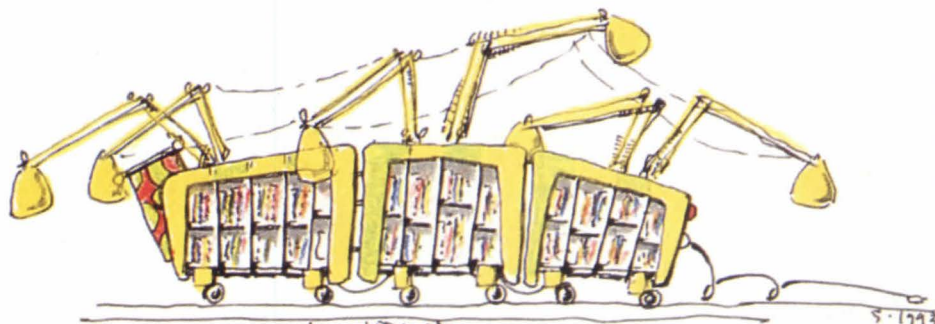
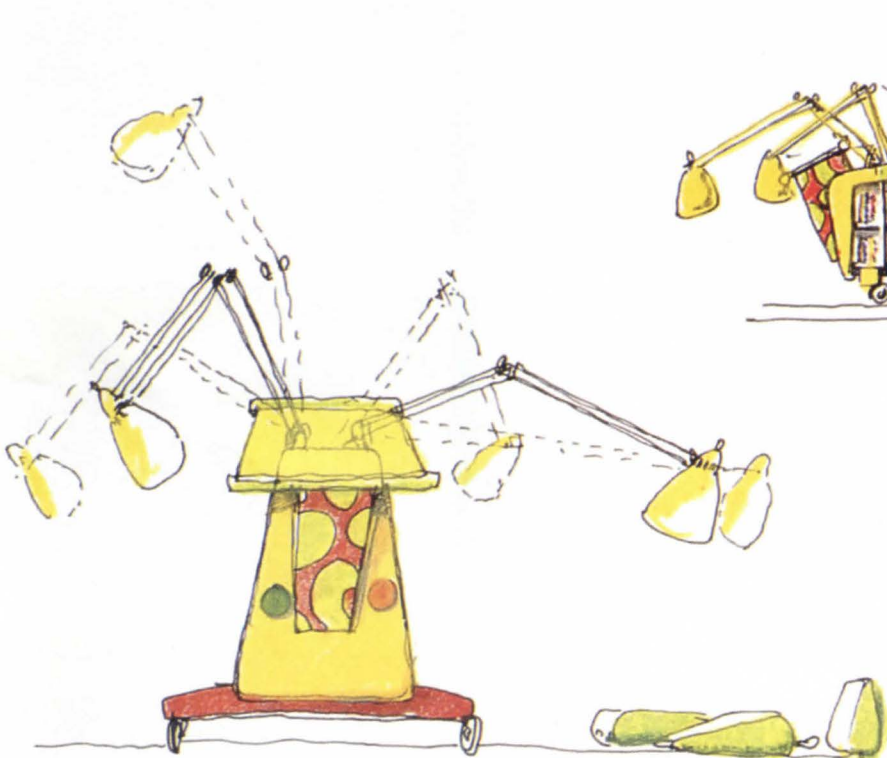
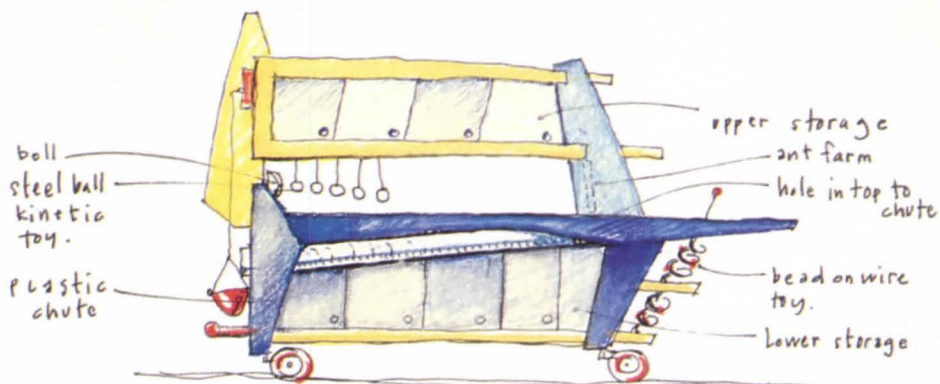
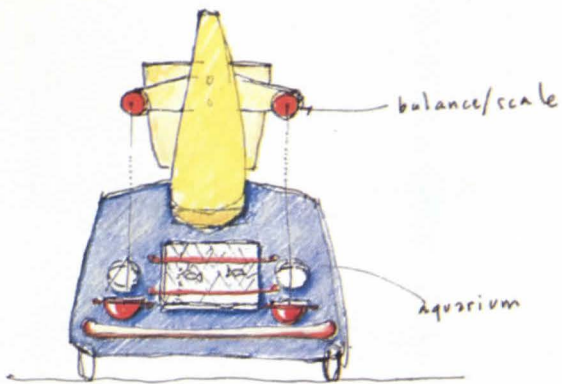


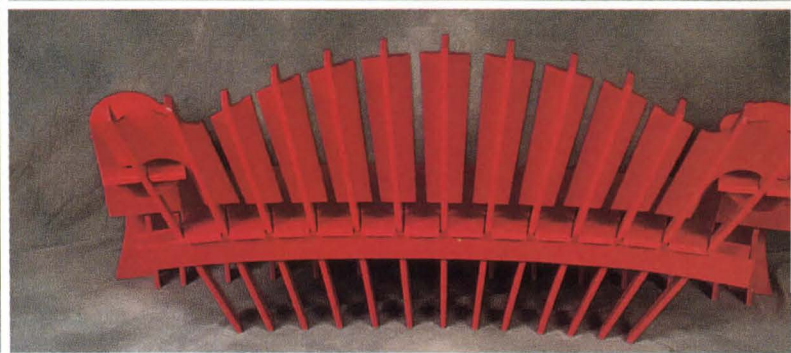
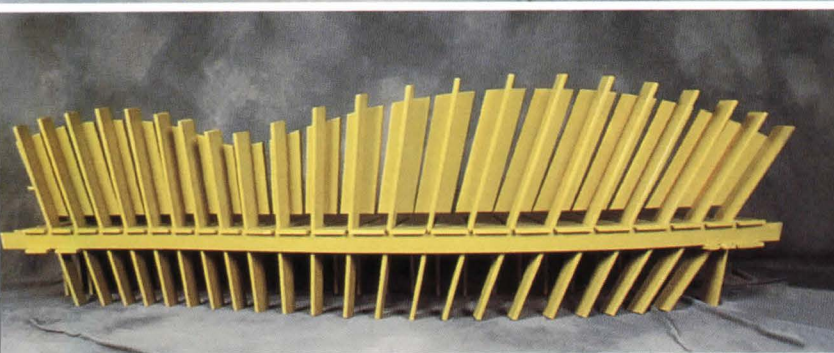
RON POLLARD

FACING PAGE, BOTTOM: At the invitation of the *Los Angeles Times Magazine*, Rios Associates designed a Garden of the Imagination, planting a gravel bed with eucalyptus trees, from which hang shards of blue glass that reflect blue light. A bench, shielded by an umbrella designed to evoke a rain cloud, incorporates a compartment for a book and a bottle of wine.

TOP: Rios Associates designed William S. Hart Park in West Hollywood, which links Sunset Boulevard and DeLongre Avenue via a pedestrian stair.

ABOVE: Hart Park incorporates the historic residence of silent screen actor Hart (top) and a fountain (right) that buffers street noise.





Furniture Designs

"Adirondack furniture gone mad," is how Mark Rios describes the painted redwood garden furniture (above) he designed for a client with a spacious Malibu garden, who couldn't find outdoor seating that would fit the large scale of his property. With their sinuous curves and primary colors, the benches, tables, and chairs indeed resemble a cosmopolitan, slightly berserk spin-off from an L.L. Bean catalog. Rios created furniture large enough that several guests could share a bench, incorporating wide arms and tables where diners could rest their plates.

The rakish seating is an example of Rios's belief that architects should reach beyond designing buildings and interiors to landscape, furniture, and lighting. Rios muses, "Frank Lloyd Wright thought all the elements in a house should have some relationship to each other. I'd rather see some elements that don't match; but, in any case, designing furniture broadens the way you think about designing buildings."

Child-care centers, Rios says, often present the opportunity to design from the ground up, since the child-sized furniture available on the market is extremely expensive. For Mattel, Rios Associates conceived a series of six mobile educational carts to house media, science, art, and storytelling supplies, designed to be shared among the different classrooms rather than duplicated in every room. Building upon Rios's

natural history theme for the center, the carts are abstractions of animals—the "media mutt," for example, includes a television, VCR, tape deck, speakers, and microphone for child-sized karaoke.

A "technoceros," conceived as a movable science fair, is designed to include an ant farm, an aquarium, and a seed incubator, as well as a storage area for rulers, springs, weights, and other science equipment. For art supplies, the "crafty owl," complete with "wings" that fold down to form activity counters, houses glue, cups, paint, towels, fabric, and paper; two spotlights atop the cabinet light the workspace.

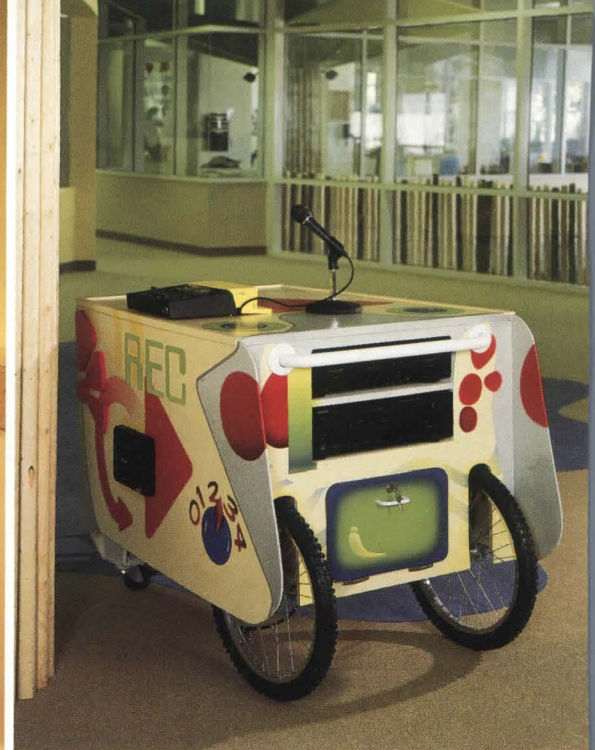
A movable library, called the "centi-read," features book shelving, newspaper and magazine racks, and detachable cushions. The "kangaroll" is a toy storage cart for buckets, plastic gardening tools, soft bats, balls, and other playground and gardening toys. The "info-lope" was conceived as a parents' information station with individual mailboxes and a drawer to hold writing supplies. It was ultimately incorporated into the entrance of the center.

For the present, Rios Associates handles distribution of its furniture, which includes children's tables and chairs (ARCHITECTURE, April 1993, pages 70-75) built by a Los Angeles furniture maker. Orders for the children's furniture line have increased, and the architects are seeking a local distributor.

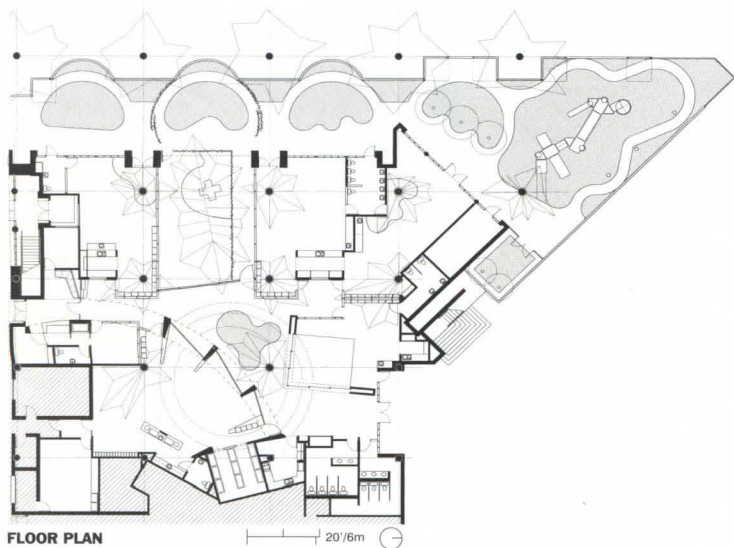
FACING PAGE: Movable educational carts include the technoceros for science equipment (top drawings); the centi-read, a portable library (center drawings); the kangaroll, for outdoor toys (bottom left); and the crafty owl (bottom right) for storing art supplies.

LEFT, TOP AND ABOVE: Long, caterpillar-like garden bench, fabricated of painted redwood, seats four to six adults. Arms and tables are designed to accommodate al fresco diners.

RIGHT, TOP AND ABOVE: Rios's take-off of the Adirondack chair is available from Janus et Cie in Los Angeles.



Mattel Child Development Center



TOP LEFT: Security door in reception area ensures maximum safety.

TOP RIGHT: The "media mutt" is a movable video entertainment station.

PLAN: Center includes classrooms, staff lounge, kitchen, and common area.

FACING PAGE, TOP LEFT: Shady patio provides a smooth place for outdoor play.

FACING PAGE, TOP RIGHT: Playground comprises sand pits and grassy areas.

FACING PAGE, BOTTOM: Common area includes a tree whose trunk is constructed of lodgepole pine poles.

Rios Associates' 10,000-square-foot child-care center for Mattel Toys is located on the first floor of a two-story building, adjacent to the 14-story corporate headquarters.

Mattel's employee cafeteria is located above the child-care center, and the company's design studio, where toys are conceived and prototypes created, is down the block. The child-care complex is designed to accommodate 84 children who range in age from 6 weeks to 5 years. The facility also serves as a testing ground, and it includes an observation room with a one-way mirror where toy designers can inconspicuously observe toddlers interacting with Mattel products.

The Mattel Child Development Center typifies Rios Associates' interdisciplinary approach: The architects designed the interior; the playground, patio, and garden; and the media carts. With his landscape architecture background, Rios chose colors and design themes that represent elements in nature. In the infant room, for example, where the tiniest occupants spend part of their day looking up at the ceiling, the architects created an abstracted night sky. The five classrooms are organized around a common space for informal gatherings and storytelling; carpeted in blue, the common area forms a lake, according to Rios. Vinyl floor tiles echo the color of sand, and structural columns are disguised by nine colorful man-made

trees whose vinyl canopies lower the 12-foot-high ceilings to create intimate, child-sized spaces.

The center's angular floor plan derives in part from the fact that the existing space lacked the required 75 square feet of outdoor playground per child, a state mandate. Out of the eastern wall of the building, Rios cut a 950-square-foot rectangular bay, which sports a leafy fabric canopy and serves the dual purpose of adding outdoor area and bringing light into the innermost classrooms.

By separating the five classrooms with glazing, which along interior walls begins at varying heights, Rios gained further light penetration and created the airy sense of an open plan without the noise and distractions that accompany such schemes.

"Mark designed this day-care center with tremendous flexibility," notes Grace Moniz, Mattel's human resources project specialist. She points out that some toddler rooms are designed with both bathrooms and changing areas, so that the center can shift its population from younger to older children as necessary. Classrooms for older children, who need more space to run around, are separated by glass doors that slide open to create larger rooms.

Mattel's day-care staff and children devised a tribute to Rios Associates in the form of a moniker: When the 4-year-olds take their naps in the common area, they say they are "camping out at Lake Rios."





ROTO ndi

Since Michael Rotondi established his own Los Angeles studio, ROTO ndi, in 1991, his new practice has challenged a basic premise of architecture—that the architect is, as the Greek roots of the word indicate, the master builder. Rotondi questions the architect's singular control over building, and doing so, he opens the field to an alternative kind of practice and an enquiry that both promise to enrich design.

Director of the Southern California Institute of Architecture since 1987 and a founding partner of Morphosis, Rotondi believes that the model of the architect as master is untenable, that a relationship of power over other actors in the building process represses their potential contributions and diminishes the potential richness of architecture. An open practice, says Rotondi, is as simple, and as difficult, as living with another person: "At worst, it becomes a relationship of domination, and at best, one of reciprocity."

Rotondi, instead, relaxes his hold and releases control as auteur, inviting into the design process clients, contractors, and consultants, as well as scientists, musicians, and artists. Each participant helps layer the process with different systems of thought, and the resulting collaboration becomes one of joint discovery. "Imprecision is part of the process," Rotondi explains. Different combinations of people and systems of expertise and thought generate new ways of working on each project, and a specific formal language. Complexity is the common denominator.

Based in a downtown studio in a former brewery overlooking a vast railway complex, Rotondi's team of 10 is now collaborating with the landlord on his own house on the brewery grounds—a lofty concrete structure being fitted out with steel salvaged from demolished buildings. By pluralizing voices in his designs, Rotondi has relaxed the self-driven formalism that characterized the work of Morphosis: Now his design is less focused on the autonomous object than on a conversational and discursive record interpreted by an architect with a receptive attitude. Rotondi's work retains the Morphosis emphasis on materiality, but it is now inscribed within a much broader cultural matrix. The sensibility is more gentle and less insistent.

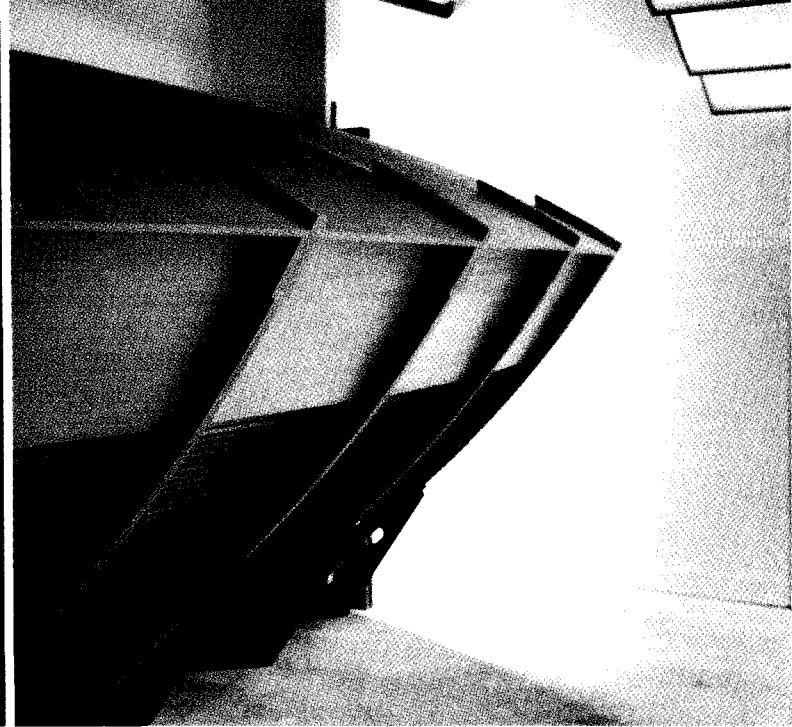
Not many years ago, many Modernists sought to reduce buildings to a single concept, but Rotondi rescues his projects from the simplicities of reductivism, opening discourse beyond function and materiality. "The search is for a zone, an in-between state, the confusion in the transformation from one state of rest to another, where neither dominates. The third state can still have evidence of the original two." For Rotondi, this period of transformation is a moment in which systems are interdependent, interactive, and unresolved. These systems are not necessarily physical, but include systems of thought.

To visualize Rotondi's approach, think of a circle invading a square and becoming a third figure composed of the parts of the originals. Rotondi's circle may be the site

conditions, and the square, the client's program, but the circle could also be a musical progression and the square, a dream. If the body seeks rhythm and structure in a natural instinct of self-stabilization, the mind, he says, is nonlinear, nonrhythmic, and dissipating. Rotondi's concepts of mind and body are other systems he crosses in buildings in an attempt to remedy the sheer of their separation: His buildings are terrains in which mind and body can be reintegrated.

Rotondi is not "wrapped up with being an architect" and does not wrap buildings in a narrowly interpreted professionalism. He admires an undogmatic architect like Eero Saarinen, for example, who remained ideologically flexible. "Saarinen explored industrialism at GM, but at TWA, he looked at flight. This is not architecture as manifesto or virtuosity, but openness," Rotondi maintains. "His ideas are much bigger than any field."

Like waves, the systems Rotondi invites into his design process intersect, creating unpredictable patterns of interference. These transformative patterns of intersection play themselves into a design that Rotondi edits, leaving traces of the original systems. Once the circle has invaded the square and left a field of parts, Rotondi tries to find underlying indeterminate geometries and coaxes a sense of order from the disorder. The results remain hybrid. For Rotondi, design is a process of transformation that he hopes will result in a configuration as inevitable as "an alluvial fan, or the course of a stream."—*Joseph Giovannini*



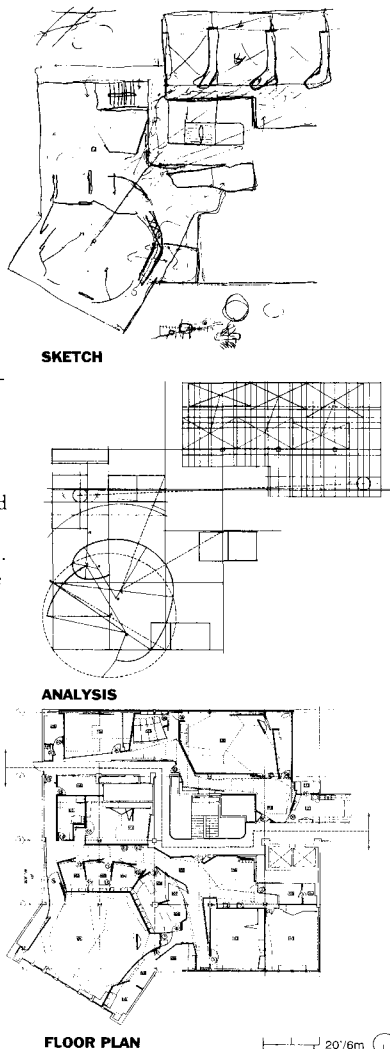
New Jersey Offices

FACING PAGE: Michael Rotondi is principal of ROTOndi and has been director of the Southern California Institute of Architecture since 1987.

TOP LEFT AND RIGHT: Interior and exterior views of a "mind gym," an isolated chamber with inclined seating for rest during brain-wave stimulation sessions.

PLANS: Developmental drawings range from initial sketch (top), through geometric analysis (center), to a layout characterized by openness (bottom).

FOLLOWING PAGES: Corridor leads past semiprivate workspaces (left). Plywood-paneled reception desk overlooks entry area (right).



Michael Rotondi was hired to design interiors by a client whose business is the creation of new businesses within existing companies. The client asked Rotondi to design seminar rooms and offices as an "exploratorium" that physically, through architecture, would help deprogram executives from conventional thinking.

The plan of the 10,000-square-foot floor—located in a standard office building with a projecting corner bay—reflects a program in which people gather in a group of up to 30 and then break up into smaller working groups of about 10. Flexibility, not rigidity, is the byword of the educational program, and the notion of openness informs all areas. Corridors and meeting spaces flow into each other. Only a small room known as a "mind gym" remains an enclosed area—a chamber in which occupants rest and submit themselves to brain-wave stimulation.

Rotondi's plan basically reveals a large corner seminar room with adjacent offices and nearby break-out rooms. What distinguishes it, however, from a conventional layout is how the design expresses and supports the nature of the various activities: Architecture makes the client's program experiential. Great fluidity and openness characterize the rooms, not only in plan but in elevation and section: Space here is not rigidly structured, but rather segmented to encourage accidental conversations and unexpected meetings.

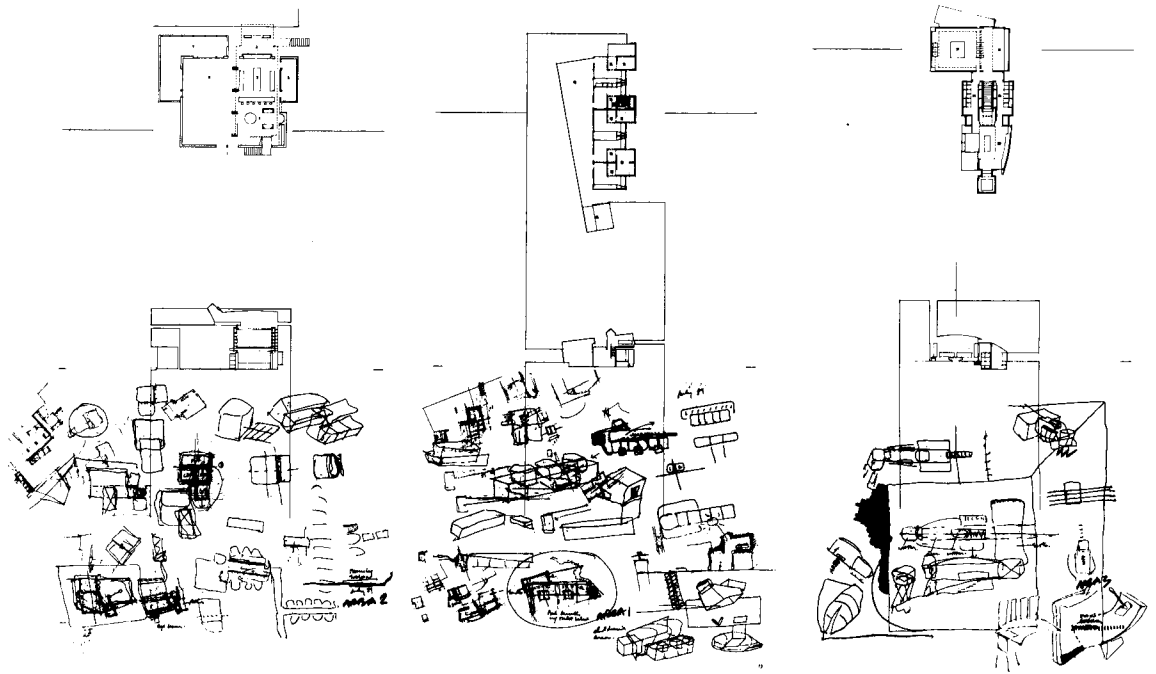
The corner seminar room is the hearth of the interior, a large area backed by a spiral wall that spins dynamically to support spaces. The corridor connecting the corner seminar room to the break-out spaces and offices is more than a simple connector: Its width expands and contracts, defining spaces for spontaneous encounters. As in some scientific labs where corridors are lined with chalk boards that invite commentary, the walls of the corridors are treated as tablets on which seminarists can scribble their thoughts—a long writing wall that ups the psychic energy the organization intentionally cultivates. The floor plan seems to unfold out of itself, always becoming something else. Private and public spaces mix in a dialogue intended to dissolve boundaries.

Within the open space, as porous as a forest, the architects have written a short exegesis on wood. Throughout the space, wood is openly expressed as a physical metaphor of growth and transformation. Sheets of plywood, for example, are sandwiched together as wall partitions, their edges showing. The constructive legibility of the space in which the wood reveals the process of its construction adds to the challenge of an office designed to encourage unexpected ways of thinking. The architecture supports a climate of thought that subverts the normative corporate mind-set of rules, categories, and hierarchy.





Qwfk House



Designing a four-bedroom house on a large view lot in New Jersey required Rotondi to accommodate a multiple program and a site with a complex nature. The house had to serve both as a home for a family of six and as a business retreat. Its narrow site changed along its length, occupied by a hickory forest along one side and by a clear shoulder of land across the far end of the site.

Rotondi located the house at the end of the lot, where the site drops to reveal a 20-mile view, and conceived it as two long, right-angled bars intersecting in a corner: One bar fronts the view, and the other parallels the drive and a swimming pool. The "view" bar accommodates a master bedroom suite built over garages and service areas, while the wing adjacent to the pool houses three bedrooms built over a common play area. The intersection of the two bars in the corner forms a double-height living room and dining area, with an independent library.

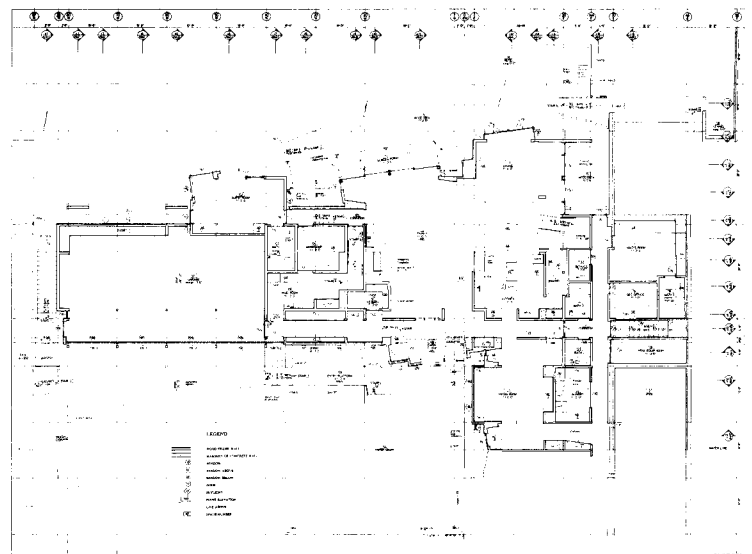
Each of the two perpendicular wings, clad in hardwood siding and stucco, and roofed with lead-coated copper, responds with the sensitivity of a geiger counter to the immediate site conditions, views and orientation, with vastly different results in the plan, section, and skin. The children's wing—articulated into several vertebrae which enclose rooms for each child—echoes the rhythmic spacing of trees in the surrounding forest, with roofs positioned to cap-

ture angled sunlight. Placed at the end of the wood, the wing is designed to continue the chiaroscuro of light and shade cast by the sun through the trees. The bar stretching from side to side across the site acts as an extrusion, with long unbroken volumes that glide along the site's shoulder of land.

The two wings, each representing a different formal ordering system, meet in a common corner, where the vertebral bar and the extruded bar intersect. They leave traces of each system in the two-story space and break into what is essentially a third condition that Rotondi disciplines rigorously through geometry.

Across the front facade, facing the view, the architect creates a semi-independent projection that breaks out of the overall geometries and acts as a porch, brise soleil, and bay window, oriented to the view and the northwest exposure. Rotondi calls this living area the DNA of the rest of the house, an interesting remark because—due to changes in the family configuration—the children's wing will not immediately be built.

"A species has a whole code that exists for its living condition," notes Rotondi, "but modifies itself according to its context." Rotondi conceived each of the two wings as systems that work for their prospective programs in the context of the site, with a highly inflected skin that explains the nature of the site through its reactions to it.



FIRST FLOOR PLAN

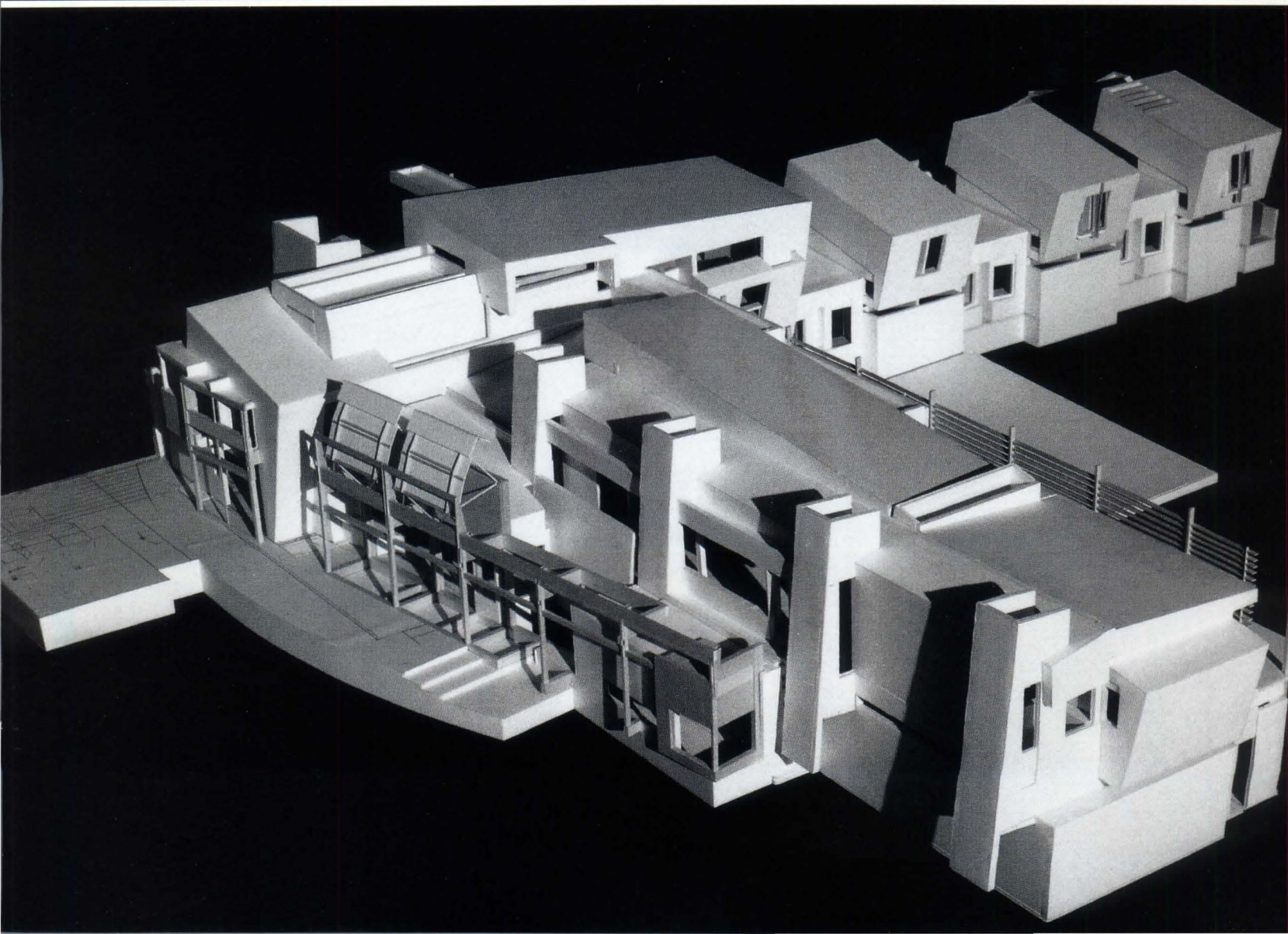
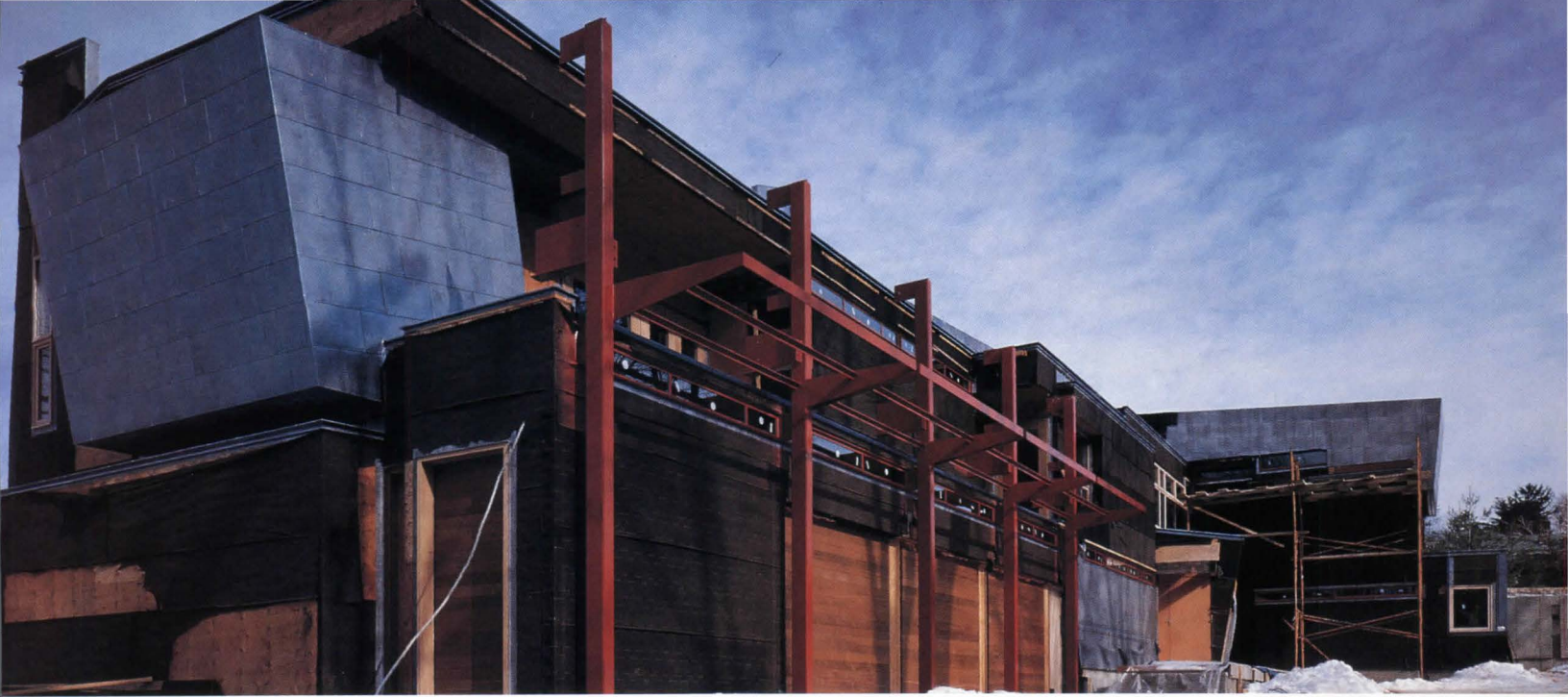
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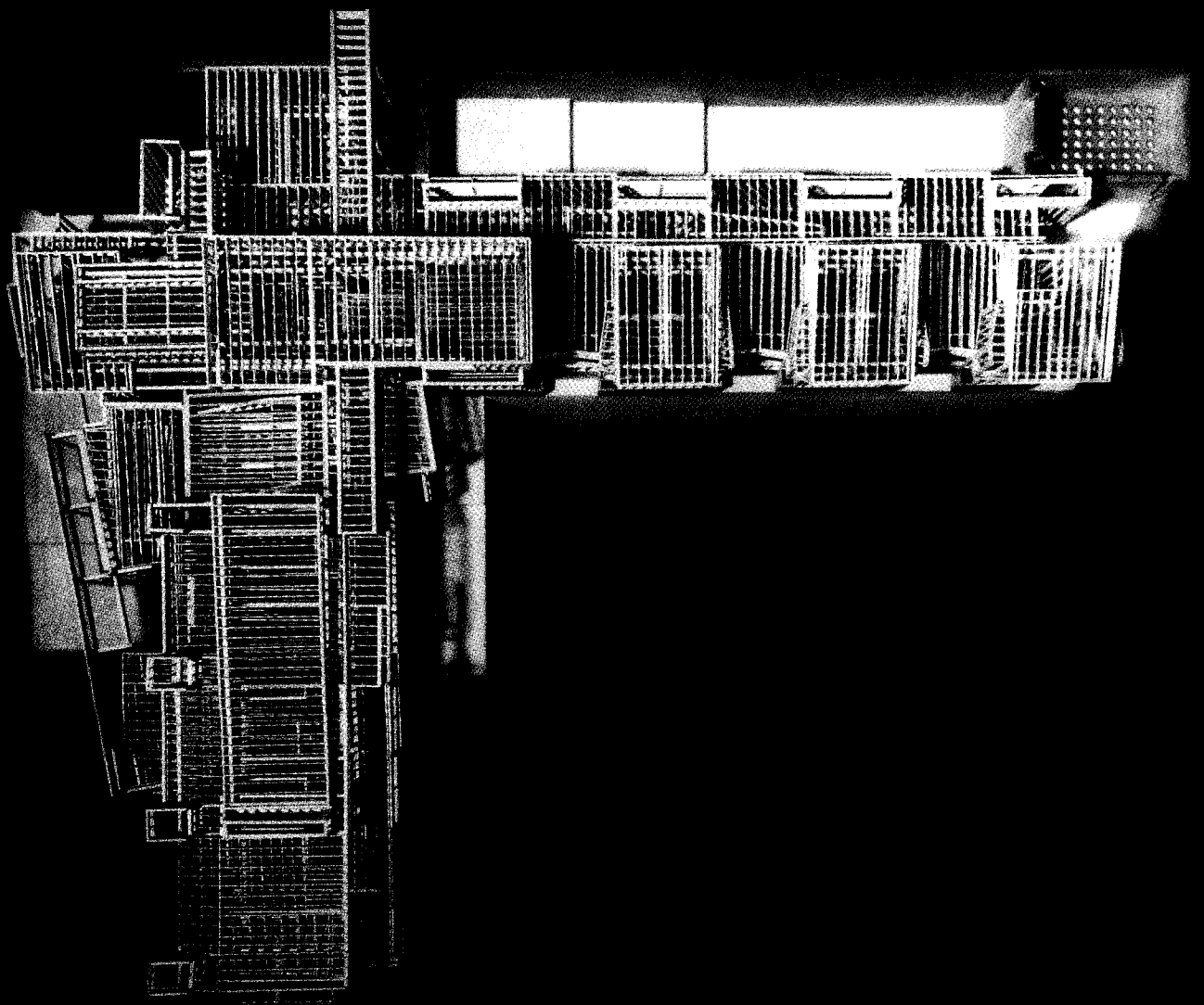
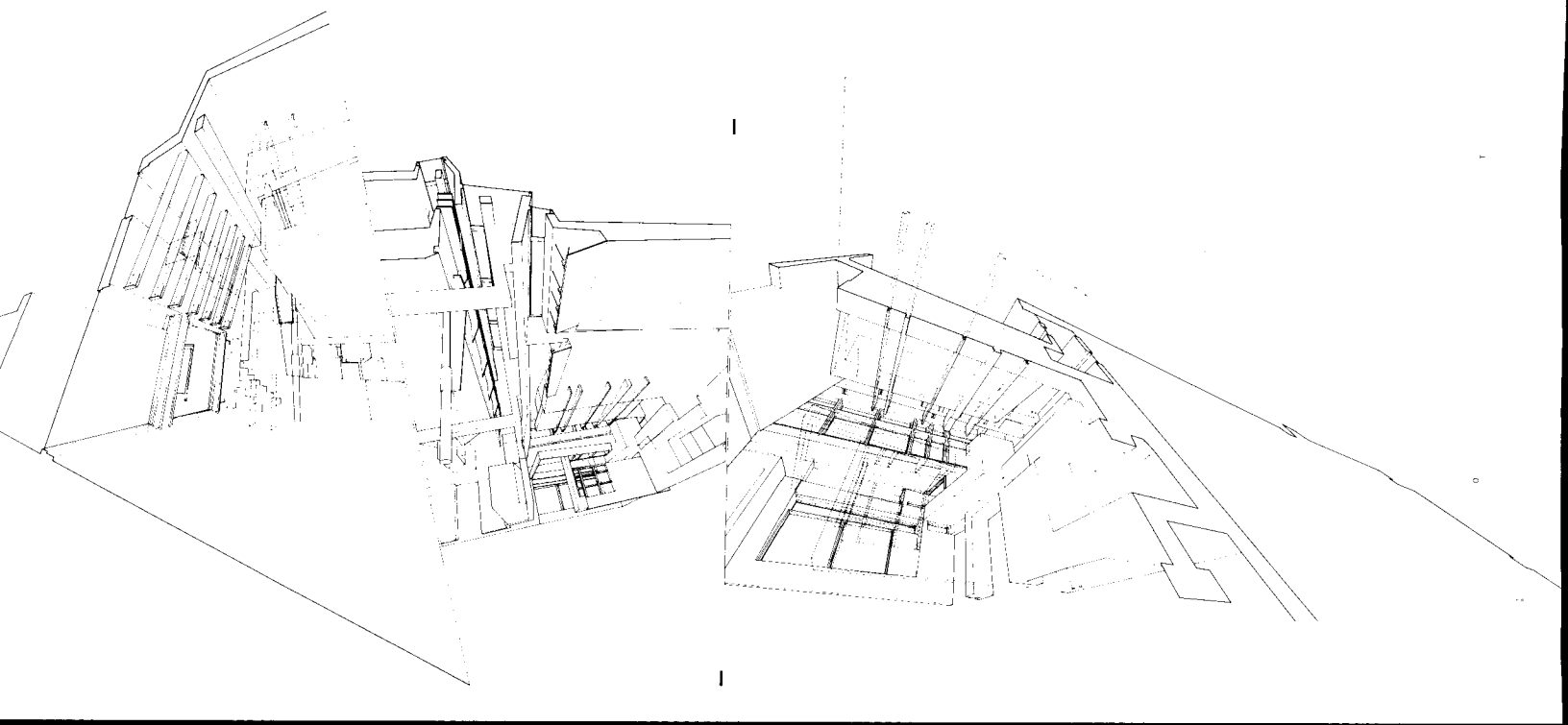
DRAWINGS: Composite drawings show plans (top), sections (center), and free-hand studies of living area, children's wing, and bedroom (bottom). First floor (above) centers on living areas.

FACING PAGE, TOP: View of southeast entry facade reveals garages (foreground) below master bedroom suite.

FACING PAGE, BOTTOM: Model shows brise soleil of northwest facade (foreground) and children's wing (right).

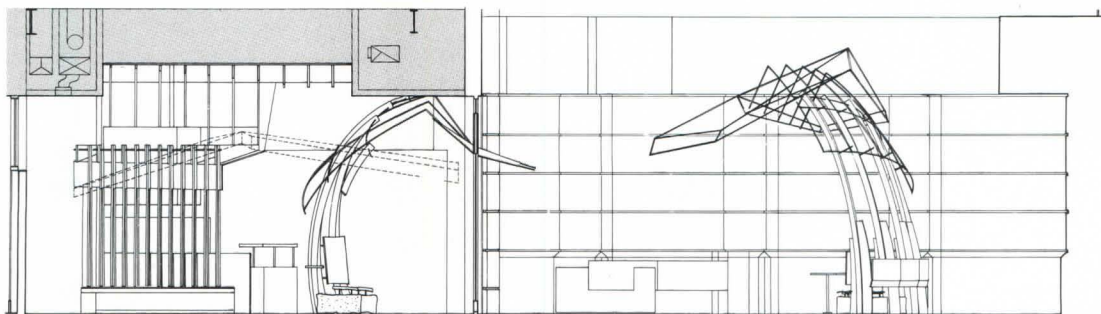
FOLLOWING PAGES: Studies include perspective of main space and framing model (left). Second-floor library projects into living area (right).



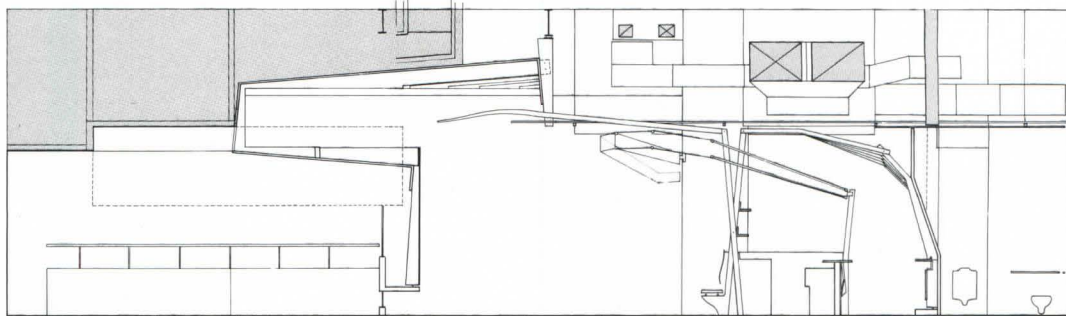




Nicola



NORTH-SOUTH SECTION



EAST-WEST SECTION

At the base of a 52-story high rise in downtown Los Angeles, Rotondi has designed a restaurant as dreamscape, made of materially commonplace plywood and studs. The site of the restaurant is essentially an indoor/outdoor space separated by a row of columns: The outdoor space occupies a corner of the atrium of the high rise. The basic organization of the restaurant is conventional, with an entry, main dining areas, and service bar, with a terrace situated "outside," in the atrium. Dining areas are separated from each other by walls of studs acting as screens, giving certain spaces an intimacy within a larger space that is perceived simply as a lofty room.

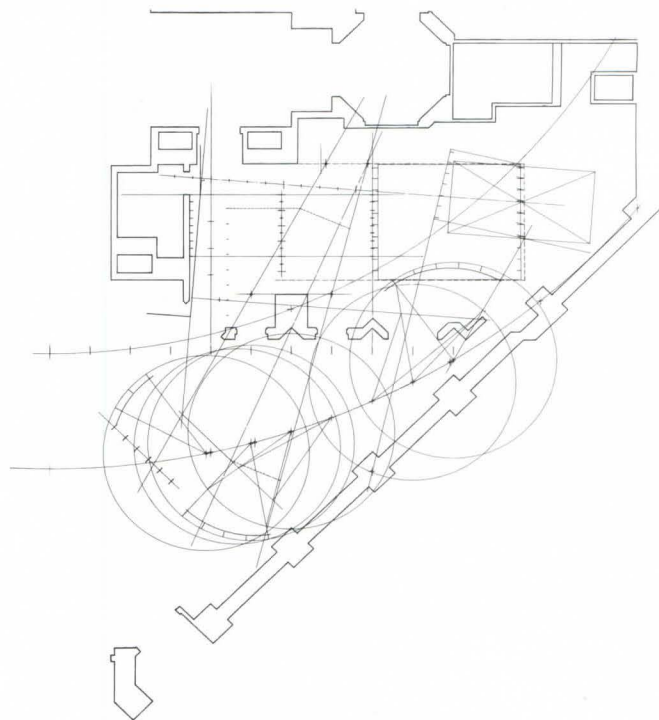
Superimposed on the orthogonal layout is a trellised path, which starts at the entrance corridor and circles around tables and banquettes, leading perceptually through the columns of the high rise to the terraced dining area. While defined by regular partitions, the path seems to generate a trellised cage that ratchets through space, as though moving with the procession of diners.

Rotondi conceived these curved ribs as a geometry of shifted lines that is incrementally projected from the center point of the building through the perimeter wall. He views the ribs as sections of spheres that move from the interior to the exterior, expressing the relationship between inside and outside. The design ambitiously attempts to address

and even integrate through architecture the mind/body split by overlaying rhythmic and nonrhythmic geometries that Rotondi believes partially characterize the difference between the two.

Rotondi admits that the inspiration of the space was the collective set of eyes of holographic figures in a Disneyland funhouse, which follow visitors uncannily. The architect wanted to create an equivalent space that would track visitors as they walk through, like moving centers. His ambition is to create a humanistic space that changes with movement, but remains centering and anthropomorphic. The eyes of the space are on the diner; the occupant who normally experiences the space becomes the object of the space's regard. Lines of sight radiate from the user, to whom they return. The space coheres both when people are moving and when they are seated: Its ambiguities allow a multiple experience, and they address both the conception of the layout and perception during procession.

The architect collaborated with April Greiman, a Los Angeles graphic designer, who chose four yellows and as many greens to code and warm the space, and Lisa Krohn, an industrial designer, who created a lighting fixture of stretched fabric with amoebic forms that spread into the ceiling areas. The palette of materials—stone, steel, wood—suggests the elemental.



SECTIONS: Ribs hover over booths.

PLAN: Projected spheres revolve from restaurant's interior into atrium.

FACING PAGE, TOP LEFT: Corridor frames a view into atrium dining space.

FACING PAGE, TOP RIGHT: Amoebic form stretching across the ceiling was created by industrial designer Lisa Krohn.

FACING PAGE, BOTTOM: Wood branches metamorphose into ceiling joists.

FOLLOWING PAGES: Semispherical ribs define seating in dining areas; furniture is designed by Rotondi.









Michaela Pride-Wells

ABOVE AND RIGHT: Michaela Pride-Wells organized a neighborhood design workshop for St. Elmo Village, an artists' colony within L.A.'s riot zone.

FACING PAGE, LEFT: Crenshaw Boulevard is the site of a redevelopment plan coordinated by Pride-Wells.

FACING PAGE, RIGHT: The plan for the Crenshaw district, funded by the Local Initiatives Support Corporation, relies on a public/private partnership. One scenario urges the Metropolitan Transit Authority and developers to plan community centers at a transit stop.



This month marks the second anniversary of the Rodney King verdict that triggered what people in Los Angeles call “the uprising.” Although city officials will tell you that the torched buildings have been replaced and reoccupied, little has changed along Crenshaw Boulevard, an embattled north-south thoroughfare in South Central L.A. That doesn’t hamper the vision of Michaele Pride-Wells, founder of the Design Professionals’ Coalition (DPC), a non-profit group of more than 300 architects, planners, and construction professionals. The 37-year-old African-American architect conducts community planning workshops in which residents and designers work side by side to plan redevelopment. “This is grass-roots planning,” explains Pride-Wells. “It’s the power of people to determine the future of their own neighborhoods.”

Born out of the L.A. riots, DPC now offers volunteer design and planning assistance to Los Angeles neighborhoods in need of revitalization. Such community-empowered charettes, Pride-Wells explains, “get projects started that wouldn’t otherwise go at all.” For St. Elmo Village, an African-American artists’ colony, Pride-Wells orchestrated a DPC-sponsored workshop that involved residents, neighbors, planners, and architects, generating citywide support for rehabbing the community. Board member Kate Diamond of Siegel Diamond Architects says the organization also “gets different groups of architects talking to each other.”

Recognizing Pride-Wells’ coalition-building skills, the Crenshaw Cluster of the non-profit Coalition of Neighborhood Developers hired her to conduct four charettes, producing a redevelopment plan for the Crenshaw district embraced by city hall. “Michaele seems to have great talent for bridging the gap between professionals and the community,” maintains Con Howe, director of planning for the City of Los Angeles. “We in the planning department see it as an asset.”

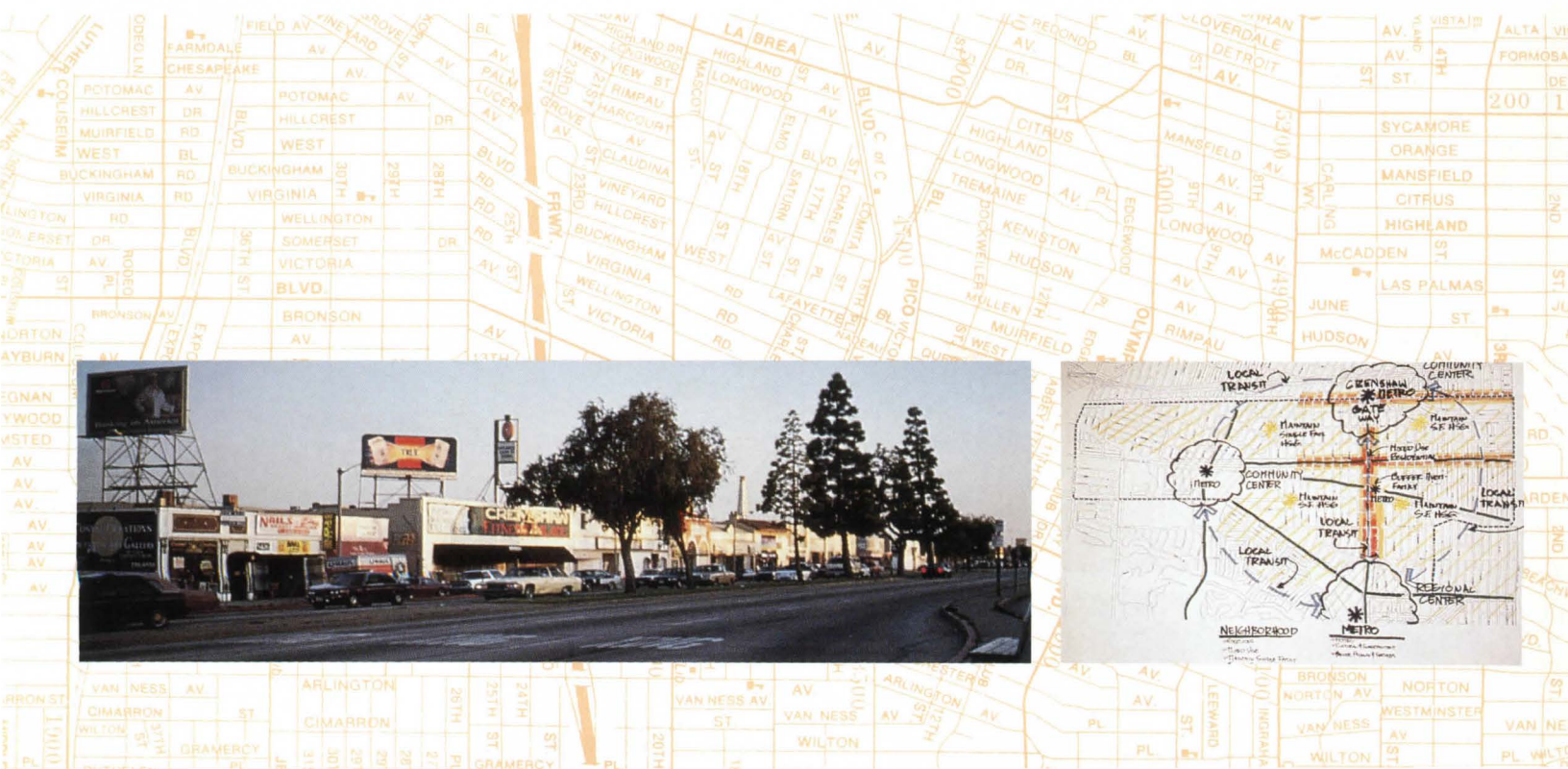
Such social idealism and grass-roots initiatives may be the key to revitalizing South Central and midtown Los Angeles, where Pride-Wells lived until she was 10. Her father, Wallace Pride, is an architect for the city’s Department of Recreation and Parks. She was the fifth African-American graduate of Arizona State’s architecture school, and one of only 73 licensed black women architects in the nation, but she rarely thought about issues of race or discrimination in her professional life. Then, in 1984, she began working for an Orange County practice, a “very conservative, white-male-dominated environment. That’s when I really became conscious of who I was.” When she and a female colleague found out that unlicensed male architects were making \$2 more an hour than licensed females, they quit, forming their own partnership to design a five-unit affordable housing project in Corona.

In 1986, Pride-Wells joined Siegel Sklarek Diamond, hired by African-American architect Norma Sklarek, whom she credits as a

role model. (Sklarek retired in 1993.) Since then, Pride-Wells has become more professionally active, serving on the national AIA’s Women and Minorities in Architecture steering committee. “Being a black woman architect has made me more noticeable, because I’m an exception,” Pride-Wells admits.

In 1990, she established her own firm, re: Architecture, working out of her home while pregnant with her son, Bryant, now 3. Pride-Wells employs a staff of six and shares an office in a converted dairy in Marina Del Rey with other firms, designing affordable housing and child-care projects in collaboration with other architects. “Everybody deserves architecture,” she believes. “The projects should reflect the people who live there.”

For South Central, whose problems are based in poverty, disinvestment, and fear, Pride-Wells’ neighborhood charettes restore a desperately needed sense of community. Rebuilding this disenfranchised section of Los Angeles—an area the size of Pittsburgh—not only demands dedication from politicians and the city, but also the support of residents. What Pride-Wells has undertaken, incrementally, neighborhood by neighborhood, is no less than a revolution in the city’s planning process. “Design makes a difference,” she believes, adding that people are inspired by their environment. “If we don’t start bringing more people to the table, the stage will be set for a breakdown of community,” Pride-Wells contends. “That will lead to another L.A. disaster.”—Heidi Landecker



St. Elmo Village

You won't find St. Elmo Village on a map of Los Angeles, and even if you drive down St. Elmo Drive, a five-block stretch in the city's gang-beleaguered heart, you might miss the 1-acre artists' colony completely. From an assemblage of 1920s-era wood-framed bungalows shrouded by succulent plants and flowering trees, St. Elmo artists-in-residence offer free art classes to neighborhood children, adults, and seniors.

Perhaps because of its creative mission, the compound was untouched by the riots in 1992, though destruction surrounds its community. Within this drug-, alcohol-, and violence-free enclave, where a motto above a fish pond reads, "If it is to be, it is up to me," resident artists Rozzell and Roderick Sykes, uncle and nephew, have since 1969 been promoting their vision that art saves lives. Director Roderick Sykes explains, "Kids that are doing art are using the lessons of the creative process: When I have something good, I want to share with you—I don't want to take your purse or hurt you." Remnants and junk are recycled into sculpture here, exemplifying another of Sykes' axioms, to build with whatever you have.

The complex is composed of wooden garages housing an open-air studio, six residential cottages, and an office surrounding a courtyard painted in rainbow colors. However, within the 1,000-square-foot vernacular cottages and garages, plumb-

ing, electricity, and even interior walls were deteriorating. The Los Angeles Housing Department had committed \$225,000 for rehabilitating the village's residential units, but the occupants wanted professional guidance to renovate the entire community. Villagers approached the Design Professionals' Coalition (DPC), which was started to offer volunteer design and planning assistance to riot-scarred neighborhoods.

Although spared from the riots' destruction, St. Elmo Village was nevertheless a likely candidate for a DPC charette, and sorely in need of renovation. "We have criteria that we use to decide whether to take on a project," notes DPC President Michael Pride-Wells. "The organization or individual has to have no other access to design services. The project has to support the neighborhood planning concept. And it should be a nonprofit, especially with some sort of spiritual, cultural, or community significance." St. Elmo Village met the requirements for DPC's attention with flying colors.

In January 1993, DPC President Michael Pride-Wells and DPC board member Monique Birault, a designer with the Getty Trust, organized a weekend charette. Included along with residents and DPC professionals were architecture and urban planning students from the University of California, Los Angeles; the University of Southern California; and California State Polytechnic

University, Pomona. The objective of the DPC charette was to document design guidelines, to help the village attract funding, and to explore the potential for expansion.

St. Elmo's four artists-in-residence, DPC's planners and designers, the students, interested neighbors, and art students identified the rehabilitation issues confronting the village. The 200-page document they produced recommends that the 10 cottages and garages be seismically braced and insulated, and that drainage be improved. All plumbing and electrical systems require upgrading; new kitchens and bathrooms are needed. Expanding the property to an adjacent site was advised, providing the architectural and spiritual character of the village could be preserved.

The DPC-sponsored charette generated support from some unexpected parties, including the Southern California Gas Company, which donated materials and offered to train residents in weatherization. Today, the rehab of the bungalows is under way; some of the tiny structures have been gutted, revealing the fragility that accompanies their age. But these old buildings, Roderick Sykes maintains, are "held together with paint and love" and will last another 70 years. Adds Pride-Wells, "The village is more than a geographic place—it's a spiritual and cultural entity. Go visit once, and you want to live there."



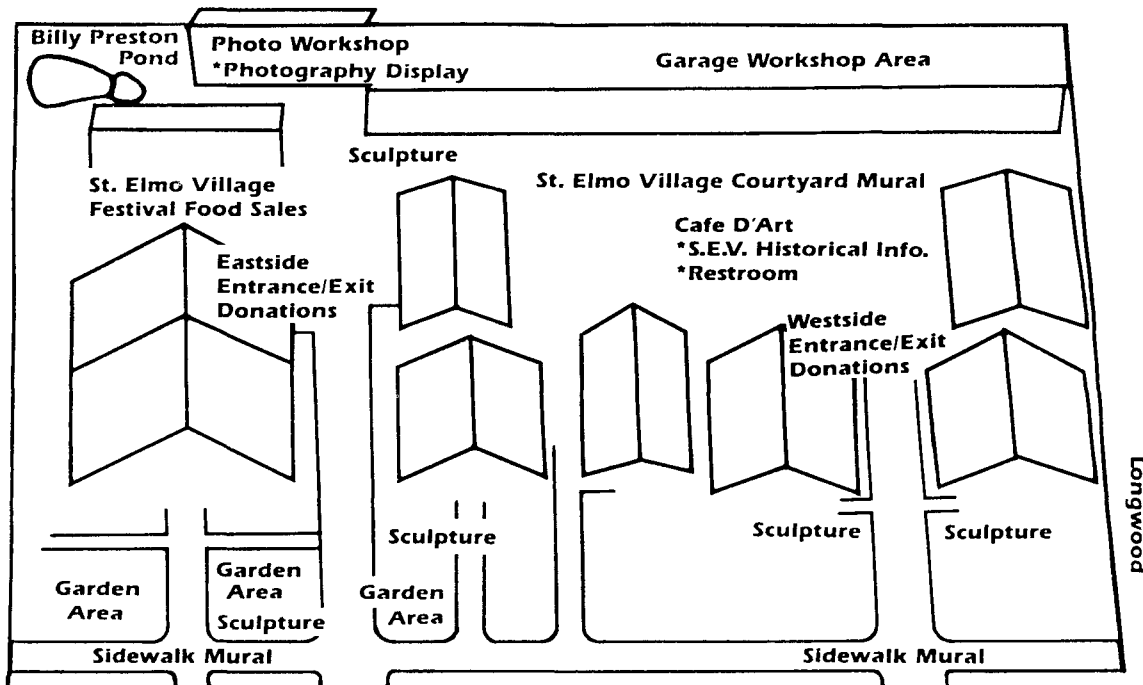
RIGHT: St. Elmo Village comprises 10 timber-frame buildings, including a gathering space for poetry readings and festivals; a garage incorporating art studios and a photo workshop; a gallery; housing; and offices.

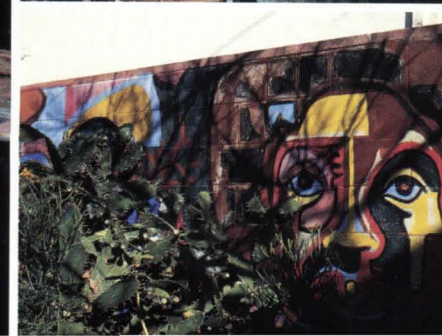
FACING PAGE, TOP: Seventy-year-old wooden cottages are decorated with African-inspired murals and sculpture fabricated from found objects.

FACING PAGE, BOTTOM LEFT: Painted courtyard brightens the colony.

FACING PAGE, CENTER RIGHT: Art studio is located within a long garage that opens onto a courtyard.

FACING PAGE, BOTTOM RIGHT: Paintings and lush vegetation enliven every corner of St. Elmo Village.





Kanner Architects



TOP RIGHT: Chuck and Stephen Kanner head a thriving father-and-son practice from their office in Los Angeles's Westwood Village.

ABOVE: Kanner Architects' witty entry in a competition for the design of a bird feeder sponsored by the Nature Company and *Sunset Magazine*.

FACING PAGE, TOP: Stephen Kanner's pencil-and-crayon sketch of an unbuilt house project inspired by L.A.'s futuristic 1950s "Googie" coffee shop idiom.

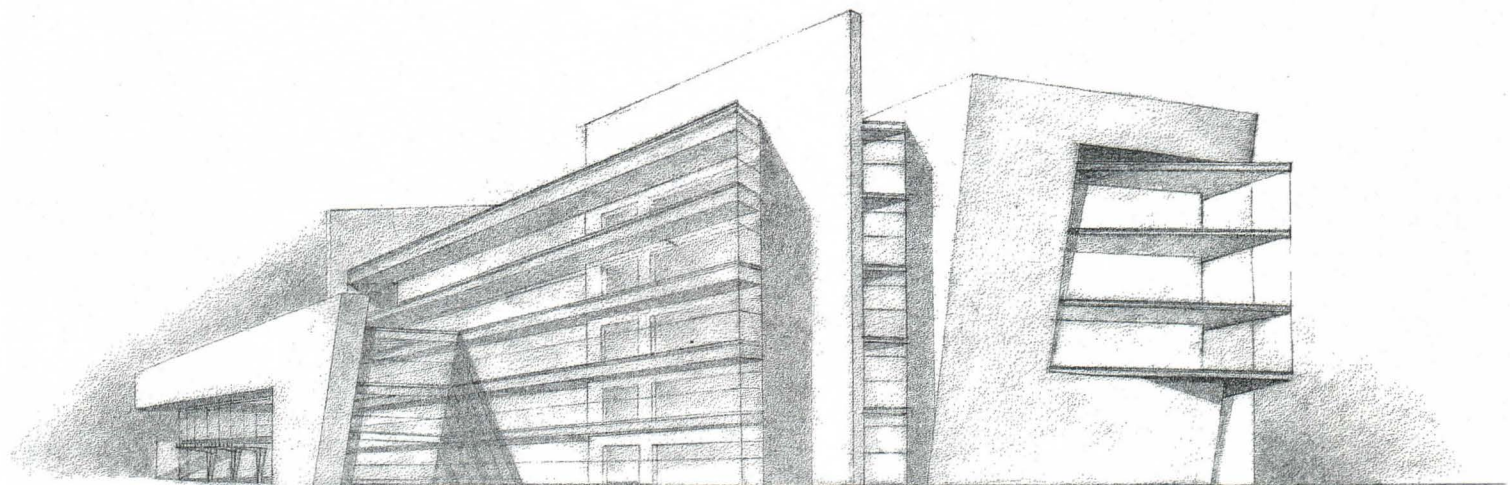
FACING PAGE, BOTTOM: West Los Angeles Municipal Courthouse expansion is inspired by the 1930s Streamline Moderne style of Los Angeles.



PATRICIA LANZA

Los Angeles architecture has traditionally run on parallel tracks of structural discipline and metaphorical playfulness. Richard Neutra, Rudolph Schindler, and the architects of the Case Study Houses developed a rigorous Modernism; while the freeform, popular "Googie" style sprang from the programmatic architecture of hot dog stands shaped like hot dogs, popular 1950s coffee shops, and drive-in diners.

The work of Kanner Architects sits squarely on this very Angeleno intersection of playfulness and seriousness. "Architecture should be artful, open, and attractive," says partner Stephen Kanner. "But it should be serious in terms of designs that serve their function responsibly and gracefully." Over the past decade, Kanner Architects has created a series of award-winning private and public projects that combine solidly functional design with visual wit. In these buildings, Stephen Kanner and his father, Charles Kanner, have created a distinctive style that



marries the intellectual clarity of Neutra with the populist fun of Googie.

Chuck Kanner, steeped in the high Modernism he learned at the University of Southern California in the early 1950s, designed several crisp and elegant buildings before his son joined the firm in 1983, after graduating with a Master of Architecture degree from the University of California at Berkeley. Stephen's sensibility, formed by the complex Postmodern currents of the 1980s, has recharged the firm's creative energies with a fresh approach. (Stephen Kanner is a third-generation Los Angeles architect; the firm was established in 1946 by his grandfather, Herman Kanner, a leading local Modernist.)

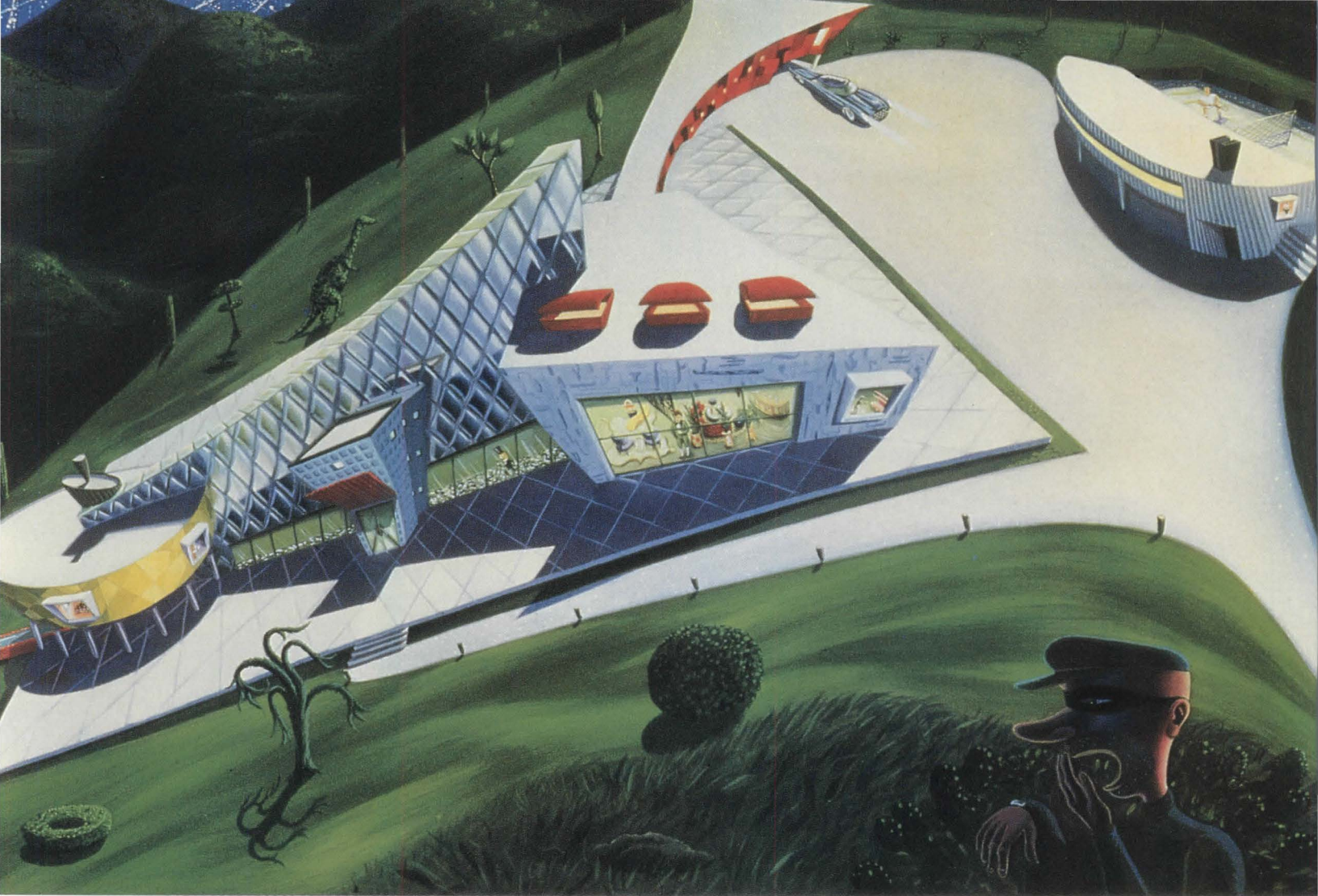
Temperamentally, father and son differ considerably. Chuck is soft-spoken, calm, and careful while his son is voluble, energetic, and fired up with ideas. Despite this difference of style, Stephen and his father share a deep commitment to Los Angeles. The Kanners acknowledge that, following the recent fires

and floods, riots and earthquakes, L.A. is a more troubled place than it was when Neutra, Schindler, and the Case Study House architects were at work. For that reason, they say, the city more than ever requires a serious response that reaffirms its populist verve and essential civic optimism. "The popular architecture of the 1950s was a spontaneous expression of what makes L.A. L.A.," Chuck Kanner asserts. "We need a shot of that optimism now, in these more downbeat times."

The first examples of Kanner Architects' new approach appeared in the late 1980s with a building for the Robbins Auto Top Company of Santa Monica. The roadside idiom of this project was refined in later buildings such as the Montana Avenue "Sweet Sixteen" Plaza and Montana Collection in Santa Monica, as well as the 13-unit, three-story Harvard Apartments in Koreatown. Based on straightforward, rational plans, these projects come alive in elevation with bold strokes and vivid visual metaphors.

A dynamic tension between seriousness and play distinguishes the design of the Nevin Avenue Elementary School in troubled South Central Los Angeles and the West Los Angeles Municipal Courthouse. Set in an inner-city neighborhood, the Nevin School's bold and colorful geometries create a cheerful environment where children can mingle between classes. The five-story courthouse expansion is formal yet unimposing.

A series of experimental house projects explores a more radical aspect of the Kanners' Neo-Expressionist style. Dubbed the "Plinth Houses," these designs show highly playful, flamboyant forms anchored by clear floor plans. They give license to an array of volumes configured as ellipses, ovoids, canted walls, and upwardly splayed towers redolent of the verve of Los Angeles in the 1950s. As their style matures, Chuck and Stephen Kanner are refining their trademark tension between a seriousness taken lightly and a lightness taken seriously.—*Leon Whiteson*



Plinth Houses

ABOVE: Georganne Deen's impressionistic rendering of the Pollyea House.

FACING PAGE, TOP: Napa Valley Plinth House project features canted towers, a curved prow, and a floating roof line.

FACING PAGE, BOTTOM LEFT: The glass-walled living-dining room complex at the west end of the Napa house takes maximum advantage of the vistas.

FACING PAGE, BOTTOM RIGHT: Two views of the Napa Valley model show the elliptical master bedroom suite and the overall composition of the house.

In tandem with their commercial and public projects, the Kanners have been experimenting with a series of residential projects they call "Plinth Houses." These playful, Neo-Expressionistic designs explore the breaking down and reordering of a building into component parts as pioneered by Frank Gehry. In the Plinth Houses, a kind of controlled anarchy is anchored by a strong base lifted above the ground plane. The strong plinth line allows the architects to take interesting risks without collapsing into incoherence.

The first Plinth House was commissioned in 1989 by an art collector whose main imperative was to display his collection. Situated on a long, narrow, sloping site in the hills above Los Angeles's Westside, the Pollyea House features a series of bold geometric forms linked by a long central spine set on a raised concrete base. At one end a drum-shaped, second-floor master bed-

room suite sits on a ring of columns with a lap pool passing under.

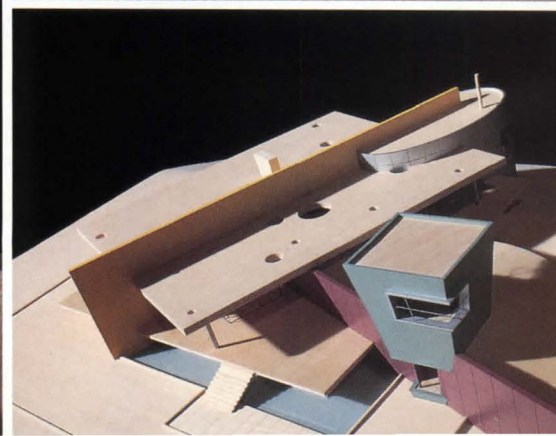
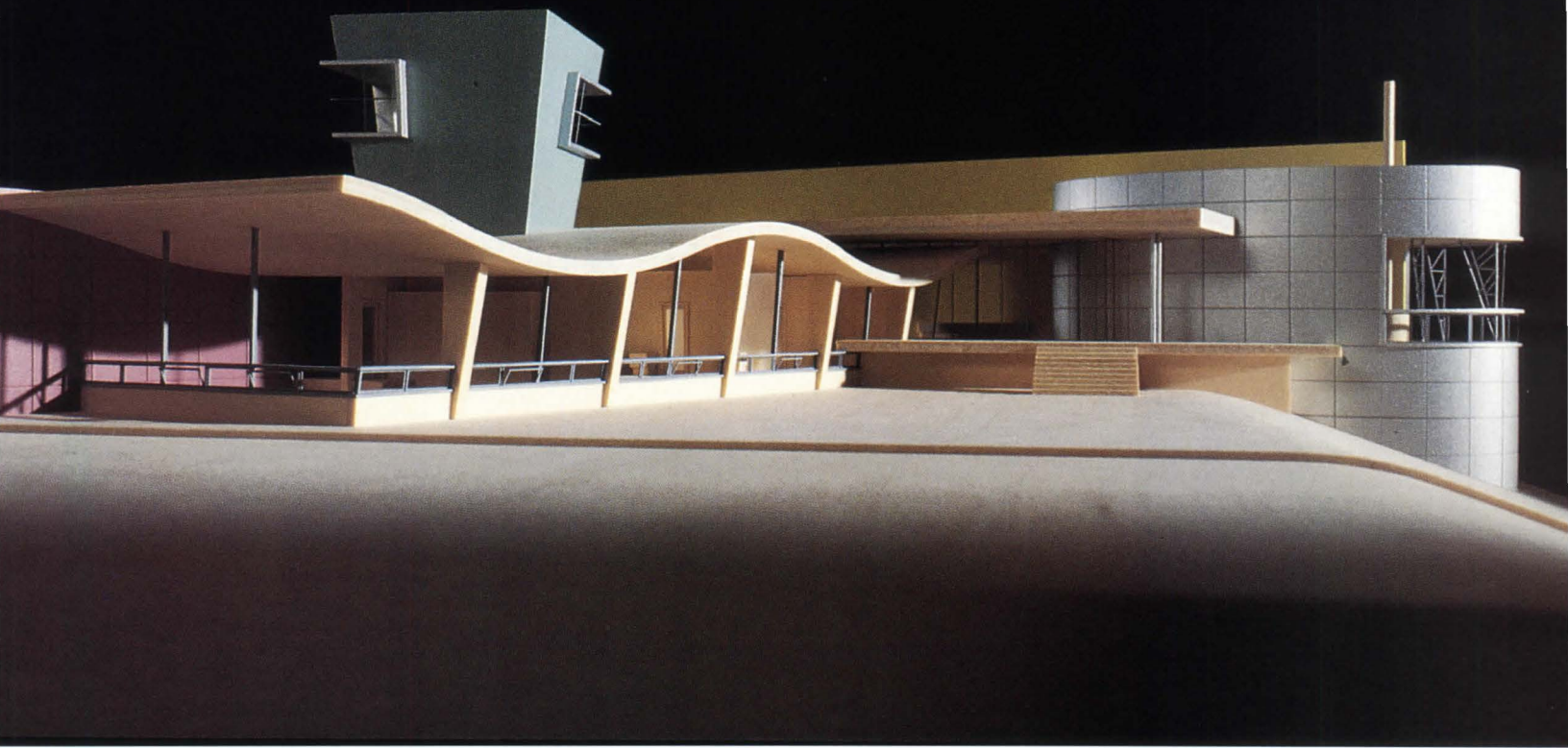
The central spine, in which the art is displayed, is linked to a rectangular, canted-wall, living-dining area at the other end of the plinth. Fractured tile, sandstone, and plaster set off the spine's aluminum paneling.

Following the Pollyea House, the Kanners conceived a hilltop residence in the Napa Valley as series of linked pavilions with angled, linear, ellipsoid, and upwardly splayed forms riding the base. One long axis, running parallel to the valley, is emphasized by a gridded wall of glass panels. The second axis is formed by a tall wall pointed directly at the panorama spread out below the house. The living-dining complex occupies a central, rectangular pavilion, and the elliptical, aluminum-clad master bedroom is set at the prow of the plinth. Canted walls play off against plumb surfaces and curving roof lines with flat planes to

create a composition whose energy matches the drama of the landscape.

Though none of the Plinth House projects has yet been built, the Kanners have continued to develop the concept on a series of imagined sites. Stephen has sketched a number of variations on the plinth theme for a small West Los Angeles house he plans to build for himself. In one variation, the plinth is curved up to link with an undulating roof plane. In another, the plinth serves as a floating platform for a collection of geometric, tilted volumes crammed together. In yet another, an angled cube falls off the plinth as if shaken loose by an earthquake.

"We feel that the Plinth House idea best combines the mixture of solid planning and visual fantasy we're striving for," Chuck Kanner says. "At the same time they are exercises in 'pure' architecture in the midst of a busy practice all-too-often dominated by the bottom line."





Harvard Apartments

ABOVE: The crisp, white-stucco simplicity of the Ninth Street frontage derives its style from the Los Angeles Modernism of Schindler and Neutra.

FACING PAGE, TOP: Axonometric reveals division of building into layered blocks.

FACING PAGE, BOTTOM: The red and yellow "fillings" between the outer white-stucco layers dominate the corner of Ninth and Harvard.

Set in the midst of a mixed Korean-Latino neighborhood that is a microcosm of L.A.'s tense ethnic and social diversity, the 13-unit Harvard Apartments rises above its shabby context with an imaginative and eccentric act of design. The district is graced with some superb Spanish Colonial and Norman-style apartment blocks left over from the 1920s and '30s, when these mid-Wilshire avenues were home to a thriving Anglo middle class. "In this context, the client asked us to give him a building that was more than just another box," Stephen Kanner notes. "What we gave him was a ham-and-Swiss-cheese sandwich of white bread Modernism with a filling of L.A. funk," he quips.

The vertical Wonderbread sections of this architectural sandwich are composed of white-stucco slices front and back. The "ham" filling is a thick, red-painted central slice peppered with square windows of

various sizes, set at angles in a scattered pattern. The "Swiss cheese" section is a slimmer yellow layer alongside the "ham," ventilated by porthole windows. The frontages along Ninth Street, a busy thoroughfare, and at the rear of the building are uncompromisingly Modernistic in their alteration of horizontal window slits and flush white-stucco wall planes.

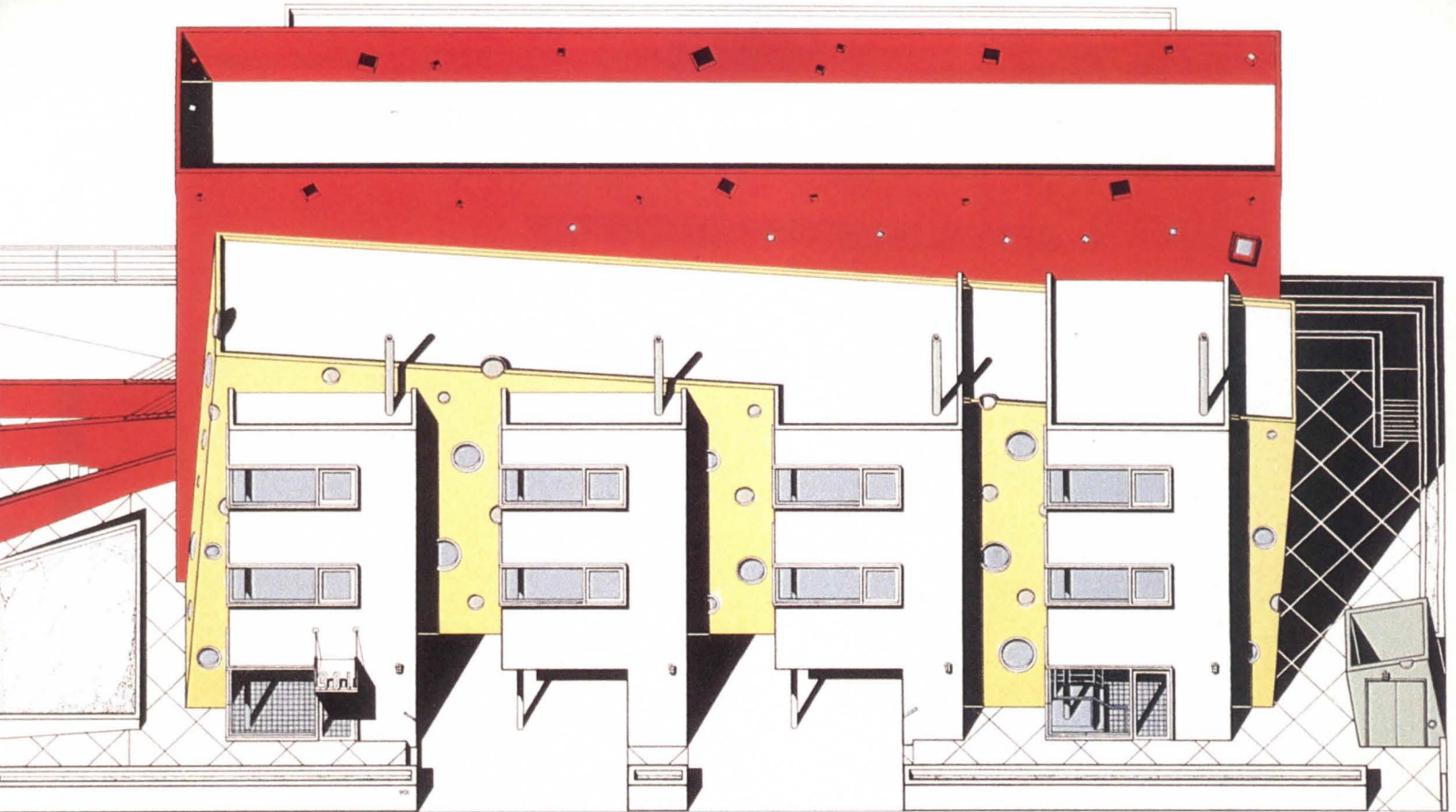
Their sleek style echoes the long tradition of local Modernism dating back to Rudolph Schindler and Richard Neutra in the 1930s and '40s. The funkier middle sections of the composition derive their inspiration from the futuristic 1950s Los Angeles coffee shops.

Each of the upper two floors of the three-story building contains five apartments, served by a central corridor. Living rooms in the top-floor apartments feature 12-foot-high ceilings, and all of the units have small balconies. The first floor incor-

porates three apartments and four off-street parking bays. Additional parking is provided in the basement.

At street level, the block attempts to be user-friendly in an area where many Korean and Latino children play on the sidewalks. Low walls provide impromptu seating, and kids are free to run along the paved walkways fronting the first-floor garages. At the same time, the largely Korean tenants in this Korean-owned building are protected by secured lobbies and a certain air of impregnability built into the architecture. This stylish combination of security and accessibility has attracted tenants who are willing to pay a little more than average monthly rental for quality.

In less skillful hands, the Harvard's sandwich style could have seemed silly. But the Kanners have achieved a vigorous combination of a well-built, economically sound design graced by Angeleno playfulness.

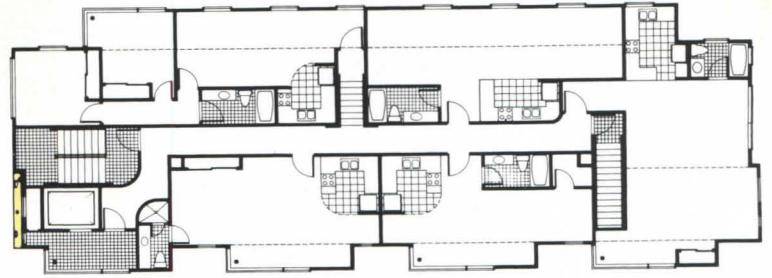


PLANS: One-bedroom units line a central corridor with stairways at each end. Living rooms in the top-floor apartments have 12-foot-high ceilings, and all the units feature small balconies.

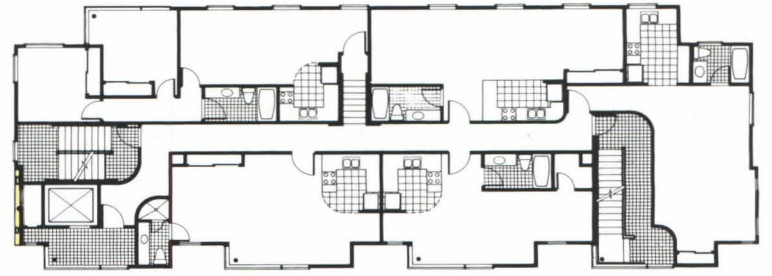
BOTTOM LEFT: Eccentrically placed port-hole windows enliven the stair lobby at the east end of the block and the living rooms at the west end.

BOTTOM RIGHT: Canted windows in the bedrooms at both ends of the block frame views of L.A.'s iconic palms.

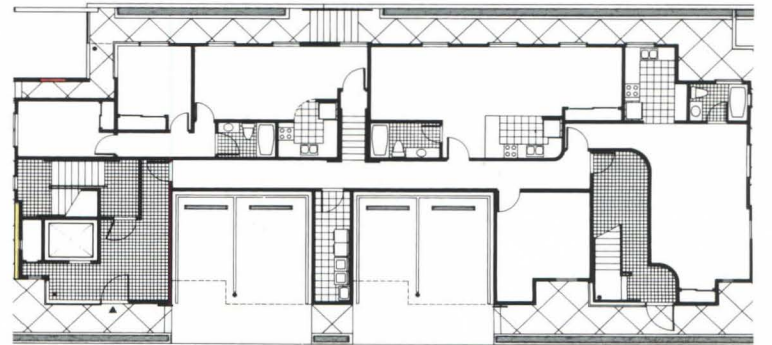
FACING PAGE: Harvard Street elevation reveals apartment block's "ham" and "Swiss cheese" fillings between slices of white-bread Modernism.



THIRD FLOOR PLAN



SECOND FLOOR PLAN



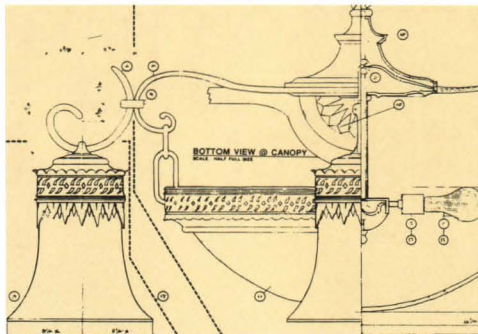
FIRST FLOOR PLAN

10/3m





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BOB TRAUFGMAN



This month's Technology and Practice section focuses on renewal. It begins with our profile of Robert Maguire, a developer who is applying his public-minded vision to reviving downtown Los Angeles. One of the fruits of Maguire's efforts is the rebirth of the Los Angeles Central Library, meticulously restored by Hardy Holzman Pfeiffer Associates, as our technology feature recounts. Before painstakingly reproducing lighting fixtures and decorative finishes, the architects ensured the structure's seismic strength by shoring the landmark's original walls and tower.

Another technology article examines a newer seismic system—base isolators. Literally shock absorbers for buildings, these movable devices separate columns from foundation, allowing a structure to move with seismic disturbances. Renewal is also the focus of our computer feature on the transition from conventional drafting to CAD. The surveyed architects agree that although the change was sometimes difficult, it fostered new levels of efficiency and productivity.



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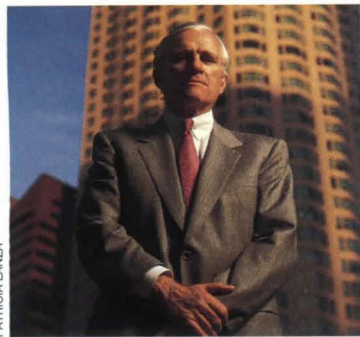
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Civic Visionary

Developer Robert Maguire is reshaping Los Angeles through his public-minded projects.



PATRICIA LANZA

L.A. DEVELOPER: Robert F. Maguire III.



L.A. TODAY: Downtown's western core of towers.



L.A. TOMORROW: Residential infill to north (foreground).

After two years of disasters—riots, floods, fires, and earthquakes—and a continuing recession, Los Angeles needs a visionary like never before. Robert F. Maguire III, founder of Los Angeles-based Maguire Thomas Partners, is proving to be exactly the sort of civic leader the city needs, revamping downtown and pushing municipal leaders to plan for the city's future. The 59-year-old developer possesses a Marcus Welby-like ability to make people feel good about the latency of L.A. Maguire also serves as a great inspiration to architects—and vice versa—having consistently advocated sophisticated design in his urban projects.

Leading developer

Maguire Thomas is probably the largest investment building firm in the nation, according to *Fortune*, controlling more than 25 million square feet of commercial space in the U.S.—9 million square feet in downtown Los Angeles alone, with the balance in Philadelphia, Fort Worth, Pasadena, and Santa Monica. Currently, Maguire Thomas is preparing to break ground for Playa Vista, 1,000 acres of undeveloped land verging on the Pacific Ocean between Los Angeles International Airport and Marina Del Rey. Maguire sees the pedestrian-oriented, mixed-use project as setting a new premium in town development, running against the grain of postwar sprawl. Even so, proposals for Playa Vista

have met broad resistance from community activists and regulators, challenging the developer to defend his vision.

Urban visionary

Maguire, however, has proved himself more than fit for the demands of sound urbanism. His firm recently managed the seven-year, \$14 million reincarnation of Pershing Square and engineered the restoration and expansion of the Central Library, which reopened in October. Maguire has opened up 10 acres of public space downtown, including the first semblance of a pedestrian corridor. And from the top of one of his four colossal skyscrapers downtown, Rob Maguire has his sights set elsewhere within the moat of freeways surrounding the resurgent city center.

"Los Angeles is a manageable downtown," Maguire observes confidently from his trapezoidal office on the 45th floor of the Wells Fargo Center. "The problem is trying to focus on making the city come together. A lot of exciting things are starting and being completed," he cautions, "but we want a very cohesive city, and we have to *plan* it."

While developers like Donald Trump, the Reichmanns of Olympia & York, and Gerald Hines drew attention in the 1980s for their overboard self-interest, Robert Maguire was staging great salons of star architects, harnessing their creativity toward his ideal of a more humane Los Angeles.



MARK LOHMAN

DOWNTOWN L.A.: First Interstate (center) and Gas Company financed restoration of Central Library (bottom left).

Downtown towers

WELLS FARGO CENTER

Marc Goldstein
Skidmore, Owings & Merrill, 1984

FIRST INTERSTATE WORLD CENTER

Henry N. Cobb and Harold Fredenburgh
Pei Cobb Freed & Partners, 1989

THE GAS COMPANY TOWER

Richard Keating
Skidmore, Owings & Merrill, 1991

"I deeply admire the guy for his vision beyond individual projects," says Richard Keating, principal of Keating Mann Jernigan Rottet in Los Angeles, who designed the 52-story Southern California Gas Company headquarters for Maguire Thomas, completed in 1991. "Rob's projects tend to be pieces of a larger part."

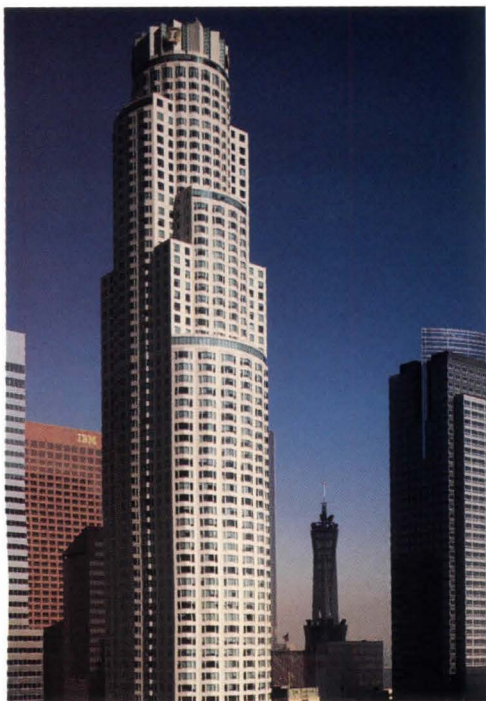
Developer's growth

Maguire earned a bachelor's degree in political science in 1960 at the University of California, Los Angeles (UCLA), and then served as a bank loan officer before opening his own real estate development firm in 1965. He began reshaping the silhouette of downtown Los Angeles in the early 1980s. His first high-rise projects were the 54- and 45-story towers of the \$400 million Wells Fargo Center. Maguire's partner, James Thomas, a 57-year-old tax specialist, joined Maguire

Partners in 1973; they changed the name to Maguire Thomas a decade later.

By 1989, the 155-person development firm counted hard construction assets of more than \$1.5 billion—surpassing those of Dallas-based Trammell Crow Company, which listed assets of just under \$1.5 billion. Maguire Thomas Partners, according to reliable reports, earns about a 12 percent annual return on its investments, compared to developers' more typical 8 percent or 9 percent. "Rob became the first developer who built magnificent and economically successful high-rise buildings in Los Angeles," notes Wayne Ratkovich, president of The Ratkovich Company, a Los Angeles-based development firm. "And he's managed all along to be a terrific resource to the city."

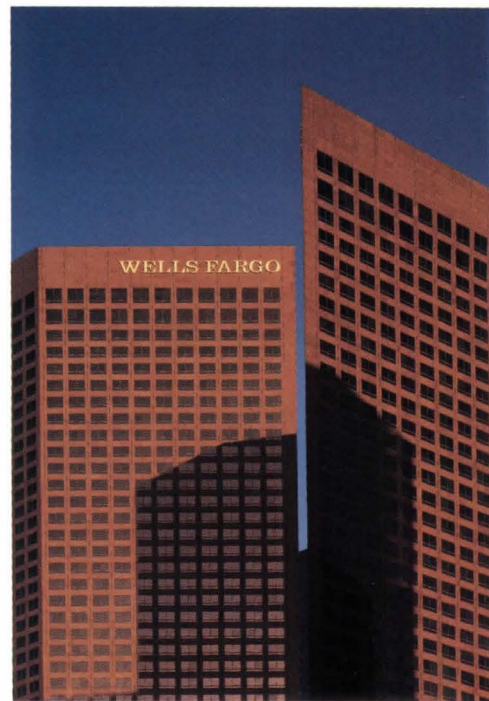
Observers routinely compare Maguire to Houston's Gerald Hines. However, as one architect contends, "Maguire cares about Los



FIRST INTERSTATE: Tallest West Coast building.



GAS COMPANY: Air rights transferred from library.



WELLS FARGO CENTER: Maguire's first high rises.

Angeles, but quite frankly, I don't think Gerry gives a damn about Houston." Still, architects add delicately that Maguire could take an organizational cue or two from Hines Interests: "It's always interesting to get Maguire Thomas to make decisions," says one. But Maguire, architects hasten to add, more than compensates for any operational shortcomings with his adventurous and compassionate building ethic.

Commitment to public space

"All of his projects have some public space component," remarks Henry Cobb of Pei Cobb Freed & Partners, who designed the 73-story First Interstate World Center in Los Angeles, "which I admire, because I have always believed that the economic leverage of tall buildings should be used to create space, not just to preempt space." Cobb also designed Maguire Thomas's twin, 40-story

granite towers of Commerce Square in downtown Philadelphia, completed in 1992. The \$425 million project only consumed two-thirds of the allowable building density, giving over the remaining floor area to a large public plaza adjacent to the building.

Maguire's instinct for balancing individual buildings and public space obviously influences his choice of architects, although he is reluctant to suggest how. Among his favorites is Mexican architect Ricardo Legorreta, who most recently collaborated on Pershing Square as well as on Maguire's 900-acre Solana office park near Fort Worth, completed in 1988. Landscape architect Lawrence Halprin stands among the elect for the populist magnetism of public spaces such as the Bunker Hill Steps. And Maguire harbors deep affection for the late Charles Moore, citing Moore's ingenious mix of theoretical seriousness and practical levity.

Unlike some developers, architects affirm, Maguire is no dilettante baron, collecting designers as if they, too, were chattel. "Rob Maguire does not use 'signature' architects as a promotional device," maintains Cobb. "He bounces ideas off architects in a way that transcends working on any particular project." Maguire keeps huge scrapbooks of projects he likes, categorized by type. "I go see everything," he maintains, confirming a constant foraging for innovation. "He likes to work with architects who are not just designing to a program," Cobb notes, "but who are helping him invent the program."

Supergroup charettes

As a developer interested in fostering the public realm, Maguire likes to fill a room with an incandescent array of architects and elicit their boldest proposals for huge tracts of urban land. Maguire's first supergroup

HEDRICH-BLESSING PHOTOS



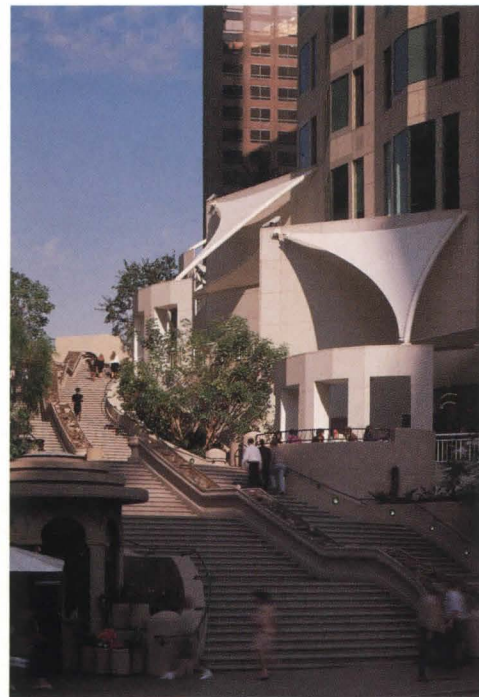
PERSHING SQUARE: Ricardo Legorreta's campanile.

ERHARD PFEIFFER



PERSHING SQUARE: Reconnects city center.

HEWITT/GARRISON



BUNKER HILL STEPS: Bunker Hill joins business district.

HEDRICH-BLESSING

Public spaces

SOLANA OFFICE PARK

Legorreta Arquitectos
Mitchell/Giurgola
Harwood K. Smith & Partners
Peter Walker and Martha Schwartz, 1988-91

BUNKER HILL STEPS

Lawrence Halprin, 1990

PLAZA LAS FUENTES

Moore Ruble Yudell
Barton Myers Associates
Lawrence Halprin, 1990

MGM PLAZA

Ellerbe Becket, Sasaki and Associates, 1991

THE MAGUIRE GARDENS

Lawrence Halprin, 1993

PLAYA VISTA

Duany Plater-Zyberk
Moore Ruble Yudell
Legorreta Arquitectos
Stefanos Polyzoides
Hanna/Olin

charette took place in Los Angeles in 1980. He assembled Cesar Pelli, Barton Myers, Charles Moore, and Frank Gehry, among others, to develop an exhaustive program for 4.8 million square feet of mixed-use space on 11 acres along Grand Avenue downtown in response to the city's request for proposals.

"What made the Grand Avenue project so special," contends Barton Myers, "is that when you plan something so big, it's too much for one architect—in fact, it's boring—and you need to diversify the approach. But what really made it work was Rob's enthusiasm and energy, the leadership to pull it off."

At about the same time, Maguire was assembling a team comprising Moore, Myers, Cobb, Halprin, and the late Harvey Perloff, then dean of architecture and urban planning at UCLA, to develop proposals for saving Bertram Goodhue's 1926 Central Library, which the city was threatening to demolish.

Maguire masterminded the now-famous tax-increment plan by which the library would be spared and restored. The developer bought the library's air rights for \$51 million, and transferred the density allowance to two sites across Fifth Street, where he built the \$350 million First Interstate tower and then the \$325 million Southern California Gas Company building. The city, in turn, taxes tenants in those buildings to produce the \$214 million needed for the library's rehabilitation. Maguire also tore down a 50-foot wall and rerouted a street to create the Bunker Hill Steps. "The whole idea was to connect Bunker Hill, the central business district, and the library," he explains.

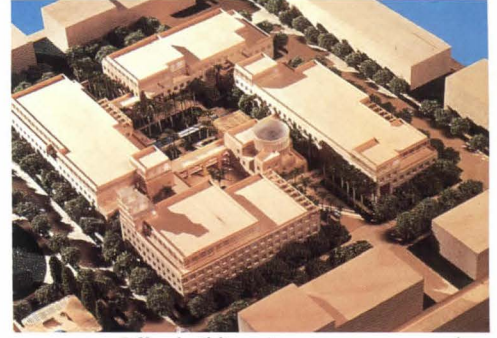
Nothing in its downtown experiences, however, fully prepared Maguire Thomas for the political trials of Playa Vista, a finger of land larger than all of Century City surrounding the former airstrip of billionaire



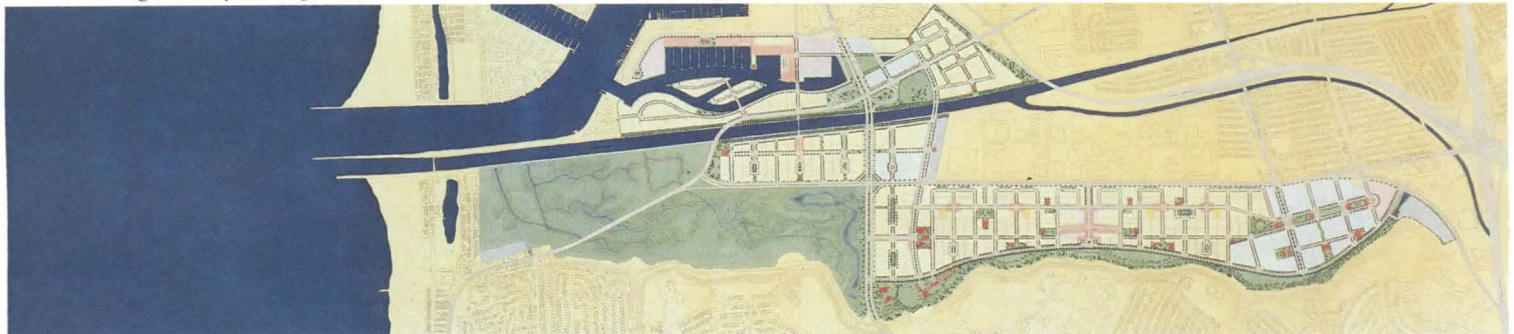
PLAYA VISTA: High-density housing.



BOULEVARD MODEL: Integration of uses cuts auto trips.



CITY BLOCK: Office buildings incorporate courtyards.



PLAYA VISTA SITE PLAN: Coastal-zone and wetland site requires environmental mitigation; project is scheduled to break ground later this year.

Howard Hughes. Playa Vista is Maguire Thomas's first foray into residential development. The complications of its first phase—3,246 residences, 35,000 square feet of retail, 1.25 million square feet of offices, and 300 hotel rooms—stem both from its proximity to a degraded wetland, and from its smog-generating potential. Maguire Thomas's partner-in-charge of Playa Vista, Nelson Rising, has spoken to more than 500 community meetings over five years. The firm produced an environmental impact report that would stand 5 feet tall. "We've mitigated everything under God," Maguire notes caustically. He may hate the hassles of Playa Vista, but he clearly loves the complexity.

"Rob has this sense of something missing until he senses urban complexity and urban richness," observes Buzz Yudell, principal of Moore Ruble Yudell in Santa Monica and a member of the Playa Vista master-planning

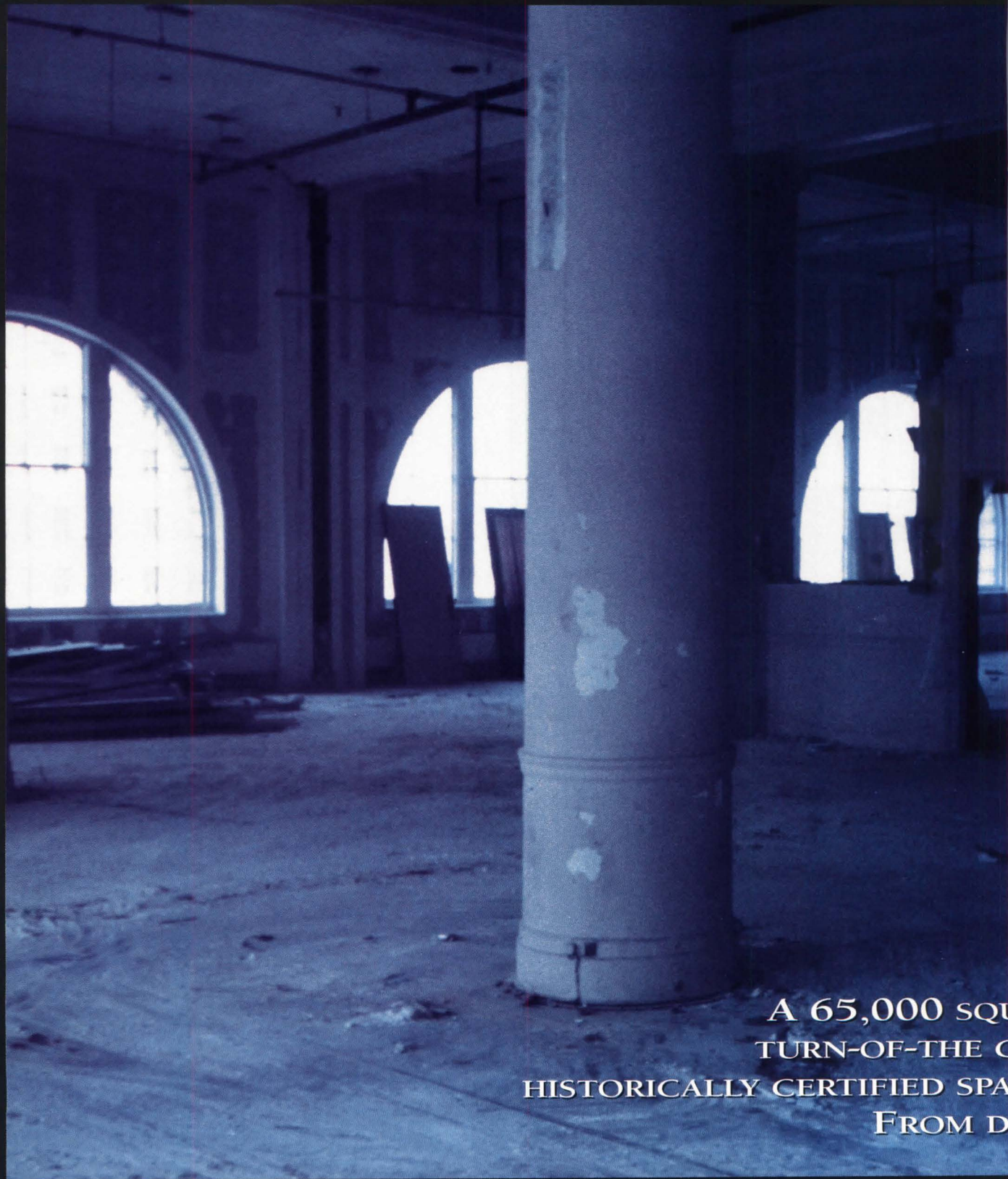
team. "He really doesn't become excited about something until it works on multiple levels. He's not terribly interested in just doing another tower."

Downtown's future

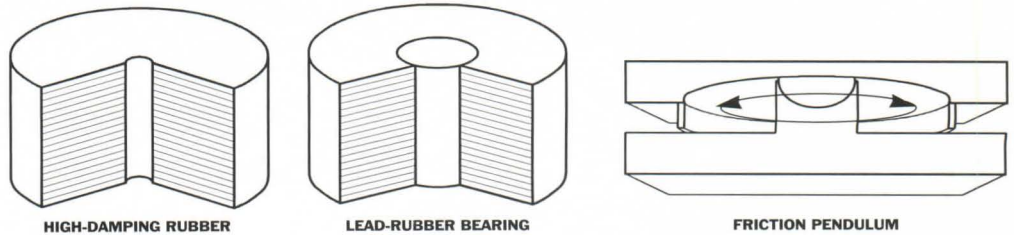
That sensibility explains the mixture of patience and urgency in Maguire's voice as he speaks of his ideas for ushering out the millennium in downtown Los Angeles, the recent caprices of nature notwithstanding. Hovering over a large model of downtown, the developer synthesizes the rehab, infill, and housing possible in a 100-acre area between First and Fifth streets. Maguire envisions a march toward the Hollywood Freeway and Union Station with a plan for 4,000 "really neat" residential units on downtown's northern edge. The housing could plug into a nascent cultural district anchored by the Civic Center and Frank Gehry's new Disney

concert hall. Over the past 36 months, Maguire has explained to Los Angeles County the compelling economics of his proposed residential scheme.

"Nobody's going to be building anything immediately anyway," the developer asserts, referring to the recession that yet lingers in Southern California. But the new North American Free Trade Agreement, combined with the burgeoning trade around the Pacific Rim, could likely bring the region back, supplanting recent losses in the defense and aerospace industries. In that case, Maguire intones, we must consider the effects of future downtown developments on the nearby neighborhoods of Chinatown, Koreatown, and Little Tokyo. As his hand sweeps over a vast model of downtown Los Angeles, Maguire asserts, "We can't pull this off unless we start thinking about this whole area from a design standpoint."—Bradford McKee



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Seismic Base Isolators

Earthquake damage can be averted by installing movable, shock-absorbing devices.

Although ground movement measured 6.7 on the Richter scale, not even a vase was knocked over in the eight-story University of Southern California hospital during the January earthquake in Los Angeles. The reason for this endurance is that the hospital rests on 149 seismic “shock absorbers,” or base isolators. Base isolators are movable, loadbearing elements inserted at the bottom of columns to separate the movement of a structure from that of its foundation. Isolators transmit the horizontal ground movement of an earthquake to the structure, but in a slower, more uniform fashion than a conventional arrangement of columns.

Types of isolators

Base isolators are categorized as either high-damping rubber, lead-rubber bearing, or friction pendulum. High-damping rubber base isolators consist of alternating layers of rubber and steel plates vulcanized together. Lead-rubber bearings comprise layered metal and rubber vulcanized around a solid lead core. Friction-pendulum isolators consist of a shallow metal dish in which a structural-steel bearing point supports the load of the column above. During a quake, the building “skates” around in the Teflon-coated dish.

Although base isolators are increasingly being installed in buildings, the technology is not new. Frank Lloyd Wright’s Imperial Hotel in Tokyo is considered to have survived a 1923 earthquake because its foundation acted as a single isolator. Constructed on a thin layer of firm soil over a 60- to 70-foot layer of mud, the structure’s closely spaced piles are thought to have moved uniformly with the ground motion.

During an earthquake, a base-isolated building moves as if it were on a plate of firm gelatin. A base-isolated structure may move as much during an earthquake as a nonisolated building, but much of the movement will occur in the isolator, not in the columns.

By minimizing the amount of movement in the structural columns, a base-isolated

building does not require as many shear walls and the type of bracing typically associated with seismically reinforced buildings. Some additional reinforcement is usually required, but the expense is so diminished that base isolation often adds less than 5 percent to construction costs for new buildings and sometimes actually cuts renovation costs, according to Mason Walters, senior associate of Forell/Elsesser Engineers, San Francisco.

Installation options

About half of the current 30 American base-isolator projects are renovations. When base isolators are installed in existing buildings, the load is removed from a column through jacks and shoring. A section of the column is cut out, and the isolator is inserted.

As Walters points out, “Base isolation is often the cheapest solution for restoration projects because it disturbs less of the historic fabric in upper stories than the creation of extensive shear walls or bracing.”

Different types of base isolators can all be designed to meet the same technical parameters for seismic protection, asserts James Kelly, professor of civil engineering at the University of California’s Earthquake Engineering Research Center in Richmond. “One might be specified over the other because architects and engineers can have a preference.”

Software that models the effect of earthquakes and shake tables that simulate ground motion have aided the development of these seismic devices. These tools help determine the most appropriate isolator for a project.

Kelly notes that the price of isolators has become very competitive. “They range from \$3,000 per isolator to more than \$10,000. But the increased competition among manufacturers keeps the bids for each project comparable,” he remarks. The extent of demolition required in retrofitting a building with such a seismic system influences the selection of the isolator type.—*Michael Bordenaro*

Michael Bordenaro is a Chicago-based writer.

Seismic Isolation Criteria

Structures are generally suitable for seismic base isolation if they meet the following conditions:

- The structure should be no more than 18 stories tall.
- The site should incorporate a 12-inch moat around the building to permit the structure to move during an earthquake.
- The subsoil should be firm. Soft subsoil, such as bay soil, can produce ground motion that counteracts the effect of the base isolators.
- Lateral wind loads or other nonseismic loads should be less than approximately 5 percent of the weight of the building.

Source: Dynamic Isolation Systems.

Base-isolation technology was just emerging from its infancy before the 1989 Loma Prieta earthquake ravaged Northern California. Architects forced with the task of ensuring the safety of buildings and their occupants turned to this developing technology to provide increased seismic safety for many Bay Area buildings.

The City of San Francisco's Bureau of Architecture also commissioned seismic evaluations for many of its damaged buildings in the historic Civic Center. Acting as the prime architect for more than 30 city building restorations and seismic upgrades, the bureau judged the proposals based on performance value, cost, and delivery time.

For the Beaux-Arts City Hall (1917), a base-isolation retrofit minimized the alteration of public spaces and disruption of important historic features; reduced the amount of work required to reinforce the 300-foot dome; and, consequently, was the least expensive seismic reinforcement alternative. Asserts architect Mark Dorian of the San Francisco Bureau of Architecture, "Base isolation provided a great asset by allowing most of the seismic work to occur in the basement and required very little reinforcement in the upper levels."

A new steel-framed metal deck at the ground floor will help to distribute lateral forces among the isolators. This structural requirement reduces the floor-to-ceiling height of the ground level by approximately 30 inches. Changing the ground floor was considered more desirable than altering historic features on other floors, which would have been required with a shear wall, braced frame, or flexible story option.

For the renovation of the U.S. District Court of Appeals, the largest base-isolation project in the United States, Skidmore, Owings & Merrill chose a friction-pendulum system. Originally designed by James Knox Taylor, the 89-year-old building was

damaged in the 1989 earthquake and is now undergoing an \$80 million restoration that includes the installation of more than 250 isolators.

SOM project architect Fred Powell explains that friction-pendulum isolators were chosen for the Court of Appeals primarily because of their height. "There were only 22 inches of space in which we could install the isolators under one wing of the building," Powell notes. "The friction-pendulum isolators were less than 10 inches tall, so we were able to maintain the historic floor level of the building." High-damping rubber or lead-rubber isolators, which can be as tall as 36 inches, would have required cutting away part of the foundation's wood pilings.

An innovative redesign of the court's friction-pendulum isolators also saved additional foundation work. Friction pendulums typically are positioned so the bearing point rests on a metal dish. However, SOM's chief structural engineer, Navin Amin, turned the system upside down and specified an isolator that has a dish resting on the bearing point. "During an earthquake, the building will move about 10 inches in relation to the foundation," Amin notes. "If the bearing point moved 10 inches, the footings would have to have been reinforced to accommodate this eccentric load."

By creating a fixed bearing point on the footing, the eccentric load on the footing was reduced, as was the amount of reinforcing required at each of the 256 footings. Also, the inverted dish will require less maintenance than the typical friction-pendulum system.

Powell adds that the anticipated movement of the structure placed additional torque on the existing steel columns, requiring that they be encased in concrete for added reinforcement. Plumbing lines and electrical conduits located adjacent to columns had to be relocated.



ROBERT CRANFIELD

U.S. DISTRICT COURT OF APPEALS: Restoration entails more than 250 isolators.



BOB TRAUPTMAN

FOOTING: Column is strengthened prior to base isolator installation.



BOB TRAUPTMAN

ON-SITE RETROFITTING: Existing column is jacked up and cut.



BOB TRAUPTMAN

ISOLATOR INSTALLATION: Friction-pendulum dishes rest on bearing point.

Pei Cobb Freed & Partners designed the new, \$87 million San Francisco main library in association with Simon Martin-Vegue Winkelstein Moris (SMWM) to resist seismic forces measuring 8.3 on the Richter scale. The library's predecessor, a 1917 George Kelham-designed building that was damaged during the 7.1 Loma Prieta earthquake, is located in San Francisco's historic Civic Center and is being renovated to incorporate the city's Asian Art Museum. The architects specified 50 lead-rubber and 92 high-damping rubber base isolators to ensure that the new library could be realized in the manner it was originally envisioned, with a granite curtain wall that is sculpted with many angled recesses.

Initially intended as a moment frame structure, the main library was subject to increased seismic resistance standards during design, notes Ben Larson, technical director of SMWM. To meet the new standards required doubling the weight of the steel structure, making this conventional structural option cost-prohibitive. The base-isolation solution not only kept the project within budget, but also maintained the angled recesses of the new library's exterior design. "The reentrant corners would have been subject to more potential damage with the moment frame design," asserts Larson.

Furthermore, the base-isolation solution limited interstory drift between floors to 1 inch during an earthquake. The technology allowed joints in the granite-faced curtain wall to remain at a standard, esthetically acceptable thickness, remarks Anthony Bernheim, project manager of SMWM. The bolstered moment frame solution, on the other hand, would have needed expansion joints so large as to require redesign of the exterior cladding, Bernheim states. As with most base-isolation projects, the cost of upper story shear wall and other reinforcing construction

was greatly reduced. Base isolation eliminated \$6.5 million in reinforcing costs by reducing upper floor accelerations by a factor of 5, note the architects, compared to more conventional reinforcement.

The library's typical isolators range in size from 22 to 28 square inches, although some of the isolators under heavy loads measure as large as 36 square inches. The isolators are 27 inches tall and weigh approximately 2,000 pounds. The structure's 22-inch box columns are outfitted with jacking stubs so they can be raised slightly to remove the bearings if they ever need to be replaced.

Local codes required some form of protection in case the isolator failed through the unlikely event of a fire spreading to the foundation. While a mineral fiber wrap was placed around a few isolators located near elevator shafts, mechanical rooms, and other sensitive areas, it would have been too expensive to wrap all 142 isolators. Also, future inspection of the isolators would have required destruction and replacement of the fireproofing, which would have resulted in costly maintenance.

The architects realized another cost savings by providing an alternative to fireproofing all of the isolators: Stub columns were welded to two sides of the main box columns. The stub columns are like legs that extend down around the isolator and are suspended slightly above the foundation. In the unlikely event that the isolator fails, the stub columns will be able to support the main column. This solution saved more than \$150,000, compared to the alternative of mineral fiber wraps, explains Larson.

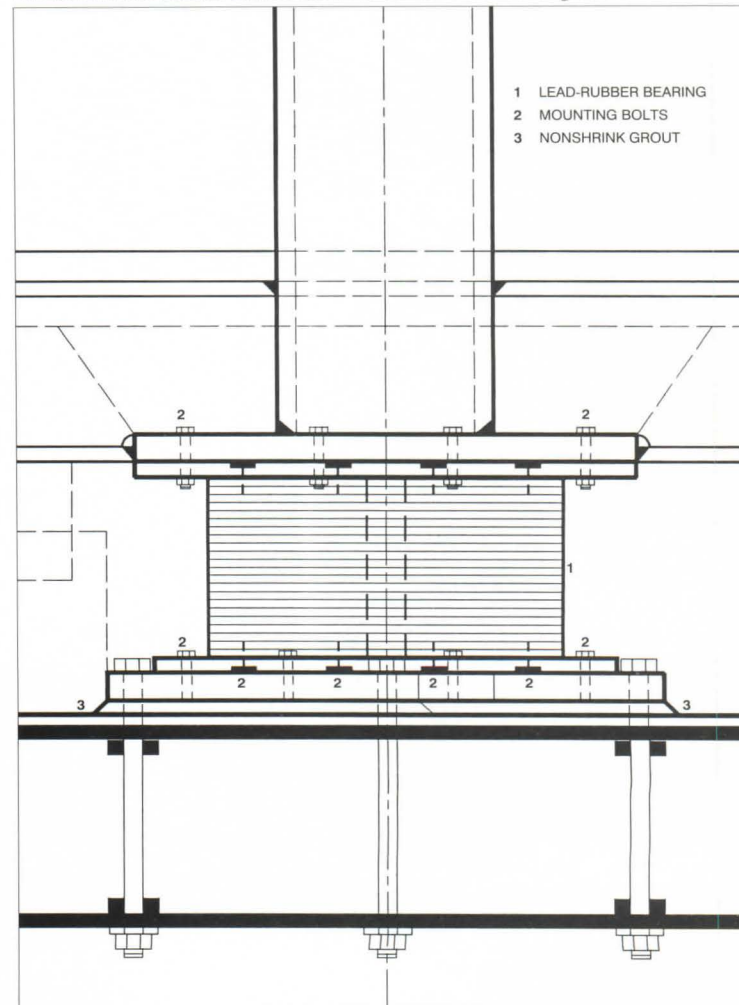
Such advancements in base-isolator design after the Loma Prieta earthquake should aid architects in their endeavors to retrofit and reinforce buildings not only in the Los Angeles area, but in other earthquake-sensitive regions as well.



SAN FRANCISCO LIBRARY: Base isolators limit interstory drift.



BASE ISOLATORS: Seismic devices cut \$6.5 million in reinforcing costs.



ISOLATOR DETAIL: Rubber device located below jacking stub. 1/17.33m

GERALD RATTO

BOB TRAUPIAN

Designed by Los Angeles-based architect Widom Wein Cohen, the two-story Kaiser Permanente Regional Data Center in Corona, California, rests on 54 base isolators. During the January earthquake, the data center experienced only slight movement, a fortuitous outcome, given that the center houses \$350 million worth of computer and patient records for the Southern California region of Kaiser's healthcare system. Although Kaiser's Northridge facility was shut down by the quake, the Corona data center was able to furnish patient records to the healthcare provider's nearby facilities that remained operational.

Chester Widom, a principal of Widom Wein Cohen, remarks that expense was not a main consideration in the seismic protection of the data center, but the base isolators still did not add much to the cost of the 120,000-square-foot, \$30 million building. "Although the isolators increased the cost of the base of the building, they helped reduce the structural requirements on the upper section," Widom remarks.

The architects took the unusual approach of highlighting the isolators as design details in the building. Isolators were exposed where possible, and windows on the exterior and in the lower lobby reveal the technology to both visitors and staff. "We easily convinced the owner that there was an opportunity to use an expensive structural element as a design feature and to show their employees and the public the extent to which Kaiser is protecting its system," Widom explains. The exposed isolators also provide a level of psychological protection to employees who are reassured that their place of work is safe, Widom adds.

The design of a base-isolation project is more complicated than a typical commission. "The coordination aspect of the project becomes more difficult because more consultants

are involved," Widom explains. Also, stairs, elevators, and utilities entering the building, and a number of other services must be carefully examined. "For example, we needed to make thorough calculations to ensure the exterior wall material was heavy enough to reduce low-level movement," he remarks. Because it can shift on the isolators, the building needed a certain weight around the perimeter to make sure it didn't move during a strong wind or a minor earthquake. Precast concrete panels were finally chosen by the architect to clad the exterior.

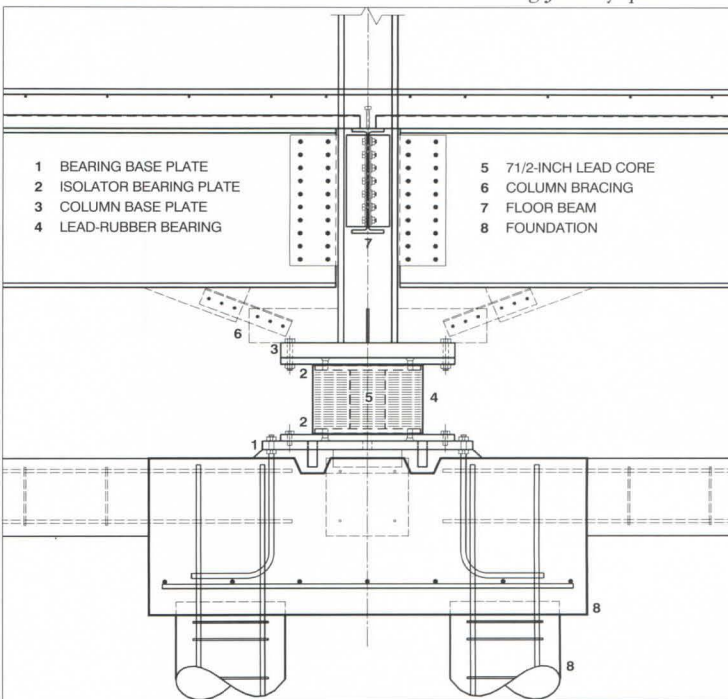
As is typical with base-isolation structures, a moat had to be dug around the data center to allow the structure room to move during a major earthquake. "The entrance required the design of a slip joint cover over the moat that was flexible yet still allowed access by persons with disabilities," explains Widom. Also, a moat had to be dug around the hydraulic elevator well that extends below the building so that the entire shaft could move as a unit during an earthquake. Furthermore, all gas, electric, water, sewer, and other utility lines were specified with double ball joints at the point of penetration into the structure.

Widom recalls that working with the local code officials also required a different approach. Because the local building department was not familiar with base-isolation review, Kaiser had requested the services of an independent structural engineer specializing in seismic designs to review the work of the structural engineer of record, Taylor and Gaines. The building officials were willing to accept the independent engineer's opinion of the isolators' ability to perform properly. The recent Northridge earthquake, although not very intense in Corona, California, was a greater test of the design's ability to perform properly—a test the building readily passed.



JORDAN LAGMAN

KAISER DATA CENTER: Base isolators limited movement during January quake.



ISOLATOR DETAIL: Rubber bearing features lead core.

1/1.39m



JORDAN LAGMAN

LEAD-RUBBER ISOLATOR: Inserted under column.



JORDAN LAGMAN

EXPOSED BASE ISOLATOR: Celebrated as design feature.

The first U.S. base-isolation project east of the Rocky Mountains is now under construction in Memphis, which lies in the New Madrid fault zone, site of an 1806 earthquake, the largest in U.S. history. The new, \$27 million, eight-story AutoZone headquarters is one of the few privately sponsored projects incorporating base isolation. When completed in April 1995, the 250,000-square-foot building will house extensive inventory-tracking computer equipment.

The auto parts retailer desired a design that would protect the concrete structure from extensive damage by a 1-in-475-years seismic event, according to Frank Ricks, a partner of local firm Looney Ricks Kiss Architects, which designed the building in association with Gensler and Associates' Houston office. "Base isolation improves the chances that AutoZone could continue operation after a major seismic event," Ricks remarks. "It also reduces the need for additional seismic bracing, although some shear walls were required in the center of the building to transmit loads to the base isolators."

The 24 lead-rubber bearing and 19 high-damping rubber isolators incorporated into the AutoZone project helped keep construction costs about equal to those projected for a steel-and-concrete structure that could survive a major earthquake. Lead-rubber and high-damping rubber isolators are often installed together because only a certain amount of lead is needed to dissipate an earthquake's energy, asserts Ron Mayes, president of Dynamic Isolation Systems, manufacturer of the project's isolators. "The lead-rubber bearings are typically positioned around the perimeter of the building to minimize the torsional response of the building," explains Mayes.

Base isolation also helped cut construction costs for the curtain wall of the AutoZone headquarters. Because a steel-and-concrete structure would

have experienced significant inter-story drift during a seismic event, the curtain wall would have required substantial movement joints. With base isolation damping interstory drift, the final option allowed for a less expensive curtain wall to be specified. Because of the reduced movement the building is anticipated to experience during an earthquake, conventional pedestal computer flooring and rooftop patio paver systems could be specified.

Every base-isolated building needs a space or "moat" around it to allow for movement during a seismic event. For the AutoZone project, the architects designed a variety of expandable moat covers because the building is located on a sloping site that required specialized detailing. For example, precast concrete pavers located adjacent to the building were designed in two pieces. Instead of butt-joining the sidewalk sections, the piece closest to the building is detailed with an upward sloping edge that rests above a downward sloping edge of the adjacent paver. If the building moves, the two sections of sidewalk can slide over each other to accommodate the movement.

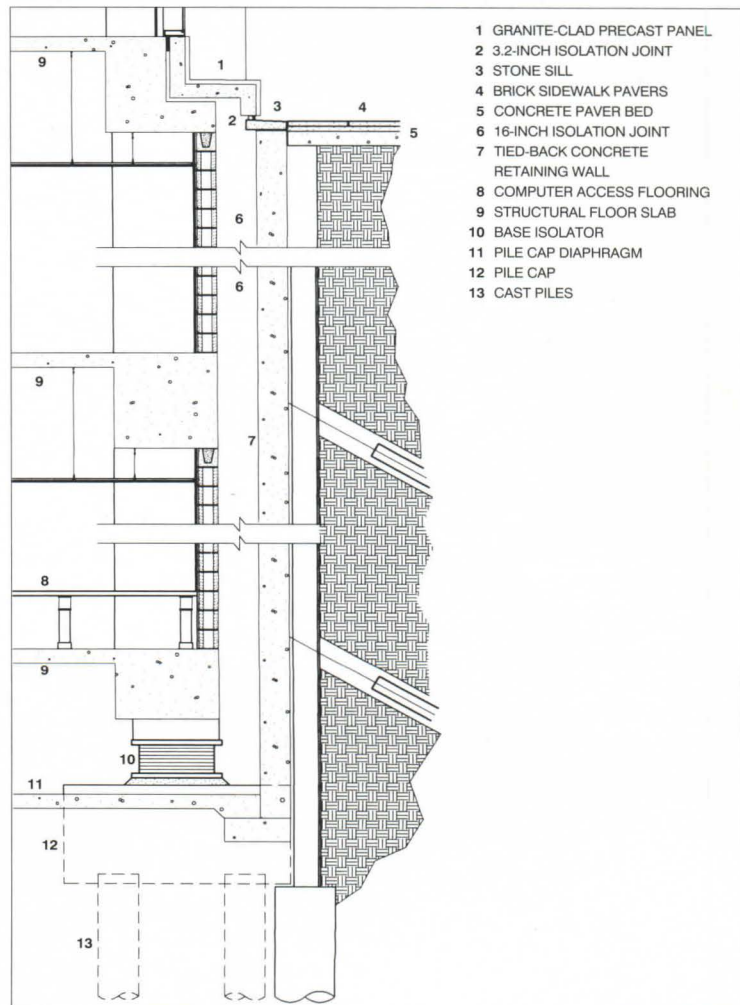
It is important for architects not to underestimate the amount of time necessary to explain the innovative structural system of base isolation to all of the project team members, Ricks points out. "We spent a considerable amount of time going over the effect that base isolation had on power lines coming into the building, sewer lines going out, joints, tie downs of equipment, and many other issues," he explains. "Every time you bring up an aspect of the building's design, you have to ask, 'How is it going to be affected by the base-isolation system?' For architects who may be working with base isolation for the first time, it is important to realize that educating team members may affect your efforts to deliver the building."



AUTOZONE HEADQUARTERS: Project on New Madrid fault incorporates 43 isolators.



EAST-WEST SECTION


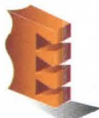
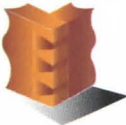


- 1 GRANITE-CLAD PRECAST PANEL
- 2 3.2-INCH ISOLATION JOINT
- 3 STONE SILL
- 4 BRICK SIDEWALK PAVERS
- 5 CONCRETE PAVER BED
- 6 16-INCH ISOLATION JOINT
- 7 TIED-BACK CONCRETE RETAINING WALL
- 8 COMPUTER ACCESS FLOORING
- 9 STRUCTURAL FLOOR SLAB
- 10 BASE ISOLATOR
- 11 PILE CAP DIAPHRAGM
- 12 PILE CAP
- 13 CAST PILES

WALL SECTION

1/1.33m



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Recrafting a Los Angeles Landmark

Reviving a 1926 civic structure demands a variety of preservation techniques.

ABOVE RIGHT: Renovating Goodhue's library included repairing its signature pyramid and rebuilding its west lawn, which was paved over for parking.



FOUAD FARAH

The scarcity of historic landmarks in Los Angeles has focused enormous attention on the recently renovated 1926 Central Library, designed by Bertram Grosvenor Goodhue. Reopened last October after more than a decade of planning and construction, the library now offers up-to-date information technology in a decorative setting that reflects the historic building's original civic grandeur.

Architect Hardy Holzman Pfeiffer Associates restored and expanded the streamlined building, adding a new 328,000-square-foot wing housing book storage, reading rooms, a 235-seat auditorium, and a dramatic eight-story atrium that almost doubles the library's size. "The completed project shows how a seriously antiquated building of great architectural character can be extended into a new century," claims principal-in-charge Norman Pfeiffer. Indeed, before the extensive restoration, dim lighting, overcrowded offices, outdated cataloging systems, slow book retrieval procedures, and an absence of air conditioning all conspired to make the city's flagship library a functional dinosaur.

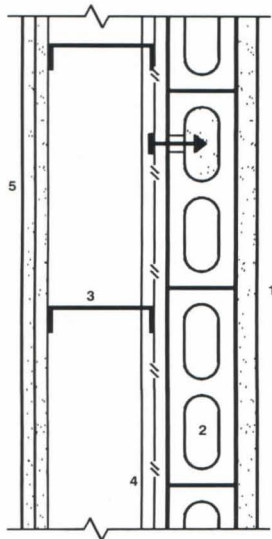
To make matters worse, two fires consumed portions of the building in 1986, gutting the rare book room, destroying portions of the stacks, and shrouding decorative ceilings with thick soot. An earthquake in 1987 damaged the signature rooftop pyramid and cracked many of its ceramic tiles. While the L.A. business establishment rallied to repair and replace hundreds of thousands of water-

soaked volumes, Hardy Holzman Pfeiffer gathered a team of historians and conservators to restore damaged artwork, recapture original colors, and reproduce historic light fixtures. Without harming the library's historic fabric, the architect strengthened interior walls against seismic failure and installed modern mechanical and electrical systems. On the exterior, layers of paint were removed from the original stucco and limestone, and cracks were repaired. In addition, both the torch-shaped finial and the pyramid's ceramic tiles were replaced in conjunction with structural stiffening of the tower.

Elements of the old building that had to be removed during construction were salvaged when possible and reused in the new wing in the interest of preservation. The 45-ton concrete-and-tile fountain assembly from the south terrace, for example, was carted away intact and later reinstalled. No less focused was the effort to reflect qualities of the old library in the decorative schemes for new interior elements created for both the rehabilitated structure and the new wing.

Designs for furniture, carpets, and lighting drew their inspiration directly from patterns and figures in the original building, many the result of Goodhue's insistence on including artist-collaborators in the commission. As steward of the landmark, Hardy Holzman Pfeiffer paid ample respect to the building arts that existed in the 1920s while, in many cases, adapting the historic rooms to the demands of our time.—*Vernon Mays*

Seismic reinforcement



WALL SECTION

- | | | | |
|---|--------------------|---|-------------------------|
| 1 | EXISTING PLASTER | 4 | 1 1/2-INCH-THICK GUNITE |
| 2 | EXISTING TILE WALL | 5 | NEW DRYWALL |
| 3 | STEEL STUD | | |

ABOVE: Existing clay-tile walls are now reinforced with new steel studs and an adhesive layer of gunite.

TOP RIGHT: Steel mesh and studs were attached to back of tile wall.

CENTER RIGHT: After studs were installed, walls were filled with gunite.

BOTTOM RIGHT: Detail shows textured surface of gunite and drywall application on back surface of wall.

FACING PAGE: Tower walls and floor received new steel-and-concrete reinforcement. Dotted lines in tower show placement of new steel ring frames. Broken vertical line adjacent to corridor (right) indicates typical location of reinforced clay-tile wall.

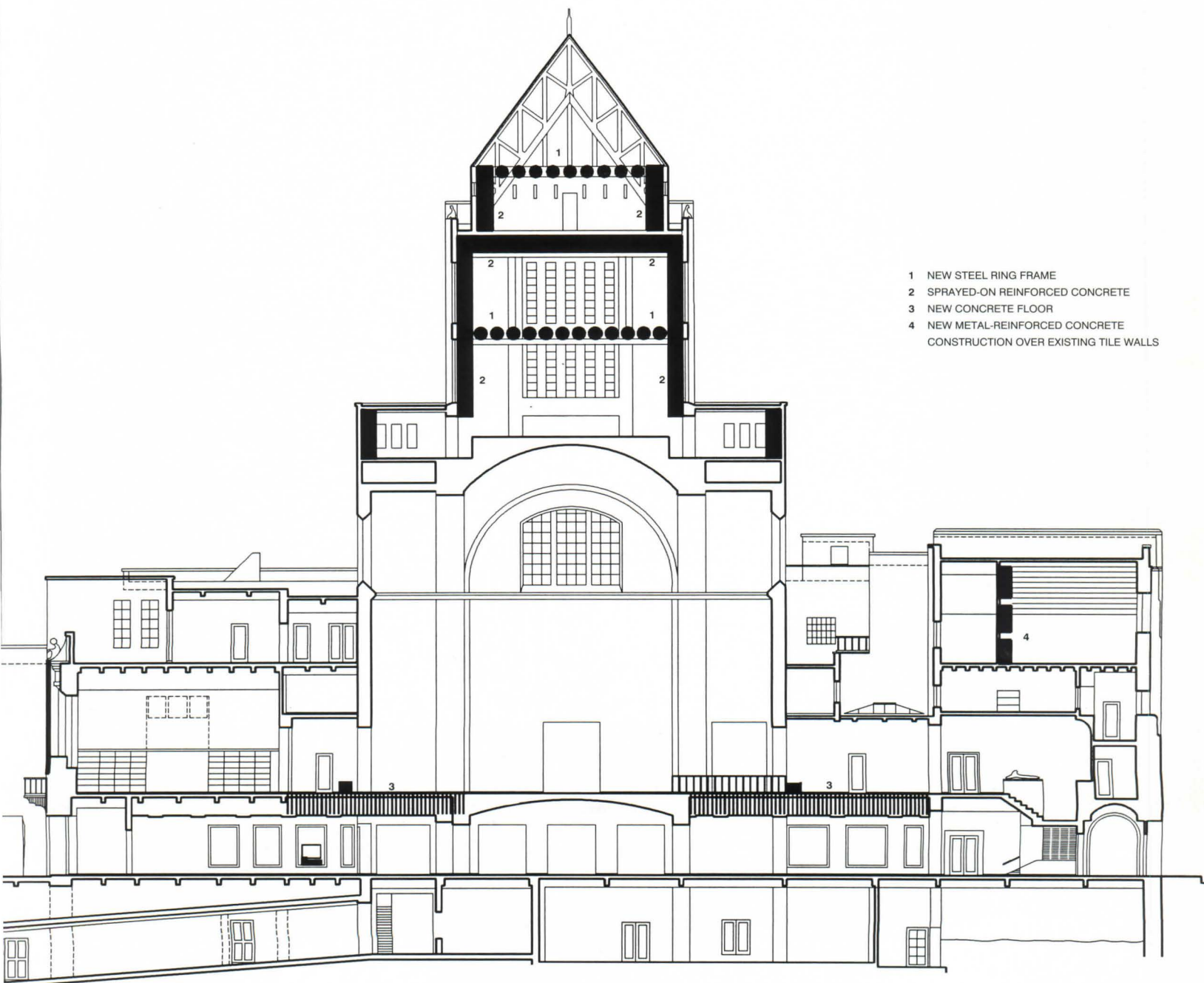
The Central Library was seismically strong overall, but Hardy Holzman Pfeiffer was concerned about specific areas weakened by earthquakes that posed potential threats to public safety. The greatest perceived danger was from terra-cotta tile walls adjacent to primary circulation paths on the first, second, and fourth levels, as well as from interior walls in the main reading rooms. On the first level, the collapse of these walls could block the library's main exits.

The original, 4-inch-thick tile walls were built two layers deep with an air space in between. To satisfy preservation requirements, the layer of wall facing the corridors was retained; and the rear layer was removed and replaced with drywall. While the back of the tile walls was still exposed, a 6-inch-by-6-inch wire mesh grid was attached with $\frac{3}{8}$ -inch toggle bolts at regular intervals. Then a steel-stud wall was erected and wired to the mesh.

Next, a layer of gunite was applied, engaging the mesh. This backup system keeps the tile wall from buckling, because the tile no longer bears its own weight. In fact, the January earthquake had no discernible effect on the library.

Structurally, the weakest area of the original building was its pyramidal tower. Telltale cracks revealed that the tower had twisted relative to the base of the building during a previous earthquake. A number of other cracks near the rows of narrow windows showed points of weak shear strength. To stiffen the tower, two ring frames built of wide-flange steel sections were bolted to the inside of the tower—one at the mid-point and another at the eave line of the pyramid. The frame corners were reinforced by tube-steel braces. To increase the shear strength of the tower walls, a grid of No. 4 reinforcing bar was attached to the interior wall surface and covered with a 5-inch-thick layer of concrete.





- 1 NEW STEEL RING FRAME
- 2 SPRAYED-ON REINFORCED CONCRETE
- 3 NEW CONCRETE FLOOR
- 4 NEW METAL-REINFORCED CONCRETE CONSTRUCTION OVER EXISTING TILE WALLS

EAST-WEST SECTION

10/3m

Lighting

In the library's historic rooms and corridors, the design team decided it was important to re-create the original light sources. Some of the fixtures were still in place, but many had been discarded. A handful of original fixtures were documented in Goodhue's drawings. Other fixtures were salvaged from the demolition. These served as models for accurate reproductions or as elements incorporated into new fixture designs.

Fisher Marantz Renfro Stone lighting consultants inventoried and sorted 27 fixture types. Some fixtures simply needed new glass shades. Others needed to be reproduced in greater quantity. The strategy was to install old-style fixtures but adapt them to meet current illumination standards, which meant increasing wattage or supplementing old fixtures with new ones.

In all the reading areas, the architects designed new tables and equipped each with a small lamp. The combination generated a clever design twist: Each reading lamp plugs into an inset tabletop receptacle fed by a cord that runs through a hollow, cast-metal leg in the table and into a floor receptacle.

In other historic interiors, removal of original fixtures completely compromised Goodhue's design. The current children's reading room, for example, originally was lighted by torcheres on oak tables. These torcheres were eventually removed and replaced with fluorescent strips—changing both the quality of the light and the axial organization of the space. That change was reversed by fabricating new fixtures based on old drawings. Re-creating 200-plus glass shades was difficult, because of the scarcity of craftspeople able to meet the quality and quantity demands. As a result, a team of 13 artists assembled at a glassworks in Wheaton Village, New Jersey, to hand-blow all the glass shapes needed for the fixtures.



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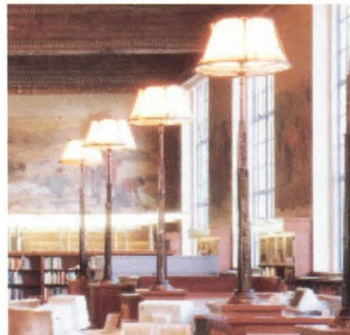
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FOAAD FARAH



FOAAD FARAH



FACING PAGE, LEFT, TOP TO BOTTOM: Photographs show historic appearance of central reference room and alteration with fluorescents. Now, as children's reading room, the space is closer to its original appearance.

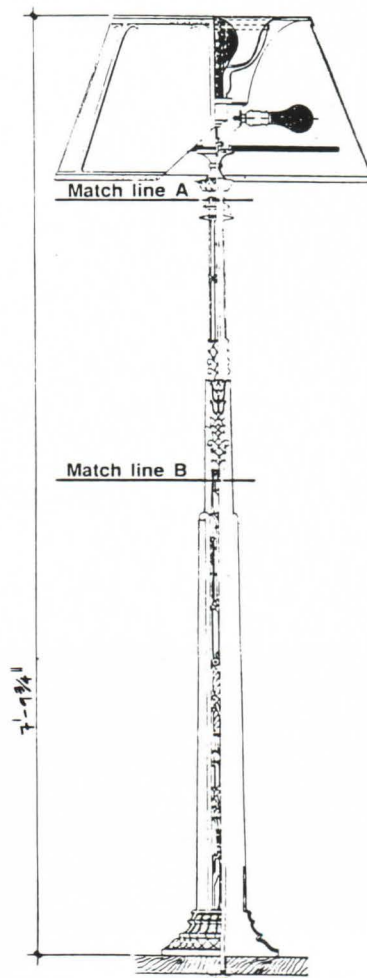
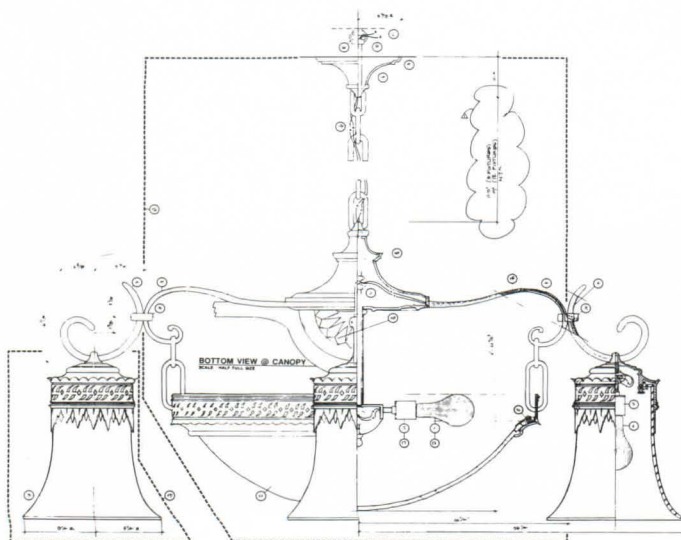
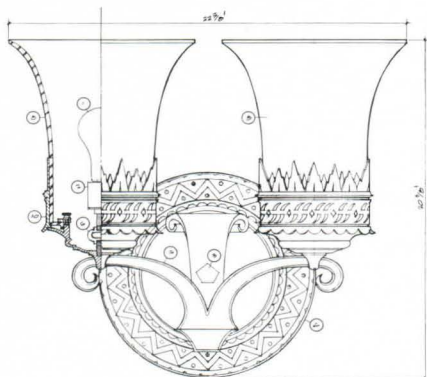
FACING PAGE, RIGHT: Periodicals room features new tables with integral reading lamps, new torcheres, and refabricated ceiling pendant lights.

FAR LEFT: Downlights were added to original fixture to increase illumination.

CENTER: Tulip uplights in rotunda have original brackets, but many required new hand-blown globes.

LEFT: Torcheres with leather shades were recast based on shop drawings.

DRAWINGS: Architects and lighting consultants altered existing fixtures (bottom) or followed historic documents to remake others (right). Detailed drawings were developed by Historical Arts and Casting, West Jordan, Utah.



Lighting

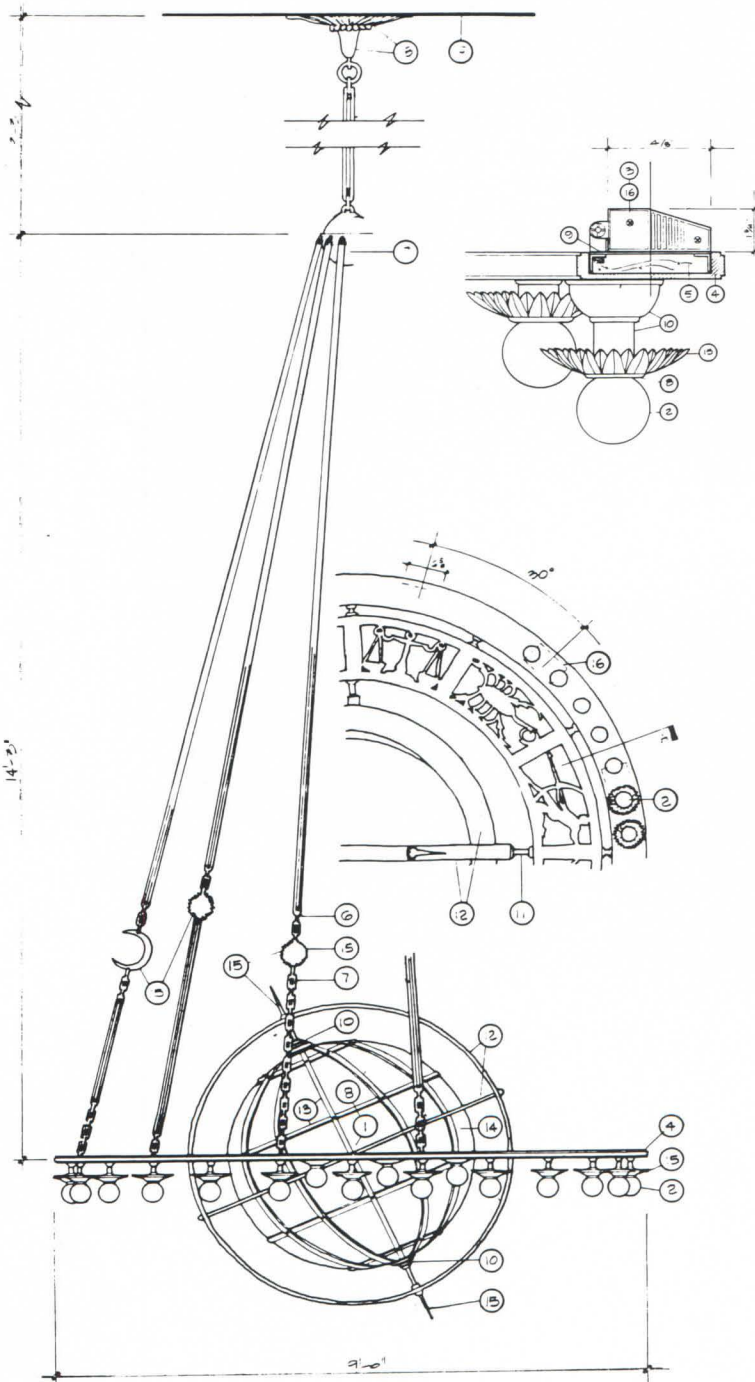


FOAAD FARAH PHOTOS

The 1926 library's most memorable space is its central rotunda, which rises four stories high at the center and features an elaborate painting scheme. It also boasts the most whimsical light fixture in the building—a glowing central globe circled by 48 incandescent bulbs, each attached to a cast-bronze ring shaped with the signs of the zodiac. But for all its vibrancy, the zodiac chandelier failed to fully illuminate the rotunda's spectacular ceiling, which virtually disappeared once the sun set outside the rotunda's arched windows. The solution: Install a dozen new uplights with 150-watt halogen lamps and secure them unobtrusively on top of the ring.

To accomplish the task, workers lowered the chandelier, measured and disassembled it, and packed it off to West Jordan, Utah. There, craftspeople from Historical Arts and Casting refinished the metal components: This process included sandblasting, chemical-cleaning, hand-rubbing, lacquering, and waxing. Missing ornamental pieces were cast in bronze anew, as were a number of links for the supporting chain. At key points, stainless steel screws were added to make the assemblage more structurally sound.

More controversial was the desired finish for the gold elements, such as the rosette reflectors. Specifications written in the 1920s called for gold-plating, which left a very thin deposit of gold. Tests with current electroplating technology produced a much glossier finish than was appropriate in this context. The design team opted for a 24-carat, gold-leaf finish that is more sympathetic with other metallic finishes in the building. Despite concerns about energy costs, the chandelier's round bulbs were replaced with new incandescents to maintain historic integrity. Long-term maintenance costs were addressed, however, by specifying lamps with a 20,000-hour life.





FACING PAGE, TOP LEFT: Zodiac chandelier required refinishing and minor structural improvements.

FACING PAGE, BOTTOM LEFT: New uplights, visible on top of ring, were added to more fully illuminate rotunda's spectacular ceiling.

FACING PAGE, DRAWINGS: Elements such as ceiling plate, ball at top of chains, and moon and star emblems were finished with gold leaf. Top detail shows placement of small trapezoidal uplights on zodiac ring.

LEFT: Raised back into place, the improved chandelier throws increased levels of light downward while illuminating the underside of dome.

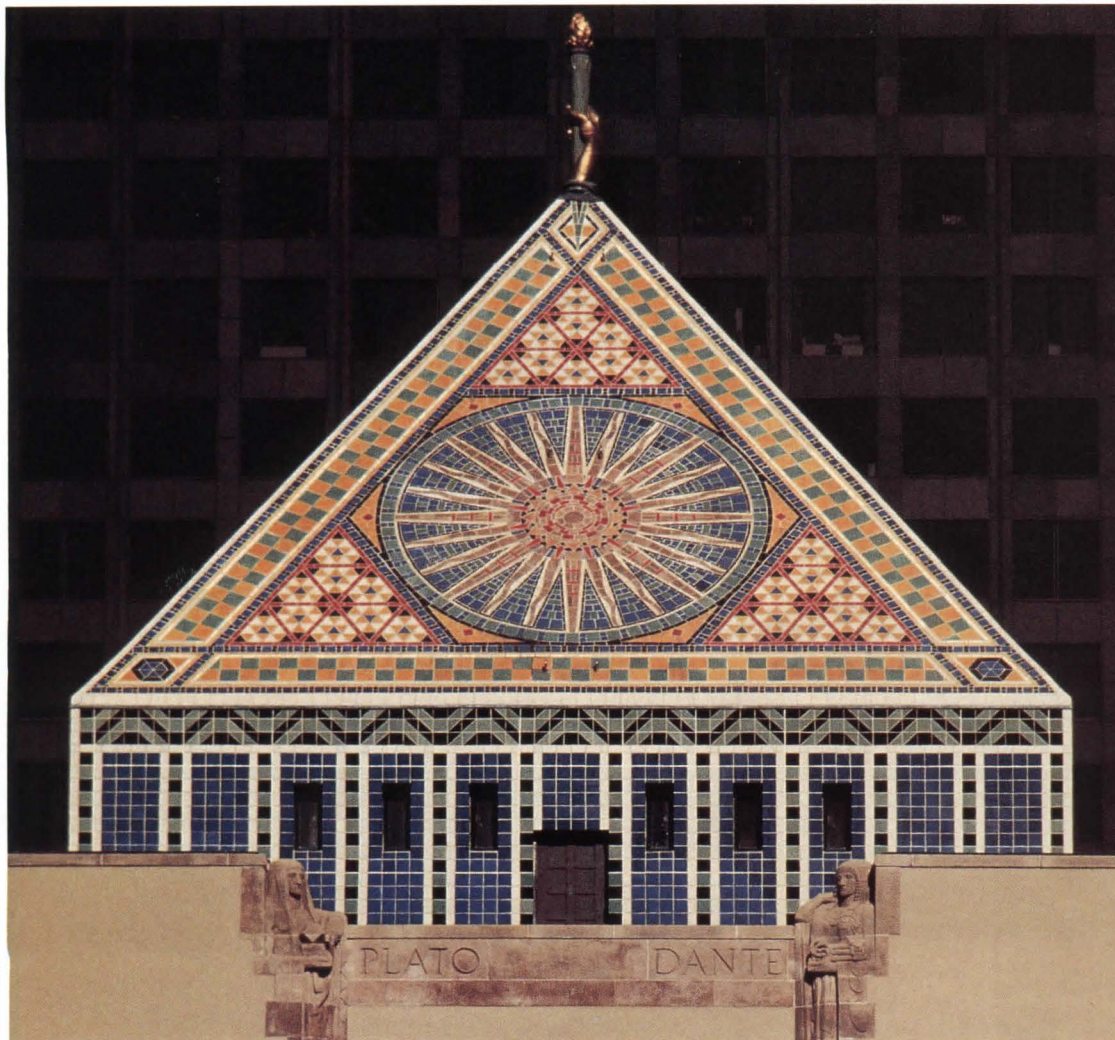
Decorative finishes

The planar abstraction of Goodhue's library design is a foil for the building's rich decorative treatments. Murals and stenciled ceilings enrich the public spaces and central rotunda. Restoration of these elements was added to the project's scope after the 1986 fires. In some instances, the stencils, painted directly on board-formed concrete, were blached by steam created during the firefighting. In many rooms, however, soot deposits formed a layer of protection. Advisors from the Getty Art Conservation Institute instructed conservationists, who cleaned the stencils with water or mild concentrations of mineral spirits. Seismic activity had damaged one of the rotunda's canvas murals, which cracked at the location of a dumbwaiter shaft in the wall. The mural was repaired and the shaft reinforced by steel and concrete.

Addition of the Tom Bradley Wing mandated demolition of parts of the historic building that were salvaged for reinstallation in the addition. The courtyard from the former children's wing featured tile planters and narrative bas reliefs that were reinstalled in a new reception area. Likewise, the copper-sheathed doors and stone entry portal from the children's wing were saved for reuse outside the new auditorium.

Restoration of the rooftop pyramid included replacement of tiles that had cracked and faded. Earthquake movement had split many tiles, especially along the hip edges. The vertical faces of the tower were almost completely retiled. Other cracks at the eave line were attributed to faulty flashing, which was replaced with new lead flashing. A new mounting system for the "Lights of Learning" torch atop the pyramid was installed by removing the upper tiles, securing four metal straps to the concrete face of the pyramid and to a new base plate for the torch, and relaying the tiles.





FACING PAGE, LEFT: Carved portal from original children's wing (top) was salvaged and reinstalled at entry to Mark Taper Auditorium in new wing.

FACING PAGE, TOP CENTER: Soot from 1986 fire covered ceiling stencils, which conservators cleaned.

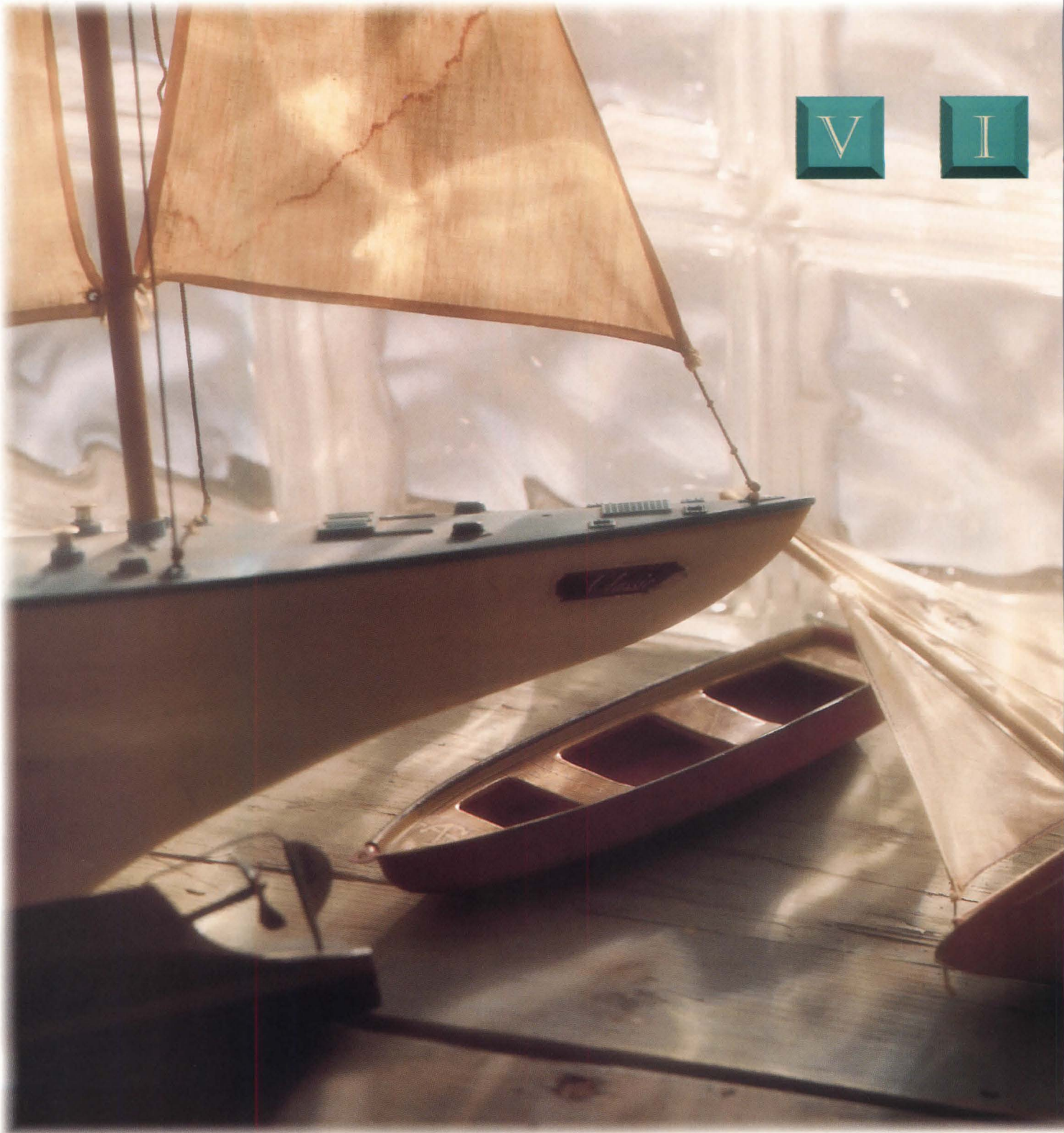
FACING PAGE, TOP RIGHT: Ceiling stencils applied over concrete beams were returned to their original brilliance.

FACING PAGE, BOTTOM: Renovated children's reading room features new carpeting with custom patterns inspired by historic stencils and murals.

ABOVE LEFT: Ceramic tiles were stripped from top of pyramid to attach new mounting system for finial torch.

ABOVE RIGHT: Original red tiles on pyramid had faded to beige over the years and were replaced.

LEFT: Newly restored pyramid features pole-mounted torch and tiles.

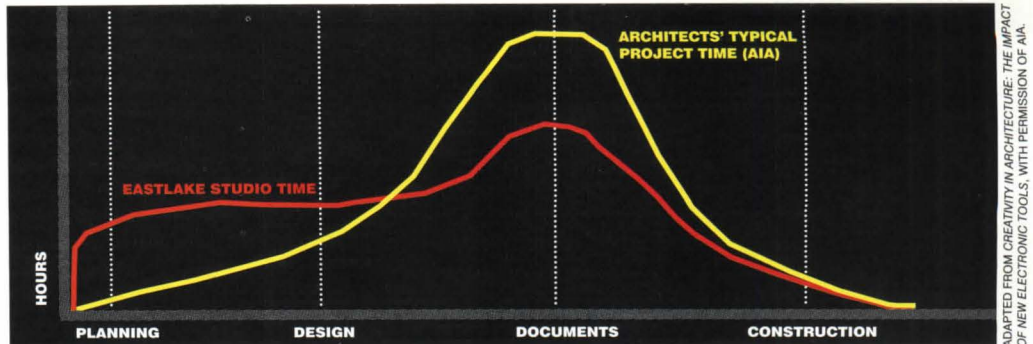


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Taking the plunge into CAD requires a firm to review its working methods and goals.

ABOVE RIGHT: Graph devised by the Eastlake Studio of Chicago reveals how automation allows architects to spend more time designing and less time developing construction documents.



Many architecture firms have made an uneasy truce with computers: They have found the technology to be indispensable for accounting and marketing, yet intimidating for production and disappointing for design. Their caution is well-founded. Firms that have successfully moved from drawing boards to CAD have discovered this means more than simply swapping equipment. Planning the move requires serious choices about timing, financing, training, and managing both projects and people.

Knowing when to move to CAD is difficult when every month brings news of improving technology at declining prices. But experts predict technology's price/performance ratio to halve every 18 months into the foreseeable future, so there never will be a best time to start. Before the Seattle firm of Loschky, Marquardt & Nesholm (LMN) bought their Intergraph systems six years ago, for example, they had resisted pressure from clients to work on CAD. LMN architect Tim Rice recalls: "We told our clients we'd make our move when the technology stabilized. But that excuse started sounding hollow after a while." Now that the firm has successfully made the transition, they keep up with new technologies through hardware and software upgrades, so they're not penalized by having begun with now-dated equipment.

Who can afford it?

An irony of breaking into computer technology is that architecture firms that can afford the move are too busy, while those that aren't busy can't afford it. But, according to Rice, firms that rely on those excuses will never break in. It's important to remember, he adds, that even though technology is getting less expensive, the highest costs are not in hardware and software. "You'll spend a significant amount on training, start-up costs, and the inefficiencies inherent in not knowing exactly how to proceed," Rice notes.

Helping firms figure out both how to proceed and how to pay for it are architectural

consultants like Barry Isakson, of Architectronica in Los Angeles. "The capital outlay is seen as a big obstacle," Isakson explains, "until I show them how much they'll save by buying the right equipment." He adds that it's unreasonable for architecture firms to expect clients to subsidize these costs. "Clients never paid for paper and T-squares; why should they pay for computers?"

The key is to focus on the benefits, which can greatly outweigh the costs. Such benefits include expanding the computer functions into information management and office automation, offering facility management support to clients, and improving design and presentation quality. Consultant David A. Jordani of the Minneapolis firm of David A. Jordani Associates warns against trying to quantify drafting productivity gains as a justification. Instead, Jordani maintains, "We need to focus on how CAD can help us improve the quality of our service, not just our speed. Firms should accept the inevitability of the transition and concentrate on not whether to move but how fast to move."

Moving incrementally is less disruptive, and correcting missteps is easier. On the other hand, according to Isakson, putting half the firm on CAD and leaving the other half on traditional media can be the least efficient situation. "If half the staff is computer-literate and half is not," he explains, "and they still need to work together, you're managing two parallel systems." To avoid this doubling of effort and the disruptions of sudden immersion, Isakson recommends that firms automate one project team at a time.

This approach was chosen by the Los Angeles firm of Barton Myers Associates for its work on the New Jersey Performing Arts Center. Architect Stuart Royalty recalls: "We had never attempted to produce drawings for a building of this size and complexity before, so we were wary of the computer. But we needed the accuracy of CAD to handle that complexity." Though risky, the choice to put the building on CAD proved correct.



TOP RIGHT: LS3P tempers overly precise CAD drawings by applying a hand-drawn effect to schematic designs.

ABOVE: LS3P offers clients multimedia-based operating manuals for buildings. On-screen diagrams are keyed to additional documentation.

Where to start?

When considering the transition to CAD, architects should also choose which applications to move to the computer. Ten years ago, there were fewer choices, but now virtually every activity in an architecture practice can be supported by computer software. Some applications are well developed and widely accepted, such as financial and project management, word processing, desktop publishing, and drafting. Other applications, such as sketching and design, have not yet inspired architects to abandon manual methods. Even computer aficionados often resort to tracing paper for working on schematic design ideas. Firms starting out with computers may be disappointed if they think their primary benefit will be in design.

The Charleston, South Carolina, architecture firm of LS3P is already about 95 percent automated. LS3P senior associate Robert Clarke recommends a particular sequence for tackling drawing types during the transition. At first, Clarke advises, don't worry about 3D modeling; just put floor plans on the computer. "The plans become the basis for all production drawings," he explains. "We have produced up to 34 drawings from the same plan file; when any information changes in the model, all the drawings change. This makes a tremendous difference in our production capability." After plans, LS3P automated elevations and wall sections; detail drawings followed. Design came later still, seeming to offer less payback than the production tools. The architecture firm continues to exploit the potential of the computer. They recently became the first firm to submit a complete set of documents for a federal project on a CD-ROM disc.

Who's on first?

Another major question is who in the firm to initiate into CAD. Only the production staff? What about the firm's principals? Most observers agree that the role of senior management is critical in the transition. Those who

hold the purse strings—and the vision—of the firm must be committed to the move to technology and understand the business goals it will fulfill. While leaving the micromanagement to those who are technically fluent, principals should give their staff the time and resources required to make it work.

Failure to recognize CAD management as a specialty is a common flaw among firms making the move, according to architectural consultant Isakson. "If you don't budget time for maintenance, explanations, and developing office procedures, it gets squeezed out of everybody else's time, usually with poor results." In addition to being a technical expert, the CAD manager should have some seniority in the firm and should understand its business direction. As Jordani notes, "If a firm is to use CAD to change design or production processes, the system should be managed by someone familiar with those processes and who enjoys the respect of the rest of the office." And finally, notes James Bruza, principal of the Oklahoma City architecture-engineering firm of Frankfurt Short Bruza (FSB), it's important not to view the CAD managers as overhead. "They not only keep the systems running," Bruza insists, "they ensure the profitability of the firm."

Over the past decade, there has been a shift in attitude about who in the firm should get their hands on the equipment. In the early days of CAD, software was more difficult to learn, and equipment was so expensive that it was "operated" in two, even three, shifts by drafters with only vocational training. These operators were often isolated, both physically and socially, from the rest of their design team. FSB tried that configuration briefly and gave it up in favor of a PC on every professional's desk. "This is better for two reasons," Bruza asserts, "even though it's probably more expensive. First, we've eliminated the drafting pool bottleneck. Second, by giving our architects and engineers integrated software, we're encouraging them to do more design work on the computer."

Who should be trained?

Although systems have become more architect-friendly in recent years, the most powerful software still requires training. A common mistake is underestimating training time. Even after a week or two of intensive coursework, individuals may require six months of on-the-job practice before becoming as proficient as they had been with manual methods. Rather than bemoan this loss of productivity or force staff to learn on their own time, principals who appreciate the added value that training gives to employees will offer it as a further sign of their commitment.

At the same time, the principals need their own training. Those who didn't push a pencil before the transition will most likely not be pushing buttons after. Instead, senior management needs a different kind of education about the capabilities of the technology. Jordani notes: "Principals must be able to market new services while neither underselling nor overcommitting the system with clients. They must be able to make realistic estimates of budgets and schedules and recognize problems for which the CAD system may be a beneficial part of the solution."

Royalty observes that, while the senior partners may not need to draw on CAD, they should learn to find and view drawings on the system. The latest version of a drawing may not exist on paper.

Perhaps one of the most difficult challenges facing architects who are now in training is that it never ends. As Thomas Seebohm,

professor of architecture at the University of Waterloo in Ontario, explains, the intellectual tools of computing are changing much more rapidly than traditional physical tools ever did. "The difficult question," Seebohm predicts, "will be what portion of an architect's time should be spent learning about new applications for information technology and what portion on revenue-producing work."

How will CAD change my firm?

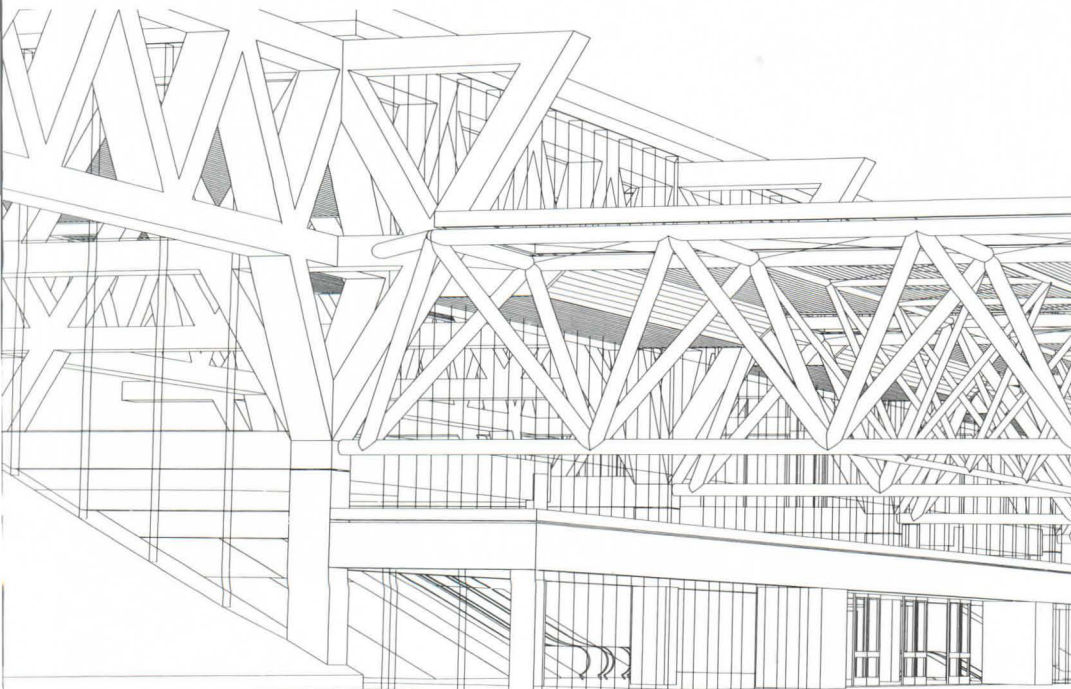
An imposing psychological barrier to making the transition to CAD is the fear of the cultural changes a firm might experience. One remedy for this fear is to understand how any negative effects of change might be outweighed by the positive, such as improved relationships within design teams. "Production designers who have become effective at using 3D as a design tool," LMN's Rice offers, "have been contributing more design input that catches the attention of the design partner who then becomes even more enthusiastic about CAD and about that person's initiative."

Clarke has noticed changes in the way architects think about design. "When you design on paper," he explains, "you tend to start with the big picture and then fine-tune the detail. But the computer presses for detail earlier on in the process. Is the door jamb 4 inches or 6 inches from the return? That becomes a critical decision on the computer, which requires precision, even though in the mind of the architect, the wall is still only a line." To compensate, LS3P relies on software

that softens hard-line plots. Squiggle, software from the Chicago-based Premisys Corporation, adds a loose, hand-drawn quality to schematic drawings. The effect persuades both architects and clients that the design is still evolving and can be changed.

Some young firms, such as *Eastlake Studio* in Chicago, adopt computers from the outset and enjoy the benefits without struggling through a transition. Principal David Johnson believes the *Eastlake* staff's fluency on Macintosh computers has a direct bearing on their creativity. "When designers are comfortable with technology," Johnson explains, "their minds are free to concentrate on problem-solving instead of computer-using." According to AIA statistics, a traditional architect spends the most time preparing construction documents. However, the value of information is highest early in the project, and the cost of change is highest during construction. Therefore, the most valuable decision making occurs early on.

Talk to enough enthusiasts, of course, and the world of CAD will smell like roses. But it's important to keep in mind the fertilizer necessary to make the flowers grow. The benefits of automation do not come without patience, expense, careful planning, and hard work. A final caveat is offered by consultant Isakson: "Firms assume everything is cast in stone when they have developed a plan. But once the equipment arrives, everyone's expectations will change. Remember, the transition is not an event, but a process."—*B.J. Novitski*



LEFT: Loschky, Marquardt & Nesholm (LMN) executed hundreds of quick line drawings for immediate feedback while studying the complex trusses of the Baltimore Convention Center.

ABOVE: LMN also created high-resolution but slow-to-calculate color renderings of the Baltimore Convention Center for client presentations.

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Los Angeles Coliseum Suffers in Quake

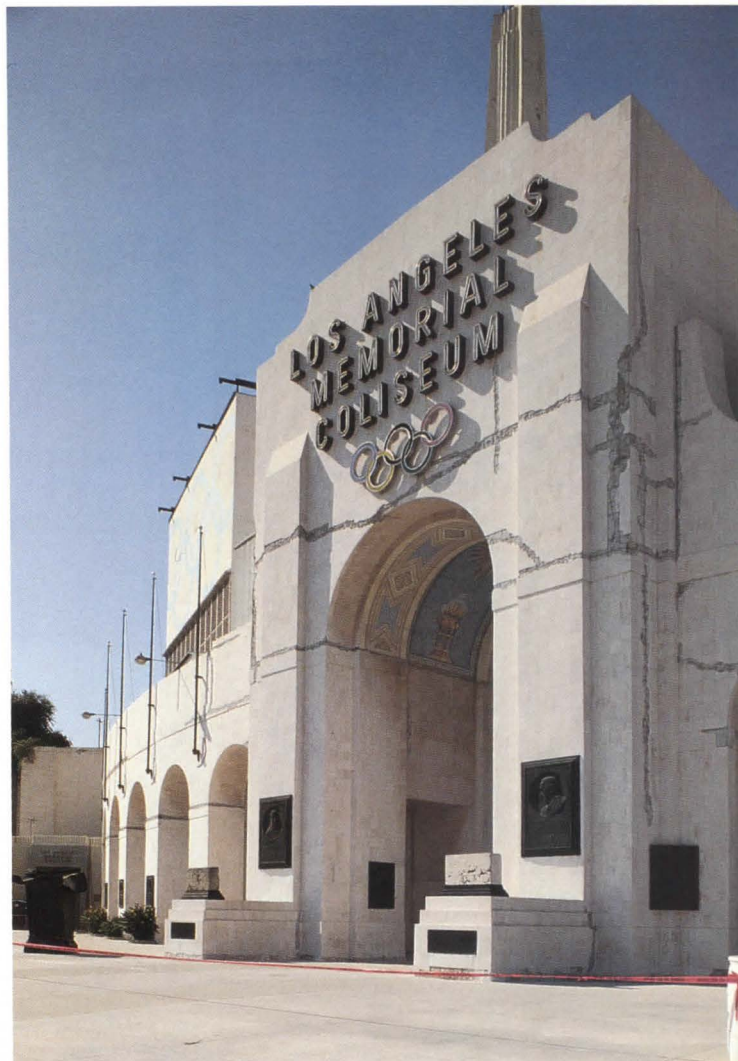
The historic Los Angeles Memorial Coliseum, renovated last year at a cost of \$15 million, sustained extensive structural damage in January's earthquake. While sports enthusiasts anxiously await a reopening in time for the fall season of the Los Angeles Raiders, architects and engineers face much graver concerns, including the possible demolition and rebuilding of the concrete structure.

Kansas City-based HNTB Architects and local structural engineer Nabih Youssef & Associates conducted a study in February to assess the damage and recommend repair strategies. Within the stadium's signature peristyle arches and steel-reinforced beams, they discovered large cracks penetrating the full depth of the concrete structure. Significant cracking and upheaval of up to 5 inches also occurred in the concrete shell supporting the lower seating areas and in many of the access tunnels. Columns supporting the upper seating were thrust outward, and interior columns suffered shear damage. More significantly, the concrete joint between the shell of the original 1923 structure and a 1931 addition cracked, revealing a 4- to 5-inch gap along the stadium circumference.

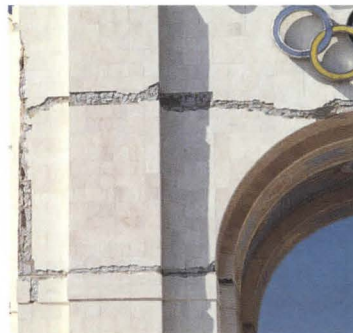
Engineers have already begun the task of shoring fractured columns, beams, and arches to prevent additional damage. Sections of concrete loosened by the quake are being removed, as are other exterior surfaces, to reveal possible underlying damage.

Meanwhile, debate continues over whether the stadium can be repaired or must be rebuilt. The coliseum's renovation project manager, Don C. Webb, points out that the earth berm on which the stadium is built may have been dramatically weakened by the earthquake and may significantly diminish the stadium's structural integrity. Webb speculates whether repairs are even possible. Youssef, however, is confident that the historic structure can be saved. "The coliseum still has the capacity to withstand earthquakes," he maintains. "There is a lot of damage, but there is some residual strength we can build on." Further investigation must still be conducted before a final decision is made. If recommended, repairs could take from six months to a year to complete and will likely exceed the original \$35 million estimate.—R.A.B.

Structural repairs to a landmark stadium may exceed \$35 million.



L.A. COLISEUM: HNTB's renovated stadium suffered major structural damage.



PERISTYLE: Cracked concrete.



EXTERIOR: Weakened areas reinforced.



TUNNELS: Shored beams and columns.



WALLS: Cracks between old and new.



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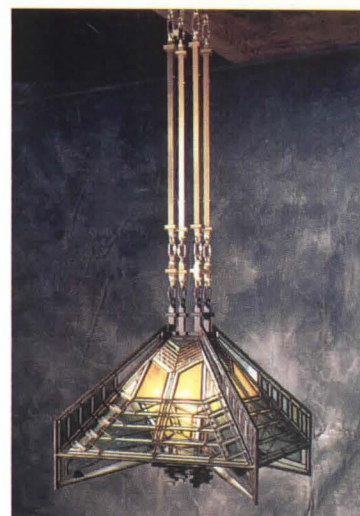
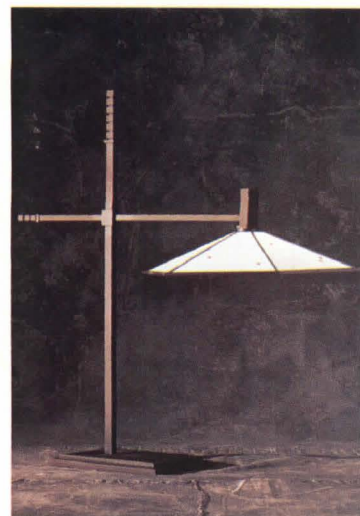
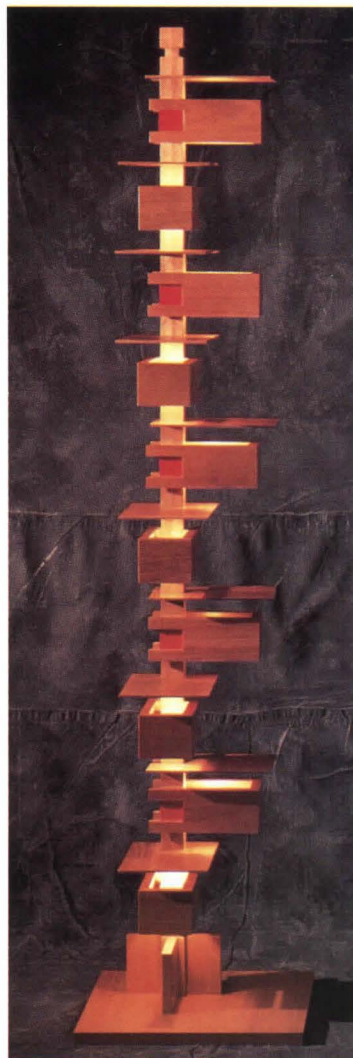
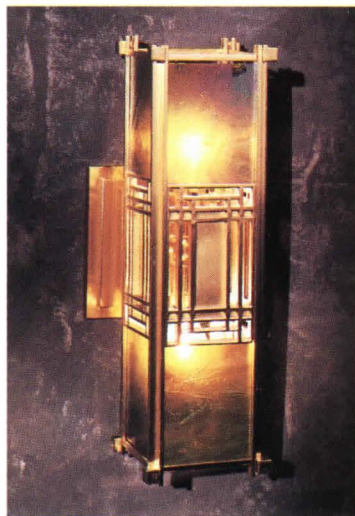
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Products

Lighting by Frank Lloyd Wright is faithfully reproduced by a Japanese manufacturer.



The Yamagiwa Corporation, a Japanese manufacturer, has formed an alliance with the Frank Lloyd Wright Foundation to reproduce 14 of Wright's intricate lighting fixtures. The lighting designs were chosen through a survey conducted by a group of engineers and architects who travelled to various Wright-designed buildings to review more than 30 fixtures. The selection criteria included esthetics and ease of replication. Bruce Brooks Pfeiffer, director of archives for the Frank Lloyd Wright Foundation, and Donald Hallmark, administrator of the Dana Thomas House, strictly supervised the reproductions. Yamagiwa was chosen based on its craftsmanship and its support of Japanese artists and architects; the company has produced lighting designs by Fumibiko Maki, Tadao Ando, and Arata Isozaki.

The fixtures will be initially sold at the Museum of Modern Art in New York City, which is currently presenting a retrospective of the work of Wright. Yamagiwa USA Corporation, the company's new subsidiary headquartered in Seattle, will market the designs in the U.S. through selected showrooms in major American cities.

TOP LEFT: Storer I replicates a lamp designed by Wright for the 1923 John Storer House in Los Angeles. The fixture is constructed of painted-steel rods reaching 76 inches high with an 8-inch-wide lamp shade that comprises frosted glass panels. The cube formed from these panels was intended by Wright to harmonize with the concrete block of the house.

ABOVE LEFT: Sumac IV, a wall sconce designed for the 1902 Dana Thomas House in Springfield, Illinois, is created from panels of luster art glass cut in a straight-line pattern set in bronze edging. The wall sconce measures 1 foot, 2 inches high by 5 inches wide.

ABOVE: Taliesin II, a standing floor lamp measuring 80 inches high and 17 inches wide, is constructed of stacked geometric blocks of various sizes, in cherry wood. The lamp's plywood shades cast indirect lighting. Wright designed this lamp for Taliesin, in Spring Green, Wisconsin, in 1925.

TOP RIGHT: Midway, a metal table lamp, was designed by Wright in 1913 for Midway Gardens in Chicago. This lamp is constructed of painted aluminum and white glass and measures 31 inches high by 29 inches wide. The low-pitched glass shade hangs horizontally from a painted-steel shaft, which is attached at a 90 degree angle to a vertical support, rising from a steel base. The translucent glass is decorated with small red squares.

ABOVE RIGHT: Sumac I is a hanging lamp designed in 1902 for the dining room of the Dana Thomas House. The lamp is constructed with an intricately patterned bronze framework that is filled with patterned art glass. This lighting fixture measures 4 feet, 7 inches high by 1 foot, 11 inches wide.

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Plumbing insulation

Truebro, a company based in Ellington, Connecticut, manufactures insulation kits for waste and supply lines under accessible lavatories. Handi Lav-Guard (above) shields wheelchair occupants from a lavatory's hot and abrasive exposed piping. The plumbing covers fit P-traps, offset wheelchair strainers, and angle stop valve assemblies; they can be installed in minutes on most piping arrangements. Handi Lav-Guard features a smooth flexible

vinyl that can be cleaned; a weep hole that allows the cover to ventilate; accessibility for servicing; and a molded symbol on the system's valve lid to identify that the lavatory is accessible to persons with disabilities. All models of Handi Lav-Guard are available in white or gray.

Circle 402 on information card.

Door louvers

Air Louvers, a manufacturer for over 25 years, offers a line of door louvers and mitred frames. The louvers are flush-welded with permanently interlocked blades. Standard units are degreased and primed with a phosphate coat and then baked with a silicon-polyester finish. The line is offered with limited vision, specialty, and sight-proof models in six mounting styles. Mineral bronze is available as well as a selection of alternate colors. A full-color catalog, offering the company's beveled vision kit for high-security applications, is now available.

Circle 403 on information card.



Vinyl flooring

Armstrong World Industries offers extended color lines in sheet vinyl flooring and vinyl composition tile (above) for customizing healthcare facilities. Hospitals can customize the company's border treatments so that patients can easily detect space boundaries. Vinyl insets simulate custom carpeting yet maintain the durability and low-maintenance benefits of vinyl flooring. In designing a 108-bed facility for the North Colorado Medical Center in Greeley,

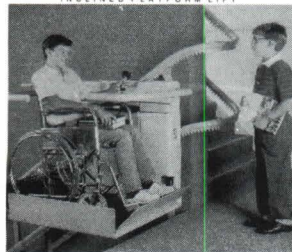
Colorado, The Davis Partnership, with a design team headed by Julie Johnson and Christine Buscay, worked with a 10-member client committee chaired by Roberta Miller, head of the construction project for the hospital. This design team selected Medintech sheet vinyl flooring due to its stain resistance, its resistance to chemicals and solutions administered during medical procedures, ease of floor preparation, and resiliency to intensive cleaning.

The design team specified a 10-foot square of Armstrong's orchid Medintech, centered it in the room, flanked the square by a 1-foot-wide strip of lisianthus, and covered the remainder of the floor in mauve.

Medintech is available in 25 colors and a variety of patterns. It can be installed as a 6-inch flash cove that extends up the wall for code compliance. Codes require that LDR and C-section rooms have an uninterrupted floor surface, therefore the sheet vinyl is heat-welded to secure the edges.

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Seattle, Washington*



Solid-brass faucets

Chicago Faucet offers a new European-styled collection named The Illusions. These contemporary designs feature a ceramic washerless cartridge, and all are cast as solid-brass faucets. Three finishes are available: brass, polished chrome, or white epoxy enamel. The crescent profile (above) has a classical appearance and is available in a widespread lavatory set, Roman tub set with personal spray, tub, shower, and tub-shower set. Brass or polished chrome finishes are available.

Circle 405 on information card.

Vinyl railing systems

American Vinyl Concepts, or Avcon, has been manufacturing vinyl railing systems since 1991. Its guard system was developed out of the need for a functional structure that would remain unaffected by harsh environmental conditions. The railing is purported to resist corrosion, chipping, flaking, or peeling since it is forged from a vinyl compound containing a blend of ultraviolet ray inhibitors and impact modifiers. The railing meets current ADA requirements and stringent building code requirements for structural integrity, safety, height, and spacing.

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Expansion joint system

Larsen Products Corporation, a developer of chemical concrete and plaster bonding agents, offers the Interspan expansion joint system. The system consists of a reinforced elastomeric membrane supported by a V-shaped, UV-resistant, and fire-retardant shoulder to provide uniform movement and additional strength. The system is premolded and cured as one piece and is resistant to punctures from heel traffic, studded tires, and other abrasive elements. An epoxy is applied vertically and horizontally to the system to prevent water and chemical infiltration be-

tween the nosing and substrate. The expansion joint system is available in lengths of up to 13 feet long.

Circle 407 on information card.

Fluorescent downlight

Omega Lighting offers the C4185, a dual reflector downlight for single 18- and 26-watt compact fluorescent lamps. This system is purported to provide high performance and control the amount of light emanating from a single, vertically installed lamp by projecting the light through a 7-inch-wide aperture. This system can be installed in ceilings up to 14 feet high, with either quad or tri-lamps, and can be supplied with magnetic or electronic ballasts. Omega reflectors are available in clear or gold specular, pewter, bronze, or black finishes.

Circle 408 on information card.

Square downlights

Engineered Lighting Products now offers recessed square aperture downlights that complement standard rectangular and square ceiling systems. Two models are available for use with one or two 26-watt fluorescent quad lamps. The housing configuration allows a 7¹/₂-inch lamp to maintain a 6-inch square aperture. These fixtures disseminate high light levels while maintaining a low wattage to extend the life of the lamp and decrease maintenance for a cost-effective application.

Circle 409 on information card.



Dual locking system

Schlage Lock Company offers a cylinder and keying system called Primus (above). This locking system offers a master key capability. Primus can be altered for every Schlage lock. Top cuts open standard Schlage locks, and side cuts open cylinder locks. Side cuts offer security since these cuts can not be duplicated on standard keys.

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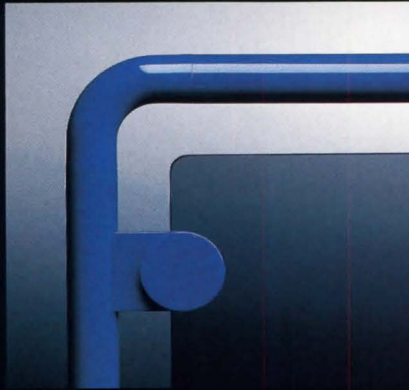
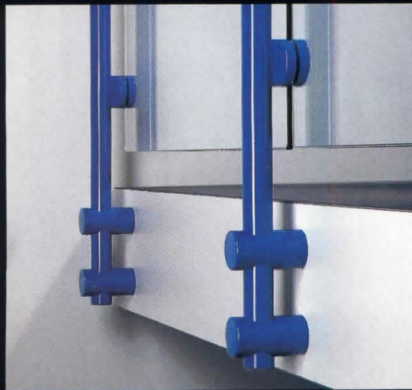
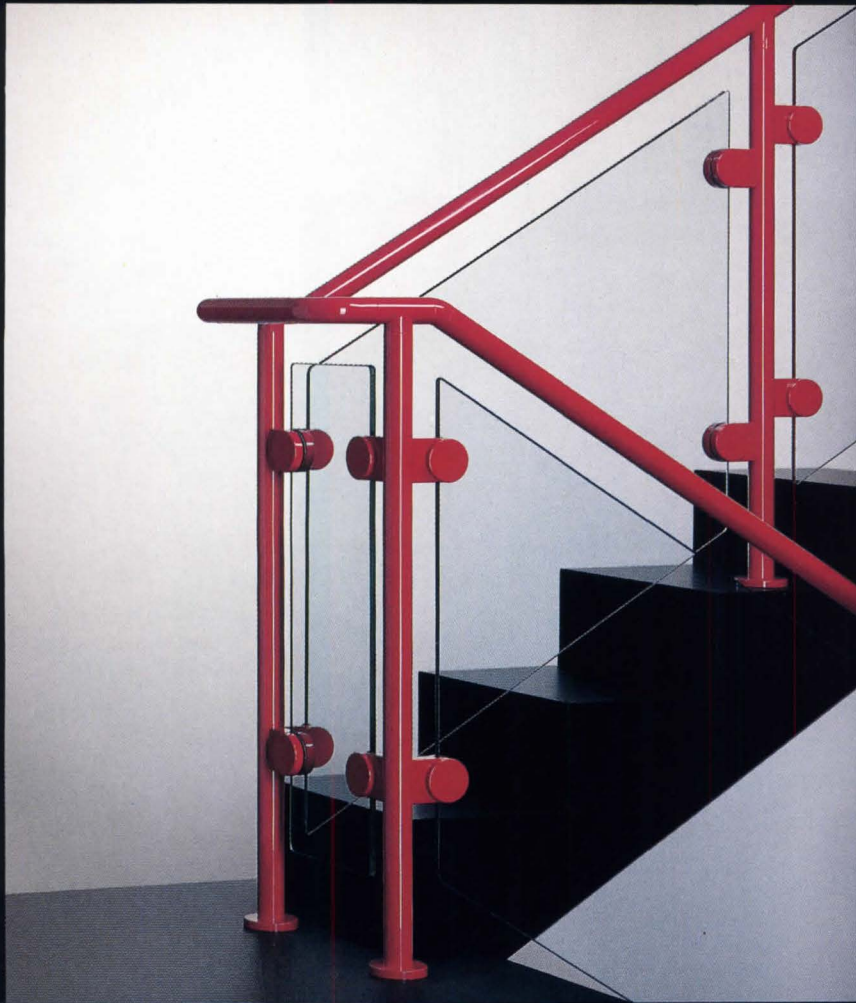
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ENGINEER: Ove Arup & Partners, Los Angeles (structural)
GENERAL CONTRACTOR: Grendal Construction Company
COST: Withheld at owner's request
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LANDSCAPE ARCHITECT: Rios Associates—Polly Furr, Dale Wall (project team)
ENGINEER: Niver Engineering (structural)

CONSULTANT: Cornerstone Child Care Centers (child care)
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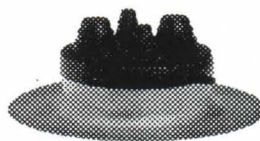
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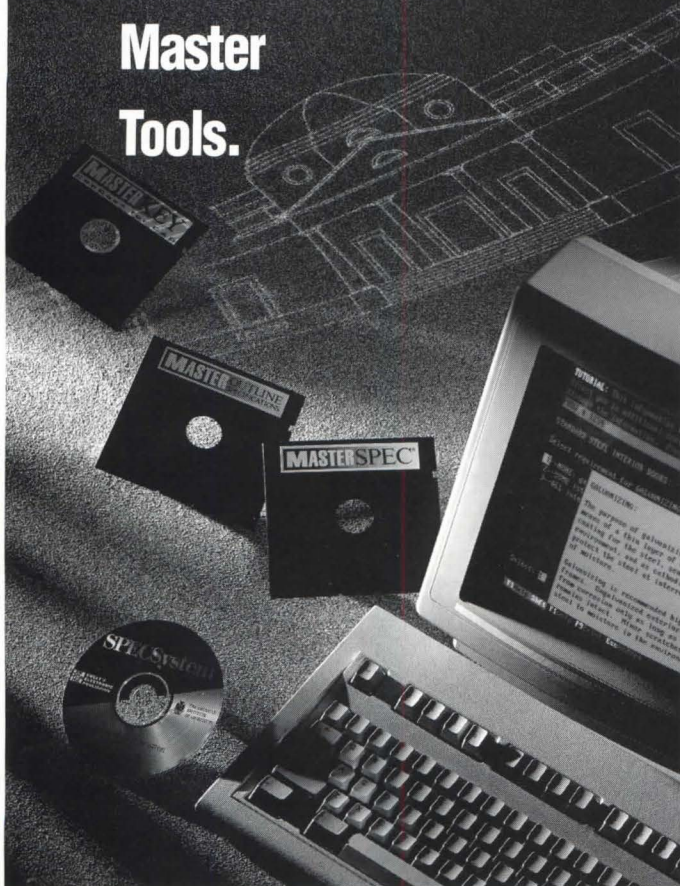


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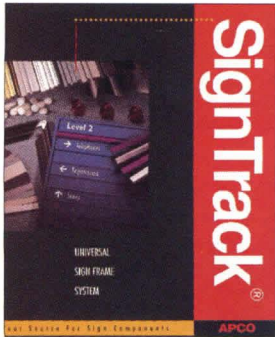
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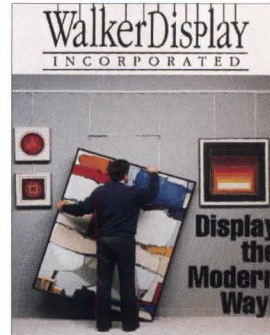
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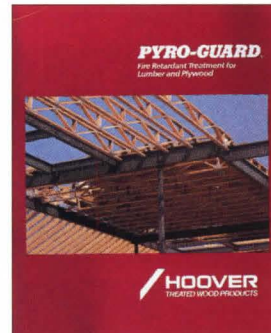
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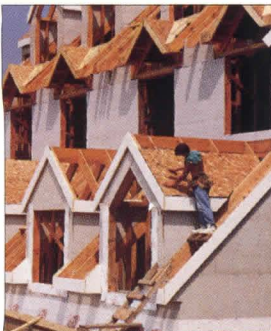
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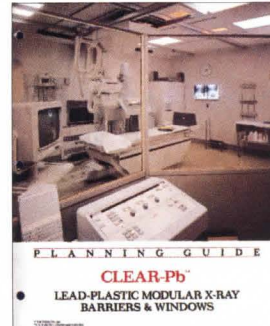
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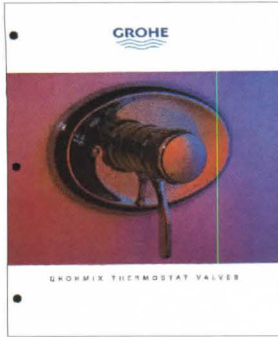
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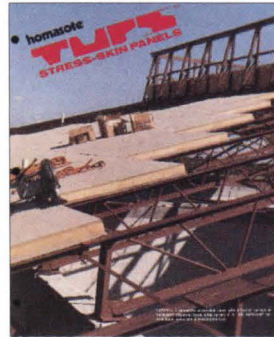
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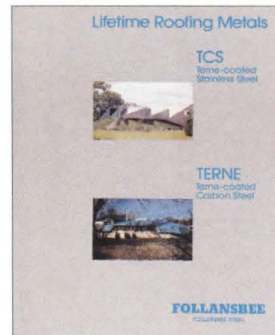
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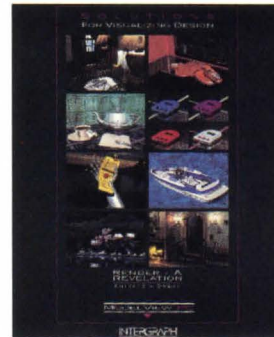
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- April 1995

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- May 25, 1994
- August 25, 1994
- November 23, 1994
- February 24, 1995

Finish Hardware

CSI Section 08710

Theater vestibule doors

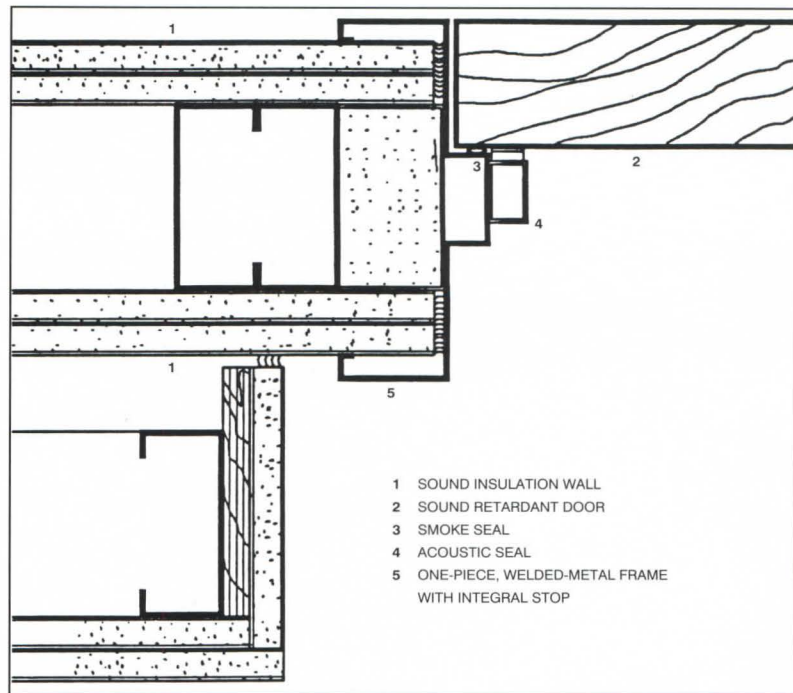
A vestibule, flanked by two pairs of double doors, is often planned as a sound lock to isolate a theater from noise in the adjacent lobby. The double door width is usually mandated by code to satisfy exiting requirements. Doors in this arrangement must be carefully considered to address esthetic, acoustic, security, egress, and ADA requirements that may conflict with each other.

In postproduction facilities, a pre-manufactured acoustic steel door and frame assembly will provide excellent acoustic performance. These acoustic door units are available with most hardware needed to optimize acoustic performance. However, these units feature closers bolted through the door, with large bolt heads visible on the opposite face, and highly visible, surface-mounted smoke seals. Even though the automatic door bottom may be mortised into the door, the wide solid threshold required to give a proper acoustic seal in carpeted rooms is quite noticeable.

In a premier theater or screening room, the same excellent acoustic performance must be obtained in a more finished design. Architects may want to finish wood doors with an attractive veneer facing the lobby and fabric-covered, sound-absorbing panels on the theater side to achieve a richer esthetic. In this case, coordination of hardware, frame, and surrounding finishes is critical.

Furthermore, a potential conflict arises when a pair of full-height acoustic doors must accommodate visible hardware. The overlapping astragal at the meeting stiles, for example, requires a coordinator to ensure that the doors close in correct sequence; this device permits the inactive leaf to close before the active leaf. When full-height doors leave no space for the closer to extend above, the coordinator can be mounted on the head of the door frame. But the coordinator must not conflict with the surface seal at the head of the frame.

Security requirements raise other concerns. In some cases, the client may want to lock the actual screening room to prevent access from the lobby. But according to code, exiting must be maintained with single-effort hardware on lockable doors. Panic bars can be set in an open position during screenings to avoid the



DOOR FRAME: Jamb detailed with smoke and acoustic seals.

metal-on-metal noise of operation. However, surface-mounted vertical rods, even in a darkened vestibule, may not be acceptable esthetically. Where wood doors are installed, architects should specify and detail a 2¹/₄-inch-thick door so that the vertical rods of the panic device are concealed. A 1³/₄-inch-thick wood door cannot accept concealed rods.

Exiting and ADA requirements must also be considered. A vestibule with gasketed doors on both ends must eliminate air leaks to perform well acoustically. Door closers must have the strength to close against the air pressure in the vestibule and must meet ADA requirements for 5 pounds maximum effort to operate the doors. One solution is to relieve air pressure in the vestibule through a lined sound "boot," which is designed to allow an escape path for air while dissipating sound.

The choice of hardware for double doors in theater vestibules should be based on the following criteria:

Where an industrial esthetic is acceptable, specify a premanufactured acoustic door and frame assembly. These insulated steel doors are primed for painting and provide superior acoustic performance.

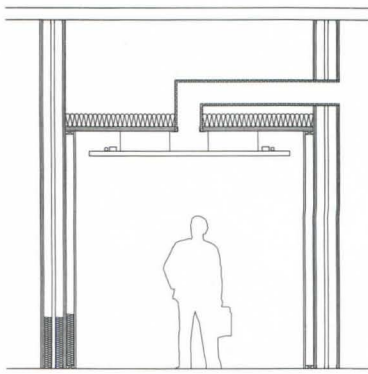
In a higher end design, determine what hardware is needed for wood doors. Because special doors, frames, and most hardware involve a long lead time, be certain to review hard-

ware issues with the client, acoustic consultant, door manufacturer, and hardware supplier early in the design process. In addition, it is advisable to require a mockup of the pair of doors with all acoustic treatment and hardware in the correct finish installed. This prototype will ensure that both esthetic and acoustic considerations are satisfactorily addressed.

If there is no fire separation that would require the vestibule doors to latch and no after-hours security necessity that would require the vestibule doors to lock, architects should seriously consider specifying quiet, free-swinging doors at the vestibule entry as opposed to latching or locking doors. This option will not achieve the highest sound rating. But these doors, with only push-pull plates, closers, smoke seal gaskets, and mortised magnetic astragals at the meeting stiles will save your client the cost of additional hardware, such as coordinators, panics, door bottoms, and surface seals. The client, acoustic engineer, and architect may agree to eliminate the astragal at the inner pair of doors to avoid the slight, but persistent, noise of the magnets clicking shut near some seated patrons.

*Anna Marie Howell, AIA
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