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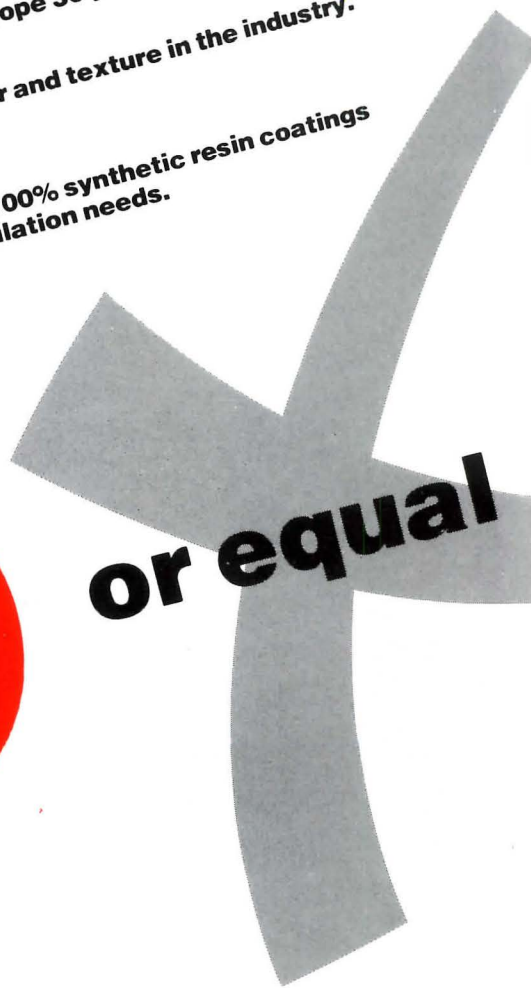
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EVENTS

Aug. 4-7: Industrial Designers Society of America Annual Conference, Seattle, Wash. Contact: IDSA, 6802 Poplar Place, Suite 303, McLean, Va. 22101.

Aug. 15-19: American Society of Interior Designers National Conference and International Exposition of Designer Sources, Chicago. Contact: Ed Gips, ASID, 1430 Broadway, New York, N.Y. 10018.

Aug. 16-17: National Association of Asbestos Abatement Contractors Symposium on Asbestos Projects Management, Washington, D.C. (Repeat symposia Aug. 30-31, Chicago, and Sept. 13-14, Los Angeles.)

Contact: Jennifer Shepherd, NAAAC, P.O. Box 6337, Kansas City, Kan. 66106.

Aug. 19-22: Ceramic Tile Distributors of America Sixth Annual Convention and Exposition, Boston. Contact: CTDA, 620 N. Craycroft, Suite 204, Tucson, Ariz. 85711.

Aug. 20-22: Course on Building Energy Performance Analysis Using the DOE-2 Computer Program, Continuing Education in Engineering, University of California, Berkeley.

Aug. 26-28: Design Conference on Five Buildings in Four Tenses: How Architecture Speaks to its Public, San Diego. Contact: Ravi Waldon at Institute headquarters, (202) 626-7429.

Aug. 29-31: Seminar on Principles of Low Energy Building Design in Warm, Humid Climates, Orlando, Fla. Contact: Ken Sheinkopf, Florida Solar Energy Center, 300 State Road 401, Cape Canaveral, Fla. 32920.

Sept. 27-30: Second International Congress on Architectural Heritage in Graz, Austria. Contact: Interconvention, P.O.B. 80, A-1107 Vienna, Austria.

Oct. 22-26: International Conference on Tall Buildings, Singapore. Contact: ICTBS '84, Institution of Engineers, 10 Anson Road, #14-06, International Plaza, Republic of Singapore 0207.

Oct. 28-Nov. 2: Convention of the Pan American Federation of Engineering Societies, Caracas, Venezuela. Contact: Julie E. Gibouleau, American Association of Engineering Societies, 345 E. 47th St., New York, N.Y. 10017.

Nov. 5-10: International Conference on Low Cost Housing for Developing Countries, Roorkee, India. Contact: T. N. Gupta, Central Building Research Institute, Roorkee, India 247667.

June 9-12: AIA Annual Convention, San Francisco.

LETTERS

Wright Stuff: On the first anniversary, in July, of the journal's name change to ARCHITECTURE, I would like to recall my 1957 radio broadcast with Frank Lloyd Wright in which I tried to prevail upon

him to change his longstanding bias against joining the Institute, which I still have on tape. Wright replied that he would be willing to join the AIA "if they changed the name to the American Institute of *Architecture*, but not while it is called the American Institute of *Architects*, for architects are the only things that are wrong with architecture."

I have a feeling he would have backed up your name change 100 percent. This points to higher-minded ideals which you continue to project. Good luck!

*Jeffrey Ellis Aronin, AIA, FRIBA, SAM
Woodmere, N.Y.*

Daylighting (Again): Architectural styles, like women's fashions, come full circle, with periodic re-inventions of the wheel hailed as breakthroughs. Witness the daylighting renaissance. It is most interesting and somewhat amusing to read in the architectural press and consumer magazines of renewed interest in more and better use of natural light: lots of glass—whole walls of it, skylights, even the re-emergence of the maligned and super-annuated glass block—all of which were in fashion in the '50s and '60s, especially with school building proliferation.

School building exhibits featured emphasis on innovative daylighting schemes. Architects engaged in friendly competition devising new daylighting design methods—some of them pretty far out! Bill Caudill, John Lyon Reid, Larry Perkins, myself, and others were all busy focusing on window walls, clerestories, glass blocks, etc., etc. Then daylighting went into a sharp decline: Educators wanted more wall space, less glare, elimination of complicated and costly daylight controls and shading. Energy was cheap; fluorescent lighting was in.

Now, spurred by costly energy, we're back again to maximizing and exploiting daylight. Ain't progress grand? Fashions, too! I'm happy that we're back on the right track, saving costly energy and utilizing old Sol to the utmost.

*William Arild Johnson, AIA
Anchorage, Alaska*

Recognition for Craftsmanship: A steelworker, Mike Lefevre, told Studs Terkel in *Working*: "... I would like to see a building, say the Empire State, I would like to see on one side of it a foot-wide strip from top to bottom with the name of every bricklayer, the name of every electrician, with all the names. So when a guy walked by, he could take his son and say, 'See, that's me over there on the 45th floor. I put the steel beam in.' Picasso can point to a painting. What can I point to? A writer can point to a book. Everybody should have something to point to."

The book, a "No. 1 Best Seller," according to its cover, has been out since 1972.

So where is that strip? Why, by now, aren't there hundreds? Scores? A dozen? One?

We decry the lack of true craftsmanship in our major artifacts. But encouragement of skill in one's trade comes in part from identification, in both a public and a private sense, of the person with his or her work. Split them asunder and both run the risk of disappearing. Of course there are those who can continue to invest themselves in their work without public affirmation. But in a world in which self-worth is constantly under attack by what we euphemistically call competition but all too often amounts to mutual denial, public affirmation becomes important, perhaps indispensable, to many. Certainly the quest for quality should be associated with a return to a recognition of its sources.

Lefevre verbalized the heedlessness and needlessness of the anonymous society. It is not true that big societies have to ignore their individuals, only that they too often do so. It is, alas, not enough to *be* an individual; you must also be recognized as one and affirmed as one to feel yourself a member, not simply an element, of a community.

Lefevre's idea is beautiful because it seems to capture so much truth in so little space and can be put into practice at so little cost. *Professor Marvin Adelson
University of California, Los Angeles*

West Front Preservation: Kudos to your news staff for the succinct yet articulate explanation of the current method being thoughtfully employed for the preservation of the U.S. Capitol's West Front (see April, page 11). Understanding that much of the essence of the historic preservation is embodied in the very tangible history of those materials that remain today is critical. Once these materials are gone it is both appropriate and traditional to offer new designs that will better ensure the conservation of the fabric and form.

It is reassuring to know that design professionals in this country are informed of the valuable contributions resulting from the sophisticated science of architectural conservation through publications such as OUR OWN ARCHITECTURE.

*Phillip W. Neuberg, AIA
Architectural Conservator
Division of State History
Salt Lake City, Utah*

Additional Credits: In the April article "A Tale of Two Houston Towers," page 38, interior architect for both Republic Bank Center (by Johnson/Burgee) and Allied Bank (by Skidmore, Owings & Merrill) was Genesler & Associates.

Correction: The reproduction of Peter Plagens' painting on page 230 of the May issue was printed sideways. The right edge is actually the bottom.

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Fairs

In New Orleans, Warehouses and 'Forms from an Idealized World'

Dusk is the hour of change, the suspended moment when reality slips into the dream world. There is a blur between illusion and reality at dusk, and especially in New Orleans, where facts get lost in the enveloping lavender of evening. That's when the lights come on at the World's Fair.

Evening is the best time to visit the 1984 Louisiana World Exposition, and dusk its perfect hour. Most of the crowds have turned to leave, the heat from the Louisiana sun lies stored in pavement and plants, jazz begins to drift out of the renovated warehouses inside the gates along Fulton Street, the odor of hot boudin and tandoori chicken reaches out and pulls you down the promenades while warm lights wash the walls or twinkle on parapets.

This is a fair rooted in a specific place, a fair designed for the deepening pink of a Gulf evening. It was conceived to fit within the fabric of a dense city already rich in character. No futuristic vision, the Louisiana World Exposition celebrates the present moment, the actual place.

It is a Class II fair where foreign countries are housed corporately so that individual pavilions cannot be relied on to set the scene. The planners, August Perez & Associates, and their primary design consultants, including Charles

Moore, FAIA, William Turnbull, FAIA, and lighting expert Richard Peters, AIA, let New Orleans inspire the show—the New Orleans of strong neighborhood flavor, of outrageous costumes and carnival. A new neighborhood, the 82-acre fair, has joined an older precinct, the historic warehouse district, and both should be visited on foot.

As the late afternoon sun shades the French Quarter and throws long shadows along the edges of Canal Street, you walk through a corner of downtown toward the fair site. The crowds are queuing to catch buses home to the Lakefront or Chalmette. After passing under the oversized, swooping concrete porte-cochere of the Rivergate exhibit hall, South Front Street opens up into a linear plaza with ticket booths three-quarters of the way down and fair gates at the end. Fragments of a brick wall define one side of the plaza, with semitropical plants perched in transparent window openings. The wall, a piece of a demolished building, serves as a directional funnel, a bit of texture, and a hint of what lies within the gates.

Right, twilight at the end of the Wonderwall, where fantastic critters fling themselves into the Ferris wheel. Below, alligators and mermaids at the main gate.



Atop the mock-heroic gates repose two multistory papier-mâché mermaids with strands of baseball-sized pearls; a pelican, the state bird of Louisiana, grabs the earth. This 51-foot-tall confection is by Barth Brothers and Perez Associates, with design efforts by Moore, Turnbull, and Peters. (An equally fantastic sculptural ensemble waits at another gate, where



Photographs by Allen Freeman



Blaine Kern, master of Mardi Gras floats, joined the Perez team. There polychromed sea gods and goddesses stand watch with 85-foot-long alligators.)

Water splashes ahead. Through the arched openings of the gates lies the Centennial Plaza, in whose center water plays into a diagonally sited lagoon braced with multicolored towers. Collectively these

pastel pavilions recall the 1884 Cotton Exposition held in New Orleans' Audubon Park. A timbered walkway lines a portion of the lagoon, offering shade as it snakes around. Turnbull suggests that the water ties the open space to a specific place: "It gives the feeling of being somewhere as opposed to the openness one finds in a piazza."

Water is also the theme of the exposition—"The World of Rivers: Fresh Water as a Source of Life." The Moore/Turnbull/Peters touch, in collaboration with the Perez firm's, is evident throughout much of the narrow site beside the Mississippi, and the result lies somewhere between Disneyland and Canal Street. The planners faced the problem of how to intro-



Above, Centennial Plaza pavilions and downtown; left, a break in the Wonderwall.

duce surprise and diversity into what is essentially a long, straight grouping of industrial buildings on both sides of railroad tracks. Centennial Plaza is the first of six "neighborhoods" that break up the whole into several approachable, identifiable parts. Its use of water as a unifying element is echoed in the Bayou Plaza, at the opposite end of the site, and along the International Riverfront.

Within the Centennial Plaza neighborhood, there is a profusion of texture and detail. From a vantage point just beyond the fair gates, the curves of the fountains are echoed in the sinuous curve of a monorail track, which loops at the entrance to the plaza. These curves play

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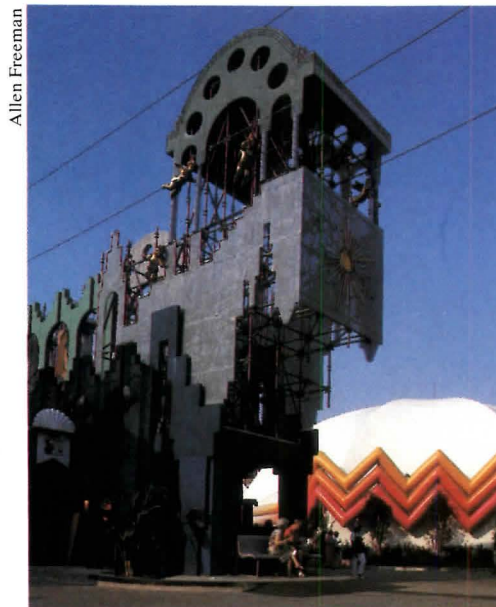
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Unless otherwise indicated, the news is gathered and written by Allen Freeman, Nora Richter Greer, Michael J. Crosbie, and Lynn Nesmith.



against the jutting angular patterns of the amphitheater far ahead to the left and soaring steel arms, which support high wires for a gondola ride across the river, beyond the lagoon. Punctuating this view are the steep pink and lilac roofs of the theme pavilions.

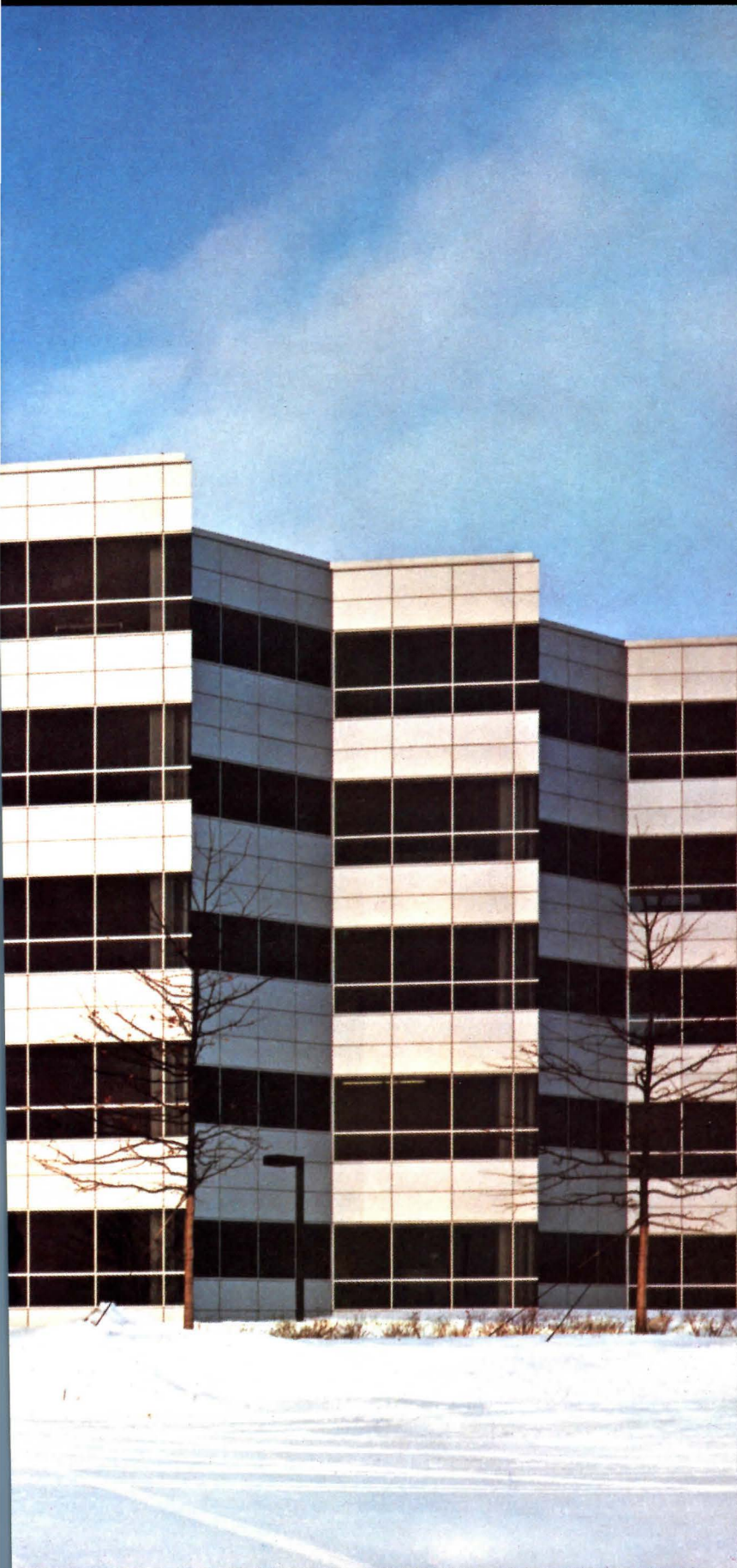
The scene is sealed by certain backdrop elements—walls that shield the reality of working railroad tracks or garbage collection, walls that help contain and define the neighborhood. The larger Great Hall looms as such a blank wall beside the gondola terminus. Similarly, behind the plaza are the brick warehouse walls

of the city of New Orleans exhibit.

The 15-acre Great Hall will become the Louisiana Convention Center when the exposition ends. Its massive spans cover 400,000 square feet and hold the majority of individual smaller exhibits such as the Great River Road Association Steamboat, the 46-foot Ochsner Foundation inflatable heart, and the Louisiana pavilion. Two noteworthy smaller exhibits within are the Mississippi pavilion, a colorful collection of building blocks and cut-out shapes by Samuel Mockbee Architects with 3-D/International and Communication Arts Co., and the WDSU-TV pyramid, a painted framework of red steel tubing, glass, and fabric, illuminated from within by megawatts of studio lighting and neon signage, and designed by Blich Architects, Inc., of New Orleans.

And, near the door to the Bayou Plaza is an 1835 Creole cottage that was moved to the hall from its home in the pathway of a new Mississippi River bridge on Erato Street and renovated by the Preservation Resource Center. The Great Hall is cool (it is airconditioned), but it is cavernous, and despite a high level of illumination, many exhibits cannot be seen to best effect. The clear, glazed canopies on one of the longer elevations provide some relief from the sun and rain, but the build-
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Left, the space shuttle Enterprise, monorail, stairway with waterfall, and, in background, U.S. Pavilion; below a pedestrian bridge across Fulton mall in the warehouse district.



Fairs from page 12

ing is essentially a backdrop for other stories.

Directly across South Front Street from the Great Hall sits authentic New Orleans in the Fulton Street mall neighborhood. The mall, with its successfully renovated warehouse structures, brings the real world of New Orleans in proximity to the imagined world of the festival architecture. These 27 buildings, which form perhaps an eighth of the historic warehouse district, have seen new life flowing into them. Their brick texture and wide openings with blue-green doors promise food or drink or shopping within.

The largest single renovation project within the grounds is the Federal Fibre Mills, keystone of the Festival Park neighborhood. This multistoried brick building will be returned to its owners, Pres Kabakoff and Ed Boettner, who plan to

spend \$11 million to convert the 184,000-square-foot structure into 109 residential units. From the building's third floor at Jed's Lookout, there is an excellent view out to the Bayou Plaza and down to the Italian Village, a surprise plaza tucked within the folds of the warehouse area.

That high perch is a good spot to stop and gawk at the Wonderwall as its 20-foot-high pelicans leap 70 feet to the whirling giant Ferris wheel. The wall is the fair's most unifying and organizing element, the pin that holds the toy together, and it is great fun. It begins its path at the fair gates in Centennial Plaza and flows along South Front Street, dividing the Fulton Street mall from the Great Hall and curving finally into Bayou Plaza and the Ferris wheel. Its theme is the great theme of literature and theater—appearance versus reality—and it is brilliantly and meticulously carried out. Moore,

Turnbull, and Peters, together with Leonard Salvato and Arthur Anderson of the Perez firm, share major credit for the sculptural concoction that is actually an assemblage of scaffolding, concrete, paint, fabric, light, color, wit, and a dash of Tabasco. There is a wave to the sculptor here, the ironist there, but don't look too closely: Wait until dusk.

Heavier forms representative of the real city line its base, which is interspersed with vending booths and stages for small performances. You can walk into and through the wall at certain points, sit beneath it, or buy a beer and stare. The next layer includes forms from idealized worlds, where Byzantine domes, pergolas, and Coliseum-like arch forms share the stage. The edges are shiny at this level; the domes burnished. Along the top of the wall is exposed metal scaffold structure hung with a diaphanous material. Putti, glazed and gilded and appropriately chubby, ascend into the ether, where moving flags and turning wind vanes make the actual transition to the atmosphere. The wall is lit to focus on recesses and coloration. At dusk the whole thing snaps to life with brilliant lights that "progress" with intermittent parades.

The festival motif of Moore's nearby Piazza d'Italia is explored and definitively elaborated at the Wonderwall. The wall was built for the here and now, and its scaffolding, which was leased from a scaffolding concern, will return to its owners after six short months.

Turnbull believes "double entendre" in the Wonderwall to be legitimate on a midway where classical references and pop icons set up a visual vocabulary that anyone can read and relate to. As an example, the wall is punctuated with royal palms familiar to any Orleanian. But here reality takes a twist, for the palms are constructed of concentric layers of green metal tubing topped with potted palmettos growing out of the crown. Alive, yes; true royal palms, no.

The pools of the Perez-designed Aquacade glow south of the Cajun Walk at Bayou Plaza. Color and light play key roles throughout the grounds, and their mutual coordination was vital to the success of the grouping of diverse fairground elements. According to R. Allen Eskew, AIA, project director for Perez, all exhibits were subject to design review, including color choices. Tina Beebe of Communications Arts in Golden, Colo., helped select the basic palette of colors with the Perez firm. Eskew calls it "part of

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Fairs from page 16

the glue that holds things together.”

The blue, blue waters of the Aquacade were calculated, as was the lighting, and here again, Richard Peters' hand is evident. His goal was to eliminate glare from public places by providing ambient light, focal glow, and the play of brilliants. The light ripples on the bright surface of the diving pools at the Aquacade, bathes the swimmers with light, glows underwater.

If muddy waters are the major theme of the fair, then movement is a secondary theme, for it is everywhere. From breezes off the river to the flags that they push and snap; from the Interstate highway slipping by the southern end of the site to the massive bridges (one complete, one incomplete) that they traverse; from the people in the pathways, bumping their collective way along, to the monorail quietly rolling over the throngs; from the ships and barges on the river to the fountains in the plazas that echo the river waves; and finally from the profiles of the buildings themselves, which dip and rise to merge with the larger city downtown.

The riverfront lies near the Aquacade, but how to get there can be confusing. The designers compressed a great deal into small places, and pedestrian orientation on the south side of Bayou Plaza is

The airy dome of the Vatican Pavilion, left, which terminates the Fulton Street mall, and, right, fanlights in the Festival Park area at one end of the fairgrounds, with the converted Federal Fibre Mills building providing a warm, brick background.

muddled. Signage is stylized and subtle, and it is of little help to the aimless.

The International Riverfront is the great open space, the breathing spot at the Expo. Here the tight urban spaces of the Fulton mall and the Festival Park explode and relax. The powerful flow of the Mississippi is calming.

At the southern end of the riverfront lies the plaza of the U.S. Pavilion; at the north end, the Liggett and Myers Amphitheater. In between is a two-story structure (“longer than the Empire State Building,” said the monorail driver) housing the individual international exhibitors.

This Perez building, like the Great Hall/convention center, is industrial in character. The problem was how to plan a large, open-span building to be occupied by an unknown quantity of exhibitors, a building whose ground floor will revert to dock usage after the exposition has closed and whose upper levels will be taken over by the Rouse Corporation in a private \$55

million retail development called “Riverwalk.” Unfortunately, the building is box-like and “longer than the Empire State Building.” The flat facades available to the visiting countries offer few opportunities for enrichment other than for two-dimensional signage. It seems odd that while Moore et al. had a highly visible hand in sculpting the imaginary landscape on the city side of the fair, the same level of imaginative exuberance is missing where the water actually flows.

Exuberance is certainly missing from the U.S. Pavilion. This blue-checked backdrop building must be a reaction to the extravagance of the Knoxville World's Fair U.S. Pavilion, which today sits derelict, without a taker. The U.S. Pavilion in New Orleans is a windowless box (whose shell was designed by Eean McNaughton & Associates) housing a ho-hum exhibit (by Barry Howard & Associates), while the real show, the space shuttle Enterprise, sits docked outside. The U.S. is capable of better architecture.

Fortunately, real architecture waits at the other end of the river promenade. Frank Gehry, FAIA, of Los Angeles, together with Chuck Sanders of Perez Associates and Richard Peters, designed the International Amphitheater, a \$5 million,

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5,500-seat unenclosed building that houses major theatrical and musical performances.

The great surprise afforded by the amphitheater is the proscenium open to the river. As the Marine band plays the "Stars and Stripes Forever," Coast Guard vessels ply the waters behind. The steel structure of the new river bridge lies to the right, while steel cranes unload barges on the sunlit West Bank. The sight lines are excellent: no one misses the view to the stage or the water beyond. This is one temporary building that should remain.

Smaller temporary buildings that echo and reinforce the amphitheater include the attractive "oases," small Louisiana pavilions scattered throughout the grounds that provide shade, rest, and the sound of running water from sculptural fountains. From their aqua columns to the abstract sculpture surmounting the roofs, these pavilions say "home" in a refreshing way.

The oases, the plazas, the major buildings, and minor open spaces are enhanced with appropriate regional plants by landscape architect Luis Guevera of the Design Consortium of New Orleans. Attention to detail extends not only to the banana plants and palms one would expect, but to morning glory vines and mirlitons that are grown on netting along the sides of staircases. If Peters has painted with light, Guevera has painted with plants.

The plants, like the scaffolding of the Wonderwall, will be ripped up and dismantled in October 1984. The last jazz notes from Reunion Hall will ricochet beside the Shuttle Enterprise somewhere in memory, somewhere in space.

New Orleans will be left with 30 million dollars worth of street repairs, including major renovations to French Quarter streets, handsome flagstone and brick pavers, street trees, and granite curbstones. The convention center and Rouse development perhaps will attract people to the warehouse buildings, since energy and enthusiasm for further development seems to be rising. But buildings will not be the fair's only legacy. The memory of a \$350 million show will remain.

Leaving the fair late at night, the jazz grows fainter and diminishes as the twin mermaids loom ahead. The entrance plaza twinkles with thousands of white lights draped over street trees. Their twinkle is a final coda, a memory that can dance on in the imagination.

ROBERT A. IVY JR., AIA

Mr. Ivy is a principal in the Columbus, Miss., office of Dean/Dale & Dean and editor of The Mississippi Architect.

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St. Bartholomew's Demolition, Development Plans Halted

The New York City Landmarks Preservation Commission has rejected a proposal by St. Bartholomew's Church to demolish its community house and replace it with a 59-story office tower, designed by Edward Durell Stone Associates. While protecting the community house for the present, the commission's decision does not rule out the possibility of St. Bart's resubmitting a new demolition/development proposal in the future.

Prior to the unanimous vote (8-0) to deny a "certification of appropriateness" to St. Bart's (which allows demolition or alteration of a designated landmark), commission members were harsh in their criticism of the design of the proposed saw-toothed, glass tower. Said Commissioner Charles A. Platt, "The sheer size of the building dwarfs the landmark [St. Bartholomew's Church]. The forms are angular, disagreeable, sharp, metallic, tinselly. It is actually at war with the landmark." Gene A. Norman, commission chairman, agreed, saying, "The kind of quality that I think needs to be alongside the superior quality of this Byzantine-inspired, beautifully organized, wonderfully ornamented church is so severely lacking that it becomes a case of night and day." Commission member Elliot Willensky said the proposed office tower "conflicts with, competes with, minimizes, trivializes, and confuses the meaning of the landmark" and that it "hangs over the landmark in such a way as to almost crush it."

St. Bartholomew's Church was designed by Bertram G. Goodhue and finished in 1918. The community house, designed by Mayers, Murray & Phillip, was completed 10 years later. Both were made landmarks in 1967, noted as "handsome modern versions of Romanesque and Byzantine architecture."

The church applied for a certificate of appropriateness last December. Since then its demolition plans have been the center of a debate over the intent of New York City's landmark law. In January at a hearing of the Landmarks Commission, St. Bart's rector, the Rev. Thomas Bowers, argued that the constitutional separation of church and state allows church officials to build a skyscraper on church property regardless of landmark preservation laws. Legislation that would exempt religious institutions, including schools and parish houses, from local landmark laws is still pending in the state legislature.

Bowers also said that the church would have to close without the funds generated from the skyscraper—an estimated

\$9.5 million a year for 10 years, plus higher annual amounts for 89 years after that. Since the church did not apply for hardship exemption with the Landmarks Commission, this was not considered in the recent decision.

St. Bartholomew's will now choose one of four alternative actions, said Paul D. Selver, of the New York City law firm Tufo & Zuccotti: have the proposal redesigned, challenge the decision in state court, challenge the landmarks law in federal court, or try to prove that the commission's decision created an economic hardship for the church.

Repercussions of High Court's Partnership Ruling Debated

The Supreme Court ruled unanimously in late May that a woman lawyer had the right to file an employment discrimination lawsuit against her former employer, a law firm, after the firm declined to make her a partner. The ruling was widely applauded by women's and civil rights groups as a breakthrough applying to women in other professions as well. Said Marsha Levick, legal director of the National Organization for Women Legal Defense and Education Fund: "I think it's important to look beyond the law world, to all the other occupations, such as engineering and architecture, that have always been organized as partnerships, and where there have been few women."

And there is a feeling within the profession that the decision will give some women incentive to pursue litigation if they think they have been denied promotion because of sex. As Evie Asken, FAIA, of Kalamazoo, Mich., puts it: "Women in their late-30s and early-40s, part of the so-called first lib, are on the threshold of partnership positions. I think that many of them would not hesitate to sue."

But a random check with women architects around the country indicates that most feel the case will have little bearing on the advancement of women in architecture because expectations of partnership for men as well as women in architecture are different from those in law.

The Supreme Court decision involves Elizabeth Anderson Hishon, a 1972 graduate of Columbia University Law School who in that same year accepted a position as an associate with King & Spalding, a large Atlanta law firm. Six years later the partnership considered and re-

jected Hishon for admission to the partnership, and the following year she was again rejected. Her employment as an associate was terminated on the last day of 1979. A month earlier she had filed a charge with the Equal Employment Opportunity Commission claiming discrimination on the basis of sex in violation of Title VII of the 1964 Civil Rights Act. Granted the right to sue, her case was subsequently dismissed by a district court on the ground that Title VII was inapplicable to the selection of partners by a partnership, and the dismissal was upheld in appeal.

Hishon petitioned the Supreme Court, which reversed that judgment. The opinion written by Chief Justice Warren Burger cited Hishon's allegation that the firm "used the possibility of ultimate partnership as a recruiting device to induce [her] and other young lawyers to become associates at the firm" and that the firm "represented that advancement to partnership after five or six years was 'a matter of course' for associates 'who receive[d] satisfactory evaluations' and that associates were promoted to partnership 'on a fair and equal basis.'"

This so-called partnership track, while the norm among law firms, is apparently unheard-of in architecture. "In law, you eventually either become a partner or you are asked to leave the firm," says Diane Legge Lohan, AIA, of the Chicago office of Skidmore, Owings & Merrill and one of two SOM woman partners nationwide. "For architects, fit of personality and architectural philosophy with coworkers determines more why you stay or go than advancement, title, or pay. We all knew it wouldn't pay well, and very soon out of school we realized that we are not going to be world famous. It is the joy of practicing that makes us put up with a lot more than we normally would."

Susan Maxman, AIA, says partnership is not as widely desired in architecture as it is in law: "There is more risk in being a partner, more financial responsibility. And architecture itself is more risky than law." Maxman, a partner with another woman, Ann Sutphin, AIA, in their own small Philadelphia firm, thinks the fact that there are more architects than jobs is also an important factor. "People in architecture take what they can get. You'd never see a woman think that she could have the option of becoming a partner elsewhere. She feels that she is not in demand, while the job is, so she can't take the stand that a lawyer might be able to take. She just doesn't have a lot of bargaining power."

All of the women interviewed see generational differences among women architects. Says Laurie Maurer, AIA, now one-

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half of a husband and wife partnership in New York City: "Women of my age—over 40—have tended to go into nice, safe situations. I was very happy working as a drafter for Philip Johnson and Marcel Breuer. It never occurred to me to look beyond to the possibility of being made an associate. But it is different today. I was the only woman in the class, but today, when half the class is women, they have a different mindset. You see more sensitivity to the issues of promotion and partnership, and more aggressiveness. I really do hope that they will give their male counterparts a run for their money on these issues."

Maxman agrees that younger women architects are more militant, but says that it is perhaps to no avail. "If the job climate doesn't change—and I don't see that it will—these young women aren't going to be able to do a darn thing about it. There are too many people waiting in the wings. If they give someone a hard time, out they go, unless they are extremely talented."

"As a result, more women will try striking out on their own as a means of calling their own shots and not being stuck in some drafting room—if they have enough guts to do it."

Two States Adopt Competitive Bidding as an 'Alternative'

Idaho became the 24th state to adopt a qualifications-based system of procuring A/E services during the recent legislative session. Both Georgia and Arizona passed procurement legislation that permits the use of price as a factor in the A/E selection. That leaves Maryland as the only state to require competitive bidding.

Idaho's mini-Brooks bill, modeled on a federal law authored by Rep. Jack Brooks, Hon. AIA (D-Tex.), provides for the selection based on demonstrated qualifications and competence and negotiations with the top ranked firm.

The Georgia and Arizona laws provide for either selection based on qualifications only and then negotiations with the top ranked firms (Brooks bill approach), or the preliminary selection of a short list of firms based on qualifications with final selection based on both price and "technical considerations." In both states, government agencies are permitted to choose the selection process on a case-by-case basis.

In 1983, Wyoming passed similar legislation that permits the use of estimated fees as a factor in the A/E selection.

Meanwhile, more than a dozen other states have recently enacted or are considering laws pertaining to A/E selection, licensing, registration, or professional lia-

bility. Mini-Brooks bills were introduced in Alaska and Indiana. Massachusetts enacted Brooks-based legislation that requires municipalities to use a competitive negotiations A/E selection system previously required of only state and counties.

In Virginia, that state's qualifications-based system was amended to allow localities to use alternative selection procedures for projects under \$20,000. A New York bill is pending that would extend the state's Brooks method of A/E procurement to all public authorities.

Colorado passed legislation that broadens the exemptions in the state's architectural licensing law to allow nonregistrants to design multifamily dwellings with four or less units. The law previously exempted only single units and duplexes.

The original intent of the bill was to allow nonregistrants to design any two-story structure with spans less than 24 feet.

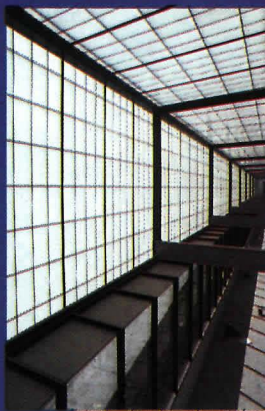
A bill was recently introduced in the New York legislature that would amend the architectural licensing law to allow "contractors or builders to execute design-build agreements on a joint venture or other basis with an architect/engineer, provided those services are provided by an A/E licensed under the applicable sections of the Education Law." Also in New York, legislation is pending that would raise the exemptions for building alterations from \$10,000 to \$20,000.

The Iowa legislature passed a bill to reduce the number of exemptions in the state's licensing law. Legislation enacted
continued on page 35

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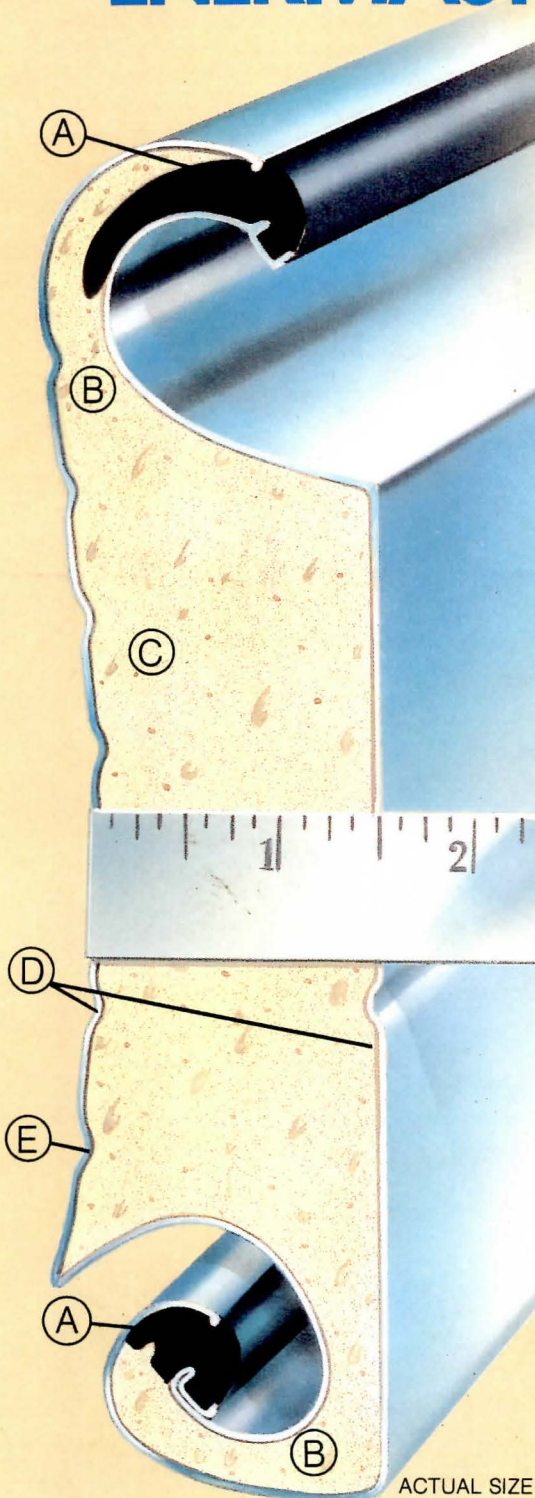
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Government from page 31
 in Virginia makes it illegal for nonregistered individuals to "offer to practice architecture" or describe themselves with the word "architect" or a derivative of it.

Bills regarding statutes of limitations for design professionals were considered by several state legislatures. A proposal that would have changed Virginia's statute of limitations' beginning point from the time of project completion to the time of injury was delayed for this legislative session. Alabama's statute of limitations on liability was declared unconstitutional in 1983, and a bill calling for a six-year statute failed this session. In neighboring Mississippi, a proposal in the state legislature to reduce the statute of limitations from 10 to six years also failed.

Cities Developers Challenge 'Informal' Height Limit in Philadelphia

For most of this spring, much of Philadelphia was engaged in a passionate debate about urban form. In public forums, on a full day of live television, in letters to the editor columns, radio call-in shows, at parties and dinner tables, the city's residents have been fighting and agonizing over what the future shape of the city should be.

As Philadelphians express it, the issue is "the hat," a broad brimmed bronze hat on the head of Alexander Milne Calder's statue of William Penn that stands atop the tower of the sculpture-encrusted, second empire-style city hall. The top of the statue stands 548 feet above the city, and no building has ever gone higher than Billy Penn's hat, though quite a few have come fairly close. This height limit, which has been, for the most part, informal, is part of the city's lore. It has become known as "the gentlemen's agreement," an idea that carries weight in a city founded on the Quaker ideal of consensus, which carries with it a resistance to ostentation.

As far back as the 1920s, there were proposals to build buildings that exceeded the informal height limit. During his tenure as executive director of the city planning commission, from 1949 to 1970, Edmund N. Bacon was a strong defender of maintaining the height limit, while resisting efforts to codify it. "It is a gentlemen's agreement," he would say. "The question is whether you are a gentleman."

But in March, Willard Rouse III, a local developer nearly everyone used to agree is a gentleman, came forward with a scheme for a development just two blocks from city hall that includes two towers,

Meanwhile, in Iowa a bill to enact an 11-year statute of limitations died in the state legislature; Iowa has never had such a statute.

In a recent court decision, the Washington State Supreme Court ruled that the state's statute of limitations does not apply to public buildings because of an obscure law.

Meanwhile, a bill is pending in North Carolina that would change the current requirement on state contracts for which architects serve as a guarantor of construction. And in Oklahoma, the worker compensation law was amended to limit lawsuits against architects stemming from job related injuries to worker's compensation claims unless plans or specifications were negligent.

both of them higher than city hall. The \$600 million proposal would also include a hotel, movie theaters, and an upscale shopping arcade linking two major streets. Rouse said he asked his planning consultants, Wallace Roberts & Todd, to come up with a design that respects the height limit. But, he said, the design that resulted would make an ugly and oppressive development with which he did not wish to be associated. The only alternative, he decided, was to go up.

Rouse's architect is Murphy/Jahn, a firm picked in an invited competition for another smaller building for part of the site. Rouse has said he will build the smaller building if the larger project is not approved.

Because part of Rouse's site may be acquired by the city's Redevelopment Authority, Rouse was bound by the authority's regulation that the building height not exceed 491 feet. He needed political cooperation to get an exception to that regulation, but more importantly, he needed official support in tackling such an emotional issue.

Leading the fight against the Rouse proposal was Bacon himself, who had been out of the public eye for more than a decade. "This is a crowning achievement of more than 300 years of self-discipline and restraint," Bacon said at one public forum on the issue. "Now we propose to dislodge this historical center, which has informed our city from the beginning, and in our arrogance, we replace it with a floating center up for sale to the highest bidder."

Mayor W. Wilson Goode, who has

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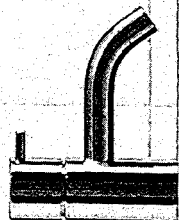
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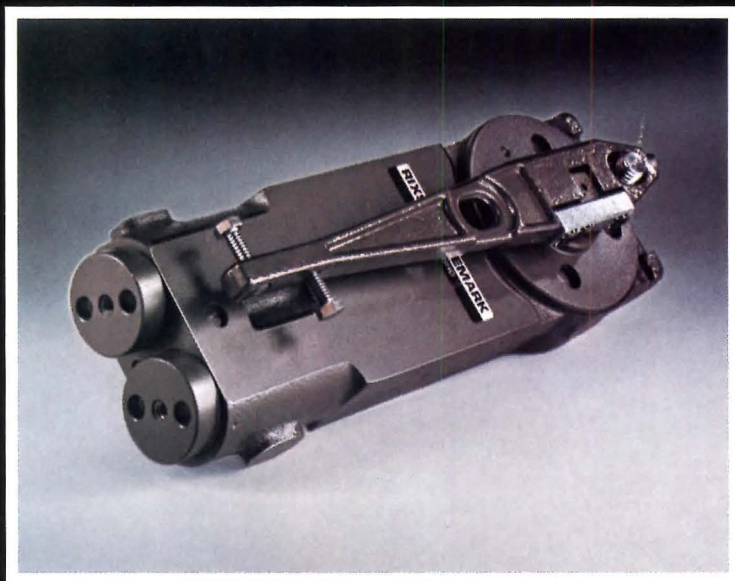
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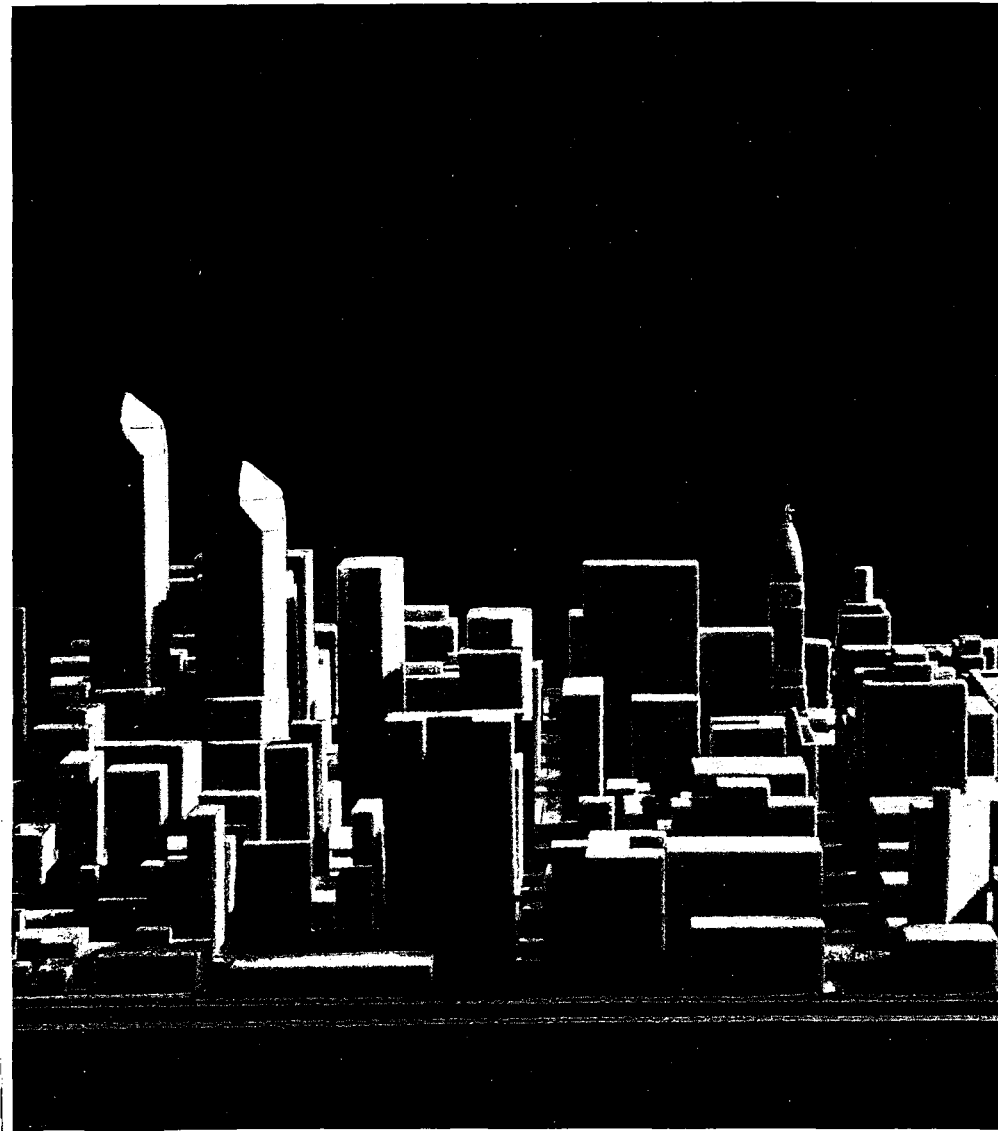
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Above, model of proposed development with the two Rouse towers at left and city hall spire to the right.

Cities from page 35 called the decision on height "perhaps the most important in the city's history," referred the matter to the city planning commission, most of whose members had been appointed only four months earlier. The commission turned to its own staff, who wrote a report firmly in favor of letting the project go ahead, and to a host of experts, both local and out-of-town, who gave a tremendous amount of conflicting advice. On May 1, Goode chaired a conference on the height limit, which included expert opinion and about five hours of comments from citizens and which was broadcast in its entirety on public television. The Foundation for Architecture, a lay membership organization of which Rouse is chairman, also sponsored a forum a few days earlier.

Most citizens who spoke were against breaking the height limit, and the mayor's mail ran 4-1 against. In general, the opponents to breaking the height limit argued that Philadelphia should not become "another New York" or "another Houston,"

while those who favored the development said that the city cannot afford to throw away the chance for high quality development and new tax receipts and jobs.

The experts were divided. William H. Whyte told the mayor's conference that the height limit should be retained because it preserved Philadelphia as an alternative to the way other cities are developing. Robert Geddes, FAIA, argued that the preservation of the height limit is crucial to the city's self-image.

"I can't think that the burning issues for Philadelphia have anything to do with the height limit," Richard Weinstein, an urban planner from New York City, told the Foundation for Architecture's forum. "The squalor of the environment on the ground is the shocking thing you should all be concerned with." Sociologist Digby Baltzell decried a skyline that was becoming "leveler and leveler," with uniform, flat-topped 40-story towers. "If you know your Latin, equality is the opposite of quality."

Discussions of the height issue quickly merged with other issues in the planning of the city. Philadelphia has a strong planning tradition, and indeed, William Penn

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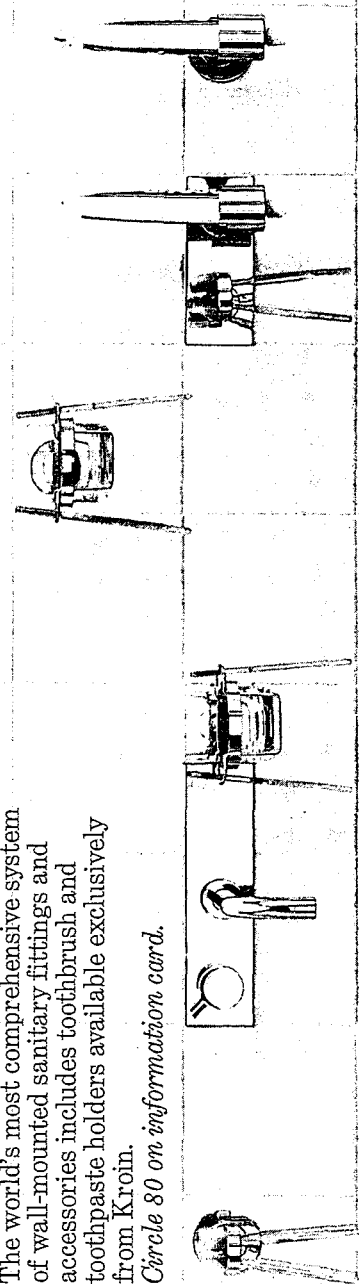
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is celebrated as the city's first planner. But in recent years, the city's physical planning machinery has atrophied, and such important questions as the placement of a new convention center and the building of a new hall for the Philadelphia Orchestra have unfolded outside of the planning process.

Moreover, the Rouse project reminded people that Chestnut Street, a somewhat troubled commercial thoroughfare, most of whose buildings are four stories high, could be lined with 40-story towers under existing zoning. The Rouse project is comfortably under the densities allowed under existing zoning, but Rouse himself has questioned whether the city's zoning should allow such high densities. A new city plan and a revision of Center City zoning is the almost certain result of the debate.

The relationship of downtown developments to the neighborhoods also emerged as a key issue. Although there was general agreement that Rouse's proposal would have been welcomed without reservation if it had not broken the height limit, the debate called attention to the lack of relationship between development downtown and the condition of the neighborhoods. "Who made the agreement?" Rodnell Griffen, the leader of one neighborhood association asked the mayor's conference. "Isn't it time we made a new agreement, one that would help the grassroots people get better housing, better schools, better protection for their families." John Andrew Gallery, former city housing and development director, proposed that developers of buildings that break the height limit be required to invest 20 percent of the cost of that part of their development that tops Penn's hat in neighborhood projects done in partnership with community organizations. Goode immediately welcomed the proposal; Bacon termed it cynical.

On June 13, Goode proposed interim legislation until a new center city plan and zoning are adopted. It would allow unlimited height in an eight-block district just west of city hall and for the time impose a 491-foot height limit on the rest of Center City. Within the district the city planning commission will have almost complete discretion over all aspects of development. Just before Goode's announcement, a new contender to break the height limit emerged. Local developer Richard I. Rubin is considering a building of 60-or-more stories, to be designed by Kohn Pedersen Fox, for a site diagonally across the street from Rouse's. Although Philadelphia has relatively low office vacancies, it is unlikely to be able to absorb two million-plus-square-foot buildings simultaneously.

Thus Rouse, who first raised the issue,

may not be the one who breaks the gentlemen's agreement. And depending on which side you're on, he was either the person who initiated a lively and salutary public debate on the future shape of the city or the man who loosened the curse of Houstonism on a historic and very livable city. THOMAS HINE

Mr. Hine is architecture critic for the Philadelphia Inquirer.

In Charlotte, a Conference On Values and Strategies

Architects in Charlotte, N.C., responding to the AIA's theme for 1984 of "Architecture and Its Public," sponsored a conference in May to discuss the future design of Charlotte. The city's new mayor, Harvey Gantt, AIA (see Feb., page 30), who is thought to be the first active, practicing architect ever to head a major U.S. city (and who incidentally is also the first black mayor of Charlotte, where blacks are a minority), joined with AIA President George Notter, FAIA, to head up a well-attended half-day symposium among representatives of banking, development, journalism, education, and government.

Charlotte is not a big city in population but it is a regional economic capital, ranking among the top eight U.S. cities in banking and trading. Like many cities it is coming out of an undistinguished period in which it built mostly commercial sprawl at its fringes and aloof, mini-Renaissance Centers downtown, and is now engaged in a widespread and thoughtful reappraisal of urban values.

The conference, called "A City by Design: Directions for Charlotte," was notable for its unanimity. Several speakers deplored the loss of street life and urbanity in Charlotte, which tend to be drained off by the suburban car culture or sucked upward off the streets by a mazelike, privatized system of aerial downtown walkways. Most applauded the city's vitality and desire for improvement, and its recent turn toward reviving residential neighborhoods downtown and preserving older buildings. Many brought examples of ideas from other cities.

Among the participants were Dennis Rash, president of the community-development subsidiary of the city's largest bank; Arthur Ziegler, who described his adaptive reuse successes in Pittsburgh; Edward Sullivan, who offered Columbus, Ind., as a case study of the impact of good architecture on a city; David Carley, Washington, D.C. developer, who talked about public-private partnerships; and Charles Hight, AIA, dean of the college of architecture at the University of North Carolina. ROBERT CAMPBELL

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ARCHITECTURE

This is not a particularly jingoistic enterprise. In fact, it is the only American architectural magazine that devotes an entire issue each year to the architecture of other nations (this year it will be September instead of August).

The issue at hand, however, has a distinctively American tone. The world's fair with which it begins is stamped U.S.A. by its exuberance (and also, perhaps, by a certain self-indulgence). And on the following pages is a handsomely illustrated report on the refurbishing of one of our most cherished national symbols.

This is followed by an account of a design process, which, while apolitical, is distinctly democratic in its openness.

Finally there are some examples of recent American architectural exports. They are products of the State Department's foreign buildings program, whose rejuvenation in recent years under William L. Slayton, Hon. AIA, continues to yield admirable built results.

Addendum: At press time we learned of the death of Nathaniel Owings, FAIA. Our feeling of loss is mixed with a feeling of gratitude to the AIA board for giving him the gold medal just in time, while he could still enjoy it and use the occasion to advance his very broad view of architecture and its responsibilities for the quality of our environment. *D.C.*



Restoring a Lady's Tarnished Beauty

A closeup of Liberty preparing for her centennial. By Michael J. Crosbie

Today she stands encased in a glistening cocoon, spun as though to conceal her transformation now under way. As you approach by boat, the sun catches and reflects off of the struts of her cage. Drawing closer and rounding the island where the boat will dock, you barely perceive workmen within the huge scaffold, moving about like tiny spiders spinning a web.

As you behold the Statue of Liberty today, with lower Manhattan rising across the harbor, you find it hard to imagine this as the tallest structure in the city less than 100 years ago. One is in awe of her size in that she is so diminutive in relation to her iconic role. On her pedestal, her height is that of a 30-story building. Off her pedestal, she would fit in the U.S. Capitol rotunda, with 30 feet to spare.

Much care is now being lavished on the Statue of Liberty to prepare the colossus for her 100th birthday in 1986. The 300-ton scaffold now raised about her is designed to not touch her surface at any point and is made of aluminum to prevent rust from blemishing an already blemished lady. Architects, engineers, preservationists, and scientists are now studying ways to best clean the stains that have appeared over the years—the spilled tar, the paint that has oozed through holes from the inside, and the scars of acid rain and the pollution that has drifted over predominantly from New Jersey, the state with, among other distinctions, the highest concentration of pollutants in the Northeast. (Liberty's close proximity to the Garden State has in the past proved hazardous to her health. In 1916 a munitions explosion on a Jersey pier sent debris flying across the harbor. Three hundred copper patches repaired the damage.)

Inside, workers are preparing to remove the layers of paint that have been applied over the years, to brace and strengthen the structure, and to repair and replace the pieces that connect Liberty's thin skin to her support. Plans are now being completed by the French-American Committee for the Restoration of the Statue of Liberty (with the New York City firms of Swanke Hayden Connell and Thierry W. Despont as the consulting American architects) for the redesign of the statue's visitor accommodations. Last February a design was unveiled that included a glass elevator that will transport tourists from the base of the pedestal to the base of the

Michael J. Crosbie

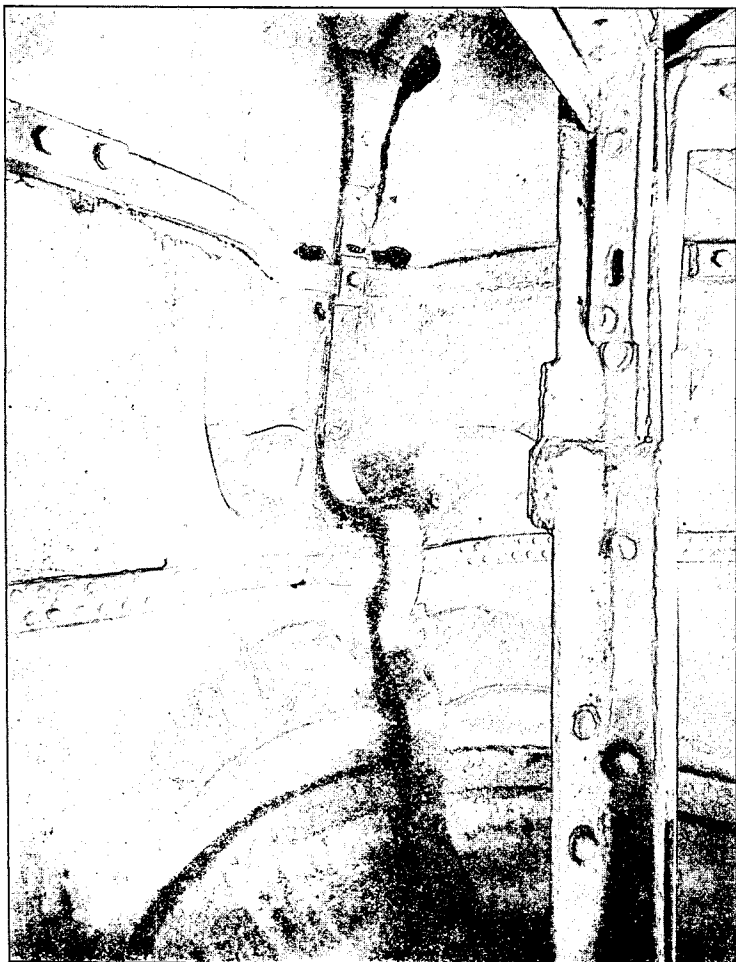


statue and will allow views of this space, a refurbishing of the double helical stair now used to reach Liberty's crown, and a new viewing platform in the crown itself. These design features and others will be made, according to Richard Seth Hayden, AIA, chief American architect of the team, "to improve the lot of the visitor."

Meanwhile, the Statue of Liberty-Ellis Island Foundation has so far raised \$75 million to complete restoration work on the statue and prepare nearby Ellis Island for its centennial in 1992. A spokesperson for the foundation reports that this money has been raised "without really going after it. We get calls and letters from people all the time wishing to donate their services as well as money." The foundation hopes to maintain the enthusiasm to reach its goal of \$230 million.

The care and attention that Liberty now receives from her host country would surprise no one more than her. While still under construction in the studio of French sculptor Frédéric Auguste Bartholdi, the statue was warily apprehended by its intended recipients. In his book, *The Statue of Liberty*, historian Marvin Trachtenberg writes that the U.S. Congress grudgingly accepted the statue and agreed to provide a site for it only after its resistance threatened international embarrassment. The Americans, in fact, nearly faltered on their promise to provide a pedestal for the gift. Bills to provide funds in both the U.S. and the New York State legislatures failed to pass. It was through the fund-raising efforts of Joseph Pulitzer (who marshalled his paper, the *New York World*, to cast the statue in a more favorable light) that the pedestal was completed. From a political standpoint it was not surprising that the Americans were suspicious of this unsolicited gift from a one-time ally who, as Trachtenberg writes, "only a decade earlier had flirted with the Confederacy and threatened to annex Mexico."

The public was no more appreciative. As portions of the statue were completed they were put on public view. The display of the torch and hand at the Philadelphia Centennial in 1876 caused some to doubt the sanity of the sculptor, who apparently started the work at the top without any idea how it might end. The statue was roundly denounced in the Catholic press at the time as a "pagan goddess" who would proclaim that "mankind

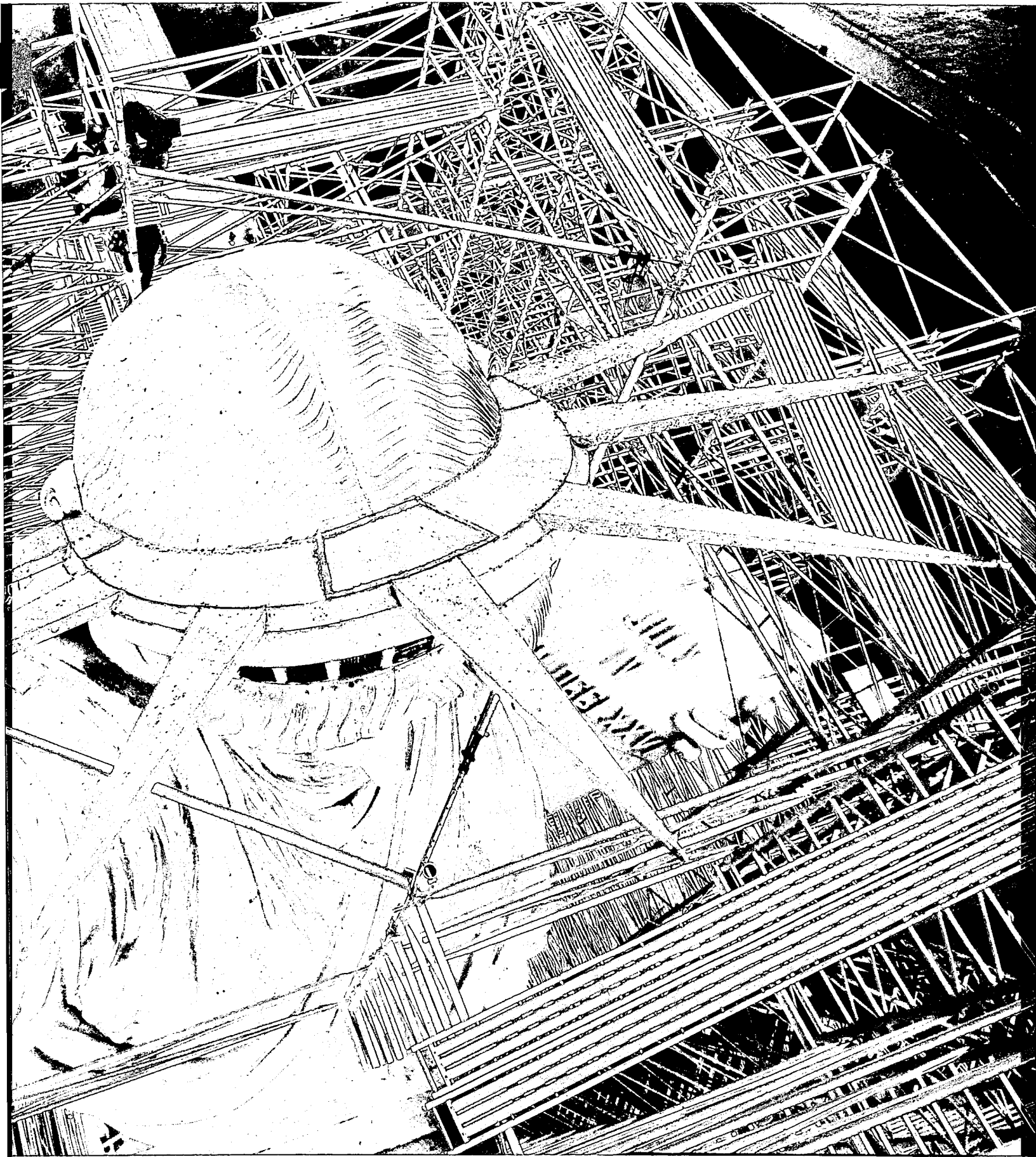


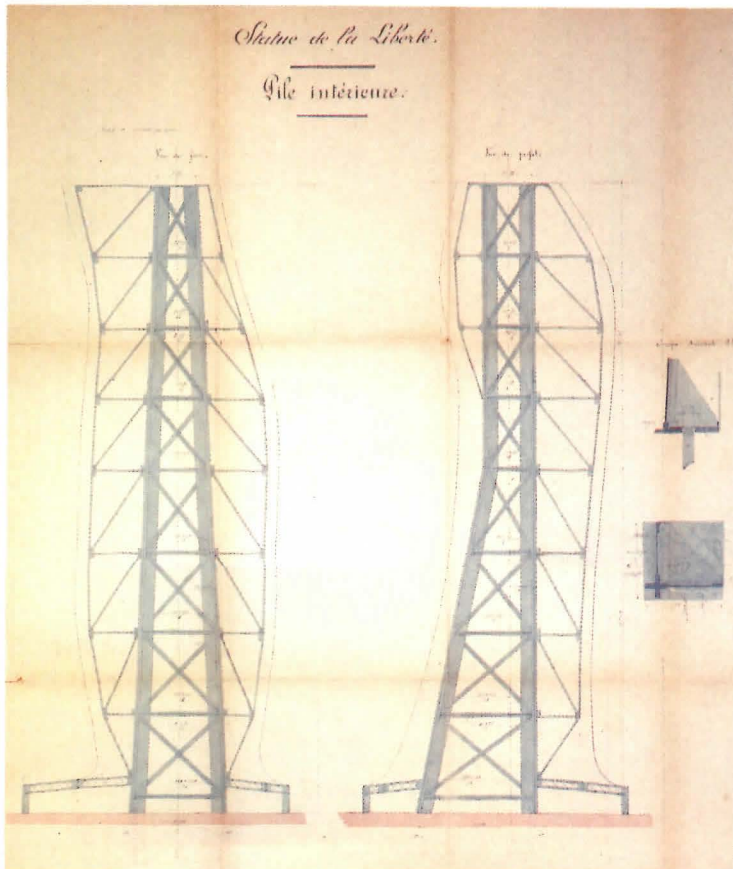
receives true light, not from Christ or Christianity, but from heathenism and her gods." Few contemporary artists had anything positive to say of Liberty's quality as a work of art. One critic went so far as to suggest that from across the harbor the statue resembled "a bag of potatoes with a stick projecting from it."

While artistic merit of the statue may have been in doubt, the structural inventiveness of its support was beyond reproach. The only work in this country of Gustave Eiffel (who assumed the design of the skeleton after the death of its first overseer, Viollet-le-Duc, in 1879), it foreshadowed the building type that was to change the face of America. Eiffel designed a rigid truss of iron that rose over 96 feet, supported by four beams approximately two feet square in section. This pylon tapered from roughly 17x14 feet at its base to 7x6 feet at its peak. To this was connected another truss, 65 feet in length, which extended out as the core of the torch arm. Together they formed a resilient structure 141 feet tall.

Above, Liberty's nose and mouth from inside. The vertical and horizontal ribs that make up the armature connect the skin to the frame. Between 20,000 and 25,000 rivets that hold the skin together will be replaced. Right, Liberty's head from the torch.







Around this central pylon Eiffel designed an intermediate frame that would transmit loads from an armature of 600 vertical and 750 horizontal ribs of “puddled” iron, which supported the skin of the statue, barely a tenth of an inch in thickness. As Trachtenberg notes, this device of Eiffel’s design does not support the statue from the bottom up, but rather from the central pylon out. “Liberty was thus,” he writes, “among the first great curtain wall constructions. In this, as well as in the detail of Eiffel’s trusswork, Americans could have found inspiration, for Liberty was put up in the very years that the problems of the skyscraper were being confronted in Chicago, Cincinnati, and New York. . . .”

Although less celebrated, the pedestal is no less a landmark construction, designed by Richard Morris Hunt. (Hunt, incidentally, is the only one not represented in a pentad of sculptures in a park on Liberty Island that depict Liberty’s progenitors: Bartholdi, Eiffel, Pulitzer, poet Emma Lazarus, and French historian Édouard de Laboulaye, who first suggested the idea of erecting such a statue in 1865.) Hunt’s classical pedestal, at 154 feet high, is taller than the statue itself by three feet. It is composed of concrete walls from 8 to 19 feet thick clad in pink granite and tapers from 65 feet square at its base to 43 feet square at its top. It has an open core 27 feet square. This pedestal rests on an immense foundation of concrete, 53 feet deep, which tapers from 91 feet square to 65 feet square. In its cen-

Above, anchorage beams as they are bolted to tie rods in the base of the pedestal, bracing the statue through tensile strength; left, Eiffel’s design for the structure in an original watercolor rendering. Right, Liberty’s foot unshackled from its chain.





Above, complex folds of Liberty's gown as the tunnel that extends to form her left arm juxtaposes to the vertical cavity that forms the book; below, the cascading gown with some of the 1,500 saddles (in foreground) that connect skin to armature; nearly half will be replaced. Right, the gown's exterior folds.



ter is a shaft only 10 feet square. Weighing more than 27,000 tons, the pedestal and its foundation together comprised, in Trachtenberg's words, "the largest single concrete mass of its time. . . ."

Time has not been especially kind to the statue. Over the years numerous alterations, additions, and deletions have been made to its interior, exterior, and base. Originally conceived as a lighthouse with illumination in her crown, Liberty passed from the jurisdiction of the Lighthouse Board in 1887 to the War Department and finally to the Interior Department's office of national parks in 1931.



Perhaps the greatest violation of the statue occurred in connection with its function as a lighthouse. The flame, which is now a patchwork of glass and copper strips, was originally a solid surface, gilded to reflect outside illumination. In 1886 holes were cut into the rim of the torch but proved a disappointment. Sixteen years later, after various experiments with colored lights, Gutzon Borglum (who would later gain fame as the sculptor of Mt. Rushmore) was called in to make the flame luminescent. He proceeded to cut through the copper surface and inserted 500 pieces of amber glass with 19 lamps below. It leaked like a sieve, so tar was slopped into the joints.

The French architects for the restoration are now studying Bartholdi's drawings and models in an effort to replicate the flame as originally fabricated. The flame was removed ceremoniously on July 4th and will be replaced with new materials, gilded and illuminated from outside as the sculptor had intended. The pieces removed will be on display in a museum on Liberty Island.

And so, barely visible behind her screen of scaffolding, Liberty hibernates as she is made ready for her centennial, enjoying considerably more care and adulation than marked her first hundred years.

Below and bottom, Philip Ratner's sculptures of Bartholdi and Eiffel, respectively, installed in the park behind the statue on Liberty Island in 1981. Right, the torch and flame with Ellis Island off to the left and Manhattan beyond. Note 'ear of corn' motif that decorates the rim of the torch. □

Michael J. Crosbie



Michael J. Crosbie





Christopher Alexander, Theory and Practice

In the 1960s Berkeley was a place of architectural as well as political ferment. The issues were not stylistic, but centered around the basic processes—the very definition—of architecture. In the middle of the intellectual battleground stood Christopher Alexander. Since then, still from his Berkeley bastion, he has carried on his struggle for architecture's soul in a number of well-known books and lesser known buildings. This is a status report by James Shipsky on the continuing evolution of the Alexander approach, beginning with its application in a recent workshop.—Ed.



The bench's design begins with participants sitting on blocks.

It began with a quiet announcement in *CoEvolution Quarterly*, the Winter '83 issue: "Spirit In Design" workshop—Three week-ends with Christopher Alexander, making an outdoor seat; beginning March 24, 1984, at Fort Mason, San Francisco.

It was deceptively simple. There was no mention of a new paradigm in architecture. There was nothing about mending a rip in your perception of the physical world. Nothing about suddenly overcoming your fear of making a beautiful thing. It didn't say you'd get permission to be a criminal (Adolph Loos: "Ornament is a crime"). It didn't say you'd be part of a powerful process capable of making profoundly good places.

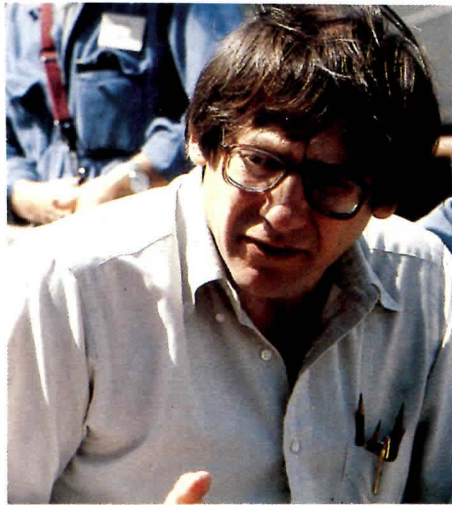
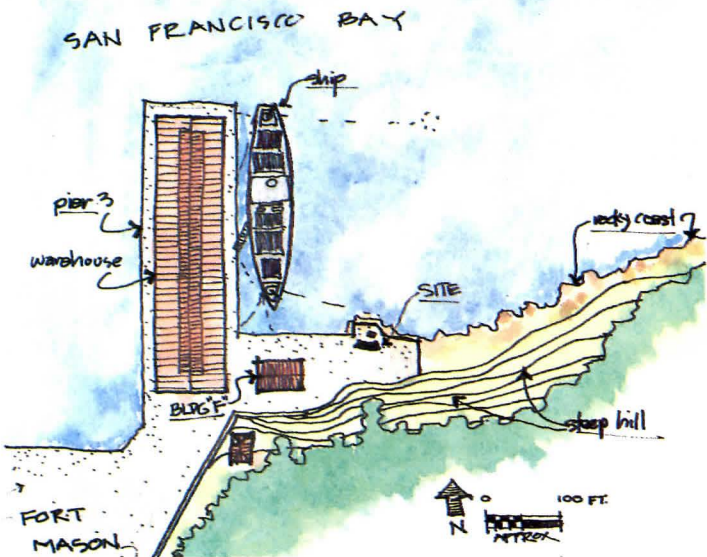
The idea for the workshop began with Irmine Steltzner, director of Uncommon Courtesy: School of Compassionate Skills. The school had been started by the editor of the *Whole Earth Catalog*, Stewart Brand, who wrote of Alexander's book *A Pattern Language*, "I suspect this is the most useful book in the catalog." Irmine eventually got in touch with Alexander and asked him to do a workshop. He agreed to lead a group in making an outdoor seat, and asked Irmine to hunt up four alternative sites.

I jumped at the chance to attend the workshop. I love architecture. I've worked with a number of architects, and I'm familiar with how design is done in offices. I've seen the typical construction process. But it was all very disappointing. Something was wrong, or missing, although I couldn't put my finger on it. I had read some of Alexander's books and sensed he was on to something very important. I wanted to find out for myself if he had a workable alternative to the way I had been practicing architecture.

The site Alexander chose is on the edge of the water, looking out across San Francisco Bay. It's a beautiful spot. Waves splash against the rocks below, and the wind on your face is cool and moist with saltiness. Moored to the pier on the left, alongside a warehouse, lies the restored liberty ship *Jeremiah O'Brien*. Off her stern to the west the Golden Gate Bridge soars over the bay to the green volcanic humps of Marin County. To the north lies Alcatraz Island, with its former prison buildings, lighthouse, and foghorn. To the east, beyond an ochre, tile-roofed pier building, Berkeley climbs the eucalyptus hills. Sailing yachts, submarines, cruise liners, and freighters traverse the sparkling blue waters of the bay. Rising behind you is a 40-foot cliff alive with near-tropical greens.

I wondered what Alexander would be like in person. His reputation was international. His credentials as an architectural theorist and writer were impressive. Frankly, I was apprehensive.

Mr. Shipsky is an architect-builder who uses pattern language. He is indebted to Stephen Grabow's book, *Christopher Alexander*, or biographical information and analysis of Alexander's work.



Photographs by James Shipsky

Saturday, March 24: At 8:30 in the morning a battered white pickup rolled to a stop in front of Building F. Red lettering on the truck's doors read: "Center for Environmental Structure, Architects, and Builders." In the truck's bed were a small cement mixer, wheelbarrow, chicken wire, shovels, and other tools. Rodney Moore, Alexander's construction foreman, climbed out and carried a bundle of re-bar over to the work site. There stacks of concrete blocks, bags of cement, and two piles of sand lay waiting. Soon Alexander pulled up in an old yellow Porsche 356. He wore jeans and shoes caked with concrete. "Hi, I'm Chris Alexander." His firm, vigorous handshake was accompanied by a broad smile. Name tags were the only formality.

We gathered out on the pier, where a promontory extended seaward onto the rocks. We were 22 participants aged 20s to 50s (six women and 16 men): architects, builders, teachers, and designers. Chris suggested we each get a concrete block to sit on, and we sat down around him in a gently curved arc. Then he described what we'd be doing in the workshop.

The design process had begun without my realizing it. When we selected places to sit, each of us followed conscious and subconscious promptings. We responded to the specific physical structure present in that place: people next to us, Chris's location, the irregular pier shape, the bay beyond, etc. Chris was about to speak of our designing the seat by responding to physical structure on a sensitive, intuitive level, something each of us had just done.

Chris said, "When I first visited this site, I sensed a partially formed whole where this pier juts out. The seat should somehow manage to complete that whole, while simply being a good place to sit next to the sea. For example, whoever put this trash container here [points to a concrete shell with a galvanized can inside] had no sense of what is going on in this space. The presence of this object seriously damages the wholeness I'm speaking of. In fact, I'd like to move it right now. Will some of you please give me a hand." The heavy shell was tipped over, rolled to the rear, and set up again.

Chris described how we'd build the seat: stack up concrete blocks right where the final seat would be, move them around until we got the design right, grout the blocks into place, and cover them with a concrete skin. The surface would then be decorated with inlaid marble-chip terrazzo. Chris asked us to be aware of various requirements of the seat: persons coming there to be near the sea, the view out across the bay, the immediate surroundings.

This simple-sounding procedure is loaded with implications, although few of them occurred to me at the time. Only later would I compare it to the office practice I was used to. Notice we were starting with a specified construction process, using the actual building materials to make a full-scale mockup on the actual site. Secondly, Chris had us searching for a form capable of focusing and resolving the structure of the distant

hills and infinite sky; Alcatraz and the water of the bay; waves, rocks, pier, cliff, and people.

Chris was visibly and emphatically serious about two things here. The structure was actually "out there" and could be seen and felt. It was not merely an issue of making a seat with a nice shape, according to some design ideas we'd brought along with us. I wanted to believe but was skeptical.

Then Chris asked us to move our blocks to a position that felt better to each of us. A shape began to emerge that resembled the rough sketch of Chris's that Irmine had sent each of us prior to the workshop. We squared it off and added more blocks to make it a continuous form. Anyone could make comments or suggestions or move the blocks to new configurations.

We were strangers come together, many with the mind-sets of current design methods. Yet we designed cooperatively, productively from the first moment. As we worked on the mockup we evolved a shared sense of what the seat was becoming. We experienced the power of working as a group in designing the emerging structure of the seat.

We shifted the concrete blocks into several variations of the square form. Chris urged us to evaluate the mockup, not by thinking about it, but by being sensitive to such questions as: "What does it do to the wholeness of this place? How do you feel sitting on it looking out at the bay? How do you feel about it as an object in itself?" But after an hour or so we didn't seem to be moving toward a final solution, and the massive mockup had become cumbersome to alter. So we set aside all the concrete blocks and brought out some lightweight stack chairs. Some people felt part of the seat should turn its back to the sea, to give shelter from the wind and face into the sun. We tried that and lots of other suggestions. But nothing we tried felt quite right.

Chris voiced the impasse, "It's in danger of getting away from us; it's getting too random: Let's do this, let's do that. We need a clear particular discussion. Let's go inside and each make a sketch of what we think it should be." First Chris measured the pier so our drawings would be accurately scaled. After five or 10 minutes we looked at each other's drawings, and Chris made two major comments: "Some designs destroy the wholeness formed by what was here before we started. We must not damage the pattern that is struggling to come to life here. And some designs are very contrived. Try asking yourself, 'What if I were to die and leave only this seat as a picture of my own true inner self?' Wouldn't you be a bit embarrassed by some of these?" Chris's sketch showed a gentle curve, not unlike our first arrangement of individual concrete block seats, although this, too, went unnoticed at the time.

We went back outside and stacked concrete blocks into a gently curved form. For the first time we had something that felt just about right. We added a second tier and upper backrest. Someone suggested there should be a small, secondary bench in the space between the railing and the main seat. First we made a curved shape that echoed the main seat. But it felt too large, and gradually we reduced it to a smaller, circular shape.

Chris kept up a steady stream of comments, "I don't know about the function, but it gives a kind of softness physically Why don't you try it, I don't know if it will work We've got to fool around with it in this zone The middle structure feels fine but the ends feel awkward My heart cannot come to rest with that It starts to confuse the other centers Just hold it there and see what happens That might be very helpful, by all means do that."

Then Chris said to the group, "One of the things I'm worried about is I'd like to have the experience of being alone with it. It worries me that we haven't checked that out." We went back into Building F, then walked out one at a time to experience the seat alone. But some passers-by discovered the seat and sat right down on it. One man was reading a book in the sunshine, and two women sitting on the upper tier asked for a poetry

reading. The seat seemed to have acquired a life of its own. Meanwhile, the group inside discussed people's solitary responses to the seat. Chris got an idea the smaller bench should have a top shaped like a 10-petaled blossom. He jumped up, grabbed a sabre saw and piece of quarter-inch Masonite, and cut one out freehand.

When each of us had had an opportunity to be alone with the seat, we went out and summarized our feelings.

Anne felt it was too close to the railing, making the entry to the pier space too constricted. In a few minutes we had shifted the more than 200 concrete blocks back 16 inches.

Chris places a good deal of trust in capable women: "Women's understanding of the environment has always seemed to me a little bit subtler, more delicate, and actually more to the point than the judgment of men."

Chris felt the west end of the seat, which presented an angled face to persons approaching along the pier, should be perpendicular. When more blocks were added to do that, they became an arm. Another was added at the east end of the seat, and it acquired a sofa-like sense of containment. It felt good. People sitting there looked calm and relaxed. By late afternoon the basic design was nearly done. But the wind off the bay had turned cold; we were tired and sunburned. We left for the day.

Back in my room that evening I compared how we'd designed the bench with how I'd previously designed in offices. I tried to think about each element of what we'd done.

We worked at the actual site. In the past I'd visit the site, but then work with a concept of the site based on memory, plans, photos, or a model. But if there really were forces, or physical structure "out there," integral with the bay, the view, the cliff, etc., I'd be cutting myself off from them if I went somewhere else to do the design.

We sensed the wholeness of the site. It wasn't easy. At first the feelings were vague and uncertain. But certain events were clear: the trash can, a number of mockup variations that clearly damaged or strengthened that wholeness. The word "wholeness" isn't exactly right; Chris also calls it "the quality without a name."

We worked without drawings, although not completely. At times, sketches were very helpful. But in the past, drawings were the primary design medium in offices where I'd worked. I had designed with models, but always at a scale tiny compared to the actual building.

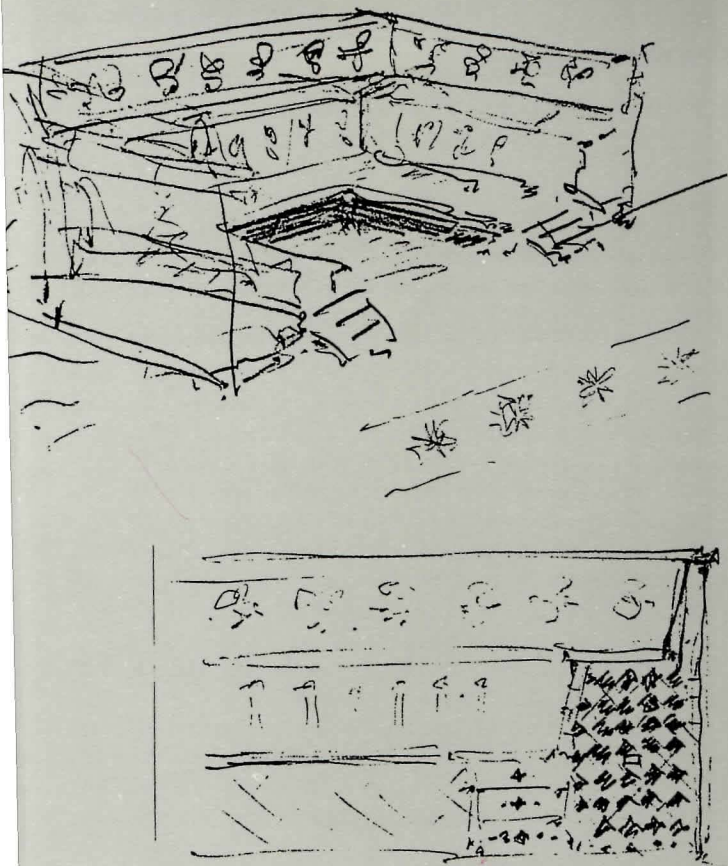
But here we worked with a full-scale mockup. We didn't have to imagine a full-scale version of the design and then imagine how it would feel to be next to it and then decide what to do to improve the design. The real thing was right there in front of us. We could lean back against the railing and look at the seat, walk over and sit down on it, re-shape it by moving concrete blocks or adding more. The mockup made possible a direct path from our physical perception of the object to changes in the object. Not unlike a painter adding some brushstrokes of color to a canvas, then stepping back to see the effect.

We worked as a group. In offices where I worked there had always been a single person making the design decisions. I had always seen this as a kind of reward to the project architect's ego for having waded through all the tasks of architectural practice that don't involve actual design. I had never thought about whether it was the most appropriate design method.

The mirror question (would I want this as a picture of my own true inner self?) turned out to be very powerful. I thought back on slick glass and metal designs I'd detailed for corporate offices and asked myself the question—and laughed. Of course not. The mirror instantly made it possible for me to make designs I knew were simple and good and joyful.

We were concerned with how people using the seat would be affected by it. In the past my concern with clients went as far as "would the client accept and approve the design?"

The on-site mockup process avoided many conventional processes that tend to keep feelings and life out of a design. We



Alexander's sketches of bench design.



Placing the blocks in a gentle curve.



Segment of mock-up is removed for study.

didn't make drawings with a parallel straightedge. This simple fact turned out to be very important. Every architect's office I've ever worked in had a lot of parallel straightedges. Drawings always had lots of straight lines in them. There was a terrible compulsion to make everything line up with something. In making the seat, it turned out that a curved shape was the best response to the situation. How easy it was to do with the concrete blocks! How hard it would have been sitting at a desk with a straightedge.

Sunday, March 25: This morning after some final adjustments to the mockup, Chris felt it was good enough to build. But he cautioned us, "Don't move anything unless you're asked to. It's very dangerous—we could lose the configuration." The arc was not perfectly symmetrical in itself or in relation to the pier railing. The night before someone had taken the concrete blocks comprising the secondary bench mockup. Chris was very concerned we'd be unable to find precisely the same location again.

We began converting the stacked-up concrete blocks into a solid base for the concrete skin. One crew removed a small segment of the seat and cleaned the slab beneath. Dennis drilled holes in the slab for re-bar pins, and we replaced the blocks. Another crew started up the little cement mixer, turned on the water hose, and began mixing batches of 1:6/cement:sand. A third crew poured buckets of this grout into the block cores and spaces between blocks. The outline of the rest of the seat was traced onto the slab. Then all the blocks but the seat ends were removed and similarly grouted back into place. Vertical and horizontal re-bar was placed to tie it all together. Chicken wire was secured to the surface to reinforce the eventual concrete skin.

At this point Chris started the process of designing the shape of the upper edge of the backrest. We cut out some lengths of corrugated cardboard and wired them to re-bars sticking up out of the back of the seat. Chris started sketching a flowing curved line on the cardboard where the seat edge should be.

Finally the irregular shape of the ends was recorded, and they were taken apart and grouted back into place. The concrete blocks forming the core of the secondary bench were securely grouted into place. They wouldn't be going anywhere that night. Near the end of the day we tried to figure out what to do with the back of the seat. A stairlike structure had been proposed to relieve the sheer expanse of seat-back, but no one felt comfortable with the mockup of it. It was left unresolved. We cleaned up the tools and loaded them into the truck.

As Chris was photographing the results of the day's work, Steve asked a question, and an informal seminar began. Steve: "Can you define a theory or describe a model of your idea of centers?" Chris: "Just look for centers whenever you sense yourself responding to one thing over another. This way you can increase your ability to recognize and enhance centers. We've become afraid to say which things we really feel good about and which things really leave us cold. Be bold, say what you like." Elias said the concept of centers struck a resonant chord with him, and he mentioned the link between centers of a greater reality and physical-spatial centers, like the seat.

Monday-Friday, March 26-30: Work on the seat continued during the week. On Monday, Chris, Rodney, and Ilkka figured out how to build the formwork for the concrete skin. Tuesday, Ilkka and Denny built the curved form for the vertical face of the lower seat. Chris and I built the octagonal form for the base of the small bench. Since the seat was to be decorated with inlaid terrazzo, we needed to place styrofoam void forms to create recesses in the concrete. The time had come to design the decoration. We made tentative, full-size decorations of green and white construction paper to match the marble chips and placed them on the seat. But the visual chaos of chicken wire, open concrete block cores, and re-bar made it difficult to judge the result. We needed to mock up the concrete skin.

Wednesday we covered the seat with gray chipboard. What a transformation! Suddenly the shape was smooth, continuous, and elegant. When Chris arrived we again began experimenting with the decoration. No drawings were used; full-size mockups were taped to the chipboard-sheathed seat. Now we could sense what strengthened and what weakened the power of the seat.

Chris explained the purpose of the decoration. The seat created a sense of wholeness and a center, on a relatively large scale. The decoration was to add a finer structure reinforcing the main whole and center with smaller sub-centers. After much trial and error, a row of nine rectangular panels alternating with small diamonds was selected for the lower backrest. Sinuous border lines on the lower seat and upper backrest were added. A kind of crest with flanking diamonds was placed in the center of the upper backrest.

Chris wanted to decorate the ends of the seat with a diaper-block pattern. He cut diamonds from green construction paper by first cutting several long strips, stacking them up, then slicing off many diamonds with each cut. Chris rubber cemented the green diamonds to a sheet of white paper covering the seat end. The diamonds were a little too small. He asked me to make another mockup with larger diamonds. I began by trying to get the pattern to come out even at the edges. But Chris stopped me and said, "Don't ever do it that way. Just start the field anywhere in the middle and let the edges come out how they will. Then it will be like looking out through a hole in the world to an infinite field of diamonds beyond."

There was an organic, objective structure to the decoration, integral with the structure of the seat. The decorations might well feel whimsical and carefree, while being not at all frivolous. And suddenly I sensed how barren the seat would have been without the decoration.

Although it was late in the afternoon, we decided to go ahead with the pour. We stripped off the chipboard. Ilkka placed the curved form. Rodney cut the styrofoam inserts. Chris mixed the concrete, being very particular about the 1:4/cement:sand proportions. We dumped the concrete into the form, and Chris troweled the styrofoam inserts into place. It was nearly dark when we finished. Thursday and Friday the lower backrest and upper seat were formed and poured.

Saturday, March 31: This morning cold wind and rain drove the workshop into Building F for a seminar. Chris talked about how our small project was relevant on a larger scale.

"I'd like to share a series of intellectual understandings of what the problem really is.

"First, the actual construction process has a lumpy character. When you're trying to make something whole, you're constantly and unpredictably confronted with questions. You can't tell what those questions are before they come up. The bigger questions have to be given time; you have to do it correctly. You have to organize the construction schedule to allow these things to take place and to avoid disastrous effects.

"What one is actually trying to do, what one is looking for, we could describe as wholeness. From a practical point of view, at each moment you want every part of this thing to be whole, which means you're trying to create these centers at various places. When you make something, you're trying to make a piece of the world resemble your own true self. I'm not talking about making something that is an idiosyncratic picture of an individual: Jim or Rodney or Chris. On a higher level the self of the person is not different from one person to another. It's a very serious matter; it puts a rather heavy burden on you. It's very, very difficult to do this. It's emotionally extremely demanding to ask that of your self. It takes a fair bit of discipline just to say, 'we're just not going to build that yet; we haven't gotten that far along.'

"That there is a family of structures that has this capacity to mirror the self is a very mysterious fact. Thinking about this,

delving into it for the last four or five years, I've come to the conclusion one's opinion of how matter is formed—how the actual structure of the universe is—must get modified to take account of these facts. I think human intuition is a very finely developed process for going into these matters, but on the other hand, not unless it's educated to do it. You can have all sorts of intuitions about all sorts of trivia. The specific intuition that's involved here has to do with the fact that there's a deeper connection between what we have to call the self and the actual material of the universe than is indicated by positivistic thinking. The so-called self is something that permeates matter and sort of comes to fruition each time one of us gets into the picture. Each one of us is more deeply connected to the general substance of things than we have been told in the past few decades.

"The work I try to do these days and all the sorts of thoughts I'm talking about, trying to explain to you, have a general structure at the base that whatever you do as a builder or as an artist is connected to this self in a very fundamental way. We're living in a world very different from the one we have supposed for the last 300 years. Self and matter are more firmly connected than we have believed. I see myself as a maker of things. I see my basic obligation to put this self into things I make."

Question: Are there certain things you do while you're working to stay in touch with this kind of thing?

"If you gradually train yourself to become more and more alert to the relative extent to which a thing has this quality, then you're in a better and better position to make judgments of the same type. I mean there is no substitute for that. Since it takes a lot of training to become alert to this quality, there simply is no quick answer. It takes years and years. It's not the same as simply liking things. Gradually, though, your liking for things will become the same as recognizing the reflection of the self.

"When you make things in this fashion you are constantly changed by that experience. If you make it your business to make things in this way, after doing it you don't just have the satisfaction; you are modified because you are then connected to things. It completely alters your relationship to the world.

"I think physical structures are immensely powerful. If you begin to create physical structure from this point of view I'm describing, then gradually the possibility of conceiving of the world in this way, with its centers, becomes more and more possible, more and more real. You can't wait for that to happen first as a mental transformation before undertaking the construction of anything like this. What we're doing actually is producing a thing that has got some ability to make a tranquil soul. I think all of you who were part of making it will take a slightly transformed innocence of what the world is like and can be like, into the next thing you do. That can also be true of the people who simply come sit here, I believe. If we're successful I think people will feel a great deal of tranquility when they come to this place. I think at some periods in history most people in society as a regular matter of normal daily business experienced the making of such things all the time. Under those circumstances people felt very, very wholesome.

"There is one thing I forgot to mention. Another way to choose something usable, less heavy and complicated than the mirror thing, is given by everything else there. In order to find out what to do, you mainly have to be a very good observer. It's not necessary to be an inventor. For example, I found very complicated color situations, trying to figure out what color to make a thing. If you put yourself in a very receptive state, a completely non-pushing state, and you look and you ask yourself, 'Which color is going to create light if I put it there?' you will actually be able to see in your mind's eye the exact color you need. The active ego is always trying to invent, to bring extraneous stuff into the situation. If you make yourself receptive enough to find what is there, you know this is extremely powerful. It implies the universe in some peculiar way is always telling itself what to do. Then all that talk about the self fades out of



Block form is covered with chipboard.



Alexander trowels foam inserts.



The bench takes shape after second pour.

the picture. I find it incredibly exhilarating. I'm more successful the more I'm doing nothing. When you play that kind of game the most incredible elaborations and structures develop."

When the rain stopped we went back outside. It was cold enough to see your breath. Anne and Jeff built the end forms, Rodney and I the rear forms, Ilkka and Elias the curved and tilted backrest form. Larry and Dennis installed a low stud wall for bracing the rear forms. Chris got the rest of the group struggling with the final form for the small bench. They cut several trial tops of Masonite, edged with duct tape to simulate the edge thickness. They pondered while we hammered and sawed.

By late afternoon their decisions had been made and forms completed. Chris sabre-sawed the final curve for the top edge of the backrest. The light began to fail; we were cold and tired. That evening we gathered at Irmine's house in Sausalito for dinner. As we discussed the things we'd done that day, the meaning of the process became clearer to me.

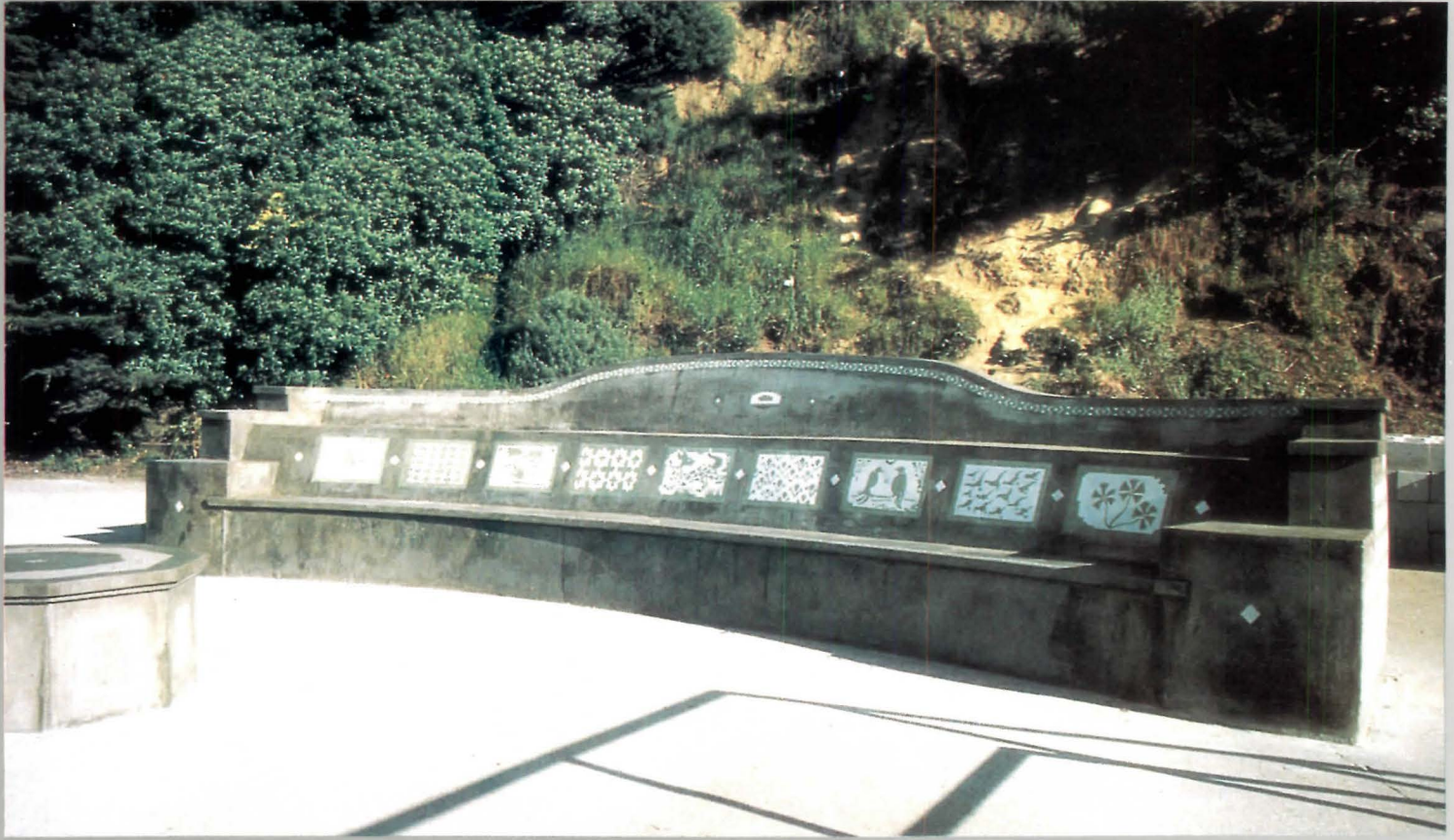
Looking for centers in physical structure seemed to make sense. Chris did not make this very clear. One might well ask, "Centers of what?" But simply thinking about the concept of centers gave me some insight into the wholeness I'd found present at many farms in western Pennsylvania. The main barn, house, smaller outbuildings, and fields comprised a field of centers of varying importance. The concept, lacking academic credentials, was quite useful to me. So was the workshop experience as a whole. It was an actual experience of designing and making something in a new way.

You have to know how to make things if you want to make them well. Really knowing how to make things had not been part of my architectural training. In offices where I'd worked I'd often heard the comment, "Don't worry about that; it's the contractor's problem." But now I saw that if the architect is the builder, the possibility exists for the design to improve during the construction process. For example, there was to be a lip on the lower seat. I make a sketch of a lip detail, not thinking exactly what would have to be done to make the formwork. Then I watched Chris, Ilkka, and Rodney figure out the actual formwork. My detail would have required special cant strips, a table saw to make special cuts, and a lot of extra construction time. By letting the construction process modify the design, they were able to devise a form consisting of one strip of plywood lapped over the main form. This process encouraged an honest, practical, down-to-earth simplicity in the design.

I had experienced a lot of antagonism between architects and contractors. When I was a child I loved building things. I'd find a scrap of lumber, draw a boat shape on it, and cut it out. The smell of fresh-cut pine, the sound and feel of sawing, the act of making something were wonderful and joyful. But I found little joy of making in the offices where I worked. The architect's role was to do the creative, intelligent, sensitive work. The contractor did the grunt work, with no creative input into the process. The contractor was considered almost the enemy. As lowest bidder, he was forced to do the work as quickly as possible and to demand extra payment for any changes in the work. The architect feared being sued for errors and omissions.

Seen from my new perspective, the conventional construction process seemed crazy. I saw design could benefit tremendously by being shaped by the nuts and bolts building process. But as an architect I'd been cut off, in the office, from that input. I had to draw an absolutely finished product before construction began. I was deprived of the actual joy of making. And worse, the person making the building, who was in touch with all the inputs of the actual materials and building processes, was not permitted to act on his or her feelings, skills, experience. They, too, were deprived of the joy of building. In fact, they'd get in trouble if they didn't build everything "as drawn."

You have to love making things, and you actually have to make them. If you don't like what you're doing, you're obviously not going to be able to do it well. Now I see I must avoid



The completed 'Spirit in Design' seat.



Applying marble chip terrazzo decoration.



The seat before decoration application.



Mocking up decoration for small bench.

processes that frustrate my love for making things. The actual physical process of making something was very empowering. It gave me a strength that drawing doesn't. It was as though some power came from the constructed seat into me. It felt like a whole cycle: conceive of the design, begin to build it, adjust the design, begin the final construction, adjust the design according to the construction, complete the construction.

Sunday, April 1: Today we took care of all the details required for the final pour. We completed the backrest form and oiled it; placed re-bar and chicken wire. Ilkka removed the end forms to add some forgotten styrofoam inserts. Irmine put a time capsule (spice jar with a workshop description and all our signatures) into the form to be encased in concrete. As the day drew to a close, Chris decided to have his university class come over the next day to do the pour. Putting in the terrazzo decoration would take place the following weekend. It was time for me to return to the East Coast. But first I wanted to find out a bit about Chris's background, see some of the buildings he'd completed in the Bay Area, and learn about his current project.

Chris was born in Vienna in 1936. But his parents fled to England when the Nazis occupied Austria in 1938, and Chris grew up in Oxford. He won the top scholarship to Oundle, considered the best secondary school for science in England. There Chris studied mathematics and chemistry, having decided to be a chemist. Later he won the top scholarship to Cambridge University, but was a year too young to matriculate. He decided to find out what being a chemist was like and went to work for his former chemistry instructor. He didn't like it.

An exhibit of photographs of modern buildings led to his decision to become an architect instead. But, following his father's advice, he first took his degree in mathematics. He completed Cambridge's three-year preliminary architecture program in two years, but felt the program was missing the point: He wanted to learn how to make a beautiful building. He's been obsessed with that question ever since.

Rather than complete the fourth and fifth years of the architecture program at Cambridge, Chris arranged to take a Ph.D. in architecture at Harvard and won a scholarship there. While at Harvard he and Serge Chermayeff wrote *Community and Privacy* (1963). Chris's doctoral thesis was published under the title *Notes on the Synthesis of Form* (1964).

In 1964 Chris moved to California. He accepted a teaching position at the University of California at Berkeley, which he still holds, and applied the theory of *Notes* to analyzing the proposed Bay Area Rapid Transit System. His ideas about design became more complex. "A City Is Not A Tree," an article in *Architectural Forum* (April-May 1965), treated the internal relations of a list of functional requirements. "The City as a Mechanism for Sustaining Human Contact," in *Environment For Man: The Next Fifty Years* (edited by W. Ewald, 1967) marked a shift toward basic human psychological needs.

In 1967 Chris founded the Center for Environmental Structure. Over the next six years he developed what he eventually called a pattern language. The development of the pattern language was closely related to the planning, design, and building projects of the same period. By 1973 the book *A Pattern Language* was largely complete, although not published until 1977. The book was presented as a tool for making places with a deep, life-giving quality, the "Quality Without A Name." "The 253 patterns, beginning with the largest, for regions and towns, work down through neighborhoods, clusters of buildings, rooms, and alcoves, ending finally with details of construction. . . Each pattern describes a problem that occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice."

Two companion volumes were published, *The Oregon Experiment* in 1975 and *The Timeless Way Of Building* in 1979.

A Pattern Language was well-received by many. In his review for *The Whole Earth Catalog*, Ernest Callenbach was enthusiastic, "The most important book in architecture and planning for many decades, a landmark whose clarity and humanity give hope that our private and public spaces can yet be made gracefully habitable." Some architects, builders, and designers began using the patterns in their work, delighted with the book's centered, loving philosophy. Others seemed to fear it would rob their creativity and opportunity for self-expression.

The center's building projects during this period influenced and were influenced by the developing pattern language. A design for a community of 1,500 houses in Lima, Peru, was completed in 1969, and 14 prototype houses were constructed there in 1971. A master plan for the University of Oregon at Eugene in 1971-72 stressed user-involvement and piecemeal construction.

Subsequent projects began to place more emphasis on the importance of the architect being the builder. In 1973 Chris was living in a Julia Morgan-designed house on Etna Street in Berkeley. In the backyard he and some students built a studio-cottage. Then user-designed, user-built housing and community facilities at Mexicali, Mexico, were completed in 1976.

Experiments with sprayed concrete began in 1978 at a site in Martinez, Calif., about 20 miles from Berkeley. Work on a small house there is currently being done by students. The house looks a bit grim in its unfinished state, but one garden wall shows how the house might look when completed: soft, muted colors with daubed-on decorations, plants and trees growing next to the wall.

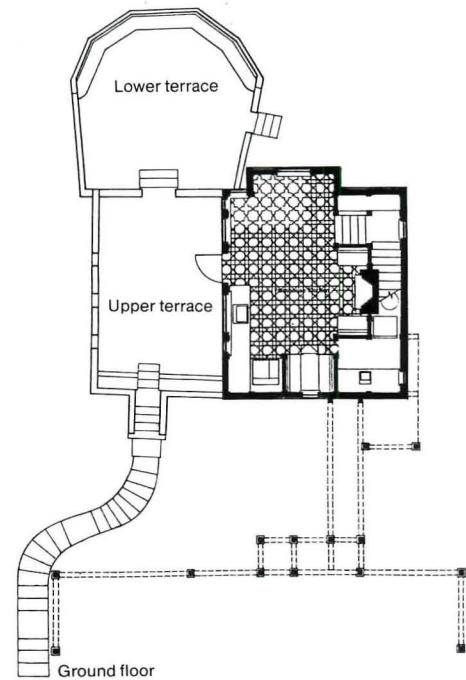
In 1980 the Linz Cafe was built in Austria and was subsequently described in a book of that title.

The Sala Residence, in Albany, Calif., was designed and built in 1982. It's a classic pattern language house: Car Connection, Entrance Room, Farmhouse Kitchen, Alcoves, Window Places, Sunny Counter, Children's Realm, Couple's Realm, Bed Alcove, on and on. Chris used composite construction: heavy timber framing with a 1½-inch concrete shear wall poured against the outside of the framing. The concrete skin was poured in lifts of alternating brick red and gray concrete, with occasional ornament. Chris invented several techniques to permit hand-crafting within a tight budget. Styrofoam was used to form arched window heads and recesses for marble-chip decoration. Styrofoam forms and gunnite were used to make the balustrade at the car connection.

Chris's current project is the New Eishin School, a 40-building combined high school and college, being built on a 67,000-square-meter site on the outskirts of Tokyo, Japan. Ingrid Fiksdahl-King, who has been involved with the Eishin Project since programming began in early 1982, described some of the unique aspects of the school and project: "Eishin stresses a three-part program: Class size is kept below 40 students, small by Japanese public school standards. Study groups of 10 students each are organized to further provide opportunities for recognizing each student's individuality. Participation in extracurricular club activities is strongly encouraged."

Fiksdahl-King went on: "The Eishin School is quite versed in building activity. Their first facility consisted of pre-existing buildings. Later a new building was designed and built for them, a homogeneous block of stripped-down modern design. Dissatisfied with that environment, Eishin is determined to get a better place the third time around and a facility highly suited to their philosophy. Mr. Hosoi, an administrator and teacher, has a dream of building a new school with a deep and distinctive character. He visited schools all over the world, became very interested in Chris's work, and asked *Chris to take on the project*. Mr. Hosoi agreed to Chris's role of architect-builder."

In determining the campus plan for the New Eishin School, Chris worked at full scale as much as possible. He and the build-



ing team walked over the site, placing bamboo poles with flags at the position of each building. Sizes and locations were adjusted until it all felt right. These locations were accurately measured and recorded.

Chris, working with school officials and the staff of the center, wrote "A Pattern Language for the New Eishin School." It is the result of a long searching process on the part of the school and Chris and his staff to articulate patterns for making a campus with a profoundly deep character, beautiful and contemplative. Again, Chris is going after something deeper and more profound than has been the case with much modern design. Some excerpts from the Eishin Pattern Language illustrate what is being sought as well as Chris's preoccupation with wholes and centers:

"The buildings and site will get their character from stone foundation walls, wood columns, white walls, some red lacquered wood, wide overhangs, dark roof surfaces, stones and grass on the ground. There is one essential center, where the sun shines on the buildings, and which catches the spirit of the whole place. It is an open place, where a very important building lies, sun shining on it; important building to the north of the open place, so sun catches it. (Something is there, don't know exactly what, that makes this place catch the spirit of the whole school, and stay in the memory.) The essential center is fairly large, itself a world. There is a subtle, indirect path passing through the school, reaching places which are more indirect and private, secluded, with changes of direction. The buildings continue this feeling: an intimate collection of large and small rooms, without formal corridors."

Entering the school will take one through a series of boundaries and zones. First the gate in the outermost wall, then along an entry street, through a second gate like a tunnel through the gate-building, which is decorated with the Shinhanshiki pattern. The Great Hall will seat 600 on the main floor and another 600 in the side galleries for assemblies of the whole school. A 1:20 scale model of the Great Hall interior was built to very accurately adjust the natural lighting, which Chris intends to be quite dim. All light first passes through an upper gallery and Shoji Screens before reaching the main space.

"The interior character is warm and subdued: wooden columns, wooden floors and walls in places, pale yellow wall color, comparable to golden chrysanthemums, paper, or silk, near sliding screens and ceilings."

The high school buildings will be grouped along a street leading to the student house. It is hoped the students will identify with this "homebase." Each class of about 30 will have its own

room; teachers of different subjects will move from room to room rather than the students. Each second floor classroom will be provided with exterior stairs to the street.

The college department buildings will be linked with a continuous gallery, a cloister beneath the overhanging second story. It will rest on thick columns, and speckled white dots on a gray band will make a border decoration above the columns. The exterior of the college library will be decorated with a green and white Shinhanshiki pattern. The second floor lecture rooms of the college department buildings will have heavy beams, brackets, and purlins supporting the roof, all visible from below.

"And inside, here and there, throughout the school, are surprising highlights of color, shining out among the subdued colors of the rest . . . a figure painted in pale kingfisher blue . . . in one place; a golden yellow iris in another."

Wednesday, April 25: Many days have passed since the workshop, yet the experience continues to exert strong influences on me. Now when I think of building something, I feel I know how to pay attention to what is most important: a sense of wholeness, the power of centers, a clear geometry, responding to the full forces of the site and users, and getting the self into the design. I feel free to use traditional forms if they are appropriate, to add decoration, to do what my inner self tells me will be good, even if it differs from current building types or styles. I know I enjoy building things with my hands, and I now feel free to initiate jobs where I will spend a lot of time on the site actually building. I understand how crucial this is.

I feel free to let myself go and fully enjoy things I'm not "supposed" to enjoy: stone mullions in a stained glass window built in the Gothic style. I'm not about to step backward to the 19th century and become an eclectic designer, but when I discover powerful geometries from the past, I'm going to pay serious attention to them. For example, I ran across a book about Chartres Cathedral by Louis Charpentier, who claims the deep physical structure of the cathedral exerts an extremely powerful influence on people. No longer do I classify that as a crackpot idea. Why should I reject something that has proven immensely powerful simply because it has been used before? I no longer feel compelled to invent every part of every building from scratch.

But most important, I've rediscovered the depths of architecture. I always knew it was more than slickness; more than the merely pleasant; more than smooth functioning. Although I'm just beginning, I know how to proceed, thanks to Chris Alexander. □



Across page, far left, the Sala House's farmhouse kitchen with hearth; middle, alcove off the farmhouse kitchen that looks out onto entrance to house. This page, above, the house's north side with entrance from road to the left. Gray and brick-red striped element is the cubical portion of house (in plan across page). Striping is due to color added to concrete shear wall poured in successive stages against wood frame of structure. At left, house from southwest as it offers views of the San Francisco Bay.



Serene Embassy In Sri Lanka

Victor Lundy describes his first impression of it after 23 years as its architect and four years of construction.

When Victor Lundy, FAIA, was selected 23 years ago to design a U.S. embassy building in Colombo, Sri Lanka (Ceylon), the State Department's panel of consulting architects then included Eero Saarinen and William Wurster. His original scheme was approved, only to be postponed during the Vietnam War years. The project was subsequently resurrected, its program scaled down, and built. Lundy here describes and illustrates with his own photographs the results. Completed early this year, it had been building for four years, during which the architect saw only construction photographs. On his arrival in Colombo early in May, Lundy says, he was prepared for "cardiac arrest or a shout of joy. Happily, it was the latter." His account continues:

"It is a strong, straightforward, sculptural image. It sits on an Indian Ocean site, long dimension facing north and south, with the important end porches facing east and west, looking like an Indian jewel box.

"Exterior materials are eternal. The concrete frame is faced throughout with hand-tooled, light sand-colored granite slabs four to six inches thick. The slabs were extracted by hand in an ancient technique of lighting fires on the surface stone of open quarries and having the stone crack away in layers through expansion against the resistance of steel chisels set at the determined slab thicknesses. The quarries were near Bangalore, and the slabs were sent on wood barges with sails from Tutucorin across the Bay of Bengal to Colombo.

"I tried to make something beautiful of security requirements, which were very stringent. I was inspired by an ancient Indian trick of decorative grilles that keep people from seeing in and give protection to vulnerable spaces while still allowing views out in a pleasant manner. The security grilles turned out beautifully. They are of Burma teak, a perfect choice for the tough Indian Ocean location where everything corrodes. Unfortunately, an orangey stain was added to the natural preservative treatment, but six months beside the ocean will take care of that. My preference is to let the teak turn gray.

"The sculptured, wide-overhanging roof is surfaced with locally made clay tiles that will weather nicely. I found this type of steeply pitched roof of tile—used in the wonderful colonial architecture of the Portuguese, Dutch, and British—to be quite beautiful. In Ceylon, these pitched roofs are the only ones that don't leak. The rains there are tremendous. I witnessed one in May and was delighted to see my building work.

"The windows, set deeply in a wall two feet, eight inches thick, are monumental in size, have cross-sections of Burma teak, are

The embassy is sited perpendicular to the Indian Ocean, its narrow ends facing the water and the passing road. The long north facade, with its narrow windows and flaring roof, is broken by a rectilinear porte-cochere, part of a court facing the British High Commission (far right in photo at left).



Below, a close-up view looking up at the teakwood grilles on the east facade, and the attic, which is ventilated through grilles under wide eaves. Bottom, the sheltering porte-cochere with the ocean beyond, and right, the west facade facing the ocean sits on a podium extending north and south.

Photographs by Victor A. Lund, E.A.T.A.



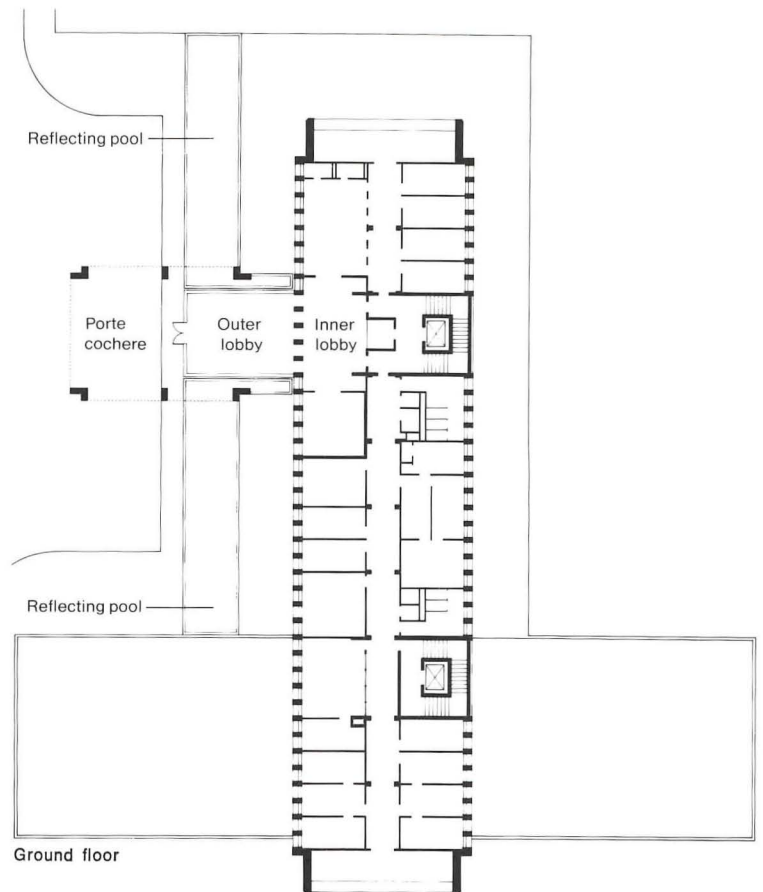


pivoted, openable. Power goes out frequently in Colombo, and the embassy is operable with natural ventilation. The entire building perimeter is sheltered against sun and rain by the overhanging roof.

“Important offices and suites are located at the east and west ends and enjoy the special porches with teakwood grilles. The porches make beautiful visual extensions of the end spaces. With the building’s long dimension perpendicular to the ocean, there are nice cater-cornered views from all offices of the sea and neighboring buildings. Eastward, there are views of Galle Road and the city; the view to the west is the ocean, while the wood grilles mask a railroad line on the water’s edge. The grilles also help filter and diffuse the intense, ever-present glare of the sun, and I was delighted with the quality of the filtered daylight.

“The people of Colombo seem to love the placement of the building because the thin, sculptured-wood end porch facade faces the main road, and they can see past the building to the ocean. The ambassador told me he was thrilled with the embassy, and I was happy to hear that apparently all of Sri Lanka is talking about the appropriateness and beauty of the new building and wondering how the roof was done.”

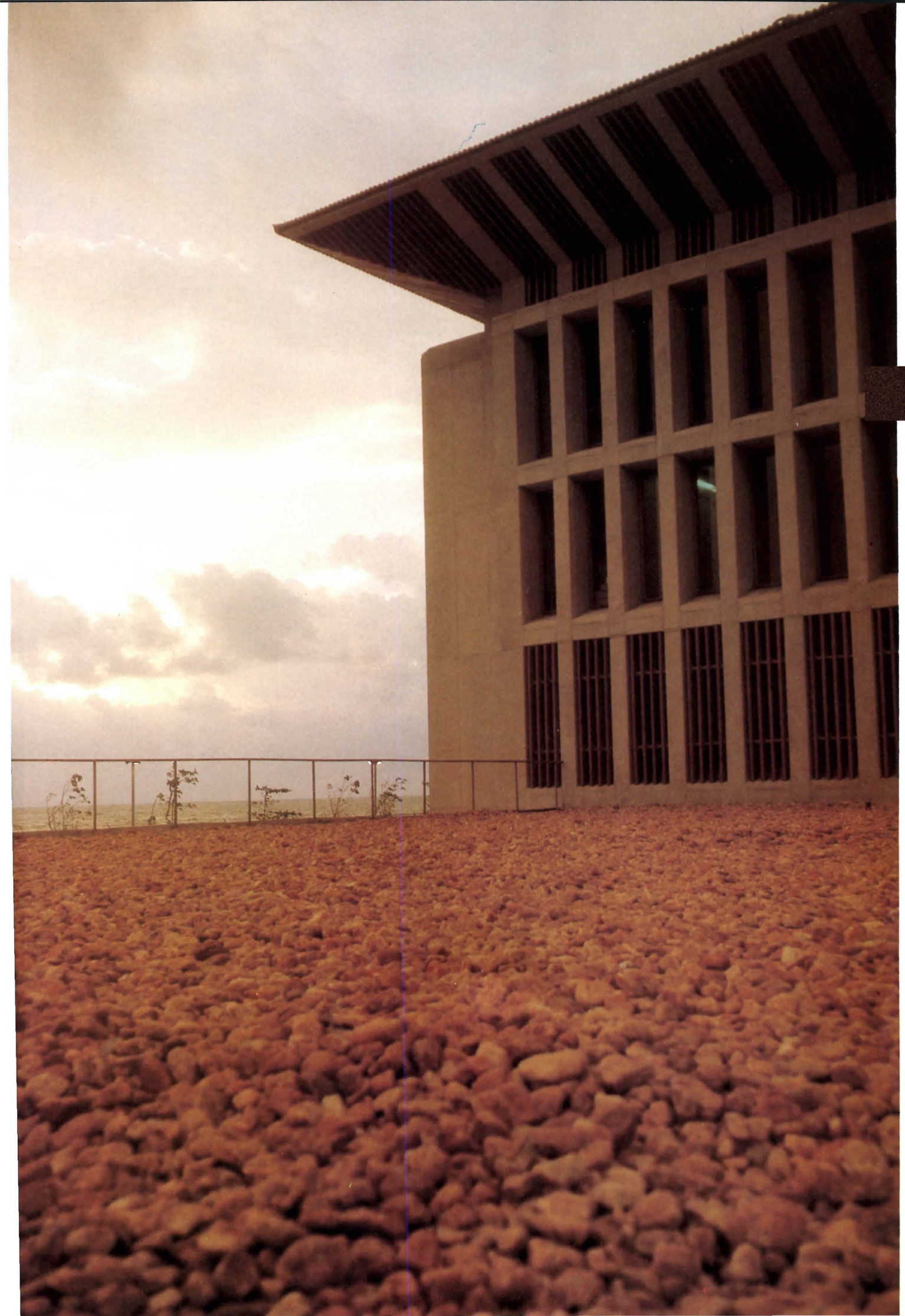




Left, view looking north from inner lobby to outer lobby, the latter under the porte-cochere. Above, skylighted typical hallway.



Left, an executive suite and grille-shaded porch on the west end facing the ocean. Above, the U.S. seal carved in teak desk in outer lobby. Right, the south facade. □



Tinted, High-Tech Housing in Manila

*Elbasani, Logan & Severin, Architect.
By Andrea Oppenheimer Dean*



Buildings like these—funky-looking, colorful, and full of flair—are bound for controversy, at least for a few moments. One Manila critic, for instance, wrote that Elbasani, Logan & Severin of Berkeley, Calif., was fashioning an instant Puerto Rican slum with this pink and yellow, blue, green, and natural-colored concrete embassy housing in Manila.

Never mind. None of the units stands empty, nor are they likely to in future. Among the reasons is the superior site planning with 24 three-story town houses clustered so that each unit has balconies on one side facing a lush green, and, on the other planted entry courts with shading provided by high, steel Vierendeel trusses covered with plastic screens. Other advantages include generously scaled interiors designed to use airconditioning sparingly and to be comfortable without it except in the worst heat.

Most architects claim that the shape and form of their buildings grow out of context, climatic conditions, program, and other



From west, covered central court links housing clusters.

constraints. In ELS's case the assertion goes beyond words. This is not to say that just because Donald Logan, FAIA, saw some pink and yellow buildings in Manila that he had to use these colors; nor that because he has always been fascinated with the structuralist architecture of Felix Candela and Herman Hertzberger, which helped him organize the pieces of his puzzle into clusters of great variety, that he had to fashion a complex resembling a Lego-like composition that might have been dreamed up in Waikiki or Miami Beach—though Manila has resemblances to both.

The main organizing principle was to unify landscape and housing into clusters of living units. The colored cross walls differentiate between clusters, adding not only panache but signposts, and gray concrete walls are scored with pattern for interest. With their entry courts sun-protected by overhead shading devices,

the clusters have been aligned along an east-west axis, with a minimum of glazing on east and west facades. The reason for this backward appearing orientation (for those of us in the Northern Hemisphere) is that near the Equator the sun is almost always high both north and south, which makes stationary horizontal shading more effective. Sun protection on the east and west would have required more expensive vertical louvers. Similarly, since the prevailing breezes flow east-west, logic would have seemed to dictate placing windows in this direction for maximum ventilation, until we remember that this is also the source of tropical storms, gales, and hurricanes. The east-west arrangement of the town houses thus draws cool air into shaded, landscaped courtyards, while mostly windowless facades buffer the units from tropical downpours. Orienting the houses along the path of prevailing breezes while minimizing openings also reduces leakage of cool air, thus lessening airconditioning loads.

To again reduce reliance on airconditioning, Logan landscaped



Vierendeel trusses with plastic screens, above, shade colorful, copiously planted entry courts, right.

the complex with lush vegetation, planting vine trellises along the major circulation areas, and placing shade trees throughout the project. He also shaped berms and plantings to nudge the breezes along the east-west courtyards and is training flowering vines onto a "wire wall" a few feet from the east-west wall. His emphasis on open space—a playground for children, balconies for every unit—has also been criticized by those contending that it's too hot in Manila to enjoy the outdoors at all. But the city is dotted with verandahs full of people in the early and late hours of the day.

Each unit steps up to three stories at most, the first two shaded by a terrace for the balcony above, the third topped by a slanted roof for sun protection and water runoff. Other energy saving and comfort augmenting devices are through-ventilation, sliding doors and wall louvers facing the entry courts, stair wells opening through each floor to allow the natural stack effect to push warm air into attic space where it is exhausted, heavy insulation, party walls to minimize the exposed perimeter, 85 percent effective sunshading devices, airconditioning that is controlled room-by-room, double glazing, double roofs and attic spaces to collect heat from the interiors, attic fans, and solar hot water systems. □





Evaluation: America's Presence In Tokyo—a Japanese Viewpoint

Pelli's embassy, joined by angular Weese housing. By Hiroshi Watanabe

The first American legation in Tokyo had to make do with the less than luxurious accommodations afforded by a Buddhist temple. In 1859 when Townsend Harris came to the capital (then called Edo) to present a letter from the president to the shogun, the party of 18 was installed in Zempukuji, and it was reported that the Americans found their makeshift quarters cramped and uncomfortable.

In 1976 the U.S. Embassy Office Building in Tokyo, designed by Cesar Pelli, FAIA, when he was a partner with Gruen Associates of Los Angeles, was completed not far from that temple, and over the last eight years the occupants on the whole have found it a pleasure to work in these entirely secular and functional facilities. Moreover, the building has made a positive contribution to the Tokyo cityscape and has had some influence on Japanese architects, as witness Fumihiko Maki's Toranomon NN Building.

The embassy is on a site of about 141,000 square feet in the heart of Tokyo. Maps show that the site configuration has not really changed since the late Edo period. To the south of the Kasumigaseki district of nondescript boxes housing the Japanese government ministries an avenue called Sotobori Dohri follows what used to be the course of the outer moat of Edo Castle. From this low ground the land rises further south. A short but heavily trafficked avenue branching off Sotobori Dohri heads southwest directly for the embassy site, where it meets a street that on the left continues upward more sharply past the embassy motor court (now hidden behind a 10-foot wall) toward the top of the hill where the ambassador's residence is located, across the street from the Hotel Okura.

The Americans moved to this site in 1890, and the legation was upgraded to an embassy in 1906. The building that was replaced by Pelli's work was built in 1931. It faced the north and had a pitched roof and a symmetrical elevation centered on the entrance topped by a loggia. Pelli pushed his building to the western half of the site and made it face east rather than north. The architect has written, "From the first moment I saw the site and understood the problem I felt that the building should end the view [from the avenue that meets the site head-on] with an oblique perspective, minimizing the formal qualities of the composition and establishing a strong dynamic relationship with the viewer. Particularly the moving viewer."

Thus the building was intended to be the antithesis of its rather stately and statically conceived predecessor. A portico framing the entrances to the consulate and the embassy is off-center as far as the building itself is concerned, but it is directly on the axis of the avenue. Placed at an angle to the avenue, the building thus permits space to continue past but at the same time acknowledges this approach. The flow of traffic and the siting are such that to motorists the building is essentially a single plane gleaming at the end of a dark canyon of other office buildings that disappears in a flash. This gives the work a strangely elusive quality.

The embassy is composed of an 11-story block and a two-story block located on the west and east sides respectively and separated by the lobby and a multipurpose hall, atop two basement floors. While there are spaces for special functions, such as the library for commercial publications on the first floor, the consulate, and a studio for the U.S. Information Service in the basement, the building essentially provides office space. The total floor area is slightly more than 251,000 square feet.

The structure is a composite: The tall block is steel framed, the short block is of reinforced concrete, and the two basement floors are steel and reinforced concrete. Pelli originally conceived it as an all reinforced concrete structure, but the Japanese contractor, Ohbayashi Gumi, urged the use of a steel frame, which it considered a better structure against earthquakes, for the tall block. The building's long facades are composed of hori-

zontal windows of bronze-tinted reflective glass with anodized aluminum sash, flush with spandrels of precast concrete panels finished in *bontile*, an epoxy substance that is much used in Tokyo as a protection against the polluted air. Pelli says his first impulse was to use a metal panel, but he writes that he "enjoyed the difficulty and opportunity of creating a precast concrete curtain wall" in response to requirements set by the State Department and is confident that this precast curtain wall is more clearly a curtain wall than neighboring ones of metal and glass.

On the short, north and south faces, the structural system is expressed directly, with beams and columns exposed as if the building had been cut; these elevations are windowless, being closed off with ribbed infill panels. (Pelli used a similar system in the Daehan Kyoyuk Life Insurance Co. headquarters building in downtown Seoul.) A portico is created by projecting the curtain wall over five bays out of 11 on the lower levels of the east elevation and exposing the structural frame. Steps partly within the portico and partly without connect the first basement (that is, the front street) level entrance to the consulate and the first floor entrance to the embassy.

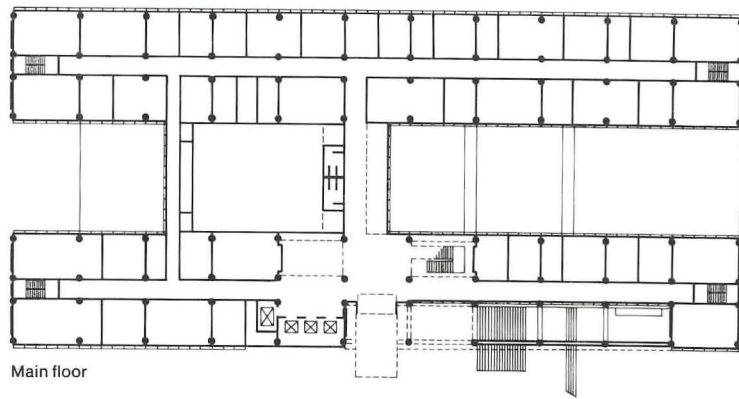
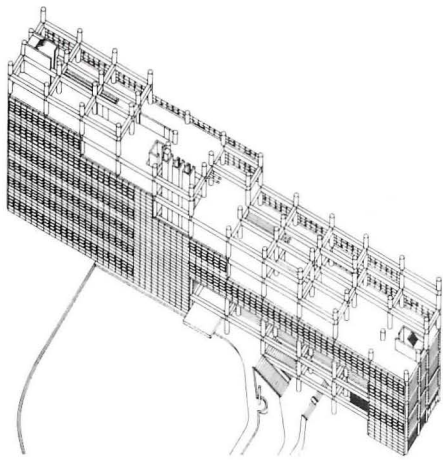
An office module of 4.5 feet was another programmatic requirement. This is expressed on the building exterior by an abstract grid that measures about 4.4x2.1 feet (dimensions having been translated into the metric system), a module for the story heights, and window dimensions determined by the eye levels of sitting and standing persons and the heights of window-side furniture. The program provided by the State Department also specified that the glass surface area be limited to no more than 50 percent of the total wall area. This ruled out very deep office spaces and resulted in a linear layout with offices no more than 20 feet deep. The typical office floor is served by a double-loaded corridor with elevators at about the halfway point.

Outwardly the building looks as good as new, and for a good reason: The precast panels were resurfaced with epoxy in 1982, six years after the building's completion. Some architects have looked askance at the treatment of the building skin as a thin membrane with minimum reveals when it must face the heavy rains of Japan. Although there has been some leakage around the windows during the typhoons that visit Japan in the autumn, this has not developed into a serious problem as yet. Nevertheless, making the windows properly watertight is a project being contemplated for the future when enough money can be found.

The embassy staff has found the building quite easy to use. The walls of plasterboard and aluminum studs make it an easy matter to rearrange the rooms, a relatively frequent task—"four to five walls a year" in one area. None of this has affected the character of the building, the order imposed by the large round columns, everywhere expressed, being very strong. There is ample space, and though the lower block was designed to accept an additional floor on top, so far there are no plans for expansion. (There are still some American government facilities that are scattered around Tokyo, including the American Culture Center, but for various reasons, including the need for greater accessibility to the Japanese public, they are not about to be brought into the embassy's fold.)

While people are generally pleased with the building envelope, there have been problems connected with the chilled-water air-conditioning system, whose capacity is inadequate for the size of the building. Additional impellers have been installed to increase the water flow, but the system is still not entirely up to snuff. On warm days, particularly in late August, people on the upper floors of the tall block complain of discomfort. The building was designed to be entirely mechanically ventilated, and the windows are not meant to be opened. However, people have somehow found keys and are opening windows. Since there is a thermostat at only one end of a floor, the introduction of outdoor air in some rooms can disturb the operation of the air-conditioning system. The low capacity of the system is seen by

Mr. Watanabe, an architect in Tokyo, is a frequent contributor.



© Julius Shulman

Long elevations are ribbons of reflective glass and precast panels, while unfenestrated narrow ends express structure.

some officials as a case of last-minute cost-cutting in a spirit contrary to the high quality of the building as a whole. (The total cost of the project at the time was \$1.59 million; the cost per square foot was thus about \$63.50.) According to William A. Levis, first secretary at the embassy, "This is a Mercedes with a Ford engine."

The State Department subscribes to the services of Preventive Maintenance Administrative System in Washington, D.C., for the embassy. Each piece of equipment in the building has been labeled and given a number, and every day work orders based on computerized reports are received and followed by Nihon Building Service, a local maintenance firm.

Apart from the quality of the building design and the diligence of those charged with building maintenance, a major factor contributing to the excellent repair of the embassy is the solicitousness of the general contractor, Ohbayashi Gumi. One of the major construction firms in Japan, the company also built the prewar embassy, the postwar embassy apartments designed

by Antonin Raymond, and their recent replacements designed by Harry Weese, FAIA. This long association with the U.S. Embassy is a source of pride for Ohbayashi Gumi, and the firm is apparently willing to incur some losses—or at least to squeeze those under it should that prove necessary—in order to maintain an amicable relationship. Several years ago, a water heater for the basement cafeteria burst and flooded the floor, ruining the parquet. The contractor brought along the subcontractor who had installed the water heater and showed him the buckled flooring, and although the guarantee for the heater had expired, the parquet was quietly replaced at no cost to the embassy.

However much one may sympathize with the subcontractor, one cannot help but feel that such attentions as this building has received have not been wasted. The U.S. Embassy Office Building is a work with both dignity and verve, and these qualities remain undiminished after eight years of use, and if not quite as emblematical of the United States to the Japanese as those other outposts of American civilization, the ubiquitous McDonald's and Tokyo Disneyland, it has nevertheless become, with its distinctive facade—the outsized banner of beige and blue—a familiar and widely admired landmark in Japan's capital.

Like icebergs that have found their way to waters in a milder climate, these are, among the patchwork colors of Tokyo, startling, etiolated presences. The apartments of the U.S. Embassy Housing, completed in March 1983, are a short walk away from the Embassy Office Building and stand on land that was once owned by the Mitsui family. Stone escarpments border a slight plateau of approximately 11 acres that constitutes the site.

The new buildings, designed by Harry Weese & Associates, replace structures that were known as Perry, Harris, and Grew houses. Perry and Harris were designed in 1951 by the Czech-American architect Antonin Raymond (1888-1976) and introduced the Japanese to picture windows and elevator-served concrete slab apartments. Three decades of use had taken their toll, and allowances for people living off the compound had become highly expensive. It was decided to rebuild the apartments and to increase the number of units from 100 to 200.

The project was realized on what was, relatively speaking, a shoestring budget. To finance the construction, the U.S. government let go six pieces of property it owned in Tokyo, and this provided nearly 87 percent of the total project cost. As with the earlier office building, American materials were used whenever possible, where a cost was less than 150 percent of that of a locally available material. (The major exception, because of a scheduling problem, was the window sash.) Another principle followed was to waive extraterritoriality and to abide by local building codes and practices. This had some effect on the siting and design. Shadows cast by tall buildings on adjacent residential properties have become in recent years a sensitive issue in Japan, and negotiations with neighbors conducted through the contractor, Ohbayashi Gumi, resulted in the lopping off of some floors that reduced the number of units to 173.

There are three tall blocks—Perry, Harris, and Grew towers—that are 14 stories high and contain a total of 131 units. These zigzag in plan but are basically aligned northwest to southeast. Of steel-frame construction, the towers are linked below street level by community facilities, including a commissary, day care center, and library, that look out upon sunken Japanese-style gardens. The units vary in size but are typically on two levels with a plan 30 feet square. The corridors zigzag as well, with a window introducing light at each turn.

Along the northern edge of the site stands the Temple Townhouse—so called because of the proximity of a religious building that is actually a Shinto shrine—containing 28 units. Built over two garage levels, the reinforced concrete structure incorporates a central passageway off which are three-story units on either side. Each of the units on the north side of this passageway has a deep courtyard to one side, while the units on the south side have terraces that look out on the towers and the Japanese gardens. On the western edge of the property is the Mitsui Townhouse containing 14 units. These are also of reinforced concrete and are raised on pilotis with garages at the ground level, above which are three-story units. There are various other buildings on the site, including the Marine guards' quarters and recreation facilities.

Weese says the property, raised above the rest of the neighborhood by the stone escarpments, gave him the idea of creating an oasis in the city. "The occupants of the housing project represent a cross section not of urban but of small-town and rural America," he notes, but does not say whether or not this is based on statistical evidence. Thus it was decided to make the units as houselike as possible; the tower apartments, for example, are basically maisonettes rather than flats.

Great concern was also shown for privacy. Alternative paths of circulation make it less likely for people to encounter each other constantly. The passageway through Temple Townhouse—likened by the architect to a village lane—runs parallel to the street at ground level and thus siphons off some of the pedestrian traffic. The community facilities that might have given more

life to that street are hidden on a lower level and served by another passageway.

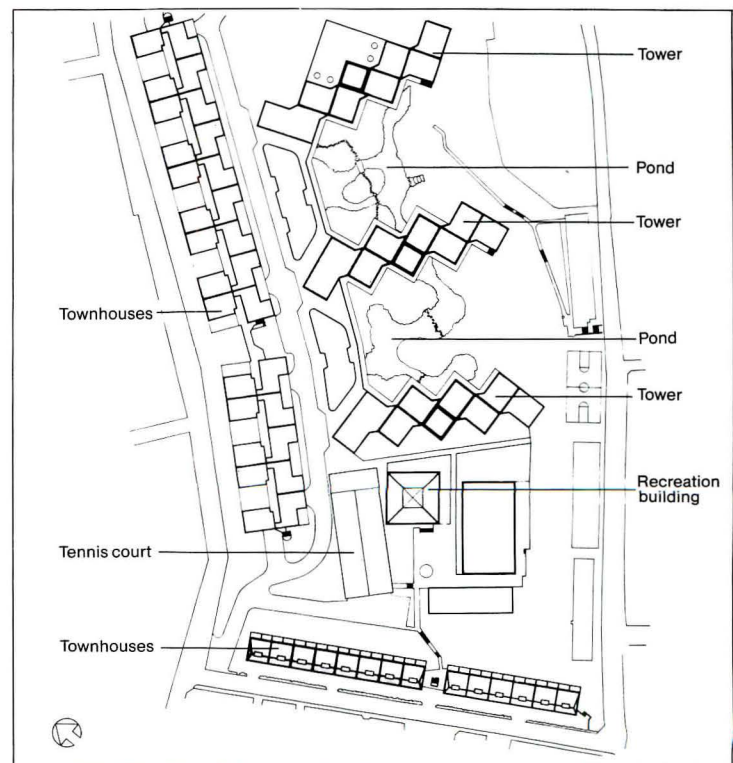
In the towers, the units are alternately entered from the top or bottom floors, so that only half the occupants on any floor use the corridor on that level. All this duplication of circulation space gives the compound the feel of a suburban community in terms of visible human presence, despite its midtown density. (It is true that occupants in some units complain of a lack of privacy, but this may be due in large measure to the heightened sensitivity of people living in a "company town.")

The towers and town houses have only the most casual formal relationship to each other, although the towers do step down as they approach Temple Townhouse. The most striking feature of the compound and the one that does integrate the exteriors of these different apartments are the white stucco panels outlined by black neoprene joints.

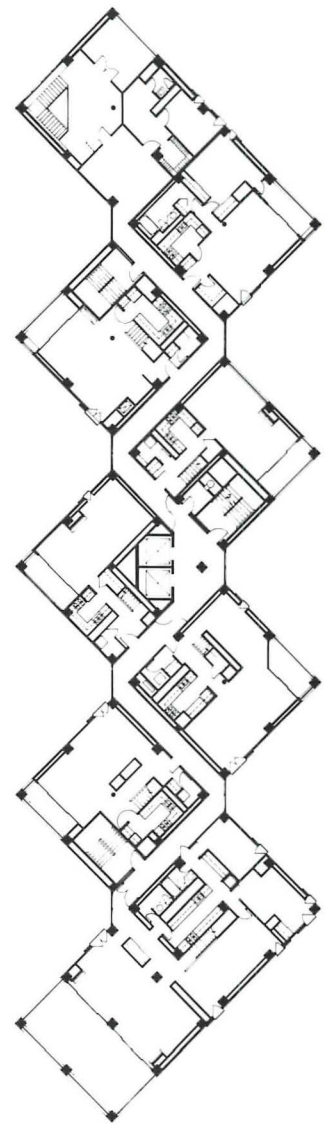
The low level of visible human activity in the compound is at odds with a very active articulation of building forms and surfaces. The stucco and neoprene recall, in Weese's words, "the half-timber tradition of Japanese rural and village enclaves" and northern Europe. They appear intended to strike a pastoral note as well as to be sure economy, but the pattern, repeated over the surfaces of the towers, assumes a restlessness that suggests a more urban atmosphere. And indeed the architect exhorts the occupants to landscape the corridors, French windows, porches, terraces, streets, and corridors "in the tradition of Rome, Milan, and Tokyo, whose balcony life with potted plants, laundry, and other evidence of humanity is always active." Unfortunately the roof gardens on the towers are whipped by winds that make their use difficult, and the people in general tend to exhibit more reserve than clotheslines; however, though the signals are mixed the intention is clear. The compound is meant to be a combination of teeming tenement and quiet rustic village, where the architecture and sundry inanimate objects are to carry the burden of enlivening the environment and permit the occupants to live in comparative privacy.

What keeps the architecture from seeming *too* busy, other than the occupants' unwillingness to ornament their balconies with flapping shirts and bibs, are the colors, or rather the absence of

Right, towers and town houses of U.S. Embassy Housing complex.







colors. The stucco panels and the black neoprene are the most visible elements in the compound, but wherever you look, you encounter only variations on gray: aluminum shutters, steel railings, exposed concrete, and galvanized stainless steel roofs. Inside, the white paint on plasterboard for both walls and ceilings sets off the oak parquet flooring, the one departure in what is certainly a budget-conscious selection of finish.

The architect persisted in the use of stucco despite strenuous objections raised until the very last minute by the Japanese contractor, Ohbayashi Gumi. According to a wry account of the affair entitled "U.S.-Japan Mortar and Lath Frictions" by Chikafusa Sato, a member of the Ohbayashi Gumi design section, when the builder got the contract initial consternation at seeing the stucco design changed to panic. "We reached the conclusion that we would have to persuade the architect to drop the idea. As soon as work with Harry Weese & Associates began, we tried this and that method to dissuade them, arguing that stucco was not dependable."

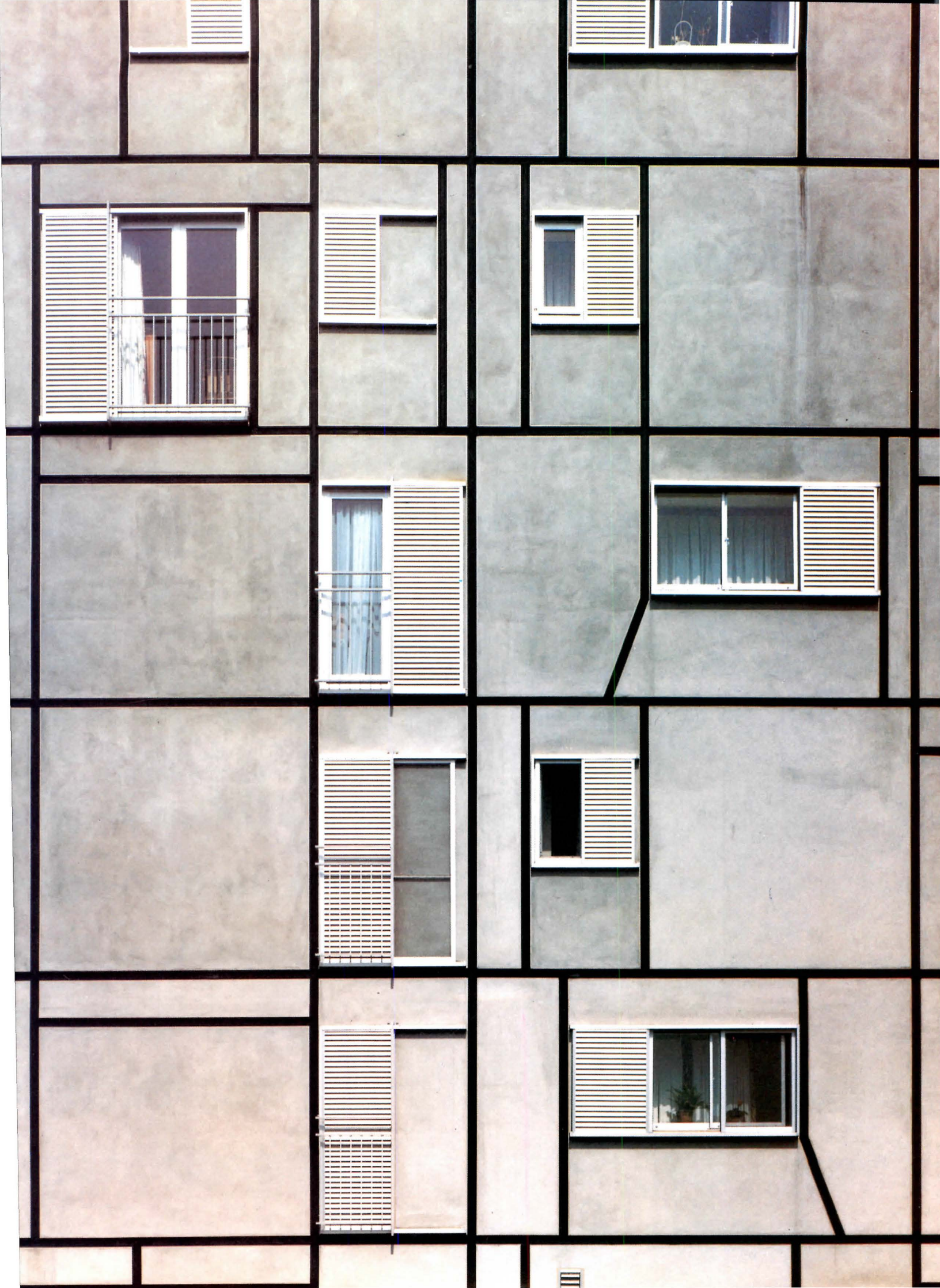
Ohbayashi Gumi proposed every alternative it could come up with, including precast panels, lightweight concrete boards, and aluminum curtain walls, but to no avail. One detects, besides a sense of professional responsibility, chagrin that Ohbayashi Gumi, which prides itself on familiarity with the latest building technology, should have been called upon to use something as old-fashioned and labor-intensive as stucco on what it perceived as a prestigious project. Sato also sees a cultural factor that might have contributed to their differences. Ohbayashi Gumi argued that there wasn't a stucco building over three stories in height in Japan and that 14-story stucco buildings were simply out of the question. A Japanese might have given in when apprised of

Above, an interior street; right, detail of a tower's stucco wall.

the lack of precedent, but the American response was an enthusiastic, "O.K., let's give it a try."

Initially, stainless steel joints were to be employed, but this was strongly opposed by the U.S. design committee. In the end, the architect decided to frame the stucco panels with the neoprene gaskets inserted into aluminum brackets. These joints, which absorb building displacement during earthquakes, can add up to over an inch at the top floors of the towers. They are supposed to prevent cracks in the stucco—up to a point. Fissures have appeared and will no doubt increase with each tremor. The architect, however, remains undaunted by hairline cracks. Weese has likened them to those on an alligator's hide.

The apartments have elicited wildly divergent responses. One Western observer writing in an English-language paper spoke admiringly of their "spectral dignity" and urged Japanese developers to use them as a model, as builders had done earlier with Antonin Raymond's work; a Japanese architect commenting in a professional journal called them *misuborashii*, meaning tacky, and sniffed that they would suggest the tradition of Japanese folk houses to few Japanese. The choice of building finish is questionable, given its vulnerability to the air in Tokyo (which is already turning the panels gray). Unlike Raymond's apartments, which had a simple, prototypical character, the new U.S. Embassy Housing is a more complex, hybrid work that is less likely to become a paradigm. Nevertheless, this American village in the center of Tokyo does provide a wide variety of generously sized and comfortable units and considerable *privacy*, and those would be worthy objectives for any Japanese developer. □



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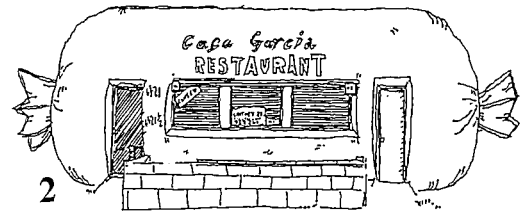
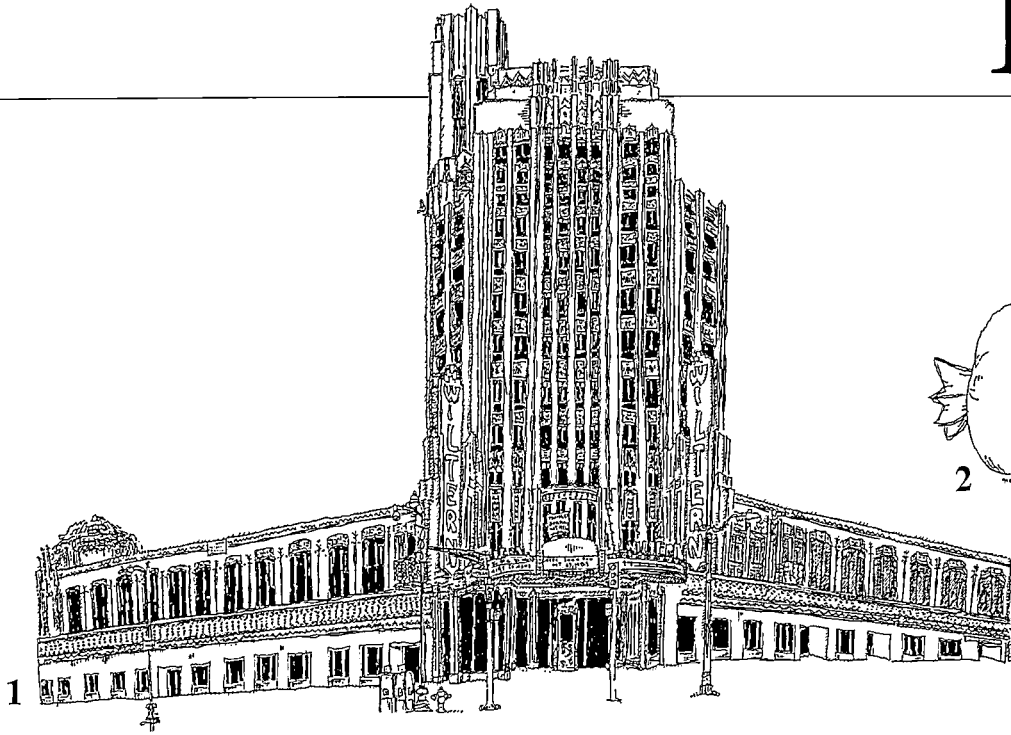
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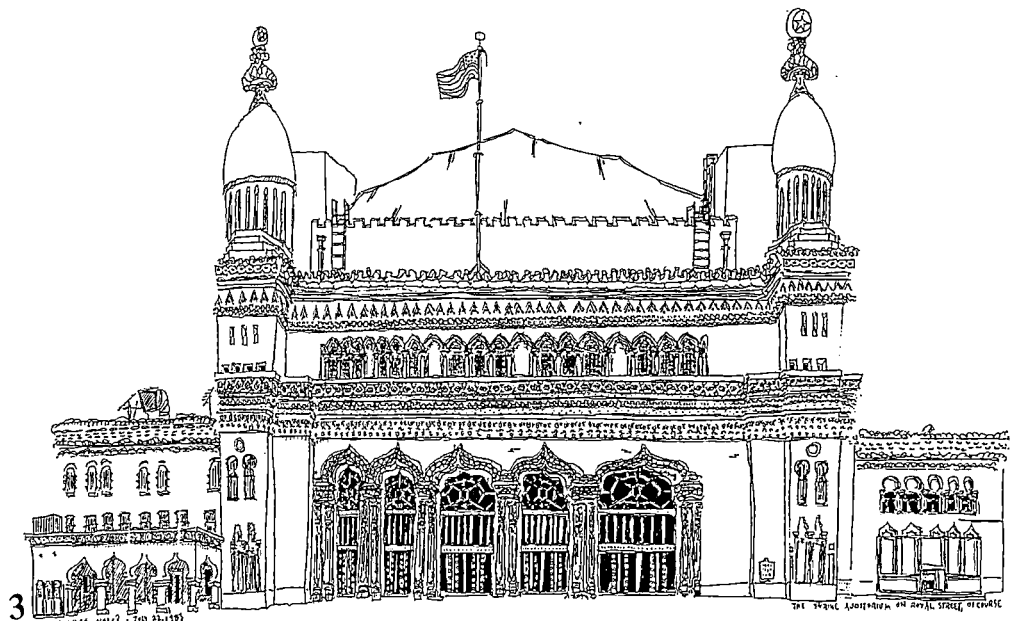
Los Angeles Seen Through 'A Most Unusual Eye'

L.A. Robert Miles Parker. (Harcourt Brace Jovanovich, \$25.95 hardbound, \$10.95 paperbound.)

Robert Miles Parker looks at architecture with a most unusual eye. To him, buildings have personalities, and the squiggly line, pen and ink drawings, which are not architectural but rather impressions of what he sees, evoke that. They are, however, replete with the tiniest of architectural details, as well as the ephemera—signs and the like—so often left out of more formal work.

In the mid-1970s, Parker toured all 50 states, documenting the architecture he saw and recounting the delightful, often funky, stories he heard, in *Images of American Architecture*. Now, the San Diego artist, whose work has become subtler over the years, concentrates his attention on one city; Los Angeles. The vernacular architecture there—whether it is a dog and cat hospital with a neon dalmatian for a sign or a massive tire factory along a freeway that resembles some ancient, ziggurat-topped Assyrian temple—has always fascinated Parker.

His love of the city shows in this handsomely printed 132-page volume. "L.A.'s
continued on page 84



'1) The 12-story deco Pellisser Building and Wiltern Theater by Morgan, Walls & Clements; (2) Casa Garcia, a giant tamale; (3) the Shrine Auditorium, an early-'20s Arabic confection by John C. Austin, A. M. Edelman, and G. A. Lansburgh; (4) view across Sunset Boulevard from Angelino Heights.

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architecture," Parker writes, "is its autobiography." His tale of nearly 200 diverse buildings, and the people who created them, is a fascinating one.

CARLETON KNIGHT III

Mitchell/Giurgola Architects. Foreword by Kenneth Frampton; essays by Romaldo Giurgola and Ehrman Mitchell. (Rizzoli, \$29.95.)

One of the most revealing discussions of architecture I have ever heard was a 1975 speech given by Ehrman Mitchell to a Philadelphia area real estate group about his firm's Penn Mutual Tower. At the time, most people, including the men and women in the room, were unaccustomed to buildings that were different on each facade, that incorporated a historic facade, that had sunscreens that were actually structural. The building, which is directly behind Independence Hall, could hardly have seemed odder to them.

But as Mitchell explained in a direct, no-nonsense tone how each of the decisions was made, the audience nodded along with him. There was a good reason for each decision, he noted. Indeed, he made the result seem nearly inevitable. In fact, there was nothing inevitable about the design, whose strengths and weaknesses are entirely characteristic of Mitchell/Giurgola. But there was a reason for each decision, a reason that could be understood by nonarchitects. The building is personal, but not arbitrary.

Good Mitchell/Giurgola buildings are sensibly mysterious in just this way. The firm views architecture as a public responsibility, and also as an art. Mitchell is the plain-spoken voice of practicality, who sees his role as creating the mechanism through which the art of architecture—represented in this firm by Romaldo Giurgola—can be realized.

In perusing this new monograph on the firm, the first thing that struck me was how busy the firm had been and what a solid record of achievement it has. And, as Frampton notes in the foreword, the work has a tremendously public aspect. For the most part, the practice has been devoted to significant, shared places, the sort of places that help shape people's idea of community, in a time that has been distinctly hostile to such ideas, Giurgola has kept alive Louis Kahn's belief in the importance of human institutions and the buildings that embody them. This book documents places to work, to learn, to gather. It is short on self-indulgence, pipedreams, and expensive fantasies.

Indeed, the very solidity of the achievement probably places the firm at a disadvantage to architects who have been able to realize fewer of their ideas. A monograph serves as an alternative to buildings as a means of disseminating architectural ideas, and, since it is portable and widely available, it is probably superior in some respects. Beautiful drawings can make promises that actual buildings do not always keep. Giurgola draws as well as anyone in the business, but this book opts for photographs, plans, and construction details rather than virtuoso drawing to make its points. Most of the drawings are on somewhat confusing pages of sketches and snippets of philosophy that open the major sections of the book. Mitchell/Giurgola's work has plenty of sizzle, but in this book they have decided to sell the steak.

The monograph is also amazingly comprehensive, including much that falls far short of the firm's best work. William Penn High School in North Philadelphia was based on a fundamentally misconceived program, to which Mitchell/Giurgola

United Fund Building completed in 1971.

added a misguided monumentality that creates problems of both function and image. It is short of outright disaster, and nobody has suggested that it be dynamited. But when it is mentioned, members of the firm generally try to change the subject. It is handsomely presented, complete with well populated photographs of a lot of students over four pages, while the far more successful Columbus East High School in Columbus, Ind., gets eight. The inclusion of both buildings may give a better account of the breadth of the firm's work, but I would rather have more on what the firm does best and how it achieves its results.

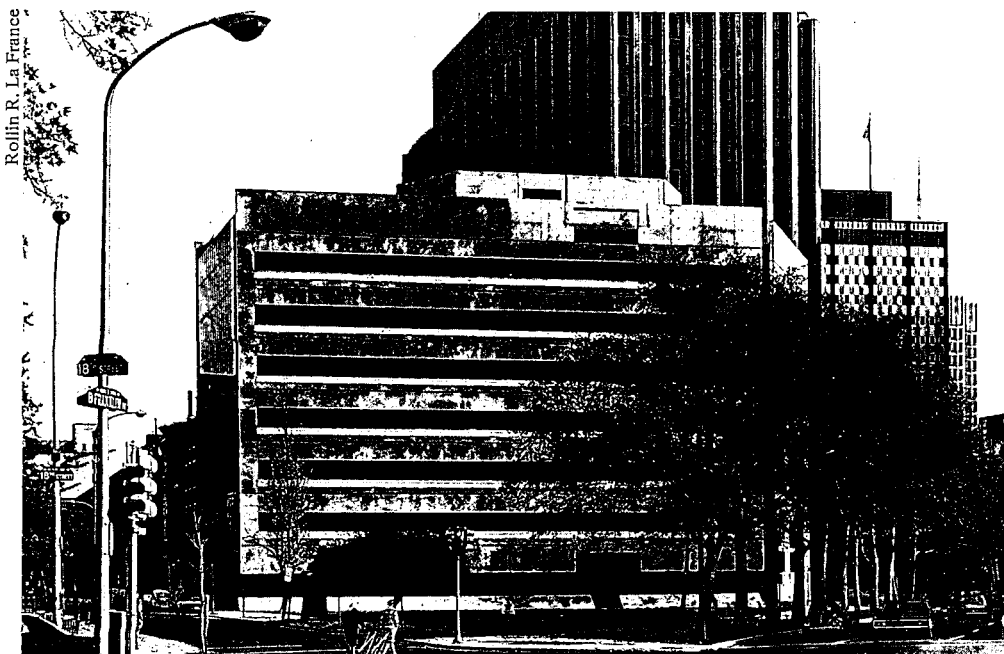
The book is amazingly reticent, considering that it is the work of a firm whose ideas are important. Each project is accompanied by a paragraph on the building's program and the nature of the architectural approach. The rest of the information is conveyed through photographs and drawings. An architect reading it can surely find many things that can be profitably stolen or adapted. But the thinking that has gone into the design is rarely apparent. The book does a better job of demonstrating the firm's mannerisms than documenting its methods.

I'm not quite sure what someone who had seen none of the firm's work would make of what is shown in this book. As Frampton notes, much of the work appears to be an architecture of collage. Surely the Philadelphia United Fund Building, one of the firm's best and most characteristic buildings, and one I usually see at least once a day, appears to have that quality. When it was first proposed during the late-'60s, it was criticized by other architects as being somewhat overwrought for such a small building. Its disparate facades seemed particularly troublesome. Now, more than a dozen years since its completion, it seems to fit in almost too well. For most people who move past it, it does not really register as a building. The piece of it seen from any particular vantage point appears as a logical piece of the larger urban scene. Few architects have so subtle a sense of their buildings as part of a larger whole, and what seems merely peculiar on the printed pages makes a lot of sense as you move through the city.

I am less convinced in those cases in which the firm makes the entire place. The campus of the American College of Life Underwriters, in Bryn Mawr, Pa., has a master plan by Mitchell/Giurgola, which also did all of its buildings over a 25-year period. Few architects have such an opportunity. Each of its buildings feels better than the last, but a sense of the whole never emerges.

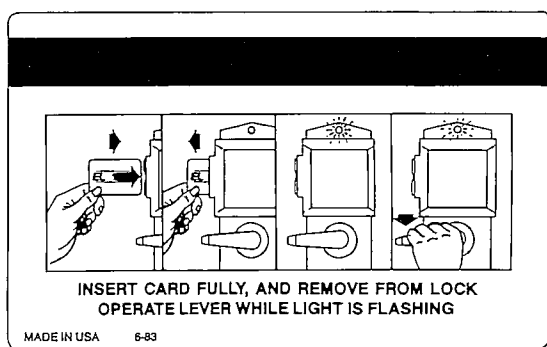
The climax of the monograph, and very likely the most important work the firm

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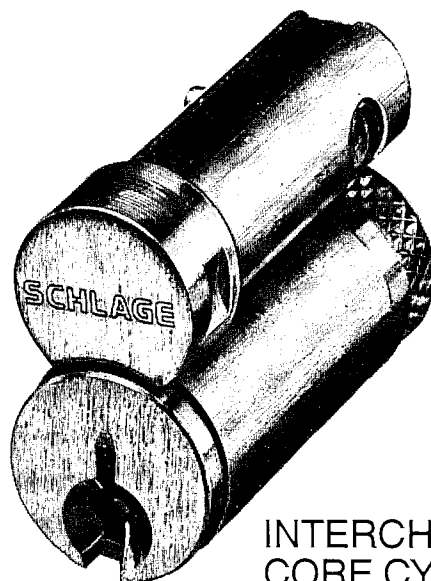


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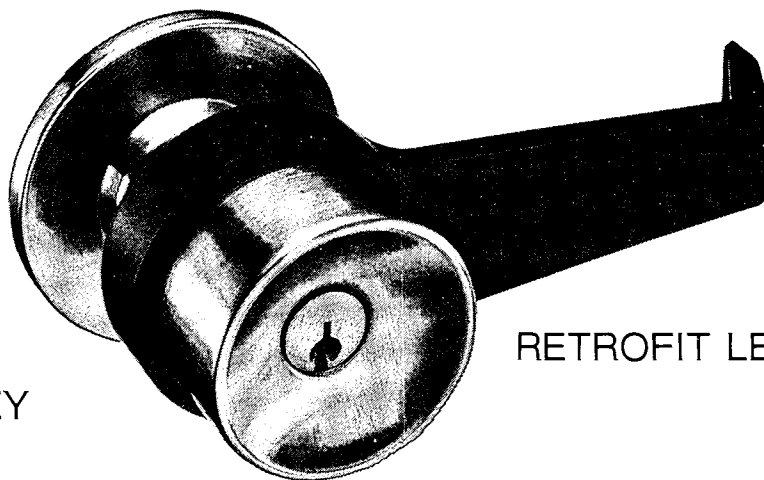
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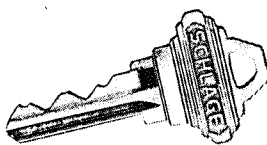
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will ever do, is the Australian Parliament House, currently under construction in Canberra. It may be the most monumental act of deference in the history of architecture. Rather than commanding the hill set aside in Walter Burley Griffin's plan for the city, it makes the building and the hill inseparable. It strives for a unity of the works of man and of the natural landscape that may finally be illusory. It is, nevertheless, moving. With its retaining walls and lawns that continue over the building, it unites with the land itself. But seen from another point of view, its three major buildings, with their contrasting shapes and rooflines, dramatize the separateness of the parts of government and the competition between them far more strongly than do most capitols and parliament buildings. The tension between parts and the whole, so characteristic of Mitchell/Giurgola's work, here engages a whole nation, a whole continent.

This is a solid body of work, one that deserves to be looked at very carefully. Today, the firm's concerns are not fashionable. The monograph has limitations, but it nevertheless contains much that is exciting. Don't let the fact that so many of their designs have actually been built fool you. THOMAS HINE

Mr. Hine is architecture critic of the Philadelphia Inquirer.

New York 1900: Metropolitan Architecture and Urbanism, 1890-1915. Robert A.M. Stern, Gregory Gilmartin, and John Massengale. (Rizzoli, \$60.)

This is a formidable production of 488 pages, 1,780 footnotes, and 536 illustrations. The text concentrates on individual buildings and complexes, the majority of which are in Manhattan and were designed within the 25-year period noted

Henry J. Hardenbergh's 1907 Plaza Hotel.



in the subtitle. Despite this narrow focus, the book ranks among the most copious studies of urban architecture in the U.S.

Computers in the Architectural Office. Natalie Langue Leighton. (Van Nostrand Reinhold, \$26.50.)

Computers are here to stay, and even the smallest architectural firm can now afford them. But how is one to understand something about computing in general, learn about pertinent applications, and, finally, decide how to choose a specific application? This book will help in all areas.

The volume is organized into three sections. The first, "Computing for Beginners," provides an introduction to computer basics. Section two comprises four chapters on hardware (equipment), software (programs), office organization, and financial concerns. The final section concerns the various computer applications suited to architectural practice—design, technical aspects, production, and business/management. Two appendices provide an extensive bibliography and a directory of computer information and sources.

This book should be particularly helpful to the architect who has decided to computerize but does not know how to proceed. It describes in detail how to prepare a Request for Proposal (RPP), indicating all the information required, both for hardware and software proposals. It also gives instructions for preparing a purchase contract and extends beyond the issue of hardware purchase to discuss renting and leasing considerations. Also helpful are the list of tasks required to write or find a program and the suggestions for pricing computer services.

The flaws are minor: certain annoying syntax errors, the omission of word processing and marketing from the discussion of applications, and occasional repetitiveness resulting from the way the material is organized. For the architect with limited knowledge of computers and a need to learn quickly, however, this book will be an excellent purchase.

PETER PIVEN, FAIA

Mr. Piven is a partner in the Philadelphia firm of Geddes Brecher Qualls Cunningham.

Designing Your Client's House: An Architect's Guide to Meeting Design Goals and Budgets. Alfredo De Vido, AIA. (Whitney Library of Design, \$27.50.)

The author gives the architect some proven planning and design methods that will help avoid expensive errors and gain a more efficient dwelling. Although the creation of a good house within budget restrictions is a "precarious balancing act," he says, it can be done if the principles given here are followed. The bulk of the

book is devoted to the work of 23 architects and designers, and the 43 projects described are economical to build and operate. Each house is covered in detail, and there are many photographs, plans, and sketches. The examples cover a wide range of locations, architectural styles, and client needs.

Furniture by Architects: 500 International Masterpieces of Twentieth Century Design and Where to Buy Them. Marc Emery. (Abrams, \$49.50.)

Most architect/designers probably know where to buy a Charles Eames chair and Ottoman or the tubular furniture of Marcel Breuer. But in this time of architectural eclecticism when, say, a free-form bench designed by Antonio Gaudí is wanted for an art deco setting, where can a reproduction be found? This source-book/catalog provides information on manufacturers of furniture designed by the likes of Gaudí, Adolf Loos, Charles Rennie Mackintosh, and other past masters, as well as more recent designs by such architects as Michael Graves, Warren Platner, and Frank O. Gehry.

Planning the Electronic Office. Elaine Cohen and Aaron Cohen. (McGraw-Hill, \$37.50.)

This profusely illustrated book gives the designer an array of information on computers, space management, environmental behavior, systems furniture and carpeting, ergonomics, lighting and power, and noise control—all of concern in the design of the electronic office. There are helpful guidelines not only for the care of expensive and complex equipment, but also for the ways in which design can increase human productivity and make the worker more satisfied. This collaborative effort by a specialist in the behavioral aspects of design and an architect is a comprehensive view of matters to be considered in the total design integration of an electronic office.

American Design Ethic: A History of Industrial Design to 1940. Arthur J. Pulos. (MIT Press, \$50.) **Design Since 1945.** Edited by Kathryn Hiesinger and George H. Marcus. (Rizzoli, \$40.)

These two handsome and generously illustrated books complement each other. Pulos's *American Design Ethic* brings to a field that has been almost barren of historical overview a compendious survey of industrial design in this country to 1940. The survey is extended to the present by *Design Since 1945*, the beautifully presented catalog of a Philadelphia Museum of Arts' exhibition last year. The exhibition of modern design masterpieces was assembled on the basis that each work had to be still available to the general public. □



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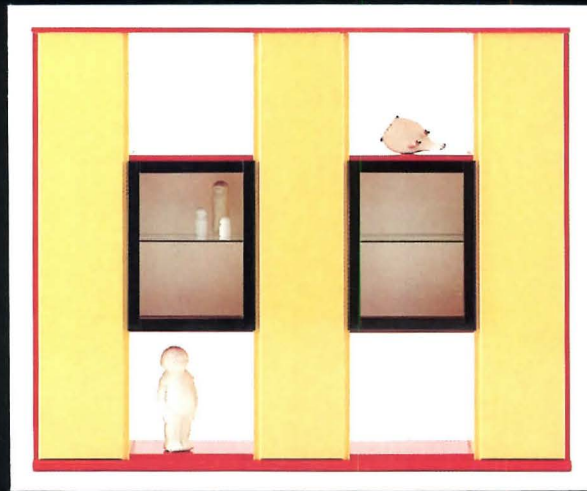
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Circle 26 on information card



1

Furnishings

As resources for design and objects of design. By Nora Richter Greer

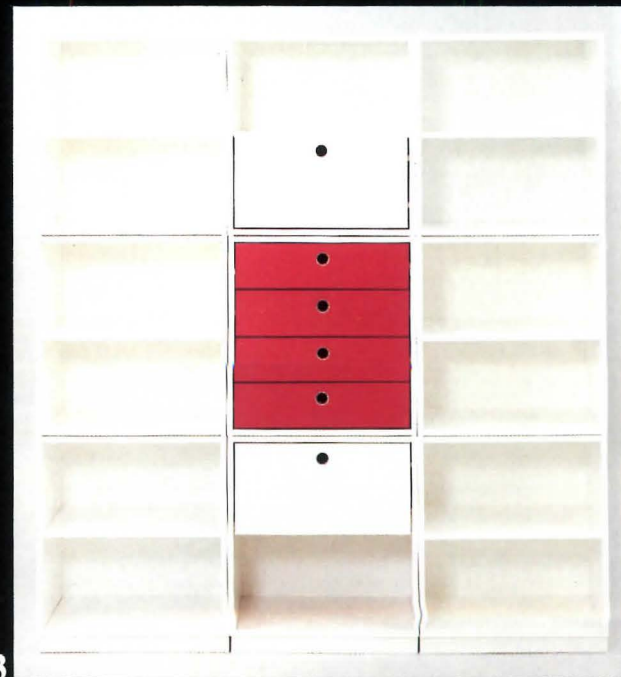
The designs of the shelving systems shown on these pages clearly were influenced by the *de Stijl* movement and artists Piet Mondrian and Theo van Doesburg. Squares and rectangles dominate, resulting from the crossing of horizontal and vertical lines. Surfaces are translucent or opaque, and even the *de Stijl* emphasis on black, white, gray, and primary colors is echoed. Manufactured in Europe, these shelving systems also have in common a versatility in that several basic modules can be combined to create numerous shapes and sizes. Each unit can be used as a room divider or a more traditional "object" on a wall.

From the Italian firm Misura Emme are three offerings in its *Continuità* series. The first (1) is distinguished by yellow horizontal rectangles, which are separated by smaller rectangles framed in black and enclosed in glass. The entire system is outlined in red. The second (4) is much cooler in tone, with gray and black the ruling colors. The third (6) combines several col-

ors (blues, grays, red, black, and gold) and is more complex in its geometry. The Misura Emme shelves are tanganyika walnut or natural ash and can be lacquered in 11 colors. Acerbis International's Madison 2 shelves (2) were so named to "recall one of the most lively and brightly colored avenues" in New York City. Designed by Lodovico Acerbis and E. Giotto Stoppino, the system combines natural wood with shiny lacquers—white, red, black, yellow, and gray. More straightforward in its geometry and color scheme is Muure Me's Nappi bookcase (3), designed by Pirkko Stenros and manufactured in Finland. Components include bookshelves, drawers, suspension files, closets; colors are lacquered white, red, black, or natural birch. A more somber image is expressed in Cassina's Brera series (5). Designed by Piero de Martini and manufactured in Italy (distributed in the U.S. by Atelier International), the system is available in ash stained black, red, or dark green. □



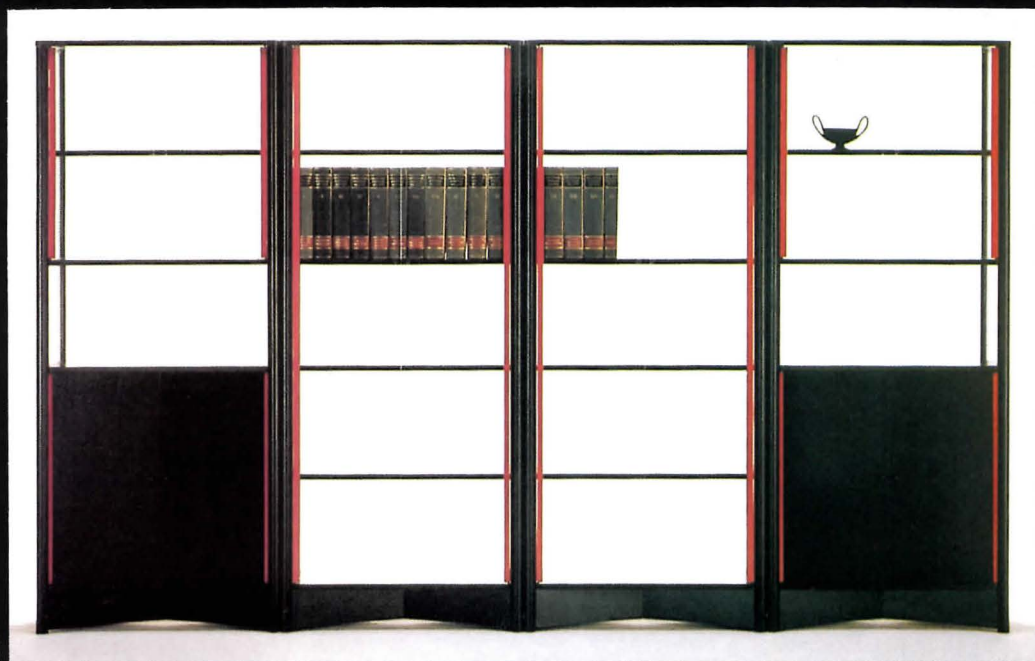
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3



4



5



6

DEATHS

Carleton Smith: Chairman of the International Awards Foundation, Smith worked over the last decade to establish major prizes in fields not covered by the Nobel Prize, including the Pritzker Prize in architecture. It was in the late-1970s that Smith persuaded the Pritzker family of Chicago, owners of the Hyatt Hotel chain, to establish a \$100,000 award to honor significant achievement in architecture. Smith died May 28 at the age of 74.

E. R. Armstrong, Bethlehem, Pa.
Charles Betts, FAIA, La Grange, Ore.
George Blaker, Pago Pago, Samoa, Hawaii
M. A. Cardo, Yorktown Heights, N.Y.
Frederick W. Dunn, FAIA, New York City
M. S. Hanes, Chatham, Ill.
Frank E. Johnson, Glen Rock, N.J.
R. Kaplan, New York City
Louis F. Karlsberger, Worthington, Ohio
Fred W. Kegel Jr., Detroit Lakes, Minn.
A. G. King, Fort Worth, Tex.
Floyd S. Kline, Easton, Pa.
Geoffrey N. Lawford, FAIA, New York City
R. T. Leslie, Garden City, N.Y.
E. Levine, Highland Park, N.J.
William Henry Lillie Jr., Newington, Va.
Mayol H. Linscott, Lee's Summit, Mo.
W. A. Lockard, Phoenix
Charles W. Lorenz, St. Louis
Alphonse J. Luinis, Brockton, Mass.
J. E. Lundstrum, Sawyer, Mich.
Alfred J. Luoni, Chestnut Hill, Mass.
J. I. Lyons, Royse City, Tex.
Marion I. Manley, FAIA, Miami
G. Y. Masson, Windsor, Canada
C. E. Mathhes, Biloxi, Miss.
J. E. McCormack, Atlanta
F. J. Meier, Long Island City, N.Y.
W. F. Mellin, San Bernardino, Calif.
Frank Memoli, Cincinnati
Raul San Miguel, New York City
Ross W. Morrison, Oklahoma City, Okla.
R. A. Morse, Tucson, Ariz.
H. M. Neal, Cornwells Heights, Pa.
David W. Nesmour, Southfield, Mich.
A. R. Nichols, Waterbury, Conn.
Samuel Nock, Sun City, Ariz.
T. J. Palm Jr., San Antonio
Milford H. Patterson, Harrisburg, Pa.
William Platt, FAIA, New York City
Joseph Prassman, Philadelphia
Thomas C. Rickenbaker, Charlotte, N.C.
Mario J. Romanach, FAIA, Philadelphia
L. C. Rosenberg, Oregon City, Ore.
S. K. Schneidman, Philadelphia
Francis B. Sellew, FAIA, Wellesley, Mass.
William Sevic, Chicago
W. K. Shilling Jr., Dayton, Ohio
Edwin J. Speiss Jr., Atlanta
R. O. Steffen, Oconomowoc, Wis.
Howard A. Stout Jr., Northfield, N.J.
T. H. Stueber, Dallas
John C. Suffling, Gulfport, Miss.
Otto J. Teegen, FAIA, New York City

Donald R. Thomas, Vail, Colo.
Herbert S. Walfish, Greensburg, Pa.
F. B. Warfield, Nashville
Ida B. Webster, New York City
Emmett White, Bellaire, Tex.
F. P. Wiedersum, Hauppauge, N.Y.
W. E. Wilson Jr., Shreveport, La.
J. Taliaferro Woodbury, Atlanta

BRIEFS

Lighting Awards Program.

The National Lighting Bureau has set Aug. 3 as the deadline in its fifth annual lighting awards program to recognize installations that demonstrate the benefits of good lighting. Anyone associated with a new lighting system or modification of an existing system (any application except single family dwellings) may submit an entry. For more information, contact National Lighting Bureau, 2101 L St. N.W., Washington, D.C. 20037.

Young Architects Competition Winners.

The Architectural League of New York City has selected seven winners in its annual young architects competition, a lecture series and national competition open to architects who have been out of school 10 years or less. The winners are: Ross Anderson, Neil Denari, Billie Tsien, and Anthony Tsirantonakis of New York City; Allan Shope, Robert Reno, and Bernard Wharton of Greenwich, Conn.; and the Boston firms of Alex Kreiger & Lawrence Chan, and Cary Tamarkin & Timothy Techler.

Japan Study Tour.

The Houston Chapter/AIA and the Technology Transfer Institute are sponsoring a fall study tour on Japanese architecture and health care design Oct. 13-27. The program will focus on common and advanced approaches to medical facility design, in addition to visiting tradition and modern buildings and gardens. For more information, contact Kazuo Moro, Technology Transfer Institute, 624 S. Grand Ave., Suite 2407, Los Angeles, Calif. 90017.

Competition Winners Announced.

The National Concrete Masonry Association has announced the winners in its first annual concrete block paver design competition. Award of excellence winners are: Saratoga Associates of Saratoga Springs, N.Y., for the Urban Park, Troy, N.Y.; Weihe, Black, Jeffries, Strassman & Dove of Washington, D.C., for a paving installation at Skyline Office Complex in Arlington, Va.; Dockery Hunter, Reynolds, Jewell of Raleigh, N.C., for a paving installation at Bishop's Park condominiums in Raleigh. Honor award winners are: Daft, McCune, Walter of Towson, Md., for a paving installation at

Arundel Center in Glen Burnie, Md.; and Laubmann-Reed & Associates of Atlanta for the Galleria Atlanta. Six special citations were also presented.

Lighting Awards Program.

The International Association of Lighting Designers has set a Sept. 15 deadline in its awards program for "esthetic and technical achievement" in lighting design. Complete or partial projects by architects, interior designers, engineers, and lighting designers may be submitted. Contact Marion Greene, IALD, 30 W. 22nd St., New York, N.Y. 10010.

Call for Papers on Masonry.

The Masonry Society has set Sept. 1 as the deadline for receipt of one page abstracts of papers for the third North American Masonry conference to be held June 3-5, 1985, at the University of Texas at Arlington. Papers should address issues relating to some phase of masonry design and construction, including energy considerations, seismic resistance, economics, or restoration. Contact Gregg Borchelt, technical program chairman, Masonry Institute of Houston, 5100 Westheimer, Houston, Tex. 77056.

Call for Papers on Computer Graphics.

The National Computer Graphics Association seeks papers for its sixth annual conference and exposition. Papers should address the application of computer graphics to architectural, business, and industrial situations. Abstracts are due before Aug. 15. Contact the education coordinator, National Computer Graphics Association, Suite 601, 8401 Arlington Boulevard, Fairfax, Va. 22031.

Call for Concrete Award Entries.

The Prestressed Concrete Institute has set Aug. 1 as the deadline for receipt of entries in its 22nd annual awards program that recognizes architectural and engineering design excellence in precast and prestressed concrete buildings and bridges. The program is open to architects and engineers practicing in the U.S. and Canada. Contact the Prestressed Concrete Institute, 201 N. Wells St., Chicago, Ill. 60606.

Student Design Competition.

The National Association of Housing and Redevelopment Officials is sponsoring a national competition for students of architecture, design, urban studies, and planning for the revitalization of post-World War II multi-unit rental housing developments. First prize is \$2,000 and travel to Budapest for the Congress of the International Federation for Housing and Urban Planning. Second prize is \$1,250, and third prize is \$700. The top 10 submissions will

continued on page 92

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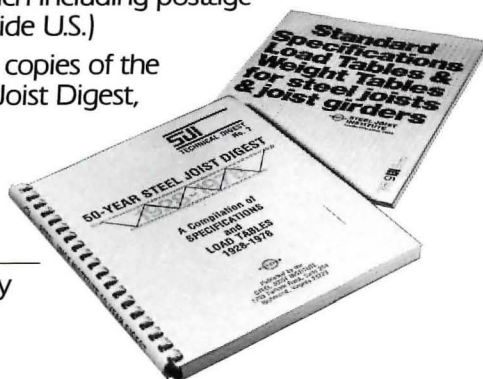
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Circle 28 on information card

Briefs from page 90

be entered in the IFHP competition. Representatives for AIA, the Association of Collegiate Schools of Architecture, the American Planning Association, and the American Society of Landscape Architects will assist with the program. Deadline for receipt of completed registration forms is Nov. 1; final entries are due by June 10, 1985. Contact Mary K. Nenno, Competition Director, NAHRO, Suite 408, 2600 Virginia Ave. N.W., Washington, D.C. 20037.

Housing Rehabilitation Competition.

The Enterprise Foundation Rehab Work Group is sponsoring a \$25,000 competition for low-cost, innovative techniques in the rehabilitation of housing for the poor. Prizes ranging from \$1,000 to \$5,000 will be awarded in five categories: materials and tools, administrative procedures, methods of repair and construction, uses of resources, and miscellaneous entries. Contact Rehab Work Group, 519 N. Charles St., Baltimore, Md. 21201.

Ancient Near Eastern Gallery.

The Metropolitan Museum of Art has opened new galleries in the south wing for the permanent display of objects from its collection of ancient Near Eastern art. The installation will include pre-Islamic works from Mesopotamia and ancient Iran, and objects from Anotolia, Syria, and Arabia.

Wood Council Design Awards Program.

The American Wood Council has set Oct. 1 as the deadline in its 1984 nonresidential renovation design awards program. Qualifying projects completed since 1978 may be restorations, adaptive reuse, infill projects, or major additions that use wood as a dominant element. For more information, contact the American Wood Council, 1619 Massachusetts Ave. N.W., Washington, D.C. 20036.

Passive Solar Builder's Guide.

The National Fenestration Council's "Builder's Guide to Passive Solar Home Design and Land Development" contains fundamental principles and technical information for architects, home builders, and developers. The 70-page book is available for \$12 from the NFC, 3310 Harrison, White Lakes Professional Building, Topeka, Kan. 66611.

Rotch Scholar Announced.

Eric Leibmann of New Haven is the winner of the 1984 Rotch scholarship, sponsored by the Boston Society of Architects. He will receive \$13,000 for eight months of foreign travel, plus an additional \$1,000 with the completion of a report to the scholarship committee. The alternate is Robert E. Dudley of Somerville, Mass.

Precast Concrete Awards.

The Architectural Precast Association has recognized three structures for design and manufacturing excellence in architectural precast concrete in its 1984 Carl E. Shawver architectural awards program. The winning projects are: Verbatim Corporation office and manufacturing building in Charlotte, N.C., by Odell Associates, Charlotte; Riverpark Office complex in Norwalk, Conn., by The Stubbins Associates, Cambridge, Mass.; and the Exxon C.C.S. Building in Florham Park, N.J., by The Kling Partnership, Philadelphia. The jurors were Charles P. Graves, FAIA (chairman), David Lindsey Niland, and Richard H. Wheeler, FAIA.

Revised ASHRAE Systems Handbook.

The American Society of Heating, Refrigerating and Air-Conditioning Engineers has published the 1984 Systems Handbook, a 640-page book that covers application criteria, design considerations, and component selection for heating, ventilating, airconditioning, and refrigerating systems. It is available for \$80 prepaid from ASHRAE Publication Sales, 1701 Tullie Circle N.E., Atlanta, Ga. 30329.

Interior Design Bibliography.

The Interior Design Educators Council's 1984 Comprehensive Bibliography for Interior Design has more than 3,000 listings of American and foreign periodicals, directories, annuals, and dictionaries, and is available for \$35 prepaid from the IDEC, 10806 B. Pinehurst Drive, Austin, Tex. 78747.

CREDITS

U.S. Embassy Office, Colombo, Sri Lanka (page 64) *Architect: Victor A. Lundy & Associates, Houston.* Structural engineer: Colaco Engineers. Consulting engineer: I. A. Naman & Associates.

U.S. Embassy Housing, Tokyo, Japan (page 75). *Architect: Harry Weese & Associates, Chicago, Ill.* General Contractor: Ohbayashi-Gumi, Ltd. Ceiling surfacing system: U.S. Gypsum. Doors: Fuji-Sah/Kawneer, Northwest Millwork. Elevators: Mitsubishi. Environmental control systems: Trane Co. Floor surfacing: Coldspring. Lighting: Kim, Prescolite. Roofing: Follensbee. Waterproofing and sealants: Dex-O-Tex, Tremco Dymeric. Plumbing fittings and showerheads: American Standard. Tubs and lavatories: American Standard. Washroom and bathroom accessories: Bobrick. Water fountains: American Standard. Kitchen: General Electric. Laundry: White Westinghouse. Wall surfacing: U.S. Gypsum. Windows: Fuji-Sah. Door closers: LCN. Hinges and locksets: Sargent. Paint and stain: Pratt & Lambert. Partitions: U.S. Gypsum. □

Products

A selection of notable offerings and applications.
By Lynn Nesmith

Custom screens (1) designed and manufactured by Miya Shoji & Interiors are constructed of rice paper plastic, silkan paper plastic, or glass fiber panels, and wood or imitation cane frames. Three panel folding screens, wall partitions, and folding doors range in sizes from 24x36 to 48x96 inches with aluminum, nylon, or wooden tracks. (Circle 201 on information card.)

The Eclipse kitchen set (2) by Paul Associates has cone-shaped fixtures made of polished chrome. The balanced spout rotates, and handles have washerless valves and turn within the cone. (Circle 202.)

The Bormix 80 solid cast brass faucets (3) for kitchens and baths, designed by Christian Bjørn for Abbaka, are available



1



2

in five enamel-baked colors or a chrome finish. The valve has a separate temperature control lever designed to maintain an even mixing ratio of hot and cold water. An internal adjustment control allows the maximum water flow to be set at predetermined rate for energy savings in residential and commercial installations. (Circle 203.)

Also from Abbaka, the Kosmos bathroom collection is available in coordinating colored and chrome finishes. The magnetic soap holder (4) has a steel disc that is pressed into a bar of soap and suspended from the magnetic holder. (Circle 204.) *Products continued on page 96*



3



4

Static Resistant Carpeting.

Designed for use in commercial and institutional installation with sensitive electronic equipment, carpeting is made of nylon fiber with a conductive filament and a conductive backing. The fiber is designed to minimize static build-up, and the conductive backing spreads the charges throughout the entire installation. Carpets are available in 12-foot rolls and three tile sizes. (Collins & Aikman Carpet Division, New York City. Circle 210 on information card.)

Wallcovering Material.

Glass fiber wallcovering fabric, designed with moisture and flame resistant properties, is suitable for residential, commercial, industrial, and institutional applications. Material is available in 12 preprinted colors in three textures or unpainted in six textures. (IKR Corporation, Alpine, Tex. Circle 212 on information card.)

Wall and Floor Surfacing.

Armstone cast-stone surfacings are made of more than 90 percent natural stone with no artificial pigmentation. An automated electronic manufacturing process is designed to achieve dimensional accuracy and precise gauging. Tiles and panels are available in 18 colors for com-

mercial interior installations. (ArmStar, Lenior City, Tenn. Circle 219 on information card.)

Vertical Blinds.

Touch of Glass vertical blinds have a dual channel and front loading track system. Fireproof vanes, available in 35 colors and a number of textures, are made of multi-strand, twice-coated glass fiber yarns. (Kirsch, Sturgis, Mich. Circle 213 on information card.)

Roofing System.

Structodek wood fiber substrate is designed to provide a moisture resistant underlay for ballasted, adhered, and mechanically anchored membrane roofing systems. (U.S. Gypsum, Chicago. Circle 214 on information card.)

Skylight Blinds.

Skyshades are lightweight, pleated shades constructed of an aluminum-backed, opaque fabric. A locking control on the frame adjusts the blinds to various open/closed positions. (Wasco Products, Sanford, Me. Circle 215 on information card.)

Architectural Wall Panels.

Insulated DesignWall panels are constructed of Galvalume steel sheets with

an aluminum and zinc coating, and a phenolic foam core. Panels are preshaped to custom specifications and coated with a copolymerized urethane paint finish in a range of colors and glosses. Customized radius and curved panels are also available. Panels are installed with a concealed, self-aligning clip system. (Benchmark Industries, Pittsburgh. Circle 216 on information card.)

Replacement Window.

Double hung thermal replacement window has 3/4-inch insulated glass with Finseal weatherstripping and block and tackle balances. Triple glazing is optional. (Air Master, Bensalem, Pa. Circle 218 on information card.)

Concrete Pavers.

Bomacron cast-in-place concrete pavers are available in a number of patterns, colors, and textures. Pavers are designed for interior and exterior applications. (Bomanite Corporation, Palo Alto, Calif. Circle 227 on information card.)

Extruded Insulation.

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installations, it is available in six thicknesses and three widths with square edges or tongue-in-groove. (UC Industries, Parsippany, N.J. Circle 228 on information card.)

Gold-Coated Glass.

Solarban 490 gold Twindow double-glazed insulating units are designed to transmit natural daylight while reducing solar heat gain in summer and heat loss in winter. The units are constructed of an inner pane of Hestron laminated clear glass, a dead air space, and an outer pane of Solex green tinted glass with the gold coating applied on the air space side. (PPG Industries, Pittsburgh. Circle 230 on information card.)

Adjustable Light Table.

Four-post light table has a baked enamel finished base with two drawers, a white box interior, five 40-watt fluorescent lamps, an acrylic diffuser panel, and a 30x48-inch glass work surface. The table tilts on an angle between 0-60 degrees and a dimmer switch controls the light intensity. Optional edge molding is available to provide a round edge and to reduce document creasing. (Plan Hold Corporation, Irvine, Calif. Circle 226 on information card.)



Mosaic Tile.

The mosaic featuring a woman churning butter (above) is one example of the custom and limited edition clay tiles by Terra Designs. Color is solid throughout to withstand heavy floor traffic in commercial installations including restaurants, lobbies, and retail shops. The thickness is adjustable enabling the mosaics to be used in combination with any commercial quarry

or paver floor tiles. (Terra Designs, Inc. Bernardsville, N.J. Circle 220 on information card.)

Door System.

Superfire door system has a four-ply stile edge for attaching mortised butts and a reinforcement system for attaching surface mounted hardware. The mounting is constructed of a 11/16-inch plywood sheet sandwiched between incombustible material. (Algoma Hardwoods, Inc., Algoma, Wis. Circle 217 on information card.)

Roof Panels.

TUPS structural roof deck panels are constructed of a composite stress skin sandwich panel with a one-inch bottom surface, a 1/2-inch nailable board, and a core of rigid polyurethane foam. A nailable roof sheathing provides a surface for attaching asphalt, wood, slate, or tile shingles as well as BUR and single-ply membranes. (Homasote Co., West Trenton, N.J. Circle 205 on information card.)

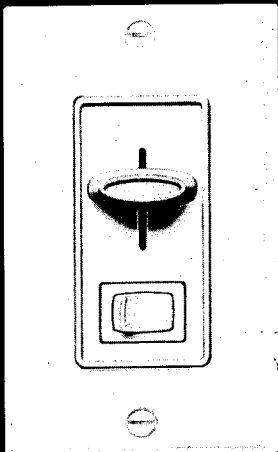
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continued on page 98

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Products from page 97

the type sheet is gripped by an alignment bar that slides along grooves for proper positioning. (Esselte Letraset, Paramus, N.J. Circle 239 on information card.)

Color Marker.

LetraJet air marker is designed to provide an air brush effect with a fine tip color marker. A Pantone marker is fitted onto its own air canister or to an air compressor, and the air flow is directed onto the marker tip. More than 100 interchangeable colors are available. (Esselte Letraset USA, Paramus, N.J. Circle 211 on information card.)

Metal Ceiling Panels.

Prestige linear metal ceiling systems for residential installations are available in copper, brass, or polished aluminum finishes. The panels are attached to carrier channels from suspended or unfinished ceilings, as well as existing plaster ceilings. Panels can also be used for vertical applications. (Donn Corporation, Westlake, Ohio. Circle 229 on information card.)

Industrial Workstation.

Workstations designed for electronics assembly, subassembly work, inspection, and testing has a steel frame with remov-

able panels in a number of vinyl and fabric coverings. Side panels can be recessed, full width, or extended. Accessible mechanical chase accommodates electrical wiring, compressed air, vacuum ducts, telephone wiring, and electronic cables. Workstations can be connected back-to-back or side-to-side. (Structural Concepts Corporation, Spring Lake, Mich. Circle 225 on information card.)

Energy Management System.

Five channel, load control energy management system, designed for small commercial facilities, has temperature input and display and automatically adjusts its duty-cycling schedule according to outside temperatures. Interchannel delays are designed to protect equipment and prevent power surges. (Honeywell, Inc. Minneapolis. Circle 221 on information card.)

Insulation Board.

Retro-Fit Board is a 1/2-inch, perlite based, insulation board, designed to provide dimensional stability on reroofing construction over noncombustible roofing decks. Available in 2x4- and 4x4-foot panels, it is also suitable as a base for mechanically fastened or ballasted single-ply membranes. (Manville, Denver. Circle 222 on information card.)

Paving.

Grass and concrete are combined to provide a porous, structural pavement for driveways, parking, and heavy traffic access roads. The continuous, reinforced cast-in-place slab drains stormwater runoff and provides erosion control. (Bomanite Corporation, Palo Alto, Calif. Circle 238 on information card.)

Ceramic Tiles.

Eight colors of semi-matte glazed tiles available in six-inch square, 6x3-inch, and a variety of trim pieces, are designed for countertops, walls, and light-duty floors. (Huntington/Pacific Ceramics, Inc., Corona, Calif. Circle 237 on information card.)

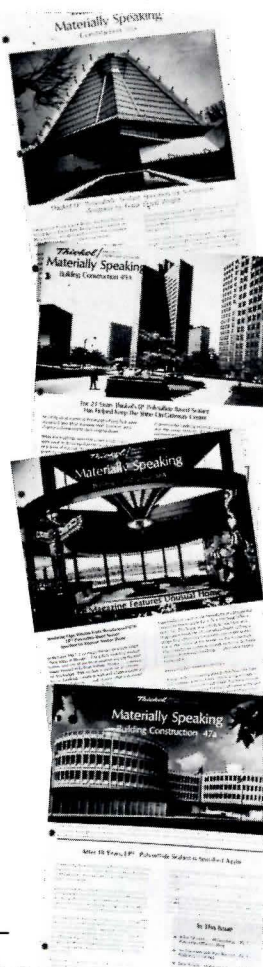
Roof Window.

Sash and frame are made of fine grain Ponderosa pine with a Marv-A-Gard aluminum cladding wrapped around the exterior. The unit is glazed with a tempered glass exterior pane and a laminated safety glass interior pane and three layers of a transparent metallic coating on the interior surface of the outer pane. It has sloped glazing and a splash lip with thermal breaks on both the sash and frame. (Marvin Windows, Minneapolis. Circle 232 on information card.)

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Résumés des Articles Principaux

La foire mondiale de la Nouvelle Orleans.

Page 10: Les efforts communs de Auguste Perez et Associés, Charles Moore, William Turnbull et Richard Peters ont transformé un site étroit entre la zone d'entrepôts et la rivière du Mississippi en un monde merveilleux de couleur, de lumière, d'eau et de mouvement. Un point fort de cette foire est le mur merveilleux, un assemblage de formes architecturales, de drapeaux et d'animaux sculptés fantastiques.

La statue de la liberté.

Page 44: Alors que ce cadeau fait à l'Amérique par la France approche du centenaire on se donne du mal pour réparer avec attention les dommages endurés pendant les cent dernières années. La statue a été dessinée par Frédéric Auguste Bartholdi, sa forme intérieure a été réalisée par Gustave Eiffel et son piedestal par Richard Morris Hunt. Alors que la réaction initiale en faveur de la statue était plutôt réservée, celle-ci avec le temps a fini par représenter l'Amérique.

De l'esprit dans l'atelier d'architecture.

Page 54: Ce projet d'un atelier d'après Christopher Alexander, explore toutes les données rendues par l'expression de son dessin qui peut être utilisée pour créer une réponse architecturale humaine et spirituelle. L'atelier a mis en chantier la réalisation d'un banc dominant la baie de San Francisco en l'espace de trois semaines.

L'ambassade Américaine de Shri Lanka.

Page 64: Dessinée par Victor Lundy qui en a reçu commande il y a vingt trois ans, la construction s'est prolongée durant

la guerre du Vietnam. Un bâtiment plus petit, de structure différente a été finalement achevé cette année. Situé sur l'océan indien, le long profil de l'ambassade s'étire au nord et au sud. Les porches font face à l'Est et à l'Ouest. Les murs extérieurs sont en dalles de granit sable taillées à la main.

Les logements de l'Ambassade Américaine de Manille.

Page 72: Le plan superbe d'un site comprenant 24 maisons de ville a trois étages donne à cet ensemble résidentiel une réponse adéquate au climat et au côté pratique. L'entreprise de Elbasani, Logan & Severin a utilisé le rose, le jaune, le bleu, et le vert pour ajouter au cachet et pour différencier l'ensemble.

L'Ambassade Américaine de Tokyo.

Page 75: Complétée en 1976, cette Ambassade se compose d'une partie de 11 étages et d'un autre bloc de 2 étages, séparés par un couloir et un hall. Réalisé par César Pelli, son extérieur est composé de verre à reflet et de panneaux de béton. Les espaces à l'intérieur sont fonctionnels et pratiques, et le bâtiment a bien résisté au temps.

La résidence de l'ambassade Américaine de Tokyo

Page 78: Travail de Harry Weese et Associés, ce complexe comprend 173 unités sur un site isolé au centre de la ville, créant ainsi une oasis pour la communauté. Les matériaux sont pour la plupart avec du stuc blanc encadré de caoutchouc noir. Il y a 3 tours de 14 étages et un certain nombre de maisons individuelles. □

Resúmenes de Artículos Principales

La Feria Mundial de Nueva Orleans.

Página 10: Los esfuerzos combinados de August Pérez & Associates, Charles Moore, William Turnbull y Richard Peters han transformado una estrecha franja de terreno entre el distrito de almacenes de la ciudad y el río Misisipí en un mundo fantástico de color, luces, agua y movimiento. Un punto culminante de la feria es el Wonderwall, un conjunto de formas arquitectónicas y animales fantásticos.

La Estatua de la Libertad.

Página 44: A medida que esta donación

por Francia a América se aproxima a su centenario, se está prestando atención y cuidado a reparar el daño que ha sufrido en el curso de estos últimos cien años. La estatua fue diseñada por Frédéric Auguste Bartholdi, su armazón interior fue diseñado por Gustave Eiffel y su pedestal por Richard Morris Hunt. A través de los años se ha convertido en un símbolo representativo de los Estados Unidos.

Espíritu en el Taller de Diseño.

Página 54: Este recuento de un taller con

Christopher Alexander explora las repercusiones de su "lenguaje de formas" que puede utilizarse para crear una arquitectura que responda a un nivel humano y espiritual. El taller construyó un banco de trabajo con vistas a la Bahía de San Francisco durante el curso de tres semanas de duración. Los diseñadores construyeron su creación.

Embajada de los Estados Unidos, Sri Lanka.

Página 64: La construcción, diseñada por Victor Lundy, que recibió el encargo hace 23 años, fue retrasada por la Guerra del Vietnam. Finalmente se concluyó este año un edificio menor de un diseño diferente. En una parcela que da al Océano Índico, las dimensiones largas de la embajada miran hacia el norte y el sur. Las terrazas cubiertas miran al este y el oeste. Las paredes exteriores están constituidas por losas de granito de color de arena elaboradas a mano. Enrejados de teca proporcionan seguridad y aislamiento.

Viviendas de la Embajada de los Estados Unidos, Manila.

Página 72: Una soberbia planificación de la parcela para estas 24 casas particulares en la ciudad de la embajada responden a su clima y eficiencia en el consumo de la energía. La empresa Elbasani, Logan & Severin utilizó los colores rosado, amarillo, azul y verde para añadir interés y para establecer diferenciación entre los conglomerados, alineados en un eje este-oeste.

Embajada de los Estados Unidos, Tokio.

Página 75: Esta embajada, concluida en 1976, está integrada por un bloque de 11 pisos y un bloque de dos pisos, separados por un vestíbulo y antecámara. Su exterior, diseñado por Cesar Pelli, se compone de paneles de vidrio reflexivo y hormigón. Los espacios interiores son funcionales y eficientes y el edificio ha soportado bien las inclemencias del tiempo.

Vivienda de la Embajada de los Estados Unidos, Tokio.

Página 78: Este complejo, obra de Harry Weese & Associates, contiene 173 unidades en una parcela aislada en medio de la ciudad que crea un oasis para la comunidad. Los materiales son, en su mayor parte, americanos con estucado en marcos con juntas de caucho negro. Hay tres torres de 14 pisos y cierto número de unidades de viviendas de ciudad. □

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