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The Background of the Bridges

Two famed spans raced for records. By M.J.C.

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Cover: Photograph by George Knight of the Mission District and skyline from Clipper Street (see page 81).

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Apr. 3: Course on Fundamental Concepts and Definitions of Photovoltaic System Design, Ft. Lauderdale, Fla. Contact: Ken Sheindopf, Florida Solar Energy Center, 300 State Road 401, Cape Canaveral, Fla. 32920.

Apr. 3-4: Workshop on Safe Removal of Asbestos from Buildings, Kansas City, Mo. (Repeat workshop Apr. 24-25, St. Louis.) Contact: Virginia Nettleton, 1020 Engineering Complex, University of Missouri, Columbia, Mo. 65211.

Apr. 9-12: Course on Using a Personal Computer, Houston. (Repeat courses Apr. 22-25, Atlanta; May 6-9, Raleigh, N.C.; and May 20-23, East Brunswick, N.J.) Contact: The Center for Professional Development, P.O. Box 964, East Brunswick, N.J. 08816.

Apr. 11: Seminar on Developing Your Own Projects, Orlando, Fla. (Repeat seminars Apr. 12, Kansas City, Mo.; May 9, Dallas; and May 10, Phoenix.) Contact: Brenda Henderson at Institute headquarters, (202) 626-7353.

Apr. 13-14: Conference on the Architectural Social, Economic, and Public Policy Aspects of Elevated and Subterranean Walkways, Minneapolis. Contact: Walker Art Center, Vineland Place, Minneapolis, Minn. 55403.

Apr. 14-18: Annual Conference and Exposition of the National Computer Graphics Association, Dallas. Contact: NCGA, 8401 Arlington Blvd., Suite 601, Fairfax, Va. 22031.

Apr. 15: AIA Energy in Design: Microcomputer-Based Energy Analysis, San Diego, Calif. Contact: Brenda Henderson at Institute headquarters, (202) 626-7353. Apr. 16-18: Conference on the Planning and Design of Marinas, St. Petersburg, Fla. Contact: Christopher P. Jones, Florida Cooperative Extension Service, 336 Weil Hall, Gainesville, Fla. 32611.

Apr. 16-18: Lighting World III—International Advanced Illumination Exposition and Conference, New York City. Contact: Robert A. Weissman, National Expositions Co., 14 W. 40th St., New York, N.Y. 10018.

Apr. 17: Forum on Rector Park at Battery Park City, New York City. Contact: Pat Sapinsley, The Institute for Architecture and Urban Studies, 19 Union Square West, New York, N.Y. 10003. Apr. 17: Seminar on Improving Productivity, Washington, D.C. (Repeat seminars Apr. 18, Philadelphia, and Apr. 19, San Francisco.) Contact: Brenda Henderson at Institute headquarters, (202) 626-7353. **Apr. 17-19:** Course on Technical Report Writing, East Brunswick, N.J. (Repeat course Apr. 24-26, Denver, and May 8-10, Atlanta.) Contact: Edith Webb, Registrar, The Center for Professional Advancement, P.O. Box 964, East Brunswick, N.J.

Apr. 17-20: Conference on Interior Design Education, St. Louis. Contact: Barbara Emil, Interior Design Educators Council, Southern Illinois University, Carbondale, Ill. 62901.

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Apr. 25-26: Course on Energy Cost Reduction for Industrial Facilities, Atlantic City, N.J. (Repeat course May 16-17, Houston.) Contact: Association of Energy Engineers, 4025 Pleasantdale Road, Atlanta, Ga. 30340.

Apr. 25-26: AIA Energy in Design: Redesign Workshop, Washington, D.C. Contact: Brenda Henderson at Institute head-quarters, (202) 626-7353.

Apr. 26: Symposium on the Appraisal of Architectural Drawings, Cambridge, Mass. Contact: Mass COPAR, P.O. Box 129, Cambridge, Mass. 02142.

Apr. 30-May 4: Clinic on Selling Skills, Washington, D.C. Contact: The Coxe Group, 2 Girard Plaza, Philadelphia, Pa. 19102.

May 8-12: Scandinavian Furniture Fair, Copenhagen. Contact: Judith B. Gura, Gura Public Relations, 156 Fifth Ave., New York, N.Y. 10010.

May 10-12: Preparation Course for the NCARB Architect Registration Exam, Atlanta. (Repeat course May 17-19, Orlando, Fla., and May 31-June 2, New Orleans.) Contact: Jane H. Shaeffer, The Registration Institute, 2600 Bantry Bay Dr., Tallahassee, Fla. 32308.

June 6-10: Conference on Making Cities Livable, Venice, Italy. Contact: Suzanne Crowhurst Lennard, The Center for Urban Wellbeing, Box QQQ, Southamp-

ton, N.Y. 11968. June 9-12: AIA Annual Convention, San Francisco.

LETTERS

Park Service as Client: We were pleased with the articles in the December issue about the National Park Service. As professionals working for the park service we are privileged to work with this built environment of unsurpassed diversity and quality. It has also been a matter of long-standing policy to use private firms in virtually all of our major projects. We believe both articles demonstrate the advantages of this public/private combination.

I would like to correct one impression left in Carleton Knight's article about the park service since World War II, if I may. He states, "Until Mission 66, all design and construction was done by NPS regional offices." [Mission 66 was a 10-year program begun in the mid-'50s to upgrade all national parks by 1966, the agency's 50th anniversary. -Ed.] Actually, throughout the park service's history central professional offices have been the norm.

Phyllis Myers' article on the early years refers to the "small field center of landscape architects and engineers" that was located in Yosemite National Park. From 1923 to 1927 the park service maintained an office in Los Angeles and in 1927 established a central office in San Francisco. This office and an Eastern evolution of it guided design and construction through most of the New Deal era. In 1937 the service was divided into four regions, and the professional services were placed there. By 1954 two professional offices were again established, one in Philadelphia, the other in San Francisco. The Denver service center was established in 1971 and has been the principal professional office of the National Park Service since then.

Denis P. Galvin, Manager Denver Service Center, NPS

Carleton Knight's observation is correct: There never was a better governmental client than the park service in Mission 66. His note that "some NPS officials" believed "name" architects were not producing adequate buildings, using the unequal settlement of the Gettysburg Visitor's Center as an example, brings to mind an interesting park service problem. Who's in charge, the historians or the office of design and construction?

In the subject case we were given the exact location of the proposed building and designed foundations to extend to solid limestone that existed at varying depths on the site. Soon after breaking *continued on page 14*

Additional credit: Dennis Langley and Peter Landon, AIA, worked closely with Ben Weese, FAIA, (of Weese Hickey Weese, Chicago) in the design of the Illinois Wesleyan University chapel, Bloomington, Ill. (January, page 44).



Architects: The Spector Group, North Hills, NY.

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Letters from page 10

ground the contractor complained that plans did not conform to field conditions. We found that a group of historians from NPS had visited the site, changed their minds, and ordered the contractor to change the location of the building.

In the frantic action that followed this discovery it is possible that insufficient care was taken to support an admittedly precarious design. *Robert Alexander Berkeley, Calif.*

Lighting Design: As someone now involved in lighting education for architectural students, after 40 years of broad experience in the light field, I was delighted upon opening the October issue of *Architecture* to see the emphasis on lighting. Unfortunately, my delight was somewhat reduced when I read Nora Greer's article, "Lighting Design—State of the Art" (page 64). Some specific concerns:

If her source was some of the rhetoric of some of lighting's critics in the early '70's she can perhaps be forgiven for perpetuating the idea that the IES was calling for "higher and higher illumination levels." When, in the mid '70s, it was pointed out that there had been no change since 1959, it was generally ignored.

The increased illumination from fluorescent lighting did not normally increase the heat load because these systems were more efficient producers of light than the previous incandescent system. Sealed buildings may be wattage sensitive but they are light "blind." The growth of airconditioning should not be attributed to illumination levels.

As a 1941 graduate in illumination engineering, I was required to study daylighting. The IES has always included material on daylighting in its handbooks. It is appropriate that the use of daylight is gaining interest and support—and for more than the interior visual environment. Using it for task lighting effectively usually involves consideration in the building design itself.

I don't believe the 1981 IES lighting level recommendations are different with regard to either minimums or maximums. As with prior recommendations, the values suggested are target values. The word minimum used in the past referred to the need to recognize light depreciation over time. The primary virtue of the new IES system is that it formalizes the variation in illuminance requirements due to the age of people, speed and accuracy, and task contrast. Sophisticated and knowledgeable designers considered these factors even with the "single number" system. The new system properly places more demands on the designer to take seriously task analysis and to consider the age of those performing the tasks. George Clark Topsfield, Mass.

'Relevant' Reinterpretation: In Nora Richter Greer's interesting article in the January issue (page 49), I was struck by the attribution of Moravian vernacular influence in the design of the new chapel at Illinois Wesleyan University, Bloomington. Whatever that influence may have been in the formulation of the architectural concept, I suggest that Ben Weese's splendid result, so handsomely illustrated in the article, can nevertheless be seen as a meaningful reinterpretation of an authentic historic ecclesiastical type.

Although John Wesley was deeply impressed by the piety of the Moravians in the course of his mission to Georgia, where he was rector of Christ Church, Savannah, he remained to the end of his life an ordained clergyman in the Church of England, as did his brother Charles and other principals in the Methodist movement. Son of an Anglican parson, Wesley had not intended to make a separate church out of the Methodist societies. The schism occurred in this country, however, in the aftermath of the American Revolution and the disestablishment of the Church of England. Consequently, in Baltimore in 1784 was constituted the Methodist Episcopal Church, the traveling ministry of which was so well suited to the westward expansion of the new republic; and in Philadelphia in 1789 was set up the Protestant Episcopal Church, the independent American component of the Anglican communion. Until not so long ago, the two bodies were often identified simply as the M. E. Church and the P. E. Church.

In the years before the Gothic revival the two bodies shared a common architectural inheritance that was still pertinent. It is exemplified in the small English church or chapel of the late 17th and the 18th centuries, a period when the Church of England was positively Protestant in practice and preaching was paramount. The formulation is best known in the London churches of Sir Christopher Wren, typically comprising a rectangular hall, shallow chancel, simple altar or mere table, rail for kneeling communicants, prominent pulpit, organ loft opposite over the entrance, and galleries.

All these constituent elements are freshly and sensitively incorporated in Weese's chapel at Bloomington. They can be seen in such early Methodist adaptations as Wesley's Chapel, City Road, London, and St. George's, Philadelphia, and in a number of colonial Anglican (now P.E.) churches in northern Virginia, within easy distance from the seat of AIA in Washington, notably Christ Church, Alexandria, Pohick Church near Mount Vernon, and the Falls Church. These latter three are further recalled in the Bloomington chapel, each being a brick box-like edifice with a prominent hipped roof. Although a conspicuous hipped roof may be a distinguishing feature of Moravian barns, it is also a characteristic of English country churches of the late 17th and 18th centuries. However interesting Weese's intellectual excursion into Moravian farmsteads may have been, the evidence is conclusive, I submit, that he arrived soundly at an authentic, historic church type, one particularly relevant to the design problem at hand, which he has brilliantly reinstated for our time. *Ernest Allen Connally, Hon. AIA Washington, D.C.*

Rights of Interior Designers: Reading your article, "Architects in the Interior Design Area" (January, page 70), I realized that there are other related issues not mentioned that discriminate against interior

design firms. An interior design firm is unable to secure professional liability insurance under its company name unless one of the principal owners is a registered architect. This precludes an existing interior design firm from attaining this level of professionalism and consequently the liability that goes with it, simply by hiring licensed professionals. Building officials of cities and local municipalities, however, do not have a conflict with reviewing sets of sealed plans from such a firm practicing architectural interiors.

Secondly, an interior design firm is unable to directly purchase some of the resource material available to architects. This information is available from local representatives and contractors, but the interior design firm may not know of the product's existence.

In conclusion, the interior design firm that has come of age by acquiring the expertise lacking in the traditional practice of interior design is operating with all the knowledge, liability, and professionalism known to the practice of archi tecture and should, therefore, not be regarded as second class. Frank Kanto St. Lour

Sea Ranch: No one is more responsive to conditions at Sea Ranch, the California coastal community described by Jim Burn in the December issue (page 56), than Don Jacobs, a local architect there. Build ings designed by him dot the landscape, and both them and he are exceptionally fine. Of course, I am prejudiced, as Don Jacobs designed our house, and we love it.

Sea Ranch is a grand and wonderful place, loved by all who are connected with it. Now, as we face the future, wise but wary lest it become suburbia, we loc to competent people with integrity for ideas and direction. Don Jacobs is certainly one of them. Ruth Hag Napa, Cali

wards Richard Rogers Recipient of Britain's Royal Gold Medal

chard Rogers, Hon. FAIA, has been warded RIBA's 1985 royal gold medal r architecture, perhaps still the most estigious international architectural ward. The citation opened with these ords: "Alone among the internationally spected architects of the latter half of e 20th century Richard Rogers has ought to high technology an element the baroque, a richness and popular uch."

Baroque is a debatable word (The Archictural Review has noted a Gothic tendcy in Rogers' work), but popular is not. ne Centre Pompidou in Paris, designed th Italian soft-tech maestro Renzo Piano, possibly the most popular public buildg in the world. The citation text reads : "There is a warmth and breadth of proach in his work which reflects his in personality. He is interested in peoe first and his buildings are firstly for ople. 'People places' is one of his expresons, and inevitably Centre Pompidou s become a peoples' place- the most sited and enjoyed building in Europe. s unsuccessful competition design for e National Gallery extension was the ly design which aimed to attract the owds in Trafalgar Square, which linked e two; an attempt to seduce people into e building who would not normally visit leries; an attempt to share more widely pleasures of pictures by appeal of an riguing and exciting structure.

'His new building for Lloyds of London a tour de force of structural ingenuity, nstructional quality, and a design of nost medieval richness of form in brilntly expressed current technology. It l lead the heritage of the City of Lonn in the 21st century, with Richard gers a rightful heir to the traditions of en and Hawksmoor."

There are several odd things about the rding of this citation, not least the coned notion that high-tech Rogers is somev both baroque and medieval at one I the same time. Then to add him to lineage of the baroque masters Wren I Hawksmoor is more than a little odd. h the 17th century architects were conned with the plastic handling of space, 1 spatial hierarchies, and in the treat-

del of the Lloyds of London Building.

ment of massive planes of masonry. Rogers' architecture, on the other hand, has had far more to do with the disintegration of formal spatial hierarchies, with creating buildings where architectural space is simply the space, open and infinitely flexible, sandwiched between ceiling and floor. Nor has Rogers been concerned with the reinterpretation of historic forms. His architecture has the freedom and vitality that grew out of a postwar concern with new materials, an optimistic belief in the power of technology to improve the quality of life of ordinary people, and in the importance of conserving resources.

But cosmopolitan, urbane, and having a taste for the good life, Richard Rogers is above all a populist. He must have been severely embarrassed two years ago when, commenting on the lackluster designs of competing schemes for the National Gallery extension in London's Trafalgar Square, former-RIBA president Owen Luder said that Rogers' scheme was the only one that dared to say "sod you" to the public. Rogers isn't a "sod you" man at all. Sadly, he was also accused of being out of touch with local feelings with his grandoise Coin Street scheme. This roman-



NEWS

tic high-tech project featuring extensive glazed galleries of shops, houses, and offices designed for London's South Bank was considered cold and overscaled. But the real reason Rogers blotted his copybook was that he was the developers' architect rather than the man of the local community.

But the majority of the British public still wants cosy vernacular or bricky neo-Georgian homes. A populist, maybe, but Rogers' view of architecture is still a long way removed from those that write letters to the London evening papers describing the embryonic Lloyds scheme as a giant oil refinery. In fact this particular building will be beautifully finished and poetic compared with the sub-Miesian slabs that dominate this sub-Manhattan part of the London skyline. Like Beaubourg, Lloyds will become a popular city landmark in time to come.

Whatever current negative reaction, Rogers is optimistic about the possibilities of sophisticated technology and says: "Ideology cannot be divided from architecture. Change will surely come from radical changes in social and political structures. In the face of such immediate crises as starvation, rising population, homelessness, pollution, misuse of nonrenewable resources . . . we simply anesthetise our consciences. With problems so numerous," he goes on, "and so profound, with no control except by starvation, disease, and war, we can respond with detachment. Today, at best, we can hope to diminish the coming catastrophe by the recognition of the human condition and by rational research and practice."

Expressed this way, Rogers sounds fiercely antiestablishment. In fact nothing could be further from the truth. Radical chic, maybe, but not revolutionary. The establishment has taken Rogers to its bosom. He is a member of the Royal Academy of Arts, chairman of the trustees of the Tate Gallery, and a key RIBA man. His commissions have been for governments and successful industrial corporations, including America's own computer giant, IBM. But, in terms of what he expects from industy, Rogers is a radical. The Patscenter at Princeton is articulate evidence of his concern to provide a dynamic architectural framework for research and development facilities. This connection between advanced industry and architectural forms is the generator of his work. It just wouldn't enter his head to use historic forms. Asked by The Architects' Journal which were his favorite archicontinued on page 22

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tectural works, he gave equal preference to Louis Kahn's Salk Center and Norman Foster's Hong Kong and Shanghai Bank. But, though he would never quote any of these in his own buildings, he then went on to list the St. Gallo Church at Montepulchiano, the work of Borromini, the history of San Lorenzo in Florence, and the piazzas in Siena and Marrakesh. Perhaps historic is the wrong word. Rogers' references are—that word again—cosmopolitan. A skip through the bare structure of his career to date soon shows that.

Rogers, 51, was born in Florence. His uncle was Ernesto Rogers of BBPR and Torre Velasca fame. Educated, after military service, at the Architectural Association in London, he went on to study at Yale as a fellow student of Norman Foster and pupil of James Stirling. Rogers married the architect Sue Brumwell and together with Norman Foster and his wife set up Team Four, a practice that endured from 1963 to 1968. Rogers then went on to work in practice with his wife for two years before teaming up with Renzo Piano.

This dynamic duo exhausted themselves over the next seven years with the research, design, and construction of Centre Pompidou. Charismatic, diplomatic figures both, Piano and Rogers surely produced one of the most enduring architectural icons of the second half of the 20th century. It seems a pity that they split up professionally, as Piano's inventive building skills and technological wizardry would have made life easier for Rogers as well as making his architecture more genuinely revolutionary. But Rogers' successes since then-Patscenter, IBM at Quimper, Inmos in South Wales, and Lloyds in London-have all been major triumphs. In some ways single minded, certainly in the way that he considers and handles interior spaces, Rogers' work shows the clear influences of both British and American high-tech: Charles Eames, Craig Ellwood, Ezra Ehrenkrantz on the

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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. one side of the Atlantic, James Stirling, Cedric Price, and Norman Foster on the other.

Undoubtedly, Rogers deserves the royal gold medal. He should get it at least for his successful championing and marketing-despite serious setbacks-of a truly modern architecture. When so many lesser architects are succumbing to banal historic forms and to pessimistic postmodern decadence, Rogers' architecture is a seductive beacon calling us to reconsider our belief in modern technology. He may be naive in this respect like others of his generation-and he has certainly shown his '60s background with his assiduous championing of the Mies van der Rohe office scheme in London, almost cheek-by-jowl with his Lloyds buildingbut Richard Rogers, unlike so many retreating historicists and postmodernists, at least believes in a future. JONATHAN GLANCEY

Mr. Glancey is an assistant editor of The Architectural Review in London.

Twelve Chosen to Receive AIA Honorary Memberships

Eleven men and one woman have been selected to receive honorary AIA membership during the Institute's annual convention in June. The individuals, chosen for their "distinguished contributions to the architectural profession or its allied arts and sciences," are:

• Michael L. Ainslie, president of Sotheby's Worldwide, a fine art auction and luxury real estate firm, former president of the National Trust for Historic Preservation, and strong supporter of legislation to restore the West Front of the U.S. Capitol.

• Francis X. Brown, administrator of the

AIA convention department for 10 years.

• Donald Canty, editor in chief of Architecture magazine since 1974.

• U.S. Senator Alfonse M. D'Amato (R.-N.Y.), major supporter of the restoration of the U.S. Capitol's West Front and chairman of the Senate's legislative branch appropriations subcommittee responsible for its funding. D'Amato supported the restoration and redevelopment of South Street Seaport in New York City.

• James P. Groton, legal counsel for the Atlanta Chapter/AIA and the Georgia Association/AIA since 1962 and senior partner with the Atlanta and Washington, D.C., law firm of Sutherland, Asbill & Brennan.

• Ronald J. Panciera, senior manager of the Institute's accounting department since 1963.

• U.S. Senator Claiborne D. Pell (D.-R.I.), principal sponsor of the 1966 law establishing the National Endowment for the Arts and a continued supporter of its funding.

• David P. Reynolds, chairman of the Reynolds Metal Co. board and a major figure in establishing in 1961 the R.S. Reynolds memorial award for distinguished architecture.

• William D. Schaefer, four-term mayor of Baltimore who has been a central driving force in the city's rejuvenation and development.

• Dr. James H. Semans, chairman of the department of urology at Duke University and, together with his wife Mary, a leader in founding the North Carolina School of the Arts.

• Mary Duke Biddle Trent Semans, trustee of the Duke Endowment, president of the Mary Duke Biddle Foundation, a philantropic organization established to support the arts and architecture. She also served as the chairman of the committee that refurbished the governor's mansion in Raleigh, N.C.

• William Walton, architecture adviser to presidents Kennedy and Johnson, chairman of the U.S. Commission of Fine Arts from 1963-71, author of *The Evidence of Washington*, a leader in the preservation of buildings on Lafayette Square nea the White House, and a continuous supporter of the construction of a subway system in Washington, D.C.

Jurors were Dean Hilfinger, FAIA, (chairman), William Rose Jr., FAIA, and Leroy E. Bean, AIA.

ACSA Honors Colin Rowe For Excellence in Education

Colin Rowe, architecture professor at Cornell University's school of architecture, has been named the recipient of thi year's award for excellence in architectural education, presented by AIA and the Association of Collegiate Schools of Architecture.

The award's jury, chaired by John Rauch, FAIA, stated that Rowe was selected "because of his substantial influence on a generation of architecture stu dents and his contributions to architectural criticism."

Rowe's early writings on architecture in the 1940s and '50s "elevated architectural discourse to a new plateau," continued the jury's statement.

Rowe is a native of Great Britain who studied architecture at the University of Liverpool and Cambridge University. In 1953 he came to the U.S. to teach at the University of Texas school of architecture. Five years later he returned to Car bridge University to teach. Since 1962 h has taught at Cornell. Rowe will receive his award at ACSA's annual meeting thi month in Vancouver.

Awards continued on page

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Engineering Society Honors 10 in Annual Awards Program

The National Society of Professional Engineers has announced the 10 winners in its annual outstanding engineering achievement awards program. In announcing the awards, Herbert Koogle, NSPE president, said, "Narrowing the field to 10 winners was very difficult. The strong competition from around the country proves the vitality of U.S. technology."

The 10 winners are:

• The Stonehenge at the University of Missouri-Rolla, a half-scale replica of England's monument. Made of granite, the UMR Stonehenge tells the date and time at noon (central standard time), accurate to within 10 seconds throughout the year. It also allows a view of the North Star through the north-facing trilithon. The 160 tons of granite blocks were cut by a new technique that increases a tiny jet of water to the high velocity of 16,000 pounds per square inch.

• Spacelab, developed by the Marshall Space Flight Center, Huntsville, Ala. Spacelab's reusable modular laboratory system consists of an enclosed, pressurized, habitable laboratory module containing utilities, computers, work areas. and instrument racks for experiments, as well as unpressurized platforms where telescopes, antennas, and sensors are mounted for direct exposure to space. The Linn Cove viaduct, Blue Ridge Parkway, North Carolina, called the "most complicated segmental bridge ever built." Designed by Figg and Muller Engineers, Inc. to protect the rugged terrain of Grandfather Mountain, the 1,243-foot S-shaped concrete bridge was built from the top down. Crews placed 153 posttensioned, prestressed, and fitted segments, with each segment being a different size and shape. (The viaduct also won a 1985 presidential design award.)

• Phase one of the tunnel and reservoir plan in Chicago, known as the deep tunnel. The project was designed by the Harza Engineering Co. to prevent pollution of Lake Michigan and eliminate water pollution caused by combined sewer overflow. When completed it will serve 375 square miles and more than 3.4 million people. The tunnel has diameters of 13 to 31 feet, 116 drop shafts ranging from four to 17 feet in diameter, 127 connecting structures, and a twin chamber underground pumping station with a top range of 710 million gallons daily.

• The automated flood warning system in Houston. In this system designed by the Harris County Flood Control District, information is collected by 39 gauging stations and is relayed, via radio signal, to a central computer that summarizes the data and provides graphs comparing





current water levels to those recorded during previous floods. The computers have the capability to project, within 30 seconds, where and when a flood will crest.

• The Great Plains coal gasification project, Mercer County, N.D., this country's first commercial-scale gasification plant. It was designed by Lummus Co. and Raymond Kaiser Engineers to produce 125 million cubic feet of gas per day.

The Optical Telescope Assembly in Danbury, Conn. Designed by Perkin-Elmer to see stellar objects 50 times fainter than now observable from the ground, the optical centerpiece of the telescope is a 94-inch-diameter primary mirror.
The X-29 advanced technology demonstrator aircraft, developed by the Grumman Aerospace Corporation, Bethpage, N.Y. The first "X" series aircraft to be built in more than a decade, the X-29 incorporates a variety of state-ofthe-art technologies.

• The Tevatron/Tevatron I, the world's first superconducting particle accelerator. Designed by Fermi National Accelerator Laboratory in Batavia, Ill., for the U.S. Department of Energy, the project is a four-mile ring of 1,000 superconducting magnets.

• The Rapidan Hydroelectric renovation, on the Blue Earth River, in Mankato, Minn., the first hydro retrofit in Minnesota, designed by Indeco, Inc.

Housing Finding a Role for Architecture In Helping Shelter the Homeless

Last fall the plight of a homeless shelter in Washington, D.C., received national attention from the press, including the television program "60 Minutes," when its director, Mitch Snyder, almost died in a hunger strike protesting its closing. Snyder's protest resulted in the D.C. government giving the building to the group headed by Snyder, the Community for Creative Non-Violence. Subsequently President Reagan promised to turn it into a model shelter for the homeless. And during the month of January five architectural students from New York City set-up shop in the dilapidated structure with the result being a durable, inexpensive, and humane design for the shelter's rehabilitation.

Conducting a design charrette was the idea of Snyder and Conrad Levenson, a New York City architect whose firm specializes in moderate-, low, and lowerthan-low-income housing and who is a consultant to New York City's Community Service Society. Levenson was first contacted by Snyder through New York City's Coalition for the Homeless last March for "technical advice."

Levenson is also a professor at the City College Architectural Center, a full-credit community design facility that is part of the City College of New York's architectural school. For the charrette Levenson chose five advanced architectural students—Helen Chung, Sergio Ghiano, Daniel Kamel, Cecilia Lopez, and Domenick Schinco. The students were also assisted by professor Alan Feigenberg.

Their challenge, as explained by Levenson, was to "design spaces that respect an individual's territory and the individual rights of residents and that also respond to the collective requirements and responsibility." The starting point was the philosophy of the Community for Creative Non-Violence, which emphasizes the homeless person's need for a humane environment.

Says Snyder, "If the guests feel that this is their house, if we can make them feel secure and at home as close as possible within the limits of this structure, then the odds are they will want to take care *continued on page 32*

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of the place, to respect it." In turn, Snyder hopes that if the homeless "are given dignity and provided with social and medical services, then maybe they will begin to get some hope back, and they will want to get out of here." The 15-year-old CCNV, which was formed as an anti-war group, is "essentially a religious community," Snyder says. "We serve 2,000 to 3,000 people per day with food, medical care, clothing, or shelter, and spend an equivalent amount of energy in addressing, resisting, and confronting values, programs, priorities, and policies that are creating people that we serve in our soup kitchen and shelters." The shelter is run as a communal enterprise and shuns government support. Many of its staff were formerly homeless. CCNV runs the shelter with strict rules: Neither alcohol nor drugs is allowed; physical and verbal violence are not tolerated; cots vacant for three consecutive nights receive new occupants.

The building at 425 Second St. N.W. was used originally as a temporary government office building during World War II and then to supplement University of the District of Columbia facilities. Now the 185,000-square-foot facility is thoroughly dilapidated. The dingy, institutional-green hallways smell of urine, there are broken doors and windows and holes punched in the plaster walls, the roof leaks, and the carpets are despoiled. When the dormitories are closed during the day, the homeless congregate in the cavernous basement.

But despite the desolute conditions, there is evidence of the human dignity that Snyder speaks of. Many of the cots are neatly made each morning. Guests create their own sense of space—a plastic potted plant tucked in a corner, a book laid delicately on a pillow, clothes hung beside a cot, names marking the scarce and highly prized single rooms. Above, the students in their makeshift design studio in the dilapidated shelter.

Besides the need for a humane domestic environment, the designers recognize the need for privacy, security, light. "The security issue all by itself is complicated," Feigenberg said. "There is crime safety, which means there is a need for surveillance. There is safety outside and safety inside. Access must be limited and doors kept closed. There is fire safety, which means clarity of plan and access to exits. There is safety for the women, who must be kept separated from the men." And, too, there was the need for a durable but inexpensive solution.

The students' plan revolves around the concept of separate "villages," six in allone for up to 75 staff, one for 150 women, and the remaining four for 200 men each. Each village will contain an enclosed dining and lounge area (including a warm-up kitchen), which will lie at the short ends of the rectangular building. These spaces will be closed after certain hours when the guests move into the sleeping area. Here off of two bisecting "avenues" will be clusters of 6-foot-high steel cubicles. In the 6x7-foot cubicles will be a cot raised high enough for a standard footlocker to be stored beneath. The cubicles will also contain low-voltage reading lights. Each village will have bathroom facilities, and the walls may be colorcoded for orientation. The staff will have individual rooms instead of the steel cubicles. On the basement level will be separate drop-in centers for women and men, a medical center, a laundry, a large kitchen, and offices for counseling and other services. The renovation is expected to cost \$2.5 million to \$3 million.

Levenson called the design charrette "enormously successful." Snyder said, "I think it [the rehabed shelter] will be a national model." The students, who were on intercession at the City College School and had just completed a course taught by Levenson on housing rehabilitation and community design, had the rare opportunity to apply their newly learned knowledge to a real life situation. From their bare-bones studio at the shelter, they were in daily contact with the staff and guestsand the shelter's desolute condition. (Al five students took a month's leave of absence from their jobs.)

Levenson also believes that the charrette has symbolic value. "The federal govern ment is acknowledging the homeless problem on a national level," Levenson said. He emphasized that in every large American city there are alarmingly increasing numbers of homeless. The number in New York City alone has been estimated at 40,000 to 50,000.

The charrette is considered phase one of the project and was funded by an emer gency \$17,500 NEA grant. The Washing ton Chapter/AIA made arrangements fo furnishings for the students. Drafting sup plies were provided by Visual Systems and printing services from Rowley-Sche Reprographics Inc. Additional logistical support was given by nine architectural firms-Kemnitzer, Reid & Haffler; Keyes Condon Florance; Metcalf & Associates Skidmore, Owings & Merrill's Washington office; Smith Segretti Tepper; Stinsor Capelli; John Carl Warnecke & Associates' Washington office; and Weihe Black Jeffries Strassman & Dove.

Phase two will involve the developmen of design documents by Levenson's office to be funded by a matching NEA grant. GSA will fund and supervise the rehabil itation. Snyder says it will be completed before next winter, "or we are going to get real fiesty." N.R.G.

Mid-'50s Frank Lloyd Wright Prefab House to be Relocated

One of the few prefabricated houses designed and built by Frank Lloyd Wrigh in Wisconsin is now being dismantled an moved to make way for an office building. According to Chris Fecht, the owne of "Skyview" (as Wright named the Mac ison house), the house will be moved 35 miles northeast to Beaver Dam onto a site that Fecht describes as "sympathetic to the house's design.

In the mid-1950s Wright collaborated with Marshall Erdman Associates, a Madison housing contractor and prefab ricator, to produce a line of specially designed prefab houses. Wright designe four models, each approximately 2,000 square feet in an L-shaped plan that included three to four bedrooms, living dining space with a masonry fireplace co family room, and a carport. Only two o *continued on page*

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the models eventually went into producon. Erdman estimates that 20 of the preb houses were built. Other estimates set the number at a dozen or only a few. Skyview was constructed in the spring and summer of 1957, "the last summer dright spent in Wisconsin," says Martin ell, AIA, a local architect who Fecht as hired to assist in moving the house. Aright spent the spring and summer of 058 in New York City supervising conruction on the Guggenheim Museum, and the following spring he died. Accordbg to the Taliesin Fellowship, Skyview as very likely the last house whose conruction.

ruction Wright personally supervised. Although Skyview was part of a prefab eries, it differs from the line in that it as enlarged by the request of the client, r. Arnold Jackson, who was Wright's hysician. Jackson wanted a larger firelace, so Wright extended the living room few feet. Three bedrooms were reuested instead of four, and Jackson also anted a larger kitchen. Fecht estimates hat Skyview is approximately 2,300 square ret.

Perhaps most unusual of all, Skyview oriented backward—the elevation degned to face south faces north. Skyview's ently rolling site overlooks Madison's boretum (a large, natural forest preserve) ad a small lake, and offers spectacular ews of downtown Madison and the state apitol—all of it to the north. Wright ecided that the house should be turned ound so that the elevation with the most indows would face the view. "It's pretty nlike Wright to have that happen," coments Sell, "but maybe he thought the ew was justification enough to do it."

When the house is moved to its new te it will be reoriented the way origially intended. According to Fecht, the buse will be sheltered on the north and est sides, sited on the shoulder of a hill at slopes to the southwest. The new ientation will offer "quite a bit of pasve solar gain," adds Sell.

Both Fecht and Sell have been workg on moving the house since mid-January hen Fecht (a transplanted California iter and a Wright buff for many years) ought the house for \$1. He had to meet number of conditions to qualify for the w price: The house had to be moved tirely from the site by March 15; Fecht d to post a performance bond of \$10,000 pay for demolition if he failed to move he had to carry \$1 million in liability surance while he was on the property d another million while the house was the highway. Fecht estimates that the lole project, including the new site, will st approximately \$70,000.

No drawings exist of the house, which akes it necessary to fully document the ucture before it is moved. The few Chris Fecht



Detail of Frank Lloyd Wright's 'Skyview.'

documents that did exist for the prefab series were lost in a fire at Erdman's office, but Fecht believes they would have been little help, "because Wright tinkered around with the house while it was being built," he says. Sell and Fecht have taken approximately 400 photographs of the house and are now in the process of completing a set of measured drawings. A local television station is also documenting the project.

Sell says that the house will be moved in two sections: the bedroom wing measuring 40x26 feet and the kitchen/dining area measuring 20 feet square. The living area and the garage will be moved in *continued on page 42*



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panelized sections, and the roof has been totally disassembled. The architect adds that the most difficult part of the house to move will be the masonry core, which includes the fireplace and a wall that extends into the kitchen and up through the roof. "Originally we were hoping to move that intact," says Sell, "but the mortar is very soft and the stones come apart so easily that everything has to be dismantled." What this involves, adds Fecht, is photographing the stonework in detail, drawing it, and then numbering each stone, "just like William Randolph Hearst," Fecht laughs.

Working on the house has offered an opportunity to study Wright's work at first hand, says Sell, whose visit to Taliesin in nearby Spring Green as a teen-ager prompted him to study architecture. "I'm too young to have studied under Wright," Sell says, "but what we're doing here provides some of the same insight that people like Edgar Tafel and William Wesley Peters may have had when they supervised his buildings under construction."

Fecht estimates that the house should be back together by mid-June, habitable sometime in July, and fully restored in two years. "A lot of the exterior woodwork has been neglected," he says, "but the interior is in pretty good condition."

New Design for St. Bart's Tower Raises Old Questions

The controversy over whether New York City's landmark St. Bartholomew's Church should be allowed to demolish its community house and replace it with a skyscraper has been rekindled. Having had its first design for the skyscraper rejected unanimously by the New York City Landmarks Preservation Commission last June, the church resubmitted a substantially different design in late December.

The new design calls for a 47-story tower rather than the originally proposed 59-story building. Materials would be limestone and brick (reflecting those of St. Bartholomew's Church) instead of reflective glass and steel. Square footage would be reduced from 716,000 to 340,000. And the zigzag, sawtooth shape of the originally proposed tower would be replaced by a building with several setbacks and tapered at the top to form a narrow, stepped-back crown.

According to Peter Capone, AIA, architect of both tower designs and president of the New York City firm of Edward Durell Stone Associates, the newest design is to "reflect a sensitive and compatible awareness to the landmark church. It is a contemporary structure whose design qualities will serve as a compatible transition from the historic site to harmonize and co-exist with its neighbors."

The incompatibility of the first tower with the Byzantine-inspired church was of great concern to the commission. As Commissioner Charles A. Platt said, "The sheer size of the building dwarfs the landmark. The forms are angular, disagreeable, sharp, metallic, tinselly. It is actually at war with the landmark."

If the commission rejects the second design, St. Bart's may still receive permission to build the tower under a financial hardship plea—it is estimated that the tower could generate revenues of \$7.8 million in the first 10 years. According to Dr. Thomas D. Bowers, rector of St. Bartholomew's Church, "Without the financial resources of a real estate development, we cannot maintain our existing church building structure nor continue *continued on page 47*

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overnment from page 42

r current religious programs." The urch has also already pledged to use lf of the anticipated revenues to suprt parishes in the South Bronx, Harlem, dford-Stuyvesant, as well as other areas the city.

If the hardship plea fails, the church s said it will appeal to federal courts, aintaining that the "landmarking of urches and synagogues interferes with eir ability to determine their own relious mission under the first amendment the U.S. Constitution." It also seems ely that the coalition of Protestant, Cathc, and Jewish leaders that lobbied last ar for a state bill to exempt religious stitutions, including schools and parish uses, from local landmark laws, would so again this year.

Opponents to any new development ve argued that the church's \$11 miln endowment, plus funds that could raised in the community, would allow to adequately continue its programs. addition, opponents cite court decions holding religious groups subject to ivate sector regulations when engaging "secular activities" such as commeral development.

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

Budget Mixed on Issues of Interest to the Profession

The administration's proposed budget for fiscal 1986 would provide funding for the renovation of the Pension Building in Washington, D.C., to house a national building museum but would cut the National Endowment for the Arts budget and recommend zero funding for the National Trust for Historic Preservation.

Reagan's \$973.7 billion budget now before Congress would also cut domestic programs, place a two-year moratorium on subsidized housing starts, and eliminate more than 25 federal programs including Urban Development Action Grants, the HUD solar bank, the Small Business Administration, and Urban Mass transit assistance. Many of these cuts were first recommended by President Reagan in 1981 but were rejected by Congress during his first term.

Although the Reagan Administration

had originally supported a private fundraising effort for the renovation of the Pension Building, the budget calls for \$16.7 million under the GSA's federal building fund program. Last year the museum received \$343,000 for operating expenses, but this year's budget does not provide any direct funding for operations.

The National Endowment for the Arts and the National Endowment for the Humanities face cuts of 11.7 and 10 percent, respectively. The budget promises \$144.5 million for NEA, down from \$163.7 in FY '85. The reduction would affect programs to different degrees with opera and musical theater sustaining the largest cuts. The design arts program was cut from \$4.4 million to \$3.9 million. NEH's budget would be cut from \$139.5 to \$126 million.

The Administration has also recommended zero funding of the National Trust for Historic Preservation and the Historic Preservation Fund that provides money for state historic preservation grants in aid and a reduction of \$343,000 in funding for the Advisory Council on Historic Preservation.

In the last four years direct federal support for housing has decreased significantly, and the '86 budget calls for addi*continued on page 51*



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vernment from page 47

hal cuts in HUD programs. Reagan proses a two-year moratorium on additional isted housing commitments and the mination of the Farmers Home Adminration housing assistance program. In 88 after the end of the moratorium, the ocation of new HUD-assisted housing its would be equally divided between oan and rural areas.

A popular grants program that financed ,000 units of housing for the elderly d handicapped in 1985 would be olished, as well as the rural housing ogram and most rural development ns. In addition to halting new construcn, the Administration plans to greatly luce the availability of rent vouchers the poor, from 100,000 to 3,500. Operng assistance to local public housing thorities would be slashed by \$240 llion to \$1 billion. Funding for moderntion of older and rundown housing projs would be cut by 75 percent. Rehatation grants to repair rental apartment its also would be eliminated, as well as pecial housing program for Indians. However, the Reagan proposal seeks more than double the funding for the JD fair housing programs from \$6.7 miln this year to \$15 million in fiscal '86. der this program \$10 million would be ed for "fair housing initiatives" to help al governments and community boards orce antidiscrimination laws and \$5 miln would be budgeted in "fair housing istance" to help local governments proc-

discrimination complaints. The budget would reduce overall fedl aid to state and local governments 5.9 percent from \$107 billion to \$100 ion and keep it frozen at that level for years. The Administration contends t the financial health of local municiities has significantly improved in the t two years and some state and local ernments have surpluses while the fedl government has a \$175 billion deficit. As part of its effort to reduce federal to localities, the Reagan Administran proposes to eliminate the popular oan Development Action Grants. inched during the Carter Administra-1, the program has provided grants to tressed cities and urban counties to st commercial, industrial, and residendevelopment and rehabilitation of vntown buildings, including hotels, contion centers, and shopping areas. It vided \$400 million annually for the t three years, was increased in 1980-81 675 million, and is currently funded 440 million. Successful UDAG-assisted jects have included Baltimore's Inner bor, Town Square in St. Paul, and the tis Park Face Block project (a comhensive low-income residential rehatation program in Denver that won an A honor award in 1982).

The Administration contends that UDAGs and other economic development subsidy programs do not add to national investment or create jobs and calls the program "an expensive taxpayer-supported shell game which lures jobs and investments from one location to another, more politically advantaged, competing locality." By killing UDAG, the President predicts a \$2 billion savings over the next three years.

Reagan has also proposed a reduction in community development block grants by 10 percent to \$3.1 billion and a shift of some funding from urban to rural areas. Block grants to the states' energy assistance programs would be frozen and aid to urban parks would be dropped.

Although Reagan proposed dismantling the Department of Energy during his first term, this budget does not call for its closing but does call for a reduction in funding from \$11.3 to \$9.3 billion. Research programs would be decreased by 2 percent, reflecting cuts in research on solar and renewable energy resources and conservation, as well as nuclear fusion, coal, oil, and gas.

The low income energy assistance program would be frozen at \$2.1 billion, and the Administration hopes to abolish within five years grants for energy conservation for weatherstripping public buildings and houses of low-income families. However, the Administration will propose legislation that is predicted to raise \$191 million in penalties from petroleum companies that violated the 1973 oil price control program and use this money to partially fund the low income energy assistance program. DOE programs for weatherization and energy conservation grants for schools and hospitals would also be financed through these settlements.

The solar bank at HUD, which provides grants and loan subsidies for energy conservation improvements and solar energy systems, would be abolished after fulfillment of obligations appropriated through 1985. In 1984, the bank provided \$17.9 million in assistance.

One of the few substantial budget increases was the funding of "superfund," a program that helps states clean up toxic waste sites. The Administration also promises to support legislation that would expand the federal government's efforts to clean up abandoned waste dumps.

The Énvironmental Protection Agency's grants to build wastewater treatment plants would be frozen at \$2.4 billion, and legislation would be introduced to abolish it. Future funds would have to be used only to complete existing projects. In other reductions of outlays for construction, the budget would cut funding for new Veterans Administration hospitals by \$157 million to \$612 million. *continued on page 185*

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The Arts Drawings by the Gold Medalists

Immensely popular, architectural drawings are as diverse as the architects themselves. This art form can entertain, can transport the viewer to distant lands, can reveal a more serious progression of an architect's work, or can record a specific architectural style or trend. This tremendous variety is delightfully encountered in the exhibition "Honor and Intimacy," which presents drawings of 41 of the 45 AIA gold medalists.

Sponsored by the AIA Foundation's College of Fellows Fund, the exhibition, which closes this month at The Octagon Museum and which was in Chicago last fall, was inspired by Richard Guy Wilson's recent book *The AIA Gold Medal* (McGraw-Hill), written in part to celebrate the 75th anniversary of AIA's highest honor. The show is an attempt to document the more personal side of the medalists' works. As Wilson says, "The creation of architecture is intensely personal. The moments when ideas are born and are given shape and form in the mind and on paper are private, intimate times, whether the architect is alone with a pad of paper or sitting sardine-style on an airplane sketching on a napkin. From intimacy, ideas and forms move toward the public realm, where they are presented to others, until the final fact of the actual building recalls the initial intimate moment."

In the exhibition, almost every style of architectural drawing is represented from the highly-romanticized watercolor of St. Stephen's Church by Bertram Grosvenor Goodhue to Henry Bacon's detailed working drawings for the Lincoln Memorial to R. Buckminster Fuller's "fly's eye geodesic dome" sketch, to the most current in technology—a computer rendering of I.M. Pei's Pyramids at the Louvre in Paris. The exhibition catalog is available for S6 from The Octagon Museum, at Institute headquarters. NORA RICHTER GREER











Across page, I.M. Pei's Pyramids at the Louvre, Paris, a computer-rendered perspective (1984, 34x56.25 cm, Courtesy of I.M. Pei & Partners, New York). Above, Richard Neutra's evocative rendering of Gunter Pescher House, Wuppertal, West Germany, in pencil, and pastel charcoal on board (c. 1969, 60x90.25 cm, Courtesy of Avery Architectural and Fine Arts Library, Columbia University, New York). In contrast to the unornamented planes of Neutra's buildings, his drawings had extravagant strokes of color in the style of the Viennese Secessionists. Left, ink on tracing paper sketches of MIT's Kresge Chapel, Cambridge, Mass., attributed to Eero Saarinen (c. 1953, 22.5x31.25 cm, The MIT Museum). Arts continued on page 61

ARCHITECTURE/MARCH 1985 59

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Above, the highly romanticized imagery and polished style of Bertram Grosvenor Goodhue as seen in his perspective (from the southwest) of St. Stephen's Church, Cohasset, Mass. (1899, watercolor and wash on paper; 50.8x67.9 cm, The AIA Foundation, Prints and Drawings Collection). Goodhue was considered one of the great architectural renderers of his time. Left, Charles Donagh Maginnis' travel sketch on Nuremberg (1929, pencil on paper, 23.75x 16.25 cm, Eugene Kennedy Jr., FAIA). Maginnis authored a book on architectural drawing in 1899.

Arts continued on page 64





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Left, the design by John Wellborn Root II of a hotel, theater, and offices at Wacker Drive and State Street in Chicago The building was never built, and the drawing's sharp contrast of black and whit is in a style popularized by Hugh Ferris in the '20s. The drawing is by Gilbert Hall (pencil on paper, 41.9x66.25 cm, Mr & Mrs. Frank D. Cooper). Below, the soft pastels of Bernard Maybeck's elevation drawing of the classically inspired Phoebe A. Hearst Memorial Auditoriun University of California, Berkeley (c. 1924-1926, 75.6x101.25 cm, College of Environmental Design Documents Collection, University of California, Berkeley). Arts continued on page (



64 ARCHITECTURE/MARCH 1985

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Above left, George B. Post's Bank of Pittsburgh represents the turnof-the-century, meticulously detailed drawings (1894, ink and wash on paper, 91.25x60 cm, Courtesy of the New York Historical Society, New York). Left, Romaldo Giurgola's flattened rendering of the House of Representatives, New Parliament House, Canberra, Australia (1980, graphite on paper, 140x107.5 cm, Courtesy of Romaldo Giurgola, Mitchell/Giurgola & Thorp Architects).

Arts continued on page 72



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The Arts



Above, Walter Gropius' design for a Social Room for an Apartment Hotel, Werkbund Exhibition, Paris, 1930. The drawing is by Herbert Bayer; reportedly Gropius never liked to draw, and there are virtually no drawings to be found by his hand (1930; ink, wash, gouache, pencil on artist's board; 40x50 cm; Harvard University Museums: Busch-Reisinger Museum: Gift of Walter Gropius). □

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ARCHITECTURE



L his has to be a more personal essay than usually appears in this space because of my involvement with its subject, being a third-generation native of the San Francisco Bay Area. I spent more than half of my life there and did a San Francisco issue of the now-defunct *Western Architect & Engineer* 25 years ago next month.

The issue was the first by an American architectural magazine entirely devoted to an urban design analysis of a single city. It featured a remarkably perceptive set of pictures by the celebrated San Francisco photographer George Knight. One of them is reproduced above, while the cover shows the same view as it looks today. Similar then and now comparisons occupy the next six pages.

In the picture above and its cover counterpart, the shadowy wall of the city's skyline stands behind the perky peaked roofs of the Mission District. The 1960 issue of *WA&E* characterized the Mission as a working class neighborhood where it was not uncommon for families to have lived for generations. It also pointed out that the Mission contained many of the pre-earthquake houses remaining in the city, and that they were beginning to show their age.

The skyline is taller, but little else has changed in the contemporary picture, although the Mission is more colorful, more chic, more diverse than it was a quarter century ago.

We lead with this picture, not just because it is arresting, but because it also emphasizes the fact that while the national focus may be on the city's tourist attractions and exploding downtown, this remains a city of residential neighborhoods.

Following the then-and-now photos (Knight's are courtesy of University of California's Bancroft Library) we look at downtown growth and planning, then present a series of mini-evaluations of some interesting buildings and spaces that have been part of that growth. They are followed by analyses of two fascinating and contrasting valleys on the expanding fringes of the Bay Area: the wine country of the Napa Valley and the high-tech haven of the Santa Clara, or Silicon, Valley.

Next comes a Kaleidoscopic review of some recent Bay Area buildings and, finally, a look at what are indisputably the best works of architecture in the region: the bridges spanning San Francisco Bay and the Golden Gate.

To maintain some semblance of objectivity, editor in charge of assembling the issue was Allen Freeman, an Atlantan. D.C.



Knight took the picture above from Fort Point, just below the San Francisco terminus of the Golden Gate bridge. In comment the magazine observed that "nature has been lavish to San Francisco. This tiny nail on a long thumb of land has water on three sides: the Pacific spills into a wide, island-dotted bay that is among the best natural harbors known to man. The land rolls, folds, and repeatedly juts upward. The hills contribute a rich variety and both begin and end an infinite series of views. The climate is unique, snowless, an irregular cycle of sun that is brilliant but not really hot, rain that is moderate and seasonal, and fog that, while poets may see it coming in on little cat feet, has a clammy hand for the ocean slope."

The contemporary counterpart picture at right, taken after 25 years of steady growth, is remarkably like the original. There are changes in the skyline from this northwest view, but it takes a hard look to find them.

Partly, this is because much of the growth has occurred in the low eastern lap of the city (the Bank of America tower, the dark one left of center, is the only really tall building to have been built high on a hill). But partly the reason for the similarity is that nature here is hard to dominate.





But more and more towers are beginning to climb the hills. The view down California Street in 1960 was of an array of buildings of delicate scale and wide diversity. The pagoda and church tower had presence among the mainly middle-aged, midrise office buildings. Now they are backed by an ever rising wall of relentless modernity, and they look rather forlorn and overwhelmed. San Franciscans call the eruption of highrises in and around the financial district "Manhattanization" and deride and resist it. (One early victory for the city's environmentally conscious citizens was removal of the oversized S.P.—for Southern Pacific sign at the foot of California Street in the 1960 photo.)

The downtown boom in commercial construction attests to the city's continued vitality as a commercial capital. But, as in Manhattan, it overcrowds sidewalks, strains transportation, and makes shadowed canyons of the streets. Current efforts to deal with some of these negative effects are reported in an article beginning on page 88.





The good news is that Columbus Tower—the very San Franciscan 19th century building in the center of the 1960 photo has been retained and maintained, if somewhat gaudily painted. The bad news is that it has acquired some rather daunting neighbors. They are all big, but they vary widely in style. The faceted Bank of America building on the right of the current photo was a respectable 1960s effort to break out of the modernist box, achieving considerable interest in both skin and profile. The Transamerica building, at left in the photo, is something else again. It is more object than building. A well-known corporate symbol, it seems to have been designed more with that in mind than the character of this city. D.C.



An Explosion by The Waterfront

By Allen Freeman

San Francisco's is a compact downtown crowding against the Embarcadero, a boulevard-scaled street along the crescent waterfront. The Spanish-flavored tower of the 90-year-old Ferry Build ing at the foot of Market Street is still a visual focus, although it is dwarfed by higher-rises and partially obscured by the elevated Embarcadero Freeway that cuts the city from its source.

Two street grids of dissimilar proportions and orientations collide along the straight spine of the 120-foot-wide Market Street, which shoots west from the Ferry Building. A major transit corridor under which run both subways and streetcars, Market separates a large district called South of Market (lower left in photo below) from the rest of downtown.

Most of the highrises prominent in this aerial view from above the Bay Bridge are products of a 25-year building boom, beginning in 1960 with the competition-winning Golden Gateway Center, Wurster, Bernardi & Emmons' blocky residential highrises just beyond the point of the Ferry Building tower. The adjacent slab highrises marching toward the bay to form Golden Gateway's commercial edge constitute John Portman's Embarcadero Center, built incrementally over the '70s. Fisher-Friedman Associates' lowrise, residential Golden Gateway Commons in the crook of the freeway (shown in our Kaleidoscope on page 146) is just now becoming fully occupied, completing the Golden Gateway redevelopment and speaking eloquently about newfound environmental and contextual concerns.



Golden Gateway redevelopment helped stimulate the quarterntury of building that has transformed parts of downtown. fice space more than doubled between 1965 and 1981, drattically altering both skyline and streetscape, particularly at of the congested financial district, whose towers dominate \geq photograph. Comprising some 30 compact blocks in a trigle radiating north of Market from the Ferry Building and mmed in by Chinatown on the northwest and North Beach

the north, the financial district has become by far the most ensely developed real estate in the city, where highrises meet nyoned streets with large lobbies and pristine banking floors ieved only by expensive restaurants and boutiques. Meanwhile, wtown hotel construction has surged: There are more than ,000 rooms for tourists in the commercial district just beyond e financial towers, centered around Union Square.

Some argue forcefully that growth is destroying San Francisco's aracter. Says San Franciscan Lawrence Halprin, author of some the city's best-liked outdoor spaces: "Downtown is becomg tourist oriented, consumer oriented, yuppie oriented; what is once a great center of merchant seamen, longshoremen,

nancial district towers cluster against the waterfront at the y Bridge, which empties into the South of Market district, at ver left. The Ferry Building on the waterfront, directly below the photo, marks the eastern terminus of Market Street. fishermen, and other working people is becoming a collection of 50-story 'flagship buildings' full of worker-ants scurrying out at 4:30 to the suburbs and jogging and hot tubs. And at ground level, dowtown is becoming the ultimate boutique."

Halprin's concern is a variation on a downtown theme increasingly echoed by environmentalists, housing and neighborhood interests, and the San Francisco electorate. In November 1983, San Franciscans voted on Proposition M, the fourth citizeninitiated anti-highrise proposition placed before the voters in a dozen years. Like the others, it failed, but by a margin of fewer than 2,000 votes. Last June, voters did adopt Proposition K, which prohibits development above 40 feet that casts a shadow on citymaintained parks and squares between one hour after sunrise and one hour before sunset. Proposition K potentially affects six downtown spaces and at least four more on the periphery.

And sometime in the next month or so, the city's elected leaders are expected to ratify one of the most exacting prescriptions for downtown growth ever written for an American city. The downtown plan, as prepared by the city planning department and currently in effect on an interim basis, restricts the location, size, and shape of new skyscrapers while mandating preservation of hundreds of older buildings. First published 18 months ago, the 130-page document has met mixed reaction from architects, from enthusiastic endorsement to a more cynical view that this city is just too vital for planners to muck up.



The new plan encourages siting of new skyscrapers in an area south of Market adjacent to the financial district, but that is not a new concept. A sort of flatlands catch-all, the South of Market district, shown in the entire right half of the photo below, covers 80 blocks that contain a cluster of skyscrapers in the blockwide corridor next to Market Street, gay bars and punk rock hangouts, the four-year-old Moscone Convention Center, bus terminals, elevated freeways, a wholesale flower market, and loft buildings that house downtown support industries like print shops. Recently the lofts have attracted a certain amount of gentrification by musicians, artists, and architects, including MBT Associates (see page 140). Halprin also has moved his office south of Market, attracted by its "authentic" amenities, and Fisher-Friedman Associates plans to consolidate its two offices in the high-rent financial district into one location south of Market.

South of Market has been the city's perennial, mostly unfulfilled redevelopment goal since at least 1953, when the San Francisco Board of Supervisors designated some 18 blocks for possible federal urban renewal. Twenty years of planning on various sites ensued, hampered by financial delays and litigation on behalf of potentially displaced residents and by no-growth proponents. When George R. Moscone was elected mayor in 1975 on a platform to promote development south of Market, he negotiated a compromise with environmentalists to build a convention center underground. After Moscone was assassinated in 1978, the underground center then being designed by Hellmuth, Obata & Kassabaum, was named for the mayor. Then, in 1980, the city redevelopment agency selected a developer team headed by Olympia & York for a 21.4-acre office, residential, and entertainment project to link the underground center, by then well under construction, to Market Street.

Architects for Yerba Buena Gardens, named for the early settlement on the site of San Francisco, are Zeidler Roberts Partnership of Toronto with Willis & Associates. Eberhard Zeidler is the design partner, and Halprin and Omi-Lang Associates are landscape architects. The mixed use project is to cover the roof of the Moscone center and contiguous blocks south between Third and Fourth Streets, as well as part of a fourth block to the east. Plans for the main three blocks include a 750,000-square-foot office tower, clad in light stone, that tapers toward its penthouse top, a 1,500-room, tapered hotel tower, a 40-unit residential building, large components of retail, amusement, and underground parking space, and expanses of open space. The block to the east is to have two additional towers.

The huge project seems fairly sympathetic with its setting. Two of the four towers appropriately go in the highrise corridor between Market and Mission, yet they are positioned to preserve a view corridor down Grant Street from north of Market. The two other major blocks are relatively low—a series of pavilions that rim central, linking spaces that visually terminate on the south edge in a domed movie palace.

Yerba Buena's tapered towers are in conceptual harmony with one of the most prescriptive sections in the new downtown plan. Noting a tendency to build to the city's allowable height, caus-



a "benching" effect of building tops, the plan states: "The tpe given to the top portion of every large structure should usider the building's position in city views. . . . As buildings rease in height, they should be sculptured or shaped to appear reasingly slender and delicate. . . . All buildings should be ssed or otherwise designed or articulated to create a visu-/ distinctive termination of the building facade." To those ls, the plan incorporates new tapering bulk controls and uires that rooftop mechanical functions be integrated into architectural design.

The regulations are not without support in the San Francisco hitecture community. Skidmore, Owings & Merrill design part-Lawrence Doane, AIA, thinks the controls will contribute to nore interesting downtown, and Michael Stanton, AIA, chairn of the San Francisco Chapter/AIA urban design commit-, says, "Let's face it, some of our best firms built some ugly rigerators. Probably 10 years of construction of buildings pped back and sculptured at their tops would be beneficial the city." But William Turnbull, FAIA, suspends judgment the height and bulk restrictions until he has to work under em, and Rodney Friedman, FAIA, of Fisher-Friedman thinks by should be made negotiable to offer greater design options.

this view looking east down Market Street, the financial disct is identified by cluster of towers to the left of Market. The pscone Convention Center roof and Yerba Buena Gardens site in the middle foreground of the photo, directly below. In terms of preserving the character of downtown, a perhaps more significant section of the plan allows the owners of a historic building to sell for use on another site the difference between the actual and allowable square footage on the historic building's site. The planning department based its list of qualifying buildings on a survey conducted by Heritage, a nonprofit preservation foundation. Heritage Executive Director Grant Dehart, AIA, says the transfer development rights concept "integrates preservation policies and controls into one cohesive document [the downtown plan] that addresses most environmental concerns. For the first time, we see the sum of environmental concerns given consideration equal to economic development."

The downtown plan also deals with open space, transit, housing, and seismic safety, but doesn't touch on perhaps the city's greatest undeveloped resource, the waterfront. From the perspective of his office on one of the piers, William Turnbull talks about his wish for the next 25 years of development.

"The bay was an early image of the city," he says, "but, in the course of developing water commerce in the 1880s through the turn of the century, the population lost contact with the water. Now, as shipping industries relocate elsewhere, the water's edge becomes a marvelous resource in the Olmsted tradition. Olmsted took a piece of New York and claimed it as Central park for the population. Our waterfront could be really special, a linear park at the foot of the city from Fisherman's Wharf to the Bay Bridge, with the Ferry Building the historical jewel in the middle of the setting." \Box



c Peter Aaron/ESTO



c Peter Aaron/ESTO

Public Perceptions of Recent Projects

Berkeley class conducts evaluations of five buildings and spaces. By Kathryn H. Anthony

n Franciscans are unusually conscious their physical environment, some say the point of chauvinism. So in the city's eent surge of downtown growth each w development has been carefully scruized and often rigorously debated, espelly in the local press and the architecal community.

What has been missing is any systemc effort to determine what the everyy person on the street thinks of these w buildings and spaces. Do those who e and visit them feel that their impact the city has been positive or negative? During two recent summers, I asked students at the University of Califorat Berkeley to find some answers. They re enrolled in my course, "Social and ltural Factors in Architectural and ban Design." Their task was to select e site from a list of major new San ancisco design projects; to review the ailable literature about the site, includprofessional architectural criticism; to erview the project architect if possi-; to observe user behavior for at least hours in and around the site; and to erview a minimum of 50 users about ir opinions of the project. Some went ll beyond the minimum, observing 30 urs of behavior and surveying over 100 ers. Some students also interviewed staff d management. My teaching assistants d I carefully monitored all phases of research. The following are some of things that we learned:

Levi Strauss Plaza by Lawrence Halprin he anchor of the new world headquars of the garmentmaker Levi Strauss. The za sits next to a set of low, terraced

Anthony is assistant professor of architure and of housing research and develment at the University of Illinois at bana-Champaign. She thanks the 28 dents who worked on the project. red brick buildings by Hellmuth, Obata & Kassabaum. Over half of the 11-acre site was given over to open space, adjoined in places by shops, restaurants, and other facilities.

Almost everyone we interviewed was highly satisfied with Levi's Plaza. Among their reasons: "It has a kind of friendly atmosphere, different from the hustle and bustle of the nearby Financial District." "It provides conveniences for people compared to the conditions about 10 years ago, when junky buildings occupied this land. The plaza has changed the environment drastically into a beautiful and secure place."

Most users came from nearby offices, three blocks away or closer. Only a small percentage of users were from the Levi Strauss complex itself. Most visit the plaza to have lunch, soak up some sunshine (at a premium in downtown San Francisco), to read, and to watch people. The majority of people surveyed visited the plaza several times a week.

A major design decision at Levi's Plaza was to separate the open space into two distinct areas-a "hard" and a "soft" plaza, each with a major fountain. Through the fountains, the stream, and the lush greenery of the soft plaza, the designer intended to create "a Sierra setting in the heart of the city." Most people preferred the east ("soft") to the west ("hard") plaza, citing the contoured landscape and the trees as their favorite features. They praised the fountains at each site. While using the plaza, most people felt relaxed, happy, and unrestricted. They seemed to appreciate the designer's desire to add a touch of rusticity to the urban fabric.

Across page: top, the 'soft' space at Levi's; bottom, the 'hard' court. Below, Levi's against Telegraph Hill. Above, a glimpse of Neiman-Marcus from Union Square.





Neiman-Marcus department store faces a corner of the stately center of San Francisco's thriving shopping district, Union Square. This controversial building features a rotunda and neoclassical stained glass dome preserved from the original City of Paris department store built in 1908.

Our study indicated that people have a negative opinion of the building and that it is neither perceived nor used in the way the architect intended. Most of those interviewed felt that the building did not fit into Union Square as a whole, primarily because it was too different from its neighbors. "It's too flat and cardboardy," said one respondent. Another commented, "It's too trendy. Like current fashion, it's trying to be 'new wave." Most people disliked the building facade. As one put it, "I hate the checkerboard. Why can't they make a building pretty anymore?"

No one was able to understand what architect Philip Johnson, FAIA, was trying to achieve in his design. Apparently one of the architect's intentions, through his box-like shape and geometric-patterned cladding of two shades of pink granite tile, was to simulate a gift box from Neiman-Marcus to the city of San Francisco. None of our respondents caught the image. Instead, they compared it to "a pair of argyle socks," or "a clown's costume." Everyone enjoyed the old rotunda, but most felt it had been poorly integrated into the design. "It looks like a grand compromise," said one user. "Seems like tokenism," said another.





Others complained, "The building should have been designed with the rotunda in mind, rather than simply attaching a building to it"; "the rotunda looks like a caged animal." We also found that people rarely stopped to look at display windows, probably because they are very dark. Three small display windows at eye level were viewed most often, but usually by people who had just left the store.

While most people praised the architect for locating the main entryway on the diagonal facing Union Square, they found that the front doors were too heavy and difficult to operate, necessitating the hiring of a doorman. The narrow front entrance created additional difficulties. As one woman commented, "There are too many small doors and they all open out onto the sidewalk, so it seems crowded going in." Two side entrances along Geary



Top, the corner of Neiman-Marcus with caged rotunda from its predecessor building. Above, openings in side walls.

Street were rarely used. Their doors are cut into the facade and angled in such a way that they are hard to see from the street, especially when walking to the east, away from Union Square.

Justin Herman Plaza is at the foot of Market Street across from the multibuilding, mixed use Embarcadero Center. Originally designed by Lawrence Halprin & Associates, John S. Bolles & Associates, and Mario J. Ciampi, FAIA, the plaza opened in 1971. The 4.2 acres of open space include a lawn area, brickpaved plaza, a five-sided irregularly shaped pool, and sculptor Armand Vaillancourt's monumental free-form fountain that recycles 30,000 gallons of water a minute. The plaza was named after M. Justin Herman, director of the San Francisco Redevelop ment Agency in the early 1960s, one of the first to envision the Embarcadero Center.

In 1982, John Portman & Associates, architects of Embarcadero Center, created some major changes in the plaza. An outdoor theater, landscaping, and a generous number of tables and chairs were added, creating a European-style open space like no other in the city. Architect William Turnbull, FAIA, was inspired by images of 19th century bandstands wher designing the Plaza Theater pavillion, a simple latticed cornice resting on sonotube columns. A glass skylight sits atop the cornice. Local and traveling groups perform here seven days a week.

In addition to the standard techniques we also examined Justin Herman Plaza using the criteria developed by William Whyte in his immensely valuable book and film, "The Social Life of Small Urban Spaces." Our observations showed that overall, a slight majority of plaza users are women. On weekends, women outnumber men two to one. According to Whyte, heavy use by women often result from successful open space design.

In terms of Whyte's criteria for socially successful urban spaces, Justin Herman Plaza ranks very high, with much access to sun, fair degree of protection from win (buildings block the westerly ocean breezes), access to water, and trees. The plaza offers many opportunities for "triangulation" (a term Whyte coined to denote a stimulus that gives two people something to talk about)-with the unusual Vaillancourt fountain, entertainers on stage, and street vendors. One of the most successful aspects of the plaza is it proximity to food, as numerous small res taurants and eateries line its edge and provide a wide variety of tastes and prices

Seating is also abundant. Most people prefer to sit at the tables and chairs, and their second choice is on the steps. The fixed seating arrangements, while adequat for parties of four or fewer, caused prob lems for larger groups who were unable to sit together. Furthermore, the vast majority of people came alone or with only one other person. As a result, it wa common to see virtually every table take while many chairs remained unoccupied Unlike our British counterparts, very fe Americans are willing to ask to join strans ers. Visitors claimed their territory, and others hesitated to intrude, causing the place to feel more crowded than it reall was. Movable chairs, as Whyte suggests would be even better.

Overall, however, the space was an eno mous social success, and the recent inco poration of new design elements, like th outdoor stage, drew throngs of people. In fact, about a third of those surveyed visited the plaza more than three times







n, the plaza against the Embarcadero way and Ferry Building. Above left, fountain; right, Embarcadero Center.

k. Most stayed between a half hour and nour, and over a quarter usually spent r an hour there. Most common pases at the plaza were relaxing, eating, people-watching. Favorite features e its openness, access to the sun, and Vaillancourt fountain. In fact, almost ourists who entered the plaza headed straight toward the fountain. We saw many children climbing up and around the fountain, screaming, and having a great time.

Children were among the greatest users of the large open area in the middle of the plaza. Riding bicycles, balancing on skateboards, rollerskating, flying kites, and chasing pigeons, they brought life to this part of the plaza.

Complaints were very few. People liked the pigeons and proximity to the freeway least. Many also asked for more trees. One of architect John Portman's guiding premises in designing Embarcadero Center was that "architects need to redirect their energies toward an environmental architecture, born of human needs, rather than merely expressing the technology of our time. . . . My philosophy is that buildings should serve people, not that people should conform to the limitations of buildings." Our evaluation indicates that, generally, Portman's design at Justin Herman Plaza fulfills those goals.





Above, the bridge from the garage to the pier. Left and below, the pier itself. Acros page, clockwise: 101 California's cylindri cal, serrated tower; the atrium lobby; th lobby from outside with its plaza and sler der surrounding columns.



Pier 39, extending out into the bay, has become a major hub for Fisherman's Wharf area tourists. Designed by Walker Moody, AIA, it contains some 140 specialty shops, boutiques, and restaurants, a family entertainment center, a 350-berth marina, and a bay cruise service.

The goal of developer Warren Simmons at Pier 39 was to provide a popular restaurant, shopping, and entertainment complex for all of Northern California. In fact, we found the vast majority of our sample to be local Bay Area residents. Approximately 30,000 visitors a day come to the site.

Most of our respondents drove to Pier 39. About half were here for the first

time. The most compelling attractions for them were the picturesque views and the shops. Complaints centered around the crowds, heavy traffic, and strong winds. Some disliked the carousel and its "circuslike atmosphere." Almost all enjoyed their visit to the pier.

Observations revealed that on the upper level, the western portion of the structure was well patronized, while the eastern side had very few people. The pedestrian bridge, connecting the parking garage with the pier, drops people off on the west side. The east side is only indirectly accessible from a secondary walkway. We also noticed that paths on the west side were much more worn, needing repair. The pedestrian bridge itself has become an attraction, and, as one of our interviewees put it, a "romantic spot for viewing the city." A few elderly people praised the bridge as a convenient way to avoid steps, which would have been difficult to maneuver.

101 California Street is a glittering 48-story tower developed by Gerald Hine and designed by Philip Johnson and Joh Burgee, FAIA. The tower is a cylinder, notched to provide more corner offices. At its base are a blocky concrete subsidiar structure, an angular plaza, and a glazed seven-story atrium lobby.

Our focus was largely on use of the atrium. Most people stayed in it for unde



o minutes. Many searched for a seat, ald find none, and instead leaned against glass walls for support or sat awkrdly on the planters, which were not igned for sitting. Two-thirds of our samliked the lobby, mainly because of its at and airy quality and its shape. Among ir comments, "I think the architect did untastic job—very free-looking and fun," e glass is wonderful," "strikingly elent," "beautiful and unusual," "eyeching," and "an extension of the street ife outside brought inside."

One person's favorite aspect of the lobby s the "ability to view the weather oute." Said another, "It's a great space, an ension of the street life outside brought de."

Aost disliked features were the lobs lack of seating and its "cold" quali.e., not the "warm greenhouse" the hitects intended. "Lack of decor and granite reminds me of an Egyptian ıb," said one person. Another comited, "It resembles a mausoleum." Othcalled it "austere" and "barren." When ed why they thought the architect had igned the lobby the way he did, one pondent commented "He confused ndeur with grandiosity. He must think e's something wonderful about dwarfthe human body." Another said, "pure tetics, little function." Others com-ted more favorably: "beauty, air, and t in a city becoming crowded and c"; "the entire building seems designed rovide a spacious feeling and open-; as opposed to the very cramped and ed feeling one gets from most irises."







The Galleria at Crocker Center by Skidmore, Owings & Merrill's San Francisco office has become a major retail hub linking the city's shopping and financial districts. The center houses over 60 shops, services, and restaurants, most in the voluminous, vaulted Galleria that runs the width of a block behind the 38-story tower that is home of Crocker National Bank's Northern California headquarters. The Galleria is linked to the tower at several levels and opens onto a roof garden.

Our research at the Galleria revealed that overall its design was extremely successful. It was highly used, and people were very satisfied with it. Over a quarter of those interviewed visit the Galleria every day. Most come to shop, brouse, or eat lunch. However, portions of it, especially the roof terrace, were hard to find and virtually void of humanity during most of the day. In fact, over half our respondents were not even aware that the roof garden existed.

Although the Galleria is marketed as having a uniquely European character, influenced by the famous Galleria Vittorio Emmanuelle in Milan, most of those interviewed did not believe it had a European feel. Most shop owners and managers surveyed were pleased with the Galleria's *design but* wanted to see an improved directory system, more eateries.

Louise M. Davies Symphony Hall by SOM faced the challenge of complementing the existing neoclassical buildings of the San Francisco Civic Center—especially the 1932 Opera House and in Arthur Brown's much-admired 1916 City Hall. So our focus was on the building's success in accommodating to this demanding context. Our study found that almost all passersby like the building. Two-thirds felt it fit well into its surroundings, mainly because of its color, size, and shape. "It's not a sore thumb," said one person. "It's not the same style, but it doesn't stand out," said another.

Yet another remarked, "Considering the age of the surrounding buildings, Davies seems to harmonize rather well." They were most highly impressed by the generous amounts of glass on the building facade. As one respondent put it, "The lighting at night and the glass allow you to see so much."

When asked what they liked least, the common answer was the projecting exterior balconies on the third level, although these were mentioned by only a few. Among the more bizarre images evoked by the balconies were "Mickey Mouse ears," "flying saucer fins," and "large protrusions-like corns on a toe." It also seemed that respondents over age 40 are more favorable about the building than their younger counterparts. The building has a strong identity. When we asked passersby a few blocks away for directions to the building, almost all knew where it was. Two-thirds of them used their hands to describe the building's curving form.

How do professional architectural critics compare with the public in reacting to these projects? In some cases they concur, in others they differ. For instance, critics scoffed at Pier 39, describing it with disdain. San Francisco *Chronicle's* architecture critic, Allan Temko, called it "corn, kitch, schlock, honky-tonk, dreck, schmaltz, merde . . . pseudo-Victorian junk, childish excresence . . . San Francisco Port's architectural disaster." And Above left, the Crocker Galleria is flanke by a small roof garden (Crocker tower is at top left in photo). Above, the soaring, vaulted space of the Galleria. Across page clockwise, one of Davies Hall's 'ears'; th hall behind the old Opera House; the hall curved corner facade.

yet most people interviewed seemed quite enamored with it.

While Temko's overall review of the new Levi Strauss complex was positive, his opinion of the open space was mixed He criticized the main fountain in the west plaza, citing the use of "such idiosyncrasies as deliberately imperfect piece of granite that look like quarryman's errors." He also spoke derogatorily of "pav ing circular rosette medallions that seen to have been traced from a Hallmark greeting card." No one in our study even noticed these details.

Have these contributions to San Francisco architecture been for the better or for the worse? It seems that from the public's viewpoint, for the most part, the have been positive. They have offered people some amenities-access to the waterfront, open space, and sunlight in an increasingly crowded downtown, an opportunity to live and work and be entertained virtually within the same block-which were otherwise missing. They have broadened the tax base of th city and employed more residents than before. They have helped attract resident and workers to stay in the city, even afte hours and on weekends.

In a general sense, these projects hav increased the appeal of city living, some thing that planners and architects acros the U.S. have long been trying to encou age, with irregular success.







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Man and Nature in The Napa Valley

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The architecture of the wine country. By David Littlejohn


happy conspiracy of soils and slopes, sunlight and fog, rainfall and heat, has made of a small, sheltered valley north of San Francisco the one place in North America est suited for growing grapes from which fine wines can be ade. California's Napa Valley is our nearest equivalent, in comactness, prestige, and prosperity, to the 20-mile stretch of nd on the west bank of the Gironde north of Bordeaux, begreen Margaux and St. Estephe.

Good wine grapes are grown in many parts of California—wine a multi-billion dollar industry in the state—but those grown in e Napa Valley, like those from the Medoc, almost inevitably ommand a premium price, by the ton or (once turned into ine) by the bottle. Since fine wine grapes don't travel well, ad since scrupulous vintners like to watch over every step from totstock to bottle cork, the Napa Valley has become home to ost of this country's *premier cru* wineries as well.

The vineyards of the Napa Valley are not planted, like those Bordeaux, around cut-stone chateaux, *monuments historiques* the 12th to the 19th centuries. But neither are most Northn California wineries housed in big, simple barns, or indusial warehouse-type structures—which are all one needs nowlays to shelter the wine-making process. Once airconditioning ad temperature-controlled steel fermenting tanks came in, stone alls and underground cellars were no longer essential. The niqueness of the valley's building tradition has a lot to do with e potentially profitable "romance" of high quality wine, which as led Californians in the wine country to build differently than alifornians elsewhere.

By the first California wine-grape boom, in the 1870s and 1880s he second came a hundred years later), spectacular showpiece ineries with adjoining Victorian manor houses were being built the valley proper by northern European immigrants and secnd generation San Francisco entrepreneurs. At least 20 Napa alley wineries still make use of these old wood or stone buildgs. Some are as handsome as they are unpretentious. Others, te the impressive row of mansions, chateaux, and stone celrs along Highway 29, were designed by their original owners impress as well as function. Today they serve their new vners-often conglomerate corporations-primarily as "images," estige buildings that attract tourists, house picturesque tastg rooms, and are reproduced on labels. The serious winemaking these mammoth enterprises, which may produce from 500,000 two million cases each a year, often goes on in vast, uncorated industrial plants across the road.

"Imagery" has a lot to do with what gets built in the Napa alley, today as in 1880. It is a concept one hears a great deal when talking to both winemakers and their architects. The new Napa Valley boom began in the 1970s. Between 1971 d 1981, Napa County acreage planted for wine grapes grew om 15,000 to 27,000; the value of a prime vineyard acre rose om \$5,000 to an absurd, unprofitable high of \$30,000. There ere 30 wineries in the county in 1971; there are now more an 130. A trade that had been dominated since the end of ohibition by a handful of establishments suddenly found itself vided among dozens of new entrants, many of them "boutique neries" producing no more than 10 or 20 thousand cases a ar. Following the lead of postwar pioneers like J. D. Zellerch and Robert Mondavi, they concentrated on quality, techlogy, and finesse to such a degree that many of their wines ded up costing \$10 or more a bottle. A few began to beat eir French equivalents in blind tastings.

With the sudden growth in American quality-consciousness garding domestic wines came the need for new "chateaux" Napa and Sonoma counties, to house the operations and the ners, and give each winery a distinctive image in this now

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frantically crowded field. At the same time, there came waves of California home-seekers pushing north from the Bay Area; second-home builders, attracted by new chic of an old rural landscape; and tourists, in search of free tastings and the fantasy of "Falcon Crest," a television series set in the Napa Valley. For them, investors built new inns and auberges, gutted old stone and brick wineries for boutique complexes and *nouvelle cuisine* restaurants.

Tour buses and cars now clog Highway 29 all summer and every weekend. Non-winery businesses to serve the tourists have opened all over the valley, not always with happy architectural results. "We get cuter and cuter," complained the mayor of St. Helena. Most new tourist accommodation has been frankly dreadful, the same ersatz Tudor or upscale French mansard or mock Normandy village that tasteless schlockmeisters put up in Anaheim or on the outskirts of Nashville.

Like television producers, tourists, market analysts, San Francisco society, European winemakers, and international chefs, *premier grand cru* architects are, in increasing numbers, discovering the Napa Valley.

The phenomenon is not altogether new. The physical attractions of the valley and its nearness to San Francisco led a number of city-dwellers to commission vacation homes there in the 1950s from Bay Region masters like William Wurster and Gardner Dailey. Two of Dailey's former associates, Charles Porter and Robert Steinwedell, were chosen in 1956 by J. D. Zellerbach, the San Francisco industrialist and U.S. ambassador to Italy, when he decided to devote a substantial part of his fortune and his remaining years to building a small model winery in Sonoma County. Steep-roofed and stone-walled, it ended up looking like the centerpiece of historic Clos Vougeot, in Burgundy. The idea of building an imitation-old, California-French winery has retained its appeal, as witness Jordan Vineyard and Winery (vaguely 19th century Bordelais, 1976) in Alexander Valley: Spring Mountain Winery (Disneyland French Empire, 1974-79), in the foothills west of St. Helena; and the jokey castle facade of tiny Chateau Boswell (1982) on the Silverado Trail.

On preceeding spread, Sterling Vineyards' Mykonos-inspired winery and its commanding view of Napa Valley. Opposite page, Spring Mountain mansion on the late-19th century Villa Miravalle estate, where location filming is done for the weekly television series 'Falcon Crest.' The house required extensive restoration in the 1970s, when the chateau-style winery, below, was added.





Photographs by Allen Freeman

tone chateaux and a variety of new styles.

A more significant step architecturally was taken in 1966, when obert Mondavi commissioned Cliff May of Los Angeles to esign a large new winery, which he wanted to appear at once omantic and progressive. Mondavi, who had admired May's bacious, California ranch-style headquarters for *Sunset* magane in Menlo Park, willingly accepted the designer's Southern alifornian motifs and materials, however alien they might seem a Napa Valley. The buildings were rough-plastered, heavily eamed, roofed and floored with tile, and fitted out with Spanish tifacts, to complete the image of a 300,000-case winery dressed a Ramona's hacienda.

This image was essentially new to the valley, which had no banish missions or haciendas to "recall." But as a canny scheme opersuade the wine-buying world that Robert Mondavi's wines ere as stylish and inviting as his buildings, it has served its wher well. "The extra cost adds to the image," Mondavi says, which in the long run adds to the profits. The buyer begins tinking you excel in everything, which allows you to sell your ine at a higher price."

Large-scale winery design in Napa and Sonoma counties for the next 17 years was dominated by Keith & Associates of Santa osa. Richard Keith, a structural engineer from Chicago forerly with the Bechtel Corporation, hired staff architects as art of a 40-man office, mastered the specialized intricacies of uality wine production (he owned a large vineyard himself), and offered his clients comprehensive service from site selecon to equipment design. Uncommitted to any particular style, e and his architects could give a winery any image.

Among the more notable of the firm's dozen or more winery esigns is a large split-open, three-sided pyramid for Chappellet ineyards (1969), sheathed in Cor-Ten steel and partly covered ith earth. Its 50-foot-high interior space feels like that of a odern redwood and glass cathedral.

After Keith's retirement in 1983, his practice was taken over former employees Andrew Hall and Scott Bartley, both regtered architects, who continue to work on "romantic," stoneced concrete shells for state-of-the-art wineries like Silverado and Chateau Michel, recent ventures, respectively, of the Disney mily and a Swiss banker.

John Marsh Davis of Sausalito is credited with two of the ore spectacular, Bay Region-styled redwood "statements" in e valley: Joseph Phelps and the first Souverain (now Rutherford ill) wineries, as well as the imposing "new" Souverain Winery Sonoma County to the north, all built in the 1970s. All three ake extravagant use of wood, "craftsman" style joinery, and alifornia-vernacular imagery. The splendid barn roofs he esigned for Joseph Phelps (originally the building contractor r the Souverain wineries, who now make some of the valley's est wine) are penetrated by a wooden arbor on the scale of a eeway on-ramp, made of timbers recycled from an old railay bridge. There is a trellised entrance gate on the same scale. omestic "Marin County" detailing like this, multiplied to garintuan size, is one design solution the winery image problem spires in residential architects.

Icing page, two Napa Valley oldtimers: the rustic, graystone hristian Brothers, above, and Inglenook, whose traditional ain building is now a visitors' center. This page: top and center, obert Mondavi's 'Spanish mission' by Cliff May, and right, the Irn profiled Rutherford Hill winery by John Marsh Davis.











Bay Region forms and a notable restoration.

Not all large-scale wineries in the North Coast work so hard at masking the quasi-industrial nature of the winemaking process. A few (Louis M. Martini, the valley-floor factory additions of Christian Brothers and Beringer) could be making shoes or silicon chips, for all the messages given off by their blank-walled exteriors. Several 19th century foundations, like Charles Krug, have been expanded into blind-faced concrete or metal sheds located behind the original stone *caves* one sees on their labels. Cuvaison Winery enfronts the Silverado Trail with a romantic building of Spanish arches and roof tiles, wrought iron, and stained glass windows; directly behind it looms undecorated reality, all concrete and steel.

An interesting contemporary attempt to sweeten and partially hide a mammoth processing plant is that of Domaine Chandon at Yountville (ROMA Architects, 1978), the first entry of French wine money into our fertile fields. This giant plant, roofed by modern barrel vaults, is partially masked by some wonderfully "natural" landscaping and long rubble-masonry walls made of stones gathered on the site. Chandon, like Mondavi, had its new headquarters consciously designed for tourist impact and on-site sales, with a bridge-and-tunnel-vault approach, a handsome indoor/outdoor restaurant, and a theatrical elegance the architects had hoped would evoke the French owner's traditional and costly *methode champenoise*. A more "honest," on the whole a more successful building (in a far less attractive landscape), is Craig Roland's and Richard Keith's Windsor-Sonoma Winery near Healdsburg (1970)—the most handsomely forthright solution I have seen to the large-scale "tourist winery" plant.

The architectural and symbolic significance of Sterling Vineyards (1971-72) to the Napa Valley cannot be overemphasized. It was founded by Peter Newton, a British paper manufacturer based in San Francisco. Like many wealthy newcomers to the valley, Newton was determined to make exemplary wine. But he was also extremely alert to the wine-market value of tourism and spectacle, and unrestricted by old valley ties. He and his associates concluded that an unforgettable winery *building* was the surest way to introduce their new label.

Dissatisfied with an original Bay Region-style scheme designed by Anshen & Allen, and impressed by a *Country Life* feature on Mykonos, Newton sent Martin Waterfield–vice president for marketing at his paper company–off to the Aegean to take pictures and bring back ideas.

The result, still attributed to Waterfield on a ceramic plaque at the entrance, does indeed resemble the Greek hilltop monastery and is utterly unlike anything else in the valley. Tourists reach the lower hill from a parking lot via cable-supported yellow gondolas, then follow a self-guiding tour around the white monastery-winery, ending up in an octagonal, skylit tasting room (designed by William Turnbull Jr., FAIA) on the upper hill. The landscaping is perfection, the valley views are from a dream; many of the interior spaces and details are singularly beautiful. A thick, simple bell-tower arch motif, repeated often, helps to unify the rambling, soft edged, rough-plastered structures, so intricate it is hard to believe that an amateur designed them. Slit windows, dark wood balconies, a "secret" courtyard, 17th century church bells, stained glass, and steep exterior staircases help maintain the fantasy of a stylized Aegean island monastery, built around the stainless steel tanks and out-of-sight industrial activity of a \$2 million, 100,000-case winery.





Opposite page, two in redwood: above, William Turnbull's winery or Jack and Doris Cakebread on the valley floor, and below, the nodest hillside Smith-Madrone winery by Ray Rector. This page: op, the restored 1886 Trefethen winery and, above, the arrestng presence of Sterling as seen from the shank of the valley.

Sterling was a daring, even defiant gesture, and it still offends hany native Californians. It looks down on the green Napa Valey like a white fortress descended from another world. But one hevitably takes visitors there—not for the wine but for the view, he tour, the unforgettable landscape-and-architecture experince. Newton and his friends sold Sterling in 1977 to Coca-Cola, who in turn sold it to Seagram. Unfortunately, the new owners ave added to the complex rather crudely.

Turnbull himself has been a winemaker in Napa Valley (he one of at least five architects and designers involved in the ade there) since 1977, in partnership with Reverdy Johnson, ho owns a famous MLTW house at the Sea Ranch. Both of urnbull's efforts in the valley proper are located behind old hite wooden houses just off Highway 29. For the Johnsonurnbull Winery, he designed a traditional wide double-roofed ("nave and aisles") barn; a defiantly interesting open-front shelter, required by the county to hide their steel fermenting tanks; and a signature eaveless shed at right angles to these. For Jack and Doris Cakebread up the road, he designed another "classic California" barn, which has gradually extended out into the vineyards. It is now cross-gabled over the high steel fermenting tanks; the roof was built over them. The beautiful crossing is crowned with a dramatic triangular light tower. The fading, darkbordered redwood walls and roof pitches recall some of Turnbull's Sea Ranch buildings (just a county away) in their union of elegance and rusticity.

Ray Rector, a local designer, is responsible for two of the handsomer recent small wineries. Silver Oak (1972), in the middle of the valley floor, is a symmetrical "dressed stone" (actually split-faced concrete block) building with a center pavilion and dormered side wings. It has satisfying proportions, sensitive door and window shapes (outlined with quarried stone), and good detailing. Without specifically trying, it looks somehow medieval and monastic. Rector's Smith-Madrone Winery (1974), three miles up the Spring Mountain Road, is a little jewel of a design, redwood on a basalt block base, with stepped-up sod tray roofs. Built by the owners over a period of years, it is one of the few interesting winery designs I've seen totally independent of *any* archetype or "recall." Like those of 20 other Napa Valley wineries, the building's image serves as the winemakers' label.

When the owners of the 600-acre Trefethen Vineyards decided to make wine as well as grow grapes in 1973, they elected to use the fine, three-story wooden winery building (1886) on their property, altering it as little as possible—in fact "restoring back" things like the original vent cupola. Despite some notable inconveniences—they must forklift all barrels up to the second story doors, then maneuver them up ramps and around closely spaced posts—the old building works well for them. It is a joy to move under and around its intricate wood framing. In expanding their facility in 1982, the Trefethens moved part of their operations into a second cross-gabled barn (designed by the owners and their winemaker, with architect Tim Faherty) that genially matches the rooflines, ceiling slopes, colors (rosy orange with brown trim), doors, and window spacing of the original.











Buildings that let the landscape dominate.

But nothing I have seen in the Napa Valley is as original, as provocative, or as beautiful as the new winery, house, and gardens designed by Peter and Su Hua Newton for themselves (with some friendly advice from William Turnbull and T. Y. Lin). Almost immediately after selling Sterling Vineyards in 1977, they found and purchased 560 wild hillside acres of land in the Spring Mountain region west of St. Helena and began the project of designing and building another "perfect" winegrower's estate. Their earth-moving and terracing efforts were costly and heroic; by means of clearing and reshaping mountains, and installing complex irrigation and drainage networks, they have constructed a magnificent sequence of 10 small gardens that might recall Sissinghurst or Bodnant, except that the first formal boxhedged rose parterre was built atop the wine-aging cellar-thereby cooling it in the classic underground fashion-and the rising sequence concludes with a raked-gravel and rock meditation garden, like Ryoanji in Kyoto, about which the Newton's hexagonal house is built.

One thinks of the estate in landscape and garden terms first, because that is what the Newtons did; having made their assertive architectural "statement" at Sterling, they tried here for something more self-effacing, in which land and plants were allowed to dominate. Most portions of the winery complex that are not underground are covered with fine cedar lattice, as is much of the house; the steel fermenting tanks, rising above the parterre, are wrapped around with a domed and open-decked cedar pavilion (the winery's label-image).

The house, further up the mountainside, is both Chinese (like Mrs. Newton, who essentially designed it) and timeless: An opensided hollow hexagon in plan, all rooms face the Zen garden from one side, the hillside views from the other. Wisteria is to grow from a railing that edges the entire flat roofline, further tying the house to the landscape. Inside, hexagonal windows, moon-doors, and cloverleaf-shaped openings are carved and disposed with astonishing finesse. Minute details of light, texture, orientation, and finish have received close attention.

If there is a lesson to be learned from all this, it is obviously not that there is a "Napa Valley style" that must be admired and followed. Despite a decent working texture of sound and solid buildings (wood barns, stone cellars, old houses, winery buildings of various shapes), an assertive European-American eclecticism has been the rule here for the last 100 years—partly because people think it helps sell wine, which has esthetic, sensuous, and Old World connotations of its own. But most of the best new wineries, houses, inns, and restaurants in Napa Valley do make an effort to "fit in"—while realizing both that there are many ways to do it, and that, as Robert Mondavi has said, "If we worried too much about 'respecting the Valley tradition,' we'd still be making rough, crude old California wines." \Box

Peter and Su Hua Newton's new house and winery are dramatically sited in the terraced hills west of the town of St. Helena. The house, top and far left, is a hollowed hexagon in plan centered on a Zen garden. Left, the lattice-covered winery.



The Greening of High Tech in Silicon Valley

Agriculture is displaced by the 'transistor culture.' By Reyner Banham For those too impoverished to land at San Jose Municipal by private Learjet, the next most up-market way of arriving in Silicon Valley is by Interstate 280, which used to be labeled "world's most beautiful freeway," which it still is for much of its length. Coming south, after Sand Hill Road, the highway passes clear over a building that could hardly be bettered as a welcome to the land of High Technology: the Stanford Linear Accelerator, a single room nearly two miles long.

One is not strictly in the valley at this point, but the next intersection—Page Mill Road—leads one over a ridge to the east, crowned by radio-telescope dishes, and on its farther slope cluster some of the most hallowed names in commercially applied science, from Hewlett Packard onwards. The architectural mood here is fair warning of what is to come throughout the rest of the valley: gardenesque, collegiate, cultured, and strongly flavored of the late '60s. MBT Associates' buildings for Syntex, for

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tance, are lost behind trees and greenery, garnished with modsculpture, and look like nothing so much as the campus of ne small California college. Hellmuth, Obata & Kassabaum's rox building, across the other side of Hillview Avenue, by const, is a large, upstanding terraced block, but with greenery wing its roofs and spilling over the parapets.

The environmental intentions are the same, really: fit settings a work force well-provided with Ph.D.s, Porsches, and the pw-how to rule the world. Nice work if you can get it, someies *very* nice indeed; farther down Page Mill on the left, MBT's a Corporation presents to the street a sober facade of brick leling carried in exposed steel framing. At the back the same om looks on terraces that run down into an exquisitely who'scroquet, almost Palladian vision made by simply tidying up remains of the orchards that once grew all around and keepthe lawns mowed.

This may be entirely appropriate, for we are at the gates of t original nursery-garden from which all transistor culture sprung—the Stanford campus. Indeed, a block or so away he west and on what was Stanford property stands what may Left, white roof of the Stanford Linear Accelerator stretches across valley floor. Top, HOK's Xerox building with Stanford's Hoover Tower in distance; middle, the rear lawn of MBT's Alza Corporation; above, Erich Mendelsohn's Varian Associates.

be the earliest surviving structure built for the electronics industry: Behind the second parking lot on Hansen Way is a boring structure with an irredeemably '50s-ish wavy canopy over its entrance—the first Varian Associates building, by the great Erich Mendelsohn, no less. I was going to say that he was the only major architect to leave his mark on the area, but that would be to overlook not only Coolidge's stolidly Richardsonian main quadrangle on the campus, but also the delicious hexagonplan Hanna house of 1937 by Frank Lloyd Wright, over the back of the campus and none too easy to visit, even though it belongs to the university.

While we are within the charmed circumstances of the campus, however, there is another building here, almost completely forgotten but crucially important in the architecture of hightech. Now used by the campus employees' credit union, the pro-











'The valley was here long before the chips.'

totype structure of the SCSD system, by Ezra Ehrenkrantz, still sits there, Miesian, highly serviced, neat, sober. The very epitome of '60s modernism, it is the admitted source of most of what the likes of Norman Foster and Richard Rogers, to name only two, were to stun the world with in the '70s. And it still looks as good as it did when I, and they, first set eyes on it.

This, however, is not "the real Silicon Valley." Nothing quite like this aloof elegance and elitism will be seen again in almost 60 miles of valley, until one gets to the IBM software facility (MBT again) at Santa Teresa in the far south. In its own nasty way, however, the ancient Spanish Camino Real, which crosses the foot of the campus and then continues to commercialized infinity in either direction, is more like the "real" valley, an endless strip of all the things strips are made of anywhere in the U.S.: fast food outlets, professional buildings, filling stations, antique boutiques, dental and medical centers, mortuaries, flower stores, sofa-bed outlets, print-shops, ice cream parlors, drive-up banks. What's interesting now about the Camino is its air of being left over from the first phase of California modernization, long before silicon chips, and every now and again the old modern and new modern confront one another-a car wash with its butterfly roof suspended from slanted, tapered, Googie-style legs that are pure '50s, will look across the ancient high road at a faceted black-glass rental office complex set in standard presstype landscaping. And, already, the car wash is history.

For the valley was here long before the chips. Santa Clara county was the richest and most productive agricultural land in the world. From just after the Yankees moved in to ranch the flat valley-bottom in the 1860s until the day before yesterday, it seems, this was farmed and overfarmed. Get a bit off the beaten track, and pockets of the older valley can still be seen: ruined orchards, pretty little framed farmhouses trellised around with vines, an occasional vast greenhouse packed solid with chrysanthemums, old water tanks still balanced on precarious quadrupods of wooden legs. That earlier valley lives, paradoxically but most vividly, in the obituary columns of the local papers, under headlines like "Richard Rodriguez, Rancher," or "Carmine (Chuck) Montero, Orchardist," and some of those Hispanic or Italian family names run right through from the pastoral past to the world of present-day real estate; the same land, different crops!

Literally the same land; U.S. Agriculture Department maps show that the present built-up area corresponds almost exactly to what was generally deemed the best agricultural land, of whicl only a stubby green "toe" protrudes to the far north of the valley, hard against the salt pans at the edge of the bay. And even that is going fast; the graders are flattening the orchards, bulldozers are knocking over the last farmhouses, random pockets of shade trees may mark the sites of lost farms, but not for long. Nevertheless this older culture has left some worthy monuments however shabbily they may have been treated since.

The best and most specifically agricultural is the California Growers and Canners office block in Sunnyvale, probably the finest nondomestic design ever to come from the drawing board of William Wurster, a building known to all fans of modern architecture in the '50s, thanks to widespread publication, but now slashed across by a railroad overpass that rises on a bruta diagonal against its redwood-boarded facade, within inches of the pioneering sunshades over its long, horizontal window strips

This page, from top: SCSD system prototype by Ezra Ehrenkran at Stanford; '50s car wash on the valley's El Camino Real strip highway; William Wurster's now vacant California Growers an Canners building, hemned in by a railroad overpass; and W. E Week's old Campbell high school, being made into a shopping complex. Opposite: IBM at Santa Teresa by MBT and dirigibl hangar at Moffett Field.



Sic transit gloria Vallechipensis-other holdouts are more likely be schools than churches, especially those by the incredibly lustrious William H. Weeks, the architect of whom it was d that "practically every city and town in Northern Califora claimed one or more buildings which he had designed." The nools of his later practice in the '20s were sensible, workae, and in a variety of catalog styles, mostly Hispanic or aux-Artsical. The best, to my mind, in a sunny, World's-Fairish ssical mode, survives in Campbell, and survives because it is w in process of (fairly sympathetic) conversion into the inevble shop/office complex, a recycling maneuver first worked t, hereabouts, in Los Gatos, a pocket of excruciating genelism that this valley tour will have to reach sooner or later. Yet the greatest, in extent and majesty, of all the survivals of at older, less gussied-up valley, is a veritable temple of high chnology, a monument so vast that is can be seen from even oderate hills as much as 30 miles away. It is the servicing hangar ilt by the U.S. Navy for its Akron-class dirigible airships in e '20s, sitting like a corrugated-metal mountain range on e flatlands of Moffett Field, 700 feet long and I forget how sh but Cesar Pelli's "Blue Whale" in Los Angeles would easfit inside it. The apsidal ends are designed to split and roll ck as giant clamshell doors and are opened to the public every ar on Armed Forces Day, and ordinary sized mortals like you d I can gawk at the spectacle of full-sized, passenger-carrying





San Jose: from marketplace to metropolis.

hot-air balloons gently rising and falling within its vast, calm, and elegantly structured interior. Best of all, it has just received an extremely stylish exterior paint job in white and gray that makes it look better than ever. If you are within a hundred miles of it, see it!

Once it has been seen, however, the valley looks awfully flat, and its characteristic architecture seems almost pathologically modest and close to the ground. Some vertical relief is available, fortunately, as one approaches San Jose, the "downtown of Silicon Valley," as its boosters now insist. For a start, there is the 50-foot-high stainless steel statue of the Virgin Mary (satirically known as Our Lady of Non-erasable Memory) by the cut-off from Highway 101 that leads to the (ailing) Great America them park, with its multistory hotels and new office developments. These, however, are more like an introductory sampling of what is to come as the highway reaches Guadalupe Avenue, the firs promise of the "Guadalupe Corridor" leading back into the cen ter of San Jose itself, down the side of the airport. One day, if all goes well, there will be a rapid transit system down the corridor; already a line of seven-to-ten-story cliché-modern office towers, all glass and angles, has begun to erupt along streets with such names as Gateway Center and Technology Drive. Like the proposed Museum of High Technology and the towers of the new civic center, they are part of San Jose's erratic 25-year



gress from major agricultural marketplace to minor metropof the international commonwealth of computerism. ortunately, again San Jose has some solid survivors from the ier agricultural role to give weight and substance to its metolitan ambitions. In spite of two generations of sneers and ekers, central San Jose is a real neat city. Sure, there are nks and panhandlers and rowdy, low-rider cruises on the week-, but it is overwhelmingly Hispanic, and if it were south of border, tourists would be standing in line to photograph colorful natives. And there are other things that make chams of commerce feel nervous, no doubt, but against that must set the very handsome central plaza with its tall trees and enery and a cluster of older public and semipublic buildings





Left, Our Lady at Mission College, 50 feet tall in stainless steel. Top, downtown San Jose with new high rises, brownstone post office that is now an art museum, and silver domed St. Joseph's Cathedral. Above, the Spanish colonial civic auditorium complex, also downtown.

Rosicrucian Park in San Jose, this page and opposite above, is world headquarters of the Ancient Mystical Order Rosae Crucis. Its buildings, by Earle Lewis, son of the founder, include: right, Rose-Croix University; below, Egyptian museum; and opposite, planetarium and science museum. Opposite below, the Winchester House of Mystery, also in San Jose.







iental-Egyptian exotica and a mystery house.

t includes a resounding neoclassical Catholic cathedral, a e old Richardsonian post office that is now the art museum, Hispanic-style civic auditorium, and, unexpectedly, a perning arts center by Wesley Peters and the Taliesin Fellowship reduced and improved version of the master's tedious great litorium on the Arizona State campus at Tempe. There have, also, been the usual sweeping demolitions to open parking deserts, especially between the plaza and First Street, even those could be excused a little because they have ealed a view of an almost laughably typical row of mader storefronts along First Street, in every ersatz style from s-frantic to rehab-revival, with, at the southern end of the uence, a very decent seven-story commercial block (the Paseo lding), in a modified Chicago style. And beyond the inevile belt of sleaze and sites pending redevelopment (no worse n in most other cities) there still lie acres of satisfying, treeed residential streets. Dionne Warwick's question: "Do you w the way to San Jose?" was well worth asking and still worth owing up. It could lead you to what must be the wierdest itutional buildings of international fame in the U.S., for on k Avenue just south of Naglee and opposite yet another of ek's excellent high schools is a group of ceremonial struces whose address is known to all teen-agers who ever pored r pulp magazines in the night-the world headquarters of Rosicrucian Order! They do not dissappoint; styled in vari-Oriental and Egyptian modes, well-finished and highly cold, they are everything exotic that youthful imagination could uire.

By sheer contrast, they emphasize, again, how very low-profile the most recent architecture is out in Silicon Valley beyond city limits. However good in quality, its ambitions and its flines are neither extravagant nor elevated. This is a onetwo-storied townscape, and most of its planting, though often elaborate, is equally modest. Even when buildings are silly or quaint, they still show this persistent genteelism. If, say, we were to head southward out of the valley, down Winchester Boulevard, we would see little to lift the eyes or raise the spirits, though we would see little to give offense either. Winchester is in many ways a more recent version of the Camino Real, but it takes its name from San Jose's favorite architectural curiosity: The Winchester House of Mystery, a salmagundi of Victorian detailing, genuine and phony, dating originally from the 1880s, and now a tourist attraction complete with romantic legends about its builder (the widow of the heir to the Winchester rifle fortune). But it is no Hearst Castle or Biltmore, and its modest turrets are quite difficult to see behind its trees.

And Winchester goes on like that, and on and on and on . . . full of mildly interesting incidents. Valley housing, in a great swath across to Mountain View and Palo Alto, runs the usual gamut through vertical boarded, shingled-gabled, and stucco-Spanish, all with chimneys tall enough to make Norman Shaw cheer from the grave. Nowhere is it remarkable enough to notice, however, and even the famously pioneering Bay Region tract







Silicon Valley aerial photo shows parts of San Jose and Santa Clara. Top and above, recent curiosities in Los Gatos: Villa Felice Townhomes and the shingled Toll-House restaurant and apartments. Right, Saratoga Foothill Club of 1915 by Julia Morgan.







he cautiously modern and the cozily domestic.'

uses designed for Joe Eichler by Anshen & Allen in the '50s ve now disappeared into the polite shrubbery. After a time e begins to welcome something like the honest, flashy vulrity of the Villa Felice Townhomes, with their confused Italoexican shapes and reproduction-Hollywood detailing. But by the time we are that far down Winchester, we are nost out of the valley. Entering the foothills, the boulevard s begun to develop contours and curves, and soon it will be named Santa Cruz Avenue as it becomes the main drag of s Gatos. Like Saratoga just to its north, Los Gatos has long en a cultured enclave looking over the valley; both exude air of unshakeable artsy-crafty gentility-Saratoga, for tance, has a neat little craftswomanly clubhouse by the great ia Morgan. Los Gatos may not possess anything so good, but has still become the snob end of the valley with a vengeance; e stores along Santa Cruz Avenue have mostly been boutiquid in the manner pioneered when the high school was made er into the Old Town Shopping Center, and the teen-age cruise at blocks the street on sunny Sunday afternoons gives subnce to the valley's favorite joke about Los Gatos:

High school civics teacher: "What happens on your 18th birthday? What adult privilege do you receive?" Voice from the back of the class, after a long pause: "Daddy gives you a Porsche?"

It all looks true in this hobbit-scaled townscape that seems to epitomize the studiedly modest architectural ambitions of this sprawling high-tech conurbation, this first city of the Information Age. The cozy prospect it seems to imply for us all in the computerized "telematic" future is summed up by the very last building on Santa Cruz Avenue, the Toll-House restaurant and apartments, shingled, towered, Victorianesque, and with no architectural statement to make beyond being resolutely but inoffensively quaint. And it is the last word on Silicon Valley, not only because it was completed only a year ago, but also because at that point the avenue finally peters out into Route 17, the "Kamikaze Highway" that squirms its dangerous way over the mountain and down to Monterey Bay on the other side. End to end, Silicon Valley is a celebration of the cautiously modern and the cosily domestic, the architecture of decent, educated, upwardly mobile professional people who did Modern Art 101 at college and now have Picasso posters in their Mexican-tiled bathrooms-and may soon be in a position to impose their taste on the rest of the world. \Box

Kaleidoscope





'itting a High-Tech Facility 'o Stanford's Traditions

ontinuity is the byword for architecture at Stanford Univery in Palo Alto, Calif., which turns 100 years old this November. of wanting to upstage the original quadrangle buildings by lepley, Rutan & Coolidge and landscaping by Frederick Law msted, the university has opted for an approach (see Nov. '83, ge 78) that creates a community of buildings rather than an chitectural museum. A design palette of red-tile roofs, bufflored walls, and arched walkways was established and, with riations, adhered to.

In addition to the stylistic constraints, there are process-oriented les as well. Design is very democratic, with everyone from the esident to a janitor having a voice, a task that makes each b especially difficult for the architects involved. But two new mpus structures show that it is possible to work successfully thin the various limitations.

The Center for Integrated Systems is an ultra-high-technology cility that would challenge any architect. One cannot find much gher technology than that represented by this facility; the 0,000-square-foot building cost approximately \$11 million, but e equipment inside added another \$15 million. This laborary for research into and production of silicon chips, the heart of computers, is a joint venture of Stanford University and 19 electronics and computer manufacturers.

Notes Jack R. Rominger, AIA, of Ehrlich-Rominger in Los Altos, Calif., "This facility is on the cutting edge of technology. It must speak to that without doing violence to the Stanford style." The architects, chosen because they had designed a number of facilities for nearby Silicon Valley firms, responded at first with Stanford traditional—a tile-covered hip roof—but were not satisfied, and developed a scheme that would "capture







Opposite page and above, center relates to Stanford through color and design motifs, such as arcade and arched entry. This page, top, grille has art nouveau look and provides sun control for secondfloor offices while it gives the building a signature. Sections show huge amount of space required for mechanical systems.



Allen Freeman





This page, left, view from open porch at entrance. Below, skylit interior with balcony. In plan, building resembles a computer chip. Across page, architects were required to preserve large tree outside entrance. Column capitals are painted color bands.





tanford's architectural vocabulary and marry it with a highech vocabulary," says Rominger.

The heart of the center is a 10,000-square-foot, glass-walled boratory, surrounded by a U-shaped building containing offices, assrooms, and support facilities. A huge, interstitial space above he lab as well as attics on the sides and the basement provide bace for the maze of tremendous ducts and piping necessary or an ultra-clean research environment.

The one laboratory wall exposed to the outside is intentionly given a space-age look with the giant truss supporting the iterstitial behind black glass. The remainder of the exterior is ylized Stanford, with a columned arcade and an arch at the itry that provides a transition to the skylit, but somewhat ordiary, interiors. According to architect Robert Evans, the palite is derived from Stanford colors with an ochre-colored, elasomer paint on the stucco and a reddish plum color for the trim ind metal roof.

The architect's task was not easy. The university was forced o cut the center's budget, thus removing a number of design ements—capitals on the columns and a gridded pattern on the cterior walls, for example. In addition, center officials were ot especially interested in "design," believing they could live a circus tent if they got the lab they wanted. All things condered, the center is an appropriate variation on the Stanford ieme. CARLETON KNIGHT III

Music Center at a Key Juncture On the Stanford Campus

The new Braun Music Center occupies a critical spot on the Stanford University campus. The site is at the southern edge of the amorphous White Plaza, a central, and thus often noisy, gathering place for the students. The plaza serves as a transition between the residential and the academic areas, linked by a major campus pathway, Lausen Mall, which bisects the site. There were additional parameters circumscribing the design. Major utilities are located under the mall and could not be built upon. The northsouth axis, which orients most of the main campus, shifts at the plaza's edge to southeast-northwest. Thus, solving the urban design issues was as important to the architects as creating the building.

Marquis Associates of San Francisco accomplished both with panache in a striking structure that serves many functions. It stops leakage of space from the end of the plaza and with its double-arch, covered walk creates a gateway to either the residential or academic area. Significantly for the music department, the building is able to meet its special needs with an unusual double corridor plan that both organizes the facility and effectively insulates the music practice and rehearsal rooms from outside noise. These spaces are placed in the middle, utilizing the hallways as a natural buffer. Yet, natural light filters into these interior rooms through glass-block walls and overhead skylights. The building is additionally divided by use with campus-oriented facilities—the library, rehearsal halls, and administrative spaces —on the first floor and studios and faculty offices upstairs.

Architecturally, the building is no less thoughtful. It is filled with clear and understandable references to Stanford's historic architecture—the arch, an arcade, columns, tile roof, buff color but all are cast in a distinctly modern interpretation. Inside, an indigo blue band of tile gives style to the economical block walls and is integrated with the door frames, which are the same shade.

Architect Peter Winkelstein, FAIA, who took special interest in this design (he is an accomplished musician), reports that an earlier solution had been approved by Stanford, "but it did not satisfy us. We had a nagging feeling that the building was what would satisfy them rather than the ideal solution." Fortunately for the university, the architects went back to the drawing board and came up with an ideal solution for Stanford. C.K. III





South elevation					11× 11					



Above, south facade utilizes Stanford design motifs—arch, columns, arcade, tile—to relate building to campus. Small auditorium, right, was added when funds became available after construction was completed on main building. Across page left, arched gateway links residential and academic centers. Courtyard takes advantage of California climate for outdoor concerts. Sections demonstrate noise-insulating effect of double corridor plan.









Above, north facade faces academic core, seen from bridge through gateway arch, top right. Interior of building, right, is bathed in natural light from skylights along main hallway with openings to first floor. Marquis Associates designed the custom wall sconces and furniture. Left, collection of historic violins is housed in custom, architectdesigned cases. Across page, view through music building's signature arch to White Plaza. Passageway through building is central in the two plans below.









Sports Complex with Billowing, Transluscent Fabric Roofs





This multiuse sports center in the heart of the Silicon Valley is a forerunner of last year's AIA honor award winning Carver Hawkeye Sports Arena in Iowa (see May '84, page 194). Both are collegiate sports facilities, both cleave to the landscape, and the lead architect for both was Caudill Rowlett Scott of Houston

The Thomas E. Leavey Activities Center/Harold L. Toso Pavilion complex was designed by CRS, with Albert A. Hoover & Associates of nearby Palo Alto, for the University of Santa Clara a Jesuit school in the town of Santa Clara. Whereas the CRSdesigned roof at the University of Iowa is supported by a light weight steel space truss superstructure, the double-domed Santa Clara complex has two Teflon-coated glass fiber fabric roofs supported from below by air. When completed, the Leavey center was said to be the first permanent building to incorporate an air-supported roof. The soft tops are expected to last for 20 to 30 years.

The roofs swell above concrete bases earth-bermed and densel planted, with the berms serving to reduce the apparent mass and height of the large buildings. On approach, you climb two short flights on the face of a berm, enter, and look down into the shallow crater from a running track that encircles the interior







Opposite, the main floor with bleachers retracted (left in photo). Above, handball court, running track, and landscaping on the east end of Leavey center. Left, a handball court.





Top, complex with swimming pavillion at left. Above, entrance to activities center. Opposite page, pool enclosed and open.

If your visit is during daylight hours, you first notice the qua ity of natural light in the building, a soft, even, shadowless glow—as if the roof were one, large luminaire. Behind and abov on a shelf encircling the interior just below the roof are brigh yellow ducts with air handlers aimed up and into the center o the space. This is the roof support system. Over the center of the big space is a massive, four-footed tubular structure with catwalks that serves as a fail-safe measure should the roof totall deflate, and as a support for the lighting system. Two less mas sive tubular structures, which cover elevated handball courts and the athletic offices, flank this big substructure.

00000

In everyday configuration, the Leavey center provides two adjacent basketball courts oriented east-west. For intercollegiat events, bleachers are pulled down over the east and west end of the hardwood floor and back over the handball courts to form seating for 5,000 centered on **a** single court oriented nortl south. For convocations and lectures, an additional 1,000 sea can be set up. A popular weight room is located under the ea handball court; locker rooms that serve both buildings are und the west handball court and the athletic offices.

The adjacent Toso swimming pavilion, approximately half the size of the Leavey center, is convertible: The roof is pulled aw about six months of each year. In place of a massive substruct ture to support the roof should it deflate, the pavilion has a couple of taut parallel cables supported on concrete piers.

The complex has been in use for several years, and complai are few. There is a minor circulation problem with people entering the building across the running track, the Leavey ce ter roof has on occasion leaked, the staff has outgrown its offic space, and the public address system acoustics are poor. But overall, the complex is well used and well liked by students, faculty, alumni, and the community. It takes two men only ar hour to set up seating for intercollegiate games, which are he an average of once a week. And, although daylighting was no the prime design determinant, the fact that on most days the lights are not turned on until an hour before sunset provides significant energy savings. A.F.





Julius Shulman

School Artfully Composed of War-Era Portable Classrooms





20 years the College Preparatory School occupied a small npus just a few yards over the Berkeley city line in Oakland. e buildings were old and space was tight, but this tattered iness contributed to the school's communal atmosphere. So, h the anticipation of moving the school to a new site with v facilities, headmaster Robert Baldwin explains, was the be that the new campus would preserve the sense of comnity and recall the architectural traditions of the Bay Area. Dutcher and Hanf Architects of Berkeley have achieved both as quite successfully with a result that impresses most in its ming effortless. The new campus, located in north Oakland, pears as though it was built long ago. Actually, this is partly e. The small, gabled roofed, wood-frame buildings that march the narrow site are portable surplus school buildings of the Os, the type used to accommodate the influx of shipbuilders their families during the war. At the suggestion of Donald ay, FAIA, emeritus architecture professor at the University California, Berkeley, 16 surplus buildings were purchased at 80 each. While money was raised for new construction the ldings were stored on a couple of local sites, having to be ved two or three times as leases on the storage lots expired. ring this mothballing, vandals hurled rocks through the winws and a number of the buildings were destroyed in a fire. Foday, the buildings show no sign of their itinerant misfores. Their exteriors are clad in new cedar shingles, their new idows trimmed in crisp off-white. Doors and exterior lockof dark bluish green blend well with the surrounding eucatus trees. Inside, as William Dutcher, AIA, explains, the struces were beefed up with tie rods and bracing. In many cases 22x36-foot buildings were partitioned in half creating small, ig classrooms. For the new library, however, two buildings re joined with an offset. Windows installed in the gable admit ditional light from above. The library is the only building with



Across page, top, the auditorium with its heavy timber frame, sheltering eaves, and sunny forecourt; above, one of the 1940s surplus buildings on its way through the streets of Oakland to the new campus; below, part of the campus's west phalanx of buildings, with surplus buildings supported by timber framing.









Top, interior of the auditorium (which the school's headmaster describes as a 'Mendocino barn') dominated by Douglas fir framing. View is from main stage toward auxiliary stage area and balcony. Above, portion of the east phalanx with library to right in photo. Across page, detail of the auditorium's forecourt.

its roof structure exposed, which makes it feel special. The struc ture was painted white, and fluorescent factory light fixtures have been installed upside down, along the bottom chord of the roo trusses, to bounce light down into the reading areas. A lot has been accomplished here with a minimum of means.

In section, the buildings are zoned with classrooms above and ancillary spaces below. These lower spaces are newly built, with exposed timber framing supporting the surplus buildings on top. The architect designed infill spaces between the buildings, as well as the redwood decks that ramble along, tying the complex together. All of the buildings are accessible on grade by ramps that extend the length of the campus behind each phalanx

The new auditorium at the north end of the campus recalls the area's architectural tradition. Bernard Maybeck's spirit is there in the building's robust timber frame—strong and sheltering, herculean yet intimate. The broad wooden steps serve as a comfortable forecourt, a place from which to observe and to be observed. Which brings us to the public spaces. They seem just right for this school of 250 students—small enough to preserve the sense of community, yet large enough to oblige the vigorous movement of students and faculty between classes. Headmaster Baldwin recalls the central space of the former campus in which "the encounter with other students and the faculty wa continual." The new campus faithfully replicates that quality in an unassuming way. "The buildings serve us," muses Baldwin. "instead of the other way around." MICHAEL J. CROSBIE



'Smart' Tower Entered from a Neoclassical Conservatory

William L. Pereira's new Citicorp Center in the heart of San Francisco's financial district is as much an emblem of 1980s architecture as Hugh Stubbins' New York Citicorp building was of 1970s design concerns. The latter, with slanting roof for solar collectors (which never materialized), was raised on square piers 114 feet above street level to provide an urbane indoor/outdoor meeting place cum garden. It thus made an initial break with the modernist four-square highrise box while proclaiming the possibilities of a solar esthetic and the virtues of "creating a sense of place."

Pereira's Citicorp, across the continent from Stubbins' and coming eight years later, is San Francisco's first "intelligent building," with advanced microelectronic and fiber optics technologies connecting, monitoring, and controlling its integrated communications and automation systems. The building's entrance, meanwhile, is an elegantly romantic, nostalgia-inducing, neoclassical "conservatory," formerly the Anglo and Paris National Bank building. Seating in the conservatory is under canopy-like large trees and around a central fountain; the roof is formed by three faceted skylights; the walls are white marble; and leading to the street are 27-foot-high granite archways.

Mr. Orwell, meet Miss Victoria Holt!

In an attempt to blend the romantic and futuristic, the architects lined the lobby of the 43-story tower in marble in tones reminiscent of those in the conservatory and left a 27-foot-tall portion of another historic facade to form the tower lobby's north wall. The tower itself is clad in precast concrete panels with embedded crushed Sierra granite to harmonize with nearby older buildings. Its corners are rounded to reduce apparent bulk, sloping glass at its summit creates skylighted top floor offices, and several rooms at the top have private patios. ANDREA OPPENHEIMER DEAN









High-Style Furnishings in an Industrial Environment




shop and gallery that specializes in one of a kind works by ists and architects, including contemporary European furnie and classic modern designs, is appropriately called Limn, arely used verb meaning to draw or illustrate.

A survivor of the earthquake of 1906 (although it lost its top or and roof), the landmark building originally housed a carge factory and until the mid-'50s a manufacturing plant for nd-detailed trucks. During the '60s and '70s when most of the toric buildings of Jackson Square were being converted to ops and designer showrooms and real estate prices in the area re skyrocketing, the retired owner of the truck factory mainned the building as his own private workshop.

in restoring the 5,000-square-foot space for his growing conet furniture business, architect Daniel Friedlander retained the industrial feel of the building by keeping the exposed ceiling beams, brick walls, and concrete floor. Displays were designed to play off the ceiling structures that had originally supported leather belts controlling the machines, and chairs were placed in a row on elevated shelves to mimic the belt assembly line.

The building's most interesting characteristic is the double arch pattern. A wooden, multiframed window in the left archway was replaced with glass panels set into the brickwork without a visible frame. A raised terrazzo floor was added to highlight the window display. The tympanum in the right archway was designed by Friedlander and executed by artist Kelly Burke. It is actually an acrylic painting designed to "fool the eye." Friedlander says, "It really works. Nine out of 10 people who see the mural think that it's tile." LYNN NESMITH

Architectural Offices in a Former Silverware Factory



C John Sutton



During its lifetime, which began in 1852, the building at the corner of Bryant and Zoe Streets, now part of the rough-andtumble South of Market Street neighborhood, survived several incarnations. Originally a jewelry store, it was turned into a charred ruin by the San Francisco fire. By 1912 it had been rebuilt according to the design of Nathaniel Blaisdell (chief draftsman at Clinton Day, the SOM of its day) as a factory and store for a silverware producer. One of its owners modestly described it to the Chronicle as a bazaar vending, among other things, "full size sterling silver lunch pails, silver cans of worms, made-to-order coat hangers, ladies' garters done in gold and silver." During World War II, the building was converted for airplane parts production, and later it changed hands several times until MBT Associates gave it yet another life, this time as an office building, in which the architecture firm occupies the first two floors.

To maintain the historical integrity of the four-story, 87,000square-foot building, the architects left the exterior much as they found it after cleaning it up, moving the entrance to Bryant Street where the original, pedimented loading dock had been, and replacing thousands of broken window panes.

MBT's interior transformation also capitalized on the building's basic elements—its U shape, narrow bays, operable windows, and high ceilings—all of which conspire to admit ample natural light and enough ventilation to make airconditioning unnecessary.

Where the building's central workroom atrium had been, MBT removed ancient, grimy glazing, while retaining the steel structure for visual interest. Since enclosing the space in conform-



ity with fire codes would have been very costly, it was left as an open courtyard with potted trees, a volleyball court, and parking for 26 cars beneath the building's wings. Adjacent to the court is a small, glazed solarium that is used mainly as a lunchroom and opens onto the main circulation spine, wnich, on the first two floors, serves as a gallery for displaying photographs, models, and drawings of MBT's work.

Connected by a spiral stair, the first two floors are open space except for two small conference rooms, "the typical place you take an employee to dress him or her down," says Peter Hockaday, AIA, of MBT. To bring the building up to seismic codes, the architects built in gunite shear walls between the frames, carried them down to the foundations, while often skipping bays to avoid interrupting the floor plan.

Overall the look is clean and uncluttered with ceilings containing only plumbing for HVAC ducts. Lighting is from HID uplights and Luxo-type desk lamps. All wiring is under carpet tiles for flexibility; all walls are white to amplify the reflectivity of natural lights. Furniture, designed by MBT, is elegant and functional. The spaces lack visual fussiness and noise, while high ceilings and acoustic workstation partitions make it a quiet place.

As a recent visitor to 539 Bryant Street remarked, "MBT recognized a very good building and made the most of it without trickery or trendiness." A.O.D.

Above, clockwise from top left: Bryant Street elevation, solarium, and central court with planters. Opposite, spiral stair between MBT's first and second floors and current and historical work space views. MBT designed the open landscape furniture.











© Rob Super

Sinuous Variations on an Early San Francisco Theme







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an Francisco architect Donald W. MacDonald, FAIA, describes is design for the Clay Street condominiums on Nob Hill as a reinterpretation of San Franciscan residential architecture." The owing lines, graceful curves, and undulating interiors are a nod o the exuberant architecture of James Francis Dunn, who built score or more curvaceous baroque confections around the ity in the early 1900s. One of Dunn's most famous buildings is ne Chambord Apartments, which was recently restored (see fov. '83, page 51) and is only a few blocks away from the Clay treet condominiums. MacDonald's homage to Dunn has its own Oklahoma twinge," in his words. As a student of Herb Greene, facDonald developed an appreciation for organic architectural xpression, using forms that are, as he explains, "more condutive to human movement than rectangles."

The condominiums occupy the top of a hill. Although the eighborhood is dense with buildings, the crest offers views out o the north of Coit Tower, Russian Hill, and the bay beyond. The front facade is akin to the roller coaster terrain of the city, and the building's top mirrors the crest of Clay Street. The exteor colors are similar to those of neighboring buildings. Inside the 11 units: nine one-bedroom units on the second, third, and ourth floors, and two two-bedroom units on the first floor. These rst floor units are designed with their living spaces to the rear, verlooking a private garden. The nine units above have their ving spaces up front to frame the view to the north. There is so a roof deck for the residents' use.

Although this building's many curves might suggest masonry onstruction, MacDonald proudly points out that at some 65 feet is is one of the tallest wood-frame buildings in San Francisco vith a concrete garage at ground level) and one of the last of ch constructed before the city adopted the Uniform Building ode in favor of its local code. M.J.C.





Across page, top, the condominiums' curving front facade with mustache-like reveals. Parking for the residents is on the ground level. Left top, the facade elevation as it relates to nearby row houses with its vertical division; left, living room of one of the first floor two-bedroom units, which overlooks a private garden; above, the living room of a top-floor unit, dominated by fireplace and skylight.

Condominiums that Respect a Historic Hill's Character



The Livermore Condominiums by Esherick Homsey Dodge & Davis occupy a historic neighborhood on San Francisco's Russian Hill. It was here that Joseph Worcester, one of the founders of the Bay Region architectural style, built a number of large, steeply gabled, shingle-sided houses in the late 1880s. Worcester was a Swedenborgian minister, a transplanted Bostonian who, when he built his first house in 1876 in Piedmont across the bay, completely covered the structure with shingles and used unpainted redwood for the interior. Later local architects—among them Bernard Maybeck, Willis Polk, and Charles Keeler—further developed Worcester's reverance for natural materials and the craft tradition of building.

Worcester's Russian Hill house has since disappeared, but a number of others he inspired are still standing, as are nearby houses by Polk and Julia Morgan, which are similar in spirit. This newest addition to the neighborhood revels in its unpainted shingles, gabled roofs, extended flue pipes, and a building form with setbacks and overhangs, bays and balconies. George Homsey, FAIA, points out that the concrete balustrades, ramps, and retaining walls in the neighborhood (added by Polk in the early 1900s) were emulated above the condominiums' garage entrance and in the wood balusters for the balconies.

Inside, the seven units are designed with a formal bearing. Homsey explains that the developer's intention was that these units would be for older people of the Bay Region whose families had grown and moved out of their single-family detached houses. The plan of the units recalls the character of a formal house with large, individual rooms that can be closed off. The living spaces are located on the east side (with access to balconies), offering spectacular views of the city. M.J.C.

Above, entrance side of condominiums with older house that cap tures the flavor of the neighborhood at left; across page, top, condos from the west showing neighborhood context; across page middle left, south elevation with entry court at right in photo; across page, middle right, study in one of the third floor units.











Complex Reflects Its Site's Colorful Past and Neighbors





Golden Gateway Commons by Fisher-Friedman Associates is he final phase in the 25-year transformation of seven blocks long The Embarcadero that were once the city's produce district.

Renewal began in the late 1950s with a competition sponsored by the San Francisco Redevelopment Agency, resulting in four esidential towers and adjacent two-story gabled town houses, ill set atop a three-story podium for parking and commercial pace. The architect was Wurster, Bernardi & Emmons.

But three blocks were never developed under the original plan, nd by 1975 almost \$2.5 million had been spent on design proosals that were rejected because of rising construction costs, hanges in housing demand, and objections by local residents.

It was not until Fisher-Friedman came up with a "think small" pproach that pleased both the developers and environmental roups that construction finally began on the three blocks in 977. The lowrise, mixed use development, completed in three tages at a total cost of \$80 million, encourages pedestrian cirulation and does not obstruct bay views from Telegraph Hill.

Project architect Robert Geering, FAIA, says that nearby ackson Square, the city's first historic district with buildings ating from the 1860s, provided the vernacular of brick veneer icades as well as scale and detailing. "Instead of trying to relate b the original Golden Gateway Center we sought to recall the Id warehouses of the produce market," he says.

pposite page, walled patios facing the landscaped courtyard. bove, arcade facing Sidney Walton Park and stairway to housg units. Right, sidewalk cafes along the colonnade.













The 155 condominium town houses are grouped around landscaped communal courtyards and set atop 250,000 square feet of commercial and retail space on two levels. The apartments vary in size and plan, with one, two, and three bedrooms and walled patios or private courtyards. The cores of these podiums provide parking for 540 cars. Fenestration and articulation of the houses differ from the base, but the architect used the same brick throughout and set the housing toward the street to create an integrated facade that "honors the urban site."

The base, two sides of which face Sidney Walton Park, is lined with shops opening on an arched colonnade animated by plantings and sidewalk cafes. A network of pedestrian bridges connects the project with the original '60s highrises and the rest of downtown. But the major accomplishment of Golden Gateway Commons is that it creates an enclave with intimately scaled garden spaces in the heart of the city while contributing to the urban streetscape. L.N.

Above, townhouse with views of one of the original Golden Gateway towers. Right, the Commons in relation to downtown.





The Background of the Bridges

Two famed spans raced for records in the depths of the Depression. By Michael J. Crosbie





They rose simultaneously within a few miles of each other, at times within sight of each other. Two bridges, both record breakers in their own right; the Bay Bridge being the largest in the world and the Golden Gate the longest suspension span ever attempted, its cables draped from the highest bridge towers ever raised. Through the 1930s they extended across the water in a race to be the longest of their kind, horizontal fugues in concert with an endeavor on the opposite coast—the construction of the Empire State and Chrysler buildings, each racing to be the tallest.

Today the Golden Gate and Bay bridges stand (much like the Empire State and Chrysler buildings) as marvelous testaments of imagination and fabrication, raised at the very height of the Great Depression—a time when there was little else to direct the eyes upward. To span the bay between Oakland and San Francisco was an idea that had been considered from the beginning of this century, and the growth of the two cities by the 1920s had conspired to make such a connection exigent. A bridge across the narrowest part of the bay proper would bring the two cities into close proximity, while a bridge at the bay's mouth would complete the coastal route that stretched from Canada to Mexico.

Comparing the two, the structural design of the Golden Gate Bridge is elegant simplicity, while the Bay Bridge is a potpourri of spanning technology. The Golden Gate is a suspension bridge, the greatest in the world when it was completed in May 1937. At 4,200 feet its central span is nearly three times that of the Brooklyn Bridge. Its twin towers rise 746 feet above the bay, each having nearly as much steel as all the towers in the Bay Bridge combined. When completed the Golden Gate Bridge was also the highest in terms of navigable clearance—220 feet from midspan to the water's surface. Its cables are more than a yard in diameter, each made up of more than 27,000 wires of pencil thickness. Unbound, they would loop the Equator three times.

Left, the double suspension span of the Bay Bridge, which connects it to San Francisco; below, the Bay Bridge's cantilever span to the east, heading toward Oakland.







The Bay Bridge is much longer than the Golden Gate, eight and one-half miles including its approaches. It includes two suspension bridges on its west side (the only pair in the world), each with a central span of 2,310 feet. On Yerba Buena Island, in the middle of the bay, the bridge becomes a tunnel 58 feet high and 76 feet wide. On the island's east side the bridge changes from suspension to a cantilever 1,400 feet long, the third largest when completed in November 1936. The bridge's eastern extreme is a series of trusses. Although built during hard times, the Bay Bridge was completed six months ahead of schedule, while the Golden Gate came in under budget.

Impressive structures in their own right, the two bridges also represent a proclamation of modernism's arrival in the Bay Area. The architecture of the Bay Bridge was overseen by a board of consulting architects, which included Arthur Brown, architect of San Francisco city hall and Coit tower, and the leading classicist in the region; Timothy Pflueger, described at the time as an "exponent of the modern" who had just completed a soaring, decoesque office building of undulating terra cotta at 450 Sutter Street; and John J. Donovan, who balanced between the two. The engineers had already planned to adorn the bridge's piers, anchorages, and tunnel entrances with classical motifs. Pflueger managed to persuade them, against Brown's wishes, to remove the ornament and suggested that the angles of the towers' crossbracing be increased to enhance their height.

Above, painter scaling a Bay Bridge cable with Golden Gate Bridge in distance; left, Bay Bridge's cables tied into San Francisco anchorage; across page, eerie void of mid-bay anchorage, said to have more concrete than the Empire State Building.





Meanwhile, Joseph Strauss, chief engineer for the Golden Gate, chose Irving Morrow as consulting architect, a role that most had expected Brown to play. Morrow convinced the engineers to conceal the towers' structure with faceted panels that diminished in size as the towers climbed into the heavens. He further sheathed the towers in a series of setbacks, which perceptually increased their stature. Open railings and light fixtures of structural steel added to the bridge's lightness and clean lines. Most shocking of all, Morrow insisted that the bridge be painted "international orange" (originally he had suggested gold) to contrast with the grays and blues of fog and sky. It's hard to imagine it as perfect any other way.



Left, the faceted, riveted face of the Golden Gate Bridge's south tower; above, the north tower gets a new coat of paint; right, view from the Golden Gate Bridge's south tower with Fort Point directly under the roadway, the white buildings of the Presidio, and the sprawling San Francisco communities of Richmond and Sunset.



Photographs by Jet Lowe, HAER





Jet Lowe. HAI

Left, the top of the Golden Gate Bridge's south tower, showing the saddle where the cable rests.

Jet Lowe's photographs of the Golden Gate and Bay bridges are for the Historic American Building Survey Historic American Engineering Record (HABS HAER), a division of the National Park Service, United States Department of the Interior, Washington, D.C. 20240. HABS HAER records and preserves through photographs, architectural drawings, and historic data the significant and historic architectural and engineering heritage of the U.S. □

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BOOKS

harles Moore: The Bay rea Style and Beyond

chitect: The Life and Work of Charles Moore. David Littlejohn. (Holt, Rinert & Winston, \$22.95.)

A problem with any assessment of conmporary architecture or architects is the ck of sustained and lengthy consideraon, both documentary and critical, on y single body of work or single figure. ief articles in the professional maganes generally treat, in a complimentary anner, the work while even briefer arties in the popular press cover the pernality angle. Once in a while, a figure to has been around for years, such as ilip Johnson, will get a lengthy considation in the professional press or a proe in The New Yorker, but even these ck depth. Usually, we have to wait until architect has been dead many years, th his papers in archives, before theses d books begin to appear-and even en, the treatment may be fragmentary. Perhaps there is good reason that we n't know too much about some of our rrent architectural leaders, both for their n privacy and also because it might ssuade us of their importance and their ractive features. This is an age of celebies, however, when people are known personalities and not because of the ality of their work. Some members of e architectural profession have pursued e rather intangible goal of celebrity. I doubt that Charles Moore willingly

lowed this goal, or sought a book writabout him, but equally this book is a sult of the search for recognition in the chitectural community and the fallout erefrom. The book under review is really t architectural criticism nor architecal history, but is aimed at a wider audice. Nonetheless I suspect that its major es will be within the architectural cominity. David Littlejohn, the author, is a rnalist with an architectural background o teaches at the University of Califorat Berkeley. Unfortunately, there is umber of errors, such as "Richard" rn for "Robert A.M." and the misdatof items such as gold medals and torical information.

In some ways, this book recalls the older ographies such as Charles Baldwin on inford White (1931) or Charles Moore of apparent relation) on Charles McKim (29) in that the emphasis is upon pertality. The book is long on words (338 ges of text) and short on illustrations (32 pages). Littlejohn likes to write word pictures of buildings which, while good, are far too lengthy. The lack of illustrations may send any interested reader to the picture books. Instead of the lengthy letters that pad the older biographies, the tape recorder is evident, providing some interesting interviews and an amusing record of a charrette involving the New Orleans World's Fair.

In some ways, Charles Moore would seem an ideal subject for a contemporary biological study since he had designed more than 100 completed buildings by 1982, has taught in and led important architectural schools on both coasts, and has been a leading protagonist of the shift away from machine inspired, ahistorical, abstract modernism toward an architecture that accepts history, context, and whimsy. He has coauthored several books that have been generally well received, and has been attracting national and international attention much longer than the other postmodernists with whom he is generally associated.

Moore's first buildings, houses, and cabins in partnership with Donlyn Lyndon, William Turnbull Jr., and Richard R. Whitaker Jr., appeared to be outgrowths of the Bay Area regional style of William Wurster and, farther north, of Pietro Belluschi and John Yeon. They were wooden buildings that combined Japanese delicacy with strong vernacular forms. To the careful observer, however, Moore's own house at Orinda, Calif., designed in 1961, indicated a willingness to explore historical and eclectic references, as in

Charles Moore medallion at the Piazza d'Italia fountain in New Orleans.



the baldacchino and "found" columns. Sea Ranch brought to a fitting climax Moore's regional phase and remains perhaps so far his crowning achievement. It is one of the truly important designs of the second half of the 20th century. Yet as Moore moved to the East in the later '60s and early '70s, he seemed to pursue the harsh aggressiveness exemplified by the pop supergraphics of Sea Ranch. Since then Moore has toned down the harshness, though to some observers the Piazza d' Italia may seem strident enough. But history and the value of ornament appear more of a concern, as in the Wonderwall at New Orleans. And he has shifted his level of concern from being intimately involved in all the details of a project to being an image maker and design adviser to firms scattered about the country.

This book provides many of the details of Moore's life and training as well as relationships with partners and clients. Yet Moore is so much committed to his life as an architect that there is little else. Littlejohn probes gingerly into Moore's private life, but delicacy makes the excursion futile. Moore emerges as a charming and gregarious host who cultivates a somewhat disarming amiability and shambling gentility, and yet he is fully in charge of his stage-managered facade. Criticisms do abound about his inability with details, both in buildings and in running institutions and problems with his work. What also emerges are the demands involved in Moore's quest for greatness-not simply the lack of private life and family but a life spent frequently in airplanes or airports, sleeping in different cities each night, and always on the run. It is a fascinating-and unsettling-portrait of the successful architect at midcareer.

The life of Charles Moore has certain basic interests for anyone concerned with contemporary architecture. But the real concern, ultimately, has to be the quality of the work—whether a person's existence has mattered. Moore appears from the perspective of the mid-1980s to have been most influential in a variety of ways. While his concerns can be seen as generated by both the culture and the architectural situation in which he has worked, still the way in which contemporary architecture is thought about and its appearance is in some measure due to his presence. RICHARD GUY WILSON

An author and architectural critic, Professor Wilson teaches at the University of Virginia. Books continued on page 167









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The City Observed: Los Angeles. Charles W. Moore and Peter Becker. (Random House, Vintage Books, \$7.95.)

Los Angeles is not a city that reveals itself quickly and, in trying to understand it, many people approach it with an attitude or a concept that makes cogent its apparent lack of order. There is, however, often an element of condescension and stereotyping in the effort—the implication that Los Angeles is a light place, a capital of the bizarre, a city conceived by set designers, 40 suburbs in search of a center.

In the introduction to this book, L.A. architect Charles W. Moore states very clearly the framework with which he conceptualizes the city and the book: Disneyland is "the real heart of Los Angeles," he says, the city "is a collection of theme parks." Throughout the book, the authors apply Noel Coward's witticism, "There is always something so delightfully real about what is phony here. And something so phony about what is real." Although the framework is amusing, and commendable for trying to conceive Los Angeles in Los Angeles terms rather than those of other cities, the framework is frequently wrong, and wrong in a trivializing way.

Architects are natural observers of the city, but architects, as artists, also tend to read the city for their own esthetic purposes, using it as the raw material of their imagination, and their next building. This book is a somewhat vaporous interpretation of L.A., because its authors look for what they often call the city's "magic," just as in his own architecture Moore tries to create enchantment and whimsy, and the charm of an unfolding story. Disneyland, in fact, is certainly closer to Moore's heart than to that of Los Angeles, and the guide's long passages on Disneyland-as storied environments, kinesthetic experience, and a closer juxtaposition of disparate places-establish a subtext that is more a portrait of Moore's imagination than that of the city. This is not an objective guide, but one strongly colored vision among other possible visions about Los Angeles.

A most revealing passage is one in which Moore encounters the Santa Monica house of another eminent architect, Frank Gehry. The house-made of plywood, chainlink fence, black top, concrete block, and other raw materials left raw-is another vision of Los Angeles: Pico Boulevard rather than Disneyland. Moore writes that he likes the house and Gehry: "His ordinariness, his unfinishedness, his laidbackness, and his appreciation of how things are." Nonetheless, Moore does not leave the house "as it is." Having analyzed L.A. as a series of rides through "environmental experiences," to be excontinued on page 170

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perienced "with your whole body, not just your eyes," he extends the observation into the Gehry house, saying it is "not so much a building as a ride, an experience." While some of L.A. may indeed be composed of "environmental experiences," there are places where the ride stops, and this house is one. It is a building about construction, and one that is an art object.

There are, then, aspects of Los Angeles that the authors cannot see with this vision—the landmarks of black history, union history, and L.A.'s turbulent water history, for example. When the authors do get to the occasional monument, such as the Los Angeles Public Library, they are not convincing. This is an edifying building, and walking through it is an allegory of edification (not a ride).

The authors' vision, however, is especially helpful in understanding other aspects of the city. As one of the most permissive of architectural eclectics, Moore broadens our view of the city to include the Hollywood drive-in restaurant Tiny Naylor's (recently demolished) and Ports O'Call Village—one of the first "themed" shopping centers in America.

The authors also succeed in the difficult task of establishing criteria by which to judge ordinary buildings like motels and extraordinary structures, done by folk artists. They commend certain "heartfelt" motels near Disneyland for their energy, "cheerful ingeniousness," and "seat-of-thepants imagery."

Among the book's most evocative passages are those dealing with the landscape. There are, then, advantages and disadvantages within the guide's particular framework, but perhaps the validity and structure of the book is not really one of vision but simply one of accumulated factual and descriptive detail. The book of nearly 400 dense pages is an appropriately long, nearly exhaustive, listing of notable places. There may be occasional omissions-the guide comes within a block of Michael Graves' San Juan Capistrano Library and never mentions it—but there are brilliant affirmations, such as Catalina Island, Naples, and Mulholland Drive-the rim of Los Angeles-and excellent discoveries, such as the Burbank Studios, the 25-acre natural forest of California live oaks (in Descanso Gardens), and the obscure Fellowship Park Pavilion, designed by Harwell Harris. The guide, as a guide, would survive a lack of vision, let alone Moore's specific one, on the strength of these listings.

By listing and explaining in such breadth and depth so many sites, the guide condenses them in a way the city itself does not. Los Angeles may be physically dispersed, but its history is compressed. The guide, the best now available on this city, succeeds in capturing the city's elusive impressiveness with its sheer density of information. JOSEPH GIOVANNINI

Mr. Giovannini is architecture and design writer for the New York Times.

Stones of Empire: The Buildings of the Raj. Jan Morris with Simon Winchester. (Oxford University Press, \$25.)

India! The destiny of the immense subcontinent was interwoven for more than three centuries with the ambitions of a tiny but intrepid island kingdom in the North Sea. Parts of the vast Indian landscape were the assets of a European joint stock enterprise for more than 200 of those years. But after the reciprocal horrors of the mutiny of 1857, these subject territories passed from the East India Co.'s grasp to become "the brightest jewel in the British Crown." India's uniqueness and centrality in Britain's imperial constellation was acknowledged by creation of a separate ministry in London and bestowal of the alien title of empress upon the redoubtable widow at Windsor.

continued on page 17.3



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In its most dynamic years, Jan Morris asserts, the British Empire was like a grand architectural masterpiece, "resting upon massive arcades of Christian faith, mercantile principle, and self-esteem-castellated against all comers, turreted for effect, audaciously buttressed, and crowned at the top, as other edifices might be completed with saint or angel, by the portly figure of Victoria." In India, the mingled emotions and attitudes of the empire found their truest expressions. If the methods and motives of imperialists in the great heyday betoken a vital creativity, selfassurance, and even brash courage, their myriad constructions across India embodied the essence of those qualities. Later building chronicled the loss of nerve no less faithfully. In these farflung emblems of empire—be they bungalows or palaces, railways or canals-the complex of the Raj still lives.

Morris attempts a glimpse, by topic, at the entire range of British construction in India: domestic, public, practical, spiritual, and civic. At The Club at Ooty in the cool Nigris, we can fairly smell the cigar smoke and furniture polish and hear the shuffle of servants' sandals and the laughter from the bar as we stare at the mounted mangy jackals and lists of Masters of the Ootacamund Hunt (founded 1847). Even now Morris finds it strange to discover Indians living in the hill station cottages, "so heartfelt was the emotion that built them," and one does keep an ear cocked in vain to hear the click of croquet balls from the garden or the tinkle of the upright in the drawing room.

Genteel mountain eyries may inspire poignant nostalgia in Morris, but railways prompt her enthusiastic judgment that, together with their bridges, tunnels, stations, and workshops, they were "the greatest of the imperial achievements in India," no less than "symbols of an age," and Victorians meant them to surpass the proudest monuments of Egypt, Rome, China, and the Mughals. By the 20th century, however, the same rulers who had not long before tunneled right under the Khwaja Amran Mountains to the very frontier of Afghanistan were to be seen at work on Malabar Hill in Bombay, digging a bunker with bedrooms and a kitchen for the governor-and even a watergate in the cliffside for his excellency's possible hasty retreat.

If by the end of the fifth chapter Morris's ardor for this circus of wonders cools, and she devotes only one sentence in her galloping catalog to the countless Indian post offices, her effervescence returns with the depiction of British built cities. After all, apart from sport and the English language, the export of municipalities was "the most lasting of the British imperial *continued on page 176*



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legacies"—and portraying cities, in all their bedazzling diversity, has been for years Morris's real forte.

Morris's remarkable powers of evocation rival John Buchan's celebrated ability to capture the warp and woof of a place. Her Victorian sentences (sometimes a dozen lines long), her idiosyncratic punctuation, and her florid style seem altogether appropriate to her sprawling, colorful subject. But she would surely admit to being better at ambiance than architecture. So she might almost be describing herself when she writes that for early British architects in India, "the symbolism was the thing," and the fact that they were "less than impeccable" in their professional grammar mattered little because "few of those who saw these buildings, whether indigenes or imperialists, really knew a pilaster from an architrave." Architectural terms in this book are used with more abandon than precision, and even some new coinage surfaces ("bobbles" and "Romanesque"). Journalist Simon Winchester has written the captions for his photographs, and the hazards of dual authorship are evident when, for example, the same building is described on successive pages as Gothic and French Renaissance. The volume's 234 pages are

flecked with factual errors, including enough genuine howlers, to mar our pleasure in the authors' prose and to undermine our confidence in their authority.

This book makes no pretense to creative scholarship, but it is not just pedants who will be frustrated by the lack of any footnotes (especially for the many delightful and apposite quotations) and by the deliberately tiny bibliography. Many buildings (and particular interiors), moreover, are lovingly and imaginatively described, but not illustrated. Too many of the monochrome photographs are murky, and, except for the front of the dust jacket, there is no color photography whatsoever. The volume cries out for a more generous mixture of antique prints and works of art with the modern photographs.

When Morris turns from architectural history to the broader palette of social and cultural history, her work is richly layered with anecdote and vignette, combining the broad sweep of the brush with splendidly vivid details that create an almost tangible atmosphere. Morris's description of Victorian architectural styles as "prodigies of suggestive synthesis" might well characterize the chapters of this book. While it may provide diverting entertainment for the armchair voyager, Morris's own candid appraisal is the last word: "... dear old Murray's *Handbook for Travellers*, now in its 22nd edition, continues to be, as it has been since 1859, the best practical guide to the construction of British India." ROBERT GRANT IRVING

Author of the award-winning book Indian Summer (see Sept., page 87), Professor Irving teaches at Yale University.

Letarouilly on Renaissance Rome. John Barrington Bayley. (Architectural Book Publishing Co., \$14.95.)

This interpretation of the achievement of Paul Letarouilly presents Renaissance Rome's architecture in a selection from the 639 drawings contained in his monumental works Edifices de Rome (1825-1860) and later posthumous companion volumes on St. Peter's and the Vatican. It is the work of the late John Barrington Bayley, a practicing architect and architectural historian, and is designed to advance the objectives of Classical America, Henry Hope Reed's unabashed advocacy organization whose efforts extend from the J. Paul Getty Museum at Malibu to the heritage of McKim, Mead & White in New York City, and the cottages of Newport, R.I.

In a happy (though unidentified) quotacontinued on page 178





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Books from page 176

tion, Reed has asserted, "Today the effect of Letarouilly's immense labors can be seen in every capital city." Of no capital city is this more true than the city of Washington, D.C., where a generation of Beaux-Arts architects imprinted neoclassicism upon the city's major buildings, from the Library of Congress, completed in 1897, to the Jefferson Memorial, in 1943. More significantly, I believe, was the impact of neoclassicism on the city as a work of urban design, expressed in the McMillan Commission plan of 1902, particularly the monumental core defined in the reinterpreted Mall and its pre-existing key buildings, the Capitol, the White House, and the Washington Monument. (This design effort has recently been the subject of an Occasional Paper of the George Washington University Center for Washington Area Studies, Historical Perspectives of Urban Design: Washington, D.C., 1890-1910, edited by Antoinette J. Lee, \$4.)

Bayley's present work compresses Letarouilly's 639 original drawings into 111 plates and 61 other illustrations, and interprets them by means of 61 architectural figures and additional biographical illustrations, two of which reflect Bayley's chief architectural work, his extension of the Frick Collection building. Thus we are given not only this selection of Letarouilly's splendidly clear drawings, but their significance in the work of neoclassical revival.

As here edited (with students in mind), this work should be considered a worthwhile introduction in which the spirit of the original drawings is well preserved in a limited but representative selection. Enough enthusiasm is generated, however, to lead one back to their initial presentation. FREDERICK GUTHEIM, HON. AIA

Mr. Gutheim is a Washington, D.C., critic and educator.

Views and Viewmakers of Urban America: Lithographs of Towns and Cities in the United States and Canada, Notes on the Artists and Publishers, and a Union Catalog of Their Work, 1825-1925. John W. Reps. (University of Missouri Press, \$89.50.)

The smiling faces of 19th century American cities that look out from the pages of John W. Reps' most recent contribution to their history certainly invite the examination of how and by whom these romantic visions came into being. Today, the perspective of the lens, the cartographer's art, and the social scientist's and historian's analytic approach have given these cities a colder cast. The contrast is most striking in the prairie cities to which Reps has given his closest attention in *continued on page 181*

o**ks** from page 178

h earlier works as The Forgotten ntier: Urban Planning in the Ameri-West Before 1890; Town Planning d Frontier America; and Cities of the herican West: A History of Frontier ban Planning. The resources of color roduction and the detailed scholarly alog in this sumptuous edition have en invoked by the University of Misuri Press to strengthen this documenon as never before.

Fifty-one artists have been dragged from shadows of near anonymity, along with publishers for whom they worked in s heyday of America's fascination with cities. Thirteen color plates and 90 ck and white plates comprise the visbackbone of this volume. The closely cumented text adds to this catalog a cinating and detailed account of the y artists worked. Evolving techniques ithography and the commercial aspects view-publishing add a cogent chapter ering ways to use this material in studythe history of cities. This is illusted in concrete detail in the case of lumbia, S.C. Reps has had experience publishing maps, plans, and city views l his historical awareness of the pracal aspects of the business has thus been nanced.

While the importance of this volume is t to scholars, curators, librarians, and lectors, it will be an indispensable source those concerned with the physical evolun of specific cities. Reps takes a realistic w of the accuracy of these documents, ny of which offer inflated views of city wth and prospects prompted by local l estate dealers. On the whole, he is lined to accept most of what they deibe as fact.

The analytical method developed by os, and illustrated in the case of Coibia, can be applied to almost any city which "bird's-eye views" or panoras are available. Some preliminary study uld establish the reliability of the deption. After that, a series of overlays be developed showing the main land s, building types, hotels, public build-, streets, railroads, churches, educaal institutions, and an especially resting identification of "larger-thanage" homes that define the "better s of town" and smaller dwellings that cate the working class quarters. In city of Columbia, a striking centralcommercial core emerges from this ysis. The relation between parks and better residential areas becomes clear. fundamental urban structure, aspects ban design, and the mainly neosical architecture of the city are ent.

: larger scale the relationship of towns eir underlying natural conditions is qually rewarding theme, especially in places like Montreal or Louisville, Ky.

For better than half a century, the views assembled here (and many others that are available from sources cited) can thus amplify what we know of the physical evolution of our cities, a neglected chapter in our urban history. FREDERICK GUTHEIM, HON. AIA

Managing Architectural and Engineering Practice. Weld Coxe. (Van Nostrand Reinhold, \$21.95.)

Management is a process, not just a role, says Weld Coxe in this useful guide to effective management techniques. There's no law saying a design firm owner has to be a manager, "as long as the consequences of nonmanagement are accepted." To avoid such consequences, Coxe gives alternatives to the question "manager or management?" In a straightforward and readable style, he discusses the many elements in the process of management, such as the choice of organizational structure; ways to manage professional performance, the marketing program, human resources, and finances; legal structure and ownership patterns; and the valuation of an established firm. The architect who wants the discipline that management requires might start learning about it by reading this book.

Renzo Piano: Projects and Buildings,

1964-1983. Massimo Dini. (Rizzoli, \$25.) This book documents and liberally illustrates the work of Italian architect Renzo Piano. Collaborator with Richard Rogers in the design of Centre Pompidou in Paris, Piano objects to the cultural center's having become "an object of imitation," saying that "if anything is worth copying, it is the design procedure, the scientific approach, the technical research. What its immensity concels is craftsmanship. We designed everything, right down to the smallest screw." He is convinced that "architecture must commit itself fully to technological understanding, to experimenting with instruments, and it must take the pulse of people's real needs." This conviction is revealed in his many designs, which run the gamut from a standardized hospital module in Washington, D.C., to the restoration of a 15th century abbey in Perugia, Italy.

Coop Himmelblau; Architecture Is Now; Projects, 1968-1983. Compiled by the Himmelblau Group. (Rizzoli, \$20.)

"With it," or "far out," may be American phrases that come to mind (depending upon one's bent) when one reads about the philosophical attitudes of this group of Austrian architects and studies the illustrations concerning their projects. Formed in 1968 in Vienna by Wolf Prix, Helmut Swaczinsky, and Rainer Michael Holzer, Coop Himmelblau is "more uncompromising and more consistent than perhaps any other young European avantgarde," says Frank Werner in the foreword. Aggressively opposed to postmodernism, the group itself has stated: "We are tired of seeing Palladio and other historical masks. Because we don't want architecture to exclude everything that is disquieting. We want architecture to have more. Architecture that bleeds, that exhausts, that whirls and even breaks." Most of the group's projects are unrealized, but there are some completed structures, including the Red Angel, a Viennese wine bar (1981). And the group gained acclamation in some quarters for its organization of Vienna's "Super Summer" exhibit (1976) that was called "a concept for urban change," presenting unorthodox alternatives to urban design. It's too bad that an editor did not correct some of the errors in the English translation of the German text.

Industrielkulture: Peter Behrens and the AEG, 1907-1914. Tilmann Buddensieg in collaboration with Henning Rogge, with contributions by Gabriele Heidecker, Karin Wilhelm, Sabine Bohle, and Fritz Neumeyer. (MIT Press, \$75.)

Pioneering German architect and industrial designer Peter Behrens (1868-1940) became an adviser to Allgemeine Elektricitäts-Gesselschaft (AEG), the nationwide German Electric Co., in 1907, and this book documents this productive period of his life, showing the tremendous impact of Behrens on everything from typefaces, ventilators, and ovens to workers' housing, railroad cars, and factories. The architecture and industrial designs had a significant influence upon the Bauhaus and, indeed, upon contemporary design.

Environmental Psychology in Building

Design. John Brebner. (London, Applied Science Publishers, distributed in this country by Elsevier Science Publishing Co., \$37.)

Psychologist John Brebner combines the principles of psychology (which concern behavior) with those of ergonomics (which deal with performance) in supplying a great deal of technical data for designers of the built environment. Against a background of information on human physical characteristics and psychological factors, he discusses lighting, temperature, noise, vibration, and odor. In a discussion of the workable environment, he covers such topics as traffic within buildings, elevators, and communications. He also supplies information on spatial arrangements for interpersonal interaction, and there is a section on the ergonomics of esthetics in which he discusses, among other topics, the psychological effects of color.

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Fovernment from page 51

The Small Business Administration, thich provides credit and low-interest bans to 21,500 businesses, would be bolished under the Reagan plan. The reasury Department would assume and quidate the existing loan portfolio. A umber of the SBA activities—including dvocacy, minority small business, prourement, and research—would be transerred to a new entity under the Departnent of Commerce. This is predicted to esult in a savings of \$1.4 billion in '86.

The Administration also calls for an nd to federal mass transit assistance xcept for a formula grant program proiding capital assistance that would be nanced by the earmarked penny-a-gallon asoline transit tax enacted in 1982. The oudget would be slashed by \$768 million n '86, with additional cuts planned that yould bring the total savings to \$4.2 bilon within three years. Other transportaion cuts would include the elimination of the \$574 million Amtrak subsidy.

Reagan supports a 45 percent increase n fees for visiting federal parks and ecreation areas and proposes an end to n ambitious five-year plan to refurbish he national parks.

DEATHS

George Agron, FAIA: Recognized for his work in the health care field, Agron was born in Portland, Ore., and joined the San Francisco firm of Stone, Marraccini & Petterson in 1952 after practicing in Los Angeles and Washington, D.C. He designed numerous hospitals and health facilities and led a four-year research project for the Veterans Administration. Agron retired from the firm in 1980 and died Jan. 9.

Henry M. Abbot, AIA, Columbus, Ohio Louis Allen Abramson, AIA, New York City

- George Agron, FAIA, Berkeley, Calif. Jeff Wilson Bagwell, AIA, Birmingham,
- Ala. Carl C. Bankemper, AIA, Covington, Ky. Arthur F. Bassett Jr., AIA, Grosse
- Pointe, Mich.
- J.J. Black, AIA, Houston
- James T. Canizaro, AIA, Jackson, Miss.
- Glenn E. Craft, AIA, Chicago
- Millard Donaldson, AIA, Pikesville, Md.
- David Bruce Falconer, AIA, Darien, Conn.

Rudolph A. Goldschmidt Jr., AIA, Birmingham, Ala. Claude Greiner, AIA, Hummelstown, Pa. Francis K. Hall, AIA, Macon, Ga.

- H.C. Heath, AIA, Houston
- **Robert Huston. AIA.** San Francisco
- H. Duane Jarvis, AIA, Dallas
- Robert Kliegman, AIA, Los Angeles
- James Lembo, Union, N.J.
- N.E. Lento, AIA, Centerville, Mass.
- Lee T. Loberg, AIA, San Francisco
- **Rolf Loddengaard, AIA,** New Cumberland, Pa.

D. Lusk Jr., AIA, Colorado Springs Edwin T. McCowan, AIA, Birmingham, Ala.

- G.W. Petticord Jr., AIA, Vero Beach, John's Island, Fla.
- C.I. Pitts, AIA, Spartanburg, S.C.
- C.J. Plaisance Jr., AIA, New Orleans
- Everett Rader, AIA, El Paso
- Fred Robbins, AIA, Coral Gables, Fla. Sherwin M. Rosenfeld, AIA, Buffalo
- Grove, Ill.
- Horace S. Seymour, AIA, Omaha
- Wayne Schmidt, AIA, Celina, Ohio Oscar I. Silverstone, AIA, New York City
- Abner L. Sommers, AIA, Hana Maui,
- Hawaii
- D.E. Soper, AIA, Eutis, Fla.
- James L. Terry, AIA, Peoria, Ill.

continued on page 186

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ROCK OF AGES CORP. / Architectural Granite 369 North State St., Concord, NH 03301 Call Toll-Free: 1-800-445-7050 In N.H. 1-603-224-5325 Deaths from page 185 Dan G. Tinder, Kansas City, Mo. George P. Turner, AIA, Birmingham, Ala. Charles Ward Jr., FAIA, Philadelphia Alfred Westberg, AIA, Seattle W. F. Wortham Jr., AIA, Houston Ralph L. Wyatt, AIA, Phoenix

BRIEFS

Degree Program in Lighting Designs.

Parsons School of Design has developed a masters in fine arts degree in architectural lighting design. It is the country's first advanced curriculum in illumination design, taught as an architectural/interior design discipline.

Charles Luckman Honored.

The University of Illinois has awarded its medal in architecture to Charles Luckman, FAIA, in recognition of "a lifetime of outstanding achievement and service to the profession of architecture."

Lighting Proposals Sought.

The Lighting Research Institute, a nonprofit organization that sponsors basic and applied research and development for all forms of lighting, seeks proposals for research grants. Criteria for selection of proposals for funding will be based on scientific and technical merit, risk, timing, and appropriateness. The deadline for receipt of proposals is July 15. For more information, contact Richard L. Vincent, Lighting Research Institute, 345 E. 47th St., New York, N.Y. 10017.

Design Competition.

Arizona State University and the National Endowment for the Arts are sponsoring a design competition for a campus museum and performing arts facility. April 15 is the deadline for request for the competition prospectus, and May 1 is the deadline for the submission of qualifications. Five firms will be selected and retained to develop designs for the complex. For more information, contact Carolyn P. Hoppin, AIA, Competition Design Manager, Arizona State University, Tempe, Ariz. 85287.

Juried Design Exhibition.

The Harvard Architecture Review, VII, has set an April 5 deadline for receipt of entries in an open, juried exhibition for an overnight shelter in the public space of a city. Submission may include completed shelters, drawings, photographs, in addition to a description of no more than 250 words. The exhibit at Gund Hall will run from April 13-26. For more information, contact "Making Shelter," Gund Hall, Room 323 E, 48 Quincy St., Cambridge, Mass. 02138.

Briefs continued on page 189

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Circle 77 on information card
Portfolio of Nolli Drawings.

A 19-sheet portfolio is comprised of a facsimile of the 1748 plan of Rome by Giambattista Nolli, plans of Piranesi and Bufalini, and an introductory essay by Allan Ceen. The boxed portfolio is available for \$75 from J. H. Aronson, Box 302, Highmount, N.Y. 12441.

Airport Graphics Guide.

A 316-page publication with guidelines and design criteria for developing airport signage and graphics systems is available for \$49.50 prepaid from the Air Transport Association, 1709 New York Ave. N.W., Washington, D.C. 20006.

Architectural Drawings Auction.

More than 200 original drawings from architects in 25 countries will be auctioned for the benefit of the Architects for Social Responsibility, a New York based organization whose major thrust is to call the profession's and the public's attention to the threat of nuclear war. The drawings among which are the works of Richard Meier, Ricardo Bofill, Robert Krier, and Michael Graves—will go on public exhibit at the Max Protetch Gallery, 37 West 57th St., New York City, on May 30. Bids will be accepted until June 6, when the exhibit and auction will end.

Beeby Named Yale Dean.

Chicago architect Thomas H. Beeby, AIA, has been named as the new dean of Yale University's school of architecture. Beeby, who is currently director of the school of architecture at the University of Illinois, Chicago, will assume his new post in December 1985.

Entries Sought for Western Home Awards.

April 30 is the registration deadline and May 24 the entry deadline in the biennial Western home awards, sponsored by *Sunset* magazine and AIA. Only projects completed since Jan. 1, 1981, by registered architects in Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming are eligible. For more information, contact AIA-*Sunset* Magazine, Box 2345 Menlo Park, Calif. 94025.

Design Conference.

The fifth annual Pacific Design Center Two international contract furniture symposium will explore "Transformation of Architecture: Space and Light" March 27-29 during PDC's West Week '85. Featured speakers will include James Wines, Jon Jerde, AIA, Count Guiseppe Panza di Biumo, Richard C. Peters, AIA, and James Turrel. For more information, contact Judi Skalsky, PDC 2, 635 Westbourne Drive, Los Angeles, Calif. 90069.

Architectural Books Cited.

A Pictorial History of Chinese Architecture by Liang Ssu-ch'eng, edited by Wilma Fairbank and published by the MIT Press, has been named the most outstanding book in architecture and urban planning in the ninth annual professional and scholarly book awards sponsored by the Association of American Publishers. Honorable mention was awarded to *The AIA Gold Medal* by Richard Guy Wilson, published by McGraw-Hill.

Haskell Student Journalism Awards.

The Douglas Haskell awards program for student architectural journalism was founded to encourage fine writing on architecture and related subjects and to foster regard for intelligent criticism among future professionals. The competition is open to all students of architecture or related areas (such as art history, urban studies, or landscape architecture). Submissions can be in published form or suitable for publication, can consist of an essay, news story, book review, or book, and must be accompanied by a 100-word statement describ*continued on page 191*

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Briefs from page 189

ing the piece's purpose, audience, and date of publication (or, if unpublished, when and where it was written). Entrants are limited to two submissions. Four copies of each entry should be enclosed in a 8½x11-inch binder and sent by April 15 to Haskell Program, New York Chapter/ AIA, 457 Madison Ave., New York, N.Y., 10022.

Urban Conference.

Partners for Livable Places is sponsoring an international conference on the economic value of urban amenities to be held April 14-17 in Indianapolis. The agenda will include roundtable discussions, issue forums, case studies, and tours of Columbus, Ind., and the replicated 1830s frontier town of Connors Prairie, Ind. For more information, contact Tina Resick, Partners for Livable Places, 1429 21st St. N.W., Washington, D.C. 20036.

Lighting Resource Guide.

"The Complete Guide to the Language of Lighting," a 317-page booklet, includes graphs, charts, and technical information to assist architects with the selection, installation, and maintenance of interior and exterior lighting systems. A free copy is available from the marketing department, Halo Lighting, McGraw-Edison Co., 400 Busse Road, Elk Grove, Ill. 60007.

Postgraduate Programs Organized.

The Institute of Architecture and Urban Studies has scheduled two new one-year programs—advanced studies in architecture and urban design, and theory and criticism—to begin in the fall of 1985. Applications should be submitted by April 15 to the advanced studies programs, Institute for Architecture and Urban Studies, 19 Union Square West, New York, N.Y. 10003.

Summer Courses.

The professional development program at the Harvard Graduate School of Design will offer 40 intensive, two-to-seven-day courses this summer. These courses are intended for beginning and experienced architects, designers, planners, developers, and firm managers. Costs per course range from \$500 to \$1,300. For more information, contact Office of Special Programs, HGSD, 48 Quincy St., Cambridge, Mass. 02138.

Park Design Competition Winners.

A "green circle" design by the Milwaukee architecture firm of Beckley/Myers was the winning proposal in a three-stage design competition for a 17.5-acre urban park in Bellevue, Wash. Runners-up were the landscape architecture firms of Jongejan, Gerrard, McNeal of Bellevue and EDAW of Seattle. \Box

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Furnishings



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







"Coming from a country with a tradition of combining rigors of the body and spirit, I have designed furniture with an informal attitude that allows man to be freer in his movements," says Japanese designer Toshiyuki Kita. His latest design for Atelier International, Ltd., is the Kick occasional table (1), the design of which is as lively as its name implies. Designed to complement Kita's Wink chairs (also manufactured by a.i.), the Kick table has an oval top of medium-density wood with a rubber bumper edge. The top is lacquered in bright blue, yellow, red, or black. A pneumatic mechanism with level control permits height adjustments up to five inches—from 15.7 to 20.7 inches. The base is a dark gray enameled steel with self-orienting casters on two of its three legs. The base is 19.7 inches wide.

Freedom of movement is also the philosophy behind the Italian firm Thema's Pick-up sofa (2). Made of a tubular steel structure stove-enameled in epoxy powders, the light-weight sofa easily folds in half. The seat covering is polyurethane foam covered with cotton or wool fabric. The color is silver gray with orangered highlights.

Two highly stylized offerings from IPF International are the Avatar Nova table (3) and the Art Moderne sidechair (4). The table's glass top has a recessed, one-inch bevel. The border is clear glass, and the center has a frosted-pearl finish under the glass. For the apron the wood is gently curved and cut in a flowing pattern. The legs are tapered. The design is offered in three models—a cocktail table measuring $40x40x16\frac{1}{2}$ inches, a $24x24x16\frac{1}{2}$ -inch end table, and a $15x48x31\frac{3}{4}$ -inch console. Designed by Tony Allen, the Art Moderne sidechair is distinguished also by flowing lines. In this case, the asymmetrical back has been pierced to create a floral pattern. The chair measures 41 inches high and comes in 38 standard finishes. The upholstered pullover seat can be color matched. \Box











Top Left—DLI-63 Building, Seoul, Korea; Glass: Polarpane Gold Reflective; Architect: C. M. Park, Seoul and Som & Assoc., San Francisco; Glazier: Shindong—AH Const. Co. Ltd.; Rep: Engitech Resources, Inc., NY.

Glass: Polarpane Silver Reflective and Polarpane Gold Reflective; Architect: Foster Meier Architect, Inc.; Glazier: Haley-Greer, Inc.

Gold Reflective; Architect: Foster Meier Architect, Inc.; Glazier: Haley-Greer, Inc. Center, Kennedy Office Center, Palatine, IL; Glass: Polarpane I/ST Butt Glazing System; Architect: Linden & Linden, Waupauka, WI; Glazier: Harmon Glass & Glazing, Elk Grove Village, IL. Above-Albuquerque National Bank; Glass: Polarpane Gold Reflective; Architect: Stevens, Mallory, Pearl & Campbell; Glazier: PPG Industries. Left—Maryville Centre, St. Louis, MO; Glass: Polarpane Silver Reflective and spandrel; Architects: Robert L. Boland & Assoc. and M. Thomas Hall; Glazier: Rainbow Glass Co.

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Circle 85 on information card









Products

A selection of notable offerings and applications. By Lynn Nesmith Colore fittings for bathtubs, showers, washbasins, bidets, and kitchens by Watercolors, Inc., have a stain resistant baked enamel finish in bright red (1), chrome yellow, navy blue, dark brown, beige, white, or black, in addition to lacquered polished brass and polished chrome. All fixtures are designed to fit standard American plumbing systems. (Circle 201 on information card.)

Decorative rope lights (2) by Verax Corporation for interior and exterior applications are available in clear white, multicolored, and single colors for stationary or running installations. Standard lengths of 12, 15, 18, and 21 feet, as well as custom lengths, are offered in three diameters. Ropes plug into one another, and bypass circuitry provides power on both ends. (Circle 202.)

System 8 doors (3) by Forms + Surfaces are constructed of stainless steel, bronze, or aluminum factory-bonded to a two-inch-thick wood core. Doors are glazed with a ½-inch-thick unframed, tempered, glass panel in clear, bronze, or gray tint; the panel is silicone bonded into a black extruded, recessed aluminum channel. Etched and embossed designs and geometric patterns are available with polished, anodized, mirror, satin, and color coated finishes. (Circle 203.)

Products continued on page 203

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rchitectural pocket extrusion systems are esigned to support all standard one-inch prizontal blinds in a recessed channel ith a headrail retainer. (Apex Systems, camingham, Mass. Circle 225 on inforation card.)

utdoor Lighting.

uartz floodlights for outdoor commeral, industrial, and residential applicaons have full gasketing for protection gainst all weather conditions and precion die-cast aluminum housings with bbed construction for optimum heat dispation. Both the 500- and 1,500-watt wide eam fixtures have above horizontal aiming ithout adders. (Stonco Lighting, Union, J. Circle 221 on information card.)

all Panel System.

ersawall foam core composite insulated tetal panels for wall and roof applicaons are available with a lightly striated r profiled configuration. The Versacor bating, available in a number of standrd and custom colors, is designed to protect the panels in urban and corrosive idustrial environments. Lightweight, terlocking, factory assembled panels ave a side joint design that eliminates sposed fasteners. Steel-based panels are vailable in widths of 30 or 36 inches and maximum length of 40 feet. (H. H. obertson, Pittsburgh. Circle 226 on infortation card.)

lasonry Fasteners.

verlock fasteners are designed to fasten isulation board to masonry, concrete, ucco, and plaster walls. Constructed of uPont Zytel nylon resin, fasteners ave a series of nine ribs designed to prode a tight application. (All Temp Comonents, Inc., Baltimore. Circle 227 on formation card.)

indow System.

/ENCO aluminum-clad wood window has built-in double weatherstrip and halfch double glazing. The window's clading covers the outside of the frame and ne wooden sash and optional snap-in ooden grille. The double-hung units are vailable with tilt/take-out sash or nonemovable sash and balance system with weathertight Mylar interface. (Jeld-Wen, nc., Mt. Vernon, Ohio. Circle 223 on formation card.)





Vinyl Flooring.

Taragon sheet vinyl flooring (top) has a bold geometrical, three-inch grid pattern. Designed for residential and commercial interiors, the flooring has a wear layer designed for easy maintenance. It comes in 12-foot widths in universal tan, executive gray, and silver brown. Cloyne Court vinyl flooring (above) has ¹/₄-inch-square recessed block design set in an alternating checkerboard pattern. It comes in 12-foot widths to allow seamless installations in most applications and is available in three muted colors. (Tarkett, Inc., Parsippany, N.J. Circle 231 on information card.)

Flooring.

Marghestone hard surface flooring, designed to appear like granite, is made of marble chippings bonded with resins. It is available in 10 colors and in tiles and slabs for floors, treads, risers, and skirtings. (Verona Marble Co., Dallas. Circle 208 on information card.)

Perspective Grid.

A supplementary set of four broad face perspective drawing underlay grids with two mirror image matched pairs of grids is designed to be used individually or as appurtenances to the basic eight-panel modular grids. They can combine to form interior and exterior perspective view panoramas with a selection of viewing angles and distances. Available in two sizes, the grids have plastic surfaces for use with wipe-off markers. Extension scales and instructions are included. (GraphiCraft Design and Drawing Aids, Westport, Conn. Circle 224 on information card.)

Erasable Drafting Film.

Ageproof Satin, machine erasable drafting film, is constructed of a coated polyester film with a satin, nondrafting back surface. The film is designed to accept 20 or more erasures on the same area of a drawing without surface burnoff or ghosting. The erasing machine must be filled with a vinyl eraser and used dry for pencil lines or slightly moistened for ink images for best results. The film is available in all standard roll and cut sheet sizes. (Dietzgen Corporation, Des Plaines, Ill. Circle 222 on information card.)

Lighting Fixtures.

A coordinated line of architectural grade lighting fixtures is available with reflector or coilex baffles in A-lamp or R-PAR lamp models with downlights, wall-washers, and adjustables with four-, six-, and eightinch apertures. Low-voltage downlights, adjustable low profile fixtures, and reflector, baffle, and lens units that all use mercury, metal halide, and high pressure sodium lamps are also available with six-, eight-, 10-, and 12-inch coordinated apertures. The fixture is constructed of a die-cast aluminum plaster frame and a 1¹/₂-inch-deep housing mount frame to adapt to thicker ceilings. It also has adjustable bar hangers and a universal mounting bracket with a five-inch span. (Halo Lighting Division, McGraw-Edison Co., Elk Grove Village, Ill. Circle 220 on information card.)

Floor Covering.

Altro X25 slip-resistant flooring for high traffic installations is constructed of silicon carbide granules embedded in flexible vinyl. The material can be applied over almost any subfloor. (Dynamit Nobel of America, Rockleigh, N.J. Circle 214 on information card.)

Wall Plates.

Flushplate decorator wallplates are available in 24 plate finishes and eight frame finishes for commercial and residential interiors. (Touch-Plate, Paramount, Calif. Circle 180 on information card.) *continued on page 206*

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viding uniform comfort and greatly cutting energy costs. Heat Mirror is the remarkable transparent insulation that reflects heat, not light. Appearance is identical to standard windows, but performance is dramatically improved. Heat Mirror achieves R-values up to 4.5, twice that of double and 40 percent better than triplepane or "low-e" coatings. Thus, designs using

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Joining: Panels can be attached with a continuous edge

Joining: Panels can be attached with a continuous edge grip system for a perfectly smooth and flush joint. More information: Steel-O-Bond material is available from Consolidated Aluminum, a leading developer and producer of composite materials for specific needs. For technical data and specifications, see our catalog in Sweet's General Building File, section 7.5/Alu. (In Canadian Sweet's, section 7pre/Al.) Consolidated Aluminum, Composite Materials Division, 11960 Westline Industrial Drive, St. Louis, Missouri 63146. Phone (314) 851-2346. Steel-O-Bond is a reg-istered trademark of

istered trademark of Consolidated Aluminum for its composite material.



Circle 91 on information card



Ceiling System.

Two-foot-square Revisions open cell, ceiling panels (above) are designed for installation in conventional grid and suspension systems in renovations and new construction. The panels are designed to achieve a regular, dropped cell effect to hide the grid line. (Armstrong World Industries, Inc., Lancaster, Pa. Circle 240 on information card.)

Work Platform.

Satellite elevating work platform system has an adjustable width of 20 to 50 feet and maximum free standing height of 32 feet or a maximum secured height of 328 feet. Designed to replace conventional scaffolding in residential and commercial con-

struction, it can carry a maximum of 8,260 pounds of cargo at a speed of 24 feet-perminute. Safety features include a full threefoot steel cage enclosure, an earth monitor system, and an independent twin drive fail safe braking system. It is designed to be assembled on the site by two people within two hours. (Access Engineering U.S.A., Charlotte, N.C. Circle 215 on information card.)

Software Package.

Pertplotter project management software program provides network logic and add-on plotting capabilities for the Hewlett-Packard 150 personal computer. It is designed to work in conjunction with the company's first package, Pertmaster, a

menu-driven microcomputer project management package. The program can run logic network plots with multiple color and line style options that allow detailing and illustrating. (Westminster Software, Inc., Palo Alto, Calif. Circle 205 on information card.)

Undercarpet Cables.

Teletape flat undercarpet data cables are designed to link CRTs, control units, telephones, and communication equipment in new construction and renovations. They are compatible with conventional connectors and with most round coax, twisted pair, and combination coax cables, and they are designed to withstand water, steam, and common detergents. The data cables are enclosed in PVC jackets with tapered edges with a thicknesses ranging from .07 to .09 inches. Factory terminated cable harnesses are available in bulk lengths and in five-foot increments as long as 100 feet. (Brand-Rex Co., Willimantic, Conn. Circle 206 on information card.)

Window Unit.

Perma-Shield gliding windows are constructed of wood members treated with a water repellent preservative and covered with a white vinvl sheath. Rigid vinvl spring tension weatherstripping is factory applied continued on page 209

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ducts from page 206

a tight seal between sash and frame. ts are glazed with double-pane insug glass. Center interlock and two-way ng loaded locking mechanism secure at head. (Andersen, Bayport, Minn. ele 207 on information card.)

nagement System.

taNet is a series of networking manment systems for commercial and istrial buildings to control tempera-, energy management, fire protection, security systems. It is designed to vide continuous, interactive data exnge between computer-based systems control these functions and to adapt xisting building management systems. neywell, Inc., Minneapolis. Circle 209 nformation card.)

zed Wall Tiles.

Image series of glazed tiles is availin 12 colors. Recommended for wall allations, tiles measure 4¹/₈- and 6--square, in addition to coordinating shapes. All tiles measure 5/16-inch k and have a cushion edge and spaces. d-State Tile, Lexington, N.C. Circle on information card.)

c Lighting.

hiFlex lighting, available with a clampor desk top base, has a pliable stem swiveling shade to provide flexible tioning. The shade swivels 360 degrees, the 16-inch stem is flexible in every ction. The shade is offered in white, k, and pastel gray. (Stacor Corpora-, Newark, N.J. Circle 211 on informacard.)

dow Insulating System.

metite window system consists of a l strip that attaches to the interior of window with a clear acrylic glazing unted in an ABS polymer frame and irred to the steel strip by a concealed ble magnet. It is designed to reduce densation problems and outside noise. gnetite, Inc., Norwell, Mass. Circle on information card.)

Paneling.

tor Wall panels are constructed of a l vinyl sheet laminated to a %-inch shield gypsum wallboard core. Factoryhed panels are available in four coldesigned to blend with the Durasan of plastic snap-on trim and corners. dard panels measure 4x8, 4x9, and feet. (Gold Bond Building Products, rlotte, N.C. Circle 213 on informacard.)

ight.

able Fox Lite skylight has a one-piece, e glazed dome with foam insulation. lable in clear, bronze, and translucent white in four sizes, the unit is hinged to a self-flashed molded curb and includes an insect screen. It can be opened manually or by a motorized control unit. (Fox Plastics Corporation, Dayton, Ohio. Circle 216 on information card.)

Processor Camera.

SMA-7730 processor camera produces ready-to-use aperture cards in a few seconds. Interchangeable cassettes convert the unit to a 35mm or 16mm roll film camera. It has a SMA-Densitronic system, automatic focus, adjustable back and top light controls, alignment bar, built-in viewing screen, and 7.4x to 32x reduction range. The unit films engineering and architectural drawings, white prints, blue prints, specifications, and maps. (Extek Microsystems, Inc., Van Nuys, Calif. Circle 217 on information card.)

Wall Panel System.

Precast and prestressed concrete wall systems are available with flat wall or double tee panels in a number of surface finishes, including plain and sandblasted concrete with different coatings, stains, and textures. The panels are designed to be used as curtain, load bearing, or retaining walls with steel or prestressed building frames. (Tindall Concrete Products, Inc., Spartanburg, S.C. Circle 219 on information card.) \Box

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