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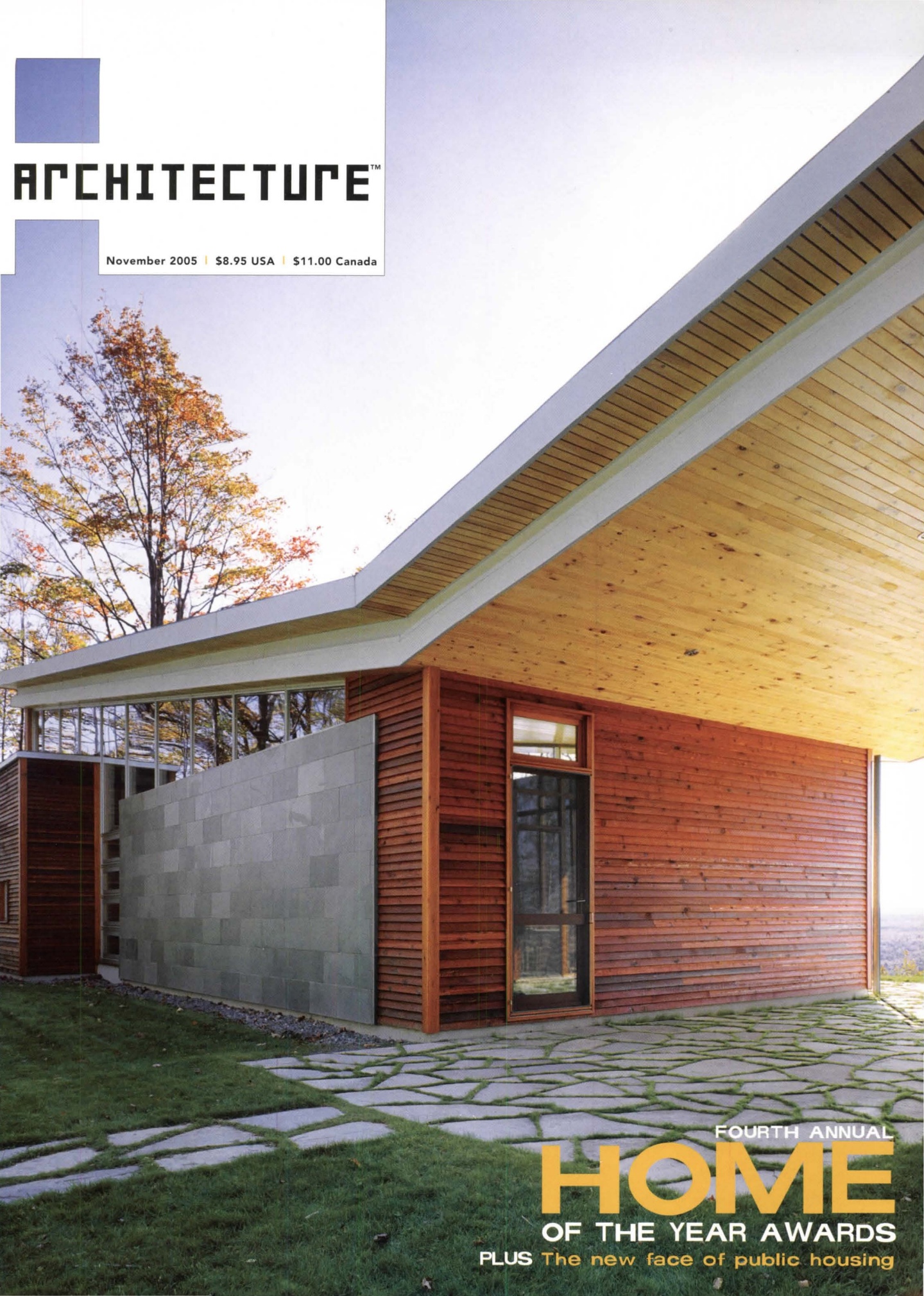

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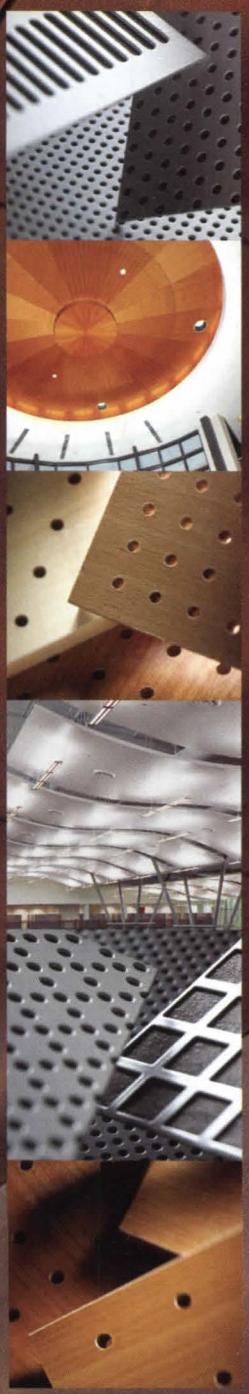

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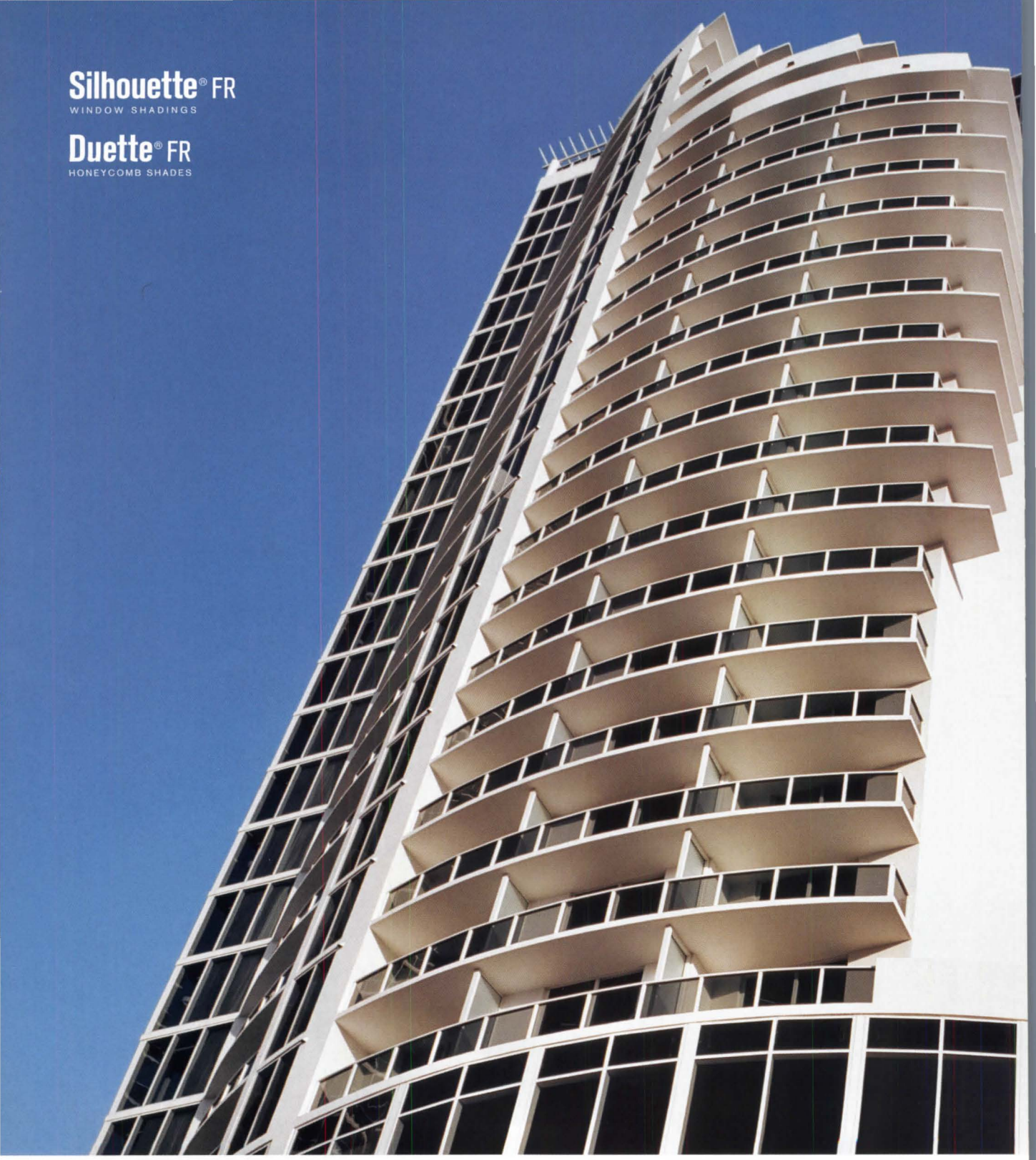

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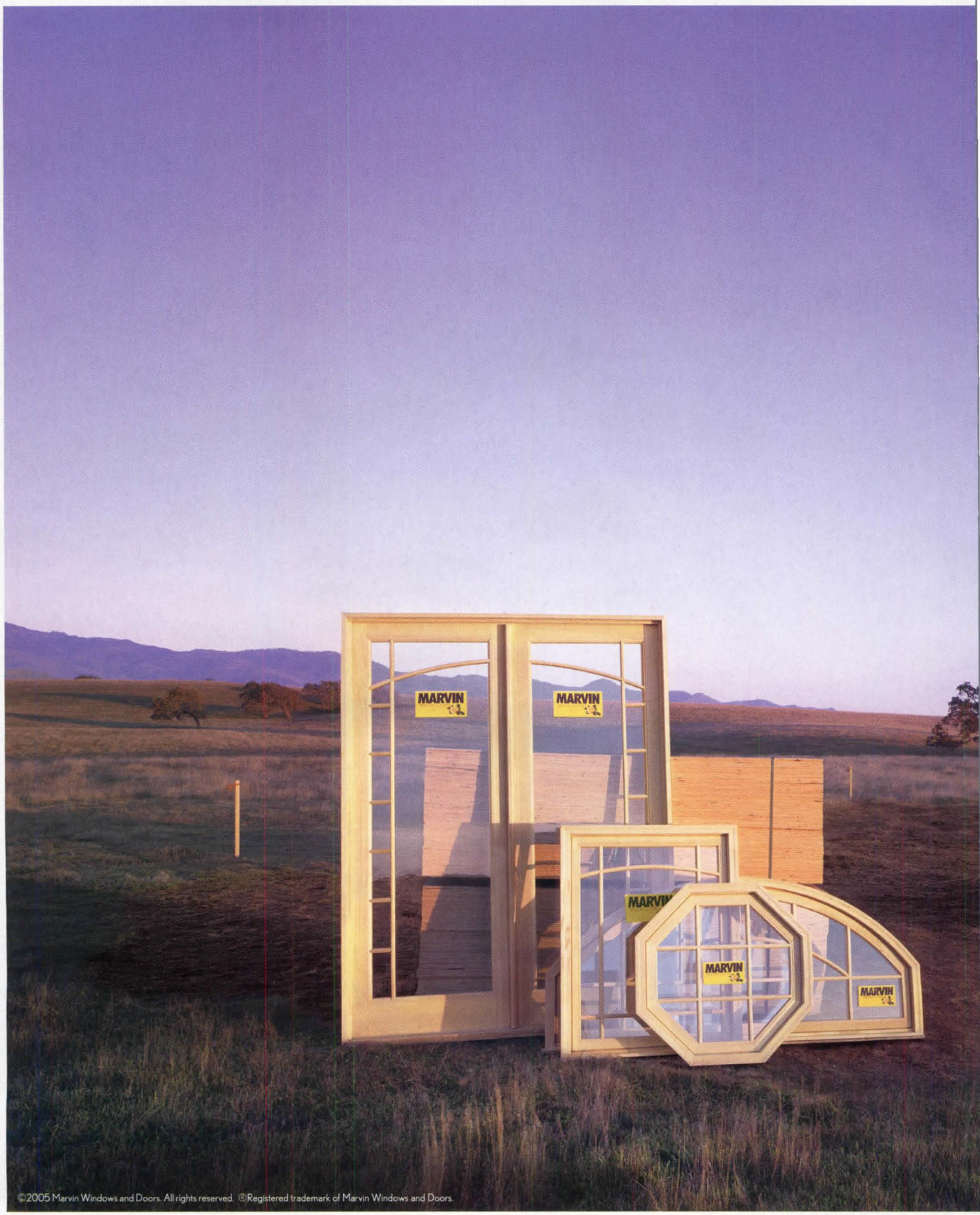

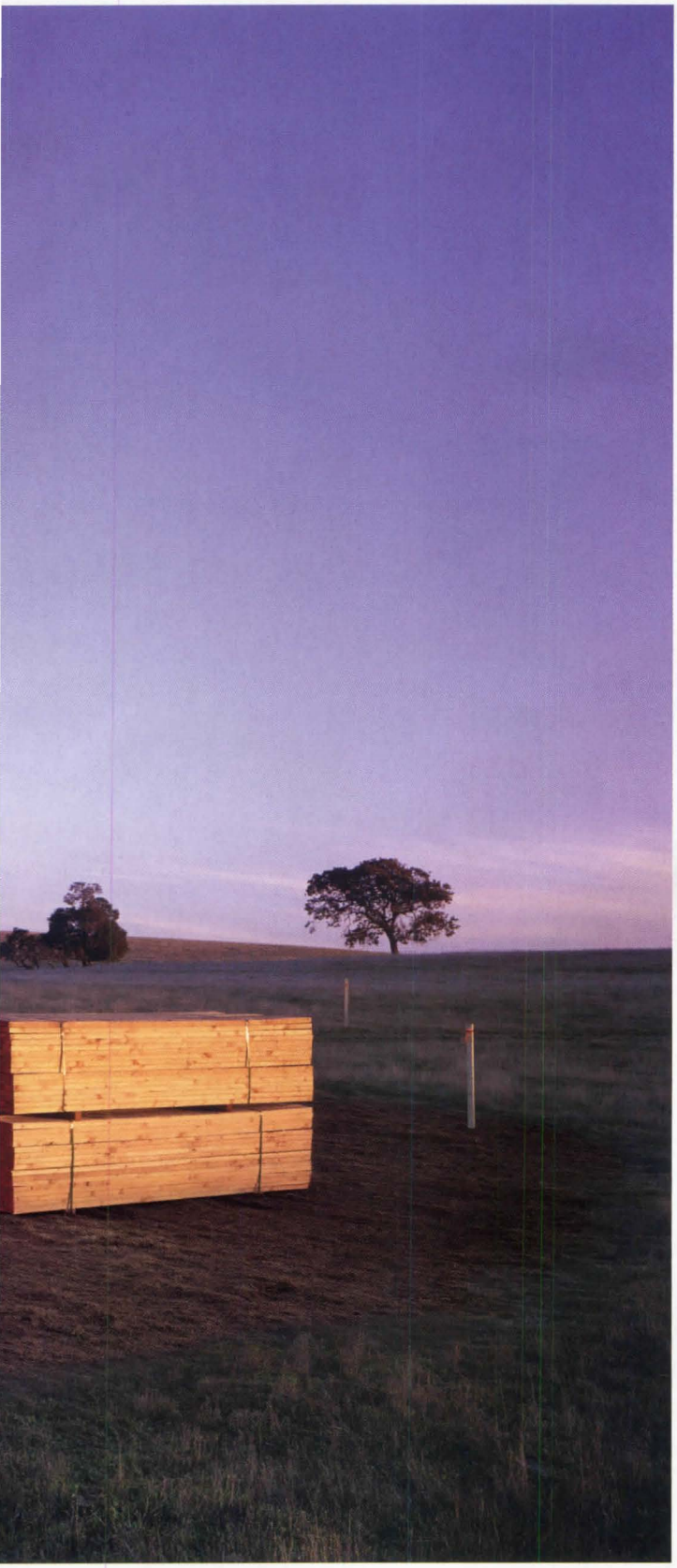

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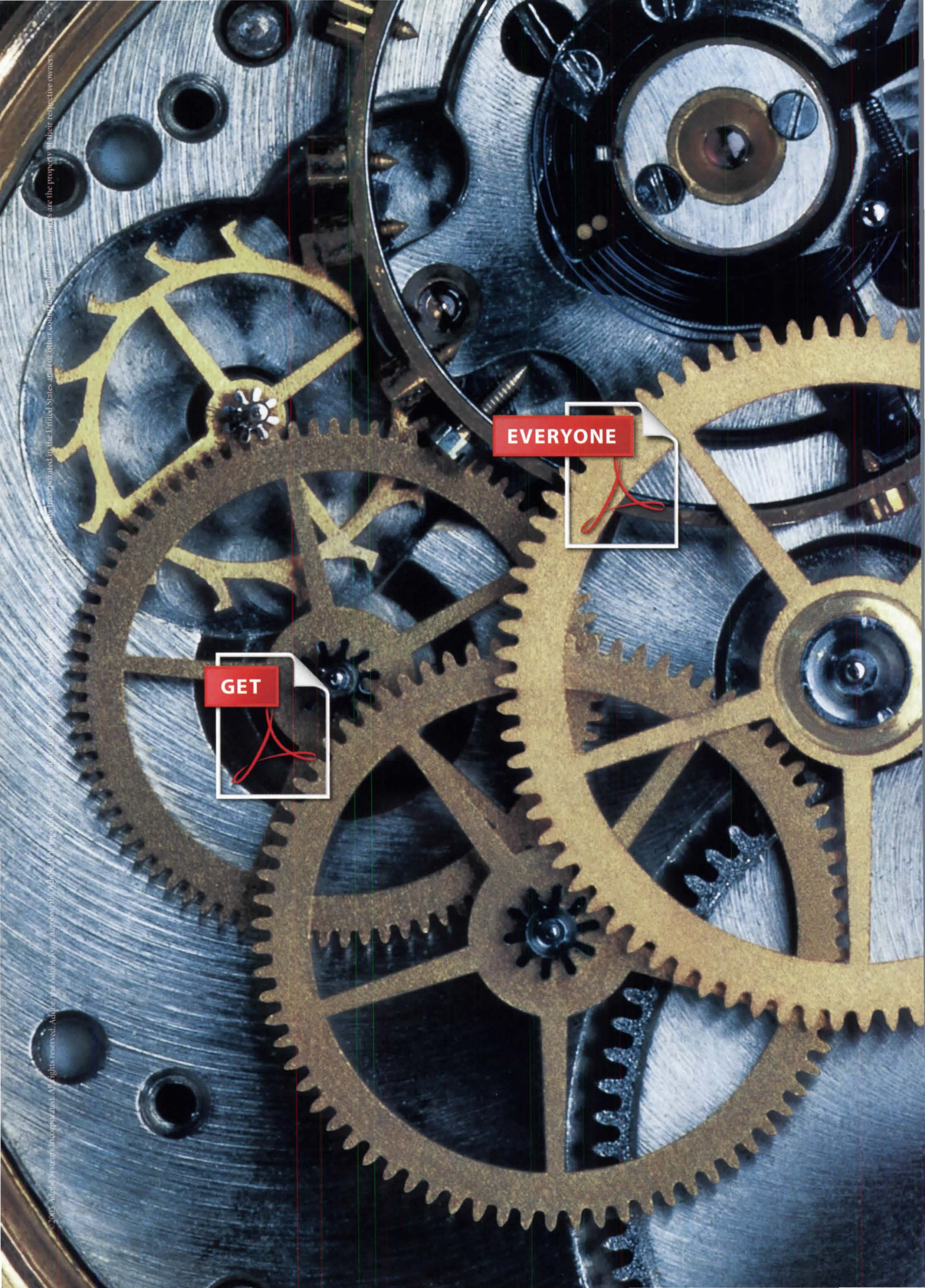

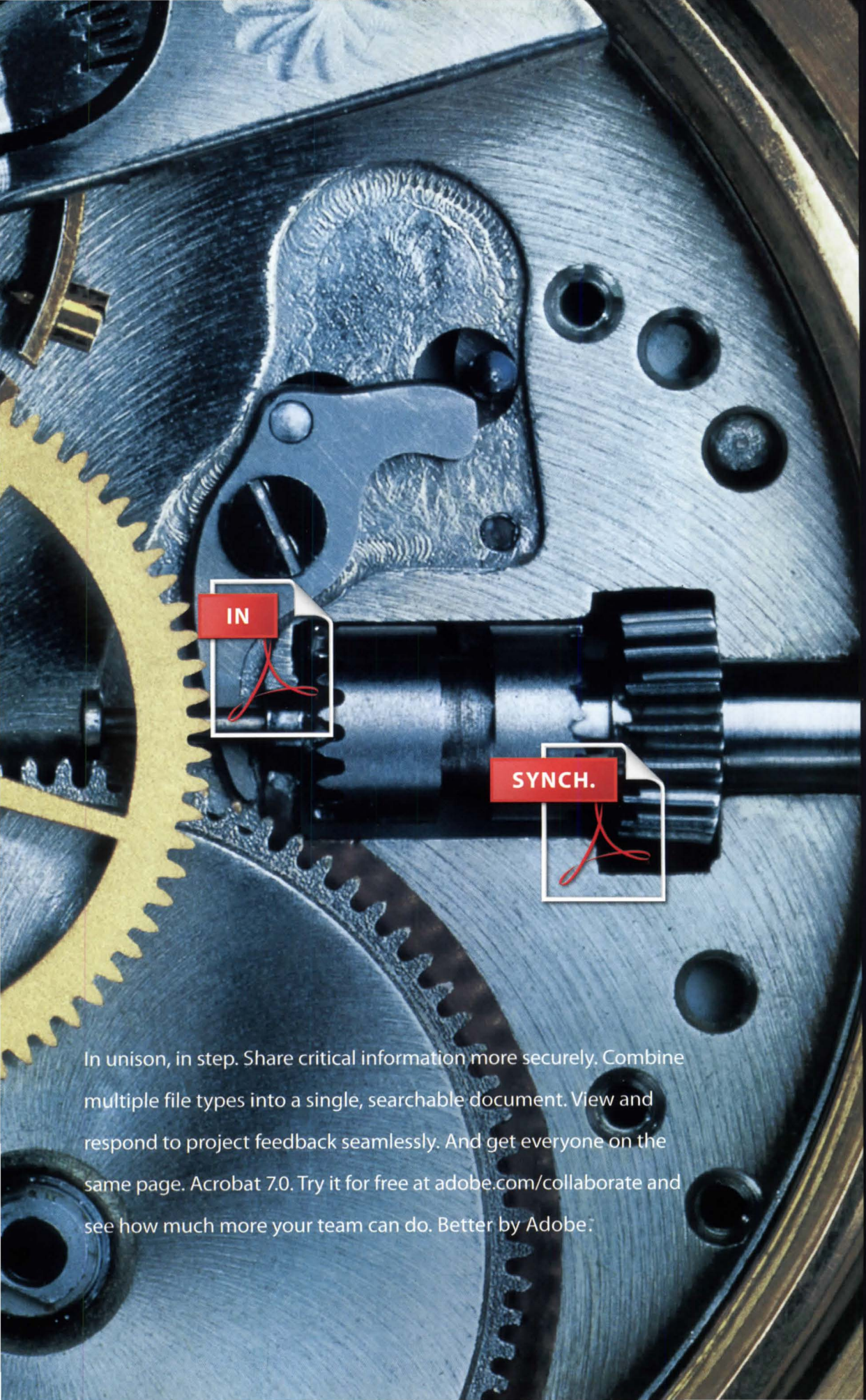

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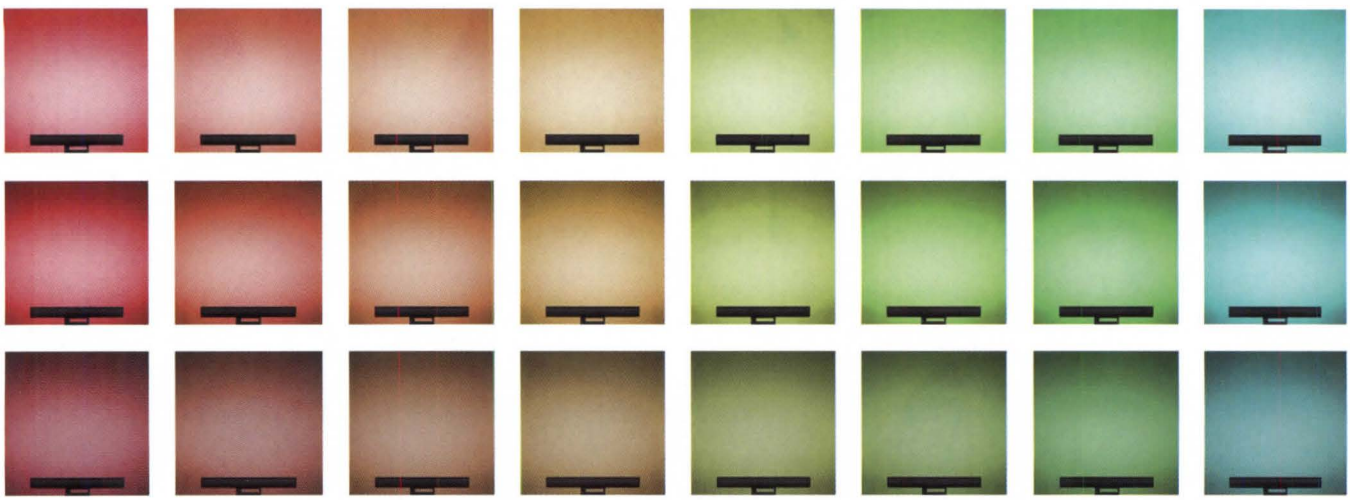
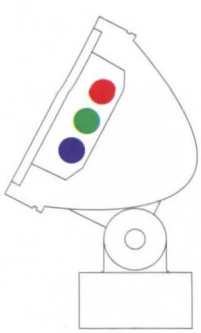
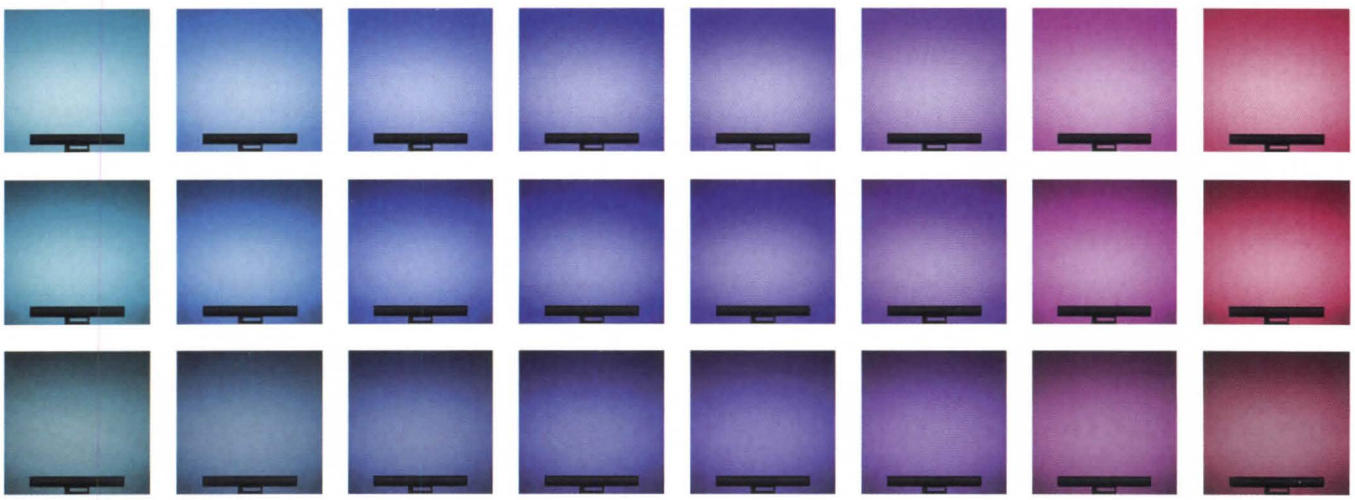


Worlds of Color





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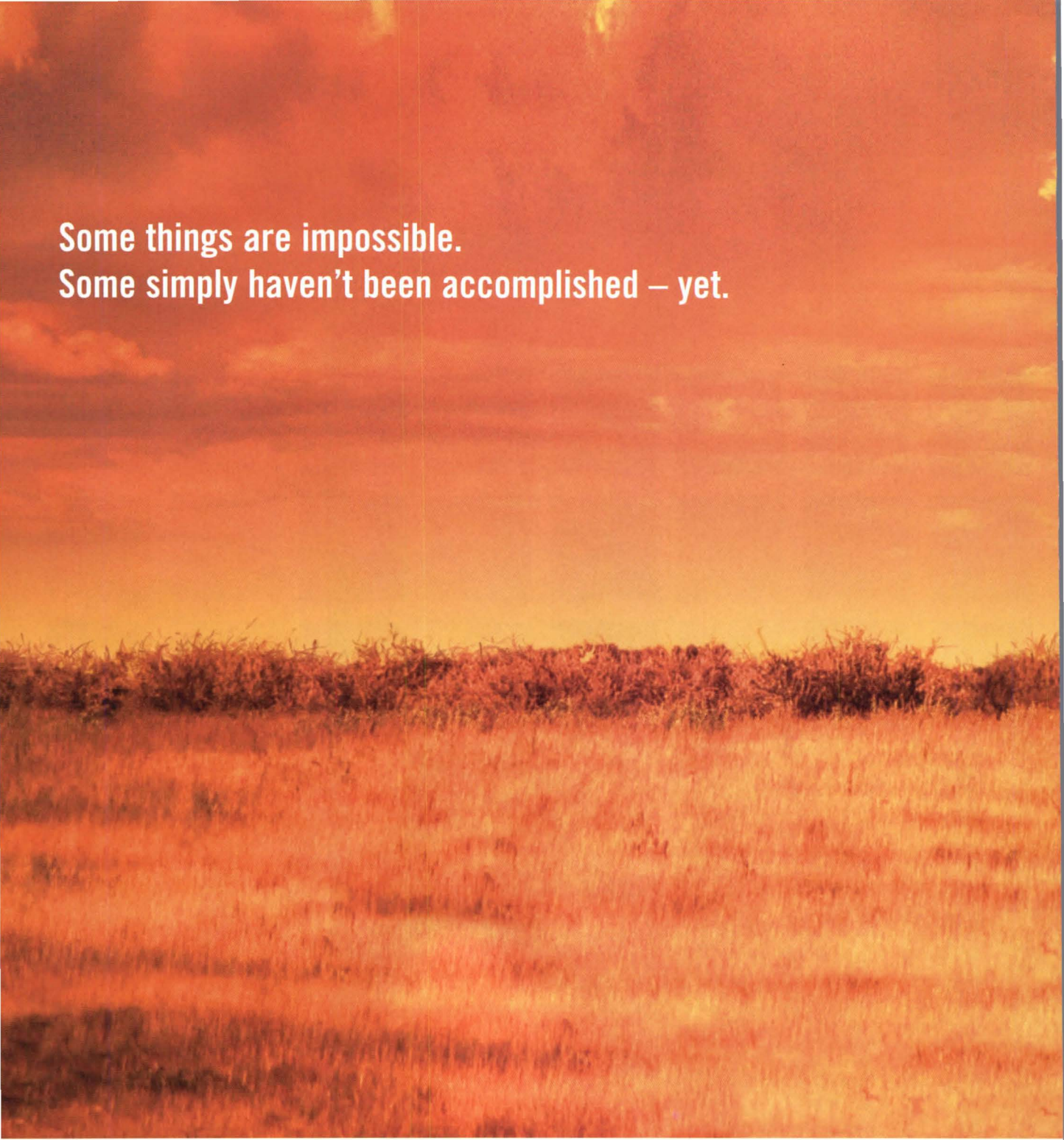

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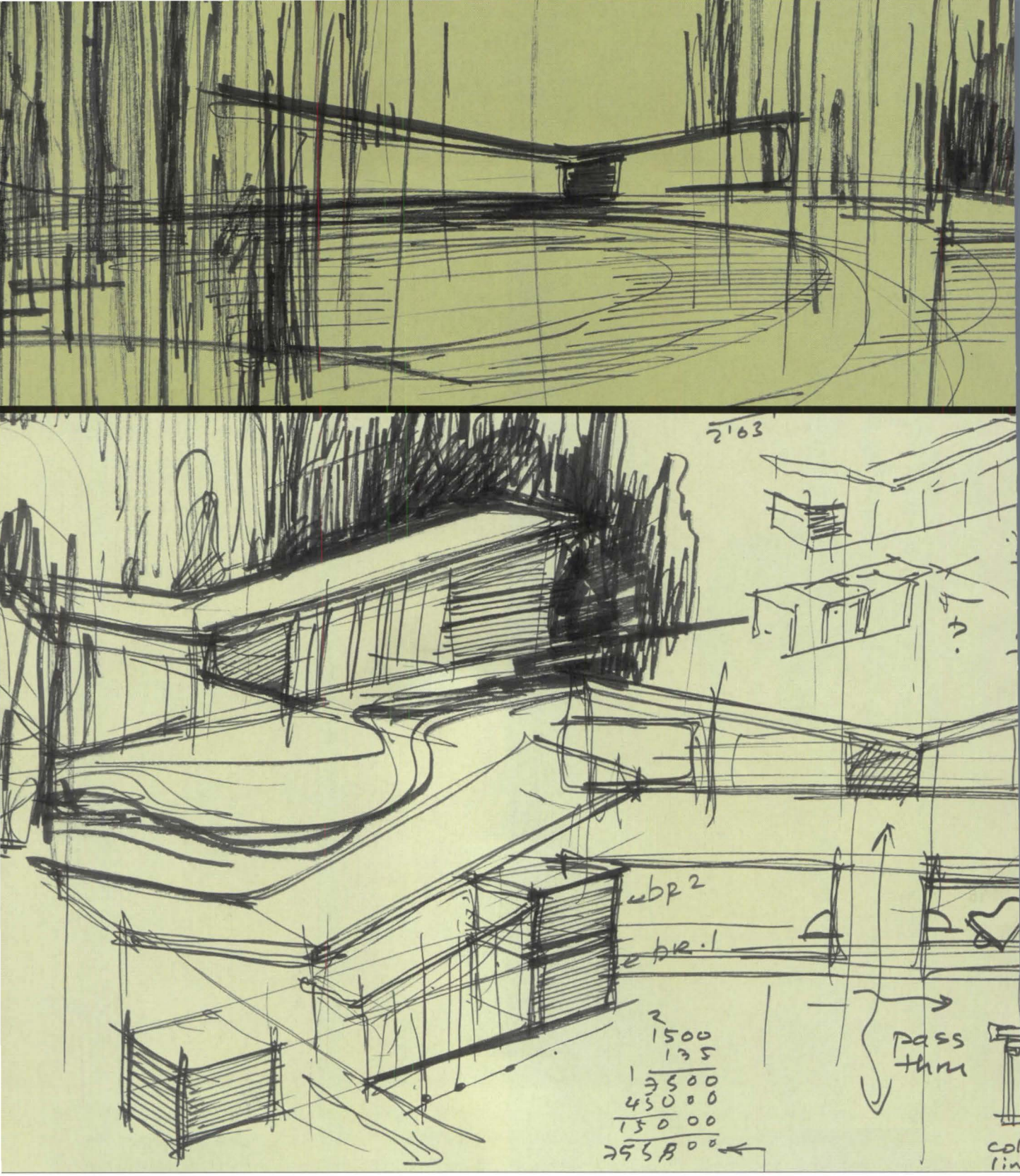
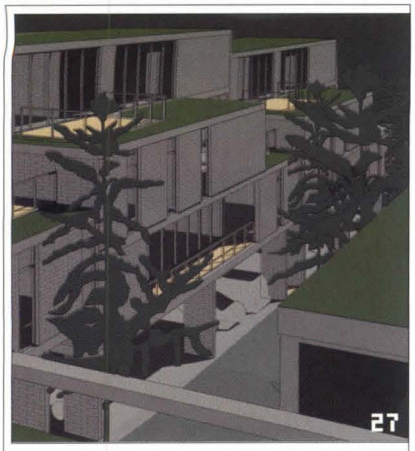
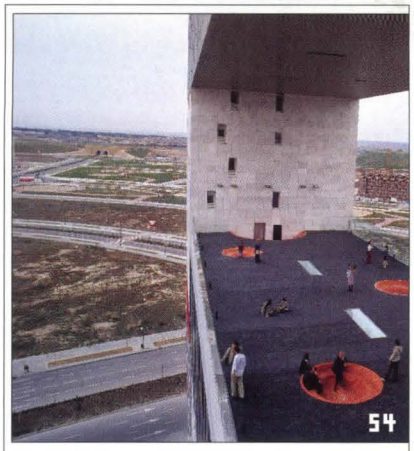


52 The proportions generated in the preliminary sketches (above) were later realized in the Minton Hill House in Quebec by Affleck + de la Riva Architectes of Montreal.



practice



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An honorable mention in the fourth annual Home of the Year Awards, Affleck + de la Riva Architectes's Minton Hill House occupies a hilltop in Quebec's Eastern Townships. Images this page (left to right): first place winner in Urban Habitat's housing competition; MVRDV in Madrid; "Mad Plaider" carpet tile by Flor.

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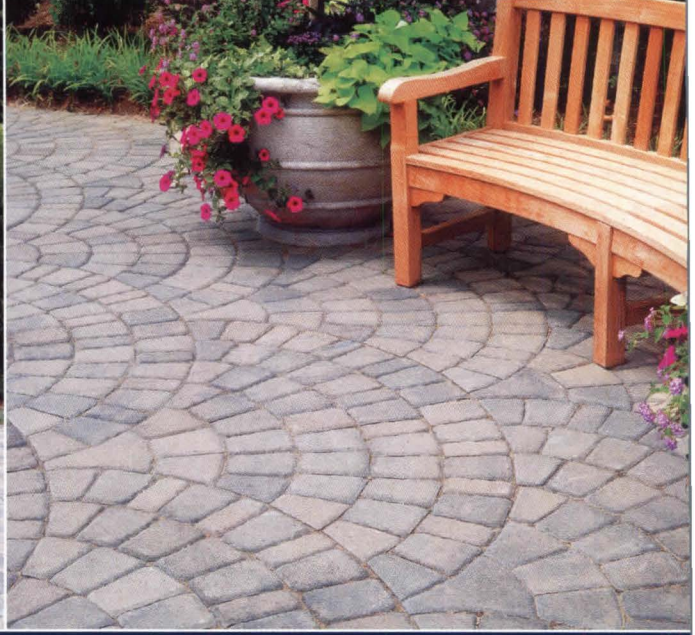

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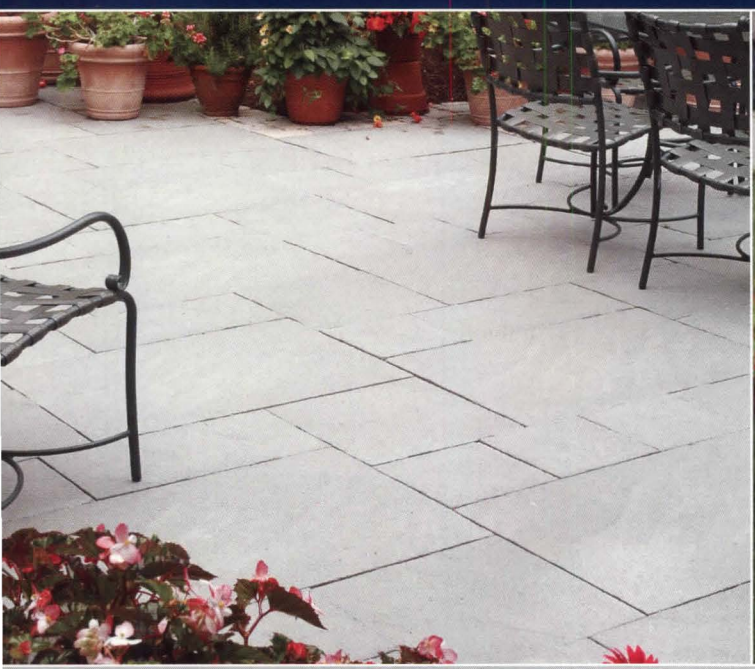

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ACT NOW

BY EMILIE SOMMERHOFF

In disaster, there must be room for hope. With the perspective and emotional distance from Katrina of two months, it is possible to see—without denying the scope of the tragedy itself—the opportunities along the Gulf Coast to plan, design, and develop truly sustainable communities.

Or not. Some are more prepared to recognize the possibilities than others, and it is a matter of involvement that will determine who really defines progress.

Mississippi governor Haley Barbour understands the potential that lays in the detritus left in Katrina's wake. In mid-October, he organized the Mississippi Renewal Forum, the purpose of which was to examine and make recommendations for the future of 11 Mississippi coastline towns ravaged by the storm. Taking place at a Biloxi resort, itself an exhausted survivor, the event involved close to 200 architects, urban planners, and allied professionals, as well as local leaders. Developers and casino owners were not invited to the charrette. The possibilities inherent in the disaster-stricken area also appeals to Miami-based architect Andrés Duany, who helped coordinate and lead the program, populating it predominantly with his peers from the Congress for the New Urbanism.

I find the forum heartening for several reasons: It and Barbour's larger initiative, the Governor's Commission on Recovery, Rebuilding and Renewal, were put together with a coordinated and determined efficiency—suggesting that steps will be taken quickly to pick up the pieces—but still within an informed and thoughtful process. There is energy and enthusiasm on hand: 200 people were willing to commit to a six-day effort, most on a volunteer basis. Developers were not present (at least the most obvious economic interests were kept at bay), but the local community was in attendance—an indication that the government recognizes that residents, not the highest bidders, must ultimately decide how to remake their communities. Most significantly, the forum is a strong indication that Mississippi officials want architects and urban planners to be intimately involved in determining the Gulf region's future.

The Mississippi event is particularly encouraging when juxtaposed against the proceedings in neighboring Louisiana. The advisory panels recently formed by Governor Kathleen Blanco at the state level and by Mayor Ray Nagin for New Orleans are glaringly devoid of representatives from the urban planning and design community. (See "Advisory Panels to Steer Post-Katrina Rebuilding," page 22.)

With that said, there is a case being made against a rebuilding process dominated by proponents of New Urbanism, which Eric Owen Moss, director of SCI-Arc (Southern California Institute of Architecture), called "right-wing developer-speak masquerading as populism" in an October 15 *Washington Post* story. Its principles, many argue, lead to rigid neighborhood layouts and characterless communities, a troubling prospect for towns with as much cultural personality as those along the Gulf Coast.

The reality, however, is whether you believe in the tenets of New Urbanism, deride them, or fall somewhere in the middle, influence belongs to those with initiative. New Urbanists comprise the group who showed up, the ones who actively helped organize the forum and then populated it for nearly a week with enough professionals to take the initial steps of a daunting task. The scramble is happening, and the New Urbanists are leading it. Their theories will define the agenda, unless a broader range of architects, designers, and planners get involved. The loss of life in the Gulf region has been catastrophic, but what will be built, literally, upon such a loss, has the potential to be instructive and enormously influential. Perhaps the question is not so much whether forward-thinking planners representing a range of schools of thought should get involved, but whether they can afford not to.

You're going to flip

Your criticism about the absence of *architects'* names and project completion dates being nowhere on the Masterworks of Modern American Architecture stamp series [July 2005, page 17] is ill founded. Turn the sheet over and you will find thumbnail bios and project dates for each building.

James M. Kelly
Tucson, Arizona

Save the children

Your magazine couldn't care less about how something works—only how it appeals to the eye. The Lavender Sure Start and Children's Centre [September 2005, page 41] is the most dysfunctional space I have ever seen. All it does is please the modernists. The looks on the childrens' faces say it all.

Charles Durrett
Berkeley, California

Drawing a distinction

I would like to pass on my appreciation of your showing construction drawings and details in the projects you present, particularly in your July, August, and September issues. You are really doing the profession a service with this extra effort that other magazines do not attempt. Architects and interns need to become better educated on how to put buildings together for the profession to move forward in America.

Neil Reardon
Fargo, North Dakota

Two trains of thought

Regarding Robert Klara's Protest "It's Time for Preservation on the Wrong Side of the Tracks, Too" [September 2005, page 104], since the renovation of the St. Louis Union Station mentioned in the piece, there has been a constant turnover of tenants. There has also been a constant turnover of managers, all of whom had promised to reverse the ongoing problems with Union Station.

Laurent Jean Torno, Jr.
St. Louis, Missouri

Thank you for the Protest piece on Buffalo Central Terminal. You framed the argument both succinctly and eloquently. I'm hopeful the article will add to the local debate.

Russell E. Pawlak
Buffalo, New York

CORRECTIONS

Of the rubber and vinyl Flexco flooring featured in Life Safety Products [September 2005, page 81], only the rubber version meets ASTM G21 standards. The Trolley House featured in "Who's the Boss?" [July 2005, page 34] was designed by Utile in collaboration with the Office of David Neilson, an urban-design firm based in Boston.

DO TELL

We want to know what you think about the stories you read in our pages. Send your letters to Robert Klara, managing editor, *Architecture*, 770 Broadway, New York, NY 10003. Or e-mail: rklara@architecturemag.com. Letters we receive may be edited for both length and clarity.

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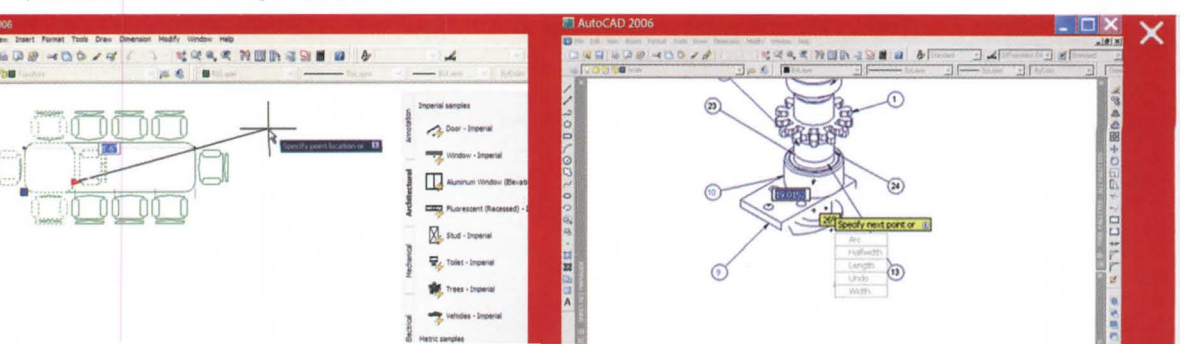

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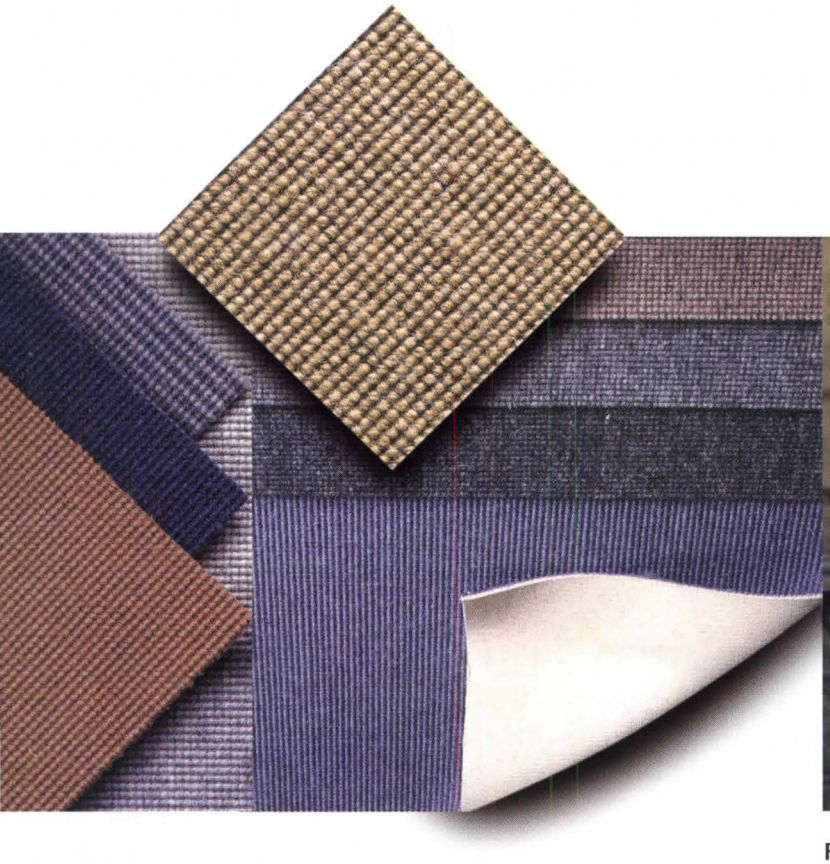

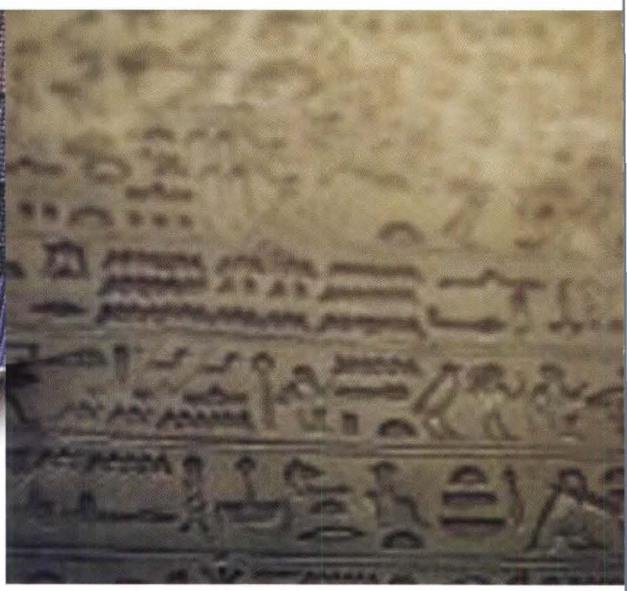

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JERZY SOLTAN, 1913–2005

Jerzy Soltan, a former associate of Le Corbusier who taught his mentor's ideas at Harvard University's Graduate School of Design for 20 years, died on September 16 at his Cambridge, Massachusetts, home. He was 92.

While Soltan did design buildings, he devoted most of his life to teaching. In awarding him the AIA/ACSA Topaz Medallion for Excellence in Architectural Education in 2002, the jury described him as "the epitome of the inspirational educator, bringing boundless energy and architectural vision to generations of future practitioners." And although he was a lifelong adherent to Corbusian principles, fellow Harvard professor François Vigier recalls he was "very open-minded and interested in what his students were trying to do, rather than imposing his 'theology' on them."

Architect Michael Graves, a student of Soltan's at Harvard, remembers him as "a breath of fresh air" who was uncommonly devoted to his students. Soltan was born to Polish parents in Latvia in 1913. While still an architecture student at the Warsaw Technical Institute, he won a competition to design the Social Security Center in Vilnius, which was completed in 1939. That same year, he became a prisoner of the Nazis while fighting the invasion of Poland and remained in captivity until World War II ended.

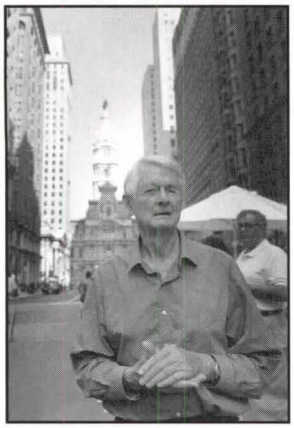
In 1945, Soltan moved to Paris to join the studio of Le Corbusier, with whom he had corresponded during the war. Under Le Corbusier, he worked on the Unité d'Habitation in Marseille and helped develop the Modulor proportioning system.

After five years, he returned to Poland and began his teaching career as a professor at the Academy of Fine Arts in Warsaw. But as elsewhere in the Soviet bloc, communist leaders in Poland did not approve of European modernism. Because his philosophy was suspect, Soltan was at one point permitted to teach only bricklaying and carpentry. "I was absolutely anathema," he would subsequently recall. Years later, after the fall of the communist regime, the academy awarded him an honorary degree.

In 1959, Soltan was invited to join the faculty of the Graduate School of Design at Harvard, where he eventually became the Nelson Robinson Jr. Professor of Architecture and Urban Design. He helped persuade university officials to hire Le Corbusier to design the the campus' Carpenter Center (1964), which became the architect's only North American work. Soltan retired from Harvard in 1979.

When he won the Topaz Medallion at age 89, Soltan told the *Harvard University Gazette* that he was "working on some mad projects. They are absolutely my fancy. When or if they will be realized, I have no idea." **Mark Alden Branch**

EDMUND BACON, 1910–2005



Controversial city planner Edmund Bacon, 95, died October 14. Executive director of Philadelphia's city planning commission from 1949 to 1970, Bacon supported developments like Penn Center—a combination of commercial and hotel complexes that strengthened the downtown core—and the demolition of a series of elevated mass transit lines, which created a strong east-west corridor that helped connect the city's neighborhoods on either side of the Schuylkill River.

His work was not without criticism, but a strong will saw most of his projects to completion. Bacon clashed most famously with Louis Kahn over the architect's plans for the city center but also with preservationists because his idea of progress often involved razing historic infrastructure. Despite this, he did favor the city's 491-foot height limit—the level of the statue of William Penn atop city hall—and opposed skyscrapers such as Murphy/Jahn Architects's One Liberty Place.

An adjunct professor at the University of Pennsylvania, Bacon was also an author: His 1967 book, *Design of Cities*, is still a seminal work in the study of city planning. **Katie Gerfen**

ADVISORY PANELS TO STEER POST-KATRINA REBUILDING

In an apparent bow to public criticism that recovery efforts were moving too slowly, both Louisiana Governor Kathleen Blanco and New Orleans Mayor Ray Nagin have created 26- and 17-member advisory panels, respectively, to oversee the Herculean rebuilding task that faces the state's Gulf Coast in the wake of Hurricanes Katrina and Rita.

While many in the community have lauded the panels—especially after faith in governmental response was badly shaken by the slow response of the Federal Emergency Management Agency—the newly created bodies clearly have their work cut out for them. Moreover, some in the design community are questioning why both panels are heavily populated by entrepreneurs and figureheads instead of architects and building professionals.

One of the early actions taken by the governor's committee was to organize the Louisiana Recovery and Rebuilding Conference (at press time, scheduled for early November), a caucus in which the AIA is to play a key role in suggesting future planning and design strategies. But except for the owner of a construction firm, no design or building-trade representatives sit on Blanco's panel. The mayor's group favors entrepreneurs, and includes trumpet player Wynton Marsalis.

The AIA was nonetheless enthusiastic in a statement about its role in the scheduled November conference, calling it a "golden opportunity... to drive an important visioning process." **Robert Klara**

- The Scottish Parliament by EMBT/RMJM, completed after architect Enric Miralles's death (February 2005, page 28), has won the Royal Institute of British Architects's 2005 Stirling Prize. The Scottish Parliament beat five other shortlisted buildings, including Zaha Hadid's BMW Central Building in Leipzig, Germany (August 2005, page 44); O'Donnell + Tuomey's Lewis Glucksman Gallery in Cork, Ireland; Foster and Partners's McLaren Technology Centre in Surrey, England; Alsop Design's Fawood Children's Centre in Harlesden, England; and Jubilee Library in Brighton, Sussex, by Bennetts Associates with Lomax Cassidy + Edwards.

- The World Monuments Fund (WMF) and the National Historic Trust for Preservation are joining forces in a partnership to promote restoration and historically sensitive reconstruction methods throughout the Gulf Coast region devastated by Hurricane Katrina. The WMF has also named New Orleans and the Gulf Coast as its 101st most endangered site.

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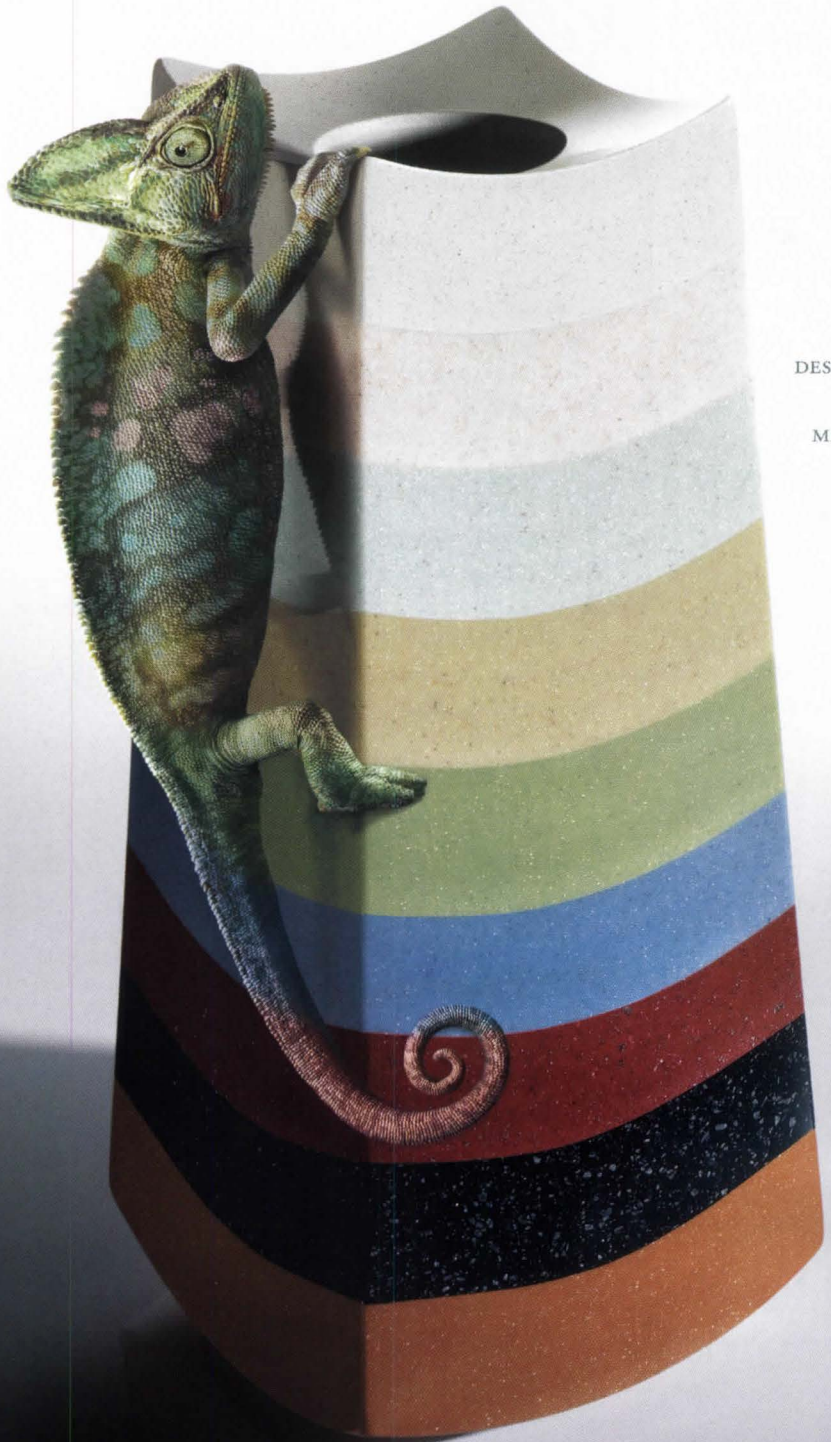

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MUTUAL LICENSURE RECOGNITION AGREEMENT REACHED

Representatives of NCARB, the AIA, the Committee of Canadian Architectural Council (CCAC), and the Mexican Committee for the Practice of International Architecture met earlier this month in Oaxaca, Mexico, to finalize details on a mutual licensure recognition agreement eleven years in the making. If ratified by the membership of all four organizations, the agreement, which would allow architects in the three countries to practice architecture throughout North America, will go into effect in late 2006. The agreement calls for practitioners to meet a series of educational requirements, and demonstrate at least 10 years of licensure in their own country. With their credentials approved by an agency not yet named, architects can apply for a license to work on a project without a local architect of record. Implementation details for the agreement are to be worked out after ratification.

Ellen Delage, the AIA's director of international relations, says that "the overall benefits include greater mobility for the architect and options for the client."

This new agreement does not affect the 1994 agreement already in place between NCARB and CCAC, which does not require the 10-year waiting period for work across borders because of the "similarities in the educational requirements and curricula," explains Delage. One reason it took so long to reach a North American agreement was because of the "difference in curriculum," she notes. In response, "we tried to develop a basis of practice-based equivalency." **Katie Gerfen**

ITO WINS ROYAL GOLD MEDAL

The Royal Institute of British Architects (RIBA) announced last month that the 2006 Royal Gold Medal will be awarded to Japanese architect Toyo Ito. Ito opened his office in 1971, and has completed such projects as the Tower of Winds in Yokohama, Japan (1986), a pavilion for the Serpentine Gallery in London (2002), and the Matsumoto Arts Centre (2004, above). Ito favors lightweight construction and is known for creating building skins out of perforated aluminum, fabric, and translucent materials. The medal, which is awarded for a body of work, will be presented at RIBA on February 15.

HIROSHI IEDA/COURTESY ROYAL INSTITUTE OF BRITISH ARCHITECTS

- The University of Colorado at Boulder won the Solar Decathlon for the second year in a row. The competition involved 20 university teams building homes on the National Mall in Washington, D.C., where each house competed in a variety of energy use challenges, as well as in categories of architectural design and documentation. The annual competition is sponsored by the United States Department of Energy.

- The Washington, D.C.-based American Architectural Foundation and the Chicago Architecture Foundation announced last month the creation of the Architecture & Design K-12 Education Network to advance a curriculum aimed at educating children in kindergarten through high school about the built environment. The new alliance will offer training for educators interested in the program, a communications network for design educators, a system of measurement and feedback on the effectiveness of methods of instruction, and symposia to share educator techniques.

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SIMPLE, DECENT, AFFORDABLE HOUSING

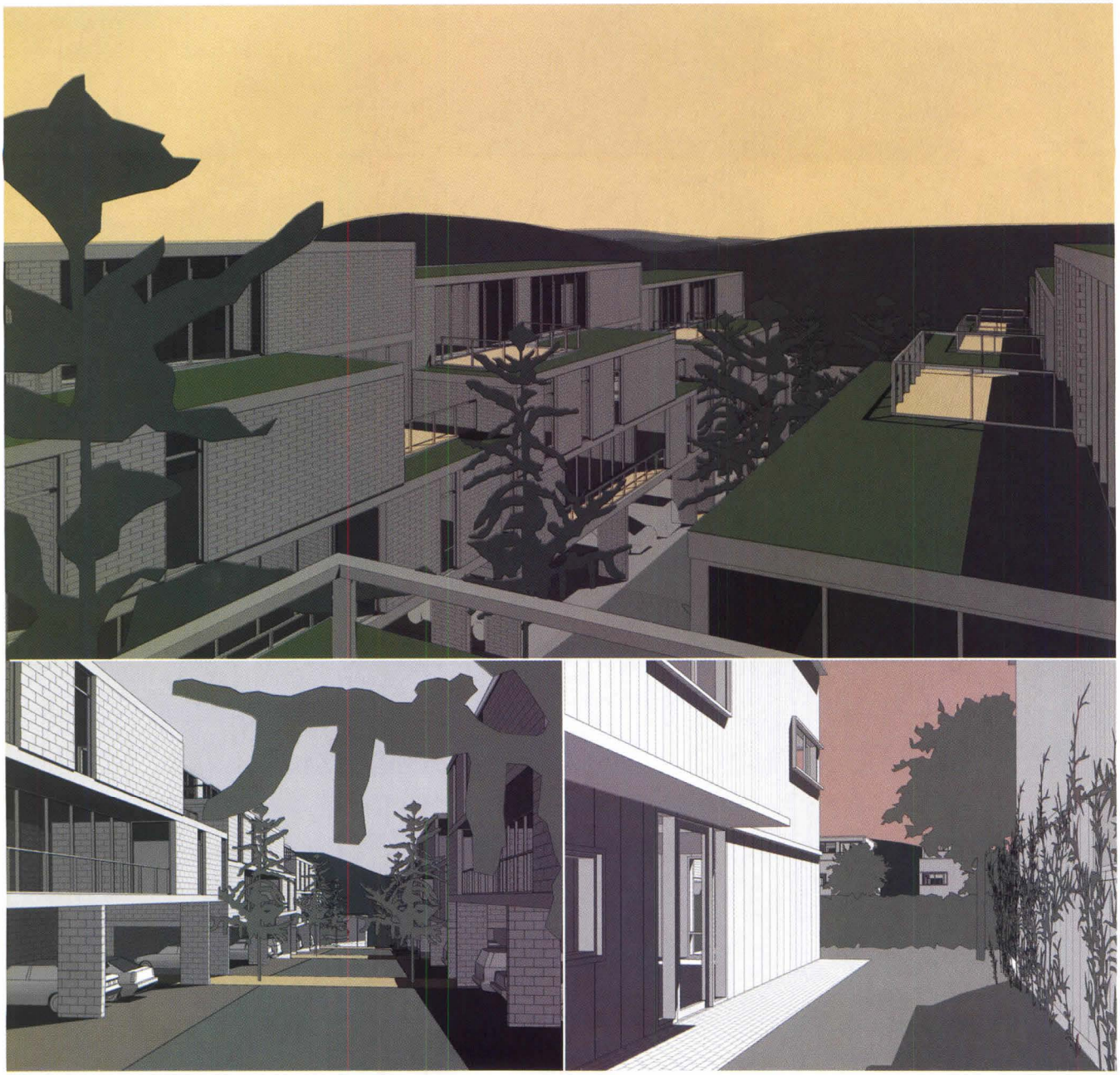
A recent spate of architecture competitions challenges Habitat for Humanity to add "design" to its triumvirate mission. by Anna Holtzman

For nearly 30 years, Habitat for Humanity, the nonprofit made famous by the involvement of former President Jimmy Carter, has helped to create affordable housing for low-income families with a labor force made up of volunteers and prospective residents, providing permanent shelter to more than 900,000 people worldwide. Inspired by the organization's work, architects and other interested parties are finding ways to convince Habitat that good design ought to be an integral part of its mission. It's been a tough sell because of the group's emphasis on practicality, but a number of local housing competitions initiated by a variety of individuals and organizations (arts groups and social services providers among them) have recently gotten Habitat's attention—and participation.

Two C2C Home entries will be built in Virginia: "House as Porch" (top) by Damien Linnen and "+A home" by Robert Gray (above).

Habitat International program director Neville Eastwood, who served on the jury of one such initiative, Urban Habitats, offers a possible explanation for his organization's initial reticence. "With our mandate of 1,200 square feet, simple, and decent housing that's multigenerational, accessible, and energy efficient," he says, "there are only so many ways you can do that. It has to be economical and something the volunteers can build," he adds. "When architects understand that, it works—there's a lot of good thinking out there, but sometimes not in a way that the Habitat affiliates can build."

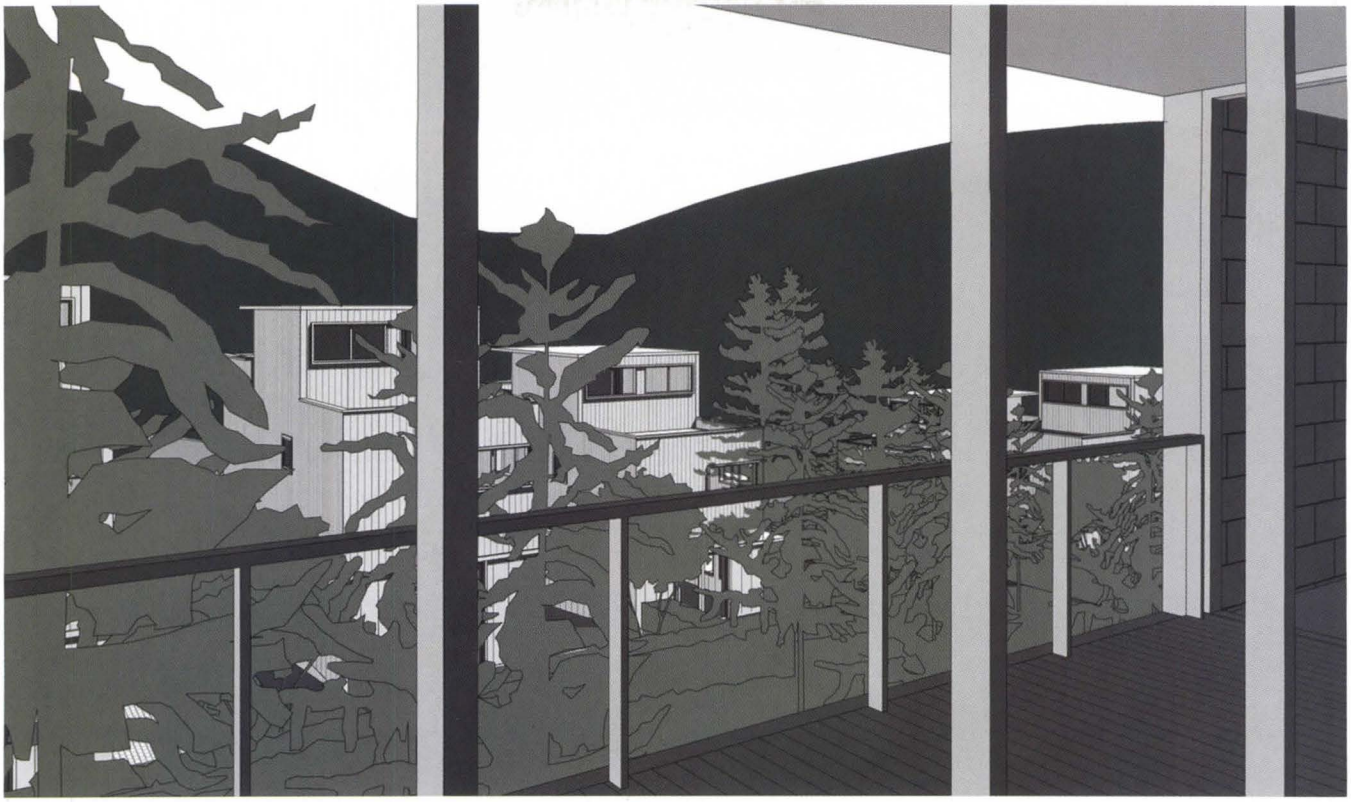
The results of this new crop of competitions, however, are demonstrating to Habitat that buildable and well designed are not mutually exclusive. Several of these initiatives were inspired by The HOME House Project, the brainchild of curator David J. Brown of the Southeastern Center for Contemporary Art (SECCA) in Winston-Salem, North Carolina. "We were one of the first to do this," Brown recounts. In 2003, through the auspices of SECCA and with



Organized by the Charlottesville Community Design Center, together with Habitat for Humanity of Greater Charlottesville, the Urban Habitats competition called for a "replicable design framework" that would provide for 72 homes on a 2.3-acre site in Charlottesville, currently home to 18 families (below).

a jury made up of well-respected members of the profession, including Jersey Devil cofounder Steve Badanes and architect and critic Michael Sorkin, Brown solicited proposals from architects around the world for affordable, environmentally friendly housing prototypes, using Habitat's three- and four-bedroom house plans as a point of departure. From a pool of 440 entries, 25 winners were chosen, ranging from a fresh take on the townhouse, by S. Flavio Espinoza, to a Doctor Seussian futuristic "bio shack" with trees sprouting out of it, by Mitchell Joachim, Lara Greden, and Javier Arbona. (Seventy-five of the submitted projects were published by MIT earlier this year in *The Home House Project: The Future of Affordable Housing*.)

While Brown did not pursue construction with his local Habitat chapter, he did gain permission from Habitat International to use the organization's book of standard plans. Instead, Brown turned to smaller, local organizations such as the Housing Partnership of Winston-Salem/Forsyth County. "Unlike Habitat for Humanity and other large organizations," he explains, "change is easy with the Housing Partnership. Nothing has broken ground yet, but we're close. This is a multiyear initiative for us."



Winning schemes in the Urban Habitats competition include the first-place proposal (facing page and above) by Genter Schindler Architecture, which organizes open communal spaces along a single street.

Architect Gregg Lewis and his wife and partner Jennifer Smith Lewis, of SmithLewis Architecture, had considered entering the HOME House competition when they were first starting their practice in Roanoke, Virginia, and had subsequently met with Brown. Thus, when Lewis later found himself in the position of planning an affordable housing competition, C2C Home, in his city, he took cues from HOME House on how to do it—and what to do differently. While the earlier competition did not specify a site for the houses, Lewis procured four parcels of land in Roanoke—two donated by the Roanoke Redevelopment Housing Authority and two by private corporations.

C2C Home began to take shape after Lewis invited architect and environmentalist William McDonough to Roanoke to give a lecture at a fundraiser for the nonprofit Roanoke Regional Housing Network (RRHN). Following the lecture, the organization approached Lewis to help them push forward an affordable housing competition that they'd been trying to get off the ground for ten years. Lewis said he'd do it on one condition: That they add sustainability to the agenda, following McDonough's cradle to-cradle principles.

Last June, Bill Osborne, Michael E. Young, Matt Winquist, and Nick Nevels of 2mA won the Simple, Decent, Affordable Housing Design Competition for 16 1,200-square-foot apartments on a one-acre site in Cave Creek, Arizona (above and below). Habitat for Humanity Desert Foothills plans to build the units for $65 per square foot.

The C2C jury—including Daniel Libeskind and Sarah Susanka, author of *The Not So Big House*, as well as Bill McDonough—selected winners last January. Since then, local housing organizations, including the Habitat for Humanity chapter at Roanoke College, have signed on to build eight houses, one of which will be Roanoke's first rammed-earth structure, designed by Ekaterina Kohlews, a student at the New School of Architecture in San Diego.

An exhibition comprising 200 submissions from the C2C competition soon traveled from Roanoke's Art Museum of West Virginia to nearby Charlottesville, where the Charlottesville Community Design Center (CCDC), an organization that launched its own competition working in partnership with Habitat for Humanity of Greater Charlottesville (HFHGC), displayed the collection. Like C2C Home, Charlottesville's Urban Habitats program brief was site-specific: Design a 72-unit, multifamily, mixed-income housing scheme on the site of an existing trailer park, a 2.3-acre parcel which HFHGC bought last February to stop a commercial developer from building high-end condominiums on the property.

The CCDC's jury included representatives of both local and international Habitat offices, three internationally recognized architects (Max Bond, Teddy Cruz, and Julie Eizenberg), and local community representatives, including a current resident. "Any change is scary [for the residents]," concedes CCDC executive director Katie Swenson, who also noted that none of the trailer park occupants would be displaced in the process. "But because they feel they have a say in it, they're almost excited about it."

While HFHGC reserved the right not to use any of the competition proposals, they may hire at least one of the winning teams to transform Sunrise Trailer Court into Sunrise Park, on which they are hoping to break ground by the end of 2007, and they are considering another team for a different job. "Habitat was worried that the entries would be pie in the sky," says Swenson, "but they were blown away" by the carefully considered, buildable proposals.

Last June, a month before Urban Habitats announced its winners—first place went to Christopher Genter and Susanne Schindler of Cambridge, Massachusetts—architect Michael P. Johnson revealed the finalists in another Habitat-partnered competition in Cave Creek, Arizona, the Simple, Decent, Affordable Housing Design Competition. When Johnson first pitched his competition idea to Habitat for Humanity Desert Foothills (HHDF), "it was not an easy sell," he reports. It took two and a half years to convince the chapter of the value of a competition. But once HHDF was on board, the organization partnered with Gnosis, a local arts nonprofit Johnson operates along with his wife, Suzanne D. Johnson, and agreed to build the winning design "without watering it down."

Johnson limited the competition to local architects under age 40, receiving ten submissions. Judges included former *Architecture* editor-in-chief Reed Kroloff and Rural Studio codirector Bruce Lindsey. The program was for 16 1,200-square-foot housing units on a one-acre site in Cave Creek. Despite a prohibitively low budget, "we got an incredible variety of solutions," Johnson reports, some of them overly exuberant, and thus unbuildable. However, the winning team, 2mA (its members are Bill Osborne, Michael E. Young, Matt Winquist, and Nick Nevels), devised a carefully considered scheme in which all kitchens and living rooms face onto common courtyards, where children can play under the supervision of parents. Johnson foresees breaking ground in January.

He hopes that competitions like these will convince organizations such as Habitat for Humanity that good design can also be practical. As with the other competitions, the winning designs from Arizona are part of a traveling exhibition, "so it's reaching beyond just these 16 buildings," Johnson points out. If more architects are exposed to competitions such as his, he attests, "they'll see that you can demand that people do architecture instead of just buildings." ▬

DOMESTIC ANXIETY

An exhibition of contemporary photography probes the uneasy realm between city and suburb, and the ambivalent legacy of the buildings that define them. by Robert Klara

In Gregory Crewdson's *Untitled*, a digital chromogenic color print from his series *Beneath the Roses*, the viewer sees a young lady sitting in the front passenger seat of a Dodge, stopped at a downtown intersection beneath a traffic light. The driver's seat is vacant, the car's left door hanging open, as the woman directs her gaze uneasily down to a point beneath the dashboard, the scene anointed by the sickly nimbus of a traffic light's yellow beam.

The physical context of this photograph—we are in a depressed part of town, it seems, flanked by worn, shuttered storefronts, while only a gasp of sunlight escapes from a bleary horizon—as well as the uncertain predicament of the woman in the car (Has the driver abandoned her? Been shot?), percolate to form a sickly amalgam of uncertainty and foreboding.

And indeed, in *The New City: Sub/Urbia in Recent Photography*, there is much of that angst to go around. In this small but stirring exhibition on view at the Whitney Museum of American Art in New York City, photographers have turned their lenses toward the countless idiosyncrasies (many of them, by necessity, architectural) that have grown from the ever-blurring notions of city and suburb—with neither enjoying the relatively clear demarcations it might have had back when "sub-urbia," as the exhibition's subtitle cleverly reminds us, was a mid-century Valhalla.

But *The New City*, on view until January 15, goes beyond a mere cataloging of urban and suburban failures, the stuff of abandoned storefronts and kidney-shaped subdivisions that are all too easily (and commonly) scorned. Rather, as the relentless push of expansion directs the attention of the public, and architects, ever outward, the photographs in this exhibition depart from questions about what's being built today in order to probe the ditches and furrows where so many of yesterday's good ideas now lie.

We see, for example, Walead Beshty's eerie day/night stereograph of Oriental Gardens, a failed prefab development in New Haven, Connecticut; its Lego-block sophistication has since been answered by boarded-up windows. That day and night are indistinguishable between these two gelatin-silver prints points an accusing finger at the deadness of the design itself. Tim Davis's *Burger King* shows an old-line suburban tract house, complete with a station wagon parked out front. But the durable, postwar idealism of the

house's gabled roof and wreathed front door is disturbingly marred by the blurry reflection of a fast-food restaurant's sign in the window. Mass-produced lunches meet mass-produced housing: Is this tragedy or poetic justice?

A near complete absence of people in the images of these spaces supposedly designed for their benefit is the exhibition's ironic echo. In *Green Slope* and *Small Green Slope*, photographer Michael Vahrenwald zeros in on a grassy hillside whose bucolic charms suggest that children are about to come frolicking into view. Those expectations erode as one realizes that the hills are little more than the bulldozed border of a Wal-Mart parking lot.

Acting as a thematic anchor for the exhibition is Amir Zaki's digital laser print, *Untitled*, drawn from his *Spring through Winter* series. In it, the spectator is shadowed (nearly engulfed, as the image is over seven feet wide) by the cantilevered ends of two houses ramrodded into the dusty hills of Southern California for the sake of providing a view. The image's central position in the gallery is wholly apt, as the themes it suggests are integral for the examination of the suburbs that *The New City* clearly mandates: vanity over common sense, the lifespan of the temporary, a balance that is at best precarious.

To be sure, there is some fun here, too—though fun of a ghostly sort. The threadbare but embracing rooms shown in Corin Hewitt's *85 Union Street*—the suburban home of his grandmother, modeled as it appeared the day of her death—portray a domestic landscape lacking in pretension and redolent of a life fully lived.

In the end, *The New City* proffers no clean conclusions regarding what's properly praised or condemned about the complex and changing borderland where city and suburb meet and overlap. But it does serve up a compelling case for a longer examination of all that would bill itself as revolutionary and untarnishable. The environments shown here—well worn and sad, empty and even preposterous—are, if anything, hardly as glorious as the day they were new. ■

Amir Zaki's *Untitled* (facing page) weights *The New City* with suggestions of impermanence. Another *Untitled* (top) by Gregory Crewdson portrays the unease of a faded downtown, while Corin Hewitt's *85 Union Street* (above) evokes a sense of harmony in a deserted domestic warren.

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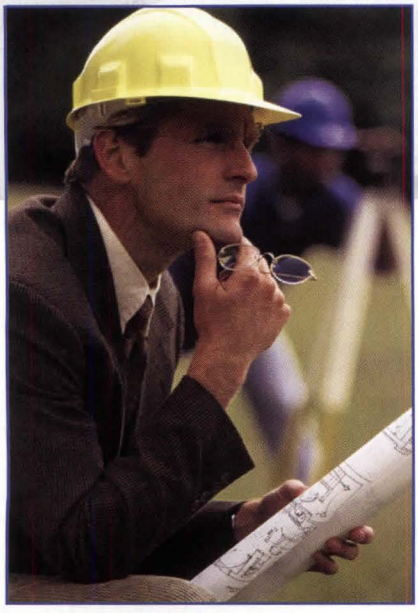

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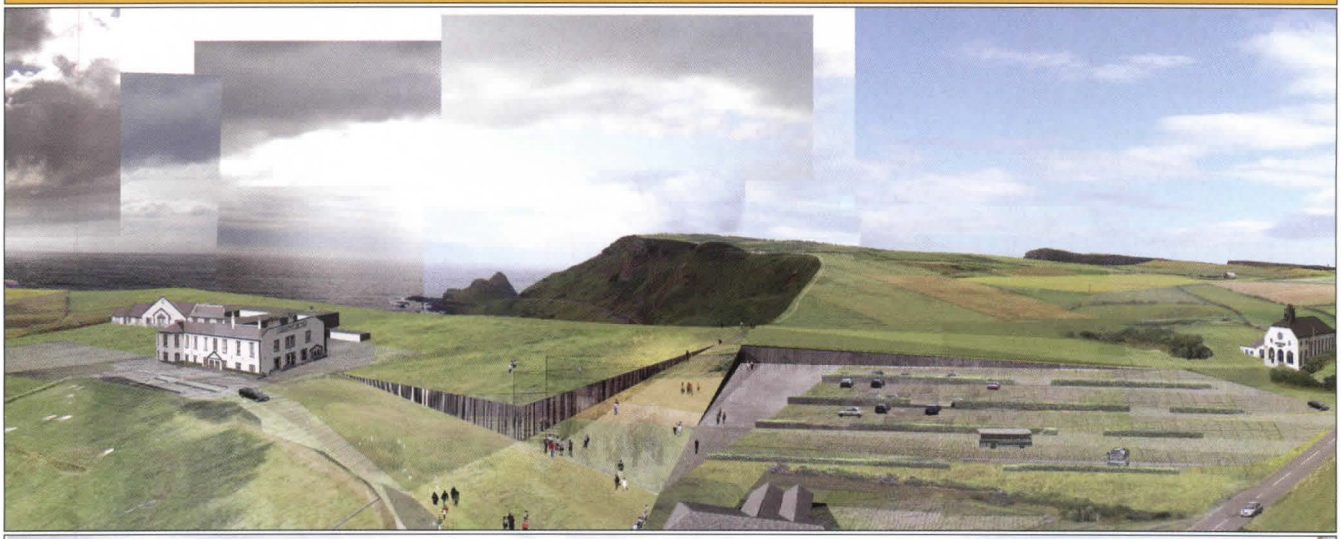
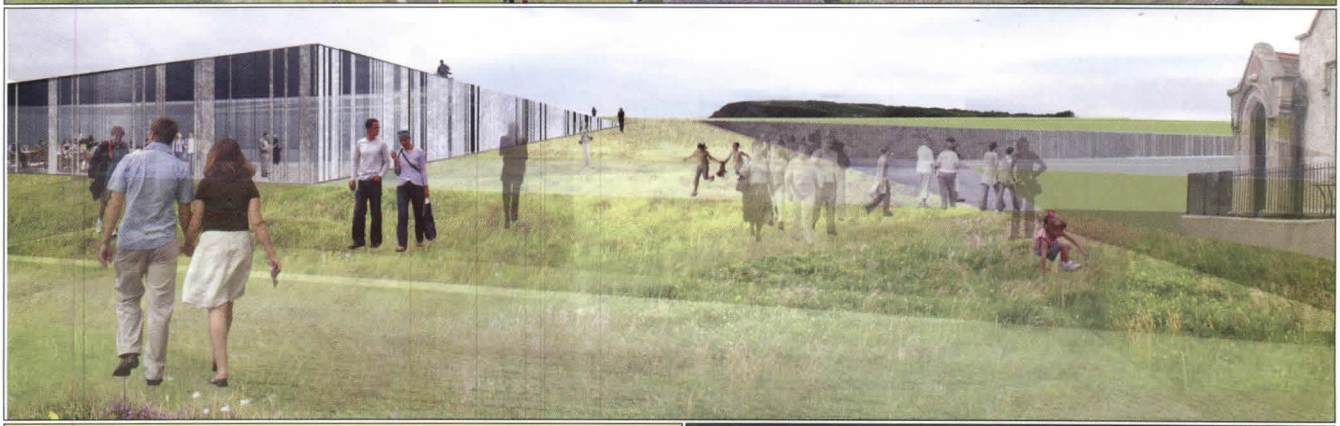
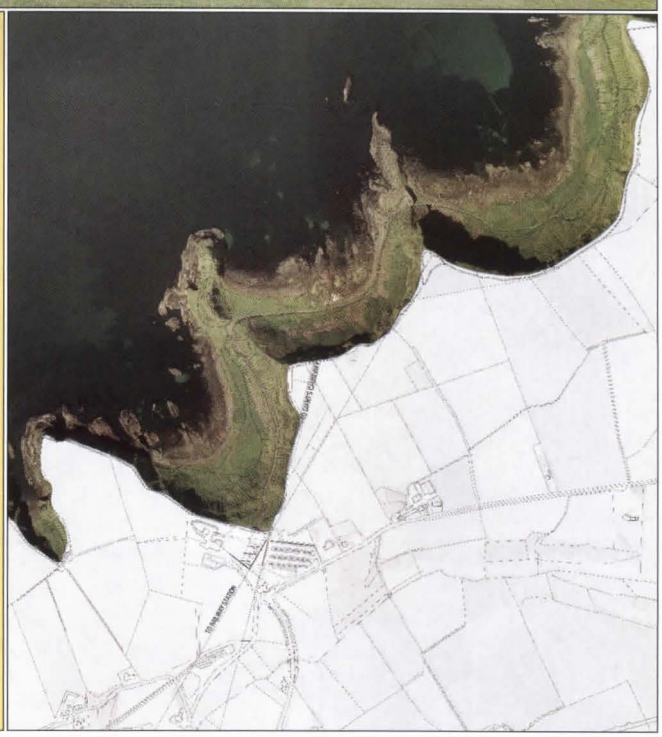


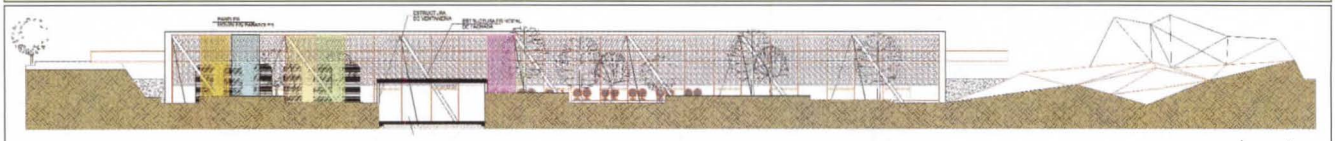


Giant's Causeway, a geologic formation on Ireland's north shore, has drawn curious visitors for centuries. So when heneghan.peng.architects set about designing a competition entry for a visitors' center at the site of this natural phenomenon, it felt the building should meld seamlessly with the landscape. And it was this approach that won the firm the commission from the Northern Ireland Department of Enterprise, Trade, and Investment, eclipsing the 800 other entrants in an international design competition. The building appears as two folds in a grassy knoll that serves as a viewing platform for the legendary formation: 40,000 tightly-packed hexagonal basalt rocks that create a natural pathway into the North Channel. Supported from underneath by columns and reinforced walls, glass skins enclose the two levels of the visitors' center, and grass roofs ensure that when looking back from the viewing platform, the building itself is invisible. Inside, a stone floor echoes the natural formation outdoors, while the upward-slanting roof of the lower level is intended as another perch from which tourists can view the surrounding landscape. The scheme was selected as the winning entry last month; the architects plan to move into the final design phase early next year. **Katie Gerfen**



ESTUDIO TEDDY CRUZ | FAVELA WINERY | ENSENADA, BAJA CALIFORNIA

High design is the latest crop growing in the Guadalupe Valley outside Ensenada, in Baja California, Mexico. Plans for the Favela Winery, the newest in a cadre of small but potent viticultural and culinary efforts there, suggest the architects at Estudio Teddy Cruz, located on the San Diego/Tijuana border, took their visual cues from the local agriculture. In the scoring of two distinct programmatic lines amid this landscape of undulating topography, the design's simple and elegant layout satisfies a dual agenda—a production facility with a dedicated educational component for training enthusiasts. The winemaking procedure occurs in a pavilion with a translucent façade that allows the interior to be visible from outside; the second zone is enriched with community space and touristic amenities. Knitting them together, another overlaying set of lines contains courtyards and open spaces that invite the landscape to reenter its formerly uncultivated domain. Word has it the local product is turning heads up in Napa. **Julie Sinclair Eakin**



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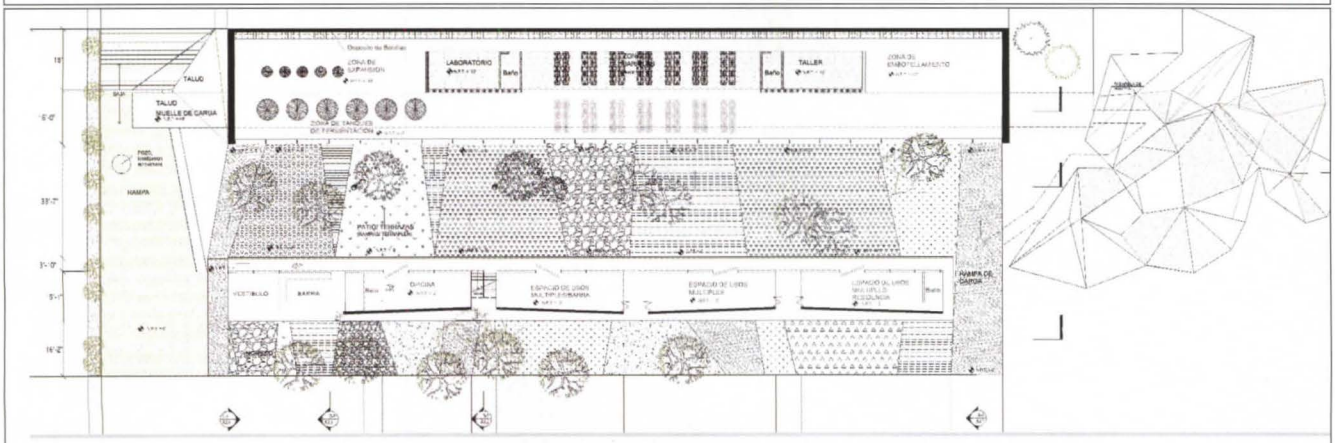
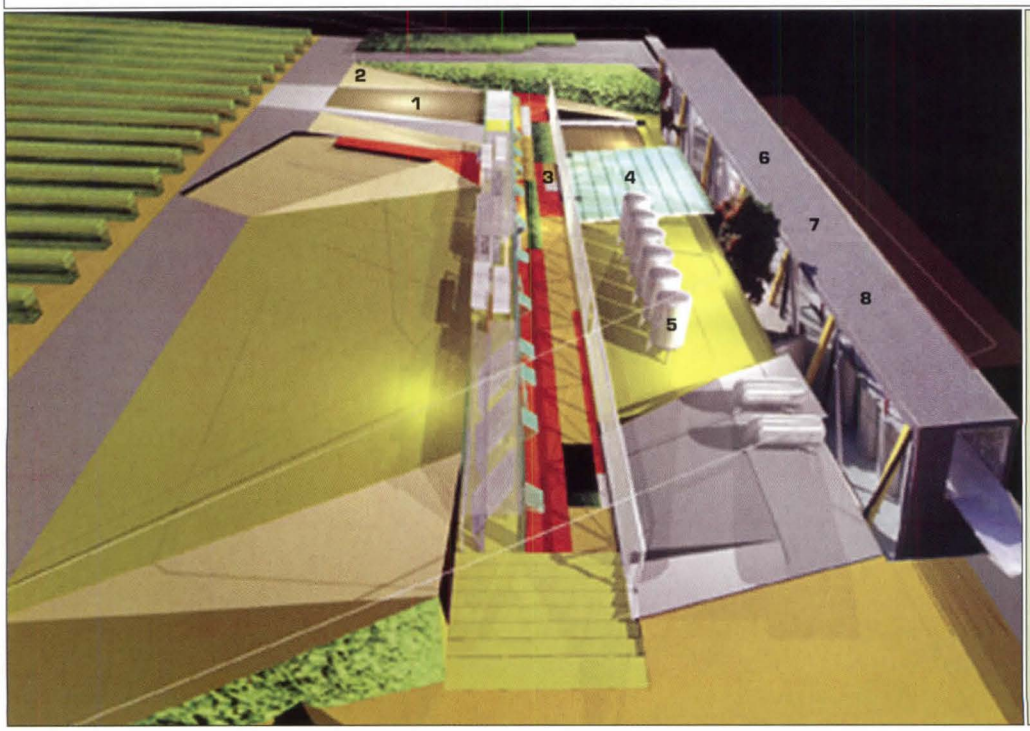


plan ——— 28′



1 entrance
2 cargo ramp
3 tasting bar
4 patio
5 fermentation
6 laboratory
7 workshop
8 bottling

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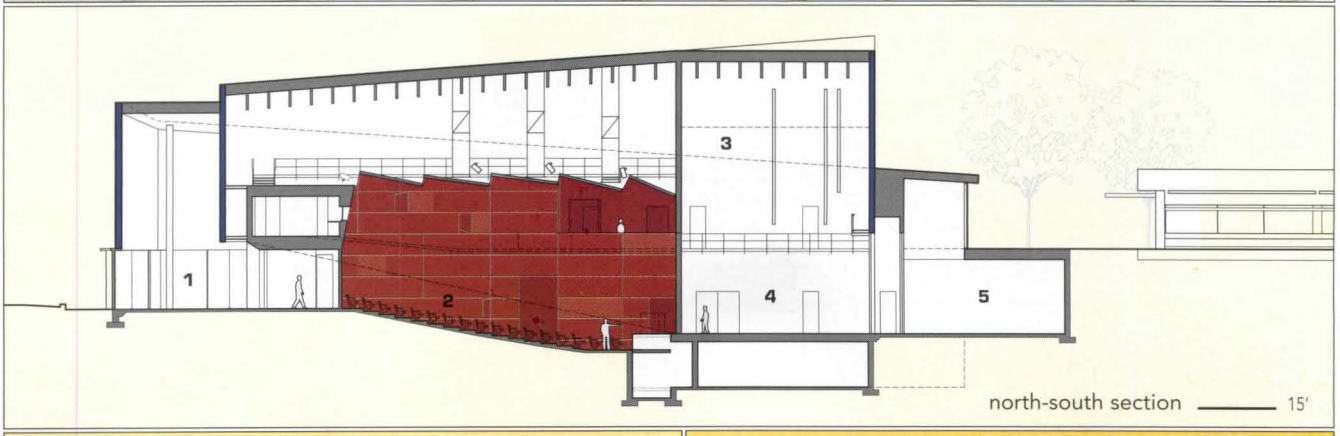
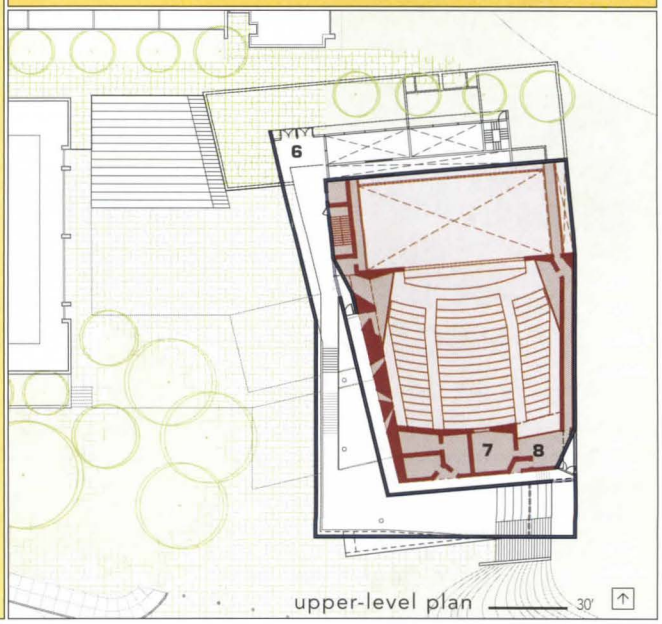


north-south section 15'

When the commuter town of Weston, Connecticut, called for proposals for a performing arts center, New York City-based Architecture Research Office (ARO) viewed it as a unique opportunity to "set a new standard for public architecture" in a still somewhat rural setting. Additional factors were a 1972 school and public swimming pool, bunkers of cast concrete and brick, into which the freestanding Weston Performing Arts center had to fit as a complement. First ARO shifted the compositional center of the campus away from the school to create an open plaza, smoothing the transition from old to new and allowing for intervening greenery. For the 24,000-square-foot auditorium building itself, the firm chose metal shingle cladding that makes a clean, modern departure from the older masonry without asthetically subjugating it. Inside the new building—currently in its funding stages—a 450-seat theater "core" contains a proscenium and dressing rooms. The skin spirals out from the core, wrapping it to create a lobby, circulation path, and other public areas. The center's long, low exterior does not compete with the school's massing language, yet its updated profile elevates the complex to more civic proportions. **Robert Klara**

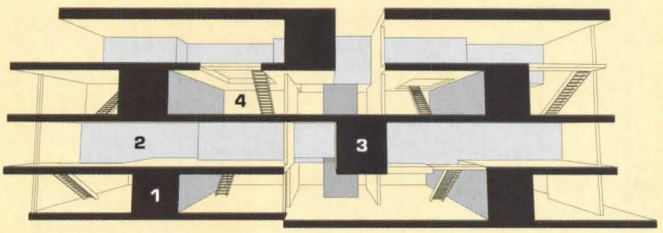
1 public entrance
2 seating
3 fly loft
4 stage
5 dressing rooms/storage
6 student entrance
7 lighting control
8 tech balcony



upper-level plan 30'

LORCAN O'HERLIHY ARCHITECTS | NORTON AVENUE LOFTS | WEST HOLLYWOOD, CALIFORNIA

Responding to the current boom in L.A.'s speculative medium-density housing market are two designs in West Hollywood with which Lorcan O'Herlihy Architects hopes to replace the typical loft typology of the multifamily unit. To avoid the stacked and tunneling aspects of identically configured floor-through spaces, the Culver City firm has organized the eight 1,500-square-foot units on its tight Norton Avenue site into perpendicularly aligned "L" sections that offer daylight and views from all four exposures and also allow for the combination of double- and single-height spaces in each home. The structure is primarily poured-in-place concrete; colored glass curtain walls and cement panels help to articulate the separation among various units viewed from the exterior. All residents will enjoy private gardens or patios as well as a communal roof deck, amenities intended to make up for a yard—common to its neighbors, but missing here—which has been absorbed into the building's sizable footprint, reaching nearly to the sidewalk. Construction on the 50-foot-by-150-foot site will begin in the spring. **Bay Brown**

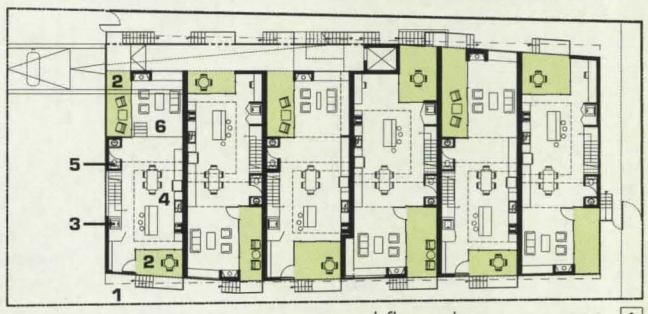


north-south section 14′

1 kitchen, laundry, and powder room
2 master bath
3 walk-in closets
4 stairs to open bedroom

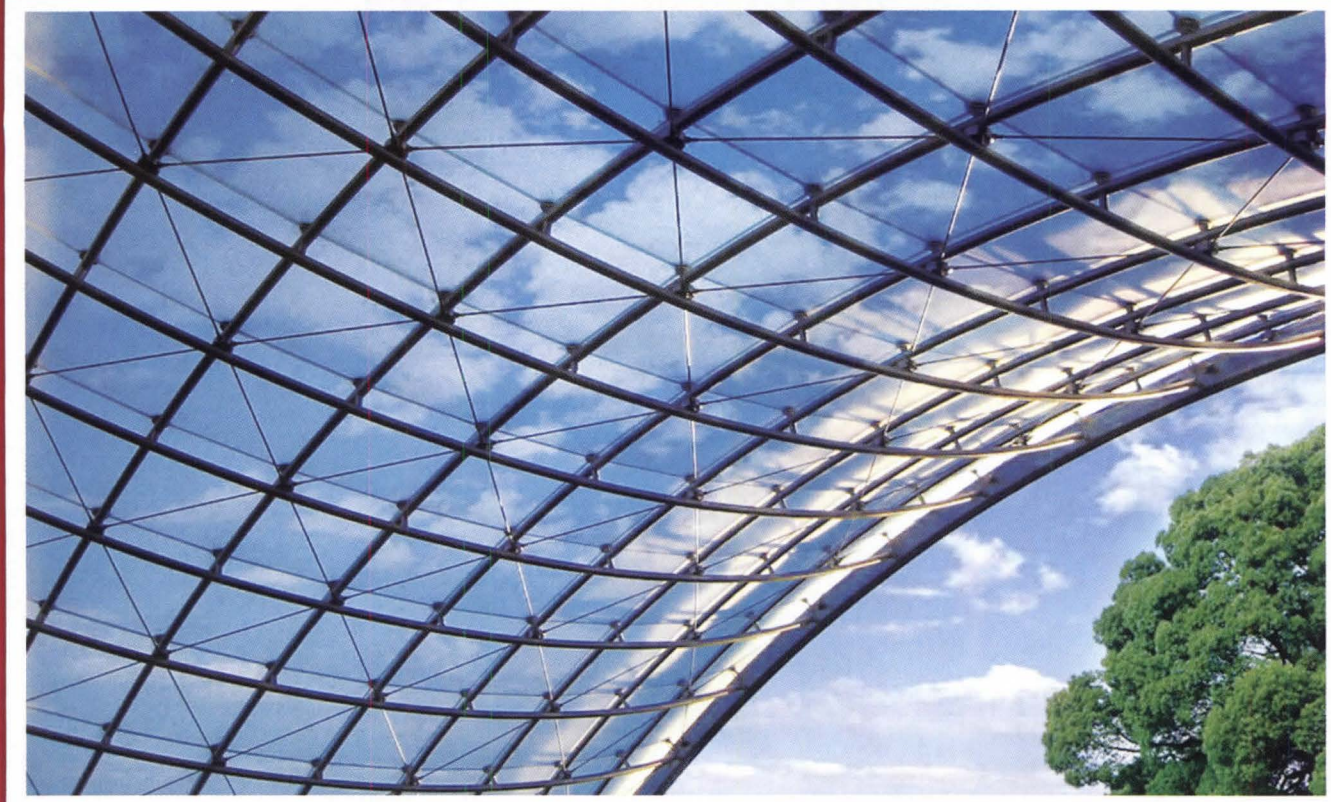
LORCAN O'HERLIHY ARCHITECTS | WILLOUGHBY AVENUE HOUSING | WEST HOLLYWOOD, CALIFORNIA

Another alternative to the single-family dwelling that characterized much of Southern California's housing over the past half century (and is likely on the path to economic obsolescence) is an eight-unit building on a Willoughby Avenue corner site, also by Lorcan O'Herlihy Architects. It's an attempt to break up 1,450-square-foot residences into discreet spaces than are typically available in more homogenous open-plan lofts. Privileging a strong connection to the outdoors is its greatest achievement, which is fulfilled by each ground-level unit being accessed by a set of dedicated stairs leading up to double-height private open spaces, conceived as outdoor rooms. Another sectional innovation increases the depth of each unit by suspending its mezzanine over its neighbor's space, in effect "hanging" a room off the common wall. A woven wire mesh scrim dissolves the curtain wall into a softer, slightly less rectilinear silhouette than its poured-in-place concrete structure would normally imply. Construction on the 70-foot-by-150-foot lot begins this spring. **Bay Brown**



ground-floor plan 14'

1 entrance
2 patio/garden
3 laundry
4 kitchen/dining
5 powder room
6 living room



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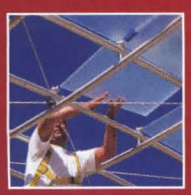

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4TH ANNUAL

homeoftheyearawards

The fourth cycle of *Architecture's* Home of the Year Awards has produced four winning schemes—one multifamily and three private residences. And all, with one exception, are in Canada. Clearly architects working north of the border have much to say about the formal and programmatic expression of dwelling in the twenty-first century.

While our esteemed jurors did not feel that any one project rose to the level of a first award—or even an award—the group of nationally recognized practitioners did find accomplishments of note in Henri Cleinge Architectes's self-developed three-unit condominium in Montreal; in Hariri Pontarini Architects's limestone-clad manse for art collectors in a Toronto suburb; in the element of water drawn through a Southern California residence by Lorcan O'Herlihy Architects; and in the "romantic approach to the landscape" taken by Affleck + de la Riva Architectes in its house for a musician in Quebec's agricultural Eastern Townships.

While pleased with their selections, the jurors—Peter Bohlin, Marilys Nepomechie, Zoltan Pali, Dan Rockhill, and Mario Saia—were surprised by the absence of sustainable strategies in this year's pool of entries. They also lamented the scarcity of multifamily projects, programs for alternative families, SROs, and cohousing developments. "We wanted to see a broader definition of living," noted Nepomechie, adding that experimentation in materials and form was sorely lacking. Of the low-income and standards-shattering innovations that he and his colleagues had hoped to see on the table, Rockhill contended, "We suspect that these things are out there."

Perhaps next year.

the jury

BJORN WALLANDER

PETERBOHLIN (ABOVE LEFT), of Bohlin Cywinski Jackson, has offices in Pennsylvania, Washington, and California, and the firm's interest in the particularities of place directs its distinctive efforts. The practitioners have received nearly 300 honors, including the AIA's 1994 Architecture Firm Award. Bohlin has a master's degree from Cranbrook Academy of Art, and has extensive experience as a design critic and juror for projects worldwide. **MARILYSNEPOMECHIE** presides over an eponymous practice in Miami and is an associate professor of architecture at the Florida International University School of Architecture. She has taught in Puerto Rico and Venezuela, and was visiting professor of housing at the University of Kentucky. Nepomechie, a graduate of MIT, received a 1993 P/A Young Architects' Award, and was a curator at the 2nd International Biennale Rotterdam. **ZOLTANPALI** infuses the work of his Los Angeles firm SPF:a with an appreciation for technical accuracy, reflecting his background in the construction industry. The office's preservation efforts include work on the Getty Villa Museum and Greek Theater renovations. He is currently a visiting professor at USC's School of Architecture. **DANROCKHILL'S** Lecompton, Kansas, office requires that its work reflect the native culture and landscape. Questioning traditional approaches and styles, the practice exhibits an abiding respect for the "labor of the hand" by building the structures it designs. Both new works and preservation efforts have been published widely. Rockhill is professor of architecture at the University of Kansas, where his Studio 804 produced a Home of the Year award-winning project last year. **MARIOSAIA** heads Montreal's Saia Barbarese Topouzanov Architects. He was educated at the Montreal School of Architecture and at Edinburgh University. The office has garnered a multitude of prizes for its work in housing, including the Governor General's Medal in 1999, awarded by the Royal Architectural Institute of Canada and the Candian Arts Council.

CITATION

6747–6759 SAINT-URBAIN STREET, MONTREAL | HENRI CLEINGE, ARCHITECTE

In 2002, Montreal-based architect Henri Cleinge purchased a 1950s wine depot—a store that sold winemaking products and grape varieties—in a semi-industrial neighborhood just west of Montreal's Little Italy. He planned to turn it into his own residence, financed by constructing two speculative residential condominiums on the same site.

The depot presented a challenge all too typical in urban Montreal: how to bring light and life into a shotgun plan. Cleinge's answer was a façade with a crisp composition of black bricks, weathering steel, and ample glazing. With a modest budget, he managed to rejuvenate the building by recasting its ill-proportioned, jerry-built volumes.

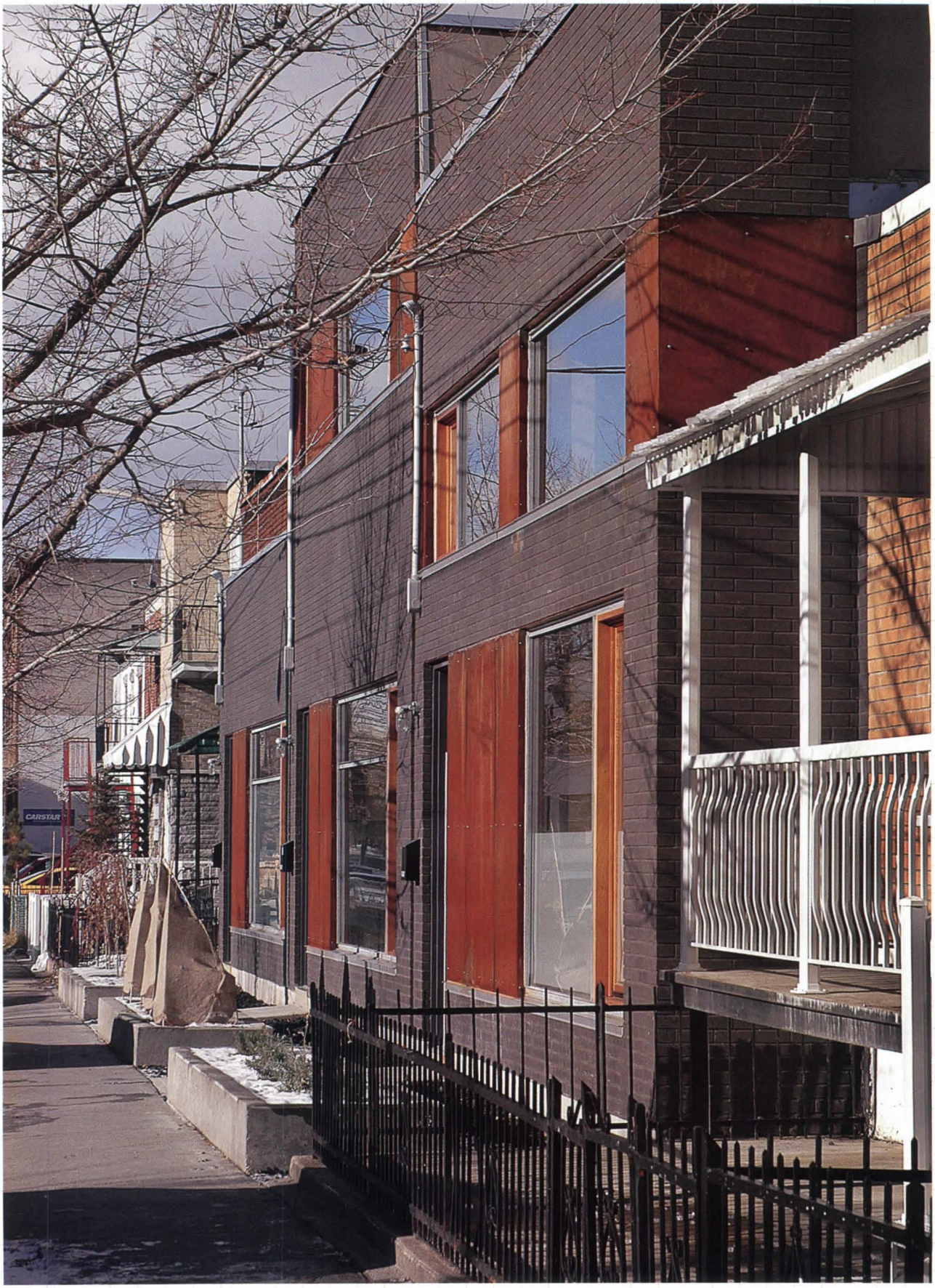
Cleinge took good advantage of his dual role as client and architect. Spec-built dwellings are rarely this composed—or relaxing. The two 2,200-square-foot units, which both sold within a week of hitting the market, sport two or three bedrooms upstairs and living spaces downstairs. Local zoning allowed him to build on the entire 7,400-square-foot lot, and to include gardens rather than parking spaces, so each ground floor graciously extends into a walled court.

Cleinge occupies the southernmost unit, which is equipped with a roof terrace and washed by the sun from a central skylight. Varied ceiling heights, rather than walls, define rooms. Despite the generous open plan, the house is intimate and private, focused inward on domestic activity—on the hearth, one could say, which here is a two-story bookcase anchored behind a bridge beneath the skylight.

The building's judicious proportions were achieved without obvious design devices like modular systems or slipping asymmetric planes. Likewise, material assemblies are carefully but unpretentiously wrought. There are polished concrete floors and hot-rolled steel stairs, but also chamfered pine two-by-fours stacked on edge to form the mezzanine floors. "Designing something simple is hard," admits Cleinge. "It has to be really well built."

The project has become a calling card for the architect, who uses it to convince clients that simplicity is indeed an architectural virtue—as long as it's comfortable, too. **David Theodore**

DAVID THEODORE IS A RESEARCH ASSOCIATE AND LECTURER AT THE MCGILL UNIVERSITY SCHOOL OF ARCHITECTURE.

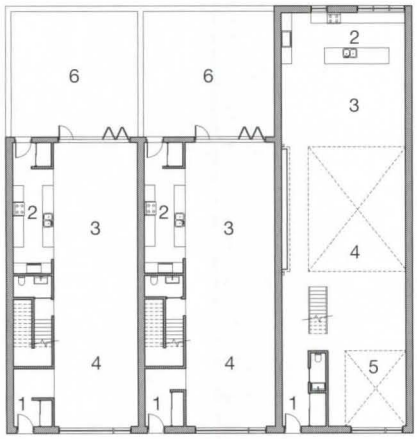


HENRI CLEINGE'S THREE-UNIT TOWNHOUSE GROUPING (ABOVE) IS CLAD IN WEATHERED STEEL, BLACK BRICK, AND STUCCO TO REFLECT THE SEMI-INDUSTRIAL NATURE OF ITS MONTREAL NEIGHBORHOOD. SETBACKS AND VARIED GLAZING MODULATE THE STREET FAÇADE (FACING PAGE).

ALL PHOTOS: DENIS FARLEY

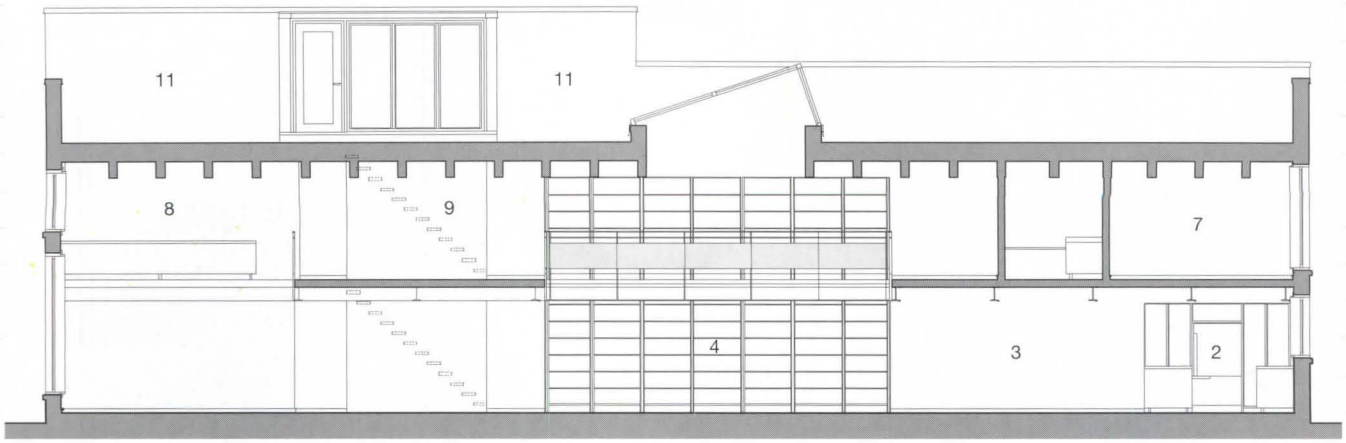
SITE PLAN _____ 60'

1 ENTRANCE
2 KITCHEN
3 DINING
4 LIVING
5 STUDIO
6 GARDEN
7 BEDROOM
8 OFFICE
9 DEN
10 DECK
11 ROOF GARDEN

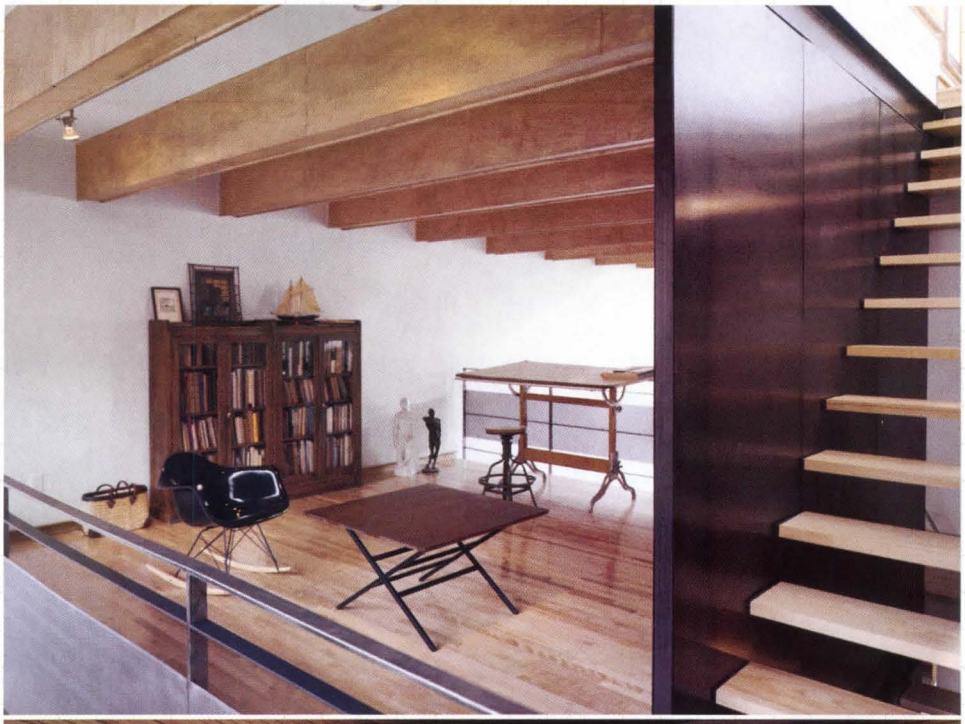


GROUND-FLOOR PLAN _____ 15'

SECOND-FLOOR PLAN



SECTION THROUGH SOUTHERNMOST UNIT _____ 5'



RENDERED IN POLISHED CONCRETE, WOOD, AND STEEL, COMMON SPACES FLOW ONE INTO ONE ANOTHER, AN EFFECT EMPHASIZED BY VARIED CEILING HEIGHTS AND PARTIAL FLOORS (ABOVE). THE STAIRCASES, DEMARCATED BY STAINED-PINE SCREEN WALLS, ARE CONSTRUCTED OF HOT-ROLLED STEEL WITH ASH TREADS (TOP).

6747–6759 saint-urbain street, montreal

client/architect: Henri Cleinge, Architecte, Montreal—Henri Cleinge (principal) **engineer:** Rafik Matta (structural) **general contractor:** Aranda **subcontractor:** Bâtitu (framing, finishes) **area:** 7,400 square feet **cost:** $850,000

Specifications

roofing: Soprema **windows:** galvanized steel (fixed windows); Par le Trou de la Serrure (operable windows) **flooring:** polished concrete with epoxy finish; birch; slate tiles **lighting:** Sistemalux **plumbing fixtures:** Batimat **stools/living room furniture/rugs/dining chairs:** Bonaldo **dining table:** Kastella **HVAC:** Ouellette; Wirsbo (radiant)

CITATION

ART COLLECTORS' RESIDENCE | HARIRI PONTARINI ARCHITECTS

Well before he drew the first line for their new house, Siamak Hariri secluded himself with his clients and asked them what mattered to them in life. "They said only two things: 'Our art collection and our well-being,'" the architect recalls. Those responses—selective, literal, and unapologetic—found their physical manifestation two years later in an upscale Toronto suburb. Surrounded by homes that are larger and more imperious expressions of their owners' material success, the Art Collectors' Residence stands out not only for its low-slung profile and L-shaped configuration, but for its specialized apportionment of space.

Because the clients own a sizable collection of glass art, spaces clustering around and extending out from the house's main entry function as gallery areas. Strategic placement of windows creates zones of varying light intensities, pinstriped with luminescent shafts. The longer arm of the "L" is thinner, affording space for a sauna and a swimming pool. Here, floor-to-ceiling windows make evident what Hariri refers to as the house's "suspension in the landscape."

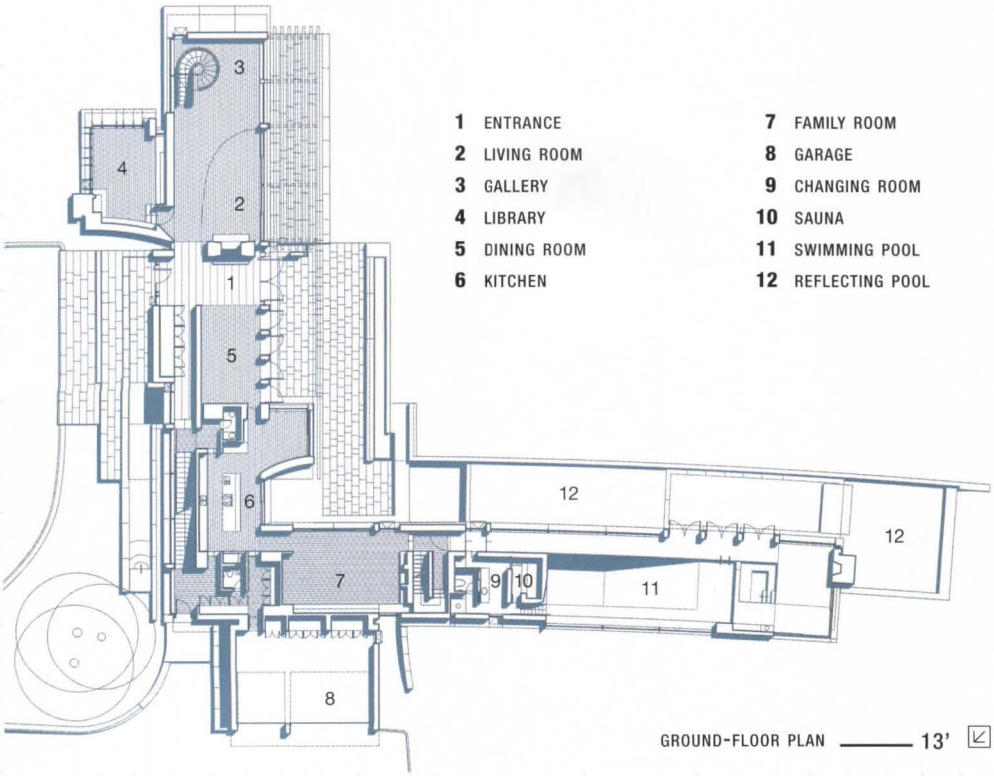
Living spaces anchor the center point from which the building's two wings protract. Yet what might otherwise be a bulky transition between zones is smoothed and unified by the use of gentle angles and curves: The roof slopes gradually upward over the gallery spaces and a corkscrew staircase connects the first and second levels.

The greater unifier of these spaces, however, is the house's exterior, a formidable assembly of teak window framing, copper detailing, and deliriously long, Algonquin limestone blocks: All enable the house to appear delicate and fortresslike at the same time. "There's a pleasure in the thickness of that stone," Hariri enthuses. "You see it in the grain and feel it in the way the light strikes it."

And it's this sense of weight and purpose that makes the house, in the architect's view, something of a philosophical victory. "In a world where everything is impermanent," Hariri says, "we were gravitating toward the permanent." **Robert Klara**

ALL PHOTOS: STEVEN EVANS

SHADE TREES AND A REFLECTING POOL DEFINE THE HOUSE'S REAR COURTYARD (ABOVE), WHICH NESTLES OUTSIDE THE FAMILY ROOM AT THE JUNCTION POINT OF THE "L." LIMESTONE IN SMOOTH AND RUSTICATED FINISHES LENDS TEXTURAL VARIETY.



1 ENTRANCE
2 LIVING ROOM
3 GALLERY
4 LIBRARY
5 DINING ROOM
6 KITCHEN
7 FAMILY ROOM
8 GARAGE
9 CHANGING ROOM
10 SAUNA
11 SWIMMING POOL
12 REFLECTING POOL

GROUND-FLOOR PLAN ——— 13'

FUNCTIONING AS BOTH AN AREA FOR ENTERTAINING AND GALLERY SPACE FOR AN EXTENSIVE ART COLLECTION, THE MAIN WING OF THE HOUSE (ABOVE) BOASTS AMPLE WALL SPACE AND A VARIETY OF WINDOW SHAPES THAT FOSTER EVER-CHANGING LIGHT PATTERNS. FILLING OUT THE HOME'S LONGER, THINNER WING IS A SPA AND POOL (FACING PAGE). A MASTER BATH WITH A DECK (BELOW) JOINS THE BEDROOMS ON THE UPPER LEVEL.

Art Collectors' Residence | Hariri Pontarini Architects

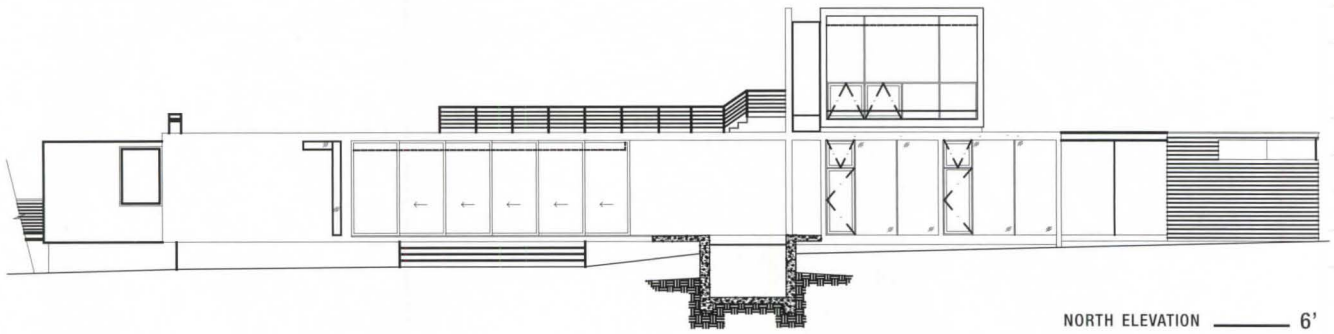
client: name withheld **architect:** Hariri Pontarini Architects—Siamak Hariri (principal); Jaegap Chung (project manager); Francis Lapointe, Steven Bauer, John Cook, Liming Rao, Dennis Giobbe (project team) **engineers:** Blackwell (structural); Toews (mechanical); Dynamic Designs (electrical) **consultant:** Dan Euser (water architecture) **area:** 12,700 square feet **cost:** withheld

Specifications

structural system: Sebba Steel **masonry:** Rotundo Stone **roofing:** French Brothers **skylights:** IBG Skylights **wood doors:** JWS Manufacturing **sliding doors:** Window Place **pools:** Betz **custom woodwork:** Caledon Woodworks **interior ambient lighting:** Eurolite **plumbing fixtures:** Gingers

HONORABLE MENTION

JAI HOUSE, CALABASAS, CALIFORNIA | LORCAN O'HERLIHY ARCHITECTS



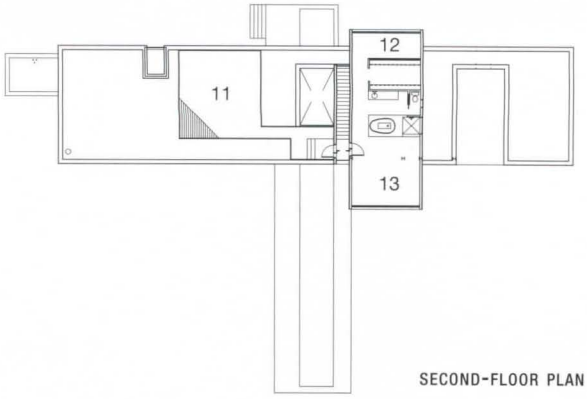
NORTH ELEVATION 6'

In keeping with the ubiquitous program for the modern house in California, architect Lorcan O'Herlihy was charged by his client to blur the boundaries between interior and exterior spaces at the Jai House in the city of Calabasas. While the street façade is largely enclosed behind stucco and sandblasted translucent glazing for privacy, the front door is clear glass, drawing the visitor's gaze through the dwelling and back out to the Santa Monica Mountains beyond. Similarly, those approaching the entrance see a 75-foot-long lap pool situated perpendicular to—and straight through—the house, that guides the eye from the threshold to the lawn beyond. Inside, plate-glass windows and doors meld inside and out, while concrete floors evoke the adjacent rocky topography.

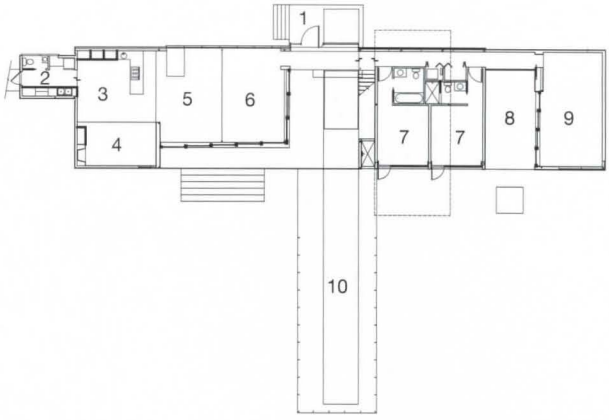
The architect's most dramatic indoor/outdoor gesture, however, is the vertical circulation: One must climb an open-air run of stairs to access the second-floor master bedroom and office. But the mild Southern California climate does not pose much of a hazard.

The Jai House, it should be noted, is not organically integrated with its landscape, but instead was conceived in the tradition of Le Corbusier's "machine for living," says O'Herlihy. Overlapping horizontal and vertical planes, which intersect at 90-degree angles, are rendered in black and white plaster, emphasizing individual volumes. "We stripped away visual and spatial excess, creating a simple, dynamic geometry," he explains. "Our reductive use of material and form allows the house to focus on space and light." **Bay Brown**

SITE PLAN 42'



SECOND-FLOOR PLAN



GROUND-FLOOR PLAN 12'

1 ENTRY
2 LAUNDRY
3 KITCHEN
4 FAMILY ROOM
5 DINING ROOM
6 LIVING ROOM
7 BEDROOM
8 PATIO
9 YOGA ROOM
10 POOL
11 DECK
12 OFFICE
13 MASTER BEDROOM

ONE OF THE FOCAL POINTS OF THE DESIGN, A 75-FOOT-LONG LAP POOL (ABOVE LEFT), DIVIDES THE GROUND FLOOR PLAN AND IS VISIBLE FROM THE LIVING ROOM THROUGH THE SLIDING GLASS DOORS. ANOTHER INDOOR/OUTDOOR GESTURE IS THE OPEN-AIR STAIRCASE (ABOVE RIGHT), WHICH LEADS TO THE SECOND FLOOR MASTER SUITE.

Jai House, Calabasas, California

client: Julie Piatt and Richard Roll **architect:** Lorcan O'Herlihy, Culver City, California—Lorcan O'Herlihy (principal); David Thompson, Juan Diego Gerscovich, Michael Poirier, Ryan Singer (project team) **engineer:** Paul Franceschi (structural) **general contractor:** Michael O'Malley Construction **area:** 4,400 square feet **cost:** $1.1 million

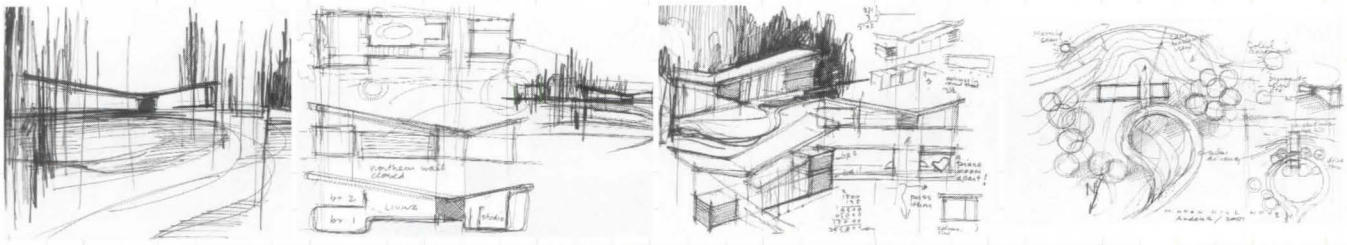
Specifications

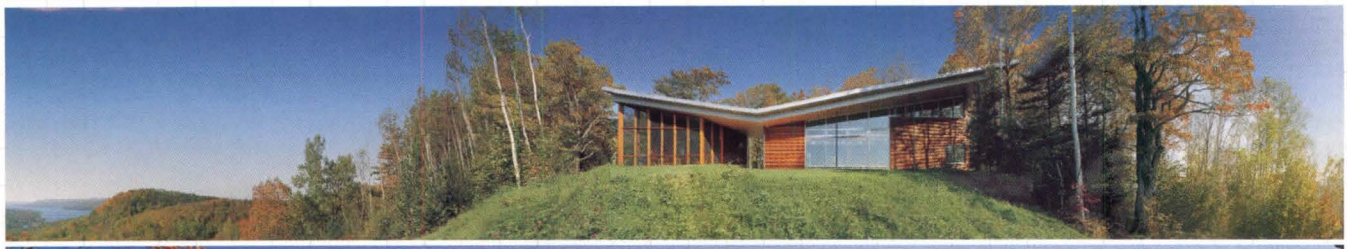
structural system: steel moment frame, wood framing **cladding:** smooth trowel plaster **roofing:** Shur-Dec **glazing/sliding doors:** Fleetwood **hinges/closers/cabinet hardware/locksets:** Baldwin **cabinetwork/custom woodwork:** Boffi **flooring:** concrete, stained walnut **counter tops:** stainless steel **dining table/chairs:** Verner Panton **sofa:** Cappellini

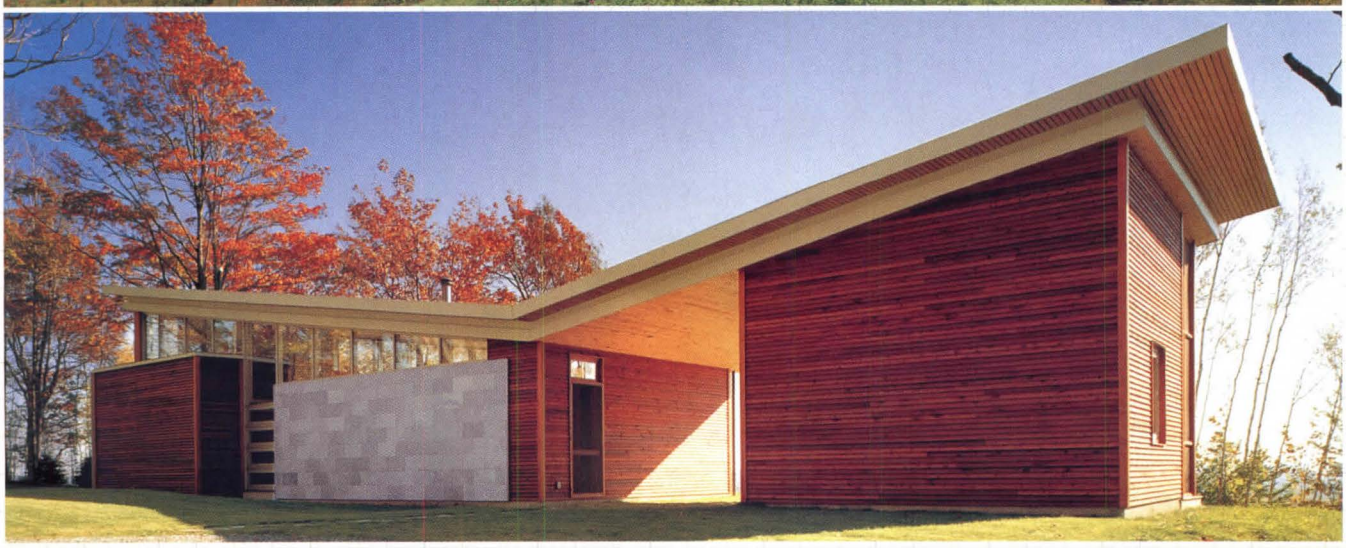
THIS PAGE: JOHN COULDGE (LEFT); KENNETH JOHANNSON (RIGHT); FACING PAGE: MICHAEL WESCHLER

HONORABLE MENTION

MINTON HILL HOUSE, NORTH HATLEY, QUEBEC | AFFLECK + DE LA RIVA ARCHITECTES







Rendered in cedar, slate, and glass, the Minton Hill House in North Hatley, a village in the agricultural Eastern Townships of Quebec, is the primary residence of a musician who required a dedicated workspace in addition to living quarters. It occupies a four-acre hilltop in this historically agricultural region, in the sugar bush of a former dairy farm, and its long, narrow footprint is sited parallel to the slope of the hill.

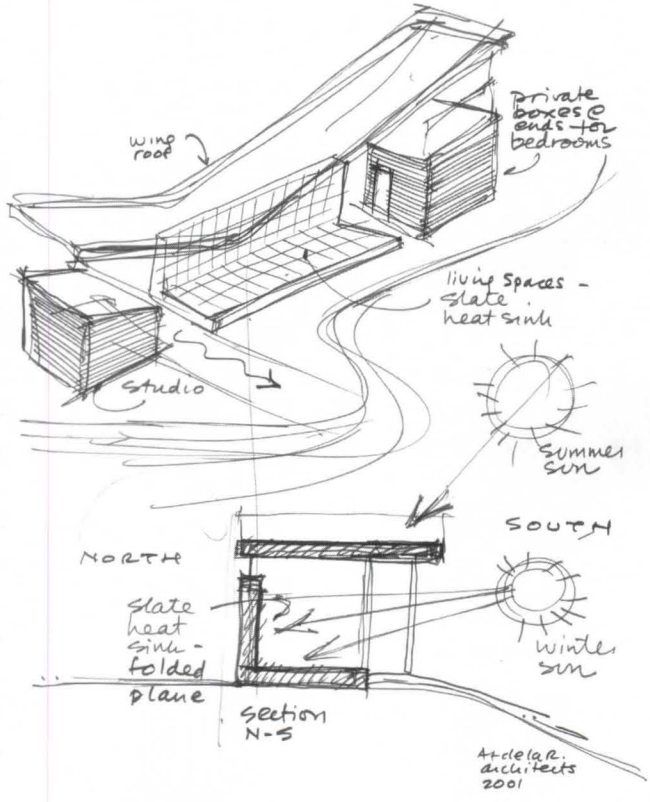
By dividing the 1,700-square-foot program into two separate volumes under a single roof, Affleck + de la Riva Architectes of Montreal has produced a clear distinction between the client's personal and professional lives. (The larger piece contains living spaces as well as two bedrooms; the smaller one an office.) The covered, open-air space between these distinct domains marks the entrances to the residence and the owner's office, while framing the view of Lake Massawippi in the valley below. The butterfly roof—comprising a steel primary span supported by steel columns and a secondary span of prefabricated wood trusses—appears to float above the inhabited volumes, emphasizing the hilltop locale.

Materials and orientation address conditions of site and climate through passive energy strategies. The Minton Hill House's heavily glazed south side has a deep overhang for solar control, while its north face is more opaque and has a narrow soffit. The north wall of the main living space is clad in blue slate inside and out—a material that also slides down to become the flooring for the living and dining areas. This expanse of stone is oriented to the south in an effort to capture and retain heat from the low winter sun flowing through the aluminum-and-glass curtain wall.

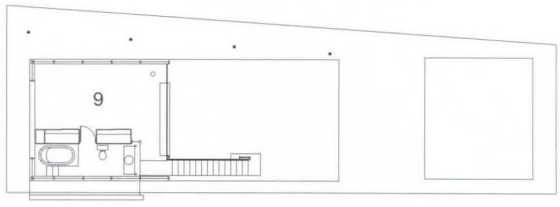
Like the local farmhouses with deep eaves it is meant to evoke in spirit, if not form, the Minton Hill House aims to work in unison with its environment. **Abby Bussel**

PHOTOS: MARC CRAMER

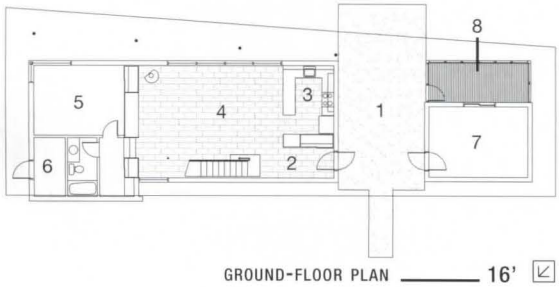
MATERIALS TIE INTERIOR TO EXTERIOR: SLATE TILES CLAD THE NORTH WALL INSIDE AND OUT, WHILE THE PINE CEILING SLIPS BEYOND THE ENVELOPE TO BECOME THE SOFFIT.



CONCEPTUAL SKETCHES



SECOND-FLOOR PLAN



GROUND-FLOOR PLAN 16'

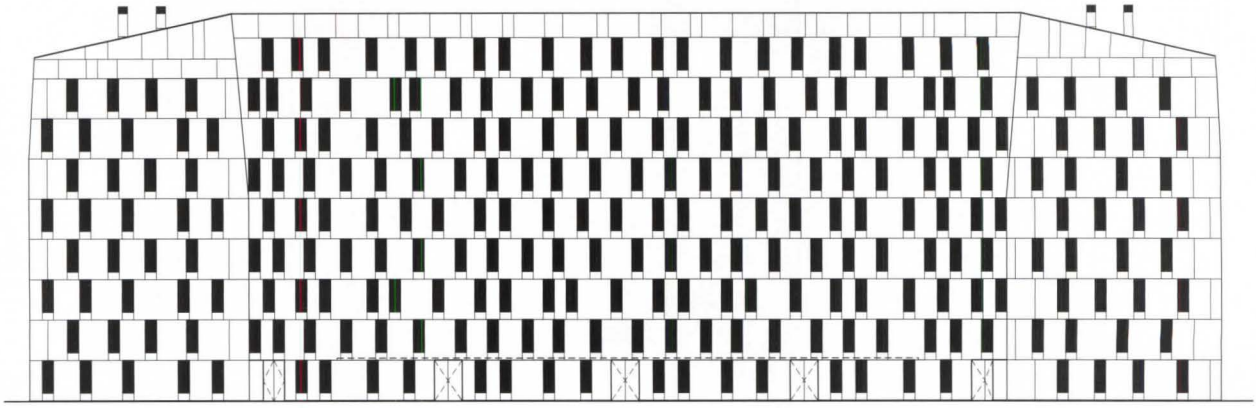
1 EXTERIOR PASSAGE
2 ENTRANCE
3 KITCHEN
4 LIVING/DINING AREA
5 GUEST BEDROOM
6 UTILITY ROOM
7 OFFICE
8 SCREENED PORCH
9 MASTER BEDROOM

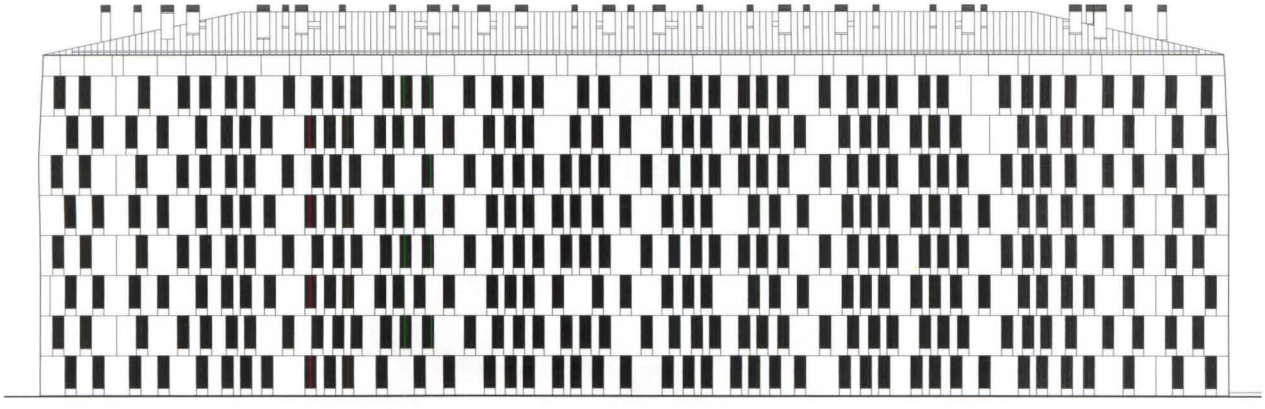
Minton Hill House, North Hatley, Quebec

client: Steven Marien **architect:** Affleck + de la Riva Architectes, Montreal—Gavin Affleck, Richard de la Riva, Veronica Charlebois, Ngae-Chi Wong, Sukaina Kubba, Jean-François Guimont (project team) **engineer**: Comtois, Blouin et Associes (structural) **general contractor:** RG Construction **area:** 1,700 square feet **cost:** $357,000

Specifications

structural system: concrete slab, wood, and steel frame **anodized-aluminum curtain wall:** A&D Prevost **prestained western red cedar clapboard:** Goodfellow **slate tiles:** Ceragrés **roofing:** Soprema **fixed windows:** Thermalite **entrance/sliding patio doors:** Prodomo **hardware:** Schlage

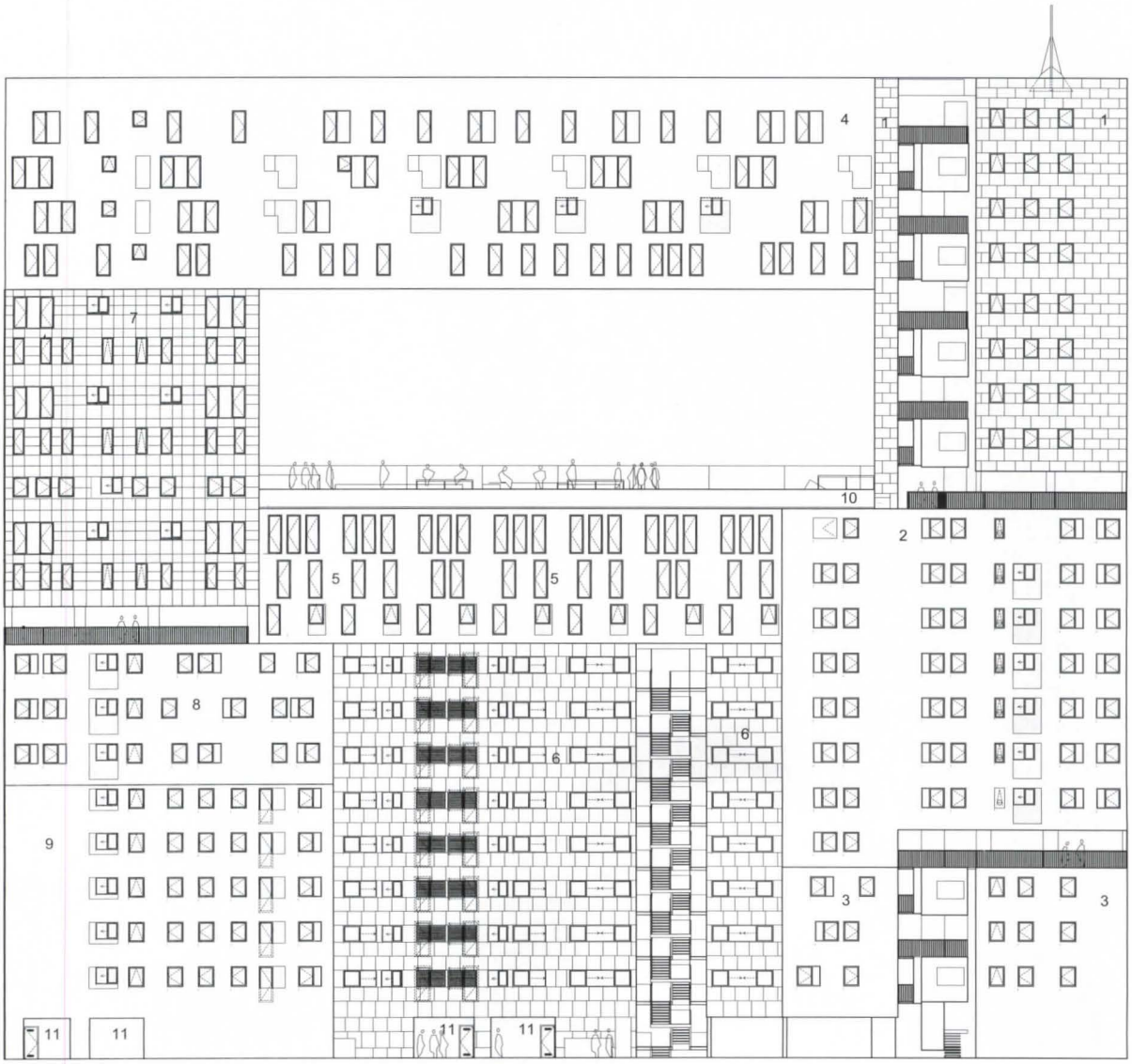




DAVID CHIPPERFIELD ARCHITECTS // VILLAVERDE

PRIVACY AND

Two new social housing projects in Madrid offer rival



MVRDV // MIRADOR

PUBLICITY

approaches to the meaning of home. BY AARON BETSKY

MVRDV // MIRADOR

Rarely has there been a starker contrast between an architecture of expressive form and one of detailed effect. Working with almost identical programs and with extremely restricted budgets, two very different architects have produced very different low-income housing projects on the edges of Madrid. One, by the Dutch firm MVRDV, literally stands the whole idea of housing as it is practiced there on its head to dramatic effect. The second, by London-based David Chipperfield Architects, refines and abstracts the familiar forms of courtyard blocks into something monumental and crafted to surprise with subtle effects. Architecture today in many ways comes down to a choice between these two designs—or a belief that both are valid approaches that hold each other in tension.

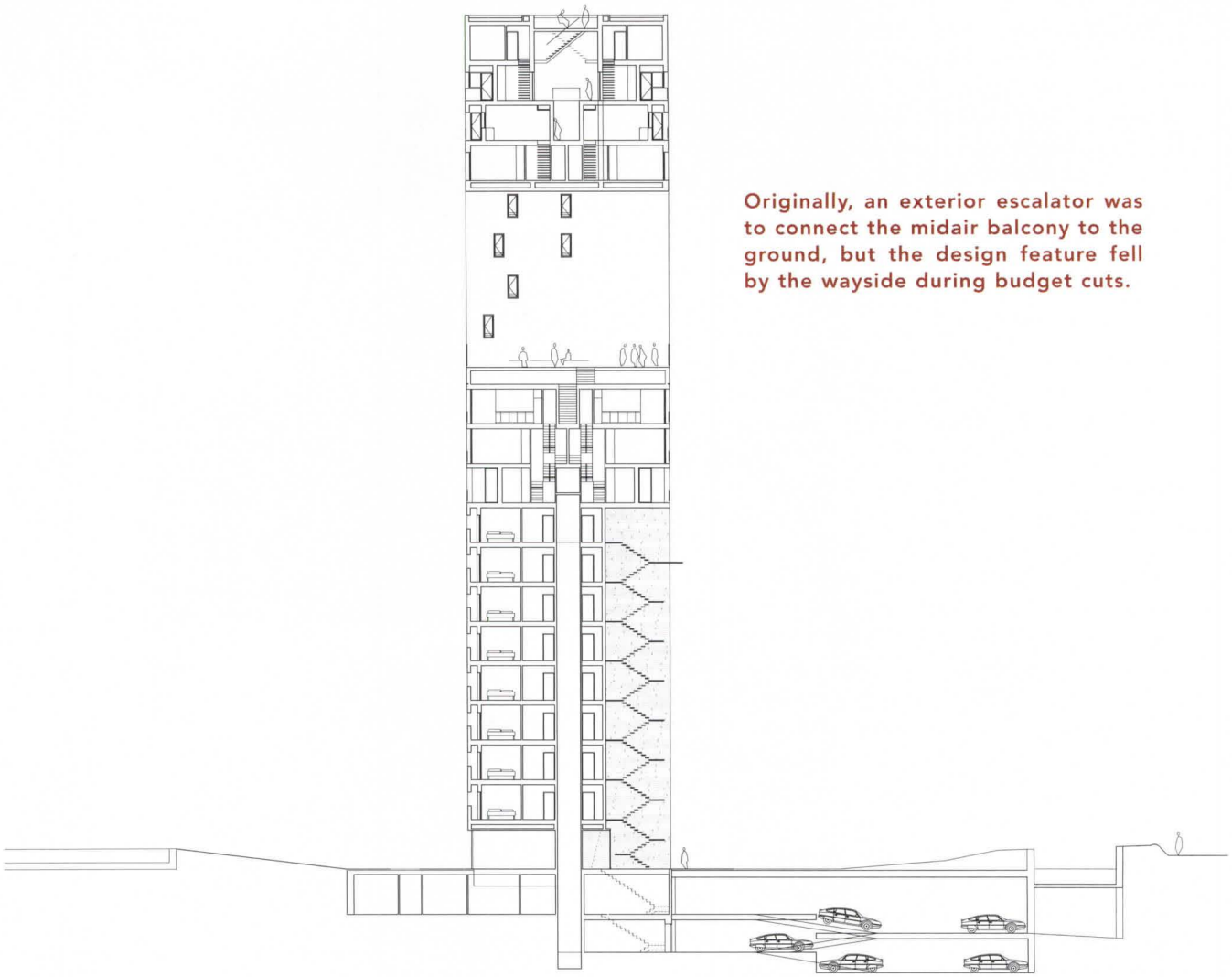
The Sanchinarro Mirador and the Villaverde projects are part of a general housing program and a specific initiative by the mayor of Madrid, Alberto Ruiz-Gallardón, to increase the quality and quantity of housing in his city. Madrid is getting richer and growing because of Spain's booming economy and because many immigrants, both from agricultural areas in Spain and from North Africa and South America, are moving there. The new housing projects that meet the demand are located at the city's periphery, where the flat, dry landscape is slowly giving way to suburbanization. The Mirador is all the way to the north, near the airport, while the Villaverde project is in the much poorer south. The two foreign offices were the first of ten hired as part of the mayor's desire to "give a boost to the city's consolidation with an image of good architecture and to strengthen the city's international projection." The third of these finished so far is by the Mexico City-based Ricardo Legorreta. As does most of his work, it relies heavily on colored stucco to give an identity to otherwise standard forms.

MVRDV uses color as well, but in a more radical way. And it did not employ any standard form. After analyzing the five- to eight-story courtyard blocks that represent how social housing is traditionally built in Spain, the designers decided, as firm principal Jacob van Rijs says, "that the area needed something to identify it. Everything is so closed, so boring and undifferentiated that you don't know where you are." Their solution was to stand the block upward on its side into a 21-story slab. What was the interior courtyard became the *mirador*, an enormous open-air balcony ten floors above the ground. This four-story hole in the slab features a glass security wall and functions as a communal gathering space from which residents can view the city, and where children may play outdoors.

The courtyard is not the Mirador's only public space. MVRDV pulled the fire stairs out of the build-

The Mirador's namesake balcony (top); its Sanchinarro site; and interior courtyard.

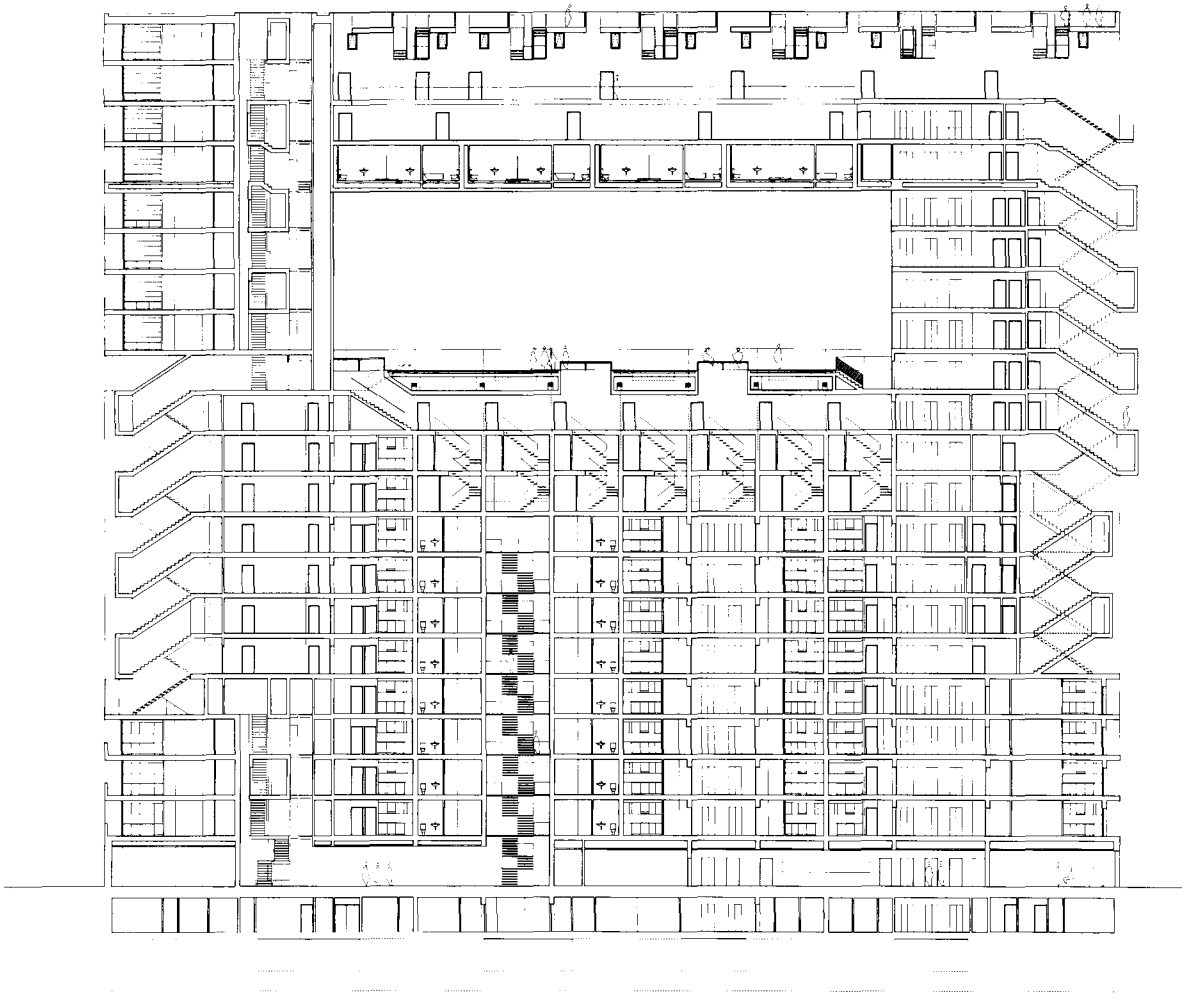
ALL MIRADOR PHOTOS: ROB 'T HART



Originally, an exterior escalator was to connect the midair balcony to the ground, but the design feature fell by the wayside during budget cuts.

elevation ——— 17′

floor plans, from left: ground, second, 12 through 14 ——— 25′



elevation ——— 17′

typical two- and three-bedroom apartment plans ——— 6′

ing and snaked them around the four façades. This modern interpretation of an American fire escape where people can gather becomes a red thread running through and connecting the whole housing project. Horizontal landings and transfer points are configured as shaded, red-painted courtyards where potted plants and bicycles are already showing up. The culmination of this ribbon is a narrow interior courtyard that slices through the building's top three floors. Stairs lead from some of the small top-level apartments to private roof terraces.

The result is an astonishing array of public spaces distributed throughout the building, but also a structure that towers over its humbler neighbors and has become the symbol for the whole district. MVRDV clad the various parts of the façade separating the fire stairs with different materials, breaking down its scale and indicating the variety of different sizes of apartments they had to provide under Spain's housing laws. As image and as space, this is a building that stands for solidarity and public coherence.

Beyond that shared world, however, the apartments are tiny and the detailing is, to say the least, cheap. That is the Dutch way: "No money, no details," as Rem Koolhaas is wont to say. MVRDV concentrated on the effect, not on the materials or on the standardized reality of small dwellings. The apartments David Chipperfield designed are not any larger, but they seem more generous and the building conveys the impression it will last. Though this might be just an effect, it does illustrate the approach of an architect who believes that "designs should be almost anonymous."

The Villaverde project has more units than the Mirador (176 versus 165 apartments), but feels—and is, at half the gross square footage—much smaller. It does not devote space to articulated circulation, though building costs were within a few hundred thousand dollars of each other, at around $13 million. The Villaverde's U-shaped structure depends on its similarly sized neighbors both to stand out and to finish the back part of its interior court. While those structures hide their basic forms behind pasted-on Neoclassical details, the Villaverde is a monolithic rock from which nothing protrudes. The building cants slightly inward as it rises and its fenestration is realized as an irregular pattern of voids, so that there seems to be no way in or out of this solid bastion. It looks safe.

Those blocks are actually glass-reinforced concrete (GRC), a hollow building material that gives itself away with one knock on its terra cotta-colored face, but Chipperfield was able to use this humble and inexpensive material to make a building in which there is no obvious (bad) detailing to distract the eye. The actual windows are set behind the GRC

Mirador rises above its traditional kin (left); exterior materials indicate apartment sizes.

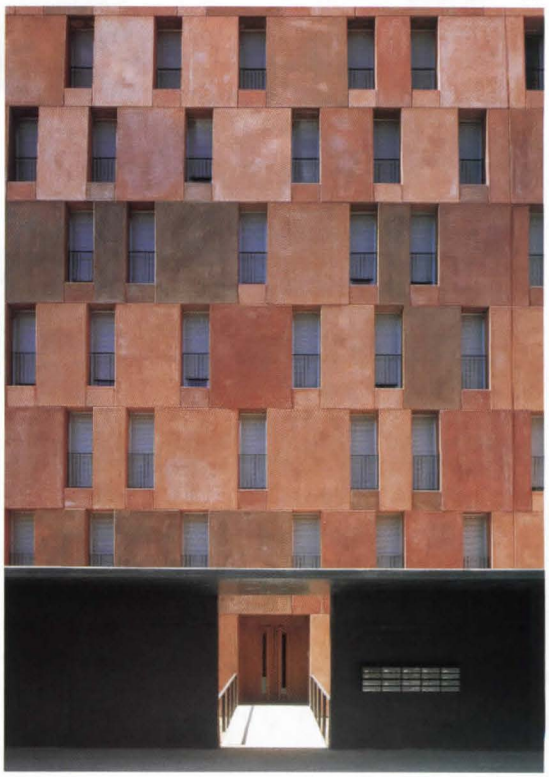
DAVID CHIPPERFIELD ARCHITECTS // VILLAVERDE

and neither the base nor roof are visible on the outside. There is no obvious circulation or public space, only the void of the interior court, which one reaches through narrow slots to the building's side. A gray-painted concrete portico organizes minimal public amenities such as mailboxes and provides a bit of shade. Beyond that one image of gathering and guiding there are only the interior stair halls, but in these spaces Chipperfield and his local architect, José Maria Fernández-Isla, made sure to detail every stair railing, every lighting fixture, and every doorknob so that the building appears much more luxurious than it actually is.

Chipperfield abstracts standard social housing models to create magnificently sculpted forms that greatly enhance its deservedly dull reputation, while MVRDV revels in the complexity of the situation and enlarges it to the point that its nature is expressed. Chipperfield gives each inhabitant a well-detailed piece of a collective rock, while MVRDV gives him or her an amazing array of public spaces in a form that proclaims their communal identity. Comparing the approaches, and without slighting Chipperfield's admirable achievement, MVRDV's irrational exuberance ultimately responds more directly to the social atomization and mindless sprawl, as well as the grinding effect of cost savings and bureaucracies, that typically leach all sense of home out of housing.

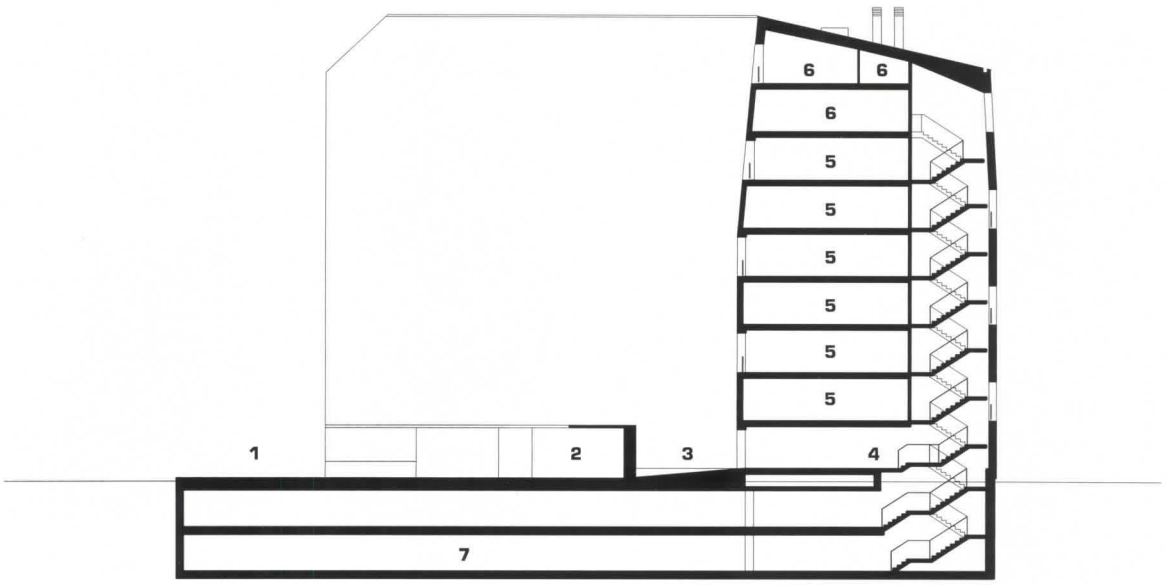
Sanchinarro Mirador Housing, Madrid
client: EMV del Ayuntamiento de Madrid **architect:** MVRDV, Rotterdam—Winy Maas, Jacob van Rijs; Nathalie de Vries; Ignacio Borrego; Stefan Witteman; Pedro García Martinez; Gabriela Bojalil; Antonio Lloveras; Nieves Mestre; Marjolijn Guldemond; Fabien Mazenc; Dagmar Niecke; Renzo Leeghwater; Florian Jenewein **associate architect:** Blanca Lleó asociados, Madrid—Blanca Lleó; Ignacio Borrego; Maria Espinosa; Helena Aguilar; Beatriz Fierro; Miguel Tejada; Juan Andrés Antolin; Maria Gonzales Campo **engineers:** NB35, Jesús Jiménez; JG & asociados, Emilio Gonzáles **area:** 273,327 square feet **cost:** $13 million

EMV Housing Villaverde, Madrid
client: Empresa Municipal de la Vivienda **architect:** David Chipperfield Architects, London—Kevin Carmody; David Chipperfield; Andy Groarke; Takeshi Hayatsu; Kaori Ohsugi; Bernard Tulkens; Jonathan Wong; Mark Zogrotski **associate architect:** José Maria Fernández-Isla Arquitectos, Madrid—Matias Manuel Santolaya Heredero; Jose Maria Fernandez-Isla **engineers:** Manuel Linares (structural); Santiago Sanz; Emilio Fernandez Roman (M/E/P) **area:** 125,916 square feet **cost:** $13 million



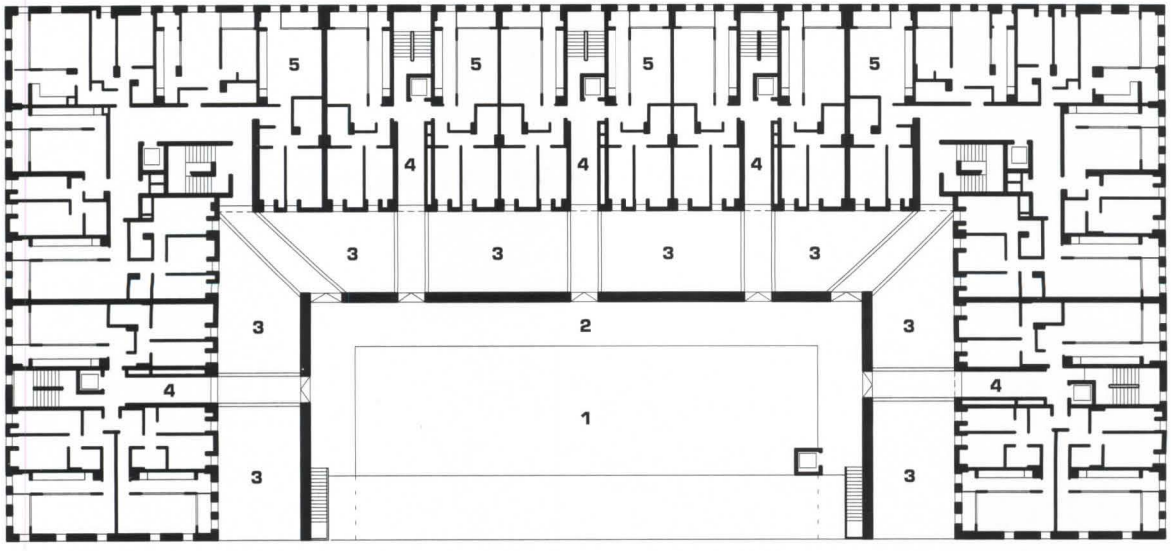
Villaverde displays a degree of subtlety not evident in its similarly massed neighbors.

ALL VILLAVERDE PHOTOS: ROLAND HALBE



northeast-southwest section ——— 20′

1 courtyard
2 portico/pergola
3 landscape
4 entrance
5 apartment
6 loft
7 parking

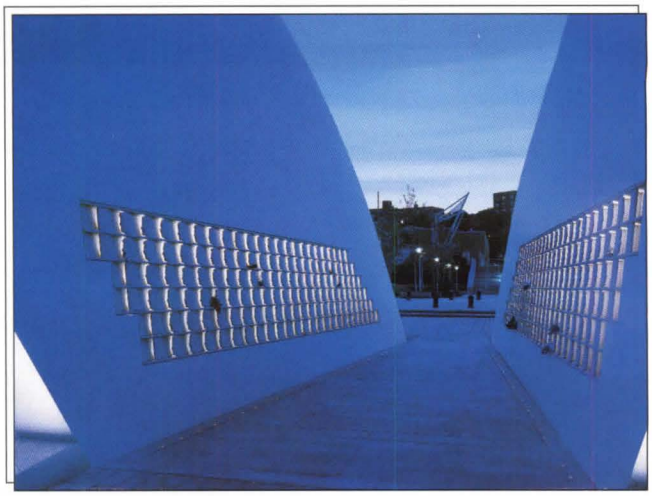


ground-floor plan ——— 20′

LIGHT LETTER

A simple lighting strategy addresses the complexities inherent in creating a powerful memorial design.

by Emilie Sommerhoff



Like the communications for which it is named, *Postcards*, a memorial honoring September 11 victims who lived in New York City's Staten Island, is experienced simultaneously on both public and personal levels. To those distant, the message recorded in the structure's poised silhouette, and in the orientation and leaning gesture of its twin walls toward the site of the former towers, is communal and unified. Inside the structure, however, surrounded by the simple, carved-granite profile sketches commemorating 267 casualties, the viewer is confronted with the private character of the memorial, as if he is reading a postcard addressed to someone else.

The structure's duality is emphasized to great effect through the application of light. New York City-based architect Masayuki Sono, who won the commission in an international design competition, notes "lighting was crucial to both scales." Sono wanted the memorial, which perches on a waterfront esplanade on the island, to seem to those witnessing it from the Staten Island ferry or Manhattan, across the harbor, as if it were floating. (*Postcards* is indeed nautically suggestive both in its prow-like form, and in its fabrication: A Rhode Island boat-building company constructed the 37-foot-tall curved composite laminate walls, which are anchored by steel brackets bolted into concrete pilings underground.) At site level, the challenge was to intensely and evenly illuminate the profiles within the design program's confines.

The overall lighting solution, developed in conjunction with New York City lighting design firm Fisher Marantz Stone,

Postcards, Masayuki Sono's September 11 memorial, looks from its perch on a Staten Island esplanade across the harbor at the former World Trade Center site. From outside, the curved shape suggests a letter in motion; inside the twin walls, individual

PHOTOS: ED MASSERY

is strikingly simple. A row of 70-watt ceramic metal halide in-ground fixtures parallels each outward-facing side of the walls, directing light up onto their gentle curves. At night, the bright wash at the base lightens and "levitates" the structure. Lighting the interior space was less obvious. Creating the effect of uniformly illuminated silhouettes to value the profiles equally seemed at first to require as many individual sources. Wiring and maintenance were too complicated in a proposed LED-based system. In the end, the same 70-watt in-ground lamps lighting the monument's outside surface were applied to backlight the profiles through vertical channels cut into the composite laminate. A customized arrangement of two spread lenses applied to each fixture helps to angle and evenly disperse the light. "This was the most graceful solution, because it wasn't gimmicky," says Sono, who also notes that the color temperature of the ceramic metal halide was warmer and gentler than that of the LEDs.

The symbolic play of light and dark features prominently in the design for the two facing forms, as their surroundings transition from day to night, and their illumination from natural to electric. Sunlight exposes the details of the faces and their accompanying inscriptions on the light-colored granite; it also casts a shadowy outline. By night this effect is inverted, when backlighting transforms the faces to dark, mysterious silhouettes, stoically aligned toward the missing towers.

Postcards, Staten Island, New York
architect: Masayuki Sono, New York City **engineer:** Weidlinger Associates (structural) **lighting design:** Fisher Marantz Stone **fabricator:** New England Boatworks

Specifications
in-ground uplights: We-ef Lighting USA (outside perimeter), Designplan (interior LEDs)

A rendering depicts the changing character of the plaques caused by the transition from daylight to electric sources.

granite profiles cut to resemble the borough's honored victims are artfully backlit at night by in-ground uplights located on the other side of the wall. Serving as marker lights, small one-inch-diameter LEDs trace the base of the memorial's interior (top, left).

OPEN OFFICE

A move to a former printing factory in Chelsea widens the Aperture Foundation's scope.

by Katie Gerfen

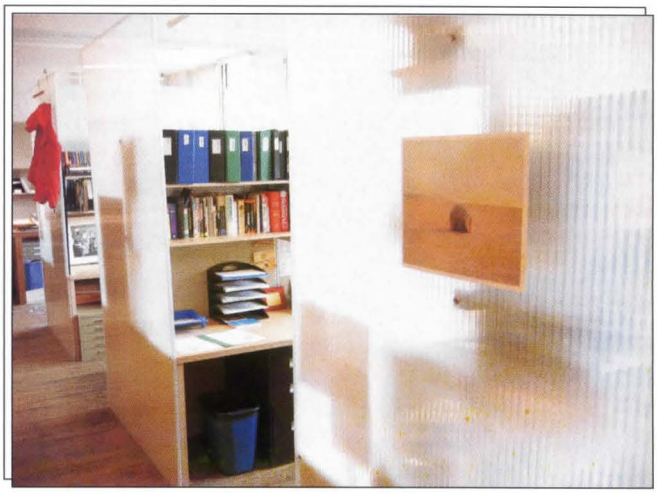
When the Aperture Foundation, a nonprofit photography gallery and publisher, decided to move from its five-story brownstone in Greenwich Village to an industrial space in the thriving Chelsea arts district, it didn't just want a new location, it wanted an open one. "We have not, in the past, had the opportunity to work closely together," says executive director Ellen S. Harris. The configuration of the old townhouse caused the various departments to be divided, so people did not interact except in the elevator or via email.

The entire renovation of the 17,500-square-foot space had to be completed on a budget of $750,000. And completed on budget it was, by Slade Architects, a young New York City-based firm known for such offbeat projects as the anime-styled theme park "I Like Dalki" in Paju City, South Korea (September 2004, page 50), designed with Minsuk Cho.

Entering Aperture's new home, one is confronted with elegant simplicity. A white-washed gallery contains the foundation's exhibitions as well as part of its permanent collection. But behind a swinging door lies a large, open office space, devised to fit all of the institution's departments.

There were, naturally, concerns with moving to an open-floor layout. "Some people just wanted doors," says Hayes Slade, principal and cofounder of Slade Architects. "This tension between the open and the private office was something that we really had to discuss." The solution? Polycarbonate panels close off certain work areas—such as Aperture's staff of book editors, who need quiet for their work—while still allowing light to filter through. Three conference rooms scattered throughout the space provide areas for private meetings.

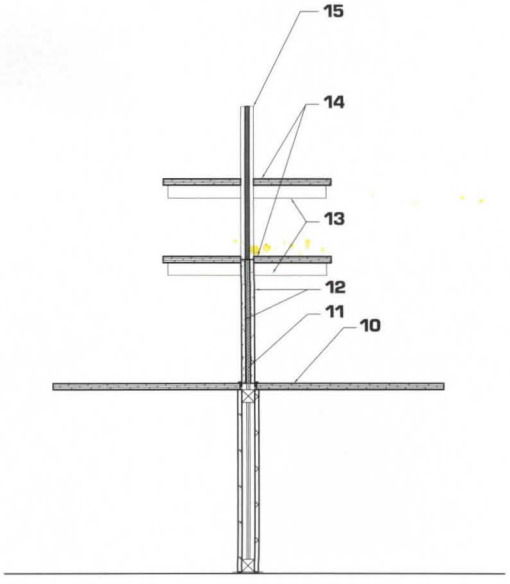
The client's other major concern was the impact on the acoustical climate by placing several independent departments in one room. Acoustical insulation between sanded Homosote divider panels at desk level controls ambient noise.



Ribbed polycarbonate panels provide privacy for those who need a quieter environment, yet still allow natural light to filter into the rest of the office.

floor plan ——— 28′

1 reception
2 bookstore
3 gallery
4 board room
5 print storage
6 matting room
7 book storage
8 office space
9 conference room
10 birch plywood desk
11 acoustic insulation
12 sanded panels
13 brackets
14 wood shelves
15 polycarbonate panels



workstation section ——— 17″

COURTESY APERTURE FOUNDATION

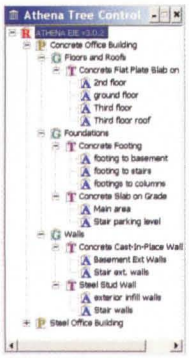
SEEING GREEN

Life cycle assessment calculators help to determine the environmental and economic impact of materials choices.

by Katie Gerfen

In an era of sustainable building, and an ever-growing obsession with LEED points, it's important for all architects to be armed with the right tools. Designers have to understand the vocabulary—cradle to cradle, life cycle assessment, and indoor air quality come to mind—and how to specify products that help achieve eco-friendly goals, not to mention the coveted U.S. Green Building Council rating.

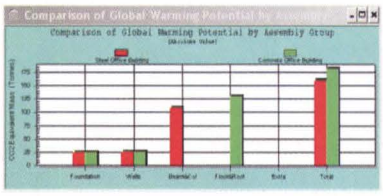
Fortunately, there are a series of tools that can help. Databases, set up by independent, government-supported agencies in the States and abroad, can help to determine whether the products in a project are really as green as they



seem. Two such tools, Athena Environmental Impact Estimator software and BEES (short for Building for Environmental and Economic Sustainability), a product of the Building and Fire Research Laboratory division of the National Institute of Standards and Technology (NIST), can be used independently or in concert to delve that extra step deeper into a particular product or construction method.

NUTS AND BOLTS

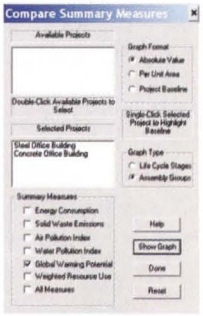
The Athena project did not begin with the goal of being a large-scale life cycle assessment tool. "It started as an initiative of Forintech Canada Corporation, the national wood research organization," says Wayne Trusty, president of the Athena Institute, "And in 1990, we wanted to look a little more broadly at the entire wood life cycle." From there, the project took on a life of its own, moving through government funding and a research collaborative until the Athena Institute was formed in Ottawa, Ontario, in 1997 with the singular goal of creating an interactive resource for architects and other building professionals. The U.S. branch opened in Pennsylvania in 2001. "We used to sell [construction system life-cycle] reports," explains Trusty, "but it became apparent that it would be more useful to have a



tool, rather than a spreadsheet." The Athena software, which is available on the institute's website (www.athenasmi.ca), specifically addresses the materials commonly available in various regions. The program currently has

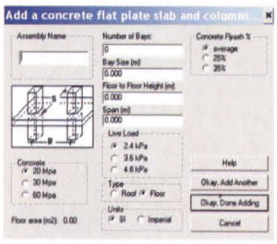
The Athena Environmental Impact Estimator calculates the cradle-to-grave implications of selected construction materials, and determines the impact in terms of embodied primary energy use, global warming potential, solid waste emissions, air and water pollutants, and the use of natural resources. Several menus guide the user through the software: the building assembly is entered in a dialogue box (below right), and can be compared with other comparable systems (above right) at which point a graph is generated (above) to provide visual reference of the implications of each assembly system. Design changes are easily trackable through the "tree screen," (left) which keeps a history of all the information inputted by the user.

specifications for eight areas in Canada and three in the eastern United States, with one U.S. average standard that provides a general estimate for the materials most often used throughout the 50 states. The environmental impact estimator allows users to choose types of construction and cladding, running calculators along the way that will measure the environmental effect of the

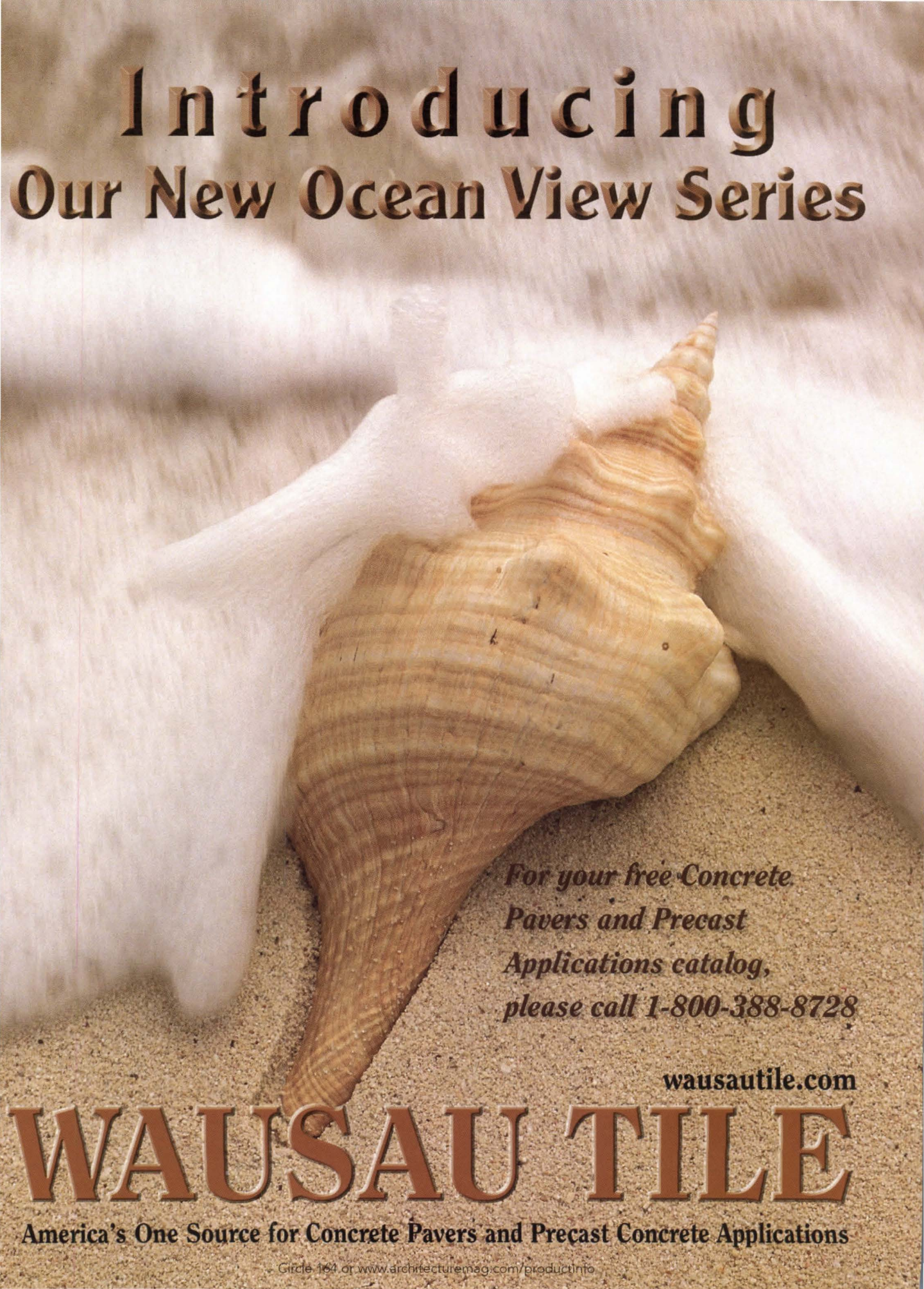


materials selected over the life of the building, including their maintenance concerns. It covers a range of materials regionally available, but does not concern itself with brand name.

BEES on the other hand, does name names, and focuses its efforts on interior finishes. Compiled from data gathered by an independent research agency so as to ensure an unbiased rating, the software, now in its third update, rates products across several categories. This program started as a



joint venture between NIST and the U.S. Environmental Protection Agency. Research was started in 1994, primarily with what economist Barbara Lippiatt, head of the BEES program, calls "industry average generic products." These hypothetical products are a result of work with manufacturing organizations to develop a general standard for the impact of a product, such as drywall, without going into specific detail about



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each brand available on the market. More recently, data has been collected for specific products such as carpet tile, partly as a result of manufacturers pointing out to the BEES program administrators that their products were far above industry standards. The information gathered on these specific products starts with a questionnaire that is verified against 400 other sources of data from manufacturing organizations and industry sources gathered by the independent contractor in a sort of information audit. The program is updated every two years, and there is a new version with more products due out in 2006.

While both BEES and Athena calculate life cycle analyses of various building and interiors materials, one program does not cancel out the other. In fact, each organization is quick to tout the other's product and suggest that they may be used in concert. "BEES is a product-to-product comparison tool," says Trusty, "whereas Athena is oriented to building construction and assemblies."

JOINING THE PARTY

There are other electronic life-cycle assessment options that are becoming available to users, including the Minnesota Building Materials Database (www.buildingmaterials.umn.edu). This web-based database, developed by the University of Minnesota, seems to follow a trend that suggests these tools are becoming better known in the industry. "One thing that makes me think the approach is going to be front and center for years to come is that the students are already learning how to use these tools," says Lippiatt. As more up-and-coming architects use the systems, there will be pressure to make them more comprehensive.

That is not to say that existing assessment programs are not without their own challenges. While the University of Minnesota's program is web-based, Athena and BEES were designed for the PC platform. Athena can be used on a Macintosh enabled with virtual PC, but that is the only option for the many in the design world who do not use PCs. Both organizations are looking to expand their coverage: BEES is hoping to move to a web-based format with the release of its version 4.0 next year, and Athena is conducting a survey to see if their customers would use a Macintosh version of the program.

FOR INFORMATION ON LIFE CYCLE ASSESSMENT SOFTWARE, CIRCLE 127 ON PAGE 97.

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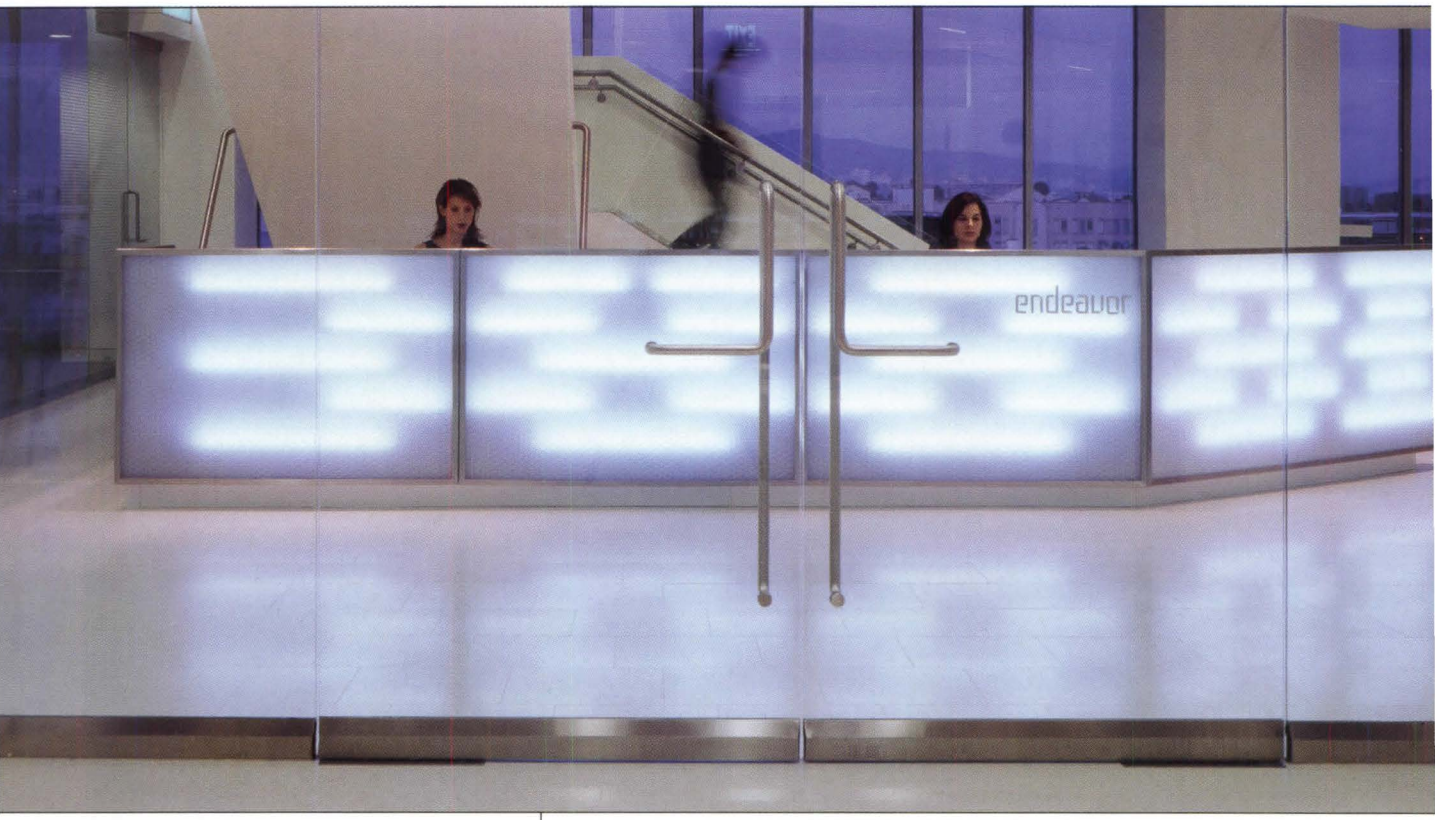

architect: Neil M Denari Architects, Inc. lighting design: Lighting Design Alliance photography: Benny Chan/Fotowo

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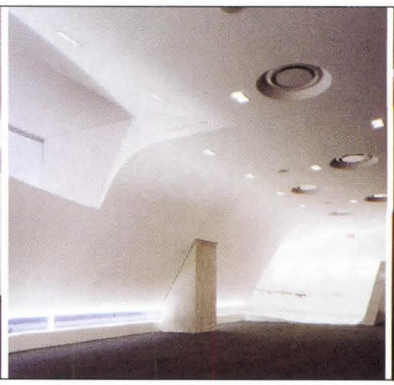


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product: **Designer Ventilation Hoods**
manufacturer: **Miele**
web: **miele.com**

Five new ventilation hoods have been added to Miele's designer series, including built-in, wall-mount, and island models. The wall-mounted options, including the DA289 (right), feature brushed stainless steel, front mounted controls, and dimmable halogen lighting that creates a custom level of illumination over the cooking surface. The built-in options feature a four-way control that allows the user to operate the hood without reaching over the cooktop, and removable metal filters that are dishwasher safe. The 40-inch designer island hood sports a height-adjustable chimney and comes in stainless steel or in one of 200 color options.

product: **Axor Uno^2**
manufacturer: **Hansgrohe**
web: **hansgrohe-usa.com**

Available in chrome and brushed nickel finishes, this new family of lavatory mixers is available with a high spout and with one or two handles. Designers can also specify wall-mounted or loop-handled mixers. Sleeker, slimmer, and more geometric in design than the original Axor Uno group, the Uno^2 collection was designed to complement modern residential bath settings.

product: **18-inch Integra dishwasher**
manufacturer: **Bosch**
web: **boschappliances.com**

This new offering provides an "ultra-quiet" alternative for those who don't have the space to accomodate a full-sized washer in their kitchens. The 18-inch model, six inches smaller than standard dishwashers, features a concealed control panel that allows the user to select from one of five settings. New performance features include One Touch, a water conservation mode that automatically adapts the cycle based on the soil level of the dishes; party wash, which washes up to six place settings in just 30 minutes without compromising the cleaning power; and Optidry, which adjusts cycle time and water temperature to allow for optimum dish drying results regardless of load size.

product: **Contours Radius Shower**
manufacturer: **Lasco Bathware**
web: **lascobathware.com**

Part of Lasco's new Contours line of products, the Radius Series shower can be ordered as a stand-alone unit or as part of a spa package, which includes the sister product, the Radius steam shower. The units can be upgraded to include a teak floor insert, chromatherapy, and body spray jets in addition to the standard shower head. The steam door may be enhanced to include heavier, frameless glass in varied patterns and finishes. Acrylic shower modules are 84 inches high and come in 48- or 60-inch widths. The acrylic is available in 17 standard colors.

product: **Big Lancelot Single Sink**
manufacturer: **Moen**
web: **moen.com**

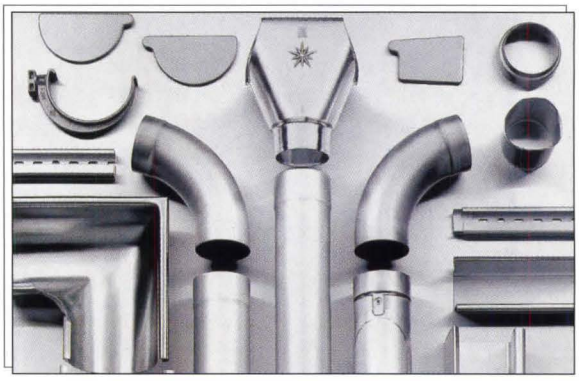
The high-end stainless steel Lancelot line of kitchen sinks from Moen now offers a deeper single bowl. The 10-inch-deep sink can accommodate pots, pans, and other bulky cookware, and the 18-gauge stainless steel construction can handle the abuse of an active kitchen. The product also features Moen's SoundShield undercoat, which reduces the noise of objects being placed in or moved around the sink. It is available in a satin finish and comes with a 15-year durability and dent resistance warranty.

FOR MORE INFORMATION ON KITCHEN AND BATH SOURCES, CIRCLE 128 ON PAGE 97.

sources roofing

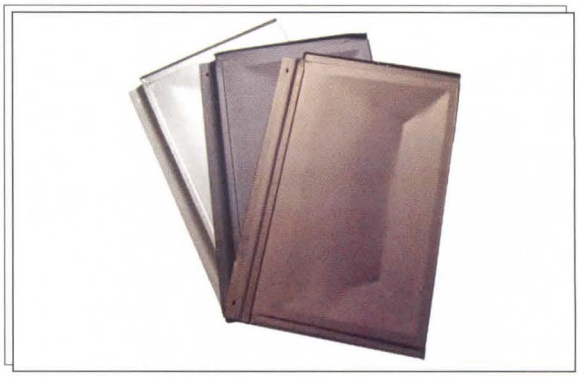
- product: **roof drainage system**
- manufacturer: **Rheinzink**
- web: **rheinzink.com**

Manufactured from 100 percent recyclable titanium zinc, Rheinzink's wide array of components can be assembled to create a custom drainage system for most any roof. Individual segments—which include downspouts and gutters, as well as more specialized items such as a leaf guard and a rainwater diverter—all come with a blue-gray finish that blends well with both contemporary and traditional roof profiles.



- product: **stainless steel roofing tile**
- manufacturer: **Millennium Tiles**
- web: **millenniumtiles.com**

Suitable for both residential and institutional applications, these stainless steel roofing tiles are easy to install and allow for a variety of design effects that require minimal maintenance. Sheets measure 9-by-15-inches and come in an amber, bronze, or slate finish. A prismatic coloring process renders the material impervious to fading or UV damage. Stainless steel tiles weigh far less than many other roofing materials, and are also fire retardant and wind resistant.



FOR MORE INFORMATION ON ROOFING, CIRCLE 129 ON PAGE 97.

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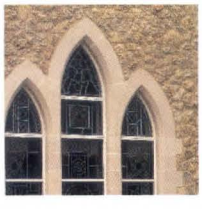
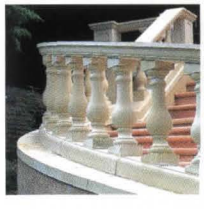
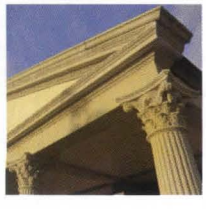

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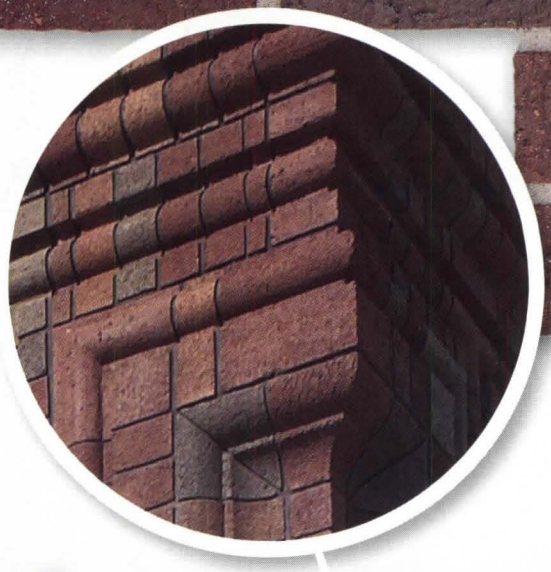

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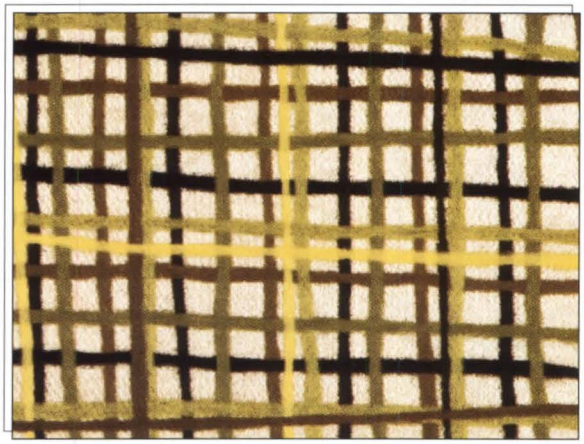
- product: **Mad Plaider**
- manufacturer: **Flor**
- web: **interfaceflor.com**

Designed for Flor by Liora Manné, Mad Plaider is an oversized, hand-drawn pattern that's a "quirky take on the traditional plaid," according to the manufacturer. Like the numerous other patterns available through Flor, Mad Plaider comes in 19.7-inch squares that can be easily cut with a utility knife and placed via peel-and-stick adhesive corner tabs. Made of 100 percent acrylic fiber, Mad Plaider is available in three colorways: Natural, Walnut, and Chartreuse (below).



- product: **reclaimed wood flooring**
- manufacturer: **EcoTimber**
- web: **ecotimber.com**

EcoTimber makes the rounds of deconstructed buildings (old barns and abandoned military base structures among them) to find the materials for its line of reclaimed wood flooring. This old-growth, tight-grained wood—cut into planks seven inches wide and of random lengths—is not only a unique, eco-friendly resource, but has a genuine character not found in newly milled floors, including nail holes, streaking, and other signs of wear. Planks come in four varieties: Australian Chestnut, Antique Oak, Antique Northern Yellow Pine (below), and Country Oak.

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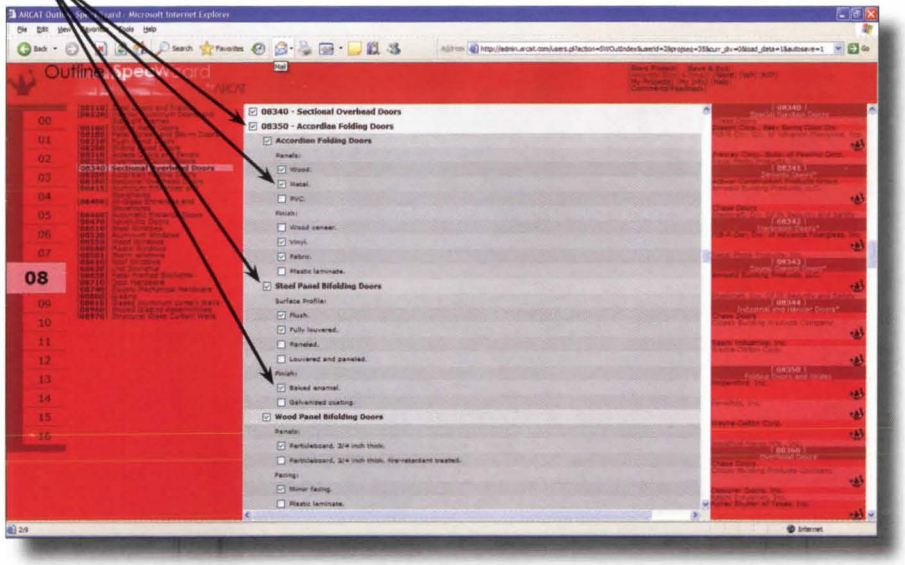

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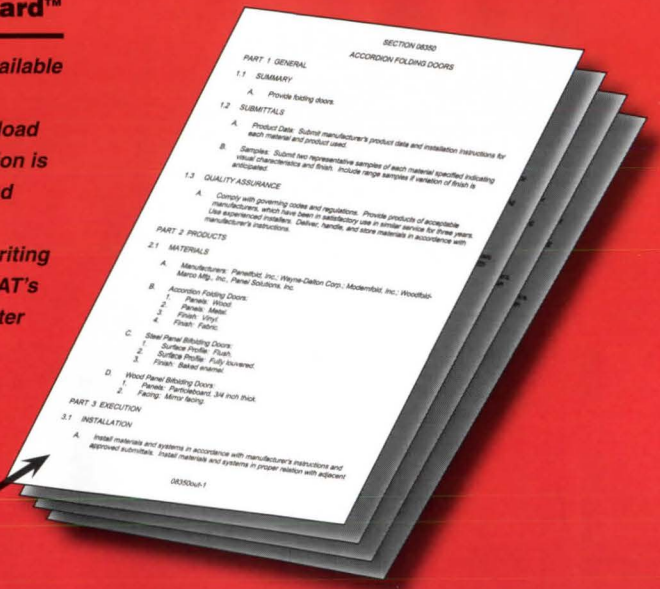

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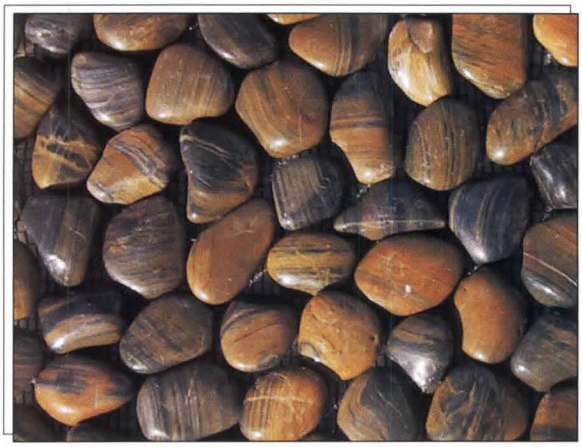
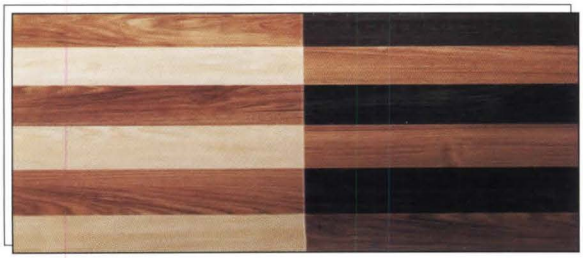
- product: **pebble tile**
- manufacturer: **Stoneyard.com**
- web: **stoneyard.com**

Used as both interior and exterior flooring, these unusual tiles are made from real stone pebbles, each about 1/2 inch across, glued to a mesh backing to create a 12-inch-square tile. Stoneyard.com offers a wide sampling of stone colors ranging from black to pink, in solid and mixed varieties, polished or left plain. (Its Polished Striped tile is shown below.) Tiles come without grout, which is added on site, then wiped off to reveal as much of the stone as desired.

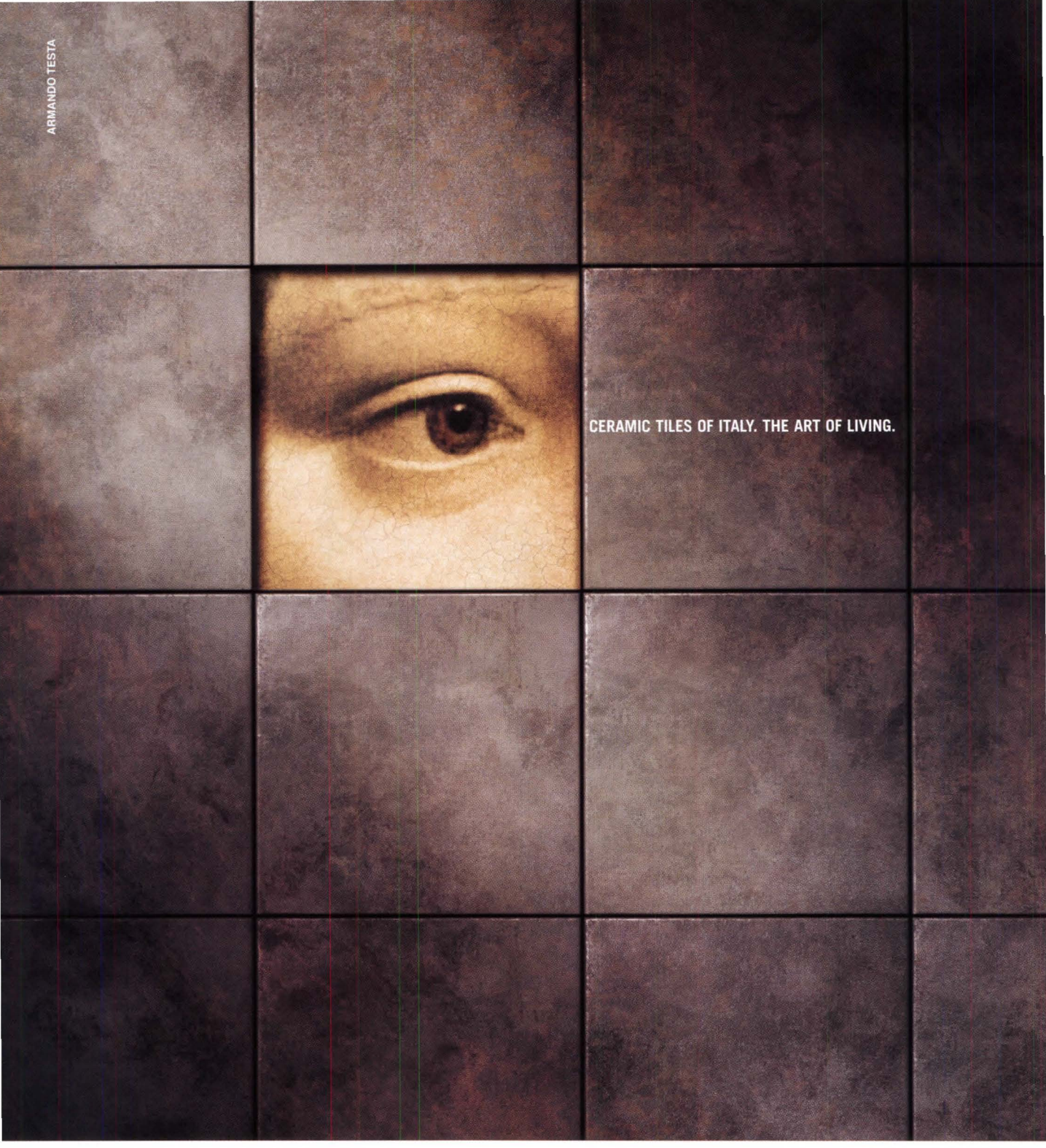


- product: **I.D. Moduline**
- manufacturer: **Tarkett Commercial**
- web: **tarkett-commercial.com**

Tarkett Commercial's new I.D. Moduline flooring mimics the look of the exotic while emphasizing industrial durability. Moduline's Wood family (below) is available in 11 narrow and eight broad planks, and stands up to punishment that genuine exotic woods could not. The line also comes in mineral and metallic families. Available starting next month, Moduline linoleum was developed for high-traffic settings such as retail, hospitality, and healthcare environments with a polyurethane formulation that's resistant to scratches, abrasions, and curling.



FOR MORE INFORMATION ON FLOORING, CIRCLE 130 ON PAGE 97.



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EXHIBITION ***Field Experiments in art-architecture-landscape: Hombroich spaceplacelab*** **| Center for Architecture, New York City | Through December 31** Amidst hundreds of acres of sugar beets and corn regenerating the site of a former NATO missile base near Cologne, Germany, a fresh kind of cultural inquiry is also being harvested. Hombroich spaceplacelab, a settlement of artists, writers, and social scientists, occasions this exhibition providing, according to the curatorial statement, "criteria for critical reflection on our built environment and standards of existence." Fortunately, this considerable ambition is generously realized; visitors may check their disbelief at the door—and turn a qualitative eye toward their own lives.

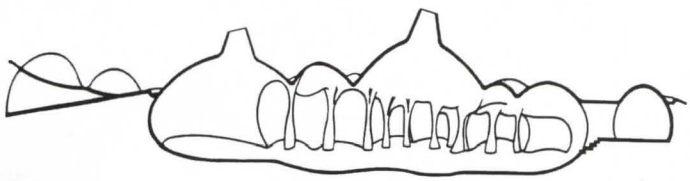
The experimental community began with art collector Karl Heinrich Muller, who purchased some of the Hombroich land for an art park 20 plus years ago. It has since expanded considerably, courtesy of state and private investment. (Muller's gallery and archive buildings—top and right, respectively—were designed by Erwin Heerich from 1983 to 2000, and are among the few structures built.) Hombroich's purposefully slow evolution results from a theoretical manifesto that preserves 90 percent of its land as agriculture, meadow, and forest. A tribe of diverse talent—Raimund Abraham, Frei Otto, Alvaro Siza, Tadao Ando, and Sverre Fehn among 16 commissioned to date—was invited by Muller to design their ideal inhabited landscape on 40 acres apiece; the results are expressed in the models and drawings displayed. There are no program restrictions, only the intention to achieve "the integration of art, architecture, and landscape through unorthodox and unanticipated realities."

Proposals are mounted individually in the gallery and are also displayed as an enormous jigsaw puzzle of 1:500 scale models fit together on a table. Visually tracing the generous curves of the topography through those varied interlocking sequences and noting the discretion of built interventions, it's easy to imagine the liberating potential of what might someday be realized on a grander scale: 40 live there now, and the goal in 25 years is a self-sustaining community of 500 people. What's peculiar is not that Hombroich is unfettered by the filter of commoditization through which we normally view contemporary buildings, but that we are so unused to dwelling, even for a moment, in such a quiet realm. **Julie Sinclair Eakin**

TOMAS RIEHLE/STIFTUNG INSEL HOMBROICH

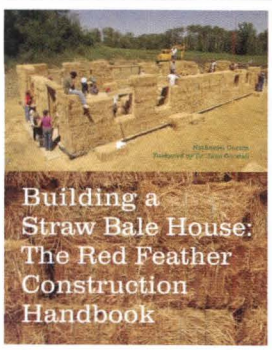
BOOK

***Ecological Architecture: A Critical History* | James Steele | Thames & Hudson** In his ambitious new book, James Steele offers a history of sustainable architecture suitable for the layperson and practitioner alike. Focusing on designs of the twentieth century, he explores the advent of modernism and the progression toward what today we would call "green" architecture. Tackling such a large and storied subject in one volume requires organization and purpose, which Steele accomplishes with the three-sectioned structure of his text. Prefacing the entire volume with definitions of key terms and principles, Steele outlines in Part One many of the major recurring themes in what he calls "ecological architecture." Part Two includes chapters devoted to seminal contributors to sustainable thinking, from Le Corbusier to Santa Fe, New Mexico-based architect Edward Mazria. These chapters cover general career inspirations as well as sustainable aspects of specific projects. In the chapter on Balkrishna Doshi, for example, Steele discusses the architect's efforts to reconcile the teachings of Le Corbusier with the rich aesthetic of his own culture in India, referencing projects such as the energy-efficient Hussain-Doshi Gufa (below), an impressive underground art gallery largely constructed with hand tools by unskilled workers. Rounding out the volume is Part Three, a look at the future of sustainable technology and how computer technology continues to influence it. Well-illustrated, *Ecological Architecture* is a valuable addition to the growing field of sustainable design literature. **Katie Gerfen**



BOOK

***Building a Straw Bale House: The Red Feather Construction Handbook* | Nathaniel Corum | Princeton Architectural Press** Despite the coming of building technologies that have outmoded them, straw bale houses—built in earnest a century ago with the rise of the baling machine—still have what they've always had going for them: straw-block walls are sturdy, cheap, environmentally sustainable, and astonishingly good insulators. But in *Building a Straw Bale House*, author Nathaniel Corum isn't just sharing obscure construction secrets for the benefit of those in search of an eccentric pet project; he has created a lucid, rational volume that confers on hay construction a lifesaving gravitas. Using a step-by-step format that's succinct yet comprehensive enough for field use, Corum illustrates the assembly method of the Red Feather Development Group (for which he serves as design director), an organization that builds straw-bale homes on Native American reservations in Montana and the Dakotas. On such terrain—or in any economically depressed region where lumber is scarce or too expensive—bale building is nothing less than a winter survival technique. Corum's is the rare how-to book that adds its voice to the dialogue on the global housing crisis.



Yet even for those whose only canyons are the skyscraping walls of Manhattan, these pages make for fascinating reading. With the help of evocative color photographs, the communal exercise becomes the pancultural equivalent of a barn-raising. **Robert Klara**

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ASTM Changes in How to Specify Gypsum Products

Architects must now use a new all-encompassing ASTM standard to specify gypsum board; the new standard has replaced nine individual standards for various types of gypsum board.

ASTM C 1396 is the new umbrella standard for most gypsum board specifications.

Architecture Magazine Continuing Education

To take the quiz and earn 1 AIA/CES Learning Unit (LU) of health, safety, and welfare go to www.architecturemag.com, click on "Continuing Ed," and proceed to "ASTM Changes in How to Specify Gypsum Products" or turn to page 88. You must answer 70% of the questions correctly to receive credit for this course. This course requires online reading in addition to the following article in order to be able to take the quiz. See page 88 for details.

Effective December 1, 2004, gypsum board should now be specified using ASTM C 1396, "Standard Specification for Gypsum Board," which replaces nine individual standards that previously were used in commercial and residential construction. To facilitate the transition from the old standards to this one new all-encompassing standard, in 1999, the gypsum industry agreed to a five-year phase-in period. During that time, product labels and literature featured dual labels that included both the new standard and the original specification number.

That five-year transition period ended last December, and now specifiers should use the new C 1396 designation in all instances that it applies, as well as write in the specific name of the type of gypsum board they are specifying. Building codes also now reflect the new standard and, at press time, most of the previous standards have successfully been balloted for withdrawal from ASTM, which will completely remove those standards from use.

Incorporated into the new ASTM C 1396 standard for gypsum board are:

C 36	Standard Specification for Gypsum Wallboard
C 37	Standard Specification for Gypsum Lath
C 79	Standard Specification for Gypsum Sheathing Board
C 442	Standard Specification for Gypsum Backing Board, Gypsum Coreboard, and Gypsum Shaftliner Board
C 588	Standard Specification for Gypsum Base for Veneer Plaster
C 630	Standard Specification for Water-Resistant Gypsum Backing Board
C 931	Standard Specification for Exterior Gypsum Soffit Board
C 960	Standard Specification for Predecorated Gypsum Board
C 1395	Standard Specification for Gypsum Ceiling Board

Although these specifications have all now been incorporated into the one umbrella specification, it's important to note that no technical changes have been made to any of the individual specifications. "We didn't change any of the individual product properties," says Keith Poerschke, chairman on the ASTM Committee C11 on Gypsum and Related Building Materials and Systems. "We've simply assembled them all into one document."

Poerschke notes, however, that one of the reasons for the umbrella designation is to simplify matters if and when requirements for individual product specifications need to be changed to reflect evolving materials and manufacturing technologies. Because the former specifications all had staggered document revision schedules, necessary changes were sometimes applied to one specification but not to another until a later time.

Learning Objectives

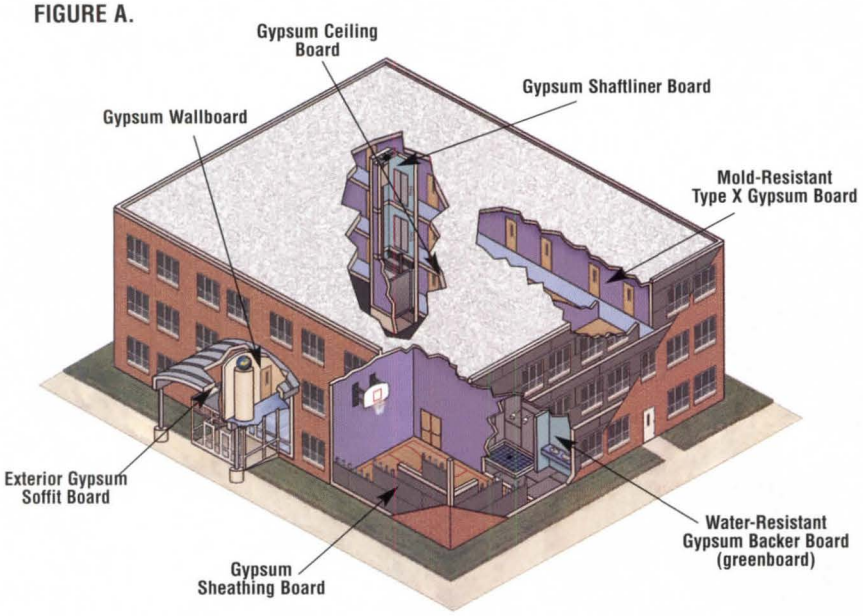
This article covers the new ways architects will specify gypsum board and the key differences between various types of gypsum board for commercial and residential applications.

Key points include:

- The new ASTM standard and the standards that have been replaced
- Common characteristics of all gypsum board products
- Characteristics and applications of different types of gypsum board
- Additional changes to standards and documents related to specifying gypsum board

ASTM Changes in How to Specify Gypsum Products

FIGURE A.



"Now if we make changes, it will only be to the one document," says Poerschke, "which will ensure consistency throughout all the applicable gypsum products."

In addition, the change simplifies product labeling from the manufacturer. In a sense, it also simplifies the job of the specifier in that there is only one number to remember for most gypsum board products. However, the specifier must still be familiar with the different types of products and specify exactly which product is called for in a given situation. "Someone can't simply specify 'gypsum board complying with C 1396,' " says Poerschke, "because that could be any number of products. The correct specification still has to indicate exactly which kind of product, such as 'gypsum wallboard complying with C 1396' or 'exterior gypsum soffit board complying with C 1396.' "

Characteristics of All Gypsum Board

Although there are numerous kinds of gypsum board that can be specified, there are certain characteristics that are true of all types of gypsum board. Gypsum board, often called drywall, wallboard, or plasterboard, is the generic name for panel-type products that consist of the non-combustible core—gypsum—with a paper surfacing on the face, back, and long edges.

Gypsum is a mineral naturally found in sedimentary rock formations in a crystalline form called calcium sulfate dihydrate, and it is found in all parts of the world. The gypsum rock is mined or quarried, then crushed and ground into a fine powder. It's then heated, in a process called "calcination," until three-quarters of the moisture content has evaporated. Water and other additives are then added back into the calcined gypsum and fed between continuous layers of paper on a board machine. The calcined gypsum rehydrates and reverts to its original rock state, with the paper binding to the core.

All types of gypsum board share the following characteristics:

Fire Resistance: Gypsum board is the most commonly used interior finish where fire resistance classifications are required. The key is its non-combustible core, which contains chemically combined water that is slowly released as steam under high heat conditions—thus, retarding heat transfer. Even after all the water has been released, gypsum board continues to act as a heat-insulating barrier. Increased fire resistance is available with products that have a Type X or Type C core (see "Enhanced Fire Resistance," far right). These products are used in establishing fire resistance-rated designs, tested in accordance with ASTM E 119, "Standard Test Methods for Fire Tests of Building Construction and Materials." These designs are specified when fire resistance-rated walls and floors/ceilings are required in building construction. In addition, tests conducted in accordance with ASTM E 84, "Standard Test Method for Surface Burning Characteristics for Building Materials," shows that gypsum board has a low flame spread index and smoke density index.

Sound Attenuation: Gypsum board wall and ceiling systems effectively control sound transmission in residences and commercial structures.

Durability and Versatility: Gypsum board is used to construct high-quality walls and ceilings with excellent dimensional stability and durability. It's adaptable to all forms of decoration, with surfaces that are easily decorated and surfaced.

Availability and Economy: Gypsum board is relatively available and easy to apply. Found naturally throughout the world, gypsum deposits are virtually unlimited in the Northern Hemisphere. In the United States, it's found in two principle belts, one starting in southwest Texas and running all the way to the Niagara River in New York State, and the other starting in the Imperial Valley in California and fanning out into Utah, with a thin extension into Montana. There are also smaller belts, and several million tons a year are mined in Canada's Nova Scotia and in Mexico. More than 34 billion square feet of gypsum board are manufactured in the United States yearly.

Gypsum Board Products Included in the New Standard

Despite their numerous shared characteristics, different types of gypsum board have different properties that make them best suited for particular applications. When specifying a gypsum board in accordance with the ASTM C 1396 standard, it is essential to indicate the exact name of the product along with any possi-

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ble variables for that product, such as thickness, enhanced fire resistance, edging, and so on.

Following is a summary of each of the products now included in the new standard, including key characteristics and applications of each (see figure A for a visual).

Gypsum Wallboard: Designed for use on walls, ceilings, or partitions and affords a surface suitable to receive decoration. Consisting of a non-combustible core, essentially gypsum, surfaced with face paper bonded to the core, it is manufactured in a variety of thicknesses, and may be mold/mildew-resistant and/or moisture-resistant, may be vapor-retardant, and may be flexible for use in radius wall and ceiling construction. Also available with enhanced fire resistance (see sidebar at right).

Gypsum Lath: Designed for use as a base for the application of gypsum plaster (not gypsum veneer plaster). It is typically manufactured in sheets that are 16 inches wide with absorbent facing paper to improve adhesion of gypsum plaster. It is available in two thicknesses and may be manufactured with a vapor-retardant backing.

Gypsum Sheathing Board: Designed for use as a sheathing on buildings as a backing under exterior siding or cladding. It consists of a non-combustible water-resistant core, essentially gypsum, surfaced on both the face and back with water-repellant paper bonded to the core. It may be manufactured with a square or tongue-and-groove edge.

Gypsum Backing Board, Coreboard, and Shaftliner Board: Designed for use as a base in multilayer systems or as a gypsum stud or core in semisolid or solid gypsum board partitions, or in shaft wall assemblies. Gypsum backing board is used as a base layer for other gypsum board materials systems or as a base for dry claddings such as acoustic tile. Gypsum shaftliner is manufactured with enhanced fire resistance (see sidebar) with an edge configuration designed to facilitate installation into specialized stud systems.

Gypsum Base for Veneer Plaster: Designed for use as a base for the application of gypsum veneer plaster with a blue-tinted face paper that is treated to facilitate the adhesion of thin coats of hard, high-strength gypsum veneer plaster. It is typically produced in sheets that are the same width as wallboard. May be manufactured with a fire-resistant core (see sidebar).

Water-Resistant Gypsum Backer Board: Designed to be used as a base for the application of ceramic, plastic, and other non-absorbent tile in dry areas or areas with limited water exposure, such as walls in bath, kitchen, and laundry areas. It is commonly referred to as "greenboard" because of its green-tinted face paper and is suitable for decoration. Consists of a non-combustible water-resistant core, essentially gypsum, surfaced on both the back and face with water-repellant paper bonded to the core.

Exterior Gypsum Soffit Board: Designed for use on the underside of exterior soffits, carport ceilings, eaves, and canopies that are indirectly exposed to the weather and completely protected from contact with liquid water. It has a water-repellant face and back paper, typically a light brown, and is more sag-resistant than regular wallboard. It may be manufactured with enhanced fire resistance (see sidebar).

Predecorated Gypsum Wallboard: Designed for use as the finished surface for walls, ceilings, or partitions and does not require any additional treatment. Consists of a non-combustible core, essentially gypsum, surfaced with paper bonded to the core with the face covered with a decorative sheet, film, or coating. Class I predecorated gypsum board has a decorative sheet or film laminated to the face; Class II predecorated gypsum board has a decorative coating applied to the face. Available in a variety of thicknesses as both a regular- and fire-resistant core material (see sidebar).

Gypsum Ceiling Board: Designed for use on interior ceilings with framing spaced not more than 24 inches on center and that affords a surface suitable to receive water-based texture and other decorations. It has the same physical appearance as gypsum wallboard and is manufactured as a 1/2-inch thick material with a sag-resistance equal to 5/8-inch thick gypsum wallboard. It is also suitable for use on interior walls.

What's Not Included

ASTM C 1396 includes all paper-faced gypsum board products. However, certain other gypsum panel products still maintain their own specifications, including fiber reinforced gypsum panels (C 1278), glass mat gypsum substrate for use as sheathing (C 1177), and glass mat water-resistant gypsum backing panel (C 1178).

Enhanced Fire Resistance

Because gypsum board is made of a non-combustible core material, all gypsum board products have a natural fire resistance. Gypsum board with a Type X core have enhanced fire-resistive properties created with the addition of glass fibers and vermiculite. (The name was coined in the 1940s after its development when the new product was shown to demonstrate "eXtra" fire resistance.)Type X gypsum board provides greater fire resistance than regular gypsum board of the same thickness because the fibers help maintain the integrity of the core as shrinkage occurs, providing greater resistance to heat transfer during a fire. Type C, also called Improved Type X, gypsum board meets all the requirements of Type X, with additional properties to further enhance the fire-resistive characteristics of the product.

The following quiz includes questions derived from online material not included in this printed article. You are required to read the additional online material in order to take the quiz and complete this continuing education unit. Please go to www.architecturemag.com, click on "Continuing Ed," and proceed to "ASTM Changes in How to Specify Gypsum Products" for the additional information.

TEST QUESTIONS

1. When did the new standard ASTM C 1396 go into effect?
- a. It went into effect in 1999, with all subsequent specifications required to use the new standard.
- b. There was a five-year transition period from 1999 to 2004 in which either the new standard or the old standards were acceptable; as of December 1, 2004, the new standard must be used on all specifications.
- c. A five-year transition period started in 2004; in 2009, all new specifications must use the new standard.
- d. It has not yet gone into effect.

2. What is the purpose of ASTM C 1396?
- a. To ensure consistency in all specifications.
- b. To make technical changes to gypsum product specifications, effective with the introduction of ASTM C 1396.
- c. To eliminate the need for specifiers to understand the differences between the various gypsum products.
- d. To stagger the document revision schedules.

3. What of the following is characteristic of all types of gypsum board?
- a. They are all made of a Type X core of gypsum and glass fibers.
- b. They all feature a non-combustible core of gypsum.
- c. Every gypsum board product is appropriate for use on the outside of commercial or residential applications.
- d. All gypsum board is water-resistant.

4. Which of the following standards is ASTM C 1396 not intended to replace?
- a. Gypsum sheathing board standard
- b. Fire-resistant gypsum sheathing board standard
- c. Water-resistant gypsum backing board standard
- d. Glass mat gypsum substrate for use as sheathing standard

5. Which of the following is true about ASTM C 840?
- a. Revisions to ASTM C 840 require changes to ASTM C 1396.
- b. The standard explains procedures for installing and finishing many of the products included in ASTM C 1396.
- c. ASTM C 840 is a new standard, created to go along with ASTM C 1396.
- d. A recent change to ASTM C 840 mandated the thickness of gypsum board products for certain applications.

6. What is gypsum?
- a. A mineral found naturally in sedimentary rock formations in a crystalline form.
- b. A mineral that is able to be heated so that moisture is removed and then rehydrated to create a rock state.
- c. A mineral that is abundant throughout North America.
- d. All of the above.

7. What is the difference between gypsum wallboard and gypsum sheathing board?
- a. Gypsum wallboard is designed for use on interiors and gypsum sheathing board is designed for use on exteriors.
- b. Gypsum sheathing board is designed for commercial use and gypsum wallboard is designed for residential use.
- c. Gypsum wallboard is always surfaced with a water-repellent paper bonded to the core and gypsum sheathing board is always a flexible face over a type X core.
- d. All of the above.

8. Which of the following is true?
- a. Gypsum sheathing board and exterior gypsum soffit board can be used interchangeably.
- b. Gypsum wallboard is more sag resistant than gypsum ceiling board.
- c. Gypsum wallboard can be specified with several variables, including thickness and enhanced fire, moisture, and mold resistance.
- d. Water-resistant backing board is for exterior use only.

9. Which of these does not now need to be included when specifying gypsum board?
- a. The standard ASTM C 1396
- b. The former standard for that particular gypsum board product (e.g., ASTM C 36, ASTM C 37, etc.)
- c. The exact name of the gypsum board product written out
- d. Variables such as thickness, type X core, edging, etc.

10. What needs to be added when specifying enhanced fire-resistant gypsum board?
- a. Nothing. All gypsum board has enhanced fire-resistive properties.
- b. Either "Type X core" or "Type C core."
- c. "Gypsum board with enhanced fire-resistive properties."
- d. "ASTM C 1832, standard specification for gypsum board with enhanced fire-restrictive properties."

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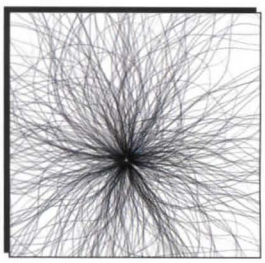

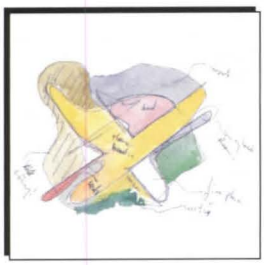

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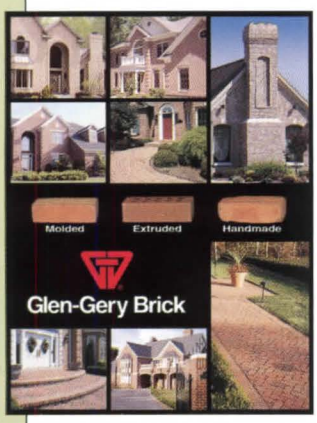

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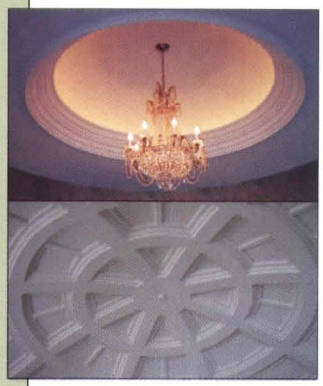

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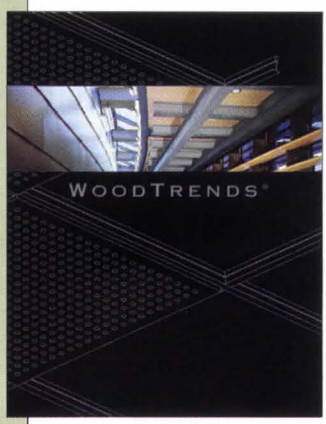

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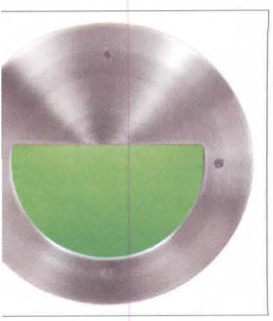

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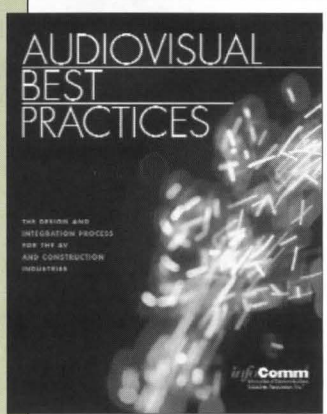

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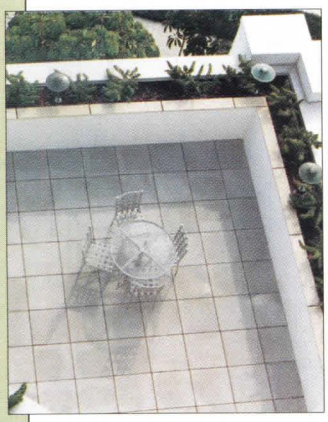

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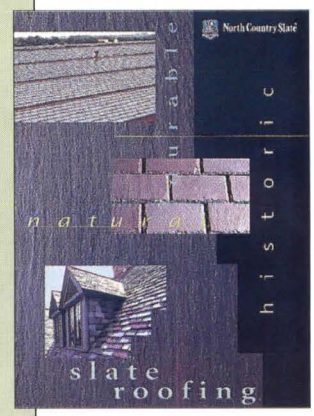

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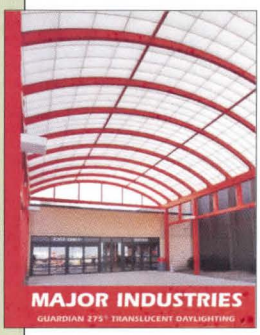

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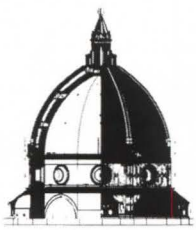

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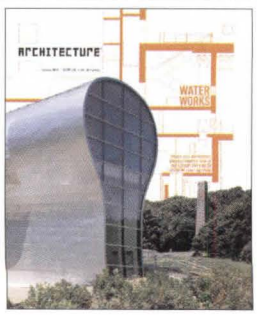

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COMMUNITIES ACROSS THE COUNTRY ARE LOOKING TO ARCHITECTS FOR MORE THAN JUST DRAWINGS, SO WHY IS THE PROFESSION STILL FAILING TO RESPOND? BY M. SCOTT BALL

According to a 1996 report by the Carnegie Foundation, 22 percent of students enrolled in architecture schools went into the field to "help improve communities." Many of these graduates find they have to leave the traditional career path to fulfill this goal.

As progressively minded architects become involved in grassroots community-building efforts, we are likely to receive unanticipated invitations for our work, not all of which will require a drafting table. Invitations will be presented to us simply because the unique skills and knowledge base of our training are inherently valuable and relevant to all levels of society and all aspects of the built environment. Our ability to spot, solicit, and provoke such invitations will be critical to the process of negotiating a community-building role for our profession. In applying our skills to society's needs in new ways, we will reinvent architecture. It is my hope that in so doing architects will recognize why the well-being of all communities is inherently valuable to the health of our profession.

> Our tendency to huddle within safe institutional boundaries has interrupted the call and response between architects and communities.

Communities solicit architects in two ways: Specific requests are obvious, but unmet needs also ask to be addressed. The two forms of invitations act as catalysts for each other. Recognizing and addressing unmet needs can precipitate specific requests from a community, as its residents get to know us and understand the value of our skills. Proactive efforts at improving communities can thus seed the ground for professional expansion. As communities make specific requests, they can in turn lead us to a fuller understanding of our own capabilities and our own relevance in society. This entrepreneurial process then leads us to see other unmet needs and, hopefully, address them and thus provoke further invitations. Through this process we join with communities in learning that architecture is relevant.

Somehow our profession has not yet translated these opportunities into actions. Our tendency to huddle within safe institutional boundaries has interrupted the call and response between architects and communities and has created a removed and debased version of our profession. We have developed a stunting tendency to look to our fixed institutional shape first and then try to find needs to serve within that underdeveloped shape, rather than look to community needs and adjust our institutions to serve them. Our

PICTURE ARTS

inwardly focused approach to our profession has fostered the illusion that architecture is something closed, finite, and predetermined. Architecture has become an idol that mesmerizes and immobilizes architects. We have forgotten that architecture is inseparable from culture and social structures, and we are in danger of bureaucratically cloistering ourselves into irrelevance.

Our profession can be brighter than that. Architecture is the sum total of what architects have done in the past and are doing in the present—and there is much that needs to be done. We focus on edifice, but architecture itself is whatever percolates out of our activity as trained architects. Invitations are everywhere for us to step back out into a broad section of society, if we would show a willingness to reinvent ourselves and allow the profession to percolate once again.

The author is president of M. Scott Ball Design, an Atlanta-based housing and urban-design firm. His text is adapted from *Good Deeds, Good Design* (Princeton Architectural Press, 2004).

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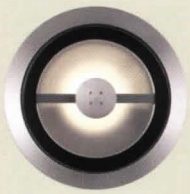

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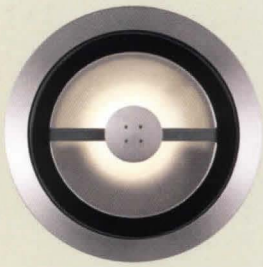

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