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Circle No. 346
ARCHITECTURAL DESIGN/PLANNING
Editor in charge: Daralice D. Boles

65 Civil Center
In Boston's Back Bay, architects Kallmann, McKinnell & Wood have expanded and transformed an ungainly 1960s exposition hall into the elegantly crafted Hynes Convention Center. John Morris Dixon

78 Reordering the Suburbs
New solutions to pressing problems of suburban sprawl are examined in a package that ranges from particular building types to town plans. Daralice D. Boles

92 Comfortable Challenge
Addressing several site and circulation conditions, a design by Eric Owen Moss is among those that comprise UC Irvine's ambitious building program. Pilar Viladas

TECHNICS

98 Building in an Electronic Age
As the use of electronic systems becomes more pervasive in modern buildings, architects find themselves having to anticipate new issues during design. Vernon Mays

SPECIAL SECTION

125 NEOCON® 21
This section lists seminars and workshops at NEOCON® 21 in Chicago, June 15–16, and previews some of the products being introduced.

DEPARTMENTS

9 Editorial
Jefferson's Suburban Model

13 Views

23 News Report
Perspectives

37 French Furniture Fair

43 Report from China

51 Calendar

55 P/A Practice
Project Documentation; Management by Delegation; Part-time Architects

102 Technologies-Related Products

160 Call for Submissions
P/A houses issue

165 New Products and Literature

171 Building Materials

173 Job Mart

175 Selected Details
Entrance Canopy Hynes Auditorium Boston

176 Advertisers’ Index

177 Reader Service Card

Cover:
View across rotunda, Hynes Convention Center, Boston, Kallmann, McKinnell & Wood, Architects (p. 65). Photo: Wolfgang Hoyt.

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Environments.
In this guest editorial on suburban sprawl, Robert Geddes argues that architects should model their actions on Thomas Jefferson, reintegrating the design of buildings and landscapes.

I live in an unintended city.

It wasn’t always this way. Twenty-five years ago, my “town,” Princeton, New Jersey was a place with less than 25,000 people. Now, it is part of a “corridor,” with at least 250,000 people, stretching 25 miles along Route 1.

The change in Princeton is not unique. Indeed, there are eight other “corridors” growing in New Jersey, and probably 100 nationwide. For developers, these burgeoning settlements are a huge success. As architecture and urbanism, they are a disaster. Why are they so bad?

They lack form.

I do not mean form in an autonomous way. In purely visual terms, as graphic images seen from the highway, the buildings along these growth corridors are often engaging, or at least amusing. Rather, I mean form that is useful and meaningful; form that serves as the stage and container for everyday life. And, if the biological concept of “growth and form” can be accepted, form that is a principled basis for development.

These new settlements, plowing haphazardly through rural and suburban communities, cannot accurately be called cities or suburbs. They have no core. They lack linkages among their fragments. They do not have a continuous fabric or a coherent structure of buildings and landscapes.

It’s easy for architects to point the finger at others, especially developers and public officials. But, architects must share the blame.

For too long architects have not been fully engaged in urbanism. With the growth of landscape architecture and urban planning as separate professions, architects tended to see the shape of the landscape and cityscape as someone else’s problem. At best, the collaborative model of the three professions, encouraged in both design education and professional practice, promoted a tripartite subdivision of concerns.

Cities were not always designed and constructed this way. Nor need they be. Indeed, the new formless corridors growing across the country make it imperative to reconsider our current methods of citybuilding. We must change both our schools and our professions. We must grasp this opportunity, born out of disaster, to reunite the design of buildings, landscapes, and cities.

For an appropriate model, we should turn to the example of Thomas Jefferson. For Jefferson, the landscape and the building were both parts of a single composition. Consider his design for the campus of the University of Virginia. Is it landscape design or building design? The two merge seamlessly; it is impossible to separate one from the other.

Jefferson, admittedly, was philosophically anti-urban in disposition, and one might argue that his vision of an agrarian America is no longer valid for a predominantly industrial culture. But, on closer inspection, Jefferson’s pastoral vision holds the key to bringing order to our chaotic new settlements.

We still tend to see the city and the country as two separate entities, adhering to different design imperatives. While we see the city as a physical fabric and spatial structure, in envisioning the countryside we cling to picturesque romanticism, imagining a landscape that is still wild. But the new components of metropolis are neither city nor country. Faced with this new entity—urban in scale and economic connections, rural in myth and location—we must abandon our picturesque, romantic view of the countryside and reconsider Jefferson’s potent imagery.

Jefferson’s ideal for a pastoral America—shown by his National Survey, his city plan for Jeffersonville, Indiana, and his academical village in Charlottesville, Virginia—was based on grids. The grid, as an intellectual structure, gave form to the building and landscape. The grid, as a public form, created the new landscape, and guided its future growth.

These two aspects of the Jefferson legacy should be our model. Not only in form, but also in practice, architecture and landscape architecture should be reunited. The new urbanism—the Green Apple—is our task. Robert Geddes

The author is design principal of Geddes Brecher Qualls Cunningham in Princeton and Philadelphia. He was urban design consultant for the Plan for Center City, Philadelphia. Dean of Princeton School of Architecture from 1965 until 1982, he was recently appointed New York University’s Luce Professor of Architecture, Urbanism and History—in the Big Apple.
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Kudos

I believe that the primary purpose of undergraduate architectural education is to prepare students for function effectively within the profession and establish a basis for deeper, special interest exploration at the student's discretion. This preparation should include the opportunity to enter the licensing process, if desired.

There is a strong need to strengthen undergraduate curricula in general regarding critical thinking, analysis, and verbal/written communication, and in particular, the areas of behavioral/sociological analysis and professional practice/business processes. It should be possible to do this within the current five year B. Arch structure. I further believe that the graduate level of architectural study requires much review because of the tremendous disparity of requirements that currently lead to the M. Arch degree.

Alan J. Horwitz, M. Arch, RA
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A recent P/A-sponsored tour of China saw landmarks ranging from Beijing’s Forbidden City (above) to recent skyscrapers. Report from China, p. 43.

AIA Honor Awards: Small Is In

Three things have become certain about the AIA’s annual Honor Awards over the years: They’ll be eclectic, they’ll be predominantly small-scale projects, and they’ll be familiar. This year is no different. Of the 598 entries submitted to the 1989 Honor Awards, 12 winners were chosen, ranging from the mythic Rationalism of Steven Holl’s Odgis-Berkowitz House to the pop historicism of Centerbrook’s pier at Watkins Glen, N.Y.

A statement by jury chairman David Childs of Skidmore, Owings & Merrill, New York, indicates that the jury was uneasy about the “limited” scale of the winners. (The largest was an elementary school.) He said the jury debated over whether large-scale projects, in order to win, (continued on page 24)

Pritzker Prize to Frank Gehry

Commending his “restless spirit,” the Pritzker Architectural Prize jury has selected Frank O. Gehry from over 500 nominees as this year’s laureate. After two years of honoring Modernist elder statesmen (Kenzo Tange, 1987; Gordon Bunshaft and Oscar Niemeyer, 1988), the jury has this time chosen a 60-year-old laureate at the height of his (continued on page 24)

Venturi Goes to Market

After years of expounding on the American suburban building vernacular, Robert Venturi has put his architecture where his theories are and collaborated with a builder on a commercial housing development in West Palm Beach, Florida. Known as Breakers West, the development, located alongside a country club, at once departs from and celebrates traditional speculatively built communities. Eying an architectural “void in high-end suburban develop- (continued on page 30)
House by Clark & Meneffee.

**Honor Awards (continued from page 23)**

must "achieve the same uniform degree of perfection and consistency" that smaller, simpler projects do. Chilès acknowledged that the jury's decisions indicate that they must but left the doors open for further debate of the issue.

As for familiarity, most of the projects will be well-known to readers of the design press. Seven have been featured previously in one of the U.S. architecture magazines (four in P/A); the Delaware River Aqueduct won a Presidential Design Award last year (P/A, Jan. 1989, p. 21), and Tod Williams and Billie Tsien's pool addition was featured as one of *Time* magazine's best designs of 1988.


Jurors, besides Chilès, were Peter Bohlin of Bohlin Powell Larkin Cwinsky, Wilkes-Barre Pa.; AIA associate member Steven Ellinger, Abilene, Texas; critic Brendan Gill of *The New Yorker*; Kathleen Hoefst of Long Hoefst Architects, Denver; student member Joyce S. Lee of Massachusetts Institute of Technology; Jaquelin T. Robertson by Robert C. McCormick; and student member Howard Margolis of the Skidmore, Owings & Merrill Foundation, Chicago.
For the past nine months, Atlanta construction sites have become the targets of poster war. A clandestine coalition, which calls itself the "Architectural Jihad," has been plastering urban walls with slogan-bearing posters attacking what the Jihad calls "bad moves" in urban architecture. Their targets range from historic structures slated for demolition ("If This Thing Goes, So Do The Rest of Us!") to new "historicism" buildings ("This is NOT a HISTORIC structure.").

The members of the Architectural Jihad are architecture and art students whose stated purpose is to raise public awareness of the irreversible changes occurring in Atlanta today. The group was launched what they call an "aesthetic holy war" that has "jaught the attention of local media and politicians, who are often invited along on late night poster maneuvers. The easily recognizable style of the posters, along with the logo, have become commercials for a more political architecture. In fact, the Jihad is planning new projects for the upcoming Mayor's race in Atlanta in hopes of making the development of the city a campaign issue.

While most of the posters placed at construction sites are quickly painted over, many could be seen in a recent exhibition at Nexus, Atlanta's contemporary art center. The Jihad is now planning to call attention to some good moves in urban architecture, as well as looking at the state of architectural education, and members report that interest in the group is expanding.

Claire Downey
The author, a freelance writer in Atlanta, is completing a book on John Portman 
& Associates.

25 Year Award for Venturi House

Robert Venturi's Vanna Venturi House in Chestnut Hill, Pa., has won the AIA's 25 Year Award, given annually for "a design of enduring significance that has withstood the test of time," in its first year of eligibility. The award, selected by the AIA Honor Awards jury, is to be presented at the AIA convention in St. Louis this month.

Venturi designed the gable-fronted house for his mother in 1962; it was completed in 1964 and first published, in P/A, in May 1965. The house became well-known as an embodiment of the principles Venturi committed to paper in his 1966 book Complexity and Contradiction in Architecture and has become an immediately recognizable symbol of the Post-Modern movement. Most recently, the house showed up in model form in the Minneapolis College of Art's permanent architecture and design collection.

"Illegal Houses" in Minneapolis

"Illegal Houses" is not about crack houses, or houses of ill repute. Rather, it is about houses that don't meet code and for good reason. The architects responsible for the exhibition—shown at the Minneapolis College of Art & Design Gallery during March—have purposely avoided the banal in their search for the singular house. Breaking the rules was the first rule they agreed to when asked to be part of this experiment.

The exhibition, which is the work of young, unpublished architects and one artist/architect collaboration, includes designs, models, drawings, and full-scale installations. The work is quite diverse; each architect used the main theme—violating code requirements—as the starting point of a private vision, provoking thoughts and exploring issues of housing and architecture in the process.

Many of the show's pieces are sculptural essays expressing, as Bachelard would say, "the poetics of space." For his "House for a Gnostic Vouyer," a construction in which the resident can spy through a window on his neighbors, violating codes and "a universal more," architect and poet Kevin Flynn presses his quill into service on a roll-down window shade.

Helena Espinosa's house for a judge is a poetic, disturbing comment on the inaccessibility of our legal system. A narrow sculptural form, within a honeycombed retaining wall, blends into its site (a freeway cloverleaf), trapping the judge between the very public roadway and the privacy of the embankment.

Many of the pieces explored the nature of materials. For example, an installation piece by architect Anthony Desnick and artist Constance Lowe entitled "The Nature of Things #2" has the unlikely mix of wood, cardboard, straw, ice, concrete, and acrylic on photostats. Playing off the notion that concepts of permanence are embedded in our codes and neighborhood zoning restrictions, Desnick and Lowe have created two tenuous spaces, one inside defined by rough straw and cardboard walls, and one outside the gallery in ice and concrete—all materials that would never meet code in any city.

Other participants include Samuel Alexander, Sixto Beltrandy, Gary Diebel, Troy Kampa, Vincent James and Joan M. Soranno, Julie VandenBerg Snow, and Geoffrey Warner. Ultimately, "Illegal Houses" challenges the viewer, as well as the artist/architects in the show, (continued on page 26)
Illegal (continued from page 25) to question preconceived ideas about houses and the purpose of building and zoning codes. Without purporting to give definitive answers, the show nevertheless is a crucible of ideas that adds to our understanding of the building type.

"Illegal Houses" is tentatively scheduled to travel the country, although locations have not yet been set. Bruce N. Wright

The author is editor of INFORM Design Journal and teaches design theory at the Minneapolis College of Art & Design.

Hellmuth, Obata & Kassabaum. Society Tower will house the headquarters of Society Bank, a major midwestern financial institution in a 55-story structure. The tower will replace Society’s 99-year-old former headquarters, for which extensive renovation is planned. In answer to Cleveland’s dearth of downtown hotel space, Society Tower includes a 424-room Marriott. All phases of the $343-million building are to be completed by 1992.

The 60-story Ameritrust complex, designed by KPF’s William Pederson and Richard Evans, on the northwest corner of the square, also includes a hotel—a 484-room Hyatt—and one million square feet of office space. The design does respect the Terminal Tower but also pays tribute to the city’s industrial heritage with its exposed mechanical systems. A curve of blue glass, representing Lake Erie like a wind-furled spinnaker, begins at the 12th floor; below is a glass barrel-vaulted atrium.

Not yet publicly announced but already causing a stir are Progressive Insurance Company’s plans to erect a new headquarters complex designed by Frank Gehry. Local speculation holds that the facility will contain a 50-story, one-million-square-foot tower, an art park, and a 2500-car parking garage on a lakeside pedestal. Jennifer Frutchy, assistant vice president at Progressive, did confirm that the goal is to “create a link between the present edge of downtown and lakefront.”

Cleveland has incorporated each of the three projects into its recently completed master plan, Civic Vision 2000, which will guide the city’s resurgent development into the new century. Christopher Johnston

Three Towers to Peak in Cleveland

Downtown Cleveland will soon sport a resculpted skyline, featuring towers designed by Cesar Pelli, Kohn Pederson Fox, and Frank Gehry. These three towers symbolize the billion-dollar building boom spawned in Cleveland since the city dug itself out of default in 1980. After a decade of chipping off the post-industrial rust and shining up its service-based sector, Cleveland now ranks 4th in number of Fortune 500 companies headquartered there.

While the Gehry design is yet unannounced, the other two, both developed by shopping mall magnates Richard and David Jacobs of Jacobs Visconi Jacobs, are underway. Pelli’s Society Tower (P/A, March 1989, p. 48) and KPF’s Ameritrust Center will rise from parcels fronting Public Square joining the city’s veteran skyscraper, the Terminal Tower, and its recent partner, the 45-story BP America headquarters by

Architectural models: Murphy for the Gap, Graves for Barneys.

“Some architects think it’s frivolous, others are jealous,” says Graves. “I have no moral problem with it.” And more architects are asking themselves the same questions and siding with the advertisers: Barneys and the Gap both say to watch out for other familiar faces in the near future. Andrea E. Monfried

WestWeek:

L.A. Draw

In keeping with Southern California’s temperate climes, WestWeek ’89 was suitably laid back. While the 14th annual design symposium, held at the Pacific Design Center in Los Angeles, March 29–31, heralded no earthshaking new trends, harbinger of fresh design were evident at every turn.

Close to 31,000 architects, designers, corporate specifiers, and journalists who attended the fair were greeted with innovative displays, if not major product launches. For instance, the join showroom designed by Gilbert Bensen for Armstrong and its subsidiary, Forms + Surfaces, employed a black, white, and red palette, platonite cones, cubes, and spheres, and the imaginative suspension of a peaked ceiling so that the companies’ ceiling, floor and wall treatments appeared anything but flat. In a complete different vein, Vecta’s looming machine-like steel sculpture by L.A.’s Morphosis provided a dramatic backdrop for the firm’s seating line.

Most manufacturers represented in the 210 showrooms were content to display refinements and extensions to existing lines. Notable exceptions included Stendig Textile’s Istrou new fabrics by Andrée Putman—including jewel-toned weaves—quite surprising for the French designer who made her reputation in severe black and white. (continued on page 28)
ONE OF THE BEAUTIES OF CORIAN® IS WHAT IT LEAVES TO THE IMAGINATION.
Progressive Architecture 5:89

WestWeek (continued from page 26)

ICF's new compact leather sofa by Alessandro Mendini epitomized a trend toward downsizing apparent also in Stendig's polished "New Scale" series of business sofas introduced last June.

It was refreshing to find some of the most provocative pieces in the PDC's corridors: Lois Lambert, director of the Gallery of Functional Art, exhibited whimsical works by artists and architects. Among them were an anthropomorphic steel chair by Reiss Nimi, a chest painted with Cezanne-inspired still lifes by Anne Kelly, and a "high-rise" magazine stand by Ted Tanaka.

The GFA corridor showcase was only one instance of enlightened use of space. This year, to alleviate the pressure on jam-packed auditoriums, the PDC provided live video coverage of the lectures and seminars.

The conference theme—"Critical Choices: Intuition and Reason in the Design Process"—was fortunately broad enough to accommodate diverse and illustrious assemblies. Thus, in one blockbuster architectural session, Mexico's Ricardo Legorreta, France's Jean Nouvel, and Japan's Kisho Kurokawa shared the podium to discuss current projects. David Hockney on the design of L.A. artists' studios proved a major draw, as did ABC's Sam Donaldson, who addressed the effect of the Bush administration on Pacific Rim business. *Eva Freiman*

Nine Competing for Seville World's Fair

Nine architecture firms and collaborations have been shortlisted for the design of the U.S. Pavilion at the 1992 Seville World's Fair. An evaluation panel of the United States Information Agency selected the nine from 75 portfolios submitted last fall.

The Seville fair, called World Expo '92, will celebrate the 500th anniversary of Columbus's voyage to America. The fair will be the first in Europe since the Brussels event in 1958, and the first "universal class" exposition anywhere since Osaka in 1970. The program for the U.S. Pavilion, for which the shortlisted firms are now preparing conceptual designs, includes a theater, art gallery, outdoor stage, and exhibition space for U.S. corporations, cities, and states.


Nine Competing for Seville World's Fair

Pavillon (continued from page 23)

municipal law requiring competitions for all projects over a budget of 900,000 francs ($150,000)—has thus been brought into the capital's neighborhoods. Eager to publicize these local "interventions," the mayor last December inaugurated the Pavillon de l'Arsenal, a display of Parisian architecture not far from the Bastille, one of the city's most rapidly changing neighborhoods. Under the great glass and iron skylights of a building that long served as a warehouse for the Samaritaine department store, architects Reichen and Robert have created an elegant and stylish showcase for architecture.

The architects—who designed the "Paris Grands Projets" exhibition in the great oval hall of Manhattan's Old Custom House last spring (P/A, July 1988, p. 24)—were charged with adapting the 1600-square-meter space to accommodate a gallery for a permanent exhibition on the city's architectural and urban history, temporary exhibition spaces, a small library/document center, and a jury room for competitions. Cleared of all but its original grid of cast-iron columns carrying the skylights, the space has gained a new transparency as well as a new focus: central atrium volume rising (continued on page 32)
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Venturi (continued from page 23)

ment," New York builder Warren Pearl approached Venturi on the collaboration proposal with the idea of targeting a specific market, in this case second home buyers, and suggested a rather unconventional use of the architect's wares: within the framework of a basic house design, accoutrements such as entranceways, windows, fireplaces, pools, and driveway pavement, each in a variety of shapes, colors and patterns, could be mixed and matched by the client. Venturi was won over, joining a slowly growing number of prestigious architects—Robert A.M. Stern, Charles Moore, and even Aldo Rossi—designing for the developer housing industry.

In March, after six months of give-and-take between architect and builder, the first of 24 proposed Breakers West homes was unveiled. Dubbed the "Limited Edition Signature Series" by Pearl (in long-term anticipation of recruiting other well-known architects for similar projects), the basic house, situated on a half acre of land, is stucco clad with a clay-tile roof.

The homes, which range in size from 3500 to 5000 square feet, abound with decidedly tame pop-architectural elements in an effort to reach the culturally informed but fairly conservative Florida market. Using a magnetized board with the basic Venturi house superimposed on it, and a set of miniature, magnet-backed architectural elements, the prospective buyer—anyone with an extra $600,000 to $1,000,000 in their pocket—will be able to "custom-design" their future home.

Should the Venturi/Pearl venture prove successful, a steady stream of Breakers West-style communities may well rise throughout the country. The hope for the future, however, is that not only will architects and developers continue to work together, but that they will also be able to look beyond the "high-end" market. Abby Bussel
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Pavillon (continued from page 28)
uninterrupted above a 40-
square-meter model of Paris.
With the touch of a button, the
exhibition visitor can select a
particular new project that is
then instantly pinpointed by a
laser beam on the model and
illustrated in a series of slides
projected on a broad screen be-
hind it. The permanent exhibi-
tion, realized on the ground
floor by Bruno Fortier and Jean
Louis Cohen, relates the his-
tory of Paris's development to the
themes that structure the con-
temporary architectural debate
in the French capital.

Temporary exhibition space:
are arranged on two new tiers o
mezzanines around the central
atrium. The mezzanines, like the
exhibition panels and cases de-
signed by Reichen and Robert,
are treated as modern insertion
suspended within the historical
framework. Carried on "airplar-
wing" beams, these new bal-
conies are clearly but subtly dis-
tinguished in materials and col-
ors from the 19th-Century
framework, while their own sim-
ple but clever structural princi-
ple exploits the existing frame
to great advantage.

Almost in homage to Reichen
and Robert's design of the per-
manent exhibition, the current
temporary show is devoted to
"Iron in Paris." The show relates
the long history of metallic archi-
teucture's struggle to gain accep-
tance in this city of fine ashlar
and painted stucco, a city slow to
accept such icons of iron as the
Eiffel Tower. Also documented
is the post-industrial aesthetic
in the Paris of the 1980s, from
Nouvell's Institute of the Arab
World (P/A, July 1987, p. 72,
May 1988, p. 94) to the city's
recently announced Prefecture
de Paris, a steel and aluminum
design by Aymeric Zublena.

Barry Bergdoll

The author, who teaches architectural
history at Columbia University, is on
sabbatical in Paris.

Virginia Chatfield
1921–1989

The Progressive Architecture staff
lost one of its most respected
colleagues on April 6. Virginia
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humor, and her spirit in the face
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Perspectives

As demonstrated at this year's Furniture Fair in Paris, French designers are among the most innovative in furniture today.

Paris Beats Milan?

Each September, crowds of American furniture buyers, importers, designers, and press swarm to Milan's Salone di Mobile, to see what's new in design. Each January, only a handful of this same group go to Paris for the Salon du Meuble. Those that do have witnessed the evolution of a new wave of French furniture design. The school has expanded rapidly in the past several years, and its designers are prolific. This year at the Port de Versailles the best of this new group were represented.

Jean Nouvel's new "Profile" seating for Ligne Roset was the most exciting introduction at this January's fair, and its appearance signalled a concerted effort by that large French firm to move into the vanguard. Nouvel's cold-molded polyurethane foam slab on a molded aluminum frame not only uses material from the automotive industry but also appropriates details such as an adjustable back mechanism.

Jean-Michel Wilmotte, designer of the interiors for L.M. Pei's Louvre, earned the title of Designer of the Year at the Salon. His newest furniture is constructed of crushed glass, chrome, and rubbed gray oak.

Also represented was Philippe Starck, who remains by far France's best known furniture designer.

Jean Nouvel's "Profile" (1) in cold-molded foam and aluminum reclines fully to form a bed. Marie Christine Dorner designed this lacquer table (2) for the Spanish firm Gayraud. Christian Dac designed this aluminum chair in green paint (3) for C.M.B. (VIA), while a table (4) by 18 Aout is a VIA-supported prototype.
designer. His graceful, often witty designs look back not only to Empire precedents but also to the decorative effects of French furniture of the 1930s, with a humor and a fresh approach to materials.

Christian Duc illustrates the French tendency towards spectacular metal work, often finished in gleaming automobile paints, while his penchant for medium-density fiberboard is proof that simple materials can be elegant.

One of the newer names at the Salon was Marie-Christine Dorner, a 28-year-old designer whose furniture is simultaneously thin and light, and rich and romantic. Other stars in the show were Ronald Cecil Spore, Martin Szekely, René Dumas, Marc Berthier, Giles Derain, Pascal Duvert, and Pascal Mourge, who will be the subject of a one-man show this summer at Steelcase Design Partnership.

"This new French furniture is graphic, linear, like turning a sketch into a three-dimensional object. Proportions are always elegant," says David McFadden, Curator of "L'Art de Vivre; Decorative Arts and Design in France, 1789-1989," an exhibition now at the Cooper-Hewitt Museum (see Calendar, p. 51). Other characteristics of the new French furniture include virtuoso metalwork—especially the use of steel and molded aluminum, and the use of rare or exotic woods, which are beautifully hand-crafted. Styles range from high tech to tribal, with an emphasis on two-dimensional effects as opposed to sculptural ones.

Behind this new wave is VIA (Valorisation de l'Innovation dans l'Ameublement), a government agency set up in 1979 to enhance the image of French furniture. VIA not only gives financial support for prototypes but also provides an outlet to exhibit work, publicity, introductions to manufacturers, and even commissions, arranging, for example, the renovation of Elysée Palace for President Mitterrand. Susan Grant Lewin

A console (5) by Jean-Michel Wilmotte is entitled "Elysée." Its crushed glass top rests on a nickle base. Lacquered wood furniture (6) is by Sylvain Livry and Vero-nique Baille for Transfert. A delightful tabouret (7) is part of a collection designed by Christian Duc for C.M.B. and is called "Sofa of Siege." Settee in chrome steel tubing and leather (8) is by Gerard Berg for Artesano.
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Report from China

A P/A-sponsored trip reveals the effects of cultural liberalization and economic expansion on architecture and construction in China.

In understanding of architecture in China, home of one quarter of the world’s people, was the objective of a P/A-sponsored tour that took place February 9 to 26. Eleven Americans in the fields of architecture and construction took part, including P/A editor John Morris Dixon and correspondent Sally Woodbridge of Berkeley, California. Our itinerary included Shanghai (with a sidetrip to the historic city of Suzhou), Beijing, Tian, Guilin, and Hong Kong. The following is the journal of that tour, of a methodical journalistic report.

The skylines of China’s biggest cities are bristling with cranes, as the nation’s effort to reform its economy along Western lines as generated vast amounts of construction. But this key sign of economic growth is about to undergo serious retrenchment as a means to cool off an inflationary economy. Government restrictions are expected to halt many jobs that are already out of the ground and severely reduce new starts.

The amount of housing recently completed and under construction is particularly apparent in the capital city of Beijing, where new apartment slabs and towers line literally miles of the broad boulevards and highways at the city’s periphery. The typical six-story walk-up abode of a decade ago have been excelled by 15-to-20-story structures. Exterior surfaces of common brick or dun-colored mcrete have given way to concrete and stucco in a variety of hues, which articulate the forms of these highrises. One ement of continuity is the way residents express their occupancy by filling the ubiquitous balconies with glass enclosures, prage sheds, and animal cages; one even cantilevered little sits out from the balconies to pture more space. After all, a milly of three to five typically is only about 600 square feet of terior.

The tower housing now going in Beijing, a type that has been discredited for public housing in the West since the 1960s, still is seen as a vehicle of progress by prospective residents, so may have been doubling up th parents or inlaws, in older apartments or in the traditional one-story court houses, where al braziers and shared out-

houses are the rule. Often, marriage and/or birth of the one child permitted per couple are deferred until an apartment is available. Asked whether the disciplined Chinese have any of the social problems associated with highrise family apartments in the West, one Chinese observer indicated that this kind of housing causes more difficulty than is officially acknowledged.

Most new housing is at the edges of the cities, apparently because building there does not involve demolition of old housing—which is precious whatever its condition—or displacement of residents. The result of this policy, however, is that pockets of dilapidation remain in the city core and ever greater numbers of residents are located in the outskirts, exacerbating transportation and traffic problems.

Besides housing construction, both Beijing and Shanghai are building new hotels—several major ones in each city—and new offices for corporations, both state-owned and foreign. Each year’s crop of luxury hotels tries to outdo the last one in amenities such as pools, health clubs, rooftop restaurants, and shopping arcades. While offering impressive service, these hotels seem to suffer from inadequate maintenance, so that a five-year-old hotel, though lavish in its original appointments, is likely to have dribbling faucets and chancy HVAC systems.

Cultural Evolution

Generally, everyone in the cities looks alert, well-fed, and neat. Little girls tend to be brightly dressed, with colorful ribbons in their hair; and young working women wear bright scarves and ribbons. Many young men affect

(continued on page 45)

Riders in the Dust

In the dim morning light of Shanghai or Beijing, vast flotillas of workers on bicycles can be seen pedaling in almost every silence toward their jobs. On the major arteries, they have their own median-separated lanes, isolated (except at intersections) from the trucks and jam-packed public buses that make up most of the motorized traffic. But even without a plague of private cars, pollution in Chinese cities is obviously severe. Innumerable coal-fueled cooking fires, plus the emissions of industries, trucks, and buses turn the morning sky gray even on cloudless days. Beijing has a fine modern subway system, but it reaches only small portions of the sprawling metropolis.

Although the traveler in China does not feel restricted (at least in extensive parts of the country that are now open to tourists) there is a sense of living in an isolated environment, economically. Foreigners still use a distinct currency, the Foreign Exchange Certificate, which is the only kind of money accepted at first-class hotels and their shops, at the state-operated Friendship stores for travelers, and at many restaurants. While some local people turn up in these places, one senses that the great mass of Chinese are barred from these oases of comfort and service.
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international chic with jeans, kets, and running shoes. Among the latest fads observed were exercises to disco music, undertaken by school children and adults alike—a far cry from the peaceful grace of ditional Tai Ji groups, who still be seen just about everywhere around sunrise. Another praise on the recreation front is the current popularity of bird watching, which is played outdoors along Beijing's boulevards, even the February chill; the participants are all young men with fashionable young female onlookers. Now that the resistance to Western pop culture has broken, we can hear country music in a Beijing taxi, and the Beatles' "Yesterday" soothes passengers on a domestic airliner.

pleasures are found in just about any of the older urban neighborhoods. The most appealing of these that we experienced were along the back streets and small-scaled canals of Suzhou, a well-preserved small city not far from Shanghai (photo page 43). Suzhou is noted for its ancient gardens of exceptional refinement—and preservation—most of them developed on small urban sites by merchants or civil servants. The Master of the Nets Garden, one of the most renowned in Suzhou, showed us what an incredible density of environmental experiences—pergolas, belvederes, bridges, framed views, paving patterns, groupings of rocks, illigree screens, and so on—can be composed on a mere 1.2 acres.

Xian, an inland provincial capital (with only three million people, compared with Beijing's ten million and Shanghai's 12 million) bears some handsome reminders of its stature as an imperial seat up to the Tenth Century A.D. There are massive stone city walls rising above miles of moat and a 210-foot pagoda. A smaller-scaled landmark is the so-called Great Mosque, a series of exquisite structures interspersed with garden courts. Reached through the narrow alleys of Xian's old Moslem quarter, the complex looks thoroughly Chinese, except for the Arabic inscriptions worked into its brick walls.

Shanghai has its unique architectural character, shaped largely by close contact with Western nations. Justifiably well-known are the many Art Deco commercial buildings of its central district. Equally interesting are many developments of low-rise housing from before World War II that show adaptations of every foreign style from Queen Anne to Moderne.

The Profession and its Works
Among our contacts with the profession and its current works was a visit to Shanghai Center, a 2 million-square-foot project recently topped out at 50 stories. Developed by a consortium that includes the Portman Companies and designed by the Portman firm, the complex will include offices, a hotel, some apartments for foreign business people, shops, and a theater much like the one in Portman's Marriott Marquis Hotel in New York. The three precast-clad towers that rise up from Shanghai Center's mixed-use base will look quite sedate compared to some of the extravagantly sculpted and mirrored towers
The Precast/Prestressed Concrete Institute invites Architects, Engineers and Designers to submit their outstanding precast/prestressed concrete structures for its 1989 Design Awards Competition. Any type of structure, including short, medium and long span bridges in the United States and Canada, using plant manufactured precast/prestressed concrete or glass fiber reinforced concrete is eligible. All entries will be judged by a nationally recognized panel of jurors. Winners will be honored and will receive national publicity in major architectural publications. For PCI Awards Entry Kit or additional information, contact Brian D. Goodmiller, PCI Marketing Director.

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Photos: Several 1988 PCI Award Winners.

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Currently being completed to designs by Chinese or "overseas Chinese" from Hong Kong or Southeast Asia. Following a pattern common to all commercial developments involving foreign investment, Shanghai Center will be transferred to the government after about 20 years.

One recent landmark that had to be seen was the Fragrant Hill Hotel near Beijing, winner of an AIA Honor Award for I.M. Pei & Partners. Built on a wooded hillside a few miles outside the city, this moderately-scaled complex meanders around some superbly designed gardens. At Fragrant Hill, the poor quality of some construction work gave a head start to the deterioration that plagues China's hotels generally. Nevertheless, the complex provides an elegant setting for the conferences that—given its distance from the city—account for most of the hotel's occupancy.

An afternoon at the Beijing Institute of Building Design gave us an excellent briefing on the current state of the profession in China. The suave director, Liu Kaiji, explained that "institutes" such as his were actually the state architectural offices. The busy Beijing Institute now has a staff of 1600 (1400 of them professional architects and engineers), but its monopoly on Beijing design ended in 1980. The institute now gets about 40 percent of the region's architectural commissions, in competition with about 200 other firms—most of them small, recently established "cooperatives," the word used here, as in the Soviet Union, for private offices. Working for fees, rather than government appropriations, institutes such as this one must be economically self-sustaining.

For major commissions, state offices from several cities may compete, along with cooperatives, and occasionally university teams. Liu seems to relish the new competitive situation and expects it to raise standards.

**Island of Abundance**

The conspicuous prosperity of Hong Kong is, of course, something of a shock as one arrives from the mainland; there is even warm sunshine, in February, to underline the contrast. The great bursts of highrise offices and apartments, against a backdrop of tropical hills, are exciting, but the virtually total concern with commerce makes the city seem less than complete.

Our main architectural objectives in Hong Kong were two office towers: the elegant Hong Kong Bank by Norman Foster (P/A special issue, March 1986), which rewards the visitor with marvels of mechanistic detail at every turn; and the 70-story Bank of China building by I.M. Pei & Partners (photo page 43), which was humming with workers aiming for completion late this year. This tower, which is the tallest in East Asia—at least until a taller one planned for Hong Kong goes ahead—is an exercise in geometry and minimal detailing. Its square volume at the base is made up of four triangular forms (delineated by the two diagonals), which rise to different heights. Sleek, griddec curtain walls give no hint of floor levels or scale. The banking hall on the third floor (above surrounding highway ramps) will be a monumental space.

Hanging over Hong Kong, of course, is the prospect of being absorbed into China itself in a decade. So far, that seems to be having little adverse effect on the colony's thriving capitalism. And if the trends we observed on the mainland continue (a big "if," of course) China is on the way to making itself over in the image of Hong Kong.

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Law: Project Documentation
What types of project documentation are important to the attorney defending your firm in a lawsuit? Why are they important, and how can your internal recordkeeping be improved? Firms rarely consider such questions until they have been sued. However, the time to do so is now before litigation occurs.

When you meet with your attorney to discuss your defense in a trial you will be asked for the project file. These documents will reveal the strengths and weaknesses of your case. Eventually the attorney on the other side will also demand copies of these documents through "Requests for Production" to assist in preparing his case. Keep in mind, when preparing notes on a project, that some day an adversary in a lawsuit may read them and use them to try to obtain damages from your firm.

Management: Delegation
The amount of management required to operate an architectural practice has grown considerably over the past generation. Regardless of the size of the firm, the need to pay at least some attention to marketing, personnel, liability, finance, and administration is inescapable. While 80 to 90 percent of a firm's energy will always be focused on producing architecture, the general rule is that about 10 to 20 percent of the effort must be devoted to managing the organization if the firm is to be successful.

Some firms have had success differentiating the roles of principals—with one or more architects devoting all of their time to managing the organization while the others concentrate exclusively on design.

(continued on page 56)

Personnel: Part-time Architects
A significant shift has begun to occur in the staffing and hiring practices of design firms. Firm managers are supplementing their core staff of full-time professionals with flex staff composed of professional freelancers. As architecture firms of all sizes feel they must keep employee overhead to a minimum, using part-time and project-to-project help has become an integral component of intelligent management.

Adding to this are the fluctuations inherent in the architectural marketplace, which have traditionally created the need for immediate upsizing or downsizing of employment capacity. These fluctuations typically happen in three areas. The first occurs when deadlines and/or expertise require personnel to shift from one project to another on demand. This is a good example of internal fluctuation. Hiring flex staff under these circumstances enables firms to avoid having their core staff work long overtime hours while still meeting their deadlines with (continued on page 56)

Practice Points
Almost 20 million square feet of office space is under construction in Washington, DC, according to the 1989 International Office Market Report. Second and third on the list of 50 cities world-wide are Los Angeles (15 million square feet) and Chicago (14 million square feet). Of the cities surveyed, only Fort Worth, San Antonio, and St. Paul have no new office space under construction.

Prepayment, escrow accounts, job cancellation fees, and project re-start fees top a list of 29 terms that the Professional Services Management Journal suggests be included in A/E/P contracts. The Newton, Mass., publication also considers a number of liability, penalty, and design scenarios that should be in contracts.

A growing amenity in the real estate market is on-site day care, according to Commercial Reporter. In order to stay competitive in the office market, developers are addressing the needs of this country's rising number of female employees by including child care facilities in new buildings.

A Department of Energy report states that approximately $387 million is saved annually through energy conservation. Interpro, the newsletter of the American Consulting Engineers Council, attributes that achievement to such federal programs as The Institutional Conservation Program, created in 1979 by the Department of Energy to provide matching grants to institutions for energy conservation.

Warehouse/distribution and light assembly facilities top the list of preferred investment properties, replacing regional malls and community retail centers, states A/E Marketing Journal. Since expansion often follows investment, architects should consider the design potential of this growing market more closely, even though it is traditionally less glamorous, the Journal suggests.
Law (continued from page 55)

for publication but few think about project photographs for possible use in litigation. During the construction of a project, it is a good policy to take periodic status photos. They should be labeled, since identification may be difficult at a later date, and negatives should be kept so that copies can easily be made for your attorney and for the judge and jury. Your adversary’s photographs will generally show the project in the worst possible light, often taken well after you are off the project, with lighting effects that make things look worse than they really are. By noting the date when photographs are taken and who took them, you can accurately illustrate how the project looked when you were on it.

Timesheets
Not all firms routinely keep timesheets. Many firms only use them when they are billing on an hourly basis and do not require employees to fill in many details about what they were doing on a particular day. As with diaries, timesheets help to reconstruct what occurred on the project during the various design stages. They may tell which drawings were done on a given day and how many hours were spent revising them. Merely noting the project name and the number of hours spent does not tell much. Each employee should fill in timesheets daily noting the day, the project name, which phase they were working on, and a brief description of what was done. Timesheets also have value beyond that of your defense in a trial. If you ever sue a client for an additional service or for an unpaid basic service, they will be essential.

Correspondence
Copies of all letters you send and all letters received should be kept in chronological order in your files. Letters you send should be xeroxed after you sign them so that you will know later whether they were actually sent. Especially important letters, such as termination letters, should be sent by certified mail. The green receipt cards should be saved and clipped to the file copy.

Correspondence also can show that you promptly attended to a problem or warned the client of a problem that he chose to ignore. Failure to document a problem may be used by your adversary to imply that you were acknowledging responsibility. Waiting too long to respond to an important letter on a project can also make a firm look bad, so answer letters promptly.

Design professionals tend to pay more attention to keeping project drawings in order than they do to other project records. Every folder should have the project name on it, and there should be separate folders for categories such as general correspondence, project minutes, timesheets, change orders, photographs, and the project contract and correspondence related to it. Paying more attention to these documents will help your attorney tremendously in either suing for your fees or defending you. C. Jaye Berger

The author is a New York attorney who specializes in representing architects, contractors, and developers.

Management (continued from page 58)

sively on doing the projects. A few firms have experimented with hiring business-trained MBAs to manage the firm, but many of these cases, conflicts have developed over who is really in charge.

For most other firms, when no one principal is interested in giving up practice to become a manager, the alternative is to spread the management tasks around. The following is a case in point.

Background
Einhorn Yaffee Prescott Architects was initially organized in 1973 by Steven Einhorn and Eric Yaffee, who had been classmates at architectural school and then had worked briefly for other firms in their hometown. From the beginning, the partners organized the practice around different (rather than similar) roles for each. Einho was clearly the best at client relations, marketing, and design. Although only 30 when the firm was founded, he was welcomed by the establishment of his city and quickly landed an impressive series of local government and developer projects. Yaffee, an intense perfectionist who worried about every detail of projects and the firm, became classic "Mr. Inside," overseeing project execution and office (continued on page 58)
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Management (continued from page 56) ministry. The firm hired staff project architects to carry out the bulk of the effort. One of these, Andrew Prescott, quickly began to show Einhorn’s talent for client development, but in new markets—he brought in a great deal of energy conservation work during the early days of the energy crisis. As a consequence, Prescott was elevated to great deal of energy conservation began to show Einhorn’s talent.

The Issue
The leaders of Einhorn Yaffe Prescott faced three choices: one or two of them could “lay down their architectural tools” and become fulltime managers of the organization, they could hire organizational managers from outside the firm, or they could begin to delegate a substantial amount of management to the next level in the firm. They chose the last route.

Actions Taken
In 1982, Einhorn Yaffe Prescott named eight of their key project architects and designers, plus the staff marketing director, as “Associates” and assigned the group a number of management tasks. Also, at this time, a studio organization replaced the department organization of the firm. The associates were the leaders of each studio. They were given responsibility for all hiring except at the highest level, for scheduling of all staff to projects, and for general assignment of space and maintenance of the office. After some initial time to organize themselves, the associates divided most of these tasks into individual or committee assignments, and developed a regular schedule of bi-weekly meetings to coordinate their collective efforts. Einhorn, Yaffe and Prescott attended the bi-weekly meetings with the associates to oversee and communicate about their activities, and the individual principals made themselves available as resources or mentors.

It took about a year before all parties were fully comfortable with this delegation of duties, but once the associates realized that the principals were sincere about wanting them to take responsibility, and once mutual expectations for the standards to be met were clear, the system began to work. In 1984 Einhorn Yaffe Prescott received the Professional Services Management Association (PSMA) Management Achievement Award for their balance and unique management styles.

Subsequent Events
Over the past eight years, Einhorn Yaffe Prescott has trebled in size to 130 staff members, and interior design and engineering have been added to the firm’s in-house services. The initial associate group has grown to 14 people. All of them, except the marketer and controller, are directly involved in project activities, but each devotes six to eight hours a week to general management. Their management tasks have been expanded to embrace performance review and setting compensation for all staff except themselves (who are reviewed by the three principals), negotiating contracts, and setting fees on routine projects, general office budgeting, and development of new internal initiatives such as the adoption of CADD systems. The 14 have been elevated to the title of “Managing Principal” with even greater compensation (about 2 percent each), plus significant participation in firm profits through an Incentive Compensation program. In effect, 80 to 90 percent of the day-to-day management of the firm is now carried out at the managing principal level.

The three founders, meanwhile, devote their day-to-day efforts to marketing, client relations, design, finance, and strategic thinking about the future of the firm. The only area of management not significantly delegated thus far is marketing. While some of the managing principals have become successful in obtaining new work from...
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Management (continued from page 58) existing clients of the firm, they have yet to be challenged to take the lead in developing wholly new business. This will be the focus of the next stage of the firm's delegated management system. The Coxe Group

The Coxe Group is a Philadelphia-based concern specializing exclusively in the management of architectural, engineering, interior design, planning, and other professional design firms.

Personnel (continued from page 55) the desired level of quality.

The second area of fluctuation in staffing occurs when a few local firms receive the majority of new commissions. Although these shifts in peak workloads often balance themselves out over time, it is not uncommon for 20 to 30 people to be laid off and be re-absorbed by other firms. Using flex staff breaks the undesirable cycle in which employees, assuming they are hired permanently, are laid off on short notice. This in turn creates a more cordial, less paranoid office climate.

Finally, there are regional or national fluctuations in the architectural marketplace. When a particular region of the country is undergoing a building boom, as the South experienced in the seventies, the workforce must respond. Regional placement offices of flex staff can help service that demand.

Firms of varying size use flex staff for reasons other than fluctuations in workload. Large international firms seeking new markets and offering expanded services must watch the expansion of their overhead. The use of flex staff makes good financial sense in the context of managing overhead in medium-sized regional firms, whose commissions and staff are vulnerable to absorption by large firms, the logic being that remaining lean and flexible will enable them to compete with their larger counterparts. Small firms, whose local market remains strong, are using flex staff to find that star designer or skilled technician when needed. With this type of flexibility, small firms can seek slightly larger commissions.

Working as a temporary employee does contribute to an architect's professional growth. "When I interview at firms, they are very impressed, quite frankly, with my broad base of experience," says David Reck, an architect working on a flex basis. "My portfolio contains drawings from a lot of firms and a lot of different projects." Working on a project-to-project basis, he adds, "really helps hone your speed and skills because, when you are hired, you have to come up to speed real fast."

Flex architects typically want to work full time, but in a variety of firms. In doing so, these individuals are exposed to diverse projects and methods, gaining greater experience in design, presentation techniques, production, and construction technology from the core staff they come into contact with. Their portfolios, work history, and maturity develop at an accelerated rate. Working on a project-by-project basis is also less traumatic than the troublesome job-jumping route to career advancement. Clearly, the highly skilled architect, possessing a diverse background, is the most marketable professional—attractive to any size firm.

This process also can greatly enhance the exchange of ideas and techniques in traditional office structures. Flex and core staff working together create healthy competition and enthusiasm beneficial to employees and employers alike.

Unfortunately, there are very few state-registered, full-service employment agencies catering to temporary architects. For those candidates considering this route, there are several things you should look for. Make sure that the employment firm you are dealing with is fully registered with all state, local, and federal agencies. Insist on a firm run by people with a "hands-on" background and education in the architectural field. Associate yourself with a firm that spends money on research and development and new services. Finally, look for a company that does more than make placements. Find one that is active in the architectural community and offers counseling, management, and special programs to its candidates. David McFadden

The author is the president of Consult for Architects, Inc., a project-to-project and permanent placement agency, based in Manhattan and founded in 1984.

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Civil Center

In Boston's Back Bay, architects Kallmann, McKinnell & Wood have expanded and transformed an ungainly 1960s exposition hall into the elegantly crafted Hynes Convention Center.
The convention center occupies a pivotal site in Boston facing one of the major commercial arteries, Boylston Street; straddling a main rail line and the Massachusetts Turnpike; and backing up to the mixed-use Prudential Center (above and top). The building itself has a linear, gabled front section containing circulation spaces that abuts the main block of meeting and exhibition spaces. Separated by a reveal and change of materials from granite to Roman brick (facing page), the two sections of the building are linked by a grid of stone that does not align with the floor levels. Grids applied to windows in the brick block obscure actual sill and head lines. Although the granite wall has deep reveals, that depth is countered by the “honest” expression of the corners of the stone veneer’s thinness.

MUCH has been said about the incompatibility of vast convention centers and urban downtowns. Today’s enormous meeting halls, with their demands for parking and truck access, are typically located the edge of the city core or beyond. (P/A Inquiry on convention centers, February 1989, pages 74–81.) In Boston, architect Kallmann McKinnell & Wood and their enlightened clients, the Massachusetts Convention Center Authority, have shown how a convention center can actually heal the urban fabric rather than shatter it.

Buried inside this extraordinary new facility is the old Hynes auditorium, an unspectacular product of 1960s urban renewal. Although primarily a meeting/exposition hall, rather than an auditorium, old Hynes was the modest public facility huddling at the far end the superscaled, mixed-use Prudential Center. When it became clear that Boston needed larger facilities in order to hold its own a convention city, the one virtue of the old Hynes was its site, at edge of charming yet busy Back Bay and within a short walk of hotels totaling thousands of rooms.

For “destination” conventions that draw out-of-towners—particularly the professionals who tend to favor Boston—a site out on expressway would have had little appeal. For the big “gate” events regional boat and car shows that draw thousands of locals in t cars, Boston already has appropriate city-edge facilities. So the Hynes was programmed not only to offer space—450,000 square feet of rentable space in an 850,000-square-foot structure—but also have meeting rooms and public spaces that would let visitors know that they were in a special place in an uncommon city.

In typical 1960s style, the blank walls of the old Hynes were only open to its major public access, Boylston Street, by a 90-foot s of vehicular drives and throw-away landscaping. Here was an excellent opportunity to expand out to the street, with a multistoried complex of meeting rooms. The other direction of horizontal expansion to the east, where a not-too-successful retail wing of Pruder
The Boylston Street façade features a ground floor loggia with glass-walled halls on the upper floors (top). To break up the 600-foot length and to respond to the two side streets perpendicular to this façade, the architects varied its fenestration pattern. The windows step down at an internal stair near one end of the building (top) and, near the other end, the wall bows in behind a projecting glass entrance canopy (facing page and p. 175). The wall's inward curve, which recalls the main circulation rotunda behind it, is reflected in the downward bow of the exposed steel beam that supports the gabled roof over the entry. At the convention center's south entrance, facing the Prudential Center (above), many of the same façade elements—the exposed steel, stone quoins, and stone beltcourses set in brick—are repeated.

Center was replaced with a variety of new convention facilities. The third direction for expansion was up, and it was possible to add a partial layer of exhibition space and an ample new ballroom on top of the existing structure. All of this expansion, in all three dimensions, was vastly complicated by the fact that the original Hynes, along with Prudential, was built above the Massachusetts Turnpike and the main railroad line into Boston. Adding to the structural complexity (and cost) was the fact that the mechanical plant for the 52-story Prudential Tower had to be disassembled temporarily replaced, then reassembled amid the underpinnings of the expanded Hynes. Complicating the work further yet was the fact that the Hynes continued to operate, except for an unavoidable interruption of a few months, with portions being occupied incrementally as construction went on around them.

Reconstituting the Street

The architects were very much aware here of the opportunity to "reconstitute" Boylston Street, developing a south street wall in harmony with the continuous but varied line of commercial and institutional buildings along its north side. To gain as much interior space as possible, they developed this frontage as an arcaded sidewalk, with tiers of internal circulation above. They wanted this street wall to have a civic dignity, with the subtle balance of order and variation that could be sustained for over 500 feet without being bland or overbearing; they wanted a maximum of visibility, in both directions between the street and the layers of corridors along it. Their solution was to design a visually self-contained loggia-like structure along the Boylston Street front, its autonomy signaled by a peaked roof. Behind this, the vast, largely windowless box of exhibition spaces is partly exposed, partly hidden by Prudential Center structures.

The distinction between these two formal elements is underscored (continued on page 72)
The convention center consists of new meeting rooms, circulation space, dining facilities, an auditorium, and a ballroom that wrap around and over rehabilitated exhibition halls. Public circulation runs in an L-shape, with vertical movement—elevators, escalators, stairs—occurring at two end nodes and a large rotunda at the corner (plans below). Meeting rooms form a block along the front of the building, while dining space and the auditorium are stacked along one side of the exhibit halls. The rail line and turnpike, which bisect the lowest floor, separate the entrance and administrative offices to the north from the truck docks to the south. Projecting above the front, gabled façade are the rotunda (section, top) and the barrel-vaulted ballrooms (section, middle). The upper hall overlooking Boylston Street (facing page) is a grandly scaled space with white walls and stone beltcourses. Custom-designed mahogany benches run down the center, and a curved stair connects to the hall below.
by facing the loggia principally in granite, with large glazed areas, and by cladding the volume behind it in an amber-colored Roman brick. The pale pink loggia granite establishes a kinship with many Boston landmarks, notably the great Public Library a few blocks east on Boylston Street, and the brick recalls the surprisingly contrasting walls of the library’s internal court; it is a material found on few exteriors in the vicinity. In a way, the walls of the loggia portion proclaim a connection to the city fabric, while those of the larger volume assert its closed, separate character.

The designers were not content, however, to simply leave these two urban forms separate but bound them together visually with string courses and grids of dark granite, reminiscent of the stone of Trinity Church and other Victorian Back Bay monuments. On the loggia, the darker bands subtly gauge the one-story drop in grade along that frontage. On the structure behind, they form a Euclidean grid that is unrelated to the floor level or bays inside; they cross the few windows at odd levels (but not unsatisfactory ones from the interior), a fact that is veiled by the grid treatment of both windows and spandrels (photo, page 67). Another layer of geometric meaning is added to the body of the hall by inserts of white limestone, which are the surface “traces” of the original structure’s 50-foot bays.

The coexistence of such abstract visual markers—akin to some of Peter Eisenman’s grids—with the apparent historicism of the Boylston Street front illustrate the catholicity of Kallmann McKinnell & Wood’s current design thinking. Neither part is, in fact, simply abstract or figurative: The Classicism of the granite-clad loggia portion is actually quite abstract, and it gives way in places to displays of bare steel; the abstract lines on the larger portion, on the other hand, are executed in rough-faced granite slabs that bear the earmarks of traditional construction. One common characteristic of the pointedly disparate portions of this building is an evident interest in the materials and craftsmanship. This visible materiality distinguishes the work from much dogmatic Modernism or Post-Modernism, in which material is the anonymous servant of form. A comparable juxtaposition of Modernist and Historicist devices—drawn together by a consistent emphasis on materiality—can be seen in all Kallmann McKinnell & Wood’s current work and in that of a few contemporaries; one notable parallel is Hammond Beeby Babkine Hild Library in Chicago (P/A, Dec. 1985, p. 53), and the same firm has recently displayed a version of the Historicist-front-abstract rear part in their design for Chicago’s central library (P/A, Janu.

Little visual connection, aside from maintaining the orientation of its rectangular forms, is made with Prudential Center, which envelops the convention center on two sides. The architecture of Prudential’s buildings is quite varied, anyway—and none of it inspired What’s more, its owners have long been discussing additions and remodelings that would change its image.

**Entrances, passages and nodes**

Public access to the new complex was required both from Boylston Street to the north and from the elevated plaza of Prudential Center to the south, the most convenient approach for most hotel guests. Externally, the main entrance has been made to look like a gravid recess into the loggia, although few feet of depth were actually available; an effect of greater dimension is generated by a broad steeply angled glass canopy that traces an ample curve as it intersects the shallow recess. At the south end, a straightforward entrance which may later be hidden by contemplated Prudential Center additions—is given added presence by the rough-faced quoins that cline the tall, rectangular opening.

A strong axial sequence of lobbies was developed linking these three entrances. A major rotunda at the Boylston Street entrance...
The main rotunda is a spatial tour-de-force. Serving as the primary vertical-circulation node, the drum-like space has escalators that shoot across it and curved stairs that rise up from its floor (facing page left) to link the Boylston Street entrance with the main lobby. The openings in the rotunda's slightly textured, white plaster walls vary in size. On the lower floors, circular corridors overlook the space through large openings, with custom-designed bronze railings that were darkened on site. The top floor has two openings on the rotunda's cross axis, above which a series of small windows (above left and cover) lights the upper reaches of the cylinder. Capping the space is a wood ceiling almost rustic in its detail (facing page right). Between the inner and outer walls of the drum are curved, cascading slate stairs that connect the various upper floors (above right). This "poché" space is skylighted and contains a small bridge that links two sections of the top-floor VIP Suite. The south entrance features a three-story drum that echoes the main rotunda's details at a smaller, more intimate scale (left).
Hynes Convention Center

The convention center is unusual in its use of deep, rich interior colors, for which Stephanie Mallis was the consultant. Because of their fixed dimensions, the meeting rooms (below) have elements rarely found in such spaces, such as pilasters and ceiling coves; colored fabric wall panels are set into mahogany frames. Their anterooms (right) employ darker wall colors. Carpets throughout have tiny grid patterns in vivid colors that fuse into more subtle tones in the manner of Pointillist painting. The main lobby has, along its one side, a colonnade framing wood windows and doors that give access to the cafeteria (bottom). The outer face of the colonnade is painted a deep blue, which becomes a slightly lighter blue when it turns the corner; as in the stone veneer on the exterior, this expression of surface thinness counters the apparent depth of the wall. In other circulation spaces, such as the ballroom lobby (facing page) one strong color is applied to a front plane, another to recesses; note that the color on the forward plane does not extend into the recesses. In this space, skylights illuminate pale blue baffles.

vertical circulation, with curved grand stairways and escalators that swoop across the void; a smaller rotunda at the Prudential Center entrance leads to some more conventional, but handsome, escalator and stair wells. East-west circulation takes place along the glazed corridors of the loggia block and a parallel internal passage; a secondary, skylighted escalator well toward the west end allows for vertical movement among meeting rooms without returning to the main axis. The circulation and prefunction spaces have been made comprehensible, with strong axes and punctuated sequences of space. Most of the meeting rooms have been organized into suites, entered through foyers that give a sense of group identity to the rooms. The meeting rooms themselves are for the most part permanent spaces, not the typical temporary divisions of amorphous space—and the fact has been underscored by pilastered walls, carpet borders, and deep coves at ceilings.

Onto this series of spaces that evoke traditional settings, the architects and interior designer Stephanie Mallis have superimposed some decidedly non-traditional uses of color. In meeting rooms, dark and muted colors are used on fabric covered wall panels; very vivid colors are used for the carpets, but in small checkerboard patterns that fuse into softer tones in the manner of Pointillist paintings. In some of the prefunction and circulation areas, and in the cafeteria and lounge, shockingly vivid colors appear on the walls, typically on strong color on columns or pilaster-like elements, another on pans of wall behind them. The color on the forward surface does not wrap around projecting elements, as one would expect, but remains in a single plane conceived as having no thickness. In some of the larger circulation spaces—the Boylston Street halls and the vertical circulation wells—the colors shift to shades of white, with muted tones—mainly handsome British slate—on floors; the white in these instances is made to seem a very positive color because of the vivid hues elsewhere and the light flooding these areas.
The two-story auditorium can be used independently of the exhibition halls behind it, or as part of the installation of Bishop Harris (right), or can be joined with them to accommodate toll exhibits. Capable of seating up to 5000 people, the auditorium has balconies on three sides that are accented with touches of bright color on the railings and exposed steel. Another space treated in an unusual way is the top-floor ballroom (facing page bottom) with its three parallel, barrel-vaulted volumes. Almost 25,000 square feet in size and able to accommodate up to 2200 at banquets, the ballroom can be divided into three parts by moveable walls, although it is visually strongest when maintained as one space. An oculus at one end of the center vault lets in diffuse light through translucent glass (facing page top). The chandeliers, like much of the center’s lighting, were custom-designed.

Kallmann McKinnell & Wood in Boston

It is interesting to consider that this is the second civic landmark in Boston by a firm that got its start with the competition-winning Boston City Hall (1969–1973). It would be easy to see these two buildings as polar opposites: the city hall as a freestanding monument in the Brutalist manner—exposed concrete inside and out—which is now at the nadir of public and professional acceptance; the convention center as a volume shaped by its context, its structure largely wrapped in various surface materials and its details related to 19th-Century neighbors.

Actually, the Boston City Hall, and the Government Center plan by I.M. Pei that set its parameters, are much more sensitively adjusted to context than is generally realized today. But, in any case, there have obviously been significant changes in the specifics of Kallmann McKinnell & Wood’s approach over the past two decades. In the American Academy of Arts and Sciences headquarters (1981) and the Boston Convention & Exhibition Center (1984), their previous concentration on exposed structure was joined by a comparable emphasis on walls, sloping roofs, and applied surfaces. Yet even in these buildings, and particularly in their Back Bay rail and transit station (P/A, Sept. 1987, p. 53) they continue to show an interest in exposed structure and its joints.

In all this recent work there is a tension between exposed members and applied wrappings, between Modernist elements—which often carry references to precedents such as, say, 19th-Century iron framing—and Historicist elements, which are always considerably abstracted. The design partners, Gerhard Kallmann and Michael McKinnell, consider themselves Modernists, but their respect for historical precedents comes up repeatedly in discussion of their work. They clearly love the traditional city and relish the opportunity to enrich it. And at this they have succeeded. John Morris Dixon

Project: The John B. Hynes Veterans Memorial Convention Center, Boston.


Client: Massachusetts Convention Center Authority, Boston.

Site: Original site of Hynes Auditorium in Back Bay, plus portion of adjacent Prudential Center. Total area: 244,000 sq ft.

Program: Exhibition space of 197,000 sq ft (of which portion can serve as 3000-seat auditorium), 38 meeting rooms totaling 72,000 sq ft, 25,000-sq-ft ballroom with banquet capacity of 2200, cafeteria and lounge, kitchen, loading docks. Total gross area: 850,000 sq ft.

Structural system: new portions steel frame with composite floors; cast-in-place concrete at rotunda.

Major materials: granite, Roman brick, aluminum windows and skylights, slate paving, carpeting, bronze doors, railings, and hardware (see Building materials, page 171).

Mechanical system: electric hot water heating (3,1500-KW boiler), central chilled water plant.


General Contractor: Bond Brothers/Dugan & Meyers.


Photos: as noted.
Reordering the Suburbs

Architects across the country are seeking new solutions to the problems of suburban sprawl. These range from incremental improvements—a better shopping mall or office park—to utopian small towns and latter-day garden cities.

As I was researching this article, a colleague asked if I suffered any "cognitive dissonance" in writing a critique of contemporary suburbia from my own home in suburban Connecticut. He touched a nerve. I live in a four-bedroom builder's Colonial. We have a septic tank, and a four-wheel-drive mini-wagon. I work in Stamford, a city that has remade itself in the image of suburbia. My commute, which I do alone, is 35 minutes along a clogged scenic parkway.

My town is grappling with the very problems of affordable housing and open space management that I have spent the past six months reading about. Indeed, my best source may well have been the local weekly paper. There I read the tale of a wily developer who flooded an old quarry to create two-acre lakefront lots that are three-quarters apparent density of his development. The paper also carries near weekly warnings that our police and firemen can no longer afford to live in the community they serve, along with ads for after-school childcare that testify to the problems of families in which both parents work, like my own. At best, I can say that when I consider suburbia, I know whereof I speak. At worst, I am open to the criticism that if you're not part of the solution, you're part of the problem.

And the problem is enormous. The essential virtues of suburbia—the characteristics that drew and continue to draw people there—are threatened even as they are achieved by more and more Americans. As Daniel Solomon phrases it, "The more of it there is, the less it is like what it was supposed to be." Or as Stephen Friedman writes in his book City Moves, released this month by McGraw-Hill, "At the heart of suburban development is a critical paradox. As any suburb increases its popularity, by providing people with the more informal, low-density settings that they seem to want, its very popularity destroys the features that first made the place appealing."

The litany of problems is as familiar as it is depressing. Little has changed since 1961, when Lewis Mumford issued his stinging indictment of suburbia—written, ironically, in suburban New York. Post-World War II suburbia, he wrote, "cartooned both the historic city and the archetypal suburban refuge: a multitude of uniform, unidentifiable houses, lined up inflexibly, at uniform distances, on uniform roads, in a treeless communal waste."

Nothing has changed, and yet everything is different. Architects building in the suburbs of today or those planning for tomorrow may revere the 19th-Century streetcar suburb, but they are working in a vastly different reality. Those who do not simply shudder and pass on recognize in the littered suburban landscape a crisis of potentially lethal proportions. "We see the urbanization of suburbia as one of the next clarion calls for architects and planners to answer ... an ambitious, even heroic agenda," says Doug Kelbaugh, who with Solomon is one of the proponents of the Pedestrian Pocket, a new model for suburban development (page 88). "We offer no apologies for such tilting at windmills," says he.

Windmills indeed. Contemporary suburbia is not merely an extended version of Levittown but an entirely new animal. Polls have long shown that most people don't want to live in cities. The numbers now show that the majority has gotten what it wants. But residential development—and the shopping malls or new "hypermarts" (page 79) that support it—does not account alone for the changing character of suburbia. It isn't the bedroom but the boardroom—or still more the back office—that marks the essential unit by which new growth must be measured. For with the arrival of the workplace—the corporate headquarters or data-processing plant—all of the essential elements that go into making a city are now in the suburbs. People do not only live there and shop there, but work there as well.

But if the elements of the city—both commercial and cultural—are now replicated in suburbia, the forms they take are vastly different. The very essence of suburbia is the segregation and separation of functions. "What emerges is not a true multifunctional core but rather a loose cluster of isolated specialized unifunctional subcenters," writes Peter Muller in Contemporary Suburban America.

The pattern he describes holds true not only for denser suburbia but for the so-called exurban frontier. This "big new spread-out small town" has been tracked down by journalist John Herbers and others. "Now, while the suburbs are evolving, another kind of development is taking place. It ... has the potential for causing further change on the scale of the migrations first from farms to cities and second from cities to suburbs," writes Herbers in The New Heartland.

Exurbia's "nonmetropolitan metropolis" defies conventional definitions. Indeed, Herbers and other exurban geographers consider suburbia itself an out-of-date appendage of the 19th-Century city. As defined by Herbers, the typical exurban settlement contains a population of 150,000 spread out over 250 square miles—a large land area than the city of Chicago with its 3 million inhabitants. I downtown is a strip 10 miles long, and its residents think nothing of an 80-mile commute to work.

For Every Home A Car

The tool that perpetuates this pattern is the car. The automobile has effectively cut the cord tying suburb to city, ending a pattern of dependence that characterized all pre-World War II suburbs. Indeed, the true symbol of suburbia is not the single-family detached house but the car in its drive. Significantly, the most pressing problem cited by suburbanites in Southern California is not nuclear war or depletion of the ozone layer but traffic.

According to Robert Cervero, author of Suburban Gridlock, more and more communities are voting for anti-growth ordinances as means to control not only development but automobiles. The anti-growth movement itself, like the tax revolts of the early 1980s, is proof of a sea change in suburbia. In California alone, according to a report issued by the American Institute of Architects as part of its Design Vision 2000 agenda, over 60 municipalities have no-growth statutes. The device masks a variety of motives, good and bad, from the desire to preserve rapidly vanishing farmland to the equally strong desire to preserve a given suburb's exclusivity.

Ironically, as the anti-growth movement gains steam, earlier exclusionary laws—such as so-called hysterectomy zoning, which
Imported from France and packaged by Rafael Vinoly & Associates of New York, America's first Carrefour, a 330,000-square-foot "hypermart" in Bucks County, Pennsylvania, sells groceries, electronic and automotive equipment, apparel, and hardware.

Although a vast improvement over most of its neighbors along New Jersey's infamous Route One, Princeton Forrestal Center lacks the housing to complement its office, retail, and hotel space. Thus the complex, designed by Sasaki Associates and Bower Lewis Thrower, remains an accessorized office park.

The projects shown on the first four pages of this article represent new takes on old building types in suburbia. Graham Gund's Village Commons in South Hadley, Massachusetts, is a new kind of village mall broken up into separate buildings. The project's Post-Modern detailing may grow dated over time, but the site plan and program—which mixes retail, office, and the old-fashioned "apartment over the store"—mark a new direction for malls.

Being considered the quintessential urban building type, the scraper is increasingly common in suburbia. The 27-story Brook Terrace Tower designed by Murphy/Jahn for a suburb outside Chicago is typical in its monumental isolation.
Reordering the Suburbs

Design guidelines developed by RTKL Associates for Cascades Town Center recreate the good old American main street, with retail on the ground floor, offices and apartments above. The Center is to be the center of a new town in Loudoun County, Virginia (masterplan by Sasaki Associates).

In the design by SOM/Chicago for The Terraces at Perimeter Center, Atlanta, spec office buildings are treated as background for an elaborate wooded landscape whose stream is spanned by a cable-suspended wooden footbridge.

designed to restrict apartment sizes and thereby hold down the school-age population—are slowly giving way. The Supreme Court's refusal to hear an appeal of the Mount Laurel decision striking down exclusionary zoning and mandating the construction of affordable housing in a New Jersey community demonstrates the new need—albeit court-ordered—to reconcile private interests with public needs.

And therein lies the opportunity for architects and others who see the basic problem of suburbia as the absence of a public realm, be it social or physical. Public values have come late to suburbia, but they are there, most visibly, perhaps, in newly formed conservation groups. Land trust proponents, for example, would do for suburban Connecticut what Central Park did for Manhattan—preserve and control nature in the public interest. These concerns animate architectural schemes as well, from Eric Kuhne's Riverwalk, a latter-day Central Park solution (page 85) to Steven Holl's hypothetical designs for Phoenix, Cleveland, and Buffalo, projects in which he seeks to preserve the country by setting physical limits to the city it surrounds (page 90–91).

Suburban Organization

There remain, however, dramatic differences between the public realm in the city and its equivalent in the suburbs. The new suburb may contain all the elements of a city, but that does not mean urban solutions are always appropriate. The so-called suburban city is a perfect case in point. Known variously as the suburban activity center, or, more paradoxically, the urban village, this concept's many names are themselves indicative of a confused identity. Born of necessity, this high-density development is situated on a highway interchange, on top of an old town, or on the leeward side of a regional airport. It is neither urban nor suburban in character. "We lack a convenient name for this new city which has all parts of the city but no need for a center," writes Robert Fishman in his fine study of suburbia entitled Bourgeois Utopias. (Fishman himself cannot resist proposing his own term, "technoburb.")

Mulder attempts to codify the various patterns of "minicities," use his term for urban villages, which he classifies as nodal (form over old towns like Stamford, Connecticut or White Plains, New York), linear (along highways), or circumferential (beltway development, like Atlanta's Perimeter). The very diversity of potential patterns proves the absence of a universal vision for suburbia that might be its equivalent to the city grid. In this regard alone, the urt village differs dramatically from its most immediate predecessor, New Town of the 1960s. William H. Whyte, author of The Organization Man, writes in a new book called City, "The new town movement of the sixties had a very coherent set of aims; the physical vision was coherent too and if it failed, it went down with philosophy intact. The current growth, by contrast, is quite free of utopian constraint. Shaped by a free market, urban villages can be ugly and anti-social places. Criticism leveled against Tysons Corner, Virginia, in a report issued by the Urban Land Institute (page 82) indicts entire species. "Urban villages," says Joseph Brown of EDAW in the ULI report, "suffer a lack of overall physical unity, poorly defined edges, and a transportation system lacking in hierarchy and identifying graphics. Pedestrian linkages and accessibility are practically non-existent. Moreover, there is little sense of community public life. The typical site design focuses inward, and open space is usually limited to private use, are few." Brown's recommendations are equally generic. Set limits to the village and its component neighborhoods, he says; add housing and mass transit; capture "four land for public parks and pedestrian spaces.

Other suburban communities, both new and old, are searching the right mix of functions. The new town of Reston, Virginia, example, is building a new downtown of office buildings, hot restaurants, retail, and movie theaters that will complement exist
The interior atrium of Gateway Center, a spec office building in Tucson, Arizona, designed by Leason Pomeroy, is a lush garden that provides relief from the desert outside. Regional architecture is also echoed in color, materials, and form (below).

Somerset Square, a new open-air mall nearing completion in Glastonbury, Connecticut, that was designed by Robert A.M. Stern Architects, is a slice of strip retail turned in upon itself. Slow traffic will enliven the square.

The parklike Dulles Corner Office Park in Fairfax, Virginia, designed by a joint venture of EDAW and WZMH Architects, is organized around an eight-acre central park, which has its own lagoon system, pergolas, and tennis courts.
Reordering the Suburbs

Urban Villages
When a rural crossroads such as Tysons Corner, Virginia, is transformed rapidly into the country's 12th largest business district, the result is a prototype of "early urbanization, raw and successful, and ugly as all getout," says Joseph Brown, of EDAW, Inc. Along with ADD, Inc. architects and planners, EDAW analyzed the physical qualities of Tysons as part of an Urban Land Institute study. In evaluating "suburban activity centers" such as Tysons, a satellite of Washington, D.C., the team pinpointed shortcomings such as a lack of physical unity, site design that disregards pedestrians, traffic congestion, and little sense of community. In response, the report recommends changing zoning laws to allow urban-style development. Not only is higher density encouraged in Tysons's center, but new districts are proposed within the now-undifferentiated whole (plan, right) to allow pedestrian scaling and promote scattering of retail functions. Also recommended are better integration of land uses (section, right) with retail and office functions attached to parking structures; introduction of housing; addition of public institutions such as libraries; and creation of an internal roadway loop to relieve busy main arteries.

Combating Suburban Creep
Although the ill effects of suburban creep may be most graphically evident in rural and exurban areas, the importing of suburban building types—and the attitudes they express—into established cities can have an equally insidious effect. The shopping mall may be the most visible arriviste, but suburban-style condominiums and apartment buildings also threaten to break up the urban domain into private islands in which, says San Francisco architect Daniel Solomon, "the public realm is reduced to walls and garage." Such is the case in San Jose, where residential design guidelines by Solomon & Associates are devised to reinforce the relation between separate multi-unit housing projects and "to improve the quality of community that new housing creates in aggregation." A comparison of pre-guidelines projects (bottom left) and new designs constructed since the guidelines were voted into law two and a half years ago (top) proves its specificity in spelling out everything from site design to building articulation (bottom right).
inted by a tendency to sneer at the suburbs and by the desire to pose solutions rather than draw them out of what is there. The role architects could play in solving that problem may be praised as pieces—such as the park in EDAW's office park in suburban Connecticut (page 81), a project which exemplifies the idea of office over shops, a deceptively simple but remarkably urban device absent in single-use suburban zones. The signs went too far, however, in removing the car from main streets, thus creating a Disney-style open-air mall that dies at five o'clock and lacks any connection to surrounding suburbia—although the latter problem is not of their making. Although housing is part of the original Forrestal plan, none has yet been built. This imbalance Whyte to term the development a "fine village center without a crack in the picture window". The trouble is not too many people," he writes, "but too few." Just as Forrestal has yet to be carried through, so many suburban objects seem incomplete. Robert Stern's Somerset Square in Glassboro, New Jersey (page 81), a project which exemplifies the referral of strip retail, was stripped of its housing and remains for better or worse a mall. Helmut Jahn's suburban skyscraper in Oakbrook, Illinois (page 79), could signal a new and potentially laudable direction in office planning—provided the open space set free by the concentration of offices in a single tower is preserved. Other projects may be praised as pieces—such as the park in EDAW's office park in suburban Virginia—but they remain unintegrated parts that finally perpetuate the larger problem.

From Critics to Apologists

The very role architects could play in solving that problem may be criticized by a tendency to sneer at the suburbs and by the desire to pose solutions rather than draw them out of what is there. The use against the "slurbs," as critic Ada Louise Huxtable called it, has been carried by eloquent prosecutors from John Keats, who named the suburban antihero of his novel Crack in the Picture Window John Drone, to the inimitable Whyte, whose Organization Man condemned the suburban conformity of white-collar suburbanites. The Man in the Gray Flannel Suit still dominates our perceptions—although the author of that novel, Sloan Wilson, has claimed that his book was misread and that his hero was in fact rebelling against the suburban conformity he has come to symbolize.

Such is the power of a metaphor set free of its context. Similarly, says Fishman, the word "suburb" has been used as a buzz word for "conformity" in the 1950s, for racial segregation in the 1960s, and for the decline of the center city in the 1970s. Thus, apologists for the suburban fight an uphill battle. Herbert Gans, sociologist and author of The Levittowners, has written that "If Levittowners report heaps scorn upon suburbia: "These new areas are populated by transient, career-minded families, who have not developed allegiances to these areas, beyond a concern for property values. There is also little interest in supporting nearby cities that at one point would have been the center of employment for outlying areas." The clue lies in the reference to cities, places in which the impact of planners and architects is self-evident. "The case against the technoburb can easily be summarized," says Fishman. "Compared even to the traditional suburb, it at first appears impossible to comprehend. It has no clear boundaries; it includes discordant rural, urban, and suburban elements; it lacks clear public spaces and does not have a coherent design."

A New Town's New Downtown

Reston, Virginia, has long been considered the quintessential New Town of the 1960s in both its successes and its failures. Although close to 47,000 people live there and another 25,000 work in the area, Reston is less of a town than a bedroom suburb surrounded by office parks. Twenty years after developer Robert E. Simon Jr. (the RES of Reston) unveiled his plans for a new garden city 18 miles west of Washington, D.C., Reston Town Center Associates—a joint venture of developers Himmel/Miller Klutznick-Davis Gray Co. and Mobil Land Corporation—believe the community has finally reached the critical mass necessary to support a true, mixed-use downtown. Leaning towards the urban end of the urban/suburban spectrum, the town center (top) designed by RTKL Associates of Baltimore (Sasaki Associates, landscape architects) mixes 2 to 3 million square feet of office and retail uses with 1000 hotel rooms, 500 to 800 units of urban housing, and various cultural or community facilities, including a museum. The first phase of this development (bottom left and right), which is now under construction, includes two 11-story office buildings, two department stores and assorted shops, an 11-screen cinema, a 500-room hotel and health club. [Daraice D. Bosles]
Reordering the Suburbs

Venturi's Suburbanism
“Learning from Levittown,” as the cartoon at right is subtitled, neatly summarizes the approach to suburbia taken by Robert Venturi, Denise Scott Brown, and Steven Izenour. In this deceptively simple comic is enshrined an entire lexicon of suburban symbols—or clichés—and the dreams they embody. The cartoon also comments on the apparent willingness of would-be homebuyers to ignore inconsistencies (“I’m a different style so you don’t really see me yet”), Venturi himself has put some of his symbols to work in a new subdivision now under construction in Florida (page 23).

Krier’s Urbanism
Leon Krier’s urban vision (right) is in many ways Levittown’s antithesis. Krier’s proposal that the solution to sprawl is to build cities in suburbia has influenced many architects now actively studying or building there, from Andres Duany and Elizabeth Plater-Zyberk (page 86) to the Pedestrian Pocket proponents on the West Coast (page 88).

Theorist Christopher Alexander, who preaches a kind of incremental architecture, supports this conclusion in his description of design as a process of setting barriers and distinctions. Architects, he writes, in his essay entitled, “A city is not a tree,” are endowed with a “basic intolerance for ambiguity...we are trading the humanity and richness of the living city for a conceptual simplicity which benefits only designers, planners, administrators, and developers.” In his conclusion, Alexander echoes the concerns of a new class of scientists who study chaos. “Where chaos begins, classical science stops,” writes reporter James Gleick in his book on the subject. Chaos theorists “had an eye for pattern, especially pattern that appeared on different scales at the same time. They had a taste for randomness and complexity, for jagged edges and sudden leaps. They believe that they are looking for the whole...In a universe ruled by entropy, drawing inexorably toward greater and greater disorder, how does order arise?”

Just as the first scientists studying chaos were unaware of overlaps in their research, so suburban design is divided among the disciplines and falls, more often than not, between the cracks. Of all the facts found in a two-day symposium on suburban design held at Berkeley in March, the most shocking for many participants was the revelation that not one of California’s legion planning departments had a traffic engineer on staff. The state hires many of them—but in the Traffic Department. Thus, in a classic case of left and right hands at odds, the traffic engineers are pressing full steam ahead with new highway plans for Fresno, a small town east of San Francisco that has been invaded by the silicon industry, while the planners contemplate slow growth plans.

That the symposium took place at all was something of a miracle for it marked the first joint-venture project by Berkeley’s planning and architecture departments—a source of pride for the school that is in its own way appalling. If planners and architects don’t talk together in school, when will they meet?

The symposium also afforded the chance to compare two competing alternative models for suburban development—the Traditional Neighborhood Development or TND developed by Andres Duany and Elizabeth Plater-Zyberk of Miami and the Pedestrian Pocket model developed by several West Coast architects, most prominent Peter Calthorpe and Daniel Solomon of U.C. Berkeley and Doug Kelbaugh of the University of Washington, Seattle.

The New/Old Town of the TND
Duany/Plater-Zyberk have been thinking about the suburbs longer than most of their contemporaries, and they have the built work to prove it. Their town plan for the community of Seaside, Florida, executed from 1983 to the present, was the first of a long-running series of developer-sponsored town plans. The firm has now perfected a “charrette” process whereby they and a team of landscape architects, civil engineers, and other consultants travel to a given site and spend a week on charrette, developing not only a plan for the community but full urban design and architectural guidelines for its execution by other architects. Much of the process has been computerized; built into the model are the generic characteristics of a traditional small town. The architects essentially upload local color—common materials and building types—along with the
In their design for Lee's Orchard, a residential development in California's Santa Clara Valley (aka Silicon Valley), Daniel Solomon and Barbara Stauffacher Solomon of San Francisco set out to prove that subdivisions need not substitute the golf course landscape of suburbia for California's agrarian past. Arguing that the picturesque landscape, as imported from England, has become a suburban cliché, these designers prefer what they consider to be a more American model—the agrarian grid. Their plan places 13 single-family houses within a new working fruit orchard, using the grid of trees as the principal landscape feature. The orchard itself serves as common area, its maintenance underwritten by production. The houses are modeled after California farmhouses, set in line with the orchard grid.

The development also taps into the history of this part of California. "When I was a child, the Santa Clara Valley and the lower hills surrounding it were covered with orchards," says Barbara Solomon, author of Green Architecture and the Agrarian Garden. "After the war developers systematically bulldozed the orchards away. I don't think they paused to think of incorporating them into their housing plan." Perhaps Lee's Orchard will change their minds.

A Suburban Orchard

Suburban Central Park

Harking to Frederick Law Olmsted's semi-urban park schemes, River Walk, a three-phase development in Chesapeake, Virginia, relies on a processional parkway to lend it coherence and identity. Designed by Eric Kuhne & Associates of New York, the 484-acre, 1400-unit subdivision is strung along a two-mile, U-shaped parkway punctuated with hierarchical "gateways," which mark entrances to neighborhoods ranging from $60,000 condominium clusters to $750,000 riverfront homes. Similarly, public amenities such as an elementary school, a day care facility and two commercial centers are located near junctions defined by curving brick walls, ironwork, copper roofs, and pavers that point north—to orient people in a setting where everything twists and turns," explains Kuhne. Each gateway doubles as gathering place and landmark (like the tower, left). "Such civic design treats the landscape architecturally," says Kuhne. "It takes spaces normally regarded as residual and makes them formal and public." Ziva Freiman
Learning from Seaside

In the ten years since their plan for the town of Seaside, Florida was completed—and perhaps more significantly published—architects Andres Duany and Elizabeth Plater-Zyberk of Miami have designed literally dozens of similar developments in New Hampshire, Arkansas, Maryland, Virginia, Texas, and other states. Each “new town” was designed in a matter of days through an on-site “charrette” involving not only the architects and their developer clients but a full cast of consulting landscape architects, engineers, and often local architects. The team conducts a massive fact-finding tour, studying everything from local building materials to the age of trees on the site, then plugs these findings into a computerized model and produces a plan for the property, backed up by urban and architectural codes that enforce its implementation long after the charrette is over.

The Village of Deerfield in Merville, Indiana (this page), is a typical product. Duany and Plater-Zyberk completed a master plan, zoning code, architectural guidelines and test unit designs for the 40-acre mixed-use development. Their plan calls for 174 housing units, 115,000 square feet of mixed retail and commercial development, public buildings such as a school, church, post office, and day care, and several public squares (top right). Although modeled on traditional American towns, the Deerfield plan has been modified to suit its site. “The town has been turned inside out,” says Plater-Zyberk, who notes that the commercial center, normally located at the heart of a town, has been pushed to one edge of this site where it adjoins a preexisting highway (middle right). Main street runs perpendicular to this strip, terminating in the town’s civic center. The “built-out” version of the plan (bottom right) repeats this pattern on adjacent properties, shaping a traditional, linear town out of a series of separate planned unit developments. The extended plan also illustrates a key aspect of this model, namely its repudiation of the hierarchical traffic patterns now dominant in suburbia. Echoing Christopher Alexander’s thesis that “a city is not a tree,” Duany takes issue with the typical artery/alg-de-sac dichotomy of suburban road systems, blaming the “funneling” effect of that pattern for suburban gridlock. He proposes instead a nonhierarchical grid that permits traffic to “filter” through a neighborhood on many routes.

Doralice D. Bales
The designs are naturally limited by the developer’s program, and though the architects try to influence their clients, they have yet to design a fully integrated town plan. But the architects have now evolved beyond this case-by-case approach to suburban designs, developing a generic version of the new/old town that is embodied in the Traditional Neighborhood Development or TND. Designed to be nested into law as an alternative to the Planned Unit Development, the TND is an ordinance that would replace single-use PUDs with integrated developments designed as small towns.

Sticking to the program of planned developments, which are accepted mode for suburban building today, the TND proposes evolution from within. “It’s an overlay code like the PUD that has no education for planners,” says Plater-Zyberk. “It’s a good move, and hence, like the PUD it would replace, less likely to meet resistance. Indeed, the first communities in New Hampshire, where the foundation that administers the TND is located, have had it into law and Loudoun County, Virginia, should do the same in next election.

In some states, what we’re doing is very closely related to growth management,” says Plater-Zyberk. “It all comes down to the fact that suburbs were chosen to be built in concentrated towns instead of sprawl, and we didn’t have the problems of loss of land or traffic congestion. The are saying ‘no building’. People have to see that there’s a way to build.”

And just what is that way? Picture a typical New England town, you have the basic mold. The TND, which is designed as a page matrix for ease of implementation, calls for alleys and main streets, for tree-lined sidewalks and public squares. The TND starts with an aesthetic premise, although the architects fully recognize and even welcome the result, which is a benevolent form of social engineering. “If you say a sidewalk has to be X dimension, that means you have a cafe,” says Plater-Zyberk. “Design affects space, and space affects behavior.” Indeed, the TND’s statement of intent is a virtual manifesto. “Traditional neighborhoods achieve certain social objectives,” it reads. “By bringing most of the needs of daily living within walking distance, the elderly and the young gain independence of movement . . . By providing a full range of housing types and workplaces, age and economic class are integrated and the bonds of an authentic community are formed . . . By promoting suitable civic buildings, democratic initiatives are encouraged and the society is secured . . .

## Residential Areas
- House lots shall be at least ten feet wide containing streets, sidewalks, and alleys with parking on one side.
- House lots shall have their rear one coinciding with an alley ten feet wide containing a pedestrian pavement width of four feet.

## Definitions
- House lots shall be at least ten feet wide containing streets and alleys with parking on one side.
- House lots shall have their rear one coinciding with an alley ten feet wide containing a pedestrian pavement width of four feet.
- Pedestrian pavement: a strip of public space, often tree-lined, intended for walking, often adjacent to sidewalks and streets.
- Public squares: large, open spaces in the center of neighborhoods, often surrounded by buildings.
- Sidewalks: pedestrian paths along streets, often tree-lined.

## Land Uses
- Residential Areas
- Commercial Areas
- Public Open Space
- Civic Uses
- Industrial Areas

## Land Allocation for Civic Buildings
- A minimum of 5 percent of the area of a TND shall be dedicated to Civic Lots.
- The Developer shall covenant to construct a Neighborhood Hall on a Civic Lot upon the sale of 75 percent of the lots.

## Design Elements
- Street widths: 20 feet wide and the curb radius shall exceed 25 feet.
- House lots shall be no less than four stories, for tree-lined sidewalks and public squares. The TND starts with an aesthetic premise, although the architects fully recognize and even welcome the result, which is a benevolent form of social engineering. "If you say a sidewalk has to be X dimension, that means you have a cafe," says Plater-Zyberk. "Design affects space, and space affects behavior." Indeed, the TND's statement of intent is a virtual manifesto. "Traditional neighborhoods achieve certain social objectives," it reads. "By bringing most of the needs of daily living within walking distance, the elderly and the young gain independence of movement . . . By providing a full range of housing types and workplaces, age and economic class are integrated and the bonds of an authentic community are formed . . . By promoting suitable civic buildings, democratic initiatives are encouraged and the organic evolution of the society is secured."

But a full range of uses is absent from the TND and therein lies the rub, say critics who view the ordinance as a brilliant but limited product. Implemented by suburban developers, the TND will inevitably reflect the bias of the market it serves. Affordable housing and public transit are just two of the ingredients that these essentially private developments are likely to lack.

Also missing from the TND, beyond a rather utopian call for artisan workshops, is anything approximating the massive office development common in contemporary suburbia. The architects claim that their model could be modified to accommodate more office or retail development, as is the case in their design for Kentlands, a development in Gaithersburg, Maryland, that incorporates a regional shopping mall bordered by main street on one side and a highway on the other. Plater-Zyberk also takes issue in general with back-office norms, claiming that the preferred 30,000 sq. ft. footplate "is a myth. What manager covers that area in one day?" she asks. Why not stack the functions, or split them up? Although limited to the PUD process, the TND represents a new approach to suburban development, one that taps into a great town-planning tradition that extends from Ebenezer Howard and...
Reordering the Suburbs

Pedestrian Pockets

A pedestrian pocket, says architect Peter Calthorpe, is a “cluster of offices within a ¼ mile walking radius of a light rail system.” That may sound simple, but it is actually a very sophisticated concept initially proposed by a few West Coast architects that differs in significant ways from other schemes for reordering suburbs.

First, their proposal is production as well as consumption-oriented; most pedestrian pockets would provide substantial amounts of working as well as living and shopping space. Second, it reorders suburbs through the reorganization of their transportation systems. Calthorpe envisions the pedestrian pockets as walkable enclaves built along the many underutilized or abandoned rail lines in cities. Other mass transportation options, such as dedicated roadways for buses and car pools, might serve sites without rail access or as preludes to a light-rail system. Third, it emphasizes the functional rather than formal aspects of buildings.

Each pocket, for example, would have a variety of housing, support facilities, and recreational areas for young and old, large families and small; the specific style of buildings in each precinct matters very little, and a diversity of formal types is actually encouraged.

Raymond Unwin—whose book Town-planning in Practice is Duany’s Bible—to Clarence Stein and even James Rouse. Its innovation is as much a matter of means as ends, for the one-page code could revolutionize the way in which the suburbs are built. Like design guidelines for residential development in San Jose drawn up by Daniel Solomon (page 82), the document is prescriptive, not prescriptive—it tells builders exactly what to do and in what dimensions.

Perhaps most astonishing within the context of typical suburban subdivisions, however, is the amount and distribution of public space allocated in the ordinance for civic lots (5 percent of the land area), parks and squares (15 percent), and a greenbelt (50 percent).

This most essential element of Duany and Plater-Zyberk’s model has not been picked up by those who would copy them. “The New Town, The Old Ways,” as the Seaside slogan goes, is a potent image, but surrogate Seasides have mimed its forms without absorbing the planning principles behind them. Unfortunately, the seductive watercolors produced by Duany/Plater-Zyberk for each charrette (page 86, top) accentuate style over substance. “We’re very sensitive to that criticism by architects,” says Plater-Zyberk. “But our architectural code is not as prescriptive of style as our drawings might seem. It does deal with the need for a rational basis for style that is related to place, history, or geography. Our drawings are meant for developer marketing. We’ve decided to do that so that we can get these things built. Then people can judge.”

Pockets for Pedestrians

One of the most interesting results of the Berkeley symposium, say the architects who attended, was their recognition of just how much the TND and its West Coast equivalent—the Pedestrian Pocket—had in common. Both models posit a new vision of the old small town, bounded by a greenbelt, centered on a commercial and retail district, and composed of connected neighborhoods, each in turn centered on a school or other civic building. But, where the TND depends on developers for implementation, the Pocket requires significant government intervention, not only in setting the site and size of a town or “pocket” but most significantly in building the light rail line that links one pocket to the next.

The heart of the pedestrian pocket ideal is the notion of a walk town. A quarter-mile radius would set the town’s limits at a maximum ten-minute walk from the central station. The town would be too mixed, combining retail, residences, and office development. A program also accommodates those who are hard-to-house in conventional suburbia—single-parent families, elderly, and handicapped. “Up to 2000 units of housing and 1,000,000 square feet of space can be located within three blocks of the light rail station us general condominium densities and four-story office configurations.”

Unlike the TND, the Pocket accommodates large-scale office development—the engine driving contemporary suburban growth—it provides for the automobile through large parking facilities. The final difference between the two models is the proposed density development. The TND is flexible; its density can be tightened up to suit a given program. The Pocket is more explicit urban in character, its residential blocks composed of three-story walkups and two-story townhouses. The plan also projects employment for 16,000 people within four stops of the light rail.

Pedestrian Pocket proponents argue that this density of development is the only way out of the coming suburban crisis. The year 2000, the projected peak-hour average speed on the Diego freeway from the Los Angeles International Airport to Sun Boulevard is ten miles per hour,” says Solomon. “If one likes to track of disillusioning facts this is a very big one . . . on the scale the Ostrogoths’ Sack of Rome or the Fall of the Third Reich. Co the gridlock,” he maintains, “comes the revolution.”

Progressive Architecture 5:89
Each stage in the development of pedestrian pockets has brought further refinements to the concept. The original proposal, funded by the National Endowment for the Arts, was produced by Calthorpe and architect Mark Mack for available sites in Marin County north of San Francisco (facing page). While their scheme contained the basic elements—the rail line, the mixed uses, the open spaces providing pedestrian access to the center—it's extreme order and symmetry gave it an idealized, utopian quality. A week-long charrette at the University of Washington (soon to be published in book form by the Princeton Architectural Press) revealed the flexibility inherent in the idea. Eight architects—Calthorpe, Mack, Donald Prowler, Daniel Solomon, Harrison Fraker, Doug Kelbaugh, David Sellers, and Robert Small—paired off with students to design four alternative pedestrian pockets for a site south of Seattle. The Mack/Prowler scheme (top left), with its radiating apartment blocks, reveals the influence of the German housing colonies from the 1920's, while the Solomon/Fraker scheme (top right) organizes the housing along the classic American grid.

Solomon and Calthorpe have continued to develop the concept with their students at UC Berkeley. Meanwhile, Calthorpe and SWA Group have been commissioned to design a pedestrian pocket in Marin City, California, a relatively poor community at a major bus transfer point for commuter buses outside San Francisco (bottom left). It will contain a main street of offices and stores that leads from the commercial section to a residential area woven into the existing street pattern. Parking is kept to the fringes of the site.

Other communities considering the pedestrian pocket idea include Albuquerque, New Mexico, and San Jose, California, as well as Marin and Sonoma counties outside of San Francisco. With its implementation has come a number of refinements to the pedestrian pocket idea, such as use of transfer rights and agricultural zoning to protect open space around each community, the creation of assessment districts and redevelopment areas to raise funds for infrastructure work, and the development of phasing plans to allow for incremental growth. The one issue that will remain unresolved until a pocket is actually built is whether this new suburban form will, in fact, wean suburbanites from their cars and their commutes.

Thomas Fisher
Reordering the Suburbs

Steven Holl would invert the way we look at suburbs. In his proposal for the edge of three American cities—Rochester, Cleveland, and Phoenix—which was unveiled at the recent Museum of Modern Art exhibit of his work, Holl views the suburbs “from the landscape back into the city. We must look at the suburbs,” he says, “in terms of their effect on the land,” with the destruction of open space, forests, and farmland. “You become less accepting of suburbs as they are,” he adds, “when you see them in those terms.” Holl attempts in these projects not “merely (to) set limits to the destruction of natural landscapes,” but actually to restore the many “partially ruined landscapes” at the edge of cities.

He also attempts to counter the sameness of suburbs by employing “a different strategy for each site, that illuminates particular meanings” and creates a sense of place through reference to its history and geography. Implicit in that approach is a critique of the generalities and abstractions of the planning profession; “We had to turn this into an architectural problem to find the necessary variety and specificity,” he says.

In his scheme for Phoenix (facing page top), Holl emphasizes the contrast between the city and desert, while making a reference to the history of the place, with its many irrigation canals built by the now extinct Hohokum Indian tribe. A line of open cubic structures would define the edge of the suburban sprawl, embrace a section of the desert to be preserved, and frame views of the distant mountains from the city. Loft-like living units, entered through communal courtyards at the base of each cube, would occupy the structures’ hollow concrete columns and beams. Adjacent loft buildings would contain office and commercial space and cultural facilities would be suspended within some of the open frames.

At the periphery of Cleveland, Holl implies an urban edge by creating five crossover points between the suburbs and rural areas. Those X-shape “stitches,” with buildings on one side and open space on the other, would not only bring the natural landscape deeper into the city but would create needed suburban centers. Holl envisions one of the centers forming a dam across a river (top right). The dam and its adjacent structures would contain, among other things, a hotel, cinema, and gymnasium; the area behind the dam would feature an artificial lake, fish hatchery, aquarium, and botanical garden.
Revolution, yes; but will it turn towards more urban solutions? Herbers’ research suggests otherwise, and pocket proponents themselves recognize that their model is in its own way utopian. Acknowledging that left to their own devices, developers—and the people they house at work or at home—won’t produce a Pocket plan, Solon et al look to government to act for the public good.

They also rely on a transit device—light rail—that has its own limitations. Although undeniably cleaner and cheaper than highway construction, light rail still represents a substantial upfront infrastructure investment at the state or county level. And it is a mode of transport that many suburbanites cannot or will not adopt. Pedestrian Pockets will work for those lucky enough to live in one and commute by rail to work in another, but what of the poor suburbanite who commutes out of pocket, so to speak? Might he be better served by buses or minivans? Or still more likely, the private car? Calthorpe warns that “express bus systems could not substitute for light rail because their peak capacity is lower and their transitory nature couldn’t sustain the land values needed for mixed-use development.”

It is the very transitory nature of so much suburban development that threatens the life of a light rail line.

The Pastoral Impulse

Calthorpe himself relays the tale of a meeting with Leon Krier, whose garden city theory has influenced so many architects. Krier asked why the pedestrian Pockets were not simply pulled together to form a “real city.” Calthorpe replied that he wasn’t trying to urbanize the suburbs, but to salvage those characteristics of suburbia that drew people in the first place: privacy, open space and mobility.

He has a point. For both the Pedestrian Pocket and the TND tap a strong nostalgia for an idealized, rural America shared by hitects and ordinary citizens alike. As such, these two planning dels stand heirs not only to the great garden city tradition but to a broader philosophical tradition of pastoralism that formed the basis for the garden city movement and distinguished this country’s suburban development (see Books, page 121, for a review of John Stilgoe’s Borderlands, a history of suburban nostalgia).

Cultural historian Leo Marx defines this “pastoral impulse” as “the urge, in the face of society’s increasing power and complexity, to retreat in the direction of nature. The most obvious form taken by this withdrawal from the world of established institutions is a movement in space ... away from a relatively sophisticated to a simpler, more ‘natural’ environment ... like Emerson’s New England village common, Thoreau’s Walden Pond or Robert Frost’s pasture.” This impulse animates suburban development from Llewellyn Park to Sunnyside Gardens. It is present, albeit in debased form, in Levittown and Maryland. And it is revived in the TND with its greenbelt, and the Pedestrian Pocket with its ten-minute walk to nature.

It is a strong, and distinctly American urge. “Americans are always starting over somewhere. We build what we don’t like, then go somewhere else and start again,” one exurbanite told Herbers. Yet that ideal grows more and more elusive, for it is based on the principle of flight, and we are fast filling in even our exurban frontiers. “We can’t go back to a land of clearly defined cities, suburbs, towns and rural countryside,” says Herbers himself. “We have created (note the past tense) a whole new form of the American community, one that is diffused, fragmented and without a center.”

Fishman takes heart in reminding us that the horrific urban landscape Charles Dickens confronted, which was “as unintelligible as any dream,” eventually resolved itself into a coherent, dignified city in the hands of Nash and Olmsted. But where is our Olmsted? Who is our Nash? “We shall solve the city problem by leaving the city,” proclaimed Henry Ford. We’ve left the city and are faced with a new suburb problem. Where do we go now? Daralice D. Boles
Comfortable Challenge

Addressing several site and circulation conditions, a design by Eric Owen Moss is among those that comprise UC Irvine’s ambitious building program.
The west façade (below) accommodates the slope of the site and the main entry; secondary access is from the parking area on the east (above).
OF all the buildings on the campus of the University of California at Irvine, none appears more outwardly "awkward" than that of the Central Housing Office. But as is often the case with the work of its designer, Los Angeles architect Eric Owen Moss, this "difficult" exterior contains an exceptionally humane and comfortable interior. The 7500-sq-ft building is the recipient of a 1989 National Honor Award from the AIA.

The Housing Office building is one of the most recent products of UC's ambitious building program (P/A, May 1988, pp. 86-87), which was led by then-Vice Chancellor David Neuman, now University Architect at Stanford. The immediate client was Jim Craig, Associate Vice Chancellor of Student Affairs and Director of Housing at UCI. Craig oversees 125 full-time employees, 25 of whom work in the housing office. Craig and his staff had been working in extremely cramped quarters which, although uncomfortable, had fostered a certain community spirit that Craig was loath to lose. He also wanted the building to be welcoming to students: "I didn't want it to seem intimidating," he emphasized. He had to be a pleasant place in which to work, and finally, it had to allow for future expansion.

In addition to those criteria, Moss also faced a rather unusual site—a sloping corner lot at a prominent campus entry point and an important student walkway, the Verano Mall, connecting the residential part of the campus to the east with the academic and administrative buildings to the west. Moss's response was to try to "grab" the property—building, parking lot, and service buildings—in a single gesture. He superimposed an ellipse, described by concrete block retaining walls, that "folds" over the terraced site.

The building itself, for which the primary pedestrian access is on the west, seems to slope right along with the site. It is rectilinear in plan but appears much looser in section by virtue of its two intersecting roof configurations. One, which aligns with the building's axis, is a series of high, projecting hipped and gabled volumes that mark the public and open-office areas. The second, which looks like a long shed roof that is slightly askew since it follows the slope of the site, shelters private offices. Both roofs, as well as the building's west wall above the block base, are clad in a white-painted sheet met with a subtle red overspray—too subtle to be a convincing evocation of the red tile roofs that are common on campus (Moss's intention but striking on its own merits. On the east side facing the parking the exterior is gray stucco. Supporting the roof overhang of the northwest part of the building are three pairs of clay pipe columns filled with reinforced concrete. The northwest corner is given prominence by a special bent pipe column and a marble fascia. This or reference to "fancy" materials seems a little too self-conscious, give Moss's sophisticated handling of humbler goods.

The lobby and other public and open-office areas are bright, expansive volumes that look decidedly un-institutional. The priv time offices, because of the intersecting roof forms, are all different; each however, has one large window and at least one small one, an sheet metal ductwork that seems to appear when least expected. small loft at the building's south end provides a staff lounge.

Materials and finishes are, by Moss's own description, "frugal," but are used with some elegance, as in the sheet metal baseboards, brass joints in the trowel-finished concrete floors, and the cool black brac laser, and the floors have been carpeted for greater acoustical com fort. Such changes seem to have been a point of contention between architect and client, but by and large, most of the building's users seem happy with it, citing its expansiveness, abundant natural light and comfortable atmosphere. "It isn't the usual little boxy office," was a comment heard from more than one occupant. Taking a stand ard building type and putting it through some unsettling changes is Moss's specialty, but he is able to be subversive here without being sadistic. This building, like his others, is challenging, but it's comfort able, too. Pilar Viladas

The author, formerly Senior Editor with P/A, is Los Angeles Editor for HG magazine.
...from the air, the ellipse is employed to carve out and define a specific area on the otherwise undefined part of the campus is clearly visible (ringing page). Future expansion would be to the south (right in the photo), or vertically. Also seen best from this stage point are the two superimposed roof volumes, higher and sketchier of which celebrates five special aspects of the plan. The more continuous ridge line starts at center of the south façade and angles off to the north at the centerline of a pair of clerestory windows of the office area. The most significant public portion of building, the northwest corner (above and right) is marked by paired clay columns, one of which, ending with a marble fascia, marks the importance of this as the main entry from campus. Pre-painted metal roof surfaces create a dramatic sculpted articulated effect.

The two skewed axes that relate to the site slope, the ring configuration of the inner campus, and the more orthogonal outer campus layout (5). The long axis of the ellipse that Moss uses to define the site also defines the ridge line of the more continuous roof; the building plan axis intersects the other at the center of the south gable (3), and marks the implied but discontinuous ridge over the higher spaces (4). As it moves north, the axis of the ellipse passes the edge of the building, leaving the roof a shed form.
At the point where one of the gables turns into a simpler shed roof, the two canted clerestory windows (left, top two photos) occur in the Housing Support Services open office area; they are emphasized because this is the function that Moss sees as the most important of the office uses. Ductwork in the building (left, bottom) was given special attention, resulting in unique sculptural configurations in many locations. His spaces, including office area (above) and the reception desk (facing page), each have clerestory/skylight openings that reveal the ribs of the hip roof volume. Paired clay pilaster columns reappear to frame the reception desk, with a somewhat greater spacing than those outside.

**Project:** Central Housing Office, University of California, Irvine.  
**Architects:** Eric Owen Moss, Architect, Culver City, Calif. (Eric Moss, principal; Jay Vanos, project associate; Scott Nakao, Diane Gourdal, project team).  
**Client:** Office of Physical Planning, University of California, Irvine; David Neuman, Associate Vice Chancellor.  
**Site:** Gently sloping corner facing a major campus entry point, and fronting on a student walk which connects the campus residential area to the academic/administrative center.  
**Program:** Office building with three open office areas, lobby, employee lounge, 11 private offices, conference room, storage, parking for 25 cars.  
**Structural system:** Wood frame and concrete block with slab on grade  
**Major materials:** Concrete block exterior plaster, pre-painted sheathing, metal, marble, vitrified clay pipe, gypsum board, and brass concrete slab expansion joints (see Building Materials, p. 171).  
**Mechanical system:** Gas-fired boiler, multi-zone four pipe hydronic system, electric chiller, variable air volume fan coils, and exposed sheet metal ducts.  
**Consultants:** Gordon Polon, structural; Paul Antieri, mechanical; Paul Immnerman, electrical; S. Goldin, lighting; Peter Walker, landscape.  
**General contractor:** MIAR, Inc.  
**Costs:** Unavailable.  
**Photos:** Tom Bonner, except as noted.
The proliferation of electronic systems in modern buildings strongly influences many aspects of architectural design.

FOR a sense of the impact that modern electronic systems have on buildings today, simply consider this example: The number of personal computers used by business employees in the U.S. number some 6 million in 1984, grew to 20 million by 1988, and will likely rise to 42 million by 1993, according to one industry analyst. As to that scale of growth the prevalence of office printers, computer, HVAC controls, security systems, in-house telecommunications networks, and fire detection systems, and it becomes clear that office buildings must readily embrace a new partner.

But what does that mean to architects? For starters, it indicates that electronics is not simply a grab bag of arcane gadgetry to choose from after completing the design of the basic building shell. Many believe, in fact, that the introduction of these technologies justifies a fundamental rethinking in the way commercial and institutional buildings are designed and built. "Buildings are becoming alive and interactive and almost human," says Piero Patri, of Whisler-Patri architects in San Francisco. "This is a monumental change." Patri served as chairman of two National Research Council committees that investigated the demands of new electronic technologies and produced the 1988 report Electronically Enhanced Office Buildings.

Experts in the field echo the study's theme that the use of computer, communications, and automated control systems places new demands on a building that, until recently, were rarely taken into account. The most obvious of those demands includes office space that offers a glare-free environment, suppression of noise, uninterruptible electric power, and cooling to offset the heat given off by electronic equipment. But other demands of the building infrastructure are not well understood: an extensive and accessible network of wires and cables; central equipment rooms to house mainframe computers and private communication branch exchanges; battery rooms to provide the uninterruptible power; satellite dishes and microwave antennas; a structural framework sufficient to support loads associated with mainframe computers, battery rooms, and rooftop antennas; and freedom from electromagnetic interferences that contaminate electronic data.

Closely linked to these issues is the matter of worker comfort, which becomes more difficult to control centrally as heat-generating devices are added to offices. Volker Hartkopf, a Carnegie-Mellon University professor who has studied the quality of office environments, says the addition of electronic technology to an office can quickly upset the delicate balance of office comfort. "Marginally successful buildings with this technology thrown into them become failures," Hartkopf says. The thrust of the work by Hartkopf—along with colleagues Peter Mill and Vivian Loftness at the Center for the Built Environment at UC Berkeley—has been to create a procedural model of the building environment that can be used to assess the effect of electronics on comfort and productivity.

"Wiring for Computers"

An issue often faced when designing the electronic office is the user's need for a variety of computers. Terminals linked to a central network, for example, are often supplemented by PCs. At the AT&T Remote Work Center in Oakland, California, the challenge was to provide adequate space for the wiring that serves the many terminals used there. Architect James Burlage, of the San Francisco office of The Architects Collaborative, says the solution in this case was "a deeper than normal ceiling plenum" to provide both the needed space and flexibility to accommodate changes in the system.
Video/Data Systems:
The Legislative Office Building in Hartford, Connecticut, by Russell Gibson von Dohlen, of Farmington, Connecticut, contains a wide range of video and data systems that usher lawmaking into the electronic age. The building's two large hearing rooms contain auditorium seating that faces legislators arranged along a tiered console. The audience can watch a video presentation on a 15-foot screen behind legislators (top), while the lawmakers simultaneously view the same images on monitors in the console (middle). Lighting within each hearing room is of TV studio quality so that television crews have adequate lighting without having to bring supplemental lights into hearings.

Closed circuit video is available throughout the Capitol complex. Video signals from portable cameras in hearing rooms can be routed through the building's broadcast center (bottom left) to monitors elsewhere in the building. Each legislator's office is equipped with a monitor (background in photo, bottom right) on which any of ten closed-circuit broadcasts can be viewed. Fiber optic lines connect the entire system to the nearby Capitol building for viewing in the Senate and House chambers.

The telephone system in each legislator's office shares a desktop console with the computer. In addition to offering voice mail, the system's workstations connect to a sophisticated data retrieval system (including daily schedules and copies of bills) accessed through a service bureau.
HVAC Controls

Office and lab buildings with extensive electronics are prime candidates for automated control of heating and cooling systems. Direct digital controls are generally favored today over pneumatic or electric controls. Sensors on HVAC equipment (for example, an air handling unit) transmit data to a microprocessor-based controller that activates a valve or fan to produce the desired change.

Among the advantages: Breakdowns or malfunctions in the HVAC system are detected immediately and can be diagnosed and corrected by the central computer or brought to the attention of a supervisor either on site or by call. Equipment can be monitored system-wide or at the component level from remote terminals (screen, right).

Worker Comfort

Planning for the Colonia Insurance Co. headquarters in Cologne, Germany, began with a survey of employees’ expectations of a computerized office. Their concerns centered on indoor air quality, natural light, and the ability to control the amount of air, light, and heat in their work space. In response, the building was organized into small pods to give each worker ample daylight and natural ventilation. An increased floor-to-floor height (drawing, right) allows for the integration of both a hanging ceiling for acoustics, ambient heating, and ambient lighting, and a raised floor for individual fresh air supply and cabling. Movable air diffusers in the floor allow for flexible desk arrangements. Designers for the project were BHLM Architects of Dusseldorf.

Building Diagnostics at Carnegie-Mellon—has been to improve the full menu of performance characteristics in the electronic office including spatial, thermal, visual, acoustic, and air quality concerns and overall building integrity. They contend that the individual competence of specialists who handle elements such as structure, ensure, service, and interiors does not necessarily lead to good performance of the combined systems.

Efforts to achieve a desirable level of building “intelligence” (term one must use with care, given the number of prevailing interpretations) are often made in Europe in the name of energy-consciousness, says Jan Goebel, of the Intelligent Buildings Institute, Washington, D.C. The selling point to building owners and tenants in the U.S. just as often centers on worker productivity.

But whatever the motivation, the message coming both from industry experts and the research community is that a structural change in the traditional building acquisition process is in order. The N report says that to accommodate electronic technology successfully, an office building must be designed from the outset to suit technological systems that will be put in it. But how to make it happen? Recommended first is that a detailed goal statement be articulated at the outset and adhered to throughout design and construction. Many experts lobby for the additional contribution of players in the building process. Added to the typical list of participants, for example, would be consultants with expertise in information systems and telecommunications.

Presumably, reliability will improve too. Until now, problems of dysfunction of everything from complex central management control systems to relatively simple sensor-controlled window shades, at times, given a bad name to technology-centered control building environments. One of the key strategies in creating a successful electronic building addresses those concerns, says Patri, the inclusion of a stage called “commissioning,” a period begin before completion of the building and lasting through initial occupancy. During this time the facility and its component systems are assessed with diagnostic procedures to see if they are performing to expectations and, if not, to propose remedies. Retrofitting of existing buildings raises another set of issues. “Up to 75 percent of existing inventory of commercial office structures will need to be retrofitted for electrical capacity,” says Peter Valentine of COMSUL, Ltd., a San Francisco telecommunications consulting firm. As the nature of work in America continues to shift toward reliance on electronics, the implication is clear that buildings new and old have to accommodate those systems and be designed to adapt to rapid changes in technology.
Energy is easy to waste when providing office space for more than 7000 employees. So steps were taken to control costs at the Pacific Bell Administrative Offices in San Ramon, California, designed by the San Francisco office of Skidmore, Owings & Merrill. "More than 50 percent of our energy use is for lighting," says facility manager Alan G. Curtis. "Controls are the way to manage it." Central system operators monitor lighting in key areas of the complex. But building occupants control lighting in offices via their telephones. Lights do not come on until they are needed in an area. Then, at day's end, they dim to half-level to notify employees who plan to work late that they must dial into the system to continue lighting their areas. Every two hours, light levels drop again.

Integrated Systems
The Lockheed Missiles & Space Company's engineering facility in Sunnyvale, California, designed by Leo A. Daly Architects of San Francisco, focused on both energy and space-efficiency. Illumination (drawing, left) is provided by task/ambient fluorescent lighting designed to complement the daylighting scheme. Photocells automatically control electric light levels. Severe solar heat gain in the offices is avoided by allowing heat to collect above the large light shelves and feed into nearby return air plenums. Employees have moderately heavy telecommunication needs and tend to move often; raised flooring was used to avoid wire management nightmares. Machine and power rooms were separated from offices to foster space planning flexibility. Acoustic studies were conducted in a full-scale mockup to achieve acceptable speech privacy.

Building Structure
At Marathon Plaza, a spec office building in San Francisco by architects Whisler-Patri of San Francisco, the program assumed a back-office use that would rely heavily on computers. The structural implications of heavy electronic usage and back-office functions (much document storage and above-average density of people) suggested increasing the floor slab beyond code strength to 100 psf live load. A capacity of 200 psf was supplied in bays near core areas (plan, left) to provide the support for battery rooms, specialized electronic equipment, or libraries. The building's roof also was structured to support dish antennas.
Individual controls for temperature, lighting, air flow, and sound are included in Personal Environments. The controls may be incorporated into existing or new structures and can be reconfigured to suit individual needs. Johnson Controls.

Circle 200 on reader service card

A derived-channel communicator called LineBacker transmits alarm information over a phone line and alerts authorities if transmission is interrupted. It is compatible with digital dialers and fire and burglar panels. Sentrol.

Circle 100 on reader service card

A microprocessor control system can be used with existing hydraulic elevators. It allows faster response time through call allocation, door controls, speed sensing, and position indicators, and can be placed on the elevator. Dover.

Circle 201 on reader service card

Lighting systems in the Pre-Pack line, from simple slide control to multiple lighting effects, are shown in illustrated case studies in this brochure. Special finishes, silkscreening, and engraving are available in custom controls. Lutron.

Circle 202 on reader service card

A closed-circuit camera has a 1/2-inch, high-resolution pick-up device and a built-in electronic shutter. A number of cameras may be attached to an auto-homing switcher to display selected images. Ikegami.

Circle 204 on reader service card

A suspended air-handling system consists of modules that bolt together to provide customized service for various areas of installation. Linear diffusers supply uniform air distribution; an envelope reduces noise. Industrial Acoustics Company.

Circle 101 on reader service card

A communications outlet, with horizontal cables connected to each of two ports, can be quickly reconfigured without rewiring. Adapter inserts match office equipment needs and snap into the ports. Amp.

Circle 203 on reader service card

Outdoor photoelectric beams, which interface with security systems, are synchronized in groups of four to provide accurate operating range and stability in severe weather conditions. Features include high light tolerance and an audible alignment aid. Pulnix.

Circle 102 on reader service card

A programmable lighting system designed especially for smaller applications consists of manual slider and preset control station, with four or eight preset and up to twelve channels of control. Strand.

Circle 104 on reader service card

A closed-circuit camera is designed to military environment standards, are sealed in corrosion-resistant, nitrogen-pressurized housings to endure humidity, pressure and vibrations. Burle.

Circle 105 on reader service card

Electronic access controls use digital scrambler keypad to activate electrified mortise and cylindrical locksets. Best Lock.

Circle 103 on reader service card

Closed circuit cameras, designed to military environment standards, are sealed in corrosion-resistant, nitrogen-pressurized housings to endure humidity, pressure and vibrations. Burle.

Circle 105 on reader service card

(See Technics, Electronic Buildings, p. 98)
Architects & Engineers...

it's tough getting a second chance.

When architects Bonanno and William began construction on the leaning tower of Pisa in 1174, they had no idea that they were embarking on what would become one of the greatest architectural fiascos in history. Had this project been attempted in modern times, it would have resulted in enough litigation to keep a battery of lawyers busy for twenty years.

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For our portfolio, write or call Imagineering/Weatherend* Estate Furniture, P.O. Box 648, Dept. L.A., Rockland, ME 04841; 207-596-6483.
A New Standard for Postal Design

Faced with a burgeoning building program that calls for construction of 100 to 200 post offices a year, the U.S. Postal Service has adopted a computer-based system of standardized designs with enough possible permutations to fit a nearly infinite combination of function, site, energy, and service requirements.

Known as "Kit of Parts," the program adopts a systems approach to ensure a given level of quality, to speed production, and to cut the costs associated with custom design of every new facility. "It truly was conceived as an integrated system," says Barry A. Yoakum, an architect with the postal service's Design and Construction Division in Memphis, Tennessee.

Kit of Parts grew into a nationwide program after officials in Washington showed interest in what was happening in Memphis. Yoakum had developed the concept—"It sounds awfully commonsensical now," he concedes—of taking the typical post office and dividing it into separate functional parts. Each component is designed on a 20-foot module, so the parts are as interchangeable as Lego blocks and can generate more than 100,000 possible floor plans.

"We haven't run across a site yet that we couldn't put a Kit of Parts building on," Yoakum says. Sixty-six post offices designed this way are now in some phase of design or construction. Fewer than a dozen facilities have been completed.

Part of the program's attractiveness is that it takes full advantage of computer capabilities. Development of the system's three-dimensional modular components and prototype form was executed by Memphis architects Jones Mah Gaskill Rhodes, a firm that was both systems-oriented and capable of generating the CADD software containing all the kit information. Now, when local firms are hired to design a new post office, they are supplied with recorded data compatible with one of three CADD systems—Integraph, AutoCAD, or McDonnell Douglas GDS. The Kit includes complete architectural, structural, mechanical, plumbing, and elec-
Daylighting strategies were integral to design of the workroom areas.

The assembly of a post office (above) combines elements that are sized and selected according to local needs.

Kit of Parts buildings adapt to varied sites, as do these projects in Salt Lake City, Utah (left) and Magalia, California (right).
ordinated graphics and steel writing desks are part of the Kit.

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Options for the lobby roof include a continuous glass atrium.

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Circle No. 368
Designing for Independence

Difficulties involved in personal care are a primary reason why older Americans enter institutions. As the number of older Americans grows, the strain of supporting them grows also. But the answer to this dilemma is not beyond the scope of design, as shown by a pioneering project on retrofit bathrooms for the elderly.

The bathroom, designed by Robert Graeff, an architecture professor at Virginia Polytechnic Institute and State University, was developed to allow the elderly to maintain their independence longer than might otherwise be possible. Graeff, an industrial designer, had earlier completed a bathtub that tried to integrate safety and comfort. When he presented the tub design to American Standard, they expressed an interest in an entirely shower/bidet system instead.

The initial idea was to present a bathroom that could be retrofitted into an existing space, negating the need for large-scale renovation or construction. The study became an interdisciplinary graduate project among VPI's gerontology department, human factors lab, and Graeff's Center for Product and Environmental Design. The objective throughout was to "integrate and combine creatively research and design," says Graeff. An analysis of the demographics of the aged revealed that the elderly population is growing, with especially significant increases in the number of older women living alone. The added layer of human factors data suggested appropriate dimensions.

The result was a list of design objectives, including provisions for progressive deterioration of eyesight and decreasing flexibility. In addition, a sensitivity to the need for privacy and the wish to preserve traditional and cultural features of bathrooms was expressed, though retaining traditional appearance proved difficult while providing for the changing physical capabilities.

Five design proposals were developed, all sharing the design objectives but adapted to different sectors of the population, including one for wheelchair users. A two-cell design was chosen for further development by American Standard because of its efficient use of space, although Graeff believes that each of the designs is useful.

The toilet unit in the full-scale model includes support and grab bars, both for ease in entering and exiting the facility and for approaching and rising from the toilet. Total storage is vastly increased over that of a traditional bathroom and includes base cabinets which tilt their contents upward when opened (to prevent dizziness caused by bending over), open-access countertop shelves, and, fitted into the wall cabinet, a magnifying bar which both guards shelf contents and makes the labels easily readable. The washbasin is mounted at a height that does not demand that a person bend over and is shaped to prevent splashing. The watercloset has been ergonomically designed for comfort and support.

The shower enclosure contains a shower head that can be remotely adjusted, reducing the gross movements necessary for bathing. A shower/bidet seat incorporates three water nozzles that massage the back, and a hand-held spray. An infrared heat lamp and hot air blower assist towel drying and lessen exposure to cold air and wet surfaces.

Other features have been conceived especially for the bathroom when retrofitting into bedrooms. Ground level lights function as night illumination, allowing orientation in the dark without the sudden shock from bright lights. And transition angles are kept at 45 degrees to prevent "dirt corners" and aid in cleaning.

The cell design is an efficient use of space, because the shower unit and the toilet unit can be fitted either separately or together into an existing room, or into a bedroom where additional privacy is desired. The installation is neither expensive nor complicated, since the entire unit is prefabricated and can share existing plumbing.

Graeff says that equal importance was placed on user, equipment, and space. While there are currently no plans for manufacture of the prototype unit, these ideals have informed bathroom design in a way that can benefit all home design, and particularly design for special populations.

Andrea E. Monfried
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On The Border

Suburbia, as Russell Baker would say, is as American as frozen apple pie. In 1980, more than 100 million people, or 40 percent of the national citizenry, lived in the suburbs, far more than resided either in cities or in rural areas. And the trend has accelerated since the last census. From Morris County in New Jersey to Gwinnett County in Georgia, and further west to Orange County in California, shopping centers, subdivisions, and offices continue to eat away at the countryside.

is narrow. The book does not attempt to analyze the intellectual underpinnings and visual transformation of an environment that would today be termed exurban or ruburban. Rather, John R. Stilgoe has chosen to analyze the intellectual underpinnings and visual transformation of an environment that would today be termed exurban or ruburban. Borderlands: Origins of the American Suburb, 1820-1939, by John R. Stilgoe, New Haven, Yale University Press, 1989. 187 pp., illus., $35.


An effort to emphasize the importance of spatial integrity in architecture, Haraguchi's collection of axonometric drawings shows designs from Lutyens and Mies to Gehry and Rossi.

Antonio Sant'Elia: The Complete Works by Luciano Caramel and Alberto Longatti. New York, Rizzoli, 1988. 312 pp., illus., $65. The prolific architect's visions, all 367 projects unrealized, are reproduced and analyzed with a kind of sad adoration.


Stilgoe calls special attention to the women "who shaped much of the philosophy underlying borderland life in the United States." Susan Cooper, daughter of James Fenimore Cooper, was particularly influential. Her *Rural Hours* (1859) is central to Stilgoe's explanation of the virtues of natural beauty on the exurban fringe. Cooper scorned farm families because they did not know the names of wildflowers, but she loved the scenery of the countryside, and she was one of the first Americans to appreciate the outdoors for its beauty rather than as an evolving artifact of agriculture.

Because Stilgoe himself shares Cooper's vision and believes that vegetable gardens, wildflowers, outdoor privacy, and romantic spontaneity are essential for health and happiness, he is an advocate of the semi-rural lifestyle described in *Borderlands*. Similarly, he has disdain for the small yards, artificial scenery, electric railways, row houses, and busy streets characteristic of pre-World War II suburbs.

Cities fare even worse at Stilgoe's hands. Favorably disposed towards neighborhoods that have no stores at all, he is the polar opposite of Jane Jacobs, whose 1961 study of *The Death and Life of Great American Cities* celebrated short blocks, mixed uses, and active sidewalks. Instead, Stilgoe suggests that prospective borderers—then and now—were disgusted by the "urban juxtaposition of stores, factories, stables, taverns, and housing" and were "desperately anxious to locate in places permanently free of noxious activities."

Though vehement, Stilgoe's disdain for cities is unsurprising. What comes as more of a shock is the author's scolding of rural America. He notes sadly and scornfully that the nation's farmers were too slovenly and ignorant to make their potentially picturesque farms into places of beauty, order, and abundance. Lacking the requisite resources, energy, and training, they did no more than was absolutely necessary to make a living. Only in the borderlands, where gentleman farmers and enlightened ideas about horticulture prevailed, could one expect to find the fresh air "and a hundred other forces tending toward health and virtue."

Unfortunately, as Stilgoe notes, the automobile spread its baleful influence over the borderlands soon after the Model T went into mass production. Motorists ultimately reconfigured the physical contours of the nation, abetted by a traditional American antipathy toward planning which prevented local governments from preserving the best aspects of borderland life. Instead, the outer fringes of great cities were even more devastated by the internal combustion engine than the central business districts.

Despite its considerable virtues, *Borderlands* does not reach the standard set by Stilgoe's two earlier books. For one thing, he does not really deal with the fact that almost all of the communities which he finds attractive were places of unusual privilege. Most were snobbish in the worst sense, and almost all relied upon restrictive covenants to maintain class as well as racial exclusivity. Should we be surprised or even impressed that the rich were able to build residential neighborhoods of considerable distinction? Obviously, if enough resources and talent are available, it is possible to design and build communities that enhance the human spirit. The real challenge of our time, however, is to design and build attractive and healthy communities for those of less exalted circumstances.

About that dilemma, this book has little to contribute.

Stilgoe's unwillingness to come to grips with the problem of cost is symptomatic of his regrettable habit of allowing the sources to speak completely for themselves. Too often, he simply summarizes or quotes 19th-Century articles without stepping back from the material and giving us the benefit of his analysis and judgment. As a result, the chapters, some of which are as short as one or two pages, become repetitive on such topics as the attractiveness or usefulness of trees and shrubs.

Stilgoe has established himself in recent years as one of the nation's most energetic and thoughtful commentators about the development of the American landscape. He has a better mind than is revealed in this book. Nevertheless, *Borderlands* offers a fresh perspective on the zone between rural space and urban residential rings, and it challenges our assumptions about what constitutes a good life. Kenneth T. Jackson

The author is the Andrew W. Mellon Professor of History and the Social Sciences at Columbia University and author of *Crabgrass Frontier: The Suburbanization of the United States* (1965), which won both the Bancroft and the Parkman Prizes.
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Seminars and Workshops

Tuesday, June 13

8:30 a.m.

9:00 a.m.
SPEC Awards Presentation, recognizing outstanding specialty products that are applicable for contract interiors. Second Floor Conference Center

10:00 a.m.-12:00 p.m.
Designer's Informium on Creative Consciousness. Call ASID/Illinois Chapter for information. Expocenter

10:30 a.m.
Coming of Age: Designing and Building for the Elderly. Dr. Thomas Fairchild, Director, Center for Studies in Aging, University of North Texas. The Merchandise Mart

2:30 p.m.

4:30 p.m.

5:30 p.m.
NEOCON® 21 Industry Reception. Sponsored by E.I. DuPont de Nemours Co. and open to all NEOCON® participants. 14th Floor Atrium, Mart Plaza Hotel

9:00 p.m.
IBD Midnight Affair. Contact IBD at (312) 467-1950. Navy Pier

Wednesday, June 14

8:30 a.m.
Making Things Happen: How to Win and Keep Customers. Keynote Speaker: Harvey Mackay, author and Chairman, the Mackay Envelope Factory, Minneapolis. Chicago Theatre

10:30 a.m.

10:30 a.m.
ABA Journal/Interiors Magazine, Fifth Annual Low Office Design Awards. Expocenter

10:45 a.m.

2:30 p.m.

2:30 p.m.
Comfort in Office Buildings. Gail E. Schiller, Associate Professor of Architecture, University of California, Berkeley; Volker Hartkopf, Professor, Center for Building Performance and Diagnostics, Carnegie Mellon University, Pittsburgh. Expocenter

2:30 p.m.
Floor Coverings to Fixtures: Specifying for Today's Grand Hotels. Speaker: Frank Mingis, President, Mingis Group, Atlanta. Merchandise Mart
Thursday, June 15

4:00 p.m.
Humanizing the High-tech Workplace: Smart Offices, Smart Buildings, Smart Cities. Moderator: Michael Brill, President, BOSTI, Buffalo, N.Y. Panel: John Paul Eberhard, retired executive director, Building Research Board, National Academy of Science, Washington, D.C.; Duncan Sutherland, Office Technology Consultant and Chairman, The Sutherland Group, Reston, Va.; Forrest Wilson, Professor of Architecture, Catholic University of America and Technology Editor, Architecture Magazine.

6:00 p.m.
Celebrate Your Imagination in Chicago! A gala evening at the new Expressways Children's Museum at the renovated North Pier. Tickets $30 per person, call (312) 467-5080.

Friday, June 16

8:30 a.m.

11:00 a.m.

12:00 p.m.
Chicago Day at NEOCON® 21. Open house for Chicago design, architecture, and business communities featuring special showroom events, presentations, lectures, and luncheons. A Chicago jazz review from 2:00 p.m.-5:00 p.m. on floors 3, 8, 9, 10, and 11 of the Mart.

1:00 p.m.
Design Presentation II. Participants in the Modern Architecture symposium present their work. Panel: Andres Duany, Principal, Andres Duany and Elizabeth Plater-Zyberk Architects, Miami; Demetri Porphyrios, Architect, London; Jaquelin Robertson, Cooper Robertson & Partners, New York; and Wolf D. Prix, Coop Himmelblau, Vienna.

4:00 p.m.

14th Floor, Mart Plaza Hotel
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**Alma**

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**American Olean**

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**Arconas**

Designed by Conrad Marini, the Paloma club chair can be specified for lounges, lobbies, and executive seating applications.

Circle 114 on reader service card

**Artemide**

The Ettorino halogen floor lamp provides indirect lighting. Finished in a lead-gray, metallic lacquer finish, the lamp was designed by Ernesto Gismondi.

Circle 116 on reader service card

**Armstrong**

Commercial ceilings such as Fine Look are acoustical panels that combine grid-hiding score lines and textured surfaces.

Circle 115 on reader service card
Atelier International

The Ingot Table collection offers over 12,000 shape, height, finish, and tabletop edge options. Four conical base plates support the table.

Circle 117 on reader service card

Baker Executive Office

Pomelle mahogany additions to the Pfister Collection include an upper deck to complement the credenza, a series of conference tables, and a guest chair.

Circle 120 on reader service card

Gretchen Bellinger

The tissue taffeta Fleur de Lis® is a new gossamer silk fabric. Suitable for window treatments, the 59-inch fabric is offered in a cream, taupe, and pink palette.

Circle 121 on reader service card

Brayton Textile

Serif, a 54-inch, 100 percent worsted wool upholstery fabric is offered in 9 colorways. Serif is patterned after Egyptian handwritings.

Circle 123 on reader service card

Azrock

Genna, an addition to the Century Marble line of vinyl floor tiles, has a white background with gray marbling running diagonally through the tile, which may be specified in 12" x 12" or 12" x 18" sizes.

Circle 118 on reader service card

BASF

Contract carpets using Zeftron 500 ZX nylon can be overdyed or space dyed to break up or accent color. The nylon can also be combined with different yarns to create luminous effects.

Circle 119 on reader service card

Bogesunds USA

A new woven, flame-retardent textile is called Pal. The 59-inch-wide pattern is offered in nine colorways and manufactured in Sweden.

Circle 122 on reader service card

Brickel

The Emile Chair, designed by Timothy de Fiebre, is an updated version of a familiar form. The pub model rests on cherry legs and features upholstery detailing.

Circle 124 on reader service card
Brunschwig & Fils
The multicolored geometric rectangles of Gradation, Shinny wood textures, create the illusion of horizontal and vertical stripes. Seven colorways and complementary tones are offered.
Circle 125 on reader service card

China Seas
Mandarin Rose, a 100-percent cotton versus fabric, is screen printed on a checked dobby weave. The 54-inch fabric is offered in lacquer red, royal blue, teal, and gold.
Circle 128 on reader service card

Cumberland
The high-arm Monaco three-seat sofa is offered in leather or fabric. The seating group also has a lounge chair and a two-seat sofa that can be specified as a low arm or modular unit.
Circle 131 on reader service card

Dar/Ran
A new modesty option is now offered for the Ambience Collection of desks. Pedestal fronts feature vertical vein-line detailing with a solid hardwood transitional base.
Circle 132 on reader service card

Davis
The collection of top surfaces available for the Dialog Desk series includes rectangular, 45 degree, triangular, and trapezoidal. Oak and walnut veneers may be specified for moveable pedestals.
Circle 133 on reader service card
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Circle No. 380 on Reader Service Card
Executive Furniture
The Formtech Palette, an executive casegoods collection, is offered in four wood finishes with 48 laminate colors for worksurfaces.
Circle 137 on reader service card

Executive Office Concepts
A stackable panel system called Room With a View consists of 16- and 18-inch high wood framed, acrylic and fabric-wrapped panels. Work surface choices include wood, veneer inlay, and laminate.
Circle 138 on reader service card

DesignTex
Nimbus, a new upholstery fabric for traditional and contemporary applications, is a durable, tapestry construction with a multi-colored warp.
Circle 134 on reader service card

Domore
A four-circuit, eight-wire electrical system; a range of freestanding desks; and paper management products are features of System Seven, designed by Robert Reuter.
Circle 135 on reader service card

Grey Watkins
A new upholstery fabric and wallcovering called Suzanne is part of the Provencal Collection. Printed on glazed cotton, the floral pattern has a 54-inch repeat.
Circle 141 on reader service card

Edward Fields
The Carpetweavers Collection, designed for large-quantity broadloom contract installations, consists of three textured patterns that may be specified in custom or standard colors.
Circle 139 on reader service card

Geiger International
The Tinto System is a comprehensive modular system of casegoods, worksurfaces, and panels. A urethane coating is offered in 20 colors.
Circle 140 on reader service card

Dunbar
Additions to the Enloe/Summers Executive Group include the panel desk, which measures 72 inches wide, 33 inches deep, and 29 inches high.
Circle 136 on reader service card

Grey Watkins
The Carpetweavers Collection, designed for large-quantity broadloom contract installations, consists of three textured patterns that may be specified in custom or standard colors.
Circle 139 on reader service card

Geiger International
The Tinto System is a comprehensive modular system of casegoods, worksurfaces, and panels. A urethane coating is offered in 20 colors.
Circle 140 on reader service card

Transit Seating systems from Bief feplast feature milled steel construction finished in a variety of oven-baked epoxy colors. One- through five-seat units or seat and stool/table combinations are offered.
Circle 142 on reader service card
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Broadloom and modular carpet systems in Antron® by DuPont have soil-resistance and static protection built-in.

Photography: Tom Crane

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Lees Commercial Carpet Company
**Gunlocke**
Influenced by the Federal Period, chairs from the Sutton collection have a camel top, detailed wood arms, and Marlborough legs or fluted base. Optional button tufting and nail trim may be specified. Circle 143 on reader service card

**Hastings Tile & Il Bagno**
A series of glazed, hand-molded tiles are frost-resistant. The terracotta tiles measure 10" x 10" and are available with matching stair treads. Circle 147 on reader service card

**Hendrick Textiles**
Highlights, a 100-percent nylon fabric, combines a reflective filament yarn with a subtle spun yarn. Offered in 10 colorways, the fabric is 54 inches wide. Circle 150 on reader service card

**Hardwood House**
A new line of component casegoods features a straight edge detail with a flush, back reveal. Enclosures, pedestals, tables, and vertical storage cabinets may be specified. Circle 146 on reader service card

**Haworth**
Places®, freestanding steel furniture includes double- and single-pedestal desks which measure 25 inches high and are available in three depths. Circle 148 on reader service card

**Harden**
Additions to the modular furniture system include a full-length hutch and corner connection units. Optional door units are offered in 20- or 30-inch units. Circle 145 on reader service card

**Helikon**
The Pomele Makore stand-up desk is part of a new line of casegoods, which also includes credenzas, add-on storage units, computer cabinet, table, and breakfronts. Circle 149 on reader service card

**HBF**
The Silhouette Chair, designed by Calvin Morgan, features six different, interchangeable side panel options. Several custom and standard colors are offered. Circle 144 on reader service card
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A palette of four harmonizing colors, Classic and Light Mink, Classic and Light Turquoise, the Tones™ Collection allows you and your clients to interpret and reinterpret a color theme that suits your vision.

The Tones Collection of colors is available on whirlpools, baths, lavatories, toilets and bidets. Classic Mink and Classic Turquoise are also available on a selected line of Amarilis faucets.
ICI Fibres
Sonnet, a tufted cut pile carpet, features Tactesse nylon fibers. Offered in 13 colors, Sonnet was designed by Patrick Carpet Mills.
Circle 154 on reader service card

JAB
An all-cotton, upholstery fabric called Wayne features color-coordinated geometric motifs on a heavy ribbed background. The Italian jacquard is offered in six colorways.
Circle 157 on reader service card

JG
UPS Cluster workstations, a panel-based office furniture system, can be configured into 4-, 5-, and 6-station clusters with central power and data distribution.
Circle 158 on reader service card

IHF
Folding tables from the Diffrient collection are available in a range of styles, sizes, and shapes. Other design options include accent colors, laminates, and veneers.
Circle 152 on reader service card

ICF
Pelle is a new leather stacking chair constructed around a chromium-plated steel frame. The chair was designed for pull-up use in cafeterias, training rooms, or workstations.
Circle 153 on reader service card

Herman Miller
Hollington® managerial chairs are offered in high- and low-back versions with arms, as a low-back side chair with arms, and in lounge chair styles.
Circle 156 on reader service card

Howe

Interns Designs
Philippe Starck’s Royalton Chair rests on a signature, polished aluminum back leg. The chair is finished in mahogany stain or black ebonized wood.
Circle 155 on reader service card

JG

ivex Furniture
ks and credenza tops from the tison collection are bordered by mahogany edges. Drawer and pulls for the casegoods are brass.
Circle 156 on reader service card
Using elegant lines to create a form of comfort, the curvilinear shape of ERGO adapts to any environment due to its transitional design. ERGO's gracefully arched back makes an harmonious transition into the arms and suspended seat to create one unified form. ERGO is accented with a double needle stitch detail for added definition.

With ERGO it's a matter of variation on a theme. The original ERGO chair, as featured, is also available in a dining and wide lounge version, as well as a two-seat sofa. Whether upholstered in fabric or leather, the uncompromising design of ERGO makes an original declaration that keeps it on the leading edge.
Kimball International

The Independence seating collection provides an executive swivel-tilt, task, and posture-back models. Guest seating and secretarial chairs round out the collection.

Circle 161 on reader service cord

Adam James Textiles

Moonlight, an upholstery collection of damask jacquards, is a cotton, wool, nylon blend. The contract textile is offered in 11 colorways.

Circle 139 on reader service card

Kinetics

The modified Neon chair now features molded back. A stool version has also been added to the line. Both models have a cantilevered frame and a urethane, molded seat.

Circle 162 on reader service card

Koch + Lowy

Designed by Sacha Ketoff, the Sapiens/2 table lamp extends up to 45 inches and can reach up to 51 inches in height. The 50-watt, 12-volt halogen lamp is finished in black or gray.

Circle 164 on reader service card

George Kovacs

The Private Eye(s) Collection, designed by Robert Sonneman is powered by a 20-watt bi-pin halogen bulb. Made from injection-molded plastic, the lamps come in table and single- or double-wall versions.

Circle 206 on reader service card

Kron

Alberto Lievore designed the Ponte Seating collection, which includes a loveseat, sofas in three widths, a chaise longue and ottoman, and modules with or without arms.

Circle 207 on reader service card

Jasper Desk

The components of the Trieste Series 3000—desks, credenzas, work surfaces, and storage units—may be configured into a variety of workstations. Three finishes and antique brass hardware are offered.

Circle 160 on reader service card

Knoll Studio

Architect Gianfranco Frattini designed The Kyoto table and Etager. Constructed of wooden crossmembers, the latticework table is offered in 35- and 44-inch sizes.

Circle 163 on reader service card

Krueger International

A managerial chair joins the Pirel seating collection designed by Giancarlo Piretti. Executive office seating and stacking and folding chairs can also be specified.

Circle 208 on reader service card
From executive suite to auditorium, fabrics of Du Pont CORDURA® are unmatched for durability and styling flexibility.

When it comes to contract upholstery fabrics and wall coverings, no other fibers come close to the unique combination of rugged durability and luxurious styling versatility of Du Pont CORDURA.

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tives look shabby or need costly maintenance.

Of equal importance, Du Pont CORDURA offers a soft, satisfying hand and a rich, inviting feel in a wide range of up-to-date colors, styles and textures, from jacquards and heathers to solid blends. So whatever the setting—from yard room to public arena—there is a CORDURA fabric that looks and feels just right. Upholstery fabrics of CORDURA are treated with TEFLEX® WBC for advanced soil and stain repellency, easy cleanability and quick drying.

To help designers with in-depth product information, technical literature, comparative testing or any other design assistance, Du Pont has established the CORDURA Design Resource Network.

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With Du Pont CORDURA, durability is always in style.
Krug
Laminate tables from the 5700 Series may be specified with rectangular, racetrack, square, and round tops. Wood edges are offered in two different styles and sizes, including a radius detail.
Circle 209 on reader service card

Loewenstein
The Ventura chair is offered with or without arms. Designers may also choose between a slatted or an upholstered back for the chair which comes in 26 finishes.
Circle 212 on reader service card

J.M. Lynne
The new YWC wallcovering collection offers a range of vinyl wallcoverings with a choice of textures and patterns suitable for high-traffic commercial applications.
Circle 213 on reader service card

Maharam
A new jacquard upholstery fabric is called Stained Glass, and is a 65-percent cotton, 35-percent polyester blend with an acrylic backing. The collection includes four designs in 14 colorways.
Circle 214 on reader service card

Meridian
New components of the Stackable Storage System include three drawer-front styles and three new drawer pulls. The vertical files are available in 22- or 28-inch deep models.
Circle 216 on reader service card

Monel
The Viola Club Chair, designed by Franz Klein features ball feet and is constructed of hardwood and wood paneling at the back and arms. Standard and large sizes may be chosen.
Circle 217 on reader service card

Marden
The Chesterfield II seating group consists of a lounge chair and a two- and three-seat sofa with tripl stitched cushions.
Circle 215 on reader service card

Lees Commercial Carpets
The Surfex program offers color and design options in modular carpet systems. A choice of four different surface textures and three backing systems are all available in either 18- or 24-inch squares.
Circle 211 on reader service card

Jack Lenor Larsen
New Italian lacquer chairs from the Lyre collection are crafted from European beech and finished in black and white satin lacquer. Upholstered seats may be selected for the arm and side chair.
Circle 210 on reader service card

Muhler
A new edge detail for Varia Casegoods is now available. Esquire, a square-edge design accented by two horizontal shadow lines, is offered on all component and in all Varia finishes.
Circle 218 on reader service card
The Conde House collection includes chairs and tables, for contract and residential use, designed for us by architects and designers from the East and the West.

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Myrtle Desk
Executive U groupings can be ordered in both traditional and contemporary styles. Each desk features a full pedestal with storage drawers and one file drawer.
Circle 219 on reader service card

Nienkamper
The Billow Chair, designed by David Rowland, has a patented Z coil suspension design. The chair is offered as a side chair or armchair in both fabric and leather. The frame is offered in polished chrome and other powder-coat finishes.
Circle 220 on reader service card

PCI/Tandem
Parameters®, a new panel and desk system, offers four wood profiles: square, radius, transitional bevel, and traditional. Coordinating casegoods are offered.
Circle 221 on reader service card

Pace
The Echo dining table has a sandblasted top with clear square to reveal the supports, which are copper coil enclosed by a black metal frame with green patina feet. End and coffee tables may be specified.
Circle 222 on reader service card

Palazzetti
Three new chairs originally designed by Rene Herbst are now constructed of mirror polished and chrome plated steel tube. Cloth covered elastic cords form the seat and back.
Circle 223 on reader service card

Panel Concepts
Omnific Multiple seating uses a central support rail to provide three-, four-, and five-place units with a variety of seat or seat-and-table combinations. Seats may be specified in 17- or 19-inch widths.
Circle 224 on reader service card

Ron Rezek
The Squiggle wall-mounted sconce, an 8-inch high fixture that accepts halogen and fluorescent lamps, is finished in white brushed aluminum.
Circle 226 on reader service card

Rosemount Office Systems
A new color program developed by Joan Burgasser for the Orion® Panel System includes fabrics, trims, and finishes.
Circle 227 on reader service card

Scalamandre
Ariel is woven from 60-percent rayon, 30-percent cotton, and 10-percent linen. The new contract textile may be specified in three colorways.
Circle 228 on reader service card

Patterson, Flynn & Martin
Illusion, a hand tufted wool fabric, part of the Obsession collection, which consists of black, white, and tones of gray colorations.
Circle 225 on reader service card
Forbo Linoleum Lets Me Create Beautiful Mosaics For The Floor.

Lightly marbleized Forbo sheet linoleum in 11 different colors provides the perfect medium for Barbara Astman's art floor in the Olympic Speed Skating Oval. The University of Calgary also used Forbo off-white linoleum tile in the halls, where a decorative inlay of the XV Winter Olympic logo is installed.

"An historic building like the Olympic Oval demands a bold and heroic entrance—to enhance the excitement of the Winter Games, to create a legacy for the people of Calgary long after the games have ended.

"Forbo Linoleum comes in such a beautiful spectrum of colors, is wonderfully durable, and lets me create and implement designs as elegant as a Byzantine floor at a quarter of the cost."

Artist/designer Barbara Astman is a native of New York now living in Toronto. For a detailed case history and full color literature contact Forbo North America, today.

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Stroheim & Romann
Part of the Tapestry collection, Langtree is a Gothic molding pattern that is designed to represent a sculpted border. Complementary woven textiles are also offered.
Circle 231 on reader service card

Shelby Williams
A floral pattern tapestry called Twig, is made from a blend of 65-percent cotton and 35-percent rayon. The 54-inch fabric is offered in four colorways.
Circle 229 on reader service card

TAB Products
The products that make up the Prestige Systems line include a wood-panel system, a wood-trim system, and an executive high-end furniture program that features high-gloss mahogany and light oak finishes.
Circle 234 on reader service card

Steelcase
A new lightweight stacking chair, called Pari, can also be specified as a side chair. Fabricated with a DuPont Zytel® plastic shell, Pari is stain- and scuff-resistant.
Circle 230 on reader service card

Studio Steel
The Technostat Table consists of structural and stainless steel with black rubber details and is available as occasional, conference/dining, console, and coffee table sizes.
Circle 232 on reader service card

Sunar Hauserman
Design Option Wall offers many base, ceiling, and finish options. The unitized movable wall has vertical chases for power and communication cabling.
Circle 233 on reader service card

Taylor Companies
The Bentley Swivel chair is offered in mid-management, low-back or closed-arm versions in addition to the Executive high-back model. Bentley stands 35" to 38 1/2" high.
Circle 236 on reader service card

Tarkett
A new Ricchetti ceramic tile collection is called Desert Moods and consists of subtle pink, bone white and beige colorways. The 8-inch tiles have an irregular edge and a semi-matte finish.
Circle 235 on reader service card
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Zeftron nylon

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Circle No. 314
Westinghouse
A series of component enhancements includes modified cabinets and worksurfaces, a multi-rail accessory panel, and expanded trim, finish, and fabric offerings.
Circle 241 on reader service card

Thonet/Madison
The Polar Chair, designed in Copenhagen by Komplot Design for dining areas and cafeterias, uses a bentwood arm and leg, a molded plywood seat and seatback, and steel wire leg supports.
Circle 237 on reader service card

Tuohy
Six new desks make up the Japonica Collection. A complement of executive desks, returns, and credenzas in a range of sizes and finishes are part of the line.
Circle 239 on reader service card

Trendway
Heather-tone fabrics for vertical panels are offered in a mix of complementary solids. Complementary high pressure laminates will also be featured.
Circle 238 on reader service card

Wilson Art
Decorative edge treatments for worksurfaces and cabinet doors make up the new Snap-On-Edge® line of moldings. Wood moldings are offered in 17 solid wood profiles.
Circle 242 on reader service card

Veda
Wilkahn FS + Grand Class seating adjusts automatically to provide constant lumbar support. High- and mid-back models feature pneumatic height adjustments and a tilt-lock mechanism.
Circle 240 on reader service card

Worden
A new component transport system is called M.T.S. Applicable in libraries, healthcare facilities, and private offices, the system consists of a maneuverable cart used together with staging racks and shelving units.
Circle 243 on reader service card
Choose colorful comfort.

Colby designs offer superb comfort, strength and the ultimate in versatility. Featuring 11 gauge steel frames with tough COBAR™ coating, they're available in free-standing or joined to tables in modular configurations. All upholstered cushions use Nemschoff Flip-loc® or Corloc® seating systems to make them instantly renewable on-site. Call or write for the colorful new Colby catalog now.

Circle No. 323 on Reader Service Card
A Call for Submissions

To identify outstanding houses to be featured in the December 1989 P/A, the editors are calling for submission of residential projects that will be completed by this summer.

Eligibility

Any single-family residence (house, house addition or renovation, apartment, guest studio) completed during the period January 1988 through August 1989 can be submitted. Landscaping and furnishing will have to be completed sufficiently to allow comprehensive photography commencing on or about September 1, 1989. Houses previously published in P/A, Architecture, or Architectural Record are not eligible.

Submissions

- A one-page description of the program, site, and ideas behind the house's design. Special attention should be given to the development of the scheme and the precedents or conditions that affected it.
- Site plan and plans of each floor. Send reduced plans, not full-size working drawings.
- Photographs (preferably slides, but prints accepted) of the house, completed or near enough to completion for its design to be evaluated. Photographs need not be professional, but should be clear and numerous enough for editors to judge from them.
- There is no limit on the number of submissions a firm can make, and there is no submission fee.

Deadline

The deadline for submissions is Wednesday, May 31. Materials must show postmark (or receipt by other carrier) by that date. The editors will review submissions during the month of June and notify all those selected by June 30.

Return of Submissions

Submissions not selected will be returned by July 7, provided an addressed envelope with sufficient postage is enclosed. (Alternatively, an account number for Federal Express can be attached, to allow for two-day collect, return delivery.) Entries without provision for return delivery will be discarded after the selection process.
Next June more than 30,000 architects, engineers, contractors, facilities managers, interior designers, mapping professionals, process/power engineers, specifiers, project managers, computer consultants, CADD specialists, and other design and construction professionals will attend A/E/C SYSTEMS® '89.

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Circle No. 355 on Reader Service Card
Victorian conservatories are available in rectangular or octagonal designs. A full-color catalog describes the modular, cedar structures and illustrates several design options. Top-hung side sashes, held open by brass window stays provide ventilation. Extruded PVC gutters and leaders drain water. Double glazing is optional. Amdega.

Circle 205 on reader service card

Electronic locksets called Touchcode® are microprocessor controlled and operate from a self-contained battery pack. Once the correct six-digit code has been entered, the mechanism unlocks for a period of time ranging from four to six seconds. Users can assign a different six-digit number to as many as three different employee groups, plus an overall master code. Touchcode® is available in six mortise lock configurations with features such as a one-inch deadbolt and key override. Yale Security.

Circle 107 on reader service card

A barrier-free shower module features a fold-up seat and measures 36" x 36". Designed for residential applications, the compact unit also meets ANSI institutional requirements. Offered in white, almond, and four other colors, the unit is part of a collection of barrier-free bathing products. Kohler.

Circle 106 on reader service card
Press-button locksets called Premi-apri are manufactured in Italy. Rather than rotating, the locksets operate by a slight touch of a built-in lever-action button. Two models are offered in six colors and three finishes. Iseo Locks.

Circle 244 on reader service card

Heated spas for commercial and residential applications made from stainless steel can accommodate from 4 to 22 people and are offered in octagons measuring from 75 inches to 86 inches in diameter and varying in length from 86 inches to 168 inches. A brochure describes the easy access spas. Bradford Spas.

Circle 245 on reader service card

New lighting directory entitled Office Lighting and Productivity has been added to the large selection of free publications devoted to lighting innovations and solutions. The National Lighting Bureau.

Circle 246 on reader service card

Over 700,000 DRY-BLOCK® units used in the Charlotte Coliseum

The beautiful, split-face masonry units making up the walls of the fabulous Charlotte Coliseum are protected from the elements by the DRY-BLOCK® System. Depend on DRY-BLOCK® the original, integral water-repellent system for lasting beauty that stands up to whatever Mother Nature dishes out.

For the full story on the Charlotte Coliseum, just drop us a line.

Circle No. 336 on Reader Service Card

A new window shade called Duette Sheer Visuale is fabricated from a light, nearly transparent fabric. The pleated shades feature a patented honeycomb construction and are offered in six pale colors. Hunter Douglas.

Circle 247 on reader service card

A software program called Wood-E® helps architects and engineers save hours of design time on wood joists and beams. The software can calculate multiple spans with up to six support cantilevers, uniform, concentrated, and trapezoidal loads. MiTek Wood Products.

Circle 248 on reader service card

A magazine rack made from steel tubing is finished with a black polyester enamel. A clear enamel coats the steel rod. The unit stands 72 inches high and weighs 15 pounds. Godley-Schwan.

Circle 249 on reader service card

New two-tone windows may be specified in tilt and turn, double hung luxury windows, and many other styles. A newly developed direct painting process maintains extrusion tolerances and protects against water and air infiltration. Mannix.

Circle 250 on reader service card

(continued on page 168)
Now there's more than one way to look at residential sprinklers.

Until now, sprinkler system designers have had a limited choice of residential sprinklers to apply to a wide range of conditions. Viking solves this problem by offering two distinctly different residential sprinkler styles in a variety of colors.

The Microfast® line employs a small frame and a unique slender bulb element in pendant and horizontal sidewall models. Available in chrome, brass & bright brass, white and Navajo white. Microfast residential sprinklers are UL listed. Color-matched flat or special adjustable escutcheons are available for all Microfast sprinklers.

The new Horizon® Residential sprinkler is a visually appealing flush sprinkler design. UL listed, the rugged Horizon Residential is available in chrome, black chrome, bright brass, white and Navajo white with matching adjustable escutcheon ring.

Both Microfast and Horizon Residential sprinklers come in 1/2" or 7/16" orifice sizes in a variety of temperature ranges and provide unmatched quality, appearance, and performance at very competitive prices.

Viking sprinklers and fire protection equipment is distributed nationally through SupplyNet. For more information on Viking’s Microfast and Horizon Residential sprinklers, contact your nearest SupplyNet member distributor, call, or write the Viking Corporation, Hastings, Michigan.
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Circle No. 001 on Reader Service Card

NEW PRODUCTS (continued from page 166)

Ceilings engineered for use in ice rinks are called Low E ceilings. The design blocks radiant heat transfer from the ceiling to the ice, thus reducing refrigeration costs. Viking Arena System.

Circle 251 on reader service card

Asbestos removal is the subject of a 12-page color brochure which discusses the problems associated with the presence and abatement of asbestos. BFI Stephens.

Circle 252 on reader service card

A new rug called Inflight Day was designed by Pamela Babey Silk. Carved dots are individually tufted and emerge from a flat, matte textured wool background. Bordered with a fine silk band, the rugs are offered in dark and light color palettes. V'Soske.

Circle 253 on reader service card

A new insulation system made from blocks of FOAMGLAS® was developed for use in high temperature environments. StrataFab® may be ordered in multi-layered stacks or billets. Pittsburgh Corning.

Circle 254 on reader service card

A new flat file drawer called Artfile Supreme is stackable—to 15 files high—transportable and storable. The oak unit holds paper up to 22 3/4" x 30 3/4". Jerry's Artarama.

Circle 255 on reader service card (continued on page 171)
PTI's 767 Acrylic Plus Sealant offers big advantages to those who want high quality sealants at reasonable cost. This unique acrylic polymer, an alternative to urethane, inherently resists ultra violet degradation better than urethanes. Long life (20 year minimum) is built in, not added on in PTI's 767. It adheres tenaciously without primer to most clean substrates. Use it on glass, metal, concrete, wood or any combination. It provides excellent elongation, even in extremes of heat and cold, and meets the Federal Specification FT-S-00230C, Type II, Class A.

Get the Data Sheet on PTI 767 and learn how to put quality into your next building project. Protective Treatments, Inc., 3345 Stop Eight Road, Dayton, Ohio 45414. Tel. 1-800-543-7570. In Canada PTI Sealants Ltd., Rexdale, Ontario. Tel. 416-249-7234.
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For more information, or to receive the registration packet, please call 1-800-342-6278 (in Illinois, call 312/527-7618).

NEW PRODUCTS

(continued from page 168)

Hand-painted fabrics make up the Rave Reviews collection of woven, print, and draper textiles. Pearlized, glazed cotton fabrics complement a line of tapestries and tea-washed linens.
B. Berger.
Circle 256 on reader service card

A new color selection system called Colorcurve® enables designers to communicate precise color selections to manufacturers using the same system. The system's colors are grouped according to objective reflectance curves for accurate matching.
Colorcurve Systems.
Circle 257 on reader service card

Building Materials

Major materials suppliers for buildings that are featured this month as they were furnished to P/A by the architects.


The Hynes Veterans Memorial Convention Center, Boston (p. 65). Architects: Kallmann, McKinnell & Wood, Boston. Steel frame: (continued on page 172)
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Circle No. 376 on Reader Service Card
NORTH DAKOTA STATE UNIVERSITY
Fargo. The Department of Architecture and Landscape Architecture at North Dakota State University is seeking applicants for one or more full-time teaching positions at the Assistant Professor level in Landscape Architecture and/or Architecture (9-month basis, tenure-track) beginning Fall 1989. Teaching duties include architectural design, lectures/seminars in fields such as technologies, structures, landscape architecture, computers, building methods and materials. Required: Master of Architecture or Landscape Architecture. Preferred: professional and teaching experience, and professional registration.

The Department of Architecture and Landscape Architecture has a student body of 1,000 in the Architecture and Landscape Architecture programs. North Dakota State University is part of the Tri-College program including two universities and one college with over 20,000 students. North Dakota's full-time student body totals 10,000 students.

For full consideration, application should be made by June 1. Application, resume and names of references to: Faculty Search Committee, Department of Architecture and Landscape Architecture, North Dakota State University, B.U. Station, Box 5285, Fargo, North Dakota 58105. NDSU is an Equal Opportunity/Affirmative Action employer.

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To be responsible for administration/management of growing 20+ person firm. 10 years experience as Project Manager: 5 years experience as Business Manager, a minimum.

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Circle No. 344 on Reader Service Card
This canopy at the main entrance to the Hynes Convention Center (see pp. 65–77), designed by Illman, McKinnell & Wood, skillfully resolved the challenge that they posed for themselves of attaching a projecting glass and steel structure to an awkwardly curving granite wall.

The canopy has a laminated glass skin composed of eight-foot-wide panels. Supporting at skin is an elegant steel structure consisting of horizontal trims and sloping perforated arms, which rest upon steel bases that fan out like fingers on the wall (above, bottom right). Those tubes, which have joints to accommodate various loads on the structure, are welded to vertical steel plates, which in turn are welded to steel trusses attached to the building's main columns (middle left). Sealed within the canopy is a truss system whose leaders, rich double as a place to hang lanterns, disappear among the steel fingers. Downlights illuminate the sidewalk (bottom left).