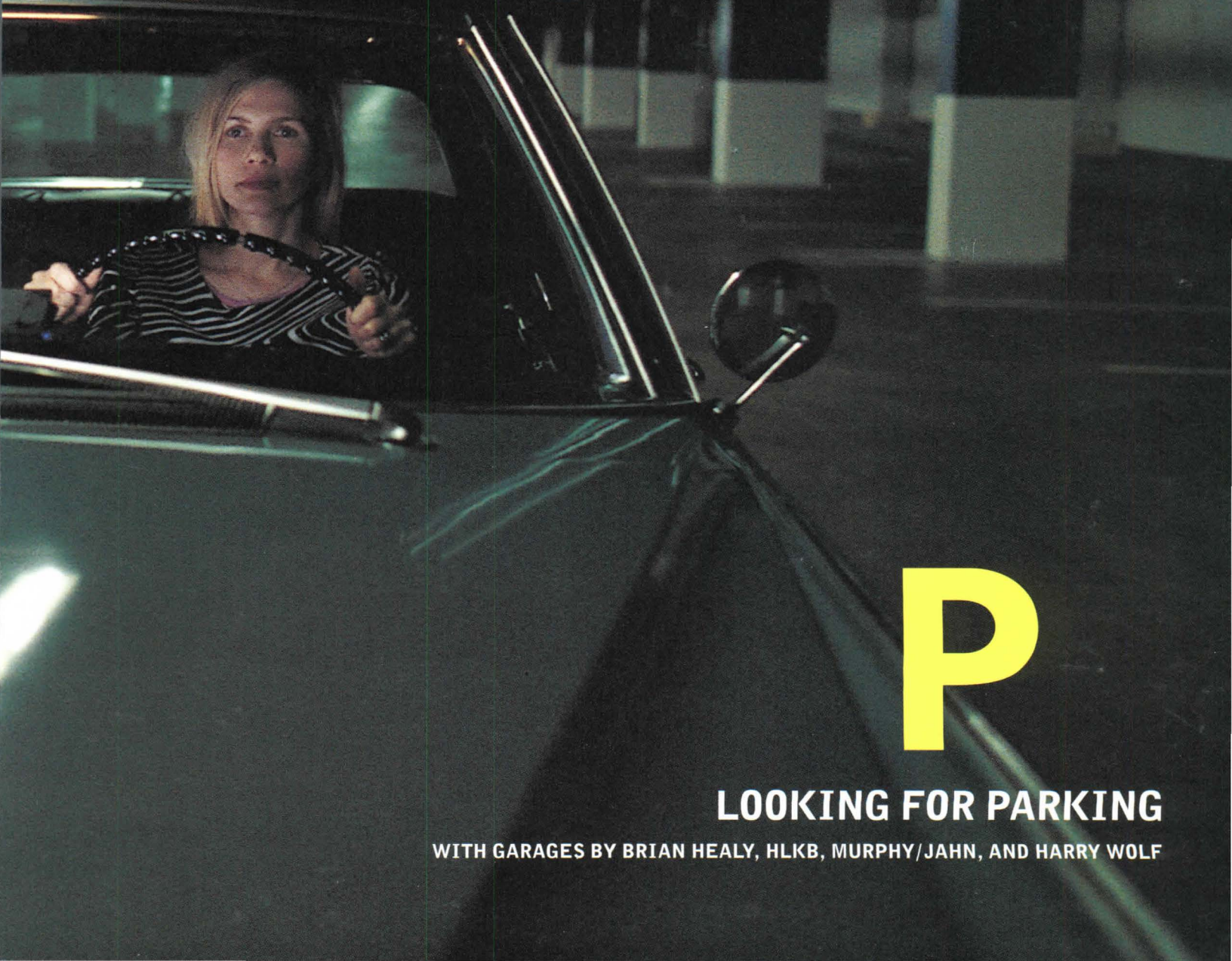


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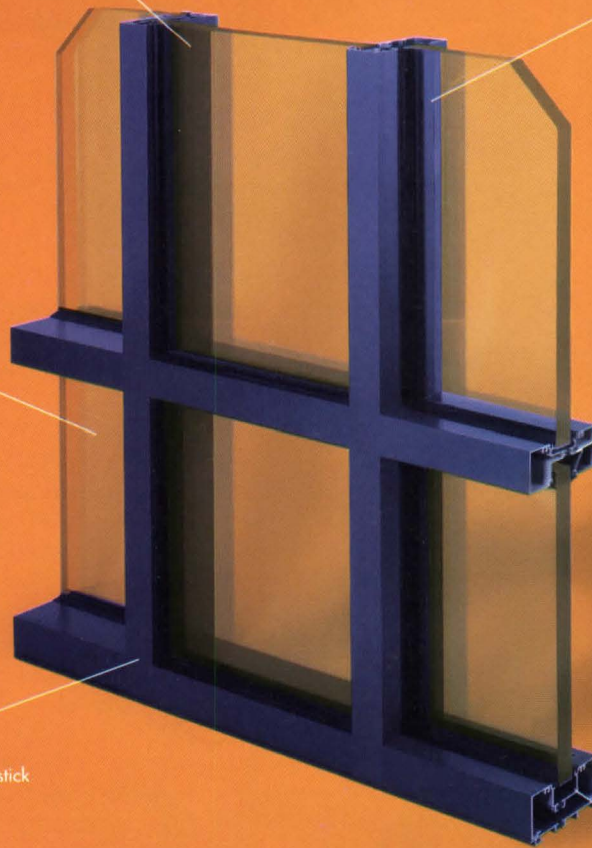
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contributors



Jane Morley



Deane Simpson



Doug Aitken

Jane Morley's parents met while her father designed elevator systems for a Chicago skyscraper constructed by her mother's family's company. "I grew up listening to stories about the tension between architects, engineers, and builders," she says. Trained as a historian of technology specializing in architectural technology and building construction, Morely is now director of business development for FPW Architects in Charlottesville, Virginia. She also writes a history column for *Design Build*, and was featured in a 1999 documentary on the Tower of Pisa for PBS's *Nova* series. For this issue, Morley reviews three books and an exhibition that examine the changing relationship between architecture and engineering (page 53).

Interested in the interplay of motion and stillness, photographer **Doug Aitken** shoots "cinematically," with images in sequence and filmlike sets. He says that he's "not after a decisive moment, but after an expanding one. I try to open up the images and content in a different way." Aitken used to direct music videos, and has recently photographed an abandoned landscape in Jonestown, Guyana, as well as a remote diamond-mining region of Namibia overrun with wild horses. For this issue of *Architecture*, he has created a noirish flip book of a driver in a garage (page 65), and images for the cover and table of contents drawn from sites around his hometown of Los Angeles. Recent publications include *I Am a Bullet* (Crown, 2000), the cover of the Whitney's 2000 Biennial catalogue, and a monograph forthcoming from Phaidon this fall.

Jane Holtz Kay writes frequently on sprawl, transportation, and environmental subjects for *The Nation*, where she is the architecture and planning critic, as well as for *The Boston Globe*, *The New York Times*, *Landscape Architecture*, and *Preservation*. In this issue of *Architecture* she examines the history of parking (page 76), realizing in the process that she believes "there's no such thing as an attractive parking garage." Kay sees the "unsolvable problem" of parking typified in a particularly disorienting episode of "Seinfeld" where the cast spends an entire day in a garage, lost. When she began writing her most recent book, *Asphalt Nation* (University of California, 1997), Kay abandoned herself to Boston's mass transit system and sold her car.

Originally from New Zealand, **Deane Simpson** works in New York City as an architect at Diller + Scofidio. He first collaborated with *Architecture* on the June 2000 issue's cover, which showed an image from the firm's forthcoming installation at JFK airport in New York City. This month Simpson writes about American crime films (page 88), a task that required him to watch more than 50 movies, of which the Ryan O'Neal vehicle *The Driver* was his favorite. The winner of both a Fulbright and an SOM Travelling Scholarship, Simpson spent three months in Russia researching the former Soviet space program, and is currently developing a project and essay based on the experience.



It's Time To End the Confusion Over Degrees

By Reed Kroloff

Did you ever wonder how the education of someone with a Bachelor of Architecture (B.Arch.) differed from that of someone with a Master of Architecture (M.Arch.)? Or what about the difference between someone with a four-year undergraduate degree (with a concentration in architecture) combined with a two-year professional master's, versus someone with a four-year liberal arts degree followed by a three-and-a-half-year professional master's? Were you aware that there is now a five-year professional master's degree? Does your head hurt yet?

Architecture has more ways to snag a professional degree than you can shake a stick at. More than doctors (they get by with only one degree), more than lawyers (even they have only two), architects have at least four types of accredited degree programs, and there may soon be a fifth: a seven-year doctorate. Where does it end? Well, late last year, the National Architectural Accrediting Board (NAAB, which accredits U.S. architecture programs) struck a modest blow for sanity by declaring that they would not accredit any new B.Arch. programs. NAAB insisted that their decision didn't threaten existing B.Arch. programs, only that no new ones would be recognized.

Reassurances notwithstanding, the decision (and even more so its accompanying suggestion that after 2010, NAAB might limit accreditation to master's degree programs only) will unnerve many powerful schools, especially the large state institutions where the B.Arch. remains firmly entrenched. But I say kudos to NAAB. It's time the confusion over what constitutes a proper architectural education is put to rest. It is wasteful, unnecessary, even damaging: Lay people already struggle to differentiate an "architect" from someone who is "architecturally trained." They

shouldn't have to hack their way through a thicket of degrees as well. More importantly, practitioners looking to make the right hire from the next crop of graduates shouldn't have to either.

The nomenclature problem began in the 1960s, as American universities struggled to meet rising demand for graduate-level education. In architecture, this led to the development of alternatives to the then-monolithic B.Arch. Most significant was a new "4+2" curriculum that consisted of an undergraduate liberal arts degree (with a concentration in architecture) capped by an accredited graduate professional degree. Variations on the theme developed over the years, reflecting the strengths, weaknesses, and interests of the 123 institutions that now offer accredited architectural degrees. Which of today's many educational options best prepares young architects? Hard to say definitively, but everyone has an opinion.

Not surprisingly, those opinions often conflict. But what might seem to be the simplest solution—a single, uniform curriculum—would limit the academic freedom that has served American universities so well. It might not be good for the profession either. For instance, a mandated B.Arch. would cripple graduate programs—and the research activities they generate. Conversely, a uniform M.Arch. would be financially impossible for many students.

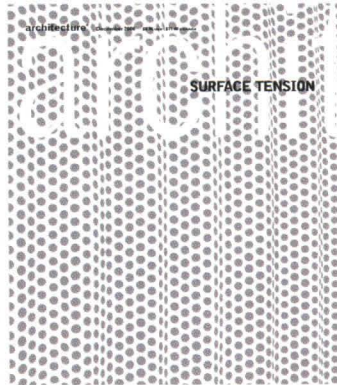
This apparent stalemate has kept architecture schools and the profession's governing bodies quarreling amongst themselves for years, while fostering the proliferation of degree programs. NAAB's proclamation, combined with recent debate within the Association of Collegiate Schools of Architecture (ACSA), suggests the nomenclature issue is heating up again. It will only grow more contentious as everyone attempts to protect their own positions. But before the wrangling leads once again to nothing, one intriguing—and remarkably simple—idea deserves scrutiny. Late last year, University of Maryland Dean Steven Hurr proposed that NAAB and ACSA jointly award graduates of accredited programs an Architecture Diploma (A.Dip.) that would confirm their fulfillment of the requirements for professional education. Universities would grant the accompanying academic degree (B.Arch., M.Arch., D.Arch.), and could therefore maintain control over instructional standards and policies, as long as NAAB criteria were met. Would this end the confusion? Not entirely. But it would come closer than anything we've seen so far. ■



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Already being called a symbol of China, the tallest skyscraper in China required the highest quality elevators. The trip to the 88th floor takes just 45 seconds. The building has quickly become a popular Shanghai tourist spot, with 2 million visitors so far, and on busy days 14,000 passengers enjoy its 9-meters-per-second speed. Mitsubishi Elevator was chosen for its advanced technology, including VVVF control and high-precision rail guides, etc. In two years of full operation, there's not been a single problem. Passengers on the scenic elevators express their surprise at the smoothness and shortness of the ride. On one occasion, our staff accidentally pressed the emergency stop button during a guided tour. The guide kept talking and the ride resumed so smoothly and instantly that the other passengers never even noticed the interruption. We rate Mitsubishi's reliability, prompt maintenance, and unique "total quality" very highly, and believe that we made the right choice.



Architecture Dreaming

As an architect that has been around for a while and that remembers the editor-in-chief as a serious teenager growing up in Corpus Christi, Texas, I eagerly wait every month for the editorial page. Although I have enjoyed and learned from every issue, this month's editorial strikes the nerve of many architects that feel that our profession lacks the leadership necessary to allow us to make the contributions to our society that students dream about during our late nights in the design labs. Elsewhere in the December issue you state that alternate careers offer architecture graduates more money. This statement speaks well for the educators, but tells me that the practitioners have neglected their role in attracting and adequately compensating the brightest and best students.

Jack Solka
Bennett, Martin, Solka and Torno
Corpus Christi, Texas

Internship Sails Ahead

Your December editorial was mainly on target (page 17). Where I have to disagree is with your commentary on internship and the Architecture Registration Exam (ARE).

Internship is not a disaster. While many people do not like the

structured Intern Development Program (IDP) curriculum, it is an effective system for making sure the next generation obtains the varied experience needed to succeed.

The ARE is flourishing, not suffering. Each year architecture schools graduate approximately 5,000 students. At the same time, NCARB sees about 2,500 new ARE candidates per year. While this does not say much for the profession, the numbers have held true for at least the past decade. The number of candidates tested has not fallen since 1997. In fact, the number of ARE divisions taken has risen steadily since then, increasing approximately 25 percent each year.

ARE pass rates have risen due to the ability to schedule when ready, and because candidates are able to study for one division at a time. We might never again equal the number of divisions taken annually during the paper and pencil examination in years prior to 1997, because candidates no longer have to take divisions over and over again in order to pass.

Lenore M. Lucey
Washington, D.C.

Editor's note: NCARB reported in April, 1999 (the first year they made statistics available) that ARE candidates completed 12,062 sections of the exam in 1997, compared to 57,000 only one year earlier, a drop of nearly 80 percent.

BipartiPAC

I take exception to your comment that it was unfortunate that Jane Frederick failed to unseat Floyd Spence, a Republican from South Carolina (November 2000, page 15). I am an architect and a Republican. Did ArchiPAC try to talk to Mr. Spence and get his support? Once you start trying to oust members of congress they will turn on you like a relative from hell.

By your comments one would assume that ArchiPAC was intended to be bipartisan. It is important to keep personal ideology out of consideration for support of congress-

sional members. You should inform the liberal end of ArchiPAC that nothing will be accomplished without the support of conservatives.

ArchiPAC cannot afford to be labeled as just another political extension of the Democratic Party (or the Republican Party) or proposed legislation will die in committee.

James Robinson
Charlotte, North Carolina

Spring Chickens

I must say I was a bit taken aback when I saw "The List: Seven Ways to Drive Down Staff Turnover", with number one being "Don't recruit anyone straight out of school" (November 2000, page 39). I think it was irresponsible for this to even be on the list, but to make it number one is over the top.

It can be difficult trying to find a job in a profession where experience is required but where you have to have experience to find a job.

What I suggest is giving the students who have sought out your firm by sending a resume and portfolio a second look. You may find someone who can be a gold mine—given the chance.

K. Gibbs
Intern Architect
Ann Arbor, Michigan

CORRECTIONS

The local architect cited in "Design by Default" (December 2000, page 134) should have been Julian Hunt.

In "Waste Not, Want Not," the landscape architectural work of Julie Bargmann and William McDonough is also a collaboration with Nelson-Byrd Landscape Architects (November 2000, page 80).

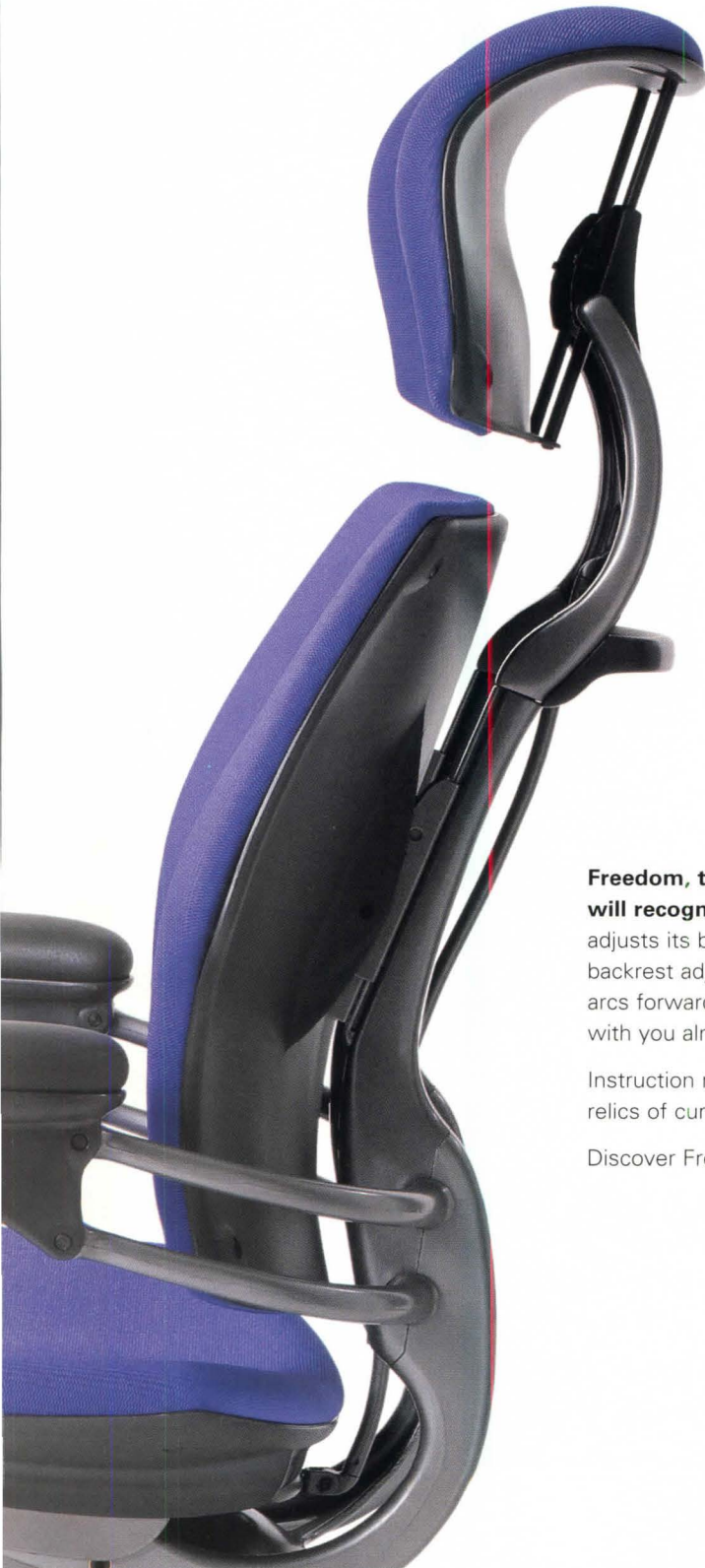
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**Presidential Award
Winners Announced**
page 26

**Upgrades Make California
Hospitals Quake**
page 29

**Who's Who Of Architecture
Signs Up for Long Island
Spec Development**
page 31

**Do New Schools Contribute
to Sprawl?**
page 34



AIA's Web Project Leaves Lots Wanting

Business The American Institute of Architects (AIA) has never been known as an adventurous, thinking-outside-the-box kind of group. So it was with great fanfare that the 143-year-old organization announced in March 2000 that it was creating a Web-based company in the vein of an Internet start-up. Called AEC Direct, the service was designed to raise the AIA's profile among allied industry folk while bringing architects into the digital age by providing distance education courses, selling construction documents approved by the AIA to architects, engineers, and construction workers, and posting up-to-the-minute industry news and information.

Dot-com or not, AEC Direct was also supposed to turn a profit.

But only a couple of months after it went online in June, AEC Direct started to show signs of trouble. It has recently undergone a restructuring that has found its top brass fired and its services reduced to a bare minimum. One of the only things keeping AEC Direct afloat is the belief that it will, someday, work. The AIA, which owns 60 percent of the company, had talked nearly a dozen companies, including IBM, McGraw-Hill

Sign up for a seminar, get a free AEC Direct shirt and help save a failing start-up while you're at it.

Construction Information Group and Hanley-Wood, into believing—and investing—as well.

AIA execs have some explanations for AEC Direct's stumbling. Jim Dinegar, AIA chief operating officer, and Norman Koonce, AIA chief executive officer and chair of AEC Direct's board of directors, both blame the dot-com flu for most of AEC Direct's woe. Of the staff cuts, Dinegar said decisions were made in the best interest of keeping AEC Direct up and running. "We could either reduce expenses or increase revenues," said Dinegar. "We had to make an assessment of what could be done to revenues to compensate for an expensive burn rate. One of our bigger expenses is on staffing. We couldn't continue down that route. We had to take responsible action."

The AIA was also hurt by AEC Direct's downturn. The organization had invested manpower and sweat equity into the project, which was initially evaluated at \$10 million. "If we've made any mistake, it was retain-

ing that [60 percent] degree of ownership in the early stages," said Dinegar of the AIA's involvement, adding that the AIA board has "made the prudent decision of diluting our ownership."

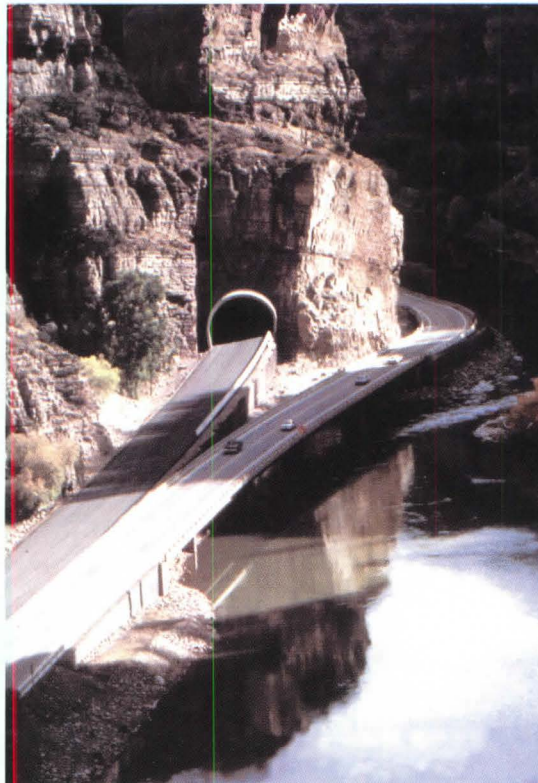
Perhaps the group most harmed by AEC Direct's troubles has been the investors. "Investors are concerned about getting our money's worth out of our investment," said Michael Wood, founder of the 24-year-old multimedia company Hanley-Wood. "Are we gonna get paid back?"

But the AIA still has high hopes for its Web venture. "There's been a change in the economy and the attitudes of investors in dot-coms," said Koonce. "It takes a tremendous amount of money to get started. We're in a second phase of operation. The start-up phase has been accomplished."

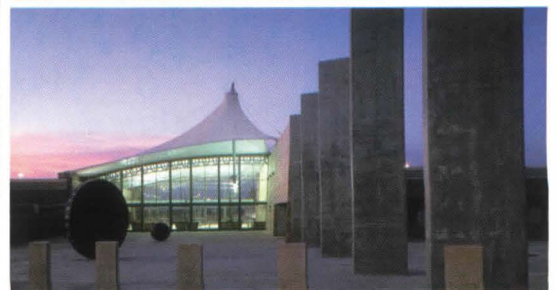
For now, the site is being manned by outsourced contractors. Legal, business, and technical consultants are currently evaluating it. Koonce said he expects to have a clearer picture of AEC Direct's future this month. *Anthony Mariani*

Presidential Award Winners Announced

Awards Believe it or not, the Feds can get some pretty good stuff designed. Take the winning entries of this year's Presidential Awards for outstanding federal designs. No straight-laced big boxes here. The winners are the U.S. Census Bureau National Data Processing Center in Bowie, Maryland, by Davis Brody Bond and Tobey + Davis; the U.S. Port of Entry in Calexico, California, by Dworsky Associates; the renovation of Grand Central Terminal in New York City, by Beyer Blinder Belle Architects & Planners; Interstate 70 in Glenwood Canyon, Colorado; the Mars Pathfinder Mission; the Franklin Delano Roosevelt Memorial in Washington, D.C., by the office of Lawrence Halprin; the National Park Service Park Cultural Landscapes Program; Westside MAX Light Rail in Portland, Oregon, by Zimmer, Gunsul, Frasca Partnership; and the Mayors' Institute on City Design in Washington, D.C. *A.M.*



Four winners of Presidential Design Awards are, clockwise from left: Interstate 70, the U.S. Census Bureau, the Franklin Delano Roosevelt Memorial, and U.S. Port of Entry in Calexico, California.





Buzz

There are no two more divergent locales in Manhattan than Times Square and Wall Street. One is glitzy and bright, the other, staid, serious, and gray. Yet it was only a matter of time before one started looking like the other. In a bold move, the **New York Stock Exchange** plans to fit one of its outer walls with video wall technology—similar to what is used on the **Nasdaq Market Site** in Times Square. Stock-conscious passersby, which is just about everybody near the NYSE, will be able to track their shares from the streets—that's if they're not too taken aback by the infusion of color.

Created by the U.K.'s **Arup** with **Llewelyn Davies** and **Speedwing**, a design for China's Chongqing Jiangbei International Airport has won the approval of the People's Republic.

Philadelphia's **Bower Lewis Thresher & Cope Linder Architects** (BLT/CLA) has been commissioned by joint-venture partners Boyd Gaming Corporation and MGM Mirage to design the \$1 billion Borgata, the largest casino-hotel project ever undertaken in Atlantic City, New Jersey.

The new public toilets being proposed for Boston by Germany's **The Wall** are squat little circular structures that look like tollbooths. The reason they're not everywhere by now is that the pooh-pooing Massachusetts Architectural Public Access Board has denied an initial proposal because the toilets did not meet the state's disability access requirements.

Geddes Demshak and **KSS Architects** have been awarded the

AIA Honors People and a Place

Awards The AIA has given its Twenty-Five Year Award to the Weyerhaeuser Headquarters in Tacoma, Washington, designed by Skidmore, Owings & Merrill and landscape architect Peter Walker, and has named Des Moines, Iowa-based Herbert Lewis Kruse Blunck Architecture (HLKB) as its Architecture Firm of the Year (see page 90). HLKB will receive its prize this month at an awards ceremony in Washington, D.C. The AIA also handed out its Honor Awards, in three categories, with 14 winners for architectural design, 12 winners for interiors, and four for urban design. *A.M.*

Extreme Protesting

Earth Liberation Front Has a Burning Hate of Sprawl

Urban sprawl has few defenders. But the radical environmental group Earth Liberation Front (ELF) is taking extreme measures to combat what it sees as "the continued destruction of the last wild places on the earth for the sake of profit and greed." In its latest action on December 30, 2000, members affiliated with the organization set fire to three upscale residences under construction in Long Island's Suffolk County, attempted to destroy a fourth, and vandalized a fifth by scrawling on it, "If you build it, we will burn it." Since 1997, ELF has claimed responsibility for more than \$36 million in property damage throughout the United States. The group alleges that no people have been hurt or arrested in the process. "People are realizing more and more that state-sanctioned means of protest on their own are not working," says Craig Rosebraugh, an ELF spokesman. "The direct action in the form of economic sabotage committed by ELF works to hit the entity at hand where it is going to count most, in their pocketbook." *Aric Chen*

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Upgrades Make California Hospitals Quake



California lawmakers want to prevent earthquake damage, like this along the windows of St. John's Medical Center in Santa Monica.

Infrastructure There's a whole lot of shakin' going on in California hospitals as facility owners wrestle with how they will pay to become earthquake-proof, as required by state law. High costs might force some facilities to close and are leaving some people, like the California Health Care Association, wondering why government money hasn't been dedicated to patient care as enthusiastically as it has been to structural upgrades.

In 1994, in the wake of the Northridge quake that closed three hospitals and caused about \$10 billion in hospital repairs, a law was passed that set evaluation procedures and a timetable for upgrading acute care facilities. January 1, 2001, was the deadline for all affected hospitals to report any or all structural deficiencies to the state. About 75 percent of the state's total of 450 facilities have met that first deadline, according to a government official, who also believes that all hospitals will eventually cooperate.

Critics complain that lawmakers passed the law, the Alquist Hospital Facilities Seismic Safety Act, without funding attached. The state's health-care industry is organizing itself to demand state or federal subsidies that would enable hospitals to comply with the nation's most stringent seismic standards. About 60 percent of the state's hospitals already operate at a deficit.

Finding the money to safeguard patients if the Big One hits is not the only problem. There is also a time crunch. Some experts worry that there are not enough qualified architects, engineers, and state overseers to handle all the retrofitting or new construction by the law's 2008 deadline, when every acute-care facility must be up to code. Others counter that many hospitals are 30 to 40 years old and are due for replacement.

That's not all: By 2030, the law requires all acute-care facilities to guarantee that essential services—such as power and water supplies—will not be interrupted by a tremor.

Meanwhile, hospital officials are stuck in a quandary. Acute-care facility officials want it known that many of the state requirements will trigger horrific financial burdens, yet they don't want to appear irresponsible or insensitive to patients. *Ann Jarmusch*

Ann Jarmusch is the architecture critic of the San Diego Union-Tribune.

silver medal by the New Jersey chapter of the AIA for the School of Natural Sciences at the Institute for Advanced Studies in Princeton, New Jersey.

Los Angeles's **Barton Phelps & Associates**, in association with **OWP&P Architects**, has been selected as design architect for the Gerald R. Ford School of Public Policy at the University of Michigan.

Atlanta's **Lord, Aeck & Sargent** have been selected to design Georgia's Technology Economic Development Headquarters in Atlanta, Georgia.

A.J. Diamond of Toronto has won the Royal Architectural Institute of Canada's Gold Medal for 2001.

Los Angeles's Music Center may be getting a makeover at the hands of **Frank O. Gehry**, who designed the Center's neighbor, the Walt Disney Concert Hall. The Center's board of directors recently discussed a design concept that was developed during workshops led by Gehry and involving **Arata Isozaki**, **Rafael Moneo** and **Laurie Olin**, among others. The redesign calls for making the existing space bigger and friendlier—and, if the architect known for making steel look like silk is involved, possibly more huggable.

Sam Rajamanickam from Design Collective of the United States won Graphisoft's seventh annual international virtual building design competition—the Graphisoft prize—for his entry, *Cotton Club* by Francis Ford Coppola. Marcel Schuler, Patrick Schmid and Guido Zimmermann of **Fachhochschule Aargau**, Switzerland, took second place for



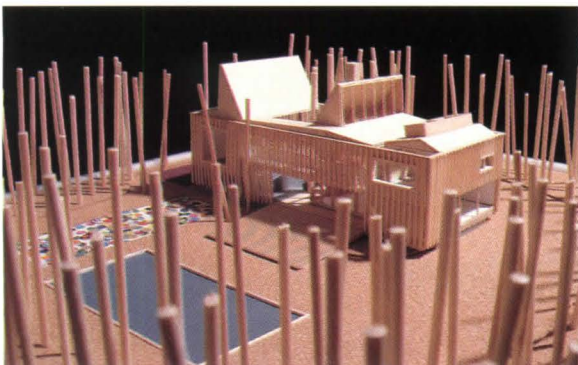
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Who's Who Of Architecture Signs Up for Long Island Spec Development



Under Wraps

Manhattan real-estate developer Harry Brown is banking on big names. Construction is set to begin on the Brown Companies' latest development, Houses at Sagaponac, this summer on Long Island. With Richard Meier acting as advisor, Brown has accumulated a virtual who's who of American architects to design speculative dwellings for the 160-acre wooded site in the Hamptons. In addition to Meier, rumored among the list of architects are such bigwigs as Michael Graves, Peter Eisenman, Reiser + Umemoto, Richard Gluckman, Eric Owen Moss, Field Operations/Stan Allen + James Corner, RoTo Architects, and Charles Gwathmey. The 30 planned residences, expected to be priced from \$800,000 to \$1.2 million, will range in size from 2,000 to 5,000 square feet on sites of between 1.5 and 3 acres, all of which are small figures by current Hamptons standards. As its hodgepodge of designers has largely been given carte blanche, the project perhaps also reacts against such stringent protocols and design guidelines as those developed by Robert Stern and others for Celebration, Disney's planned community in Florida. Meier has compared the Houses at Sagaponac to the 1927 Mies-planned Weissenhof Siedlung housing settlement erected in Stuttgart. A.C.

The Ministry of Truth from George Orwell's *1984*. And Gabor Osvath, Attila Vocsa and Bojka Pehlivanova of **GYAR**, Hungary, took third for their interpretation of *The Ministry of Truth*. Participants were asked to design their works along cultural themes.

Office dA (Boston), **Studio Granda** (Iceland), **Diller + Scofidio** (New York City), and **Peter Zumthor** (Switzerland) have been announced by the Institute of Contemporary Art, Boston, as finalists for the design of its new 60,000-square-foot building.

From the do-what-I-say-not-what-I-do department: **City Hall East** in Los Angeles, where local government is, was cited for 480 fire code violations.



BMW, from its beginnings, has banked upon architectural excellence: Architectural competition for the BMW Event and Delivery Center in Munich

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Jury

Architectural juror a. o. Prof. Marc Angéllil, L.A./Zurich; Prof. Dietmar Eberle, Lochau; Dr. Gunter Henn, Munich; Prof. Peter Kulka, Cologne; Prof. Ulrike Lauber, Munich; Christine Thalgott, municipal architecture council city of Munich; Konrad Wohlhage, Berlin.
Technical juror a. o. Prof. Joachim Milberg, Chairman of the Executive Board BMW AG and Christian Ude, Lord Mayor Munich.

Prizes

Approx. Euro 317.000,00 in total.

Deadline for application
February 15, 2001

For application documents and additional information, see www.phase1.de/bmw.

Californication

California Supreme Court Backs Proposition to End Minority Contracting

As President Bush ponders limiting government affirmative-action programs, one state has already beat him to the punch.

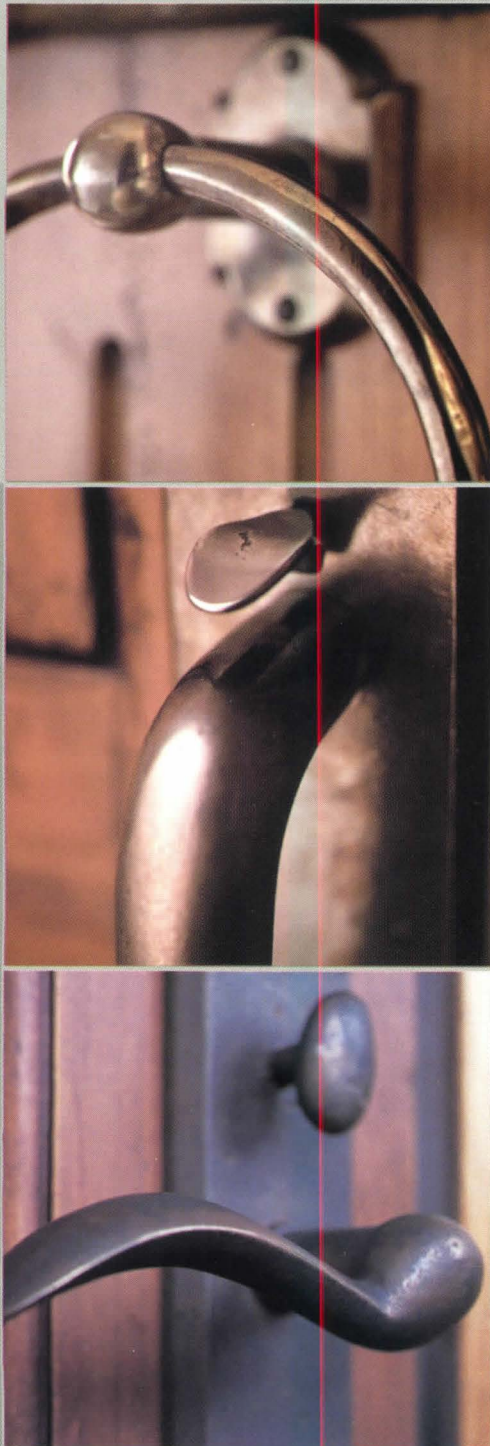
In December, the California state Supreme Court ruled unanimously in favor of Proposition 209, in a case in which the city of San Jose was sued by a wire company that argued that San Jose's hiring methods violated the proposition. A state constitution amendment since it was approved by voters four years ago, Prop. 209 ends quotas and preferences based on race or gender in state and local contracting, employment and education.

The decision is expected to extinguish or alter dozens of so-called outreach programs and affirmative-action endeavors in cities throughout the populous state.

In a rare court appearance, California attorney general Bill Lockyer argued against the company, saying that San Jose's requirement that contractors include a predetermined percentage of minority- and woman-owned subcontractors, or recruit at least four such subcontractors when seeking contracts of more than \$50,000, differed from any quota system outlawed by Proposition 209. The U.S. Justice Department and nine cities and counties filed briefs supporting San Jose's ordinance.

Yet even that four-tiered display of governmental unity didn't sway California's justices. They sided with Sacramento-based Pacific Legal Foundation lawyers for Hi-Voltage Wire Works, which sued San Jose after the city rejected the company's low bid on a circuit-switcher for a sewage treatment plant. City staff disqualified the \$198,760 bid because the company did not pursue or negotiate with minority subcontractors, as required by San Jose law. The city enacted this outreach policy after a 1990 study showed that San Jose minority-owned businesses did not receive a fair share of city work.

Affirmative-action advocates in California are now searching harder for language and strategies that may foster diversity among qualified contractors without colliding with Prop. 209. The justices offered direction when they noted the success of Los Angeles's aggressive contracting outreach programs, which target small businesses. Without mentioning race or gender, Los Angeles has expanded its pool of applicants and, in the process, increased hires of minority- and woman-owned firms. *A.J.*



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Calendar

Exhibitions

Cambridge, Massachusetts
Heinz Tesar's *Fragments on Le Corbusier: Brush Drawings, Poems and Memorabilia from a Formative Experience* at Harvard University's Carpenter Center for Visual Arts through February 16 (617) 495-3251

Immaterial/Ultramaterial at the Harvard University Graduate School of Design opens March 5 (617) 496-1234

Chicago
Building Images: Seventy Years of Hedrich Blessing Photography at the Chicago Historical Society through July 8 (312) 642-4600

Columbus, Ohio
Suite Fantastique at the Wexner Center for the Arts at Ohio State University through April 15 (614) 292-6493

Dallas
Poetics of Movement: The Architecture of Santiago Calatrava at the Meadows Museum at Southern Methodist University opens March 25 (214) 768-2516

Denver
Before + After at the Colorado AIA through February 23 (303) 443-1945

Houston
Design of Our Time at the Museum of Fine Arts, Houston opens February 25 (713) 639-7300

London, England
Do Create by Droog at Architectural Association Gallery through February 22 (44) 20 7887 4000 or e-mail info@aa.school.ac.uk, www.aaschool.ac.uk

Los Angeles
The Architecture of R.M. Schindler at the Museum of Contemporary Art opens February 25 (213) 621-2766 www.MOCA-LA.org

L'Esprit Nouveau: Purism in Paris, 1980-1925 at the Los Angeles County Museum of Art opens April 29 (323) 857-6000

Shaping the Great City: Modern Architecture in Central Europe, 1890-1937 at the J. Paul Getty Museum opens February 20 (310) 440-7722

Minneapolis, Minnesota
Herzog & de Meuron: In Process at the Walker Art Center through February 11 (612) 375-7651 www.walkerart.org

New Haven, Connecticut
Saving Corporate Modernism at the Yale Art & Architecture Building through March 2 (203) 432-2288

Pittsburgh, Pennsylvania
Light! The Industrial Age 1750-1900, Art & Science, Technology & Society at the Carnegie Museum of Art opens April 7 www.cmoa.org

Toledo, Ohio
Eternal Egypt: Masterworks of Ancient Art from the British Museum sponsored by the American Federation of Arts, opens March 1 at the Toledo Museum of Art www.afaweb.org

Washington, D.C.
Ten Shades of Green at the National Building Museum through February 14 (202) 272-2448

Conferences

Caring Communities for the 21st Century: Imagining the Possible is an exhibition, conference and design presentation concerning community development for senior citizens, at the United Nations headquarters in New York City. The exhibition runs from February 5 through March 9. The conference and design presentation are on February 8 (212) 688-4321 or iccc@undp.org.

Preservation and Care of Brownstone Buildings and Structures in Providence, Rhode Island; March 31 through April 1 (617) 623-4488



Czechoslovakian modernist Karel Teige believed that art's primary purpose was to serve the people. A prolific writer and artist, Teige combined words with images to render socially conscious works of art that were as beautiful and honest as they were self-righteous and pedantic. His contributions to modernism and Czech democracy have gone unnoticed by most Western eyes—until now. The Wolfsonian-Florida International University presents **Dreams and Disillusion: Karel Teige and the Czech Avant-Garde**, which runs through April 1 and will be the first U.S. exhibition on the modernist icon. The show will feature nearly 100 objects, including a full-scale model of Teige's ideal apartment for workers. The Wolfsonian-FIU, Miami Beach, Florida; (305) 531-1001.

Plastic to Polyester: Modern Design in the 20th Century Seattle Art Museum; February 8 (206) 654-3158

House and Communities at the Moore Center at the University of Texas in Austin; March 1-4 www.charlesmoore.org

Reuniting the Arts: Contemporary Art and Architecture at Ronald Reagan Washington National Airport at the Octagon in Washington, D.C.; February 9 (202) 626-7387

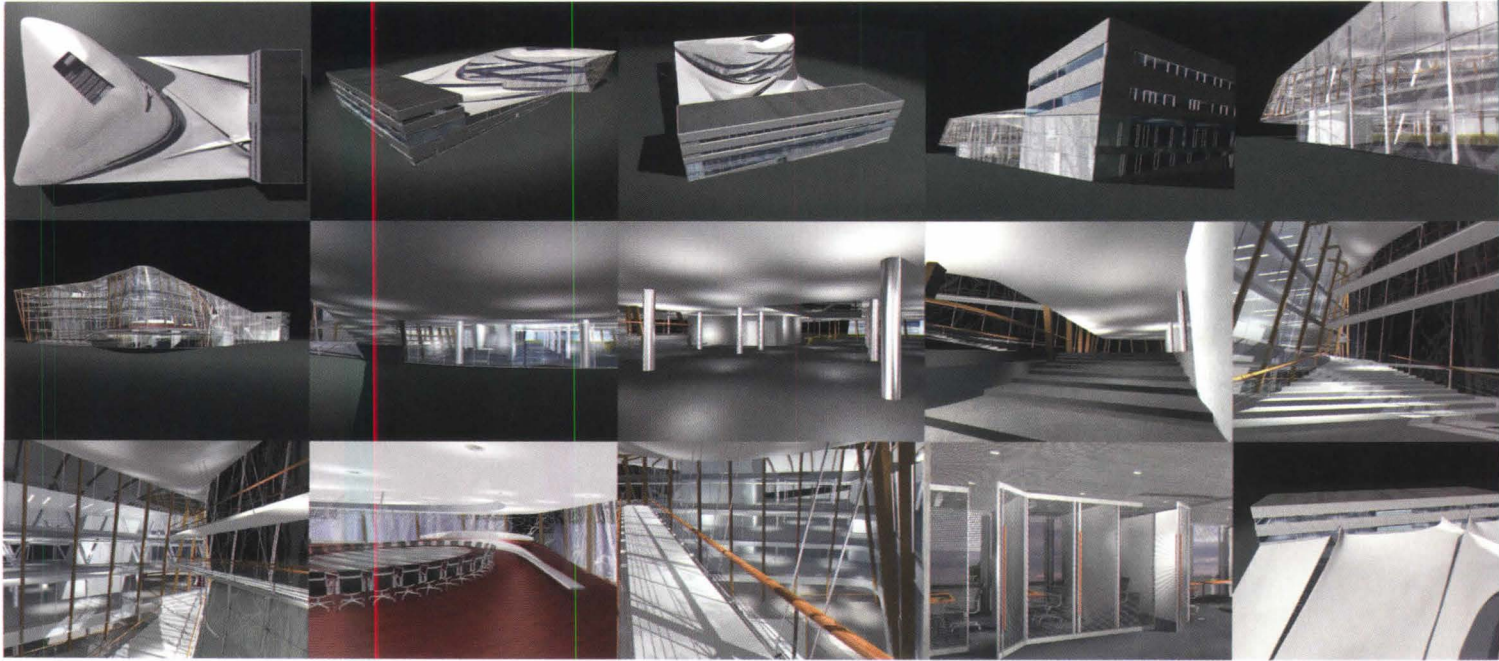
Competitions

AIA-Sunset Magazine 2001-2002 Western Home Awards Entry forms must be postmarked by March 12 (650) 324-5632

Food, Fantasy and Form: A Journey into the World of Restaurant Design presented by Adam D. Tihany at the New York School of Interior Design on March 14, at 6 p.m. (212) 472-1500

RIBA is sponsoring two competitions, **Sustainable Schools** and **Holistic Hotels**. The first is a search for development prototypes for schools. Deadline February 28. The second is a search for environmentally conscious hotel designs. Deadline February 27. For information on both, write *RIBA Competitions*, 6 Melbourne Street, Leeds, LS2 7PS.

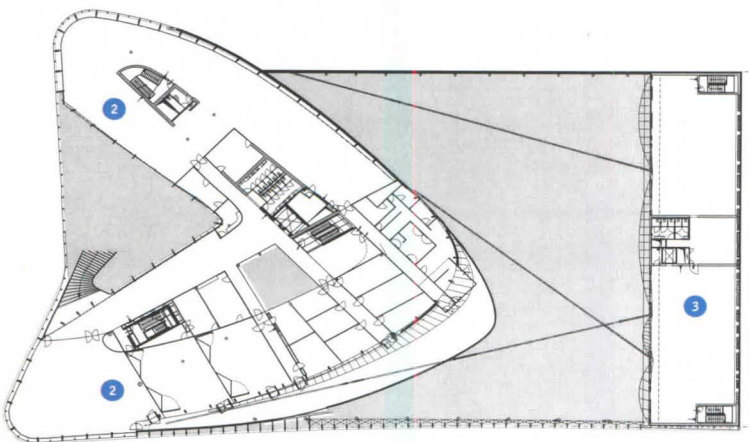
Project grants for architects, designers, and scholars are available via the New York State Council on the Arts through its Independent Projects category. Applications due by March 1 (212) 387-7142 or spenn@nysca.org



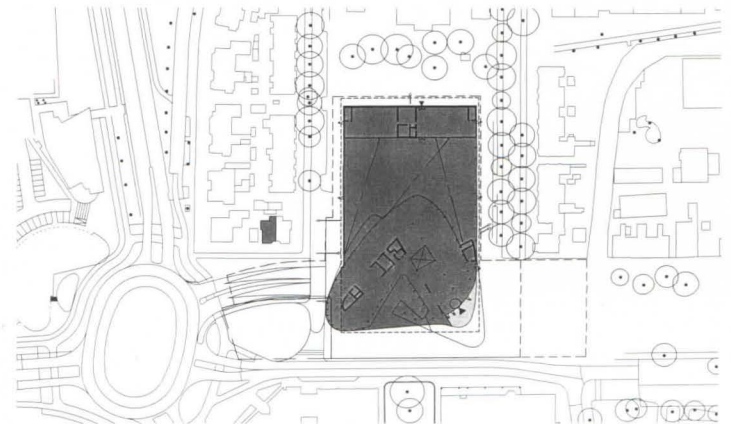
On the Boards

Erick van Egeraat Associated Architects,
City Hall, Alphen aan den Rijn, the Netherlands

If Erick van Egeraat's new city hall for the town of Alphen aan den Rijn is representative, then one might think that the Dutch take a looser approach to the representation of governmental power in civic buildings than Americans tend to. The General Services Administration's mammoth building program (January 2001, page 65) shows U.S. architects interpreting ideas about civic grandeur without, in many cases, totally abandoning the formal ideas common in Depression-era federal buildings. While van Egeraat's building,



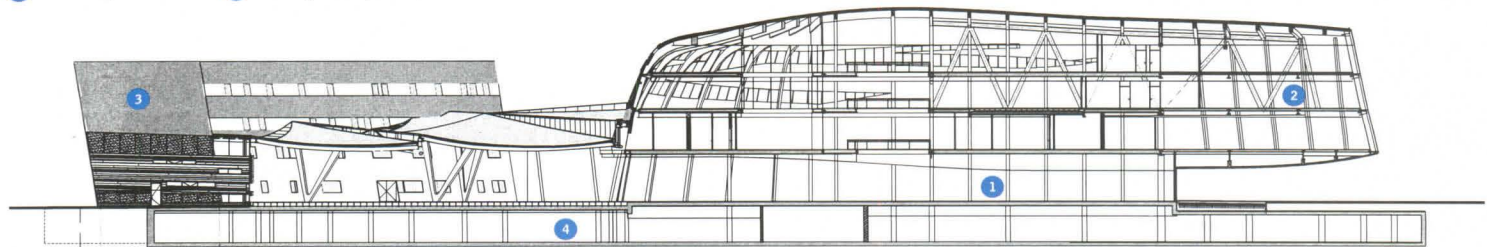
Second-floor plan | 43' >



Site plan | 118' ^



- 1 lobby
- 2 assembly rooms
- 3 staff offices
- 4 underground parking



North-south section | 23'

which will be complete in the fall of 2001, uses glass as a literal signal of his government's transparency and openness to the people it serves, the architect admits that he wanted to convey this idea "in a somewhat less obvious fashion."

The 270,000-square-foot city hall consists of two primary elements: a blob clad primarily in glass housing public areas such as assembly rooms and service offices, and a rectilinear stone block of employee offices. The two are linked by a tent-like span of fabric that shelters a ground-level lobby. On the city hall's glassy southern edge, the top three floors are cantilevered out over a public square; an inflection in this façade creates a notch that marks the main entrance.

Because the new city hall is the first building in an ambitious

master plan designed to create a dense pedestrian zone in Alphen aan den Rijn, attracting traffic through the building was an important consideration. Van Egeraat and the city planners imagined the ground floor as a "department store" for government services (one might get a passport, pick up some maps, or take out books from a small library) to keep people moving through the building as much as possible. The basement level holds an underground parking facility—which will ultimately connect to a series of other garages—to accommodate the cars of all of the hoped-for shoppers and walkers. It is this programmatic diversity that will convey openness in "a less obvious fashion," making true the promise held out by the glass façades. *Anne Guiney*



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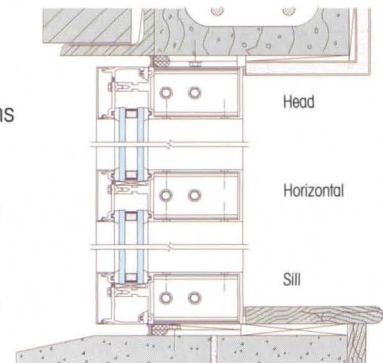
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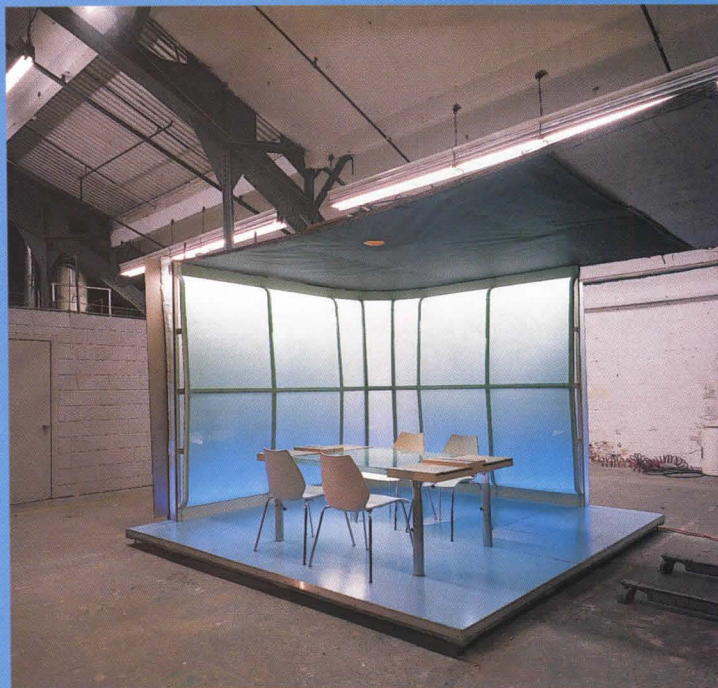
practice

“For every earnest client asking for environmentally sensitive design, there is a likely poseur simply trying to impress people with dumb ideas.”

Environment, page 46

“Developers argue that this trend will revitalize America’s urban centers. Planners argue that power-guzzling buildings with no more than a security guard on-site are a waste of space.”

Technology, page 50



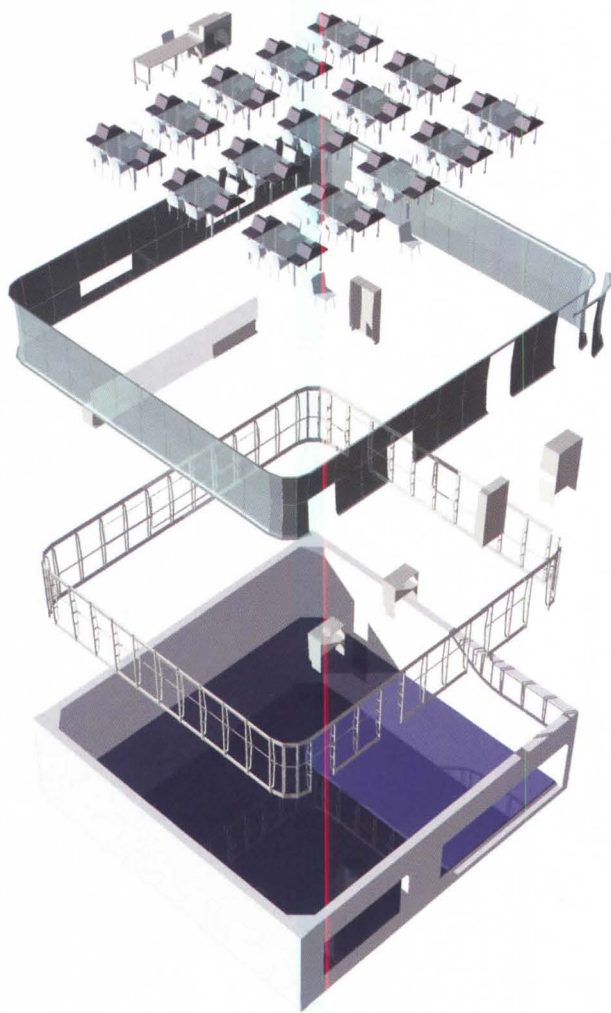
Pretty Cool for A School

Does the privately owned, for-profit Edison Schools have something to teach the public sector about how to build a classroom?

Lawrence W. Cheek conducts the quiz.

Education Not only is the EdLab not your father’s schoolhouse, it’s not one that you—nor most kids today—would recognize, either. There are no blackboards, no bookcases, no cartoon posters, no windows through which to ponder drifting clouds and daydream. This prototype classroom of the future, designed for Edison Schools by New York architect Leslie Gill in collaboration with graphic artists Doyle Partners and lighting designer L’Observatoire, is resolutely focused on technology. “Much of this [concept] stems from the philosophical belief that if

Architect Leslie Gill built full-scale mock-ups of EdLab’s wall panels and desks in preparation for the final classroom design.



Gill's design is made up of components manufactured off-site and then assembled as a kit-of-parts and installed—often in spaces that are internal and underused.

you don't have technology, you won't be able to function in American society," says Gill.

Edison Schools, based in New York, is a for-profit corporation (NASDAQ:EDSN) that operates 113 public charter schools around the country in "partnerships" with local school districts. Christopher Whittle, Edison's controversial founder and CEO, is also known for launching Channel One, an educational cable news system that drew fire in 1989 by streaming advertising into classrooms (see "Balancing Act," page 42). Edison plans to manufacture an undetermined number of EdLab modules, along with online courses and videos, and will begin introducing them throughout its network of 113 schools by 2003.

Gill took the job skeptically and then visited several Edison schools. "I was absolutely won over," she says. "There's a sense of community and a level of responsibility that you rarely see anywhere else. I rarely heard negative criticism. If somebody wants silence, they just raise a finger, and everyone waits for him or her to speak."

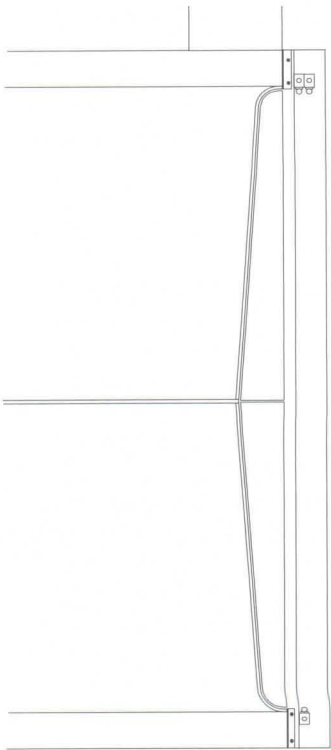
Gill hired a contractor to build full-scale mock-ups of parts of the classroom as she worked on the design. The job progressed with blazing speed—five months from inception to three working prototypes installed in schools in Colorado Springs, Colorado; Wichita, Kansas; and Lansing, Michigan. "Having these full-scale mock-ups allowed us to be so much more creative," Gill says. "We started with panels, then a corner mock-up 15 by 20 by 8 feet to test lighting. Our drawings would be taken directly into shop drawings by the general contractor and built in two or three days."

The three prototypes are now in their second semester of pilot use. The Colorado EdLab was manufactured in New York and assembled on-site; local contractors built the others. All are modular assemblies consisting of a vertical steel frame, a translucent plastic wall liner, and furniture accommodating up to 60 students. Completely self-contained, they slip into existing building envelopes: The modular pieces of the EdLab are carried into the interior space cleared for them and assembled inside. The size can be juggled to fit the enclosure. (The Colorado box is 38 by 40 by 8 feet.) Inside, student desks lock into modular "pods" of four that form a work group. Every student faces a laptop computer with an online connection, and a big screen for video "distance learning" fronts the room.

So that the lighting can be totally controlled and used to manipulate both perception and mood, there are no windows. The walls, says Gill, "are not perceived as barriers, but as mutable boundaries [where] light, color, and transparency entice students to broaden their horizons." Light can either illuminate the walls from behind or fall onto them, and the idea is to move the students' perceptual horizons. "The physical boundaries are constant, but the visual boundaries are playing tricks with you," Gill explains. "You're trying to make young children understand a very amorphous sense of the world they live in. On one hand, they are there with their classmates and teacher, and that constitutes their orbit. On the other, the way they're learning brings a very different sense of boundary. So abstractly, we're trying to make that concept not frightening, but intriguing."

Of the several classroom-management lighting schemes that L'Observatoire designed as part of the teacher's "control center," one creates a cocoon of light enveloping each pod, isolating it in a darkened classroom to build a sense of highly focused teamwork. Another pours white lighting toward the front of the room, focusing attention on the teacher.

EdLabs won't replace all the spontaneity, clutter, and sense of individuality of traditional homerooms—nor were they intended to. EdLabs are "the new auditoriums, the special places within the school," says Gill. In the pilot program, students meet in them for one period a day.



Classroom wall section



Desks separate students into groups of four (above). The teacher controls classroom lighting, which can be modified to signal the start and end of class (below). The walls consist of modular translucent plastic panels (left and top left), which are friction mounted to a steel substrate. Adjustable fluorescent lights are mounted at the top and bottom of the steel behind each plastic panel.

Fifth-grade teacher Tom Schuck uses a prototype EdLab at Roosevelt-Edison Charter School in Colorado Springs for a health-science unit called "The Human System." He's become a believer. "I think it's the wave of the future," he says. "I've never been a teacher who just gets up in front of the class and talks, and this kind of structure really suits my collaborative style."

Schuck typically will lecture for two to five minutes, then let the students work with their computers at their own pace as he wanders around and answers questions. The interactive classroom design, he says, frees him to offer much more individualized attention. And the technology-rich environment is exactly what his students need. Roosevelt-Edison is an inner-city school serving a lot of transient and low-income families that don't have computing power at home.

What amazes Schuck most is the effectiveness of the lighting design. "Comparing it with other classrooms is like night and day," he says. "I can have discipline problems in math class but when they walk in here, it's totally different. When they're working at their pods, it's so

soothing, you can just feel it in the air. They know [that] when that lighting comes on, it's time to settle down and get the work done. There's also an 'enter-exit' lighting scheme, and you should hear the noise level increase when that comes on."

Schuck says he would rather not see Edison's entire teaching strategy go into the EdLab environment. "I think the EdLab is great to have in the mix," he says, "but to be in it all day would be a mistake." At this point, EdLab is a petri dish in which to learn just how thoroughly the Edison idea of fully integrated teaching and technology can be realized. Gill sees even more in it, describing its concept in terms that are almost spiritual: The design objective is "to visually suggest worlds other than the world you're standing in, but at the same time affirm the worth of you as an individual working at your pod or in the classroom." As subjects in the experiment, Schuck's Colorado fifth graders don't exactly think in those terms, but they have an opinion. "The kids have a sense of ownership: 'It's ours, so we'd better take care of it,'" he observes. "And they think it's cool." ■



Balancing Act

Christopher Whittle is trying to raise his students' grades—and make a profit in the process.

Christopher Whittle, founder, president, and CEO of Edison Schools, has tried to bring private-sector ideas to public education for most of his 30-year career. First, in 1970, he founded Whittle Communications, a Knoxville, Tennessee-based publisher of student magazines. Then, in 1989, he launched Channel One, a company that provided television equipment to public schools in exchange for the broadcast of an in-class television show, complete with

paid advertisements. Critics shrieked that students should not be captive to commercials, and Channel One hemorrhaged money.

Whittle sold Channel One in 1994, while raising money for his new venture: Edison Schools, a for-profit company which would pilot public schools. Eager to prove his critics wrong after the failure of Channel One, Whittle recruited former Yale University president Benno Schmidt as chairman of the company, and in August, 1995, Edison opened its first four schools.

Local school districts and public charter school boards contract with the company to take over individual schools in return for public per-pupil funding, which on average amounts to a little over \$5,000 per student per year. As of November 2000, Edison was in charge of approximately 57,000 students in 113 schools in 27 states across the country.

The company has to balance business with academics. To fulfill its promises to parents and educators, Edison must keep teachers happy, and raise its students'

grades above those of students at other public schools. (Edison claims it has succeeded in this regard, but critics argue that no one outside the company has been allowed to analyze the raw data.) To satisfy its investors, the company must eventually turn a profit.

Edison's business plan rides on cost savings it claims result from centralization. Because it administers lesson plans, orders supplies, and pays salaries out of a centralized system, Edison isn't burdened by the district-by-district costs associated with public schools. "If you have the same program going on in all the schools," says John Chub, chief educational officer for Edison, "it's easier to support."

According to its SEC filings, Edison is desperate to cut costs right now. As of September of last year, Edison Schools had a deficit of at least \$196.9 million. For each school it opens, Edison trains teachers, pays their salaries, buys books and materials, upgrades or builds facilities (Edison claims to have built 30 percent of its schools

itself), and, after the first year of business, provides computers to each student above the second-grade level.

But while centralized management may help ease debt, it doesn't necessarily sit well with teachers. At San Francisco's Edison Academy, promised raises and reduced working hours couldn't prevent more than 60 percent of the school's teachers from leaving last summer. Teachers also complain that Edison's cookie-cutter approach to curriculum defies one prominent contemporary educational theory: that lesson plans must be adapted to the learning patterns of each student, rather than being imposed system-wide.

Still, Edison has managed to infuse badly needed resources and hope into ailing school districts. But as the purse strings are pulled tighter by Edison's creditors and the company's critics howl at the windows, it remains to be seen whether the company can maintain its focus, or whether Whittle will retreat yet again. *Jacob Ward*



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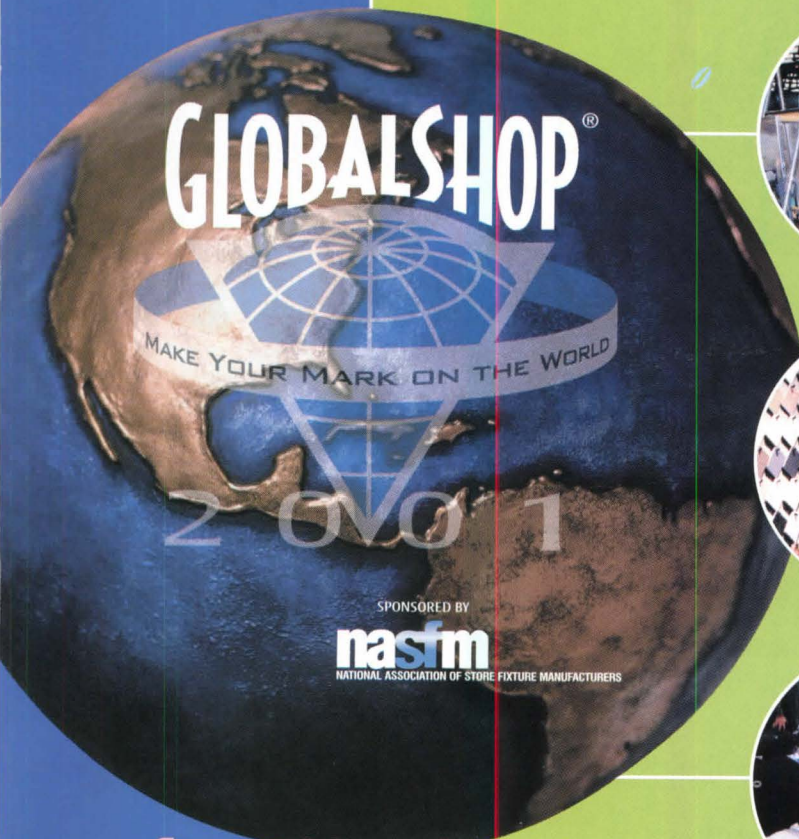
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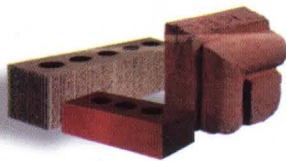


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The Green Machine

Examples of sustainable architecture vary in sincerity, but **Bradford McKee** finds that when the client is a group of die-hard environmentalists, you can bet you're looking at the real thing.

Environment Over the past decade, sustainable, or “green” building design has become quite fashionable, as commercial and institutional clients have grown wise to its broad appeal among their members, or shareholders, and the public. The buzz about sustainable design leaves serious environmentalists both hopeful and worried, because for every earnest client asking for environmentally sensitive design, there is a likely poseur simply trying to impress people with dumb ideas. “Greenwashing,” says Donna McIntire, program manager for the U.S. Green Building Council, an advocacy group in Washington, D.C., “is rampant in the industry.”

Few organizations care more sincerely about sustainability than the Chesapeake Bay Foundation: For 35 years, the CBF has led a massive effort to clean up its namesake, the nation's largest estuary. Over the past two years, as the foundation's directors prepared to design and build a new 32,000-square-foot headquarters near Annapolis, Maryland, they had to walk their own talk: They needed to create a building their ardent constituency would approve of, and uphold their foundation's ideals by protecting the Chesapeake Bay, which lies 100 yards from the building, across a small beach with a couple of lonesome old trees and sublime views to the south.

Now that the building is finished, two years later, those directors should be able to sleep at night. Their new compound, designed by the Washington office of SmithGroup and a host of sustainable-design experts, has to be, as they claim, one of the “greenest” build-

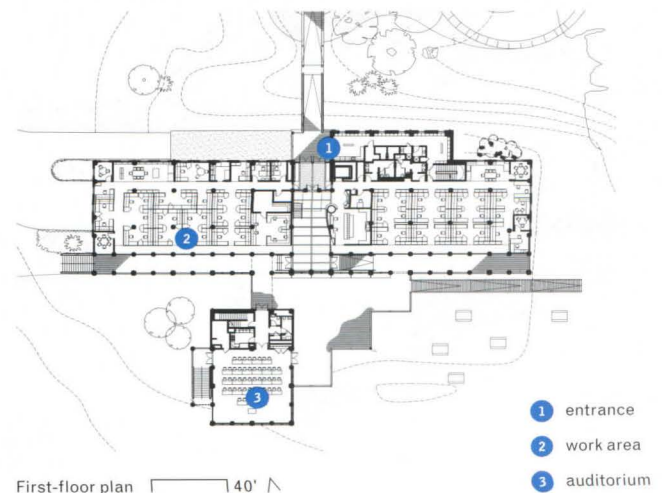
ings of its kind. The final product—a fairly simple shed of galvanized steel, frankly articulated wood members, and three huge cisterns for rainwater—proves once again that architects needn't sacrifice beauty for sustainability.

The CBF came to the site at the invitation of the neighbors. Before the CBF chose the 30-acre property for its headquarters, formerly the historic Bay Ridge Inn, the site was the target of a plan to build dozens of new houses, which made the relatively few people who live nearby nervous. But when the community learned that the CBF was looking for land for a new headquarters, they invited the foundation to consider the site. The parcel was perfect for the mission of the CBF, which wanted to consolidate 100 of its 200 employees from four locations around the Annapolis area. The previous landowner sold the CBF the land at a price below market value, and, as a nonprofit, the organization secured a low-interest loan and sold the site's excess development rights to the state of Maryland.

“We didn't think in our wildest dreams that we would get a deal like this,” says Charles D. Foster, Foundation director. (See “Jolly Green Client”, page 48.)

The foundation had developed a few sustainable buildings in the past—but had completed nothing on such a large scale. The CBF turned

SmithGroup designed the Chesapeake Bay Foundation headquarters to disturb as little of the site as possible (facing page). The building stands on a series of 7- to 10-foot piers (below left), which open up the ground beneath for parking. The narrow plan and open interior allow natural light to penetrate (below right).





for help to Janet Harrison, an Annapolis architect who specializes in sustainable design. Harrison began looking for a suitable rating system by which to measure the project's sustainability. She settled on the U.S. Green Building Council's Leadership in Energy-Efficient and Environmental Design, or LEED. The LEED system is the "strictest and most rigorous" of the various green benchmarking programs available, Harrison says (see "Degrees of Green", page 49). "But the CBF really wanted to go up against it and see what they could do." The CBF studied the LEED criteria, which cover everything from site preparation to indoor air quality, and developed a wish list of sustainable design features.

The budget for the building, of course, would limit the amenities the CBF could afford, so the programming phase began in October 1998 with a two-day peer-review critique led by specialists at what is now known as the Sustainable Building Industries Council (SBIC). "All these projects are individual, and you have to figure out what consultants would make sense," says Ellen Larson, program and policy man-

ager of the SBIC. "It's a combination of a charette and a peer review."

The group, which met at the old Bay Ridge Inn just before it was torn down, included representatives of SmithGroup, the Maryland Energy Administration, the state's Department of Natural Resources, the World Wildlife Fund, and the National Renewable Energy Laboratory.

"A lot of philosophical questions came up," recalls Harrison, who kept track of the building's LEED adherence throughout design and construction. "Steel or wood? Do we save the trees? Or do we use the trees to encourage certification of sustainable forests?"

Several major components were removed from the design during the initial review session, such as a radiant heating system considered for the floors. "It had a lot of benefits, but was redundant with the heating system," Harrison says. And though the building's south elevation is mostly glazed, the original scheme included much more glazing, which the team replaced with structural insulated panels. "Every time we saved money" during the review, notes Harrison, "we rolled it back into the building."



Jolly Green Client

Charles Foster, director of the Chesapeake Bay Foundation (CBF), spoke to *Architecture's* Bradford McKee recently about the design and construction of the new Philip Merrill Environmental Center in Annapolis, Maryland, which claims to be the "greenest" building in the U.S.

Architecture: The Chesapeake Bay Foundation is more self-critical

than most clients doing "green" architecture. How do you know your new building is environmentally meaningful and not just symbolic? Charles Foster: A lot of these are products we've used in other buildings: the Clivuses [composting toilets], cork floor, linoleum, and so on. We have a bunch of centers around the bay. One has a geothermal heat pump. We have one center that's completely photovoltaic [a method of converting sun-

light into electricity]. You can do the research, but unless you have billions of dollars to test products, there comes a point where you have to take them at face value.

Given that the CBF now lives right next to the bay it's trying to save, what were your design priorities? We looked at all the different issues with the bay. We reduced the amount of impervious surfaces [to prevent storm-water

runoff into the bay]. The property had buildings on it and our desire was to reuse them. But, after a thorough evaluation, it became clear that we wouldn't reuse them. So we built on the existing footprint and, in turn, reduced the amount of impervious surfaces.

How did you wind up hiring SmithGroup?

The whole world knew we were looking. We had a list of 50 architects we requested infor-

The cost per square foot of the building alone came out to be about \$199, of which \$30 to \$45 went toward green elements. That figure sounds extravagant, but the foundation's board fell in love with the LEED system and wanted its highest, or "platinum" rating (see sidebar, at right), and succeeded. As items came out during the peer review, and later, during value engineering (\$30,000 was saved by leaving sheet nails exposed, for instance, rather than covering them over), "our board said, 'Cut what you want, but don't cut that rating,'" says Foster. "The LEED rating became a shield to protect the green-ness of the building."

As a result of this adherence to the LEED, nearly every facet of the project suggests sustainability. The Merrill Center lies at the end of a two-lane road, newly painted with bicycle lanes, that stops near the water's edge. It's quiet out there. The drive curves through a wood to a gravel parking lot, which doubles as a "bioretention" system developed by civil engineer Greenman-Pedersen and site consultant Karene Motivans, an ecologist who works with the National Institutes of Health. The choice of gravel over asphalt paving cuts the amount of land impervious to storm water, which as a result percolates away from the parking area through a natural filter of locally native rushes, asters, irises, and wool grass to a newly built non-tidal wetland. Practically no runoff from the site ever reaches the bay.

The CBF wanted to disturb as little of the land as possible. Eighty-four percent of the site remains open, a ratio achieved by building atop the footprint of the Bay Ridge Inn's former pool house. Initially, the CBF hoped to reuse the old building, but it was "too far gone" says Foster, so the building was picked apart and its wood recycled.

Small design strategies add up to a sustainable whole: Photovoltaic panels generate a small amount of solar power for the building (facing page, top left). The lobby features bamboo floors (facing page, top right). Many of the CBF's employees commute by bicycle (facing page, bottom right). And to cut costs on materials and electricity, SmithGroup left the ceilings of office interiors unfinished (facing page, bottom left).

mation from, and we set up an incredible process of hoops to jump through. We whittled it down to 10, and then five. Very few firms had experience in green building, and [Keyes Condon Florance, the Washington, D.C., firm which SmithGroup acquired and renamed] had very little also, but they had the resources and desire to do it. We toured their other projects, and they demonstrated their commitment.

How did the LEED environmental rating system (see above right) help steer the design and construction?

Any project you come across will have value engineering for cost overruns. More than likely, the green stuff is going to suffer before you cut program space: you know, take out the [photovoltaic] array before taking out 10 office spaces. This rating system gives you a quantifiable objective. And the value engineering actually made the building more green.

Green

Degrees of Green

Last year, the U.S. Green Building Council (GBC), a Washington, D.C., advocacy group for sustainable architecture, launched a sort of Good Housekeeping seal of approval: the Leadership in Energy and Environmental Design, or LEED rating system. So far, the system rates mainly commercial buildings, but the GBC hopes to be able to rate interiors, residential projects, and operations and maintenance of buildings by 2003.

The rating is a scorecard of criteria in six broad areas: sustainable sites, water efficiency, energy and atmosphere, indoor environmental quality, materials, and innovation in design. "We try to guide the designers on the principles of design rather than specifically telling them what to use," says Donna McIntire, the GBC's LEED program manager.

Out of a total of 50 possible points, a score of 36 or more will earn the "platinum" designation by the GBC; the Chesapeake Bay Foundation's new headquarters is the first, and, so far, only, building to receive the platinum rating. The GBC's members—who work in the real estate, design, and construction industries—decide on the LEED criteria. "We have a democratic process," says McIntire. "The members review provisions and can reject certain parts of them."

McIntire counts 60 pilot projects under LEED and now has 47 projects officially registered. "The industry is really taking off," she says. "On our [Internet] register of projects, we've had thousands and thousands of downloads of ratings. People are using it as a guide to design and construction." For more information, log on to www.usgbc.org. *B.M.*

You have smaller workspaces than you had before. Is the staff adjusting well?

We involve our staff in all our decisions. That was one of their bigger choices: Open or closed offices, and how big are they? Everyone's desire was for offices that close and, preferably, lock. But it's harder to get natural light into closed offices, harder heating and cooling them, harder for natural ventilation. Without open office spaces, it'd be impossible

to achieve the greenness we have achieved.

So, how's the bay?

We've made some improvements since 1966. Rockfish are back. But there's still a long way to go. The [human] population is increasing because the bay is a great place to live. [It will] increase by several million by 2020, so just holding our own will be tough. And improving it is even more work. ■



Technology

Dead Zone

Good news: Abandoned warehouses all over the country are being bought and resurrected. Their new owners are reinforcing the frames, cleaning the exteriors, and, best of all, leaving the original design elements intact. But there's a catch. When the renovations are finished and the buildings reopen, they'll be just as lifeless as before, because in their new incarnation, all they will hold is data.

Data storage has become a multi-billion-dollar industry, and data-storage companies are scouring the country for buildings strong enough to hold the millions of computers on which America's data will live. Old warehouses make perfect candidates; their vast interiors and thick

floors can be easily converted to hold computers and masses of wiring.

Developers argue that this trend will revitalize America's urban centers. Many city planners, however, argue that power-guzzling buildings with no more than a security guard on-site are a waste of space. In November, Washington, D.C.'s Office of Planning mandated intense reviews for any company planning to convert existing buildings into data centers. Similar regulations are being adopted in cities like Phoenix and Orlando.

But some places are more welcoming. In Chicago, Core Locations, a Maryland developer, recently began to convert the 88-year-old R.R. Donnelly & Sons Co. building into the Lakeside Technology Center (above), and the city kicked in \$4.8 million. But Chicago made Core restore the lobby: The city figures that if it chips in for the renovation, the new tenant can at least make the place look nice. "We like to see high technology come into the city," says Meredith O'Connor, director of technology for Chicago's Office of Planning. "But it's a historic landmark." *Jacob Ward*



The building's parking area channels runoff away from the bay (top). Rainwater collects in cisterns and is used for sprinkler systems, sinks, and laundry (above).

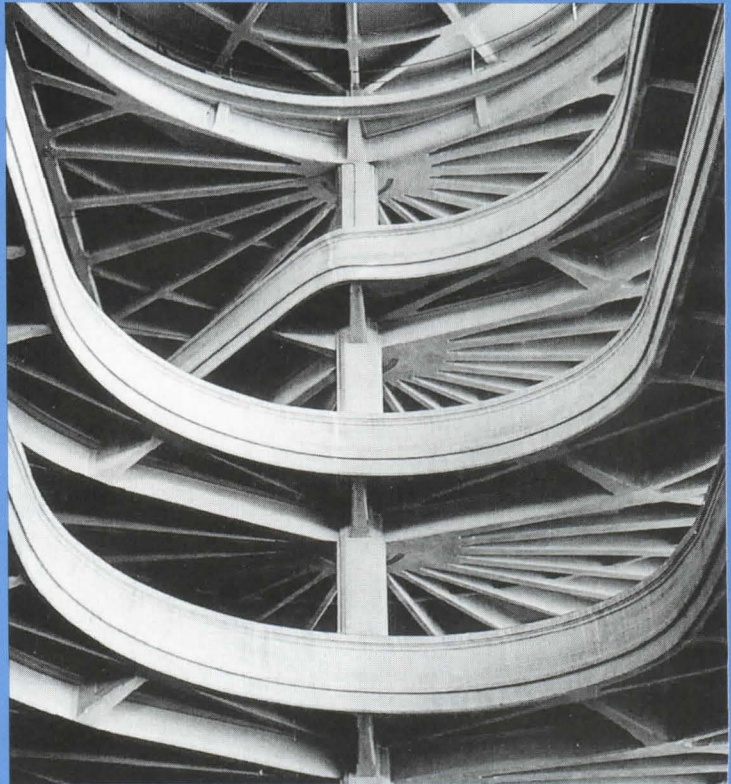
The new building boils down to two chamfered volumes: a large, rectangular office block and a smaller cube holding a conference annex. Both pieces sit atop 7- to 10-foot-high piers that open the ground beneath for 45 parking spaces (though many CBF employees bicycle or kayak to work). The form is vernacular: "We looked at a lot of fisherman's shacks and watermen's buildings, all raised up on piers with simple geometries and shed roofs," says SmithGroup project architect Gregory A. Mella.

In the office block, structural bays measure 60 feet deep, the critical distance for allowing natural light to filter to the building's northern edge. Its glassy south façade sits behind a 10-foot-wide porch running the length of the building and is delineated by a frame of engineered-wood members. The porch's frame holds a series of brise-soleils (which baffle the summer sun) made from recycled pickle-barrel wood obtained from a disused factory nearby. (The December sun shines almost directly into the offices, which *continued on page 124*

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on The 1970s: Beyond
Revivalism
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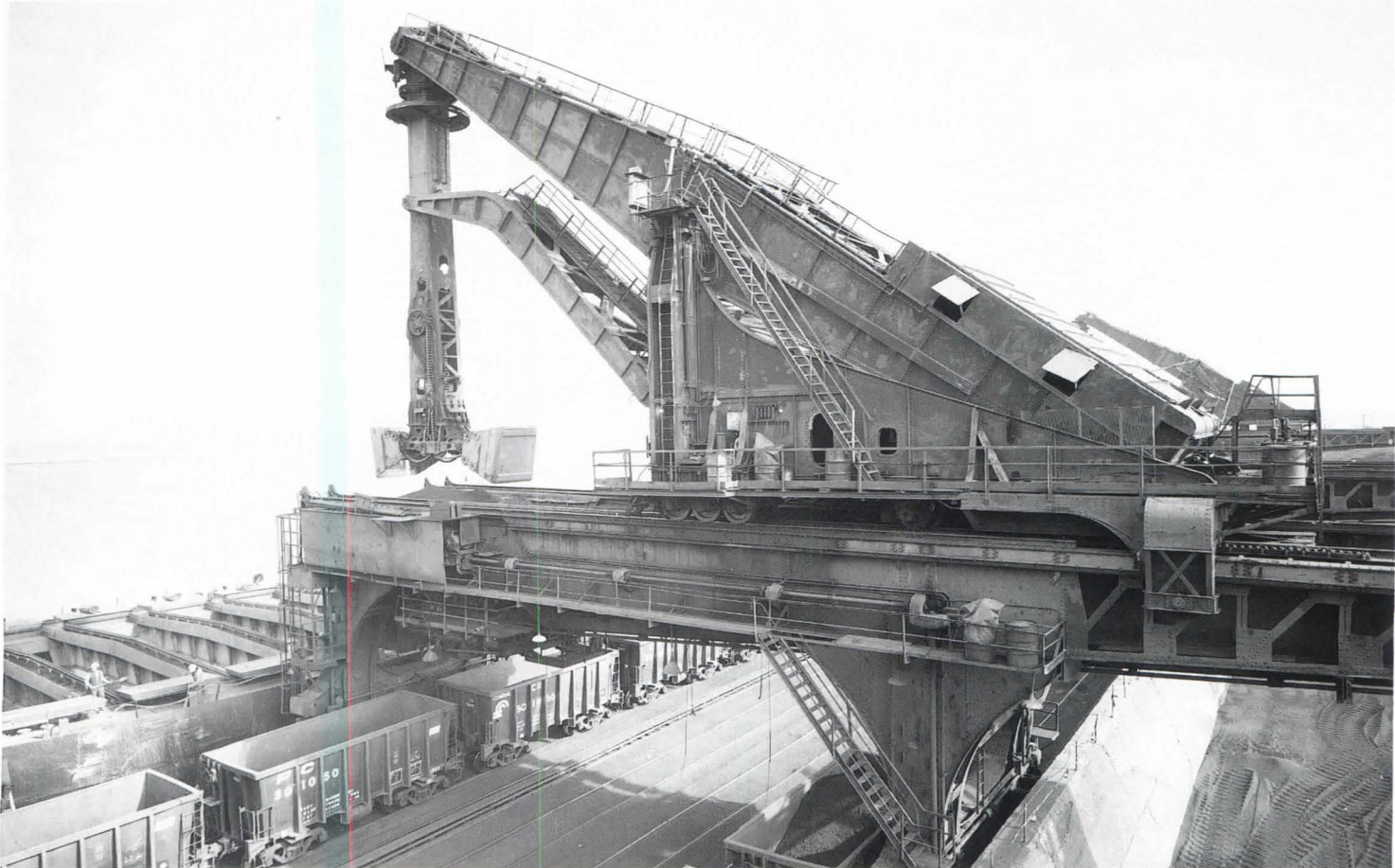


Architecture's Muse

Engineering and architectural innovations go hand in hand. **Jane Morley** reflects on their intricate intersections.

Review Few would argue that engineering work does not include an aesthetic component (and any dissidents should refer to David Billington's books on Swiss bridge engineer Robert Maillart, or the photography of Bernd and Hilla Becher). At the same time, most engineering projects are still not considered "artistic works," nor are they evaluated in aesthetic terms. "Technologists" (among architects' most frequent collaborators, they are mechanical, electrical, and structural engineers) seldom struggle with the artistic, cultural, or historical implications of their work. Architects, meanwhile, grapple almost obsessively with these very issues, and with their use of technology, the antagonistic role it plays in their work, and the theoretical questions it raises. The

The Making of the Modern Architect and Engineer details the pioneering work of concrete engineers, such as François Hennebique, whose steel-reinforced system made the Fiat Factory in Turin (1916–20) so extraordinary.



HAER's archive includes the Hulett unloader (named for the engineer who perfected it in 1898), which unloaded iron ore at Cleveland's port, a hub for rail and water traffic.

questions are loaded: Does progress in architectural and construction technology necessarily determine progress in architectural design?

Architects like Le Corbusier embraced new forms of technology, recognizing its potential to renovate not only architectural form but also prevailing assumptions about what good architecture should be. In his revolutionary 1922 book *Towards a New Architecture*, ocean liners, automobiles, reinforced concrete—broadly speaking, the machine—became a muse for architecture, in both formal and philosophical terms.

Three recent books and an exhibition address, directly and obliquely, the role of technology (in these cases, referring primarily to structural and material engineering) in modern architecture. In *Art and Technology in the Nineteenth and Twentieth Centuries* author Pierre Francastel probes developments in 19th- and 20th-century technology, architecture, and art, and confronts a conundrum: Traditional “symbol” activities (or the arts) are unleashed when they collide with unprecedented technological capabilities. But the author—a polymathic scholar who draws on philosophy, sociology, economics and anthropology—ultimately relegates technology

to a secondary role in modern architecture, refuting its deterministic role. He argues that technology, for instance, reinforced concrete, did not in itself cause a fundamental rupture between traditional and modern architecture. Rather, it was the combination of reinforced concrete construction with the preoccupation of cubism (with its departure from classical form and its juxtaposition and superimposition “of the fragments of a shattered reality onto a flat surface,” he writes) that signaled a real change in architectural style. Francastel cites Le Corbusier’s 1931 Villa Savoie as clearly influenced by cubism. Still, he carefully avoids placing cubism in a deterministic role. Unsurprising given Francastel’s scholarly biases, he maintains that there were larger forces at work that were expressed in architecture just as they were in other cultural forms.

Francastel’s book is making its first appearance in English, having been originally published in France in 1956. Read today, when technology’s role in architecture is at its apogee, his arguments seem a desperate effort to put technology in a secondary role to philosophy and other cultural factors in the production of architecture. But his thinking is cir-

cular. He writes, for example, that at the heart of cubism are “human attitudes . . . influenced by life conditions affected directly by technology.” So technology shapes culture. Then it has a deterministic role after all?

Ulrich Pfammatter would say yes. His book *The Making of the Modern Architect and Engineer* argues that technological developments in the 18th and 19th centuries caused a fundamental and permanent change in the teaching and practice of architecture, involving the institutionalization of a technical curriculum. Pfammatter, a lecturer at the famously technically oriented Swiss Federal Institute of Technology (ETH) in Zurich, surveys European teaching pioneers and institutions, narrating the emergence of the “modern architect.” Rapid industrialization with its new machines, materials, and processes required state-of-the-art

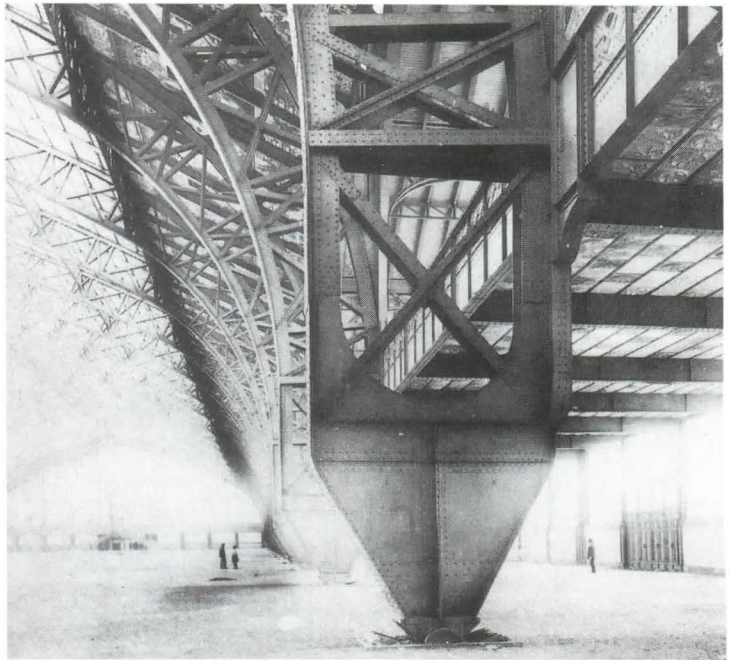
Architects wrestle daily with the extent to which technology drives (or hinders) their design visions.

training and a revised educational model that included practice-oriented studios, lectures, exercises, and projects, as well as visits to construction sites and other field work. The profession thus developed a new understanding of architectural theory and practice with regard to its new industrially oriented curriculum. According to Pfammatter, modern architectural theory after 1800 established the equivalence of “construction” and “composition,” with construction understood as an important dimension of architectural design. With this shift in theory, architecture became a technological process, as well as a product.

The National Building Museum’s exhibition *Monuments, Mills, and Missile Sites: Thirty Years of the Historic American Engineering Record* (HAER) shows technology—in crisp black-and-white photographs of machinery, factories, bridges, dams, and other engineering feats—as a tool, but also as a muse, in much the same way Le Corbusier saw it. The contents of the show, which are a tiny fraction of HAER’s archive, are strikingly reminiscent not only of the artistic photography of the Bechers but of the images in *Towards a New Architecture*. Unencumbered by Le Corbusier’s ideological text, these documentary-style records of industrial structures nonetheless beckon designers with new forms and possible new languages for architecture.

The exhibition celebrates HAER’s 30-year history of documenting over 7,500 sites in the United States. Its more than 68,000 photographs, 3,500 measured drawings, and 56,000 pages of data comprise an exceptional archive of American industrial and engineering prowess. HAER projects include standard fare such as the Brooklyn Bridge, but also sites that would not immediately come to mind, such as the White Sands Missile Range, home of the first atomic bomb test.

Most of the images were taken by Jet Lowe, who has been the primary photographer for HAER and its sister program HABS, the Historic American Building Survey, for 23 years. His sensitive work provides a stunning contribution to the canon of visual literacy for the architecture



For the 115-meter-wide hall of the Palais des Machines at the 1889 Paris Expo, mechanical engineer Victor Contamin devised a system of three-hinged trussed girders.

profession. Coincidentally, a volume has recently been published and serves as a good companion to the HAER exhibition. *Industry, Architecture, and Engineering: American Ingenuity 1750–1950* by Louis Bergeron and Maria Teresa Maiullari-Pontois contains primarily images from HAER, and is perhaps the most comprehensive illustrated history of American industrial and civil engineering. In both this monograph and the HAER exhibition, one engineering accomplishment after another captures the eye and the imagination: the Statue of Liberty with its iron structure clad in copper only three-eighths of an inch thick—arguably among the earliest curtain-wall structures ever built; a wooden whale-like covered bridge undulating like a Frank Gehry museum.

Architects wrestle daily with the extent to which technology drives (or hinders) their design visions. The range of technologies relevant to architecture now encompasses molecular chemistry, artificial intelligence, imaging devices, and more. Architecture’s muse is multiplying—as are its consequences. ■

Art and Technology in the Nineteenth and Twentieth Centuries, Pierre Francastel, foreword by Yve-Alain Bois (Zone Books/MIT Press)

The Making of the Modern Architect and Engineer, Ulrich Pfammatter (Birkhäuser/Princeton Architectural Press)

Monuments, Mills, and Missile Sites, National Building Museum, Washington, D.C., through May 20.

Industry, Architecture, and Engineering, Louis Bergeron and Maria Teresa Maiullari-Pontois (Abrams)

Architectural Model

Move Over, Barbie

It is fitting that the most popular fin-de-millennium doll was not Barbie but Amanda the Architect. Hitting the stores last fall and selling out by Christmas, Amanda is the latest in Smartees's "Smart Friends for Smart Girls" doll series, founded by two professional women who wanted to have "positive playpals" for their own new daughters. Amanda's clique includes Vicky the Veterinarian, Emily the Entrepreneur, and Jessica the Journalist.

Amanda's eToys profile reads: "Since she was young, Amanda has had a flair for design. Now she's an architect who makes her living designing and sketching plans for safe and attractive buildings." Amanda comes with her own T-square, hard hat, and plot-



ter—as well as an outsized brush and comb (she wouldn't want to have to borrow those from Barbie). Amanda the Architect is \$19.99, through www.eToys.com or www.smartees.com.

Customer comments:

Bill in Cincinnati: "What a great product. My wife Amanda is an architect. I'm going to buy many of these for Christmas."

Harvard GSD Students:

"The first-year architecture students at the Harvard GSD think Amanda the Architect is just fabulous, although most architects would not wear a red-belted suit—one might want to reconsider Amanda's outfit. Perhaps a black pantsuit, and maybe some Gucci shoes. Oh, and that model she is holding . . . not sure that is the direction that architecture is heading in lately. The doll is a swell idea."

Karen in Washington, D.C.:

"As a female architect, I would never wear a red power suit to a client meeting. I want the client to pay attention to the project, not to me. Basic black is good, interesting fabrics, avant-garde jewelry. The red outfit is better-suited to executives and sales representatives."

Beau, 10-year-old boy in

Boston: "I have one at home and she's lots of fun. She looks real professional. She means business and that's real neat, but I know she can go to parties and have LOADS of fun."

Cathy Lang Ho

Revival of The Fittest

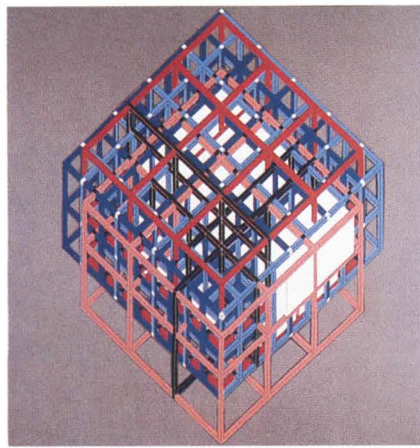
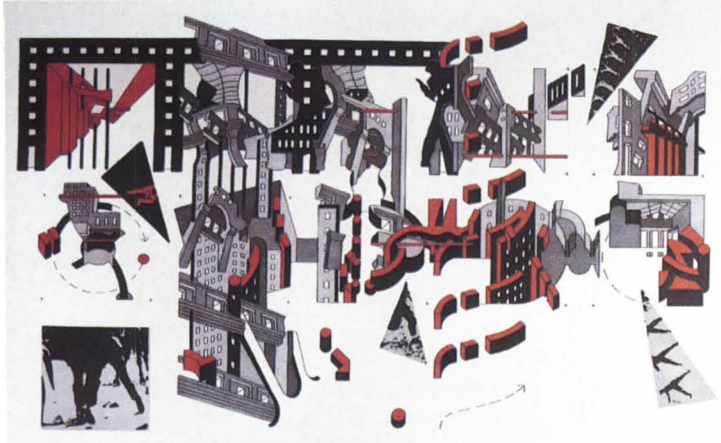
During the 1970s, architectural discourse thrived. What does contemporary architecture owe to those early debates? **Michael Hays**, **Brendan Moran** and moderator **Liane Lefavre** talk it out (and **Jeffrey Kipnis** hangs up).

Dialogue The influences of the 1970s recently have cropped up everywhere it seems—in furniture, interior design, fashion, products, graphics, music, art. In architecture, however, that influence is less obvious, less glittery. *Wallpaper* magazine and other pop media sources have flattened the era into a slim glossary of forms. The general perception of this recent but already forgotten period is that it was an era preoccupied with formalisms, owing to the dominance of postmodernism, and the proliferation of seemingly self-involved "paper architecture."

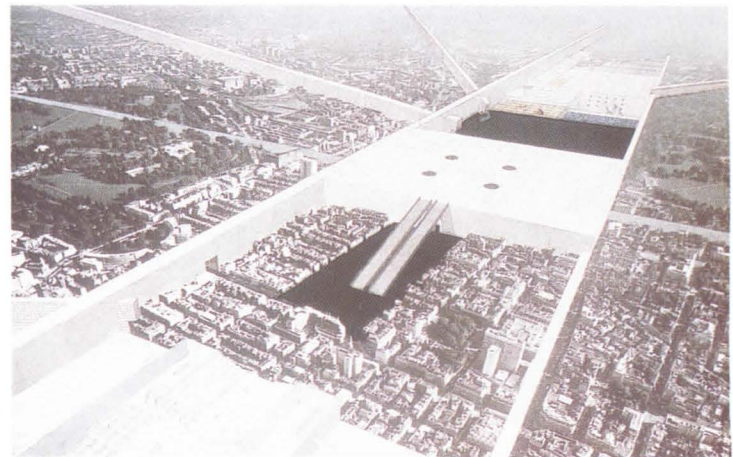
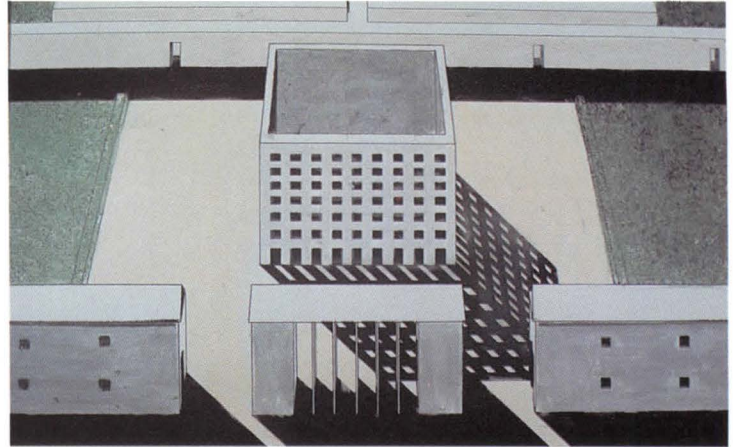
Three concurrent projects debunk ideas about Zeitgeist, style, and formalistic retreats. At the Wexner Center, architecture curator Jeffrey Kipnis's inaugural exhibition *Suite Fantastique* includes, as one segment of a larger four-part composition, "Perfect Acts of Architecture," an ode to the flourishing of paper architecture of the 1970s. At Harvard and Cornell, professors Michael Hays, George Baird, and Val Warke have organized a lecture series titled "The '70s: The Formation of Architectural Discourse." And "Resurfacing Modernism," a forthcoming issue of Yale's journal *Perspecta*, edited by Annmarie Brennan and Brendan Moran, explores the decade from new theoretical angles. In this discussion among Kipnis, Hays, Moran, and *Architecture* contributing editor Liane Lefavre, it becomes apparent that architecture culture in the 1970s was the breeding ground for many of the formal and conceptual developments that architecture is experiencing today.

Liane Lefavre: Why was the 1970s an important period for architecture?

Michael Hays: In the 1970s architecture faced external factors, like economic recession, the oil crisis, Vietnam. In addition, there were encroachments into the field from other disciplines, like sociology, behaviorism, operations research, and more. In other words, many factors began to chip away at architecture's traditional vocations. Architecture had to virtually reinvent or recode itself in the 1970s. This reinvention or reterritorialization of the discipline began in the 1970s and persists to this day.



In the 1970s, with actual building curtailed, architectural experimentation erupted, forming the basis of some of today's most high-profile work. Clockwise from upper left: Bernard Tschumi's *The Manhattan Transcripts* (1978); Aldo Rossi's *Cemetery of San Cataldo* (1971), Rem Koolhaas's *Exodus, or Voluntary Prisoners* (1972), and Peter Eisenman's *House 6 Transformations* (1972).



Brendan Moran: I don't think you can believe the 1970s aren't relevant to what's happening now. I don't think that you can imagine that any sort of reinvestigation of the midcentury, which is suddenly of interest again, isn't considering a lot of the other things that have happened in between. The rather simplistic story is: glass boxes and International Style, then postmodernism, and now *Wallpaper*. There must be more to the story of the last half decade than that.

Jeffrey Kipnis: Why do any of you think I am interested in the 1970s?

LL: "Perfect Acts of Architecture," a section of your much larger exhibition *Suite Fantastique*, deals specifically with the phenomenon of paper architecture, which you tie specifically to the 1970s. Wouldn't you agree the five architects you are presenting [Rem Koolhaas, Peter Eisenman, Bernard Tschumi, Daniel Libeskind, and Thom Mayne] are products of the 1970s?

JK: Yes. I mean, who or what isn't a product, in some sense, of the

moment [during which] they materialize? But I don't think they are the product of any Zeitgeist. I didn't call the works [in the exhibition] "perfect acts of history." My thinking about these projects is that they have perfected a certain trajectory of architectural development that actually began at the turn of the century. I don't really agree with Michael that a certain fissure occurred that obligated architecture, in an unusual sense, to begin a redefinition or anything like that. I do think that there was, as in any storm, a kind of tumult, and therefore there may have been a kind of exaggerated sense of project. But what's really interesting to me about the work is the degree to which it demonstrates a real intensification of a research. That research has some economic and social relationship to issues at the moment, but also draws on other systems.

BM: The term "Zeitgeist" implies "style," or some stylistic tendency that prevails; thinking in those terms tends to make any era less interesting, and less cogent because you have to hammer things into cubbyholes. They'll always lose their luster when that happens, even if it is 1970s gold lamé.

MH: There are surely some things that emerge in the paper architecture of the 1970s that continue a certain formal research of an older modernist project. But during the 1970s the same formal project began to work itself into exhaustion and new associations, “transcodings,” or “resonances” were found. There were graftings of architecture with linguistics, film, performance art, choreography, as well as the more well-known graft of architecture with painting or sculpture. The radical heterogeneity of media that is so fascinating and problematic [in architecture now] actually began then.

BM: Our [*Perspecta*] contributors found the 1970s to be the birth of a lot of things—product-positioning or branding, formalism’s continuous leapfrogging, the possibility of punk architecture, the nadir of today’s oh-so-stylish “surface” (i.e., the curtain wall), the media explosion.

JK: For me, the 1970s was a time when people were trying to grapple with social life and collective life, in every circle.

LL: I always thought of the 1970s as a period of narcissistic, formalistic retreat—and an unfortunate turn from the 1960s, when architecture was emboldened by a strong sense of social purpose.

JK: You know what? I don’t think I can contribute to this conversation. Bye. [Hangs up.]

LL: Oh. That was unexpected.

MH: Let me respond to Liane’s accusation of formalism. It seems to me that accusing an architect of formalism is like accusing a fish of aquaphilia. That retreat to formalism, as you describe it, doesn’t bother me so much. You have to realize that the 1970s, neither culturally nor economically, could possibly sponsor the social projects that we would have hoped for. The “formalistic retreat,” if you want to call it that, was a time of looking again at what architecture could do socially.

LL: You think socially? You think that the 1970s was a time when people approached social issues in architecture with a can-do attitude?

MH: I think they approached them with a different knowledge of the real limits of architecture’s social vocation. [The thinking was] it might be better to keep to producing ideas of alternative forms, alternative spaces, alternative ways of inhabitation and observation. Just keeping the idea of alternatives alive is, I’d say, of social value.

BM: As to Liane’s formalist question, if you ask writers who aren’t devoted formalists—those who are invested in feminism or cultural studies or other directions—to look at that work and that time critically, they would not come up with the same story we’ve heard before. Besides, while the formalism-elitism marriage in architecture maybe

hasn’t been completely annulled, there have been some really constructive trial separations. So the White/Gray debate can be seen [not only as the famous battle between the modernists and the postmodernists, but] as an effort to reach beyond an exhausted tradition of “high” practices, in which all architecture culture was in some way elite.

LL: Architecture was less elitist before the 1970s. In the 1960s there was a populist movement in architecture that was lost by the 1970s.

BM: But I would say the “high-low” schism from the 1970s hasn’t disappeared, nor has it played out as earlier skirmishes suggested. For example, the standard take of the White/Gray debate is European elitism pitched against American populism, with commercial pragmatism occupying the middle road, but that certainly isn’t all there is to it. If you want to see figures like Bob Stern, Michael Graves, John Hejduk, Peter Eisenman, Cesar Pelli—and their myriad students in practice now—as only invested in formalism, then you’re not going to get more out of that moment than has already been found. There are other figures and other ways to address the era.

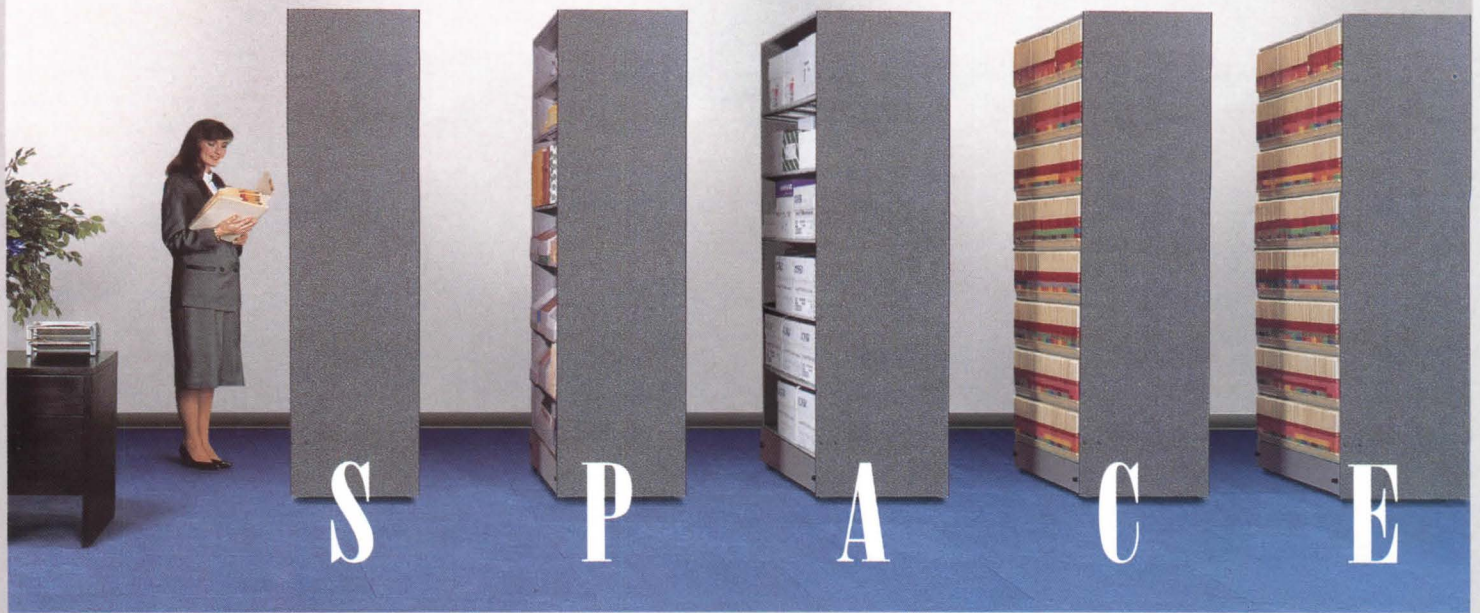
MH: One of the things that makes the ’70s the ’70s and not the ’60s is 1968. The dark side of the 1970s is the psychological working-through of the failure of certain social projects, and also of a grounded architecture. I think of the melancholy of Aldo Rossi, whose work is a painful recognition of a way of living in the city that could not be sustained, a loss of the ways cities produced typologies that were legible to communities. You can accuse the 1970s of being a period of narcissistic retreat, but you can also recognize it as a time of reflection and retooling.

LL: Do you remember, Manfredo Tafuri said that, in the face of all this pessimism, it was time for architects to start enjoying themselves.

MH: I think a lot of what you’re calling formalism is an attempt to find ways of resisting the consumer culture that, by the 1980s, had overwhelmed architecture.

LL: So what does any of this have to do with architecture today?

MH: You can’t get to Greg Lynn’s animate forms without going through Peter Eisenman’s 1970s transformational processes. You can’t get to Diller + Scofidio’s cyborgs or Steven Holl’s moody spatial narratives without Hejduk’s fables and masks. Herzog and de Meuron begin with a flight out of Rossi and Venturi. Tschumi’s early projects are full of anticipation of a lot of the thought about the complexities of urbanism today, as well as about architecture in a consumer society. And look at what Koolhaas does with the elevator in *Delirious New York* of 1978 and what he does in the Bordeaux House of 1999. In both projects, the technical device produces intense experiential effects almost without “architecture” in any traditional continued on page 127



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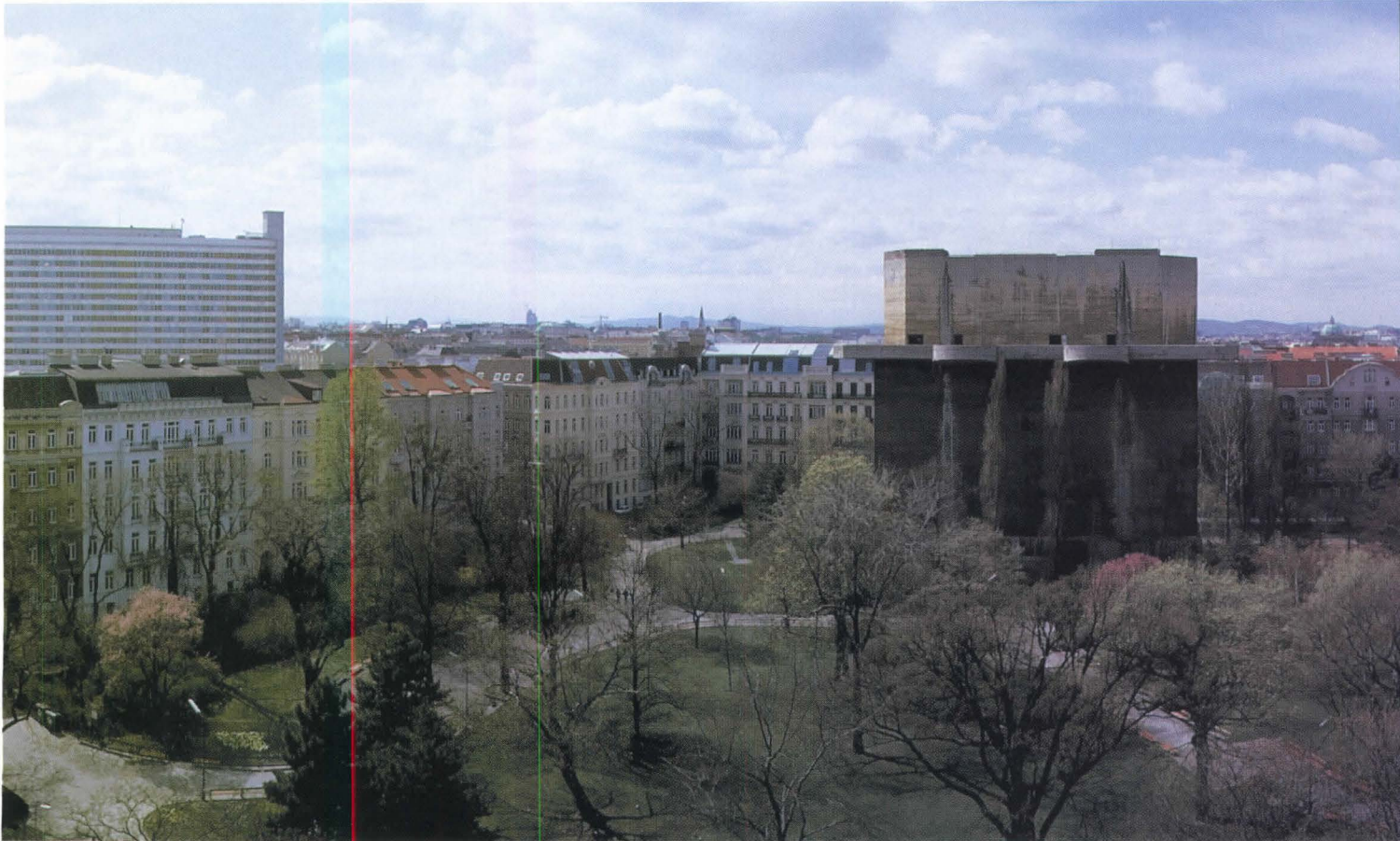
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De-Bunkered

Peter Noever of the MAK Center recycles a Nazi anti-aircraft tower into a contemporary art gallery. **Liane Lefavre** assays the transformation.

Vienna is arguably one of the most refined, elegant, and architecturally pedigreed cities in the world. What was it to do with the six ungainly, towering concrete bunkers that arose in its midst during the Nazi occupation? For the past 50 years, it just pretended they weren't there. Now, Peter Noever, director of the MAK (Museum für Angewandte Kunst, or Museum of Applied Arts, which was founded as part of what is now the University of Applied Arts in 1863), wants to turn one of these structures into a bastion of art.

These are no ordinary bunkers. They are the biggest anti-aircraft towers in the world, and have been grim mementos of the city's Nazi past ever since they were erected between 1942 and 1943. Containing bomb shelters, hospital facilities, artillery, among other things, the 10-story-high towers dominate the skyline of Vienna's historic First District, which is girded by the famous mid-19th-century Ringstrasse—a bustling succession of architectural masterpieces including Gottfried Semper's Museums of Art History and Natural History, Otto Wagner's Post Office Savings Bank, and Adolph Loos's American Bar. The six *Flaktürme* or "flak towers" are clustered in pairs (one radar tower, one artillery tower) and form a disturbing counterring to the Ringstrasse. With reinforced concrete walls ranging from 6 to 23 feet thick, they are indestructible.

The flak towers have been the subject of artistic exploits for decades. In 1960, Hans Hollein proposed to make the tower in Esterhazy Park the main monument of the city, as part of his pop-art series *Transformations*. In 1976, Christo proposed to wrap the same tower as a temporary installation. Noever's CAT (Contemporary Art Tower) is the most pragmatic



proposal to date. He persuaded Austria's Federal Chancellory to "give" MAK the radar tower in Arenberg Park in 1995; until now, MAK has used it mostly as storage for its extensive collection. The MAK was originally founded to present the work of the students and professors at the Arts and Crafts-inspired design school next door. Devoted to the applied arts, both school and museum embraced "low" rather than "high" creative production, showcasing common objects, like furniture, fashion, household products, as well as architecture.

Since his appointment as director in 1986, Noever has carried on the MAK's broad-minded mission, inviting artists such as Ilya Kabakov, Rebecca Horn, Damien Hirst, Bruce Nauman, Rachel Whitehead, and Robert Wilson to exhibit in its 19th-century galleries. In the tower, MAK will create a center for exhibitions, workshops, and studio spaces for visiting artists. The CAT extends the same idea that Noever initiated in 1994 with the establishment of MAK's satellite Center for Art and Architecture in Los Angeles, which occupies two early Schindler houses. Staging exhibitions and hosting artists and architects in residence, the center is

The Museum of Applied Arts (MAK) in Vienna has annexed a military bunker as the Contemporary Art Tower (CAT) (above left). Four oculi open the roof of the 10-level structure to the sky (above right). The top level will be a restaurant and bar.

dedicated to exploring work "that lies in the often contested and contradictory territory between the disciplines," says Noever.

Though Noever is in the process of securing funding from Vienna's Minister of Construction, he intends to make the CAT as financially independent as possible. Just as he shocked Vienna by turning an entire section of the original museum—once devoted to its permanent collection—into a restaurant, he plans on including commercial activities at the CAT. The entire lower third of the building is reserved for retail and events, and the top two levels will have two restaurants and a bar.

In what must be a first, the Austrian-born editor, designer, and curator appointed himself as the architect of his own project, in partnership with local architect Sepp Müller and engineer Michael Embacher. Their intervention for the CAT is minimal: They created a "Media and Supply Tower," a fragile glass-and-steel construction set in deliberate contrast to the

Les situations d'urgence sont-elles le germe d'une nouvelle condition urbaine ?



City

Mutations, Arc en Rêve
Centre d'Architecture,
Bordeaux, France,
through March 25.
Catalogue through D.A.P.

The exhibition *Mutations* is yet another invocation of the maelstrom of advancing urbanization. Staged in the Entrepôt, a vast 19th-century warehouse that once received the spoils of the French colonies, the show charts the urban effects of colonialism's latest ramification: globalization. The chaotic assembly of architectural, photographic, and cinematic material depicts the endless extension and vulgarity of the majority of the world's cities today. Questions like "Has shopping become the principal ritual of urban life?" or "Will local differences be maintained in the face of globalization?" wax rhetorical and produce cynical affirmations of the status quo, rather than a challenge to the current situation.

Presiding over this doomsday assemblage is Rem Koolhaas, who has spent enough time recently shopping around in China and

Nigeria to propose an insidious ideological convergence between the developing world and American commercialism. Sanford Kwinter curates the gloss on the U.S., mostly Houston—the unopposed champion of deregulation. Stefano Boeri investigates European sprawl under the moniker U.S.E., or the Uncertain States of Europe. Jean Nouvel's design for the exhibition, meanwhile, guarantees a slick exchange between objects of desire and presentiments of calamity.

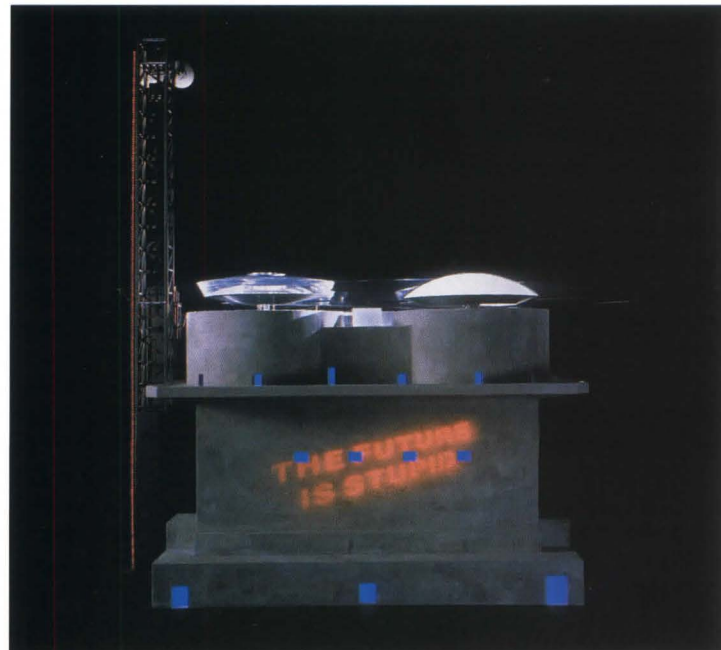
The masterful photography of Gabriele Basilico, Alex MacLean, and Francesco Jodice undermines, to some extent, the professional reflections on urbanism and architecture that *Mutations* presents. In these high-quality compositions, the state of things appears more interesting than the efforts to transform them. Any valid or sane urban responses in the world are excluded from this exhibition, as if to not compromise the millennialist aesthetic of uncontrollable urbanization.
Richard Ingersoll

bulkiness of the main structure. The slender tower houses an elevator that permits access to each floor and the rooftop. On the roof, they designed spaceship-like glass dishes that hover over each of four oculi, skyward openings that allowed surveillance equipment and artillery to peer out.

Noever also brought in artists James Turrell and Jenny Holzer to collaborate, demonstrating one of MAK's important objectives: to blur art and architecture. Turrell's circular Skyspace Bar is located beneath one oculus, and offers a clear view to the sky. Holzer's design is an attention-getting searchlight placed atop the Media and Supply Tower. She will also project text and images onto the tower itself, transforming the tower into an artwork, as well as a source for broadcasting art, information, and news.

The CAT raises a number of questions. Can a Nazi building be recycled as an art center without banalizing history, particularly in a city like Vienna, which is so famously amnesic about its Nazi past? Less ponderous but still intriguing is the relationship between art and architecture today. What is the difference between them? Can they be brought together? What can one contribute to the other? These are particularly Viennese questions, and tied intimately to the history of the Museum of Applied Arts. The institution itself was conceived as a kind of "total work of art" or *Gesamtkunstwerk*, a melting pot for all the artistic fields. The CAT is a rare case of history, art, and architecture converging. ■

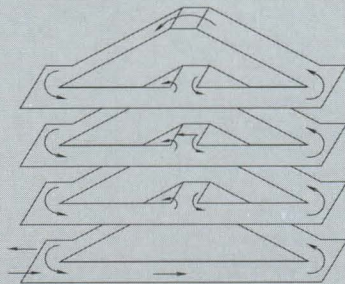
Liane Lefavre was recently nominated the Chair of Architectural Theory and History at the University of Applied Arts in Vienna.



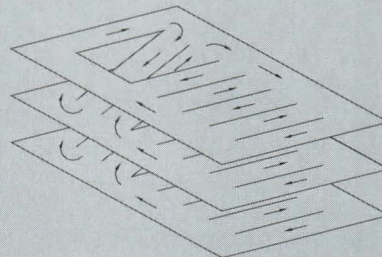
Noever, Müller, and Embacher's addition to the fortress is a slender tower that allows access to each floor. With searchlights attached, courtesy artist Jenny Holzer, it also becomes a beacon of art. Holzer also proposes to project texts on the building (above).



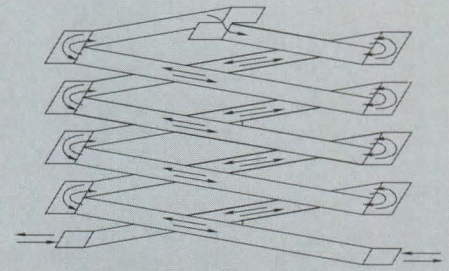
architecture



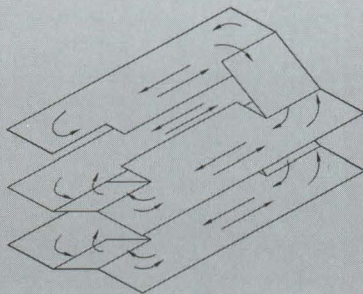
CAMELBACK
Single-Threaded Helix Combination



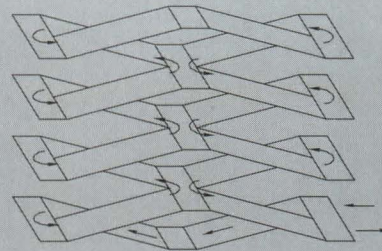
FOUR-BAY SIDE-BY-SIDE WITH SIDE FLAT BAYS
Flat Floor Parking



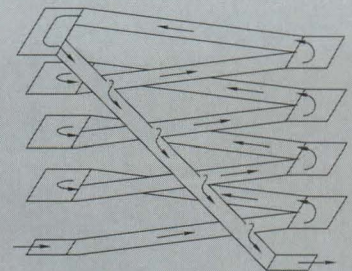
TWO-WAY FLOW
Two-Bay Double-Threaded Helix



TWO-WAY FLOW
Split Level



END-TO-END
Single-Threaded Helix Combination



ONE-WAY FLOW
Two-Bay Single-Threaded Helix

PARKING STRUCTURES

Parking occupies a passive place in the collective consciousness. Most people want garages and surface lots to be readily accessible, but invisible; they think of them as necessities, not amenities. Considering that garages are typically designed by *Graphic Standards* rote (above), it's understandably easy to forget that places for parking are just that—places, settings for events sometimes only tenuously connected to the storage of cars. Witness Jason Fulford's photographs of suburban Texas garage interiors, packed to the rafters with everything from ladders to lawn chairs. Parking lots, so often forlorn, occasionally come to life with football-season tailgate parties, summertime flea markets and swap meets, or the encircled cars of teenagers who have nowhere else to spend their weekend nights. Other activities are less convivial, as Deane Simpson demonstrates in his study of 1960s and 1970s action movies, in which someone always seems to get ambushed in a downtown garage. The beauty and inventiveness of the seven garages assembled in this issue may not help prevent crime, but they might at least help change peoples' attitudes towards parking.



P1

Project

Disney Resort

Guest Parking Structure

Anaheim, California

Architect

Wolf Architecture

If you're planning on going to Disneyland after winning your next Olympic medal, there'll be no need to encourage your car-mate to pray for parking. While elsewhere in America, white-knuckled drivers are gripping their steering wheels in frustration as they circle the block looking for that elusive space, you'll be sailing, so to speak, off Interstate 5 right onto the entrance ramp that leads directly into the world's largest parking structure.

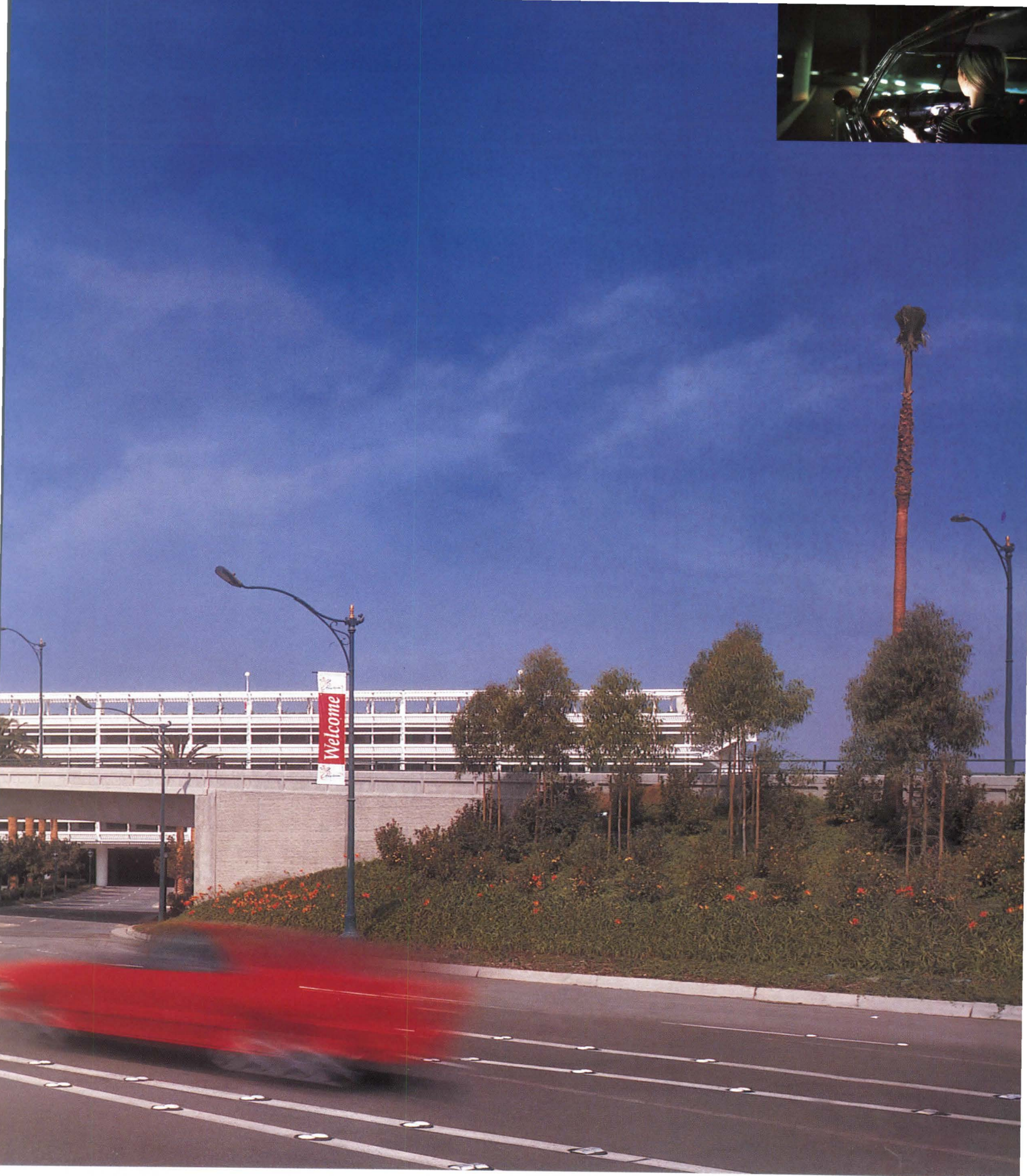
This new parking facility, designed by Harry Wolf, principal of Wolf Architecture, is the keystone in Disney's efforts to expand their Southern California kingdom.

Land previously used for surface parking has now been reclaimed for a new theme park, as well as for the new garage which houses up to 10,500 cars. As drivers enter—at a rate of 60 cars per minute—they line up to one of six booths where they are directed to a specific parking area. "In elephantlike fashion, nose to tail, the cars move up through the building and park in tandem," quips

Wolf. This "conga line" reinforces efficiency as cars empty and visitors make their way to a pedestrian zone at the east end of the building, and then down an escalator that deposits them at the tram pickup. No need to worry if the lemming or elephant in front of you loses their way—plenty of smiling "cast members" are there to keep the show going.

It was no easy task preventing a structure that is as long as the Chrysler Building is high from looking like a behemoth. Wolf didn't want the relentless appearance of a factory, or the Pentagon. Instead, he likened the design to a ship or an oil refinery: The parts make up the whole but "explicate the intelligence of the building. There is a logic to how it works." Each façade addresses the site through its tectonics. The mass of the west side, for instance, is broken by precast-concrete planters in deference to the residential neighborhood across the street. The north and south façades comprise a series





The pedestrian zone located on the east façade (top and facing page) is protected by sunscreens. The louvers shield the eyes from glare, but also animate the surface with shadows. Three pairs of escalators empty the fifth, third, and second floors to trams which transport visitors to the park (below and facing page). Interstate 5 carries cars past, and directly into, the parking garage (previous page and facing page).

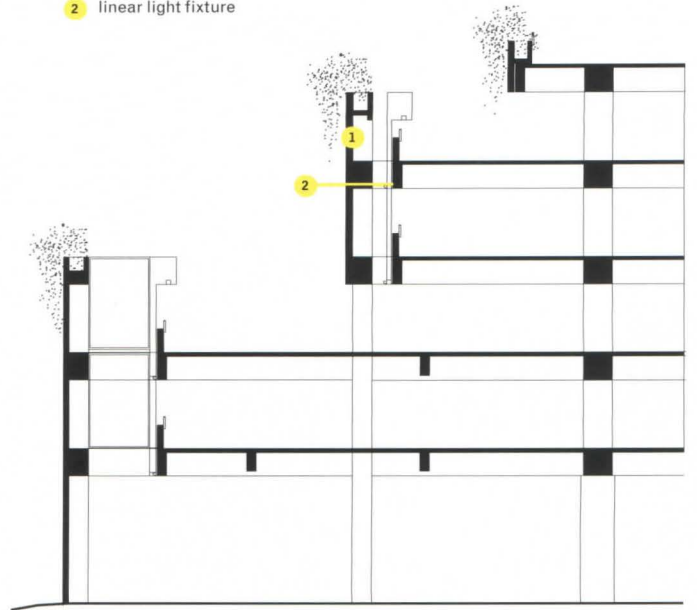






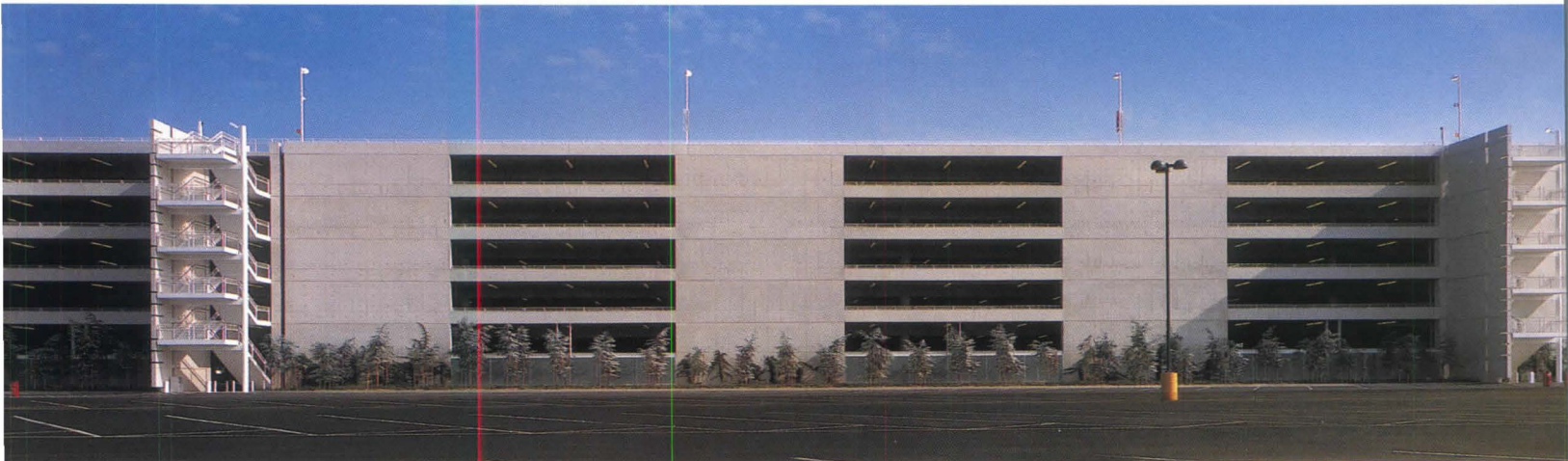
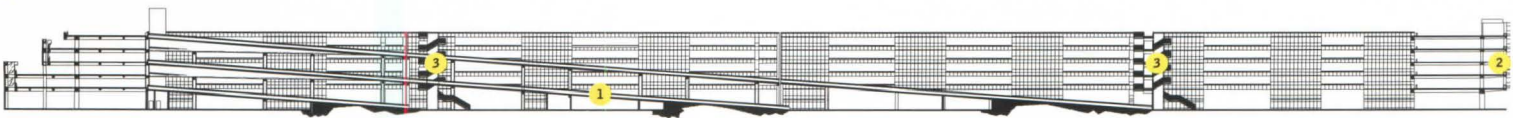
West-wall section 8'

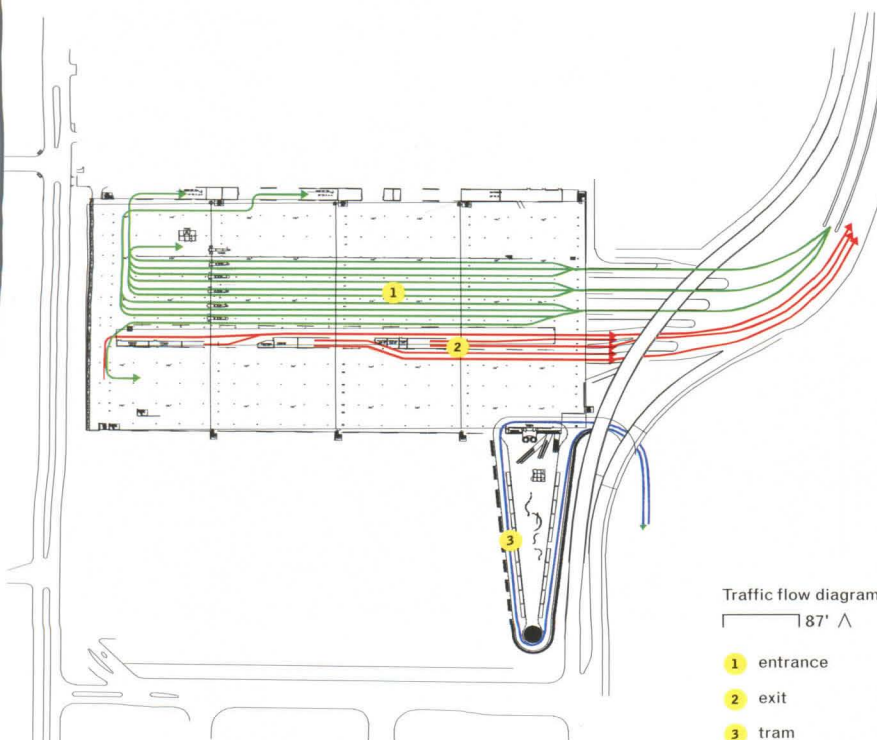
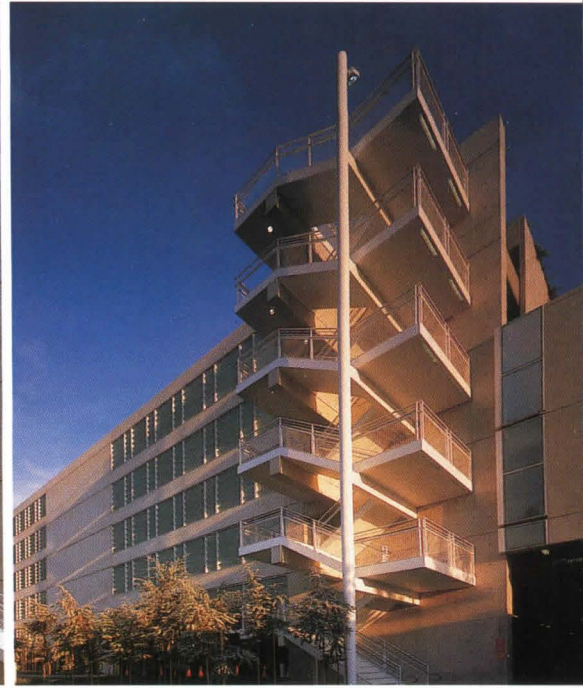
- 1 precast-concrete panel
- 2 linear light fixture



East-west section 29'

- 1 ramps
- 2 pedestrian zone
- 3 exit stairs



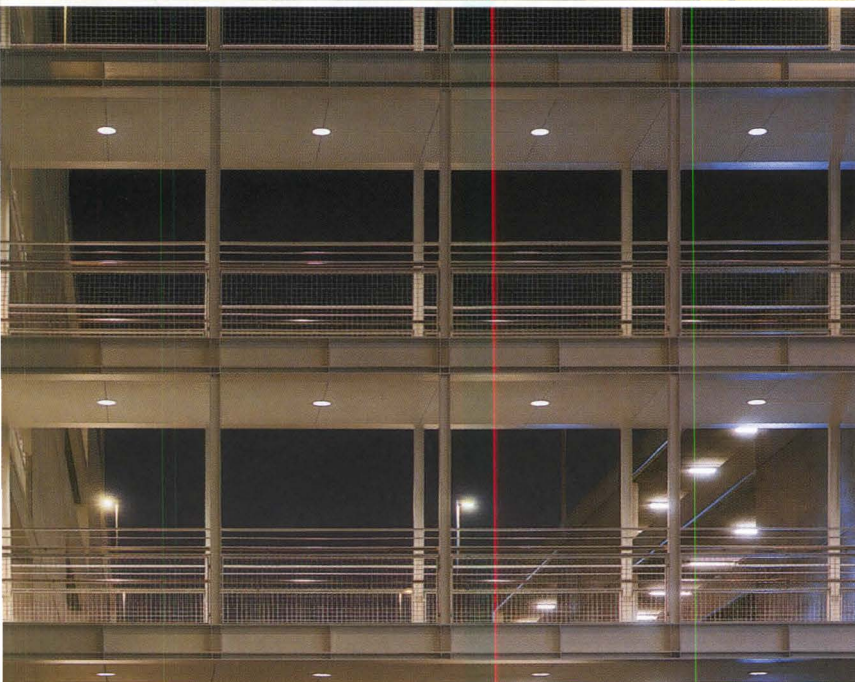
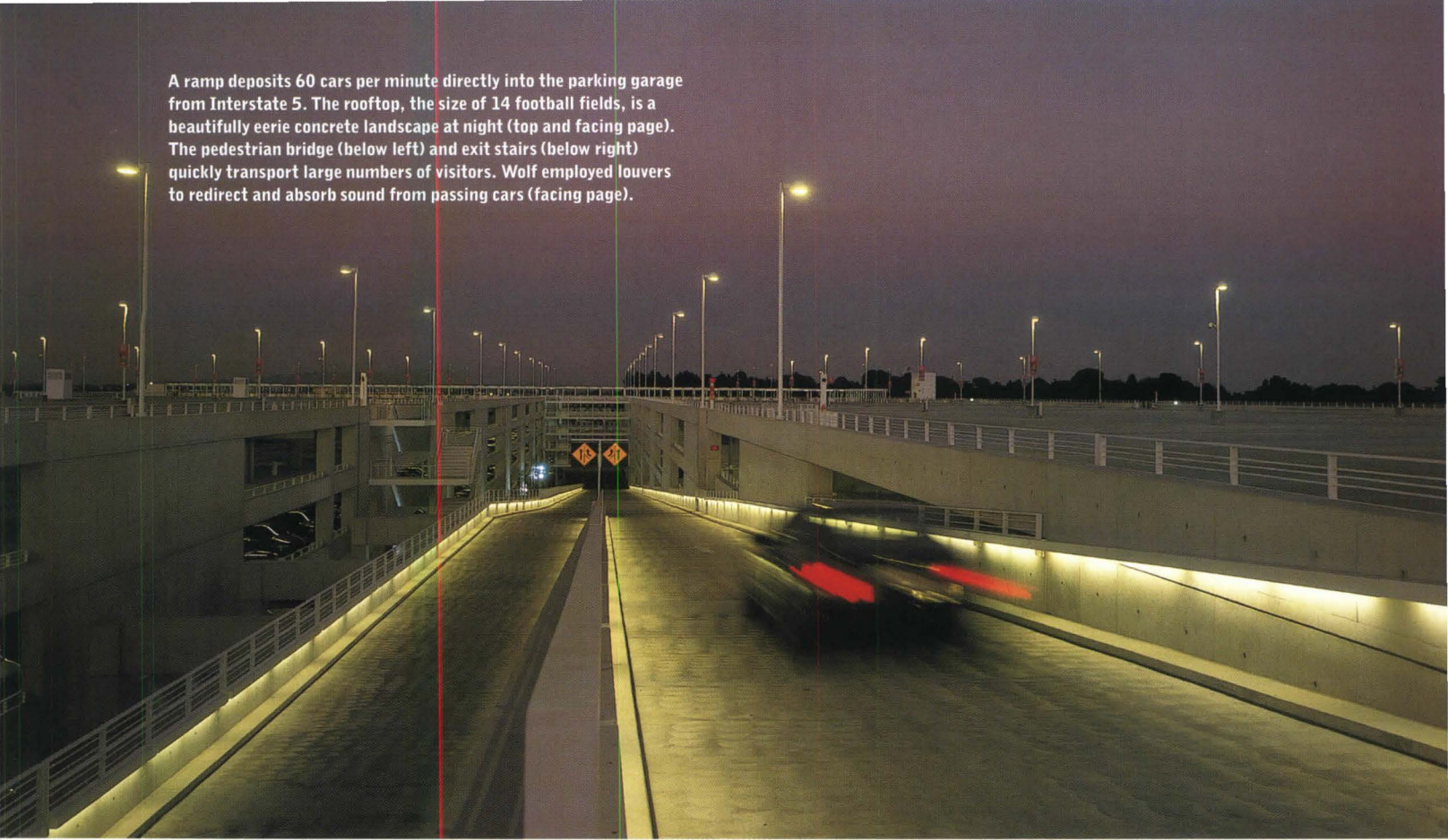


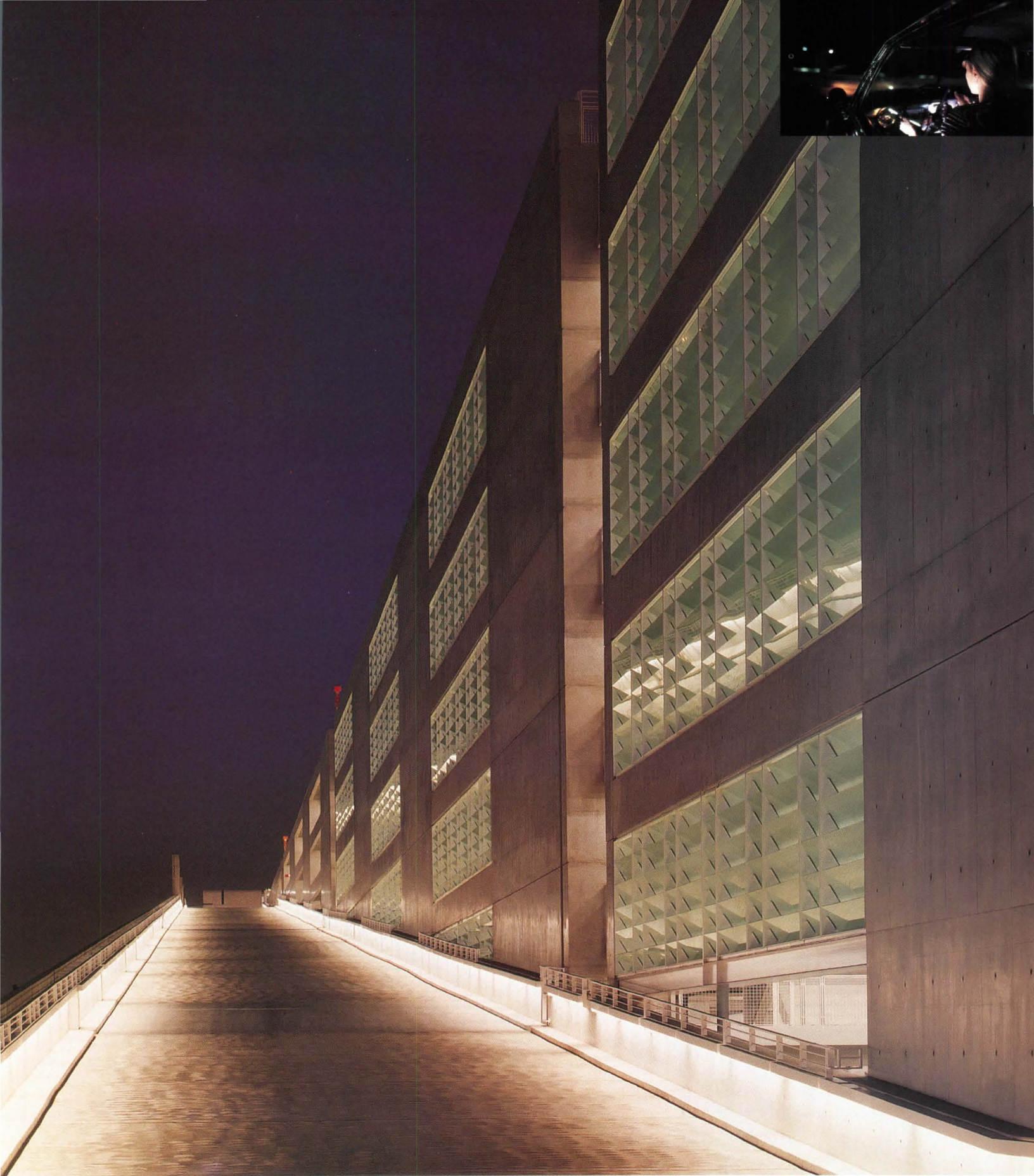
Stepped precast-concrete planters defer in scale to the residential community on the west façade (facing page, top). Extruded exit stairs help articulate the south façade (above left and facing page, bottom). A steel pedestrian walkway bridges the north and south sides of the garage together over the car ramp (above center).

of seismic shear walls, each 39 feet wide and 61 feet, 7 inches tall, linked by 51-foot-long post-tensioned beams. Wolf likens them to Roman aqueducts that help make the scale comprehensible. Exit stairs are pulled out to articulate the elevations. Wolf deployed louvers on the east side, where pedestrians walk to escalators, to protect eyes from the sky's glare as well as to help drivers adjust to the dimmer light as they make their way through the garage.

The massive new parking garage is vital to the daily operation of the Disney Resort, which now includes not only Disneyland, but the new California-themed park, a resort hotel, and a Downtown Disney entertainment center. By strengthening and centralizing parking, Disney hopes to transform frustrated road warriors into worthy citizens of the "happiest place on earth." *Joelle Byrer*

A ramp deposits 60 cars per minute directly into the parking garage from Interstate 5. The rooftop, the size of 14 football fields, is a beautifully eerie concrete landscape at night (top and facing page). The pedestrian bridge (below left) and exit stairs (below right) quickly transport large numbers of visitors. Wolf employed louvers to redirect and absorb sound from passing cars (facing page).







An open cantilevered structure (above) brings light into the well-trafficked pedestrian zone (above and facing page). The enfilade of closely spaced painted columns separate cars from pedestrians. Each floor is painted its own color and tiled with a California flower to remind visitors where their car is parked.



DISNEY RESORT, GUEST PARKING STRUCTURE, ANAHEIM, CALIFORNIA

CLIENT: Walt Disney Imagineering, Anaheim, California—Tom Kozlowski (director, master planning & entitlement) **ARCHITECT:** Wolf Architecture, Malibu, California—Harry Wolf (principal-in-charge of design); Madelaine Fava (design architect); Jon Frishman (project architect); Steven Fernandez (deputy project manager); Peter Seyfarth (project manager); Tim Shea (deputy project manager); Chun-Wai Ho (chief technologist/design team member); Nila Myint (design team member); Jose Valeros (design team member); Patricia Takanashi (administrative assistant) **LANDSCAPE ARCHITECT:** The SWA Group **ENGINEERS:** Walker Parking Consultants (parking/structural); Guy Nordenson and Associates (special structural consultant, peer review) **CONSULTANTS:** Fisher Marantz Stone (architectural lighting); Hanscomb Associates (cost estimating); Ito Engineering (mechanical); JKH Mobility Services (elevators, escalators); Law Crandall (geotech); OMB Electrical Engineers (electrical); R.A. Heintges (architectural metals); RBF & Associates (civil); Reginald Hough (architectural concrete); Schiff & Associates (security) **GENERAL CONTRACTOR:** McCarthy Construction **COST:** Withheld at owner's request **PHOTOGRAPHER:** Adrian Velicescu

C1

Critique

A Brief History of Parking

Jane Holtz Kay searches from Main Street to megastructures to answer the eternal question, "Where's my car?"

"CITY DITTY"

HERE LIES AN URBAN GENTLEMAN,
WHO FAILED TO MAKE HIS MARK,
HE DIED WITH HIS LIFETIME SQUANDERED,
HUNTING SOME PLACE TO PARK.

—R. Omar Barker, 1946

The history of parking can be summed up in the immortal words of that late-departed chariot driver, Julius Caesar: "*Veni, vidi, vici.*" The car came, it saw, it conquered. Or, as Booth Tarkington predicted in his 1918 novel *The Magnificent Ambersons*, "Automobiles have come and almost all outward things are going to be different because of what they bring."

One outward (and most unpredictable) thing the motorcar brought was the need for its own storage. In repose, as well as in motion, it took space. And, as form follows function, what that need for parking eventually wrought on all outward things was a new sense of priorities for space, and hence architecture.

To be sure, at first it was movement, not stasis, that mattered most for the infant auto. Before the advent of Henry Ford's 1908 Model T, the popular machine for the masses, motorcars had languished all too regularly in the shop or gotten stuck in the mud. Ford's reliable, utilitarian vehicle, available, he quipped, in "any color so long as it was black," insured uniformity of parts and performance, and supplied its workers with the living wage (more or less) to buy it.

In near tandem then, the Machine Age and the Motor Age were born. Both the farmer saddled with a pricey rail monopoly to deliver his goods and the city dweller who craved more mobility than a streetcar signed on to the self-propelled vehicle. Still, if going, not resting, concerned the nation, some shelter had to cover the not-always-hardy vehicle.

Americans, reared with a use-it-up, wear-it-out, make-it-do-or-do-without mentality, at first simply adapted the new technology to established architectural ways. Pricey toys for the rich, early cars dwelled in old carriage houses or stables that were miniature replicas of the main house. Gradually, the carriage house evolved into a form of its own: a

spit-and-polish repair shop for the vehicle, often with a chauffeur-cum-mechanic living above, and even a gas pump out front.

As middle-class suburban dwellers bought their own cars, their smaller houses sprouted wooden or brick garages—detached from the house lest the newfangled machine explode and take the family along with it. This more modest homeowner's garage might still be built to match the architecture of the parent house, or arrive bundled in a kit from Sears Roebuck or Montgomery Ward. Soon, a more modish home for the vehicle emerged when Frank Lloyd Wright, as enthralled with the motorcar as any Hollywood star, brought not only architectural modernity but mobility to one of his Oak Park homes, in the form of a built-in garage.

Even in more urban quarters, automobile-oriented architecture arrived early. Nothing quite matched the brick Colonial façade of Marshall and Fox's 1907 Chicago Automobile Club, which allowed vehicular entry from the street and parking space on every floor. Ernest Flagg likewise designed an arched entrance and garage as part of his personal dwelling. *Architectural Record* called it "a new type of city house." Routine apartment builders also squeezed out space for the car within or behind their multifamily residences.

Indeed they had to, as the number of American cars mushroomed to nine million in the 1910s. And not just on the home front—the nomadic motor vehicle was beginning to demand parking downtown. At first, the curb—the former resting place of the horse and buggy—sufficed. Giving many of the nation's 14 million horses their walking papers helped both urban space and sanitation needs, freeing up the cityscape. At the same time, it paved the way for more and more cars to come. And, as the 1920s advanced, so did downtown streetside congestion. "No place to park" began to join that other mantra, "stuck in traffic," as the automobile took hold.

Downtown businesses soon found themselves engaged in finding new lodgings for the influx of motorcars. The old expedients for parking—the open lot, farm yard, stable, or barn in the country; the warehouse or empty industrial building in the city—no longer offered enough space for the mounting number of motorists. City planners turned to new quarters for their cars. These ranged from dropping "day-storage" spaces for cars



into the light wells of existing buildings to following the portentous instructions of William Phelps Eno (a planner who set America's first parking codes) to clear trees for parking.

As early as 1918, pioneering Chicago began to innovate new architectural designs to keep cars out of sight and protect its skyscraper city. (For a while, it even banned parking in the Loop.) Holabird & Roche designed a vertically stacked 5-story structure with a spiraling ramp for the Hotel

La Salle. Attempts to move cars in and out of such garages more quickly inspired architects to create new technologies—Ferris wheel-like inventions, turntables, transfer carriages, or combinations of elevators and ramps—and prompted garage owners to hire attendants.

These measures barely helped. "The right to move a car is superior to the right to store cars on the public way," city planners observed in *American City* magazine, in the late 1920s. Their colleagues debated

the merits of double parking, and of angle vs. curbside parking. "Aside from the weather there is no question more discussed in our cities today than that of automobile parking," the United States Conference of Cities declared in 1928. *Where Shall They Park?*, the National Safety Council titled the published proceedings of a Chicago meeting, damning both double and angle parking as obstructions to traffic flow. "The driver who engages in it shows little regard for the rights of others," the document declared.

Where shall they park? The answer became clear as more and more municipalities, from Los Angeles to smaller centers, voted for city-funded open lots. With that space grab came another staple: the flattening of unprofitable structures and a foretaste of the coming bulldozer approach to urban America. At mid-decade, Andrew Mellon, secretary of the treasury, told *Collier's* magazine that he would like to move the Washington Monument for more parking lots.

The architectural elements on these lots were minimal, to say the least—a mere dot of an attendant's booth, typically. By and large, parking was still impromptu and helter-skelter into the 1930s, say historians. The

A 1958 issue of *House and Garden* featured a photograph of a house of the future with a "living garage"; it depicted a Chevy parked inside the living room just across from the divan.

Model A and its heirs filled up piers in New York. In Pittsburgh, "they just parked them on the levee of the Monongahela, angled towards the river," recalls architectural historian Arthur Krim.

At home, as the car became less explosive, owners looked for elegance; even the house itself seemed fit for a storage center. "Why not keep your automobile in the house?" Charles Alma Byers asked in *Keith's* magazine in 1920. As the decade progressed, not everyone agreed: Architects Keck and Keck's own four-story co-op apartment, fronted by a three-car garage entranceway, upset their Chicago neighbors, if not the two architects who lived there. Yet, the trend toward stylish car shelters advanced. Even Babbitt drove into a terra-cotta garage in Sinclair Lewis's *Main Street*.

By 1927, architects in Boston would give their prestigious Harleston Parker prize to Park Square's Motor Mart, a multistory, ornamented building by Ralph Harrington Doane. Elsewhere, deco motifs garnished an automated skyscraper garage northwest of New York City's Columbus Circle. The Ritz in Chicago's Hyde Park boasted terra-cotta insignia of gears and winged wheels, while Norman Bel Geddes's 1931 "House of Tomorrow"—created, as he wrote, "in the spirit of the age"—featured a streamlined modern circular bay wrapped around a two-car garage. The Century of Progress Centennial Celebration of the Chicago World's Fair in 1933 went even further with a truly splendid garage. "The World's Largest Parking Terminal" boasted a capacity of 24,000 cars plus a "climb-proof" fence, floodlighting at night, and policing every

minute during the exposition. "Parking reservations are as important as your hotel reservations," declared promotional literature, listing attendants and chauffeurs, beauty and barber shops, a drug store, and greasing and washing services within the imposing structure—the epitome of one-stop stopping.

Parking was simultaneously revolutionizing architecture in yet another manner. As early as 1922, America set off on its trip from *Main Street to Miracle Mile*, as historian Chester Liebs described the development of the road culture that eventually replaced the sidewalk with the strip. In 1923, J.C. Nichols created what some call the first shopping mall, Kansas City's Country Club Plaza, a Spanish architectural fantasia of turrets wrapped around parking lots and a multilevel garage.

No one knows exactly where "curb service" began on Main Street in the '30s but its destiny on the highway was almost preordained. By 1939, U.S. Route 1, between New York City and Trenton, New Jersey, had 500 billboards, 300 gas stations, and 400 other drive-in businesses with vast parking lots. Long before those two California brothers, Maurice and

Richard McDonald, spread the concept of 15-cent hamburgers from their first Main Street store to the crossroads of America, their behind-the-wheel meal style helped dictate the design of drive-through or drive-in banks, markets, movies, and stores. They paved the road to today's postmillennial stripscape, where asphalt-islanded Wal-Marts generate 10 thousand car trips a day.

Despite these portents of the primacy of parking, even before World War II the notion that the only good car storage was invisible garage storage also had adherents. San Francisco's Union Square led the way underground in 1942. Excavating four stories down, this municipal parking garage not only housed 1,700 vehicles but boasted of "pre-war possibilities as an air raid shelter" in promotional brochures.

After the war, the "transportation affliction," (as Wilbur Smith, chairman of New York City's Department of Traffic Operation, described the situation to New Yorkers) undid this urge for an architectural vanishing act: Cities got into the parking business. Combined with federal housing subsidies, the motorcar's growing takeover of space would score the final path of outward-bound, highway-bound Americans. "Better Parking is Good Business" was the urban dictum in 1952. Stimulated by the Highway Defense Act of 1956 and urban renewal, the war to pave paradise rolled across the country, as classic buildings such as those on Newport's Bellevue Avenue became concrete-and-asphalt shopping centers and landmarks of public transportation like Penn Station tumbled. The result, as one British visitor reported to the Architectural



Association, was a nation where houses built by Richard Neutra and other modernists in California “could only be discovered like nuggets of gold in this waste of asphalt and wire.”

Americans didn’t see it that way. The vivid, car-catching signage of the 1950s drew them to the strip and to motel-based resorts like New Jersey’s Wildwood. The suburbs, similarly, upped the ratio of driveway to house. A photo of a house of the future with a “living garage” appeared in a 1958 *House and Garden*; it depicted a Chevy parked inside the living room across from the divan.

In the postwar downtown, parking these New Look vehicles took precedence, prompting storefront merchants to claim victory in their competition with the burgeoning suburbs. In 1946, only 70 cities had parking requirements in their zoning plans; a decade later, at the dawn of the interstate age, most did. And, as urban renewal served as a tool for struggling cities to flatten themselves for parking spaces and widen roads to relieve congestion, urban officials themselves lifted up the light rail lines to provide room. Los Angeles’s “Big Red” cars took their last run in the late 1950s, while Chicago Mayor William *continued on page 122*

P2

Project

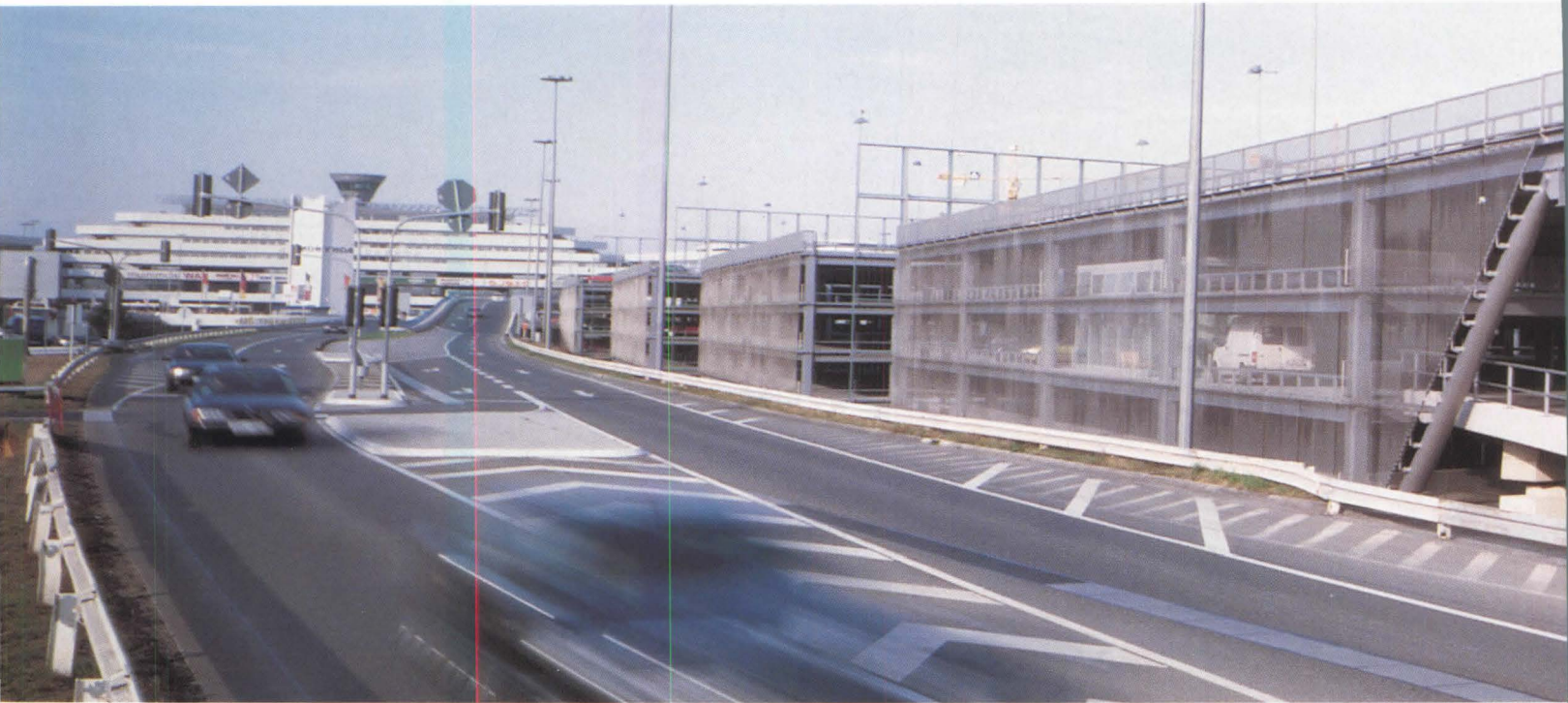
Parkhaus 2 and Parkhaus 3

Cologne / Bonn Airport, Germany

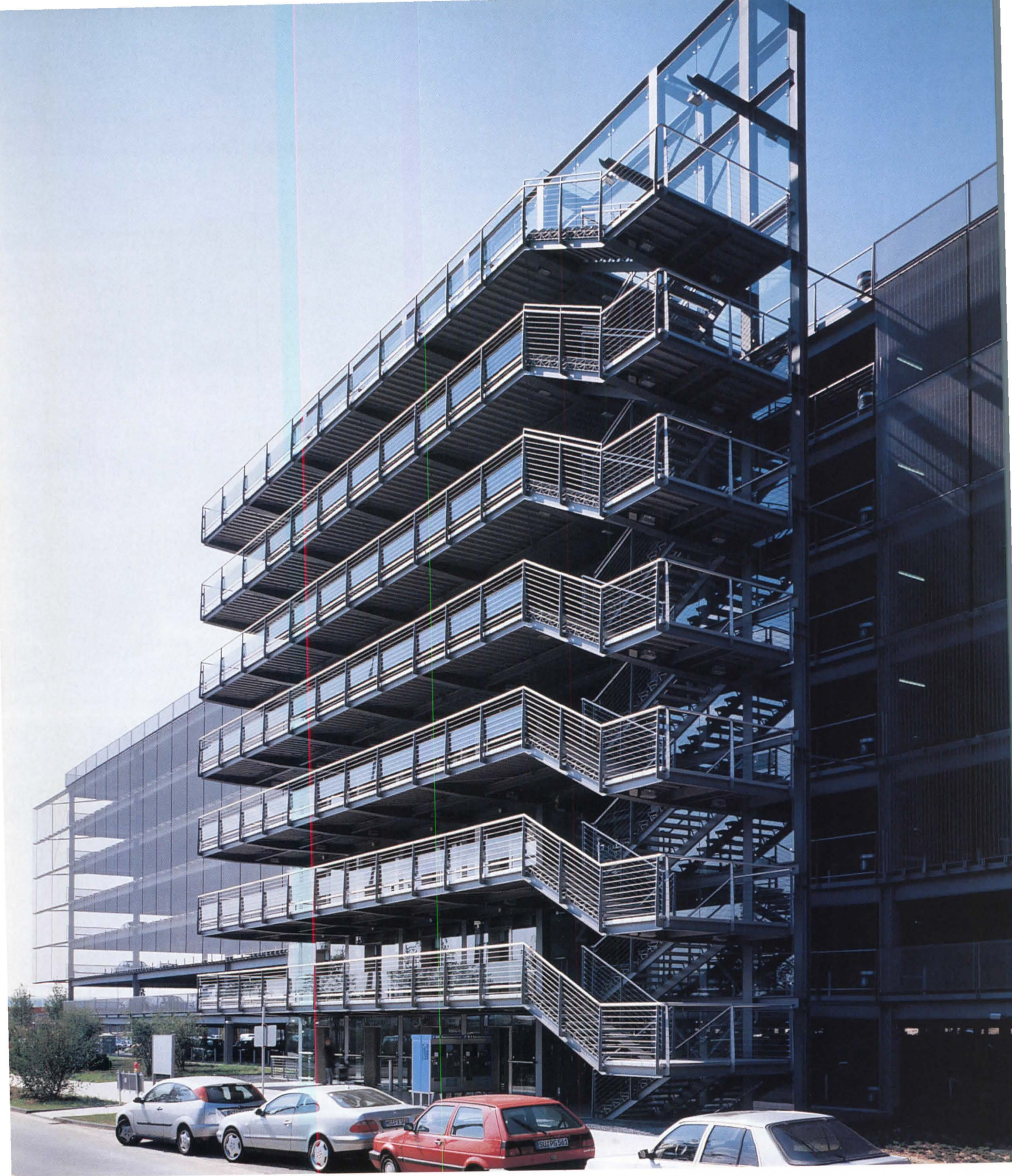
Architect

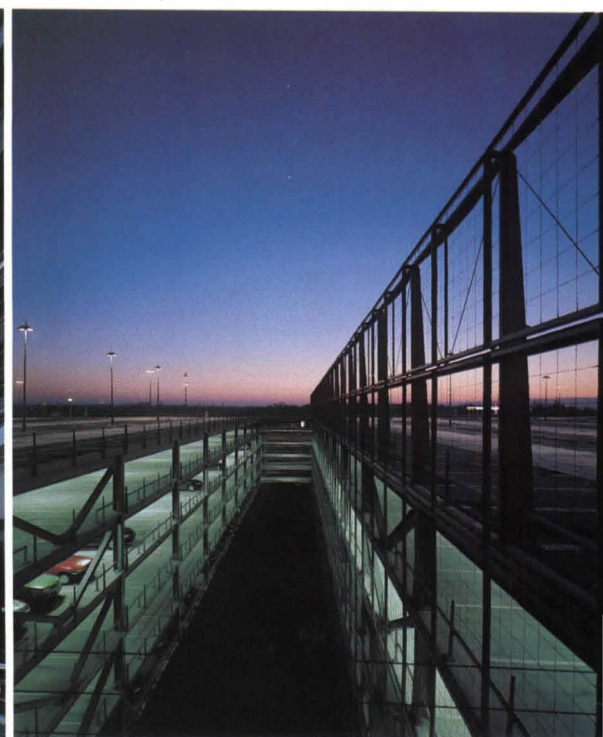
Murphy / Jahn

with Heinle, Wischer & Partner









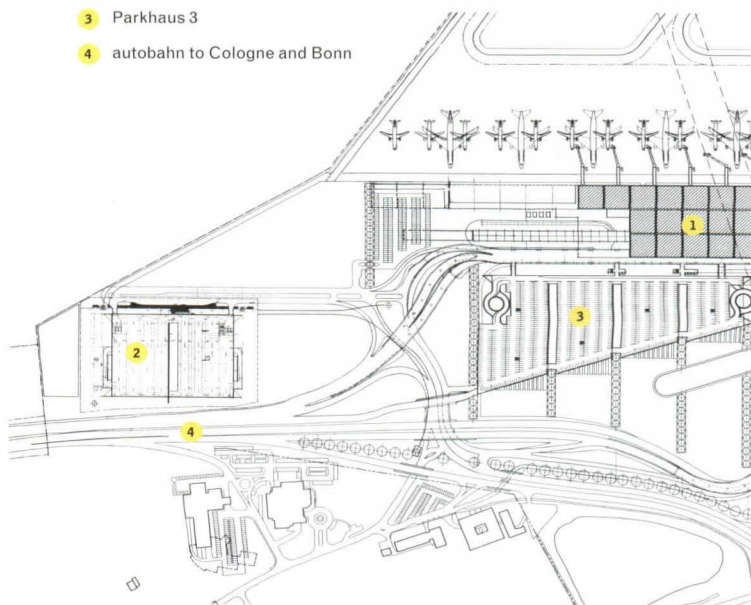
A large stairway (facing page) marks the entry to Parkhaus 3. Both structures are segmented—Parkhaus 3 into two sections, and Parkhaus 2 into four—so that they don't have to be mechanically ventilated: Between each of these segments is a narrow courtyard with ivy plantings at the base (above left), pedestrian and automobile access (above center) at the far end, and a billboard-like extension of the trellis on the roof (above right).

Parking garages may be the most predetermined of all building types. Straight parking or angled, spiral ramp or double helix—these decisions are based more on the size of the lot and the number of cars to be accommodated than any aesthetic considerations. Murphy Jahn's new Parkhaus 2 and Parkhaus 3 at the Cologne/Bonn Airport in Germany use these basic elements as the scaffolding for a refined wrapper that belies the prosaic nature of the program it encloses.

The two buildings were designed as a part of Murphy/Jahn's new terminal for the airport, which also includes a station for the InterCity Express, a railway link to the neighboring cities. The route of the train tunnel created the primary difference between the two garages, which are otherwise identical: While the eight-level,

Site plan 1 290' 2

- 1 new terminal
- 2 Parkhaus 2
- 3 Parkhaus 3
- 4 autobahn to Cologne and Bonn



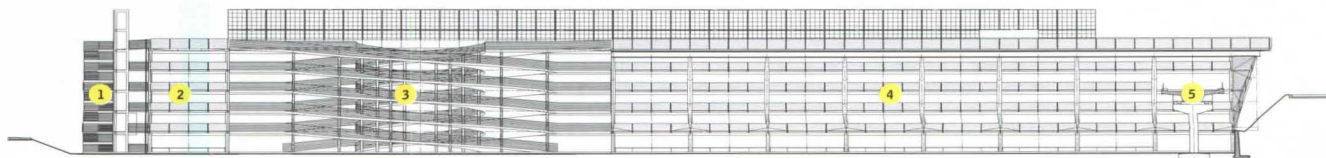


Parkhaus 2

West façade 37'

- 1 stairs
- 2 vehicular access
- 3 spiral ramp
- 4 parking
- 5 to autobahn

Parkhaus 2's circular ramps (above) are placed at the far edges of the structure, and lead on and off of the autobahn. The transparent stainless steel mesh (facing page) that clads both garages is kept in tension by springs attached to the exterior of the second floor.

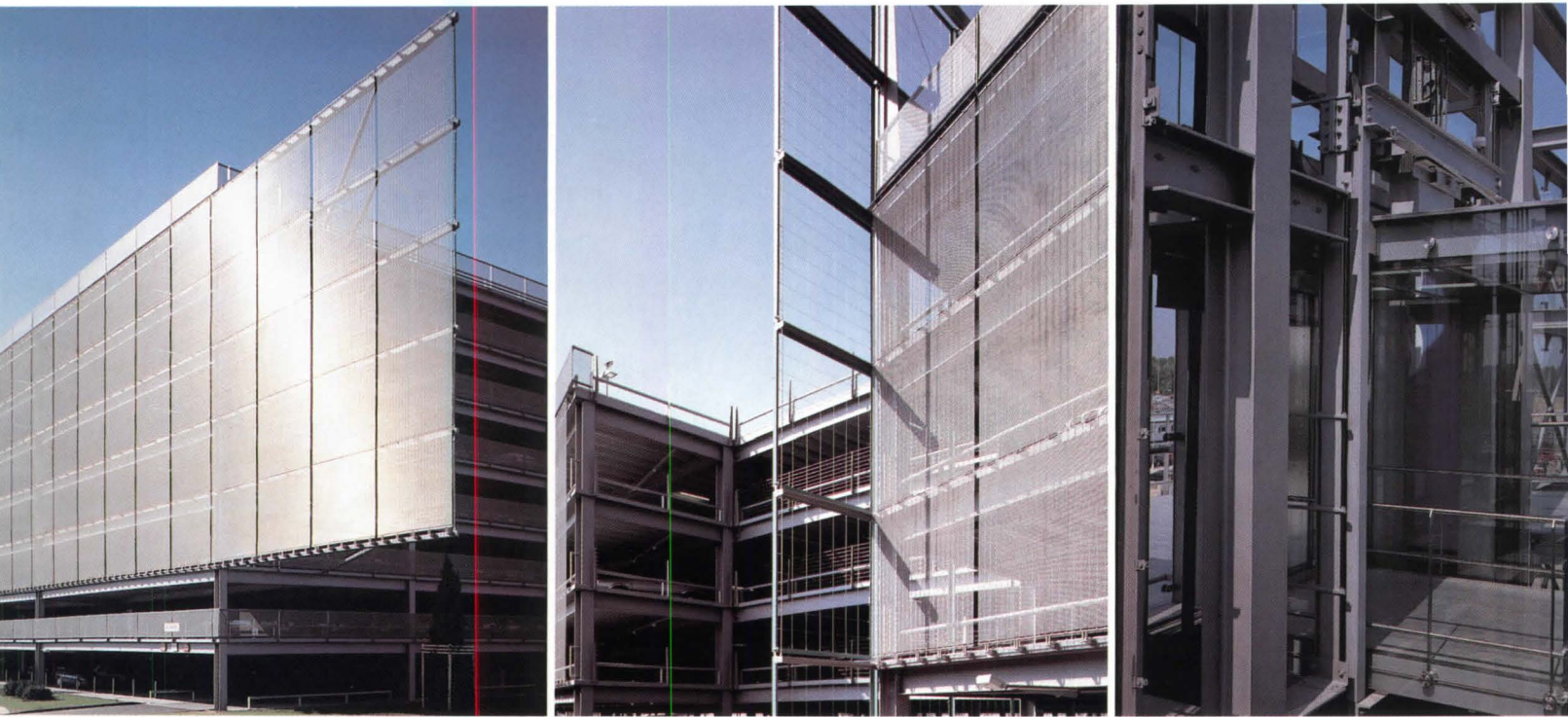




4,500-car Parkhaus 3 is perfectly rectangular, the six-level, 5,800-car Parkhaus 2 is wedge-shaped to accommodate the infrastructure for the new rail line.

Architect Helmut Jahn explains that the buildings are essentially rough, and that he wanted to show them as such: "It is a simple construction with simple components—steel framework, precast concrete, metal and concrete decks." Each parking deck is divided into regular segments separated by a narrow courtyard so that no mechanical ventilation is necessary. Overlaid onto this simplicity—and set into relief by it—are a series of elements which give the garages their

character. A fine stainless steel mesh similar to the metal weave of conveyor belts acts as the skin, allowing light and air to pass through. Along the slit-like courtyards an ivy-planted wire trellis replaces the steel mesh. On Parkhaus 3, stair towers and glass-enclosed elevators project out from and punctuate the façade, while Parkhaus 2 is articulated as four distinct segments to achieve the same effect. For Jahn, both respect for the constraints of the type and interest in the diagrammatic quality of any garage clearly override the limits of program, despite his statements to the contrary: "They are utilitarian buildings," he says, "It's the old story of the decorated box." *Anne Guiney*



Details such as skins extending past the edge of the floor plate—both the stainless steel mesh (above left) and the wire trellis (above center) do this—and glass-clad stairs and elevators (above right) are evidence of the care spent in

adorning Murphy/Jahn's professedly rough containers. The wire trellis which lines the slit-like courtyards continues up onto the roof level (facing page), providing a break in what might otherwise be an overwhelmingly large expanse.



- Parkhaus 2
 Typical floor plan 186'
- 1 parking
 - 2 courtyard
 - 3 spiral ramp
 - 4 stairs
 - 5 to autobahn



PARKHAUS 2 / PARKHAUS 3, COLOGNE / BONN AIRPORT, GERMANY

CLIENT: Flughafen Köln/Bonn **ARCHITECT:** Murphy/Jahn, Steven Cook, Sanford Gorshow, Hannes Zabel, Wolfgang Bauer, Michael Bender, Mark Frisch (project team) **EXECUTIVE ARCHITECT:** Heine, Wischer & Partner **LANDSCAPE ARCHITECT:** Büro Jürgen Schubert **ENGINEERS:** Werner Sobek Ingenieure (structural) **CONSULTANTS:** Hayek Engineering (project manager); Ingenieuregruppe IVV Aachen (traffic); Peter Andres (lighting) **GENERAL CONTRACTOR:** DSD-Hilgers Bausystem; Ferdinand Kochems **COST:** Withheld at owner's request **PHOTOGRAPHER:** H.G. Esch, except as noted

C2

The Driver, 20th Century Fox, 1978

DIRECTOR: Walter Hill

STARRING: Ryan O'Neal, Bruce Dern,
and Isabelle Adjani

CRIMINAL MISUSE: covert meeting and
car chase/stunt



Magnum Force, Warner Bros., 1973

DIRECTOR: Ted Post

STARRING: Clint Eastwood and Robert Urich

CRIMINAL MISUSE: stalking and
covert meeting



Bullitt, Warner Bros., 1968

DIRECTOR: Peter Yates

STARRING: Steve McQueen, Robert Vaughn,
Jacqueline Bisset and Robert Duvall

CRIMINAL MISUSE:
covert meeting/exchange



Scorpio, MGM, 1973

DIRECTOR: Michael Winner

STARRING: Burt Lancaster and Alain Delon

CRIMINAL MISUSE: stalking and shoot-out



Critique

No Exit

Why do bad things always
happen in good parking garages?
Deane Simpson watches
some action movies of the 1960s
and 1970s, and takes cover.

In the *Death Wish* film series, Charles Bronson plays Paul Kersey, a New York City architect with an extreme solution to inner-city decay: When a gang of youths attacks his wife and daughter, Bronson turns vigilante. Shot on location, within a lawless, ravaged urban landscape, the early *Death Wish* films are typical of the American crime-film genre of the late 1960s and 1970s. Ostensibly vehicles for stars such as Bronson, Clint Eastwood, and Steve McQueen, these films aggressively characterize the modernist inner city as a place of alienation, anxiety, and paranoia.

The parking garage is the emblematic space of this genre. Villains in such films as *Death Wish 2*, *Scorpio*, and *The French Connection* inven-

P3-

A

Project

Center Street Park and Ride

Des Moines, Iowa

B

Project

Melrose Avenue Parking Facility

University of Iowa, Iowa City, Iowa

C

Project

Newton Road Parking and

Chilled Water Facility

University of Iowa, Iowa City, Iowa

D

Project

North Campus Parking and

Chilled Water Facility

University of Iowa, Iowa City, Iowa

Architect

Herbert Lewis Kruse Blunck Architecture

Des Moines, Iowa



It's a big year for Herbert Lewis Kruse Blunck Architecture (HLKB). In January, the American Institute of Architects gave the Des Moines practice its 2001 AIA Architecture Firm Award. The nominating committee praised the firm's "stated goal to do a common thing uncommonly well..." One common thing the firm does most uncommonly well is the parking garage. It is not a building type HLKB set out to become known for, according to principal Rod Kruse, but in the last 10 years, the firm has completed three in Iowa City for the University of Iowa as well as one in Des Moines; three more are in the works.

Certainly, looking at all four built projects together, one can trace an increasingly confident line of development in the firm's design



approach. The earliest garage—the 400-car North Campus Parking and Chilled Water Facility in Iowa City—burrows modestly into a hillside, with two on-grade basketball courts along the street, the chiller plant flanking one of the garage’s sloping short façades, and a simple steel mesh covering the only fully exposed elevation, at the rear.

The next two garages in the series take the use of metal cladding a step further, in the form of perforated sheets of steel—punched out in a regular grid of squares at the University of Iowa’s Melrose Avenue Parking Facility, and with half-moon cutouts with the tabs bent outward at a 90-degree angle at the Center Street Park and Ride Facility in Des Moines. The material doesn’t fully wrap either

structure; both are punctuated by balconies and glazed stair towers. The Center Street program also includes a transit station and day-care center clustered around a small plaza on one corner of the garage.

HLKB returned to the University of Iowa for its most recent garage, arguably the boldest of the bunch. Like the North Campus Facility, the Newton Road garage occupies a sloped site, but this time sits on the hill instead of in it. The elevation along the top of the rise is a bent glass wall that continues beyond the edge of the building, while perforated copper clads the opposite, rear façade. “We never consciously wanted to disguise the buildings,” says Kruse—an instinct that has served both the clients and their communities well. *Anne Guiney*

P3A

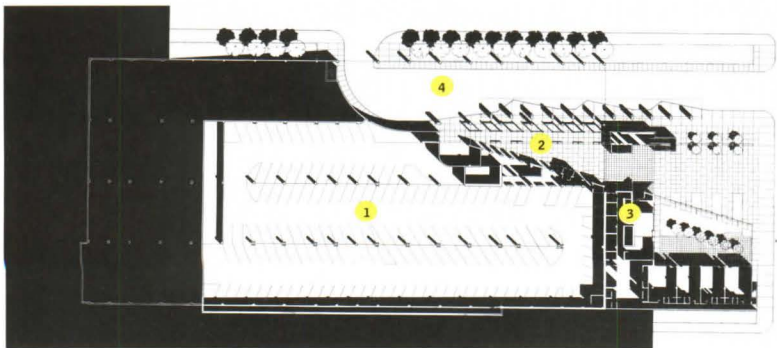
Center Street Park and Ride
Des Moines, Iowa



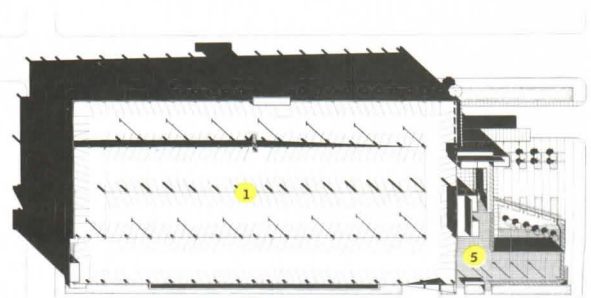


At the Center Street Park and Ride in Des Moines, a cantilevered steel canopy (facing page) leads commuters to the entrance of a metro station within the garage. The roof of an L-shaped day-care center (above) adjacent to the canopy doubles as a public terrace.

- 1 parking
- 2 metro station
- 3 day-care center
- 4 bus loading area
- 5 elevated plaza



Ground-level plan 64' <



Roof plan



A super-sized “park” sign (top left) leads drivers to the garage entrance of Center Street Park and Ride. Yellow steel columns (top right) enliven the ground-level area where commuters await shuttle buses to downtown. Glazed stair towers (above left) animate the south façade. Half-circular

perforations (above center) punctuate metal panels along the façade. The stair towers (above right) offer views of downtown Des Moines, and lend complexity to the profile of the Melrose Avenue Parking Facility in Iowa City (facing page).

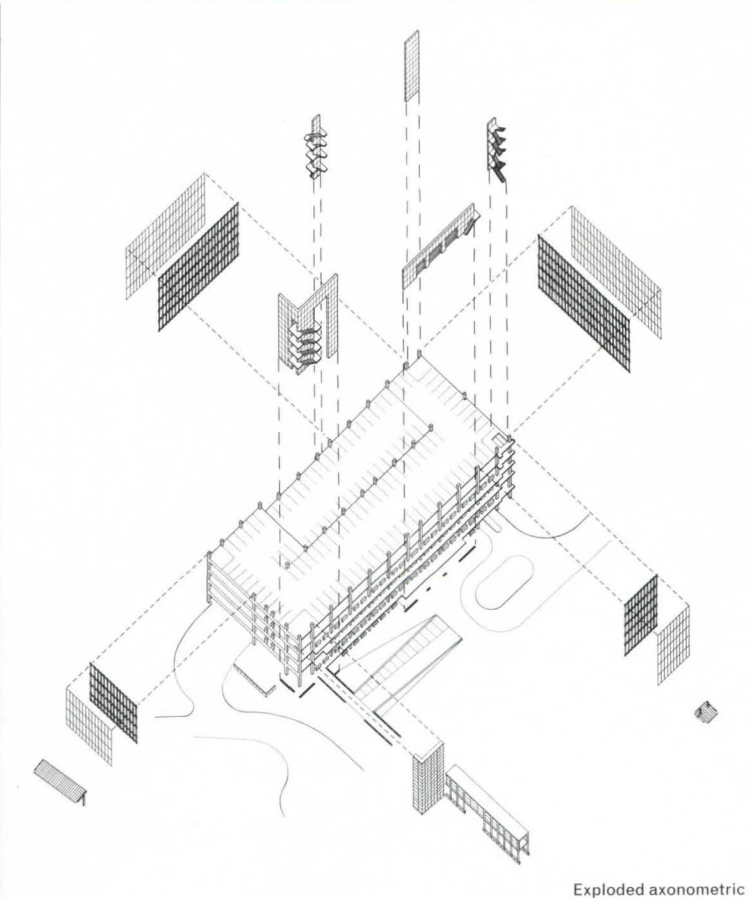
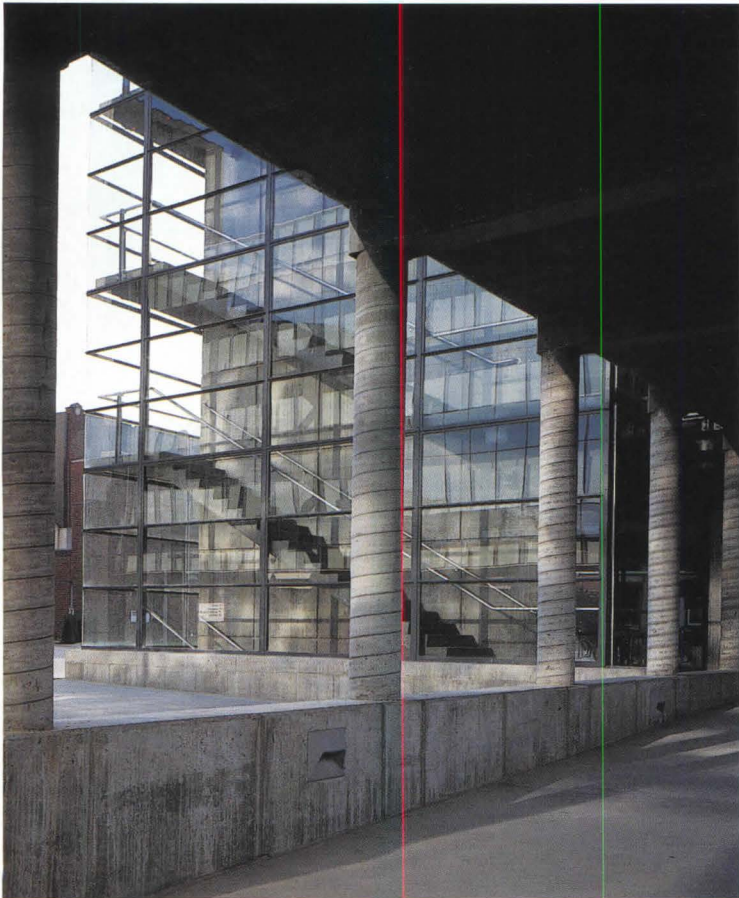
CENTER STREET PARK AND RIDE, DES MOINES, IOWA

CLIENT: City of Des Moines—Gary Fox (Traffic & Transportation Department); Steve Spade (general manager, Des Moines Metropolitan Transit Authority)
ARCHITECT: Herbert Lewis Kruse Blunck Architecture, Des Moines, Iowa—Rod Kruse (principal-in-charge); Jason Alread (project architect); Tim Hickman, Khalid Khan, Cameron Campbell, Steve Low, J. Mark Schmidt, Pete Goche (project team) **LANDSCAPE ARCHITECT:** Herbert Lewis Kruse Blunck Architecture
ENGINEERS: Desman Associates (structural/parking); Krishna Engineering Consultants (mechanical/electrical); Bishop Engineering (civil) **CONSULTANTS:** CPMI (cost estimating) **GENERAL CONTRACTOR:** Taylor Ball **COST:** Withheld at client’s request **PHOTOGRAPHER:** Farshid Assasi

P3B

Melrose Avenue Parking Facility
University of Iowa, Iowa City, Iowa







HLKB employed a minimal amount of mirror-finish steel paneling to clad the Melrose Avenue Parking Facility, principally on the façade that faces a residential neighborhood (above). Here, the panels have a pattern of square perfora-

tions (facing page, top right). A steel canopy (facing page, top left) marks a vehicular entrance. The delicate glazing of a stair tower (facing page, bottom) contrasts with the largely exposed concrete structure.

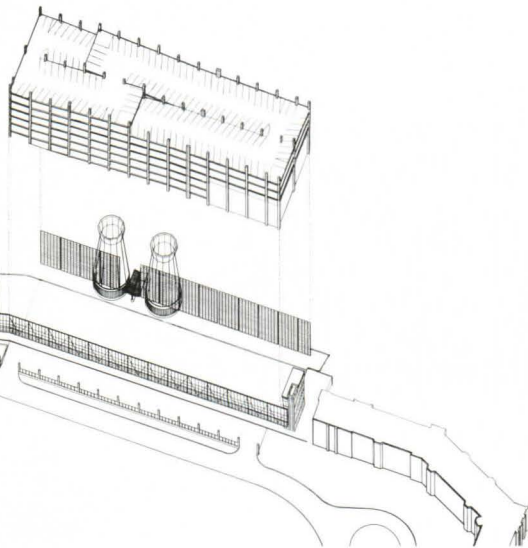
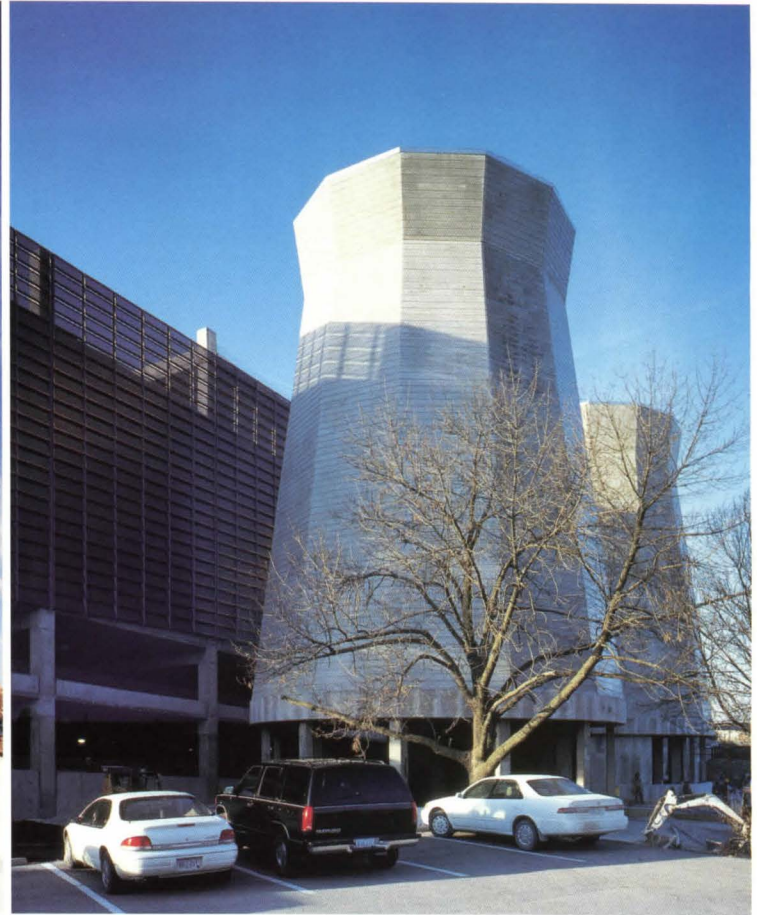
MELROSE AVENUE PARKING FACILITY, UNIVERSITY OF IOWA, IOWA CITY, IOWA

CLIENT: State Board of Regents of the State of Iowa / University of Iowa—John Amend (associate vice president, Facilities Services Group Administration); David Ricketts (director, Parking and Transportation Department) **ARCHITECT:** Herbert Lewis Kruse Blunck Architecture, Des Moines, Iowa—Rod Kruse (principal-in-charge); John Locke, Tim Hickman (project team) **LANDSCAPE ARCHITECT:** Herbert Lewis Kruse Blunck Architecture **ENGINEERS:** Desman Associates (structural/parking); Hansen Lind Meyer (mechanical/electrical/civil/HVAC) **CONSULTANTS:** CPMI (cost estimating) **GENERAL CONTRACTOR:** McComas-Lacina Construction Company **COST:** Withheld at client's request **PHOTOGRAPHER:** Barbara Karant

P3C

Newton Road Parking and
Chilled Water Facility
University of Iowa, Iowa City, Iowa





A fritted glass scrim on the campus-facing façade of the Newton Road garage shields cars from direct view (facing page, top); a slit in the back-lit "park" sign frames a neon "full" sign that lights up when the garage has reached capacity (facing page, bottom). A sheltered walkway slips between the translucent glass screen and the glazed stair tower (above left). On the side of the garage that faces a highway (above right), perforated copper sheets cast patterned shadows on the two precast-concrete chiller towers.

Exploded axonometric



The translucent glass wall is pulled out from the edge of the garage's floor slabs so that it is flush with the brick medical building next door (above left), and to create a covered walkway (above right). A simple steel mesh (facing page) screens

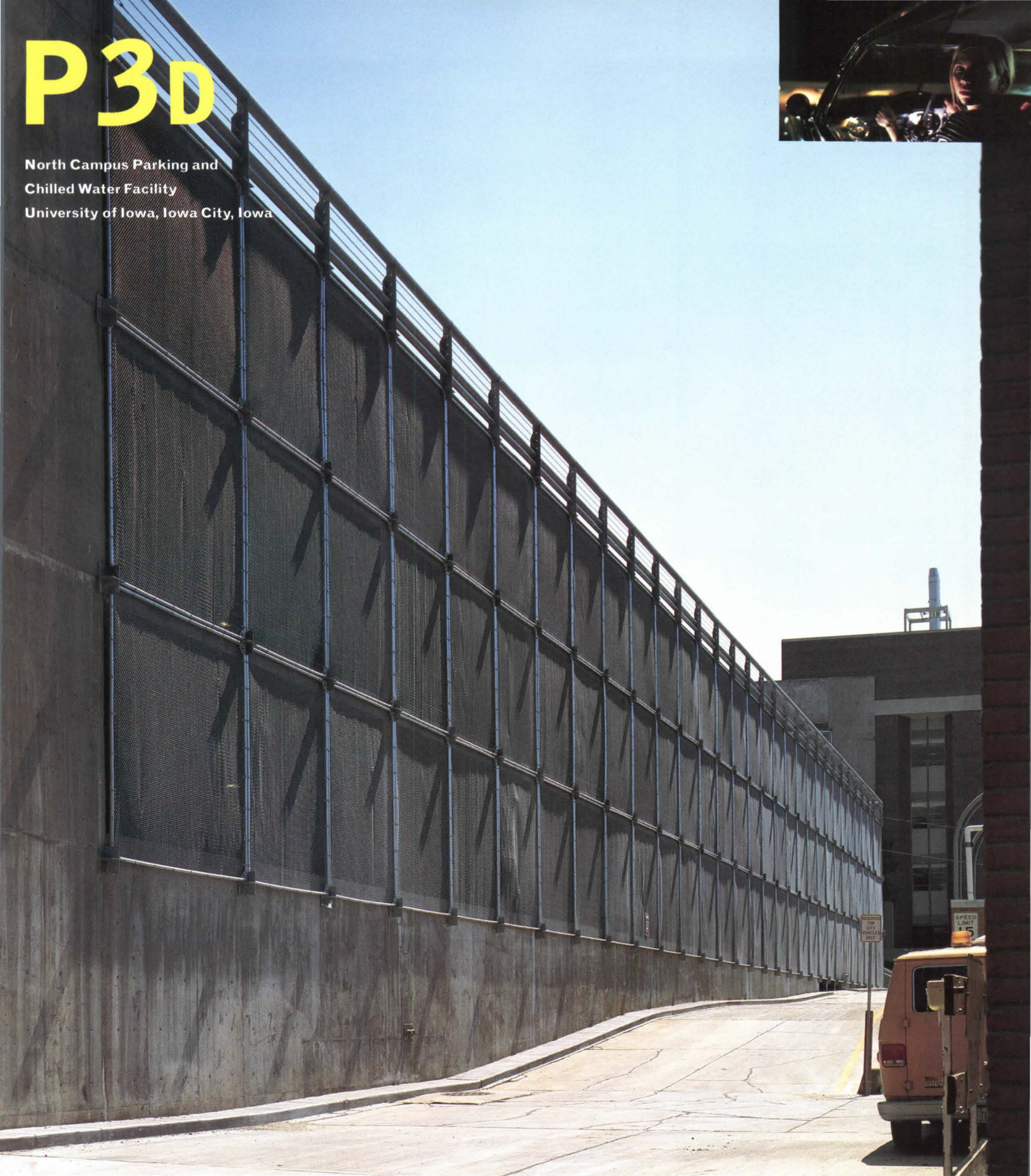
the rear façade of the North Campus Parking and Chilled Water Facility at the University of Iowa in Iowa City.

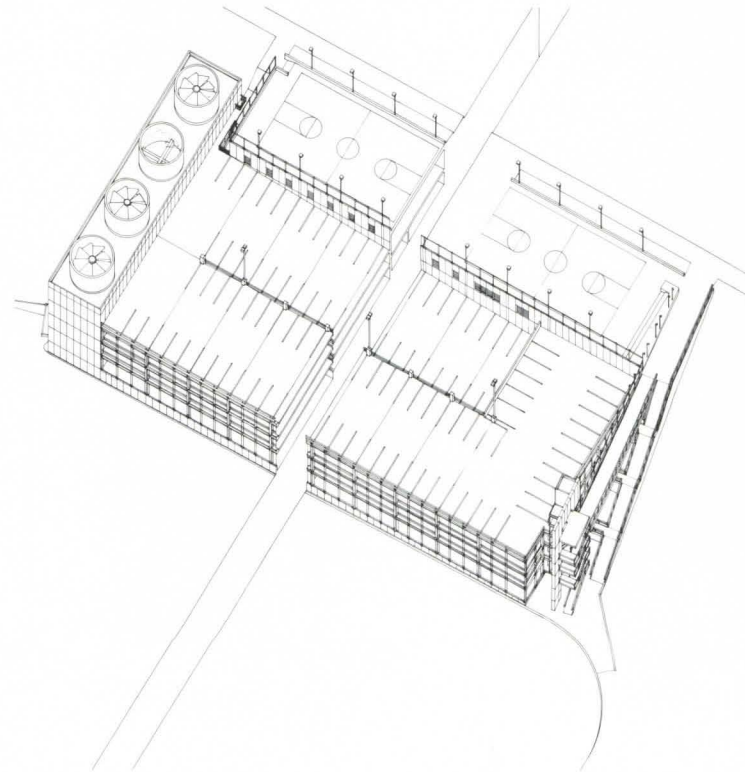
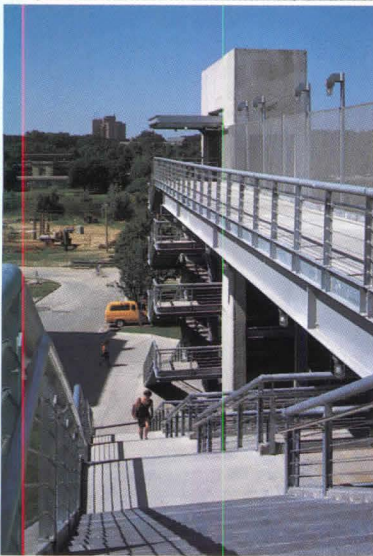
NEWTON ROAD PARKING AND CHILLED WATER FACILITY, UNIVERSITY OF IOWA, IOWA CITY, IOWA

CLIENT: State Board of Regents of the State of Iowa / University of Iowa—John Amend (associate vice president, Facilities Services Group Administration); David Ricketts (director, Parking and Transportation Department) **ARCHITECT:** Herbert Lewis Kruse Blunck Architecture, Des Moines, Iowa—Rod Kruse (principal-in-charge); Jason Alread (project architect); Tim Hickman, Khalid Khan, Cameron Campbell (project team) **LANDSCAPE ARCHITECT:** Herbert Lewis Kruse Blunck Architecture **ENGINEERS:** Walker Parking Consultants (structural/parking); Alvine and Associates (mechanical/electrical) **CONSULTANTS:** CPMI (cost estimating) **GENERAL CONTRACTOR:** McComas-Lacina Construction Company **COST:** Withheld at client's request **PHOTOGRAPHER:** Cameron Campbell

P3D

North Campus Parking and
Chilled Water Facility
University of Iowa, Iowa City, Iowa





The North Campus garage is built into a hill (facing page), with a rooftop basketball court at grade along the street (top left). A stair alongside the chiller plant leads to parking behind the basketball court (top right). On the western side of the garage, a pedestrian bridge (above right) leads to a concrete-and-steel stair tower (above left). The bridge is used primarily by students moving from the riverside Union to their dorms up the hill to the north.

Sectional axonometric



NORTH CAMPUS PARKING AND CHILLED WATER FACILITY, UNIVERSITY OF IOWA, IOWA CITY, IOWA

CLIENT: State Board of Regents of the State of Iowa / University of Iowa—John Amend (associate vice president, *Facilities Services Group Administration*); David Ricketts (director, Parking and Transportation Department) **ARCHITECT:** Herbert Lewis Kruse Blunck Architecture, Des Moines, Iowa—Rod Kruse (principal-in-charge); John Locke (project architect); Kevin White, James Dwinell (project team) **LANDSCAPE ARCHITECT:** Herbert Lewis Kruse Blunck Architecture **ENGINEERS:** Walker Parking Consultants (parking); Structural Consultants (structural); Stanley Consultants (mechanical/electrical) **CONSULTANTS:** The Construction Consulting Group (cost estimating) **GENERAL CONTRACTOR:** The Weitz Company **COST:** Withheld at client's request **PHOTOGRAPHER:** Farshid Assasi

C3

Critique

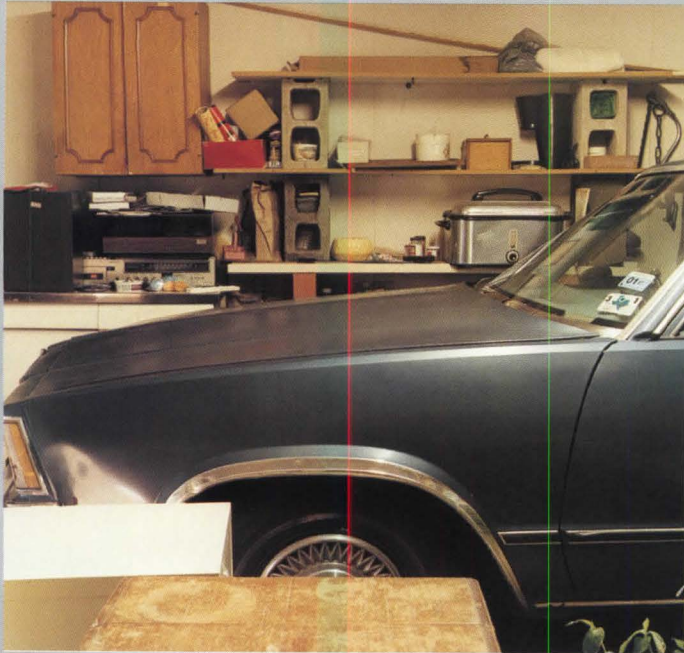
The Biggest Closet In the House

Jason Fulford travels to San Antonio to photograph the way Americans fill their garages.



Terrell Heights





Harmony Hills



Jason Fulford is a Scranton, Pennsylvania–based photographer who recently published *Sunbird*, a collaboration with writer Adam Gilders.

P4

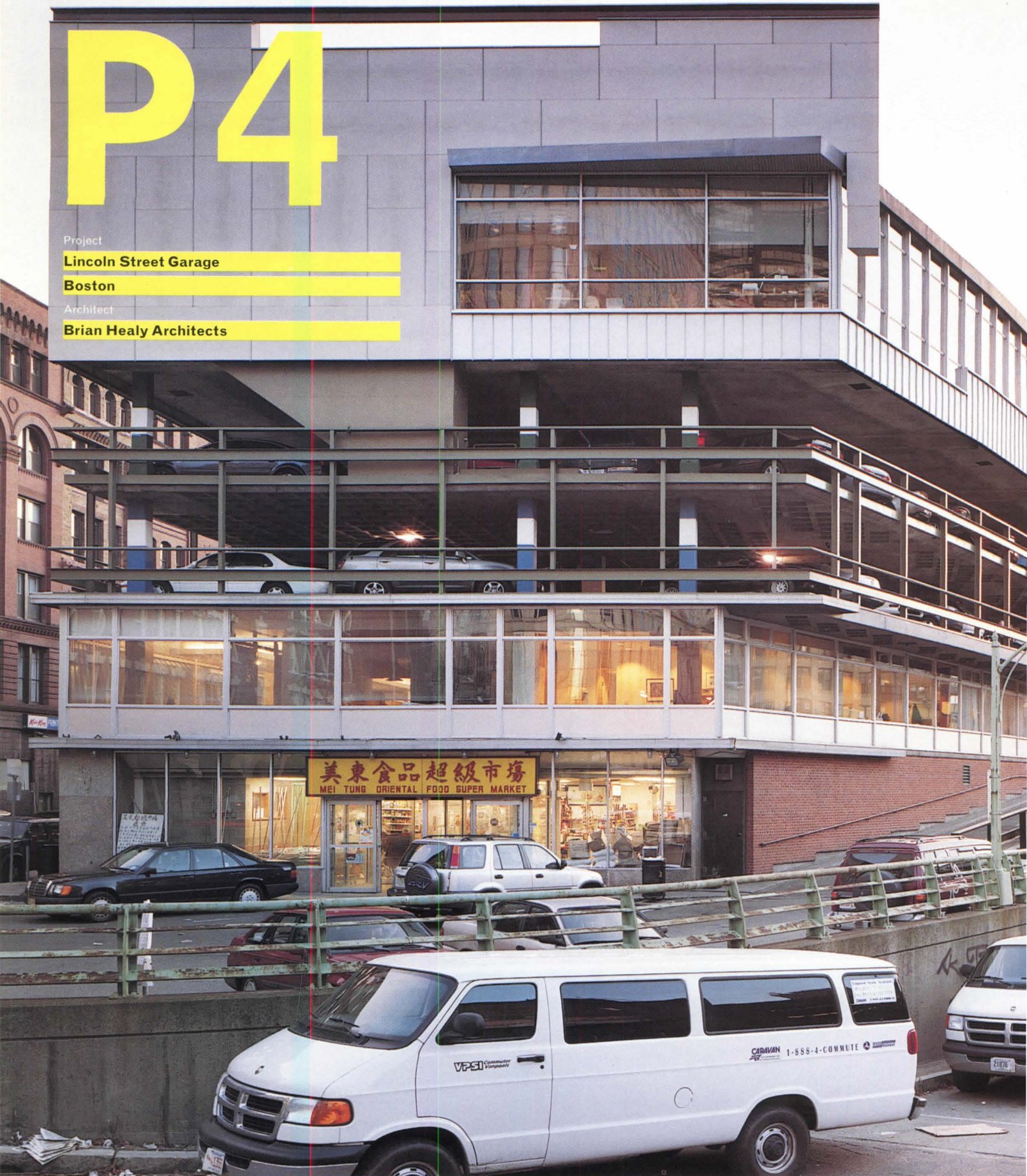
Project

Lincoln Street Garage

Boston

Architect

Brian Healy Architects





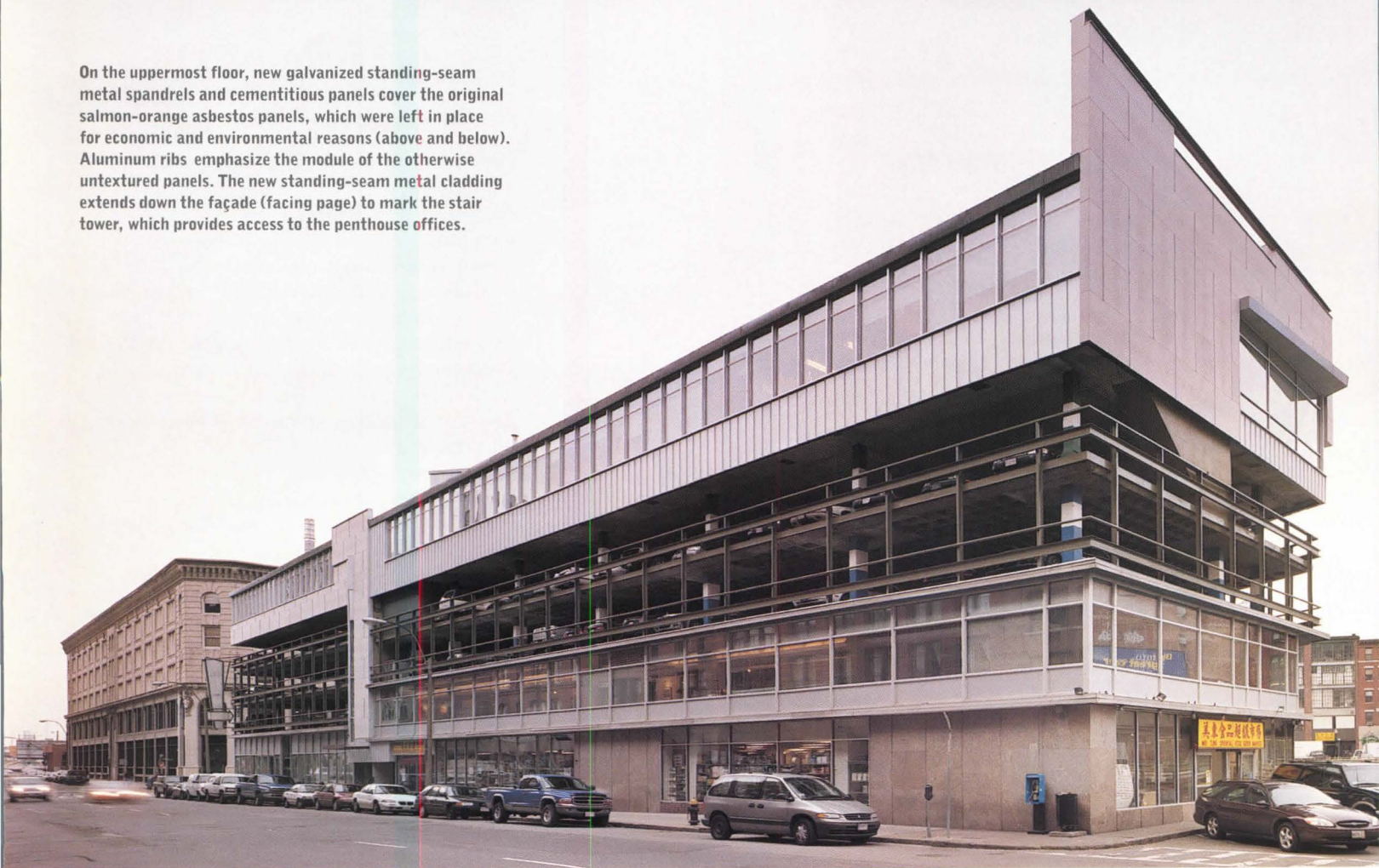
Back in 1956, when “motoring” was still a pleasure, Boston embraced the budding car culture with a passion that would bring blushes to some of its dowagers and to all of its current urban planners. The Central Artery—the 7.5-mile elevated highway then dubbed the “Skyway” but now being relocated underground in the “Big Dig”—was under construction. And the Lincoln Street Garage, a utilitarian and unapologetically modern parking garage, was completed on an awkward wedge-shaped site circumscribed by one of the new highway’s off-ramps. It was Boston’s first architectural response to the promise of fast cars and urban mobility.

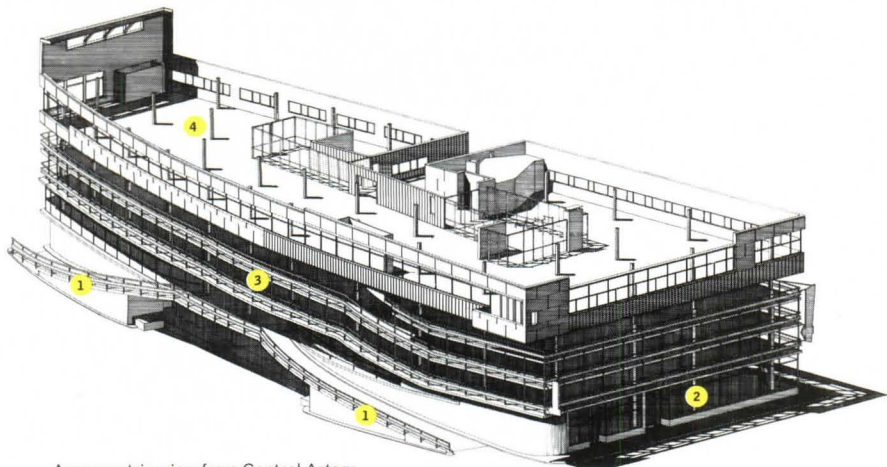
Recent upgrades have brought fresh attention to a building that has always been the eccentric relative in Boston’s architectural family. “People older than I am tend to think it’s the ugliest building in town, and people younger than I am say it’s the coolest building,” observes Brian Healy, the 44-year-old architect for the renovation. Originally designed as a mixed-use structure

On the ground floor, the Lincoln Street Garage (left) is now home to an Asian supermarket and other small retail stores serving the adjacent neighborhood of Chinatown. Management offices for the open-air parking are on the second floor, and an Internet start-up firm leases the top floor.

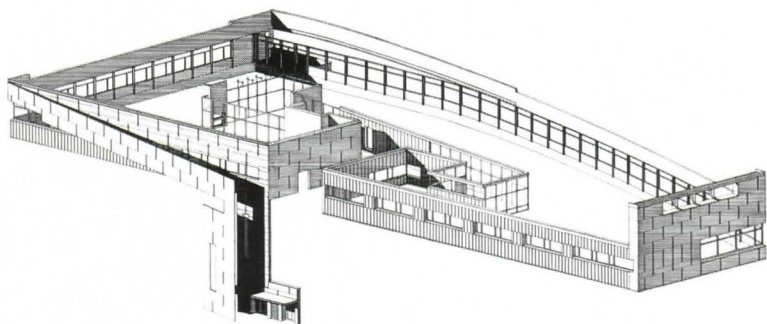


On the uppermost floor, new galvanized standing-seam metal spandrels and cementitious panels cover the original salmon-orange asbestos panels, which were left in place for economic and environmental reasons (above and below). Aluminum ribs emphasize the module of the otherwise untextured panels. The new standing-seam metal cladding extends down the façade (facing page) to mark the stair tower, which provides access to the penthouse offices.





Axonometric, view from Central Artery



Axonometric of new cladding, view from Lincoln Street 29'

- 1 automobile access ramp
- 2 retail
- 3 parking
- 4 offices



with a bank on the first floor and parking decks above, the garage was expanded in 1959 to include office space on a penthouse level. It is this layer-cake quality that gives rise to such divergent opinions: Ramps curve up along the building's edge, cutting across the open parking decks, and the top-floor offices sit improbably above it all.

The new work—primarily new exterior cladding, mechanical systems, and code upgrades—honors the original design with subtle surface additions and deletions that give the building greater coherence. The original cladding wrapped around the building's perimeter continuously, but the new design looks for every possible reason to interrupt: A new taller parapet on one façade matches the cornice line of neighboring buildings, and changes in cladding call attention to the project's peculiar context.

Unfortunately, the completion of the Big Dig in 2004 could also mean the end for the Lincoln Street Garage. Anticipating developer interest in what will be a valuable site adjacent to the financial district, the current owners acknowledge that the present uses are placeholders. This brazen reminder of Boston's *affaire d'auto* may itself become only a fond memory. *Elizabeth Padjen*



The Lincoln Street Garage sits on what amounts to a large traffic island between three distinctly different conditions, but manages to connect itself to each one. The Asian supermarket on the ground level (facing page) is one of the largest serving Chinatown, just across the street; several

levels of parking help accommodate the cars coming off the Central Artery, which runs below ground alongside the garage; and the dot-com offices on the top floor overlook the newly hip brick warehouses of the Leather District (above).



LINCOLN STREET GARAGE, BOSTON

CLIENT: Intercontinental Development **ARCHITECT:** Brian Healy Architects, Boston—Brian Healy (principal); Betsy Walker, Karin Tehve, Maiya Dos, Craig Scott, Antonello Magliozzi, Beth Whittaker, Andrew Burgess, Chris Grimley, Andrew Powell (design team) **ENGINEERS:** Sarkis Zerounian (structural); Panitsas Associates (mechanical/HVAC); Verne Norman Associates (electrical) **GENERAL CONTRACTOR:** Intercontinental Builders; Sunrise Erectors **COST:** Withheld at owner's request **PHOTOGRAPHER:** David Joseph

C4

Critique

Long-Term Parking

Evan S. Connell's 1959 novel

Mrs. Bridge recounts the thwarted private life of a wealthy Midwestern housewife. In the final chapter, "Hello?", the elderly widow heads to the garage for a trip downtown.

One December morning near the end of the year when snow was falling moist and heavy for miles all around, so that the earth and the sky were indivisible, Mrs. Bridge emerged from her home and spread her umbrella. With small cautious steps she proceeded to the garage, where she pressed the button and waited impatiently for the door to lift. She was in a hurry to drive downtown to buy some Irish lace antimacassars that were advertised in the newspaper, and she was planning to spend the remainder of the day browsing through the stores because it was Harriet's day off and the house was empty—so empty.

She had backed just halfway out of the garage when the engine died. She touched the starter and listened without concern because, despite her difficulties with the Lincoln, she had grown to feel secure in it. The Lincoln was a number of years old and occasionally recalcitrant, but she could not bear



the thought of parting with it, and in the past had resisted this suggestion of her husband, who, mildly puzzled by her attachment to the car, had allowed her to keep it.

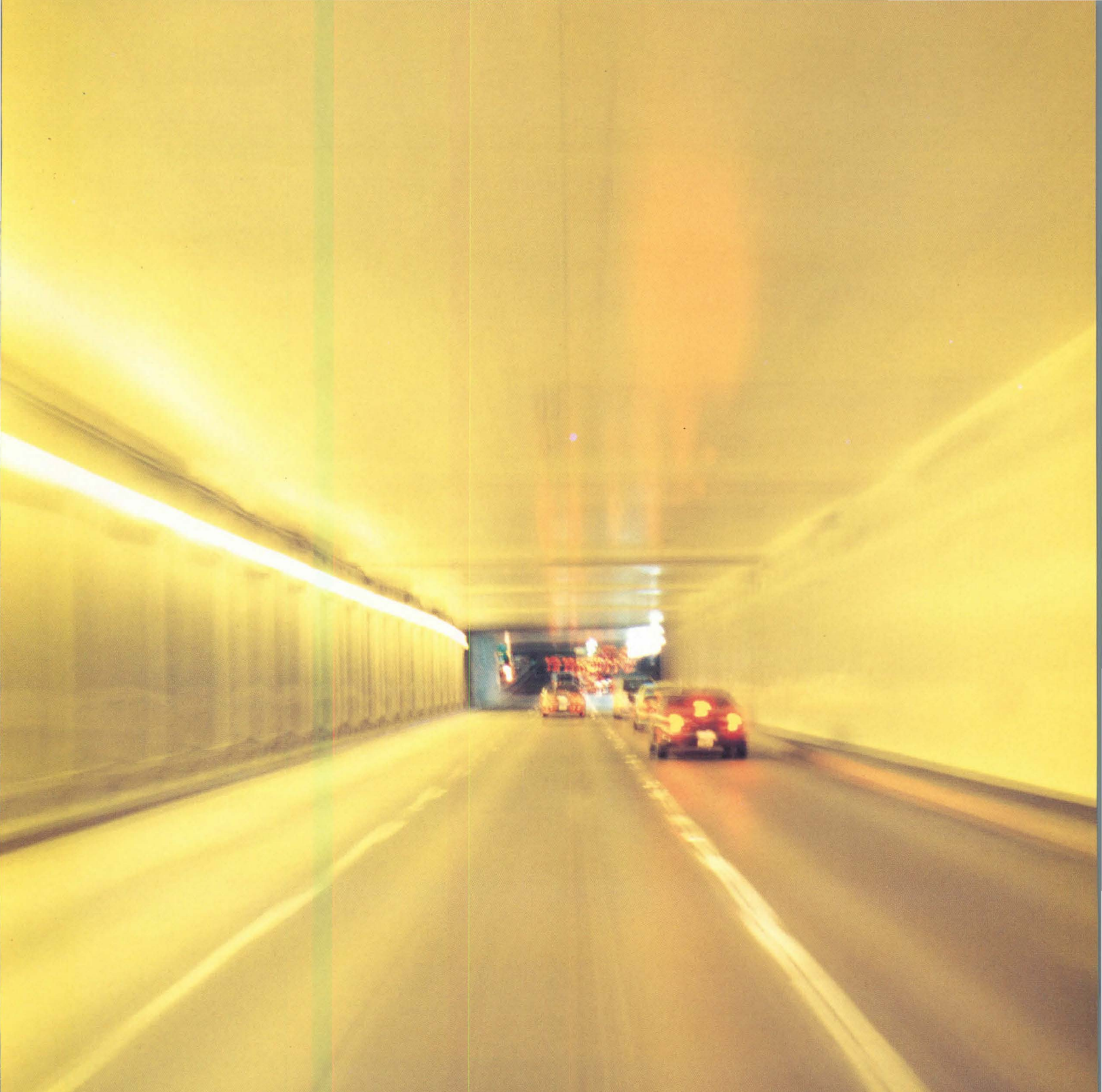
Thinking she might have flooded the engine, which was often true, Mrs. Bridge decided to wait a minute or so.

Presently she tried again, and again, and then again. Deeply disappointed, she opened the door to get out and discovered she had stopped in such a position that the car doors were prevented from opening more than a few inches on one side by the garage partition, and on the other side by the wall. Having tried all four doors she began to understand that until she could attract someone's attention she was trapped. She pressed the horn, but there was not a sound. Half inside and half outside she remained.

For a long time she sat there with her hands folded in her lap, not knowing what to do. Once she looked at herself in the mirror. Finally she took the keys from the ignition and began tapping on the window, and she called to anyone who might be listening, "Hello? Hello out there?"

But no one answered, unless it was the falling snow. ■

Excerpt from Mrs Bridge by Evan S. Connell. Copyright ©1959 by Evan S. Connell. Reprinted by permission of North Press Point, a division of Farrar, Straus and Giroux, LLC.



The parking statistics were compiled by Jane Holtz Kay and Anne Guiney from the following sources:
Jane Holtz Kay, *Asphalt Nation: How the Automobile Took Over America and How We Can Take it Back* (Berkeley: University of California Press, 1997)
International Parking Design, Oakland, CA; www.ipd-global.com
International Parking Institute, Fredericksburg, VA; www.parking.org
Ignacio San Martin, Associate Professor, School of Planning and Landscape Architecture, Arizona State University
Katie Alvord, *Divorce Your Car!: Ending the Love Affair with the Automobile* (Gabriola Island, B.C.: New Society Publishers, 2000)
Surface Transportation Policy Project, Washington, D.C.; www.transact.org
Parking Today magazine, Los Angeles, CA; www.parkingtoday.com
Peter Newman and Jeffrey Kenworthy, *Sustainability and Cities* (Washington, D.C.: Island Press, 1999)
The Parking Market Research Company, McLean, VA; www.parkingresearch.com
Donald Shoup, "The Trouble with Minimum Parking Requirements," published on the Victoria Transport Policy Institute's Web site www.vtpi.org



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A Brief History of Parking

continued from page 79

Daley boasted of the nine parking facilities built or under construction in his town in a 1960 Board of Parking publication.

Out where the green grass grew, post-war affluence was breeding a nation of consumers and mall-goers. Whether to serve Victor Gruen's futuristic structures, domed shopping malls, or drive-through food chains like McDonald's, suburban parking proliferated—and urban parking swelled to beat it.

Parking did not remain America's Most Important Product forever. By the early 1970s, the freeway revolt, the oil embargo panic, environmental and preservation consciousness, and "eyesore" epithets on the fast-food free-for-all combined with "advocacy planning" to shift the dwelling place for the car. Some cities had always resisted the urge to demolish their architectural heritage. Even in the time of tailfins, Pittsburgh, among other cities, still buried its parking garage under a downtown park. Cars also began to go under architectural cover. Sometimes it seemed the architect's vision of dolling up this enlarged car-carrying capacity lead to greater, not better, garage visibility. Kallman and McKinnell's massive and monumental freestanding garage for Boston's Government Center in the late 1960s did little to advance the art. Paul Rudolph, creating a garage for New Haven's urban renewal makeover, didn't do any better. Such Brutalist attempts to tame the beast brought little improvement to the building type—or the streetscape. Meanwhile, by 1972, the National League of Cities counted 6,250,000 spaces in 646 parking lots or garages across the nation.

The inward-turning, enclosed, car-filled architecture of Philip Johnson's IDS building in a languishing Minneapolis, or the supposedly problem-solving tower-cum-parking palliatives of John Portman's Renaissance Center in Detroit, were still an architecture of the exit ramp. As the 1980s approached, the epitome of parking as form-giver issued from Roche Dinkeloo at

Union Carbide's headquarters in Danbury, Connecticut. The building, settled into the isolated greensward of its exurban site, offered rooftop parking connected by a highly visible driveway ramp that seamlessly connected the driver/worker to the interchange.

Now and again, even architects like Stanley Tigerman—who mostly disdain the mundane needs of parking—might design a folly of a garage: in his case a facility with a façade like a Rolls Royce grille. But as the 21st century neared, the idea that the only good parking is no parking (or at least no visible parking) had gained currency as urban and suburban caretakers continue to try to camouflage or adorn the garage. In Dallas's gentrifying Uptown district, a lively apartment enclave from Post Properties tucks the automobile out of sight inside five-plus-story residential structures that line the streets. So, too, the New Urbanism returns to the Old Suburbanism ever more fervent by putting the automobile back behind the house or cozying it up to the curb. Developers in La Brea, about half an hour from Los Angeles, returned to the '20s and put their cars behind a new Main Street-style commercial district, complete with galleries and two 10-screen theaters.

Portland, Oregon, has also gone against the megaparking grain with ordinances that insist that three-quarters of a house façade must be (shazam!) house and (surprise!) not garage. Economically, so-called "cashing out" of parking—paying employees not to use parking—has become a favorite option for businesses, anti-auto advocates and even local governments. Santa Ana, California, gives employees who walk to work a \$50 annual shoe subsidy; the EPA is putting freezes on new garages and lots in cities and towns like Houston that don't attain clean air standards.

Statistically, these trends are probably a slight compared to the multi-car garages of McMansions—built, it seems, to hold the bulging brown bags from big box stores jammed into the bulging backs of SUVs parked therein. With parking lots cutting a swath through the nation, now, as in the motorcar's "Come Away With Me Lucille" or "My Merry Oldsmobile" infancy, the automobile remains an artifact desperately seeking shelter. *Plus ça change.* ■

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The Green Machine

continued from page 50

has raised concerns about glare.) Photovoltaic arrays situated at either end of the porch generate only 2 percent of the building's energy load, but CBF wanted to keep them in the design as teaching tools. At either end of the office portion, cabled X-braces stabilize the long building against high winds.

The building is framed and clad largely in structural insulated panels: Each panel consists of two thick pieces of oriented strand board sandwiching a 6- to 8-inch-thick layer of insulation. "You build the structure just like a barn," says Mella, first assembling

the walls from individual panels joined flat on the ground, then raising the walls upright. The panels remain bare on the interior except for battens covering the joints. A girdle of galvanized steel wraps the exterior "like a blanket," Mella explains, because it has high R-values for insulation; its content is 75 percent recycled metal. The surface was left unpainted both to avoid volatile organic compounds in paint and to ensure that the steel will recycle readily at the end of the building's life. A small volume on the building's north side holds a locker room; it is clad in a ground-faced masonry block containing recycled aggregates and fly ash.

The open-plan interiors are a showcase for green materials.



The CBF's new office stands just 100 yards from its namesake, the Chesapeake Bay.

The floor of the lobby is made of 3/4-inch bamboo boards. Office floors are finished with cork beeswax, which absorbs fugitive noise in the large spaces. The

bamboo, cork, and engineered wood are among the few exceptions to a design-team rule: building materials may originate no more than 300 miles from the site.

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Janet Zweig

Participating Communities

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The exhibition and publication have been supported by a grant from the Philadelphia Exhibitions Initiative, a program funded by The Pew Charitable Trusts, and administered by The University of the Arts, Philadelphia, with additional support from The William Penn Foundation, the Pennsylvania Council on the Arts, and the Fairmount Park Art Association.

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The office ceilings will stay exposed except for suspended trays of gypsum, (74 percent recycled) which hold the light fixtures.

Open offices were the only way to both ventilate and light the building naturally. Light sensors mounted throughout the offices judge when the daylight dims enough to turn up the electric lights. And temperature and humidity monitors outdoors suggest when the air is comfortable enough to activate the "Open Window" signs that hang in each office quadrant: Staff may then crank open the glass panels and let in fresh air. Roof dormers open mechanically to help draw air through the spaces. "This region isn't the most suitable for natural ventilation," Mella observes. "It's

a little humid. We estimate [the staff] will be able to use it about 10 percent of the year, based on our idea of thermal comfort. But knowing these people and how hands-on they are, they'll probably use it a lot more than that."

Although the building's vital organs hide behind all the obvious amenities, they offer the most compelling signs of sustainability. Renewable energy sources supply about 34 percent of the building's total load. The indoor air temperature is regulated by a "geo-exchange closed loop": The heat pump connects to vertical wells that reach 300 feet into the ground to take advantage of the earth's natural temperature of 55 degrees Fahrenheit, which helps to cool the building in summer and heat

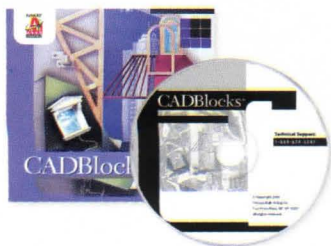
it in winter. The roof collects rain-water and directs it to one of the three 12,000-gallon cisterns for storage. From there, the water is filtered of particles, treated with chlorine, filtered again through carbon to remove the chlorine, and used for the sprinkler system as well as for hand washing, mop sinks, and laundry. (Local codes, however, prohibit using rainwater for drinking, cooking, or showering.) And in the restrooms (where occupancy sensors control the lights), the design team specified Clivus Multrum composting toilets. All waste winds up in a large container beneath the building, where it is turned into fertilizer to be used on the site.

As the CBF staff moved into their offices in early December,

Foster began verifying that all the building's systems perform as designed. The CBF will use the "Bonneville" standards for building performance, set by the city of Bonneville, California, which are among the strictest in the nation. The U.S. Department of Energy, Foster says, has offered to monitor the building systems over the long term, which is fine with him. "We see part of the purpose of the building as providing a [teaching] tool," Foster explains. "Green buildings as green buildings are not the CBF's mission. Our mission is to save the bay." And now the foundation's staff can turn its full attention back to that majestic body of water, which slowly changes colors throughout the day. ■



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Revival of the Fittest

continued from page 58

sense. Coming out of the '70s, research architects began to explore the experiential and conceptual effects of form, not form in and for itself. What Jeffrey calls the "ecstatic," what Robert Somol calls the "ambient"—both about zones of architecture that form alone cannot give access to—have beginnings [in these early investigations].

BM: The confluence of ideas that we think we're seeing now as we look back at the 1970s seems to me overdetermined—it's as though we only have one story. It might be more productive to take a different

perspective: At the end of the 1970s there was a very strong reaction in architecture, especially in America, towards high post-modernism. And that tended to cast the 1970s as monochromatic and monolithic. Revisionism was bound to occur because the idea of one prevailing idea—a formalism—during the 1970s is a fiction.

LL: Well, I wish Jeffery were here. I wanted to end with him because his exhibitions are about what he calls "ecstatic architecture" and the eruption of "graphic experimentation of incomparable beauty and depth." I think it's probably a direct result of the formalism of the 1970s in the good sense of the word. Architects became much more visual, and architecture

became a much more visual culture than it had been before.

MH: Without speaking for Jeffrey, I would understand that how the sum of all this worked is exactly what you are calling the formalist project. You actually begin with formal research to find formalism's "other." What Jeffrey calls the "ecstatic" I would understand as something that cannot be: A form can sponsor it or inspire it but it's not form anymore.

I think architecture is still looking for the specific ways in which it can intervene in culture or have any kind of cultural vocation—while being aware of the ways in which other professions or media are better at it. Architecture is still searching for its own cultural

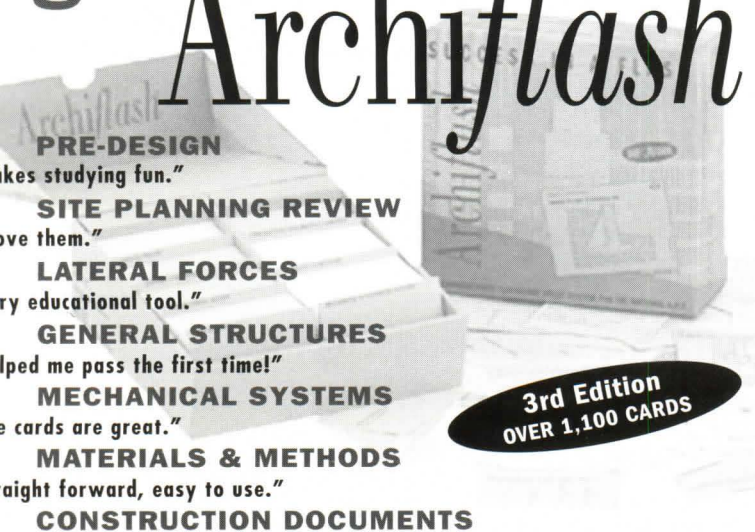
specificity, only now, it has more media to compete with. ■

Suite Fantastique: Perfect Acts of Architecture, Wexner Center for the Arts, curated by Jeffrey Kipnis, through April 15.

The '70s: The Formation of Contemporary Architectural Discourse, Harvard Graduate School of Design and Cornell School of Architecture, organized by Michael Hays, George Baird, and Val Werke, through April 24.

Perspecta 32: Resurfacing Modernism, edited by Annmarie Brennan and Brendan Moran (Yale School of Architecture, April 2001)

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Adrift in The Land of Flying Cars

Phoenix's Sky Harbor takes parking to new heights. **Reed Kroloff** brings it back down to earth.



In her story "A Brief History of Parking," Jane Holtz Kay bemoans the automobile's voracious consumption of our cities (page 76). Hold on, Jane. You ain't seen nothing yet: Out in Phoenix, a city that has been writhing in an orgy of automobilia for 50 years, cars have begun to fly.

Well, almost. The cars don't actually leave the pavement, but they are certainly off the ground at Sky Harbor, the city's quaintly named airport. A few years ago, Sky Harbor built a new main terminal, designed by in-town architects DWL. Like a dirt mountain, the 2.4 million-square-foot, brown concrete building (named in memory of favorite son Barry Goldwater, but perhaps out of respect, referred to locally only as Terminal 4) pushes seven stories into the air, the top four of which are parking. Visible for miles around, the massive elevated garage delivers an unmistakable message: In this city, parking is serious business.

Now, ever in search of more parking (ground transportation generates nearly as much revenue for the airport as air traffic), Sky Harbor is extending Terminal 4's garage. However, the \$90 million, 1.5 million-square-foot expansion, by local Cullen/Burr Architects, is not only rising two floors farther up, but reaching farther out as well, over six lanes of roadway that bracket the terminal. In other words, the building is sprouting a pair of six-story, 150,000-square-foot concrete wings that will hover some 50 feet above the ground.

Terminal 4 was originally justified by its planners as environmentally efficient. The garage, they argued, would shade the terminal and demand no extra land. It shades the terminal all right, plunging it into perpetual gloom. (Don't people come to Arizona for the sun?) If shading was so important, why didn't they simply use... a shade, one that could give the building character, and nice lighting as well (as in the Denver airport)?

From the outside, the massive rooftop parking structure—already more than six acres per floor—completely overwhelms the terminal visually. The addition will only make matters worse.

And what of the argument about saving land? Yes, storing the cars above the terminal was efficient. But it would have been just as efficient to use the garage as a foundation (and let the building's 15 million-plus visitors take in the view of the city's dramatic landscape from the vantage point of a day-lit arrivals hall). Moving beyond Terminal 4's original envelope, the parking addition makes a land grab that belies not only the original "logic" of the building, but also the alleged justification for its plan and section.

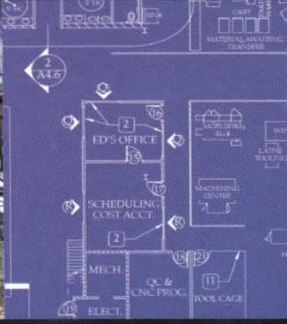
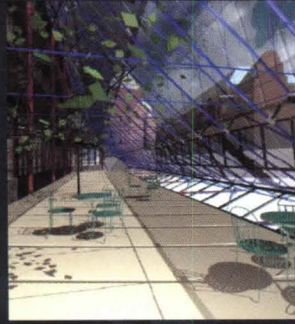
The addition should have been only on top of the building, not beside it. This wouldn't have made Terminal 4 good architecture—it's too late for that. But it would have at least kept the roadways in sun. And, in the hands of a clever architect, the new levels could have been shaped into some sort of visually meaningful (or at least dramatic) cap for the building. As designed, they don't.

One thing the extension does do well is reinforce the message that Terminal 4 already delivers so forcefully: In Phoenix, the automobile reigns supreme. Nothing is more important here than getting to and from the car with maximum ease. But where does this kind of logic end? Phoenix is already a city that routinely hoists gigantic buildings (like its convention center) over city streets. Why not, then, shade more of the city with airborne parking lots? At least the symbolism would be appropriate for a place so enamored with, so worshipful of cars, that it lifts them on high—nearer my Dodge to Thee. ■

Sky Harbor's Terminal 4 is already a building entombed in parking. Now the garage will grab the streets as well. What's next, the runways?

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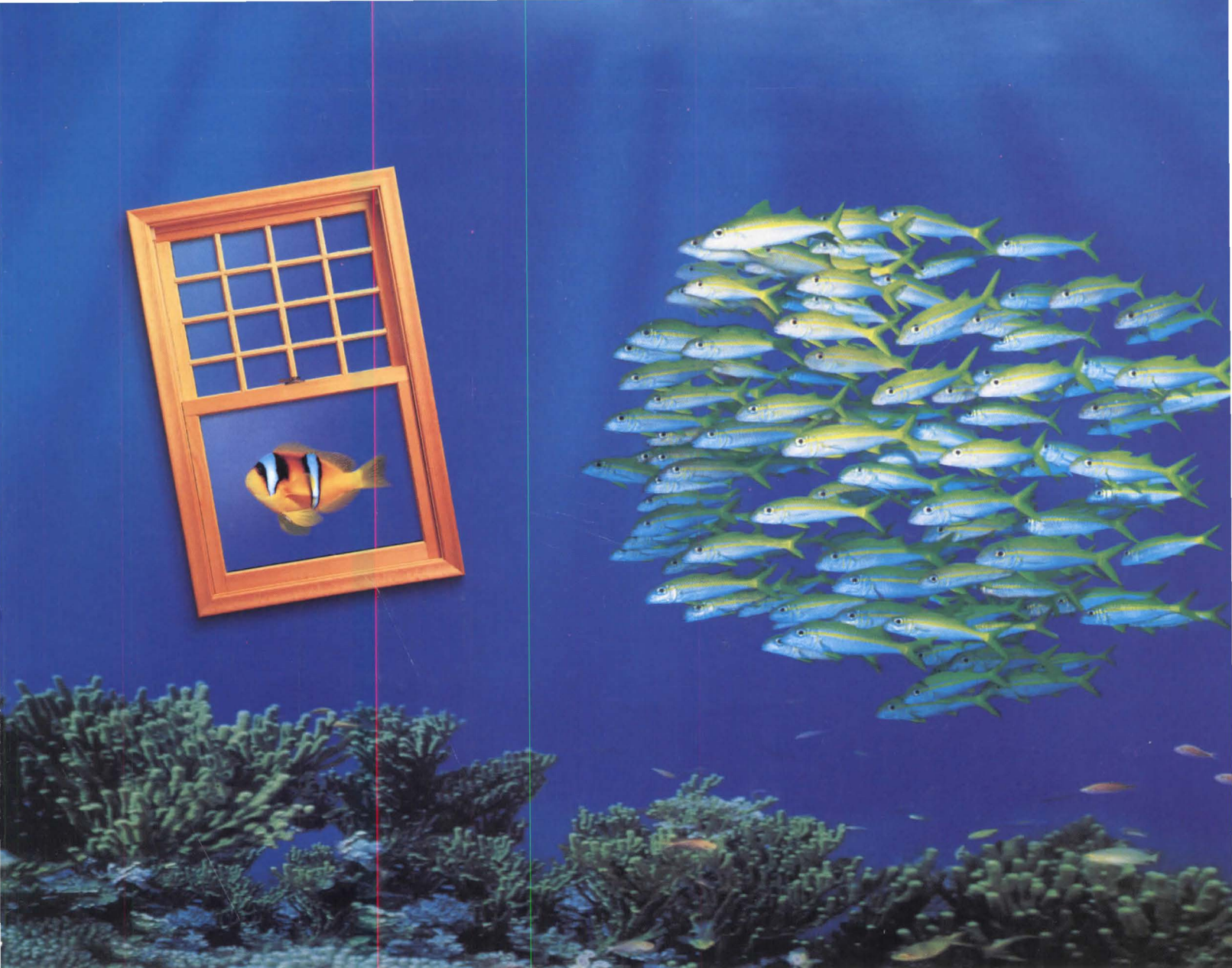
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