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the journal of the hawaii chapter, american institute of architects





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The official monthly journal of The American Institute of Architects, Hawaii Chapter. \$10 per year. Opinions expressed in articles are not necessarily official opinions of the AIA.

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Cover:

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HAWAII ARCHITECT Published by

Post Office Box 833
Honolulu, Hawaii 96808
Telephone (808) 521-0021

Crossroads Press, Inc.
Publishers of
PACIFIC BUSINESS NEWS

OSHA Conference

From the AIA, Washington, D.C.

Document everything. That is a lawyer's advice to architects and engineers who are trying to assess their responsibility — and potential liability — under the Occupational Safety and Health Act of 1970.

The lawyer was Gerald W. Farquhar, a speaker at the AIA-sponsored conference, "The Architect, the Engineer, and OSHA," in Washington, D.C., on June 25 and 26 at the Statler Hilton Hotel.

Under OSHA, the design professional has three areas of responsibility, according to conference speaker David Golemon, a professional engineer, of Framingham, Mass. These areas involve him as an employer whose work place must conform to OSHA standards; as an employer who sends employees to building sites; and as the designer for a client whose building must comply with the Act.

It is the last two which are most

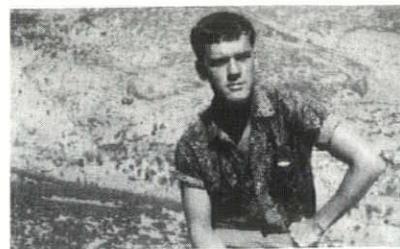
likely to cause problems — problems, Farquhar said, which can be largely avoided by thorough documentation of attempts to comply with OSHA in the design and construction phases of projects.

Farquhar is a consulting attorney to the Office of Professional Liability Research for Victor O. Schinnerer & Co., Inc., the national underwriting managers for the AIA and NSPE sponsored professional liability insurance program. He advised designers to communicate fully with clients to determine the final use of the building. They should do this for clients who will use the building for their own employees; where the client intends to lease the building the designer should determine the tenants' uses as well as he can. In this way the designer can do as much as

Continued on page 14



City Planning and Urban Design as Architecture — Part II



by Andrew Yanoviak AIA

With this background, it is interesting to ponder the specific relativity of the relatively nonindustrialized and sparsely urbanized Hawaiian Islands, with respect to their appropriate position and behavioral characteristics within the global region that they, and other Pacific islands may be required to service — possibly as an intercontinental City of Refuge, in the sense that they provide rest and relaxation from urban and industrial routines and stresses, as well as a humanitarian source of refreshing, inspiring recreational, cultural, and educational exchange.

GLOBAL AND REGIONAL ARCHITECTURE

In his marvelous documentary, "Creation is a Patient Search," Le Corbusier relates how "modern man chooses to live, where he would rather not work (suburbs); and conversely, to work in an (urban) area where he would rather not live." It may be necessary for politicians and planners to contemplate the repercussions for the State of Hawaii or one of its major islands, if either were called upon to systemically serve the world community or the Pacific region, as a regional park within the larger global-metropolitan supra-system. In this context, Hawaii and its natural park-like oasis setting, can ideally serve as an East-West trans-Pacific conference center for reflective thought, complex problem-solving, policy-making, planning, and decision-making.

City planning critic and author Lewis Mumford has perceptively stated in "The City in History" that "The city which was once a 'world' is fast becoming a world which is a 'city.' Architect-planner Aldo van Ewyck has graphically and poetically shown how the structure of a leaf microcosmically resembles the systemic structure of the tree, in its trunk, branches, limbs, and twigs, and vice versa. He has also analogously portrayed the established fact that an urban home can be a microcosmic city while the whole city or a

portion of it can be a macrocosmic home. Le Corbusier in his companion volumes "The City of Tomorrow" and "Towards a New Architecture" claims that "a house is a machine for living in."

It appears therefore that the primary and essential question confronting city planners, urban designers, and architects of Hilo and Honolulu for continuous resolution is how to offer precocious guidelines for simultaneous maintenance of this delicately sensitive commodity, as their organism experiences both extensive and intensive transformational growth and perhaps, further urban decay.

METROPOLITAN AND URBAN ARCHITECTURE

Metropolitan and urban Hilo and Honolulu have fantastic potential for planned development in accordance with ecologically inclined suburbanization patterns. In recognition of the ultimate "CBD" locations, interconnected interdependent towns can be formulated in accordance with the principles of Walter Gropius in his "Scope of Total Architecture" whereby the higher-rise (perhaps even terraced) structures are spread further apart, while the lower density residential units, for example, can more closely coexist compatibly with each other, with man, with technology, and with nature.

At this stage of development the cities of Hilo and Honolulu, within their larger metropolitan and regional contexts, offer fantastic challenges for analytical perception and conceptual synthesis. "The Urban Prospect" by Lewis Mumford, "Matrix of Man" by

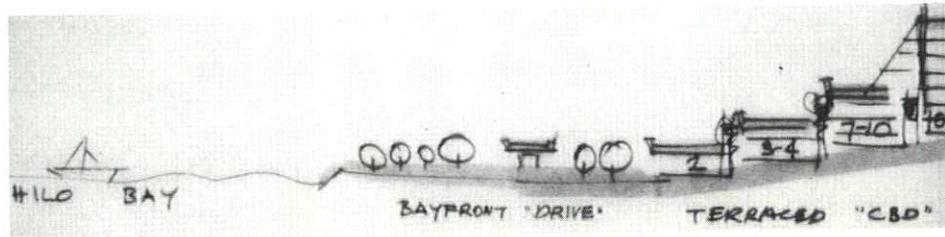
Moholy Nagy, and "Design of Cities" by Edmund Bacon, all contain historically documented principles and theories which could positively effectuate the future quality growth of Hilo and Honolulu.

World famous urban design architects and city planners such as Constantinos Doxiades and Edmund Bacon (former City Planner of Philadelphia) should be invited for serious consultation — to professionally assist Hawaii in the guidance and direction of the efforts required to build an appropriately distinctive suburban "city" (as a suburb of Hong Kong, San Francisco, Honolulu, or Kona's "Gold Coast," in recognition of their uniquely beautiful and dramatic amphitheatrical environmental settings).

ECOLOGICAL SUBURBANIZATION

Anyone artistically inclined must be greatly and deeply moved by the sculptural formations of the mountains and the valleys and the ocean shapes in between — these are certainly dramatic, powerful, natural settings for inspired hands to participate in the ongoing molding process of creating beautiful city forms and spaces, people movement systems, and places to rest and work and play industriously or leisurely.

After all, how many cities in the world can claim the beauty of the Hilo Bay complex, surrounded by the majestic splendor of snow-peaked Mauna Kea and the slopes of Mauna Loa — a very inspirational (synergistically more than 360 degrees) panoramic — a delightful experience of nature's design abilities



Terraced City — Concept sketch for Hilo Bayfront.

“... every effort it made in it (American Architecture and Urbanism) to push the history of architecture toward a proper urbanistic scale and an active role in society... it is the environment as a whole — how to see it,

how it got that way, what to do about it — which we must learn to write about at the present time... there is no difference between architecture and city planning; all must now — or, rather, again — be treated as one...”

Vincent Scully/New Haven — Nantucket (1966-67)

and planning capabilities.

Given the topographical configurations of a volcanic island — organically linked to other parts of the world and their ports across the sea, with umbilical waterways, airways, and wireless communication capabilities counterbalancing transportation corridors on and off the land — the preponderantly predominant question of where, when, and how to space and place the dynamic network of roadways to serve the industrial-economic base, as well as recreational parks, becomes understandably appreciable — in view of the growth-change rates not only of human population, but also man-made and technological industrial productivity, with which we are all being confronted in contemporary society.

The counties should retain consultants to study the ecologically layered attributes of the Ian McHarg “Design with Nature” approach, on at least a metropolitan scale, to better assess the real zoning potential of the land in terms of its use for conservation and open space, parks and recreation, residential, agricultural, and urban needs. These graphical and statistical analyses and syntheses should consist of at least hydrological, soils, wildlife, vegetation, subsurface water, topography, geology, and archaeological data, and so forth, which can begin to establish the structural form and character of the city on a metropolitan scale.

VIALE CITY ORGANISMS

The counties should also retain economical planning consultants to recommend how reasonable amounts of public lands might be acquired and maintained in accordance with zoning techniques, instrumental taxation regulations, rates of employment-mix, and whether or not acceptable urban densities can offset the financial costs of acquisition on a metropolitan, regional, or statewide basis.

It is the responsibility of parks and recreation departments at the Federal, State, and County levels to afford an

ample supply of these spaces and facilities, and to have the foresight to furnish them before they are irretrievably gone to highest-and-best use claims, and their concomitant escalation of real estate values. In this sense, the County of Hawaii is to be commended for its visionary foresight in proclaiming certain natural features in the land, sea, and aircapes, as “communal” property and “public-utility” spatial domains. Both economical and ecological well-being, and community health and welfare are dependent upon these humanly inspirational “inlets” and expirational “outlets,” to and from and in the mountains, as well as to, from, and in the ocean; including their transitional parks and the tree-lined parkways between.

The vital needs for interrelated recreational activities and “green” zoning for open-space parks in Hawaii, to offset the human absorption of pressures and infringements caused by urban living, has been well documented in several planning reports (SCORP, Overview, and others), in terms of preserving and enhancing the community’s mental, physical, and spiritual health and material welfare.

MULTI-DIMENSIONAL ZONING

City planning departments are often accused of finding one existing neighborhood commercial store in a city block, or one or two industrial plant sites, and color coding the entire block or area in between as a proposed designated allowable land use. These blightful attempts at forecasting city growth and development are preponderantly deleterious to the community’s health and welfare. Unfortunately, we have some startling examples of such mismanagement in Hawaii.

Michaelangelo exclaimed Florence, Italy to be the most ideal city-form in the world because it has the River Arno for its “soul” with all the vitality associated with the vibrancy of an intensive CBD — which, interestingly was very much like Hilo’s downtown urban

core “three-dimensional” vertical zoning, whereby commercial shops on the front street were reinforced with behind-the-shop industrial activities and with residential levels above for the owner and his workers (initially familial). In addition, Florence has the mountains, not only for marvelous Florentine marble for Michaelangelo’s spectacular statuary, but also for visual and recreational relief from the intensity of the city. As in Venice along the Grand Canal, those palatial dwellings of the aristocratic merchants and political leaders along the river’s (nuclear-soul) edge, competed with each other in a kind of beauty contest for facade aesthetics and street appearance. In terms of joint-use, the Venetian Ponte Rialto and the Florentine Ponte Vecchio marvelously combine commercial shops along with pedestrian bridges, in acknowledged works of architecture, engineering, and city planning.

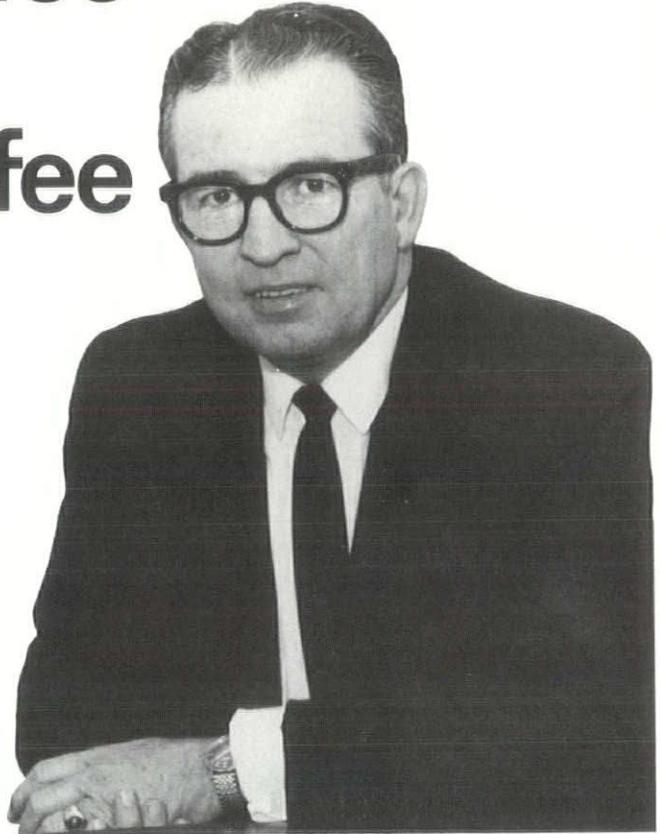
In view of the conventional two-dimensional horizontal strip-zoning, which is land consuming and environmentally blightful, contemporary city planners are now leaning in these recommended directions, because of the vitality that they bring to an area, as well as the reduction of crime rates.

Zoning, as powerful or “powerless” technological and philosophical planning mechanism, has the dual responsibility to vitally maintain as well as transform the existing and proposed dynamic environments, within the realm of both special and general community needs and desires, and this is certainly no minor charge. Most zoning practices (however well-intended) simultaneously suffer from being either too specific or too generalistic.

Honolulu and Hilo are about to experience further man-made transformation with the contemplated growth of population and the requirements for inter-city and inner-city mobility; whether the mode of travel be the automobile, mass transit vehicles, or other instruments of technology. En-

Continued on page 7

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Yanoviak from 5

vironmental planning (through zoning) is of the highest order of surgical environmental design importance, followed by architectural and landscape treatments — which are too often only superficially remedial cosmetic beautifiers.

ENVIRONMENTAL SYSTEMS DESIGN

Various natural and man-made forces are altering the course of development in Hawaii; including tsunamis, lava flows, changing life-styles, modernization trends in the design of transportation facilities such as airports, harbors, and highways, as well as revolutionary trends in commercialization, industrialization, institutionalization processes, and concomitant residential requirements.

Possibilities for revitalized development of metropolitan Hilo include the distinctive allocation of the major tsunami inundated land areas to open space and recreational parks use, because the Finger-City Plan can continue to function, while it contributively enhances the form and the content of the city. Instead of filling in this recently zoned continuous open space with high density land use, and thereby creating a high-rise wall which would block views from the mountains to the ocean bay and vice versa, continuous ecological greenways would thread through the pockets of intensified urbanization, and connect along Hilo Bay in hand and finger relationships, harmoniously replacing the former urban patterns of development, and more thoroughly counterbalancing the unfinished works of nature and man (as a part of nature), and of his technology. Bridged arterial connectors would join the centers of urban development, as they ford the ecologically desirable streams and their surrounding landscaped parkways in a layer of man-made development suspended above the natural terrain, instead of being irretrievably superimposed upon it. In this manner, the specified concerns for a more suburban rather than completely urbanized city, could be met for long-range populations of 40,000 to 200,000.

The innovative concept for the Terraced Crescent City-Plan is an indication of a reversal in current thinking and plans for Hilo Bay development, including both the State of Hawaii Department of Transportation proposal for Hilo Bayfront Highway as well as the

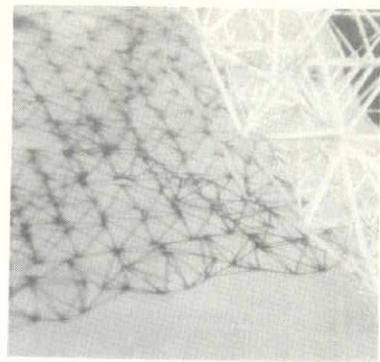
zoning map included in the County of Hawaii General Plan. Instead of the intense high-rise urban development occurring adjacent to the Bay, the Bayfront Parkway elevated viaduct (permitting full usage of park space beneath the structure with unrestricted pedestrian and bicycle access to the beachfront) is followed by low, medium and higher-rise structures in a mauka direction following the mountainous volcanic slopes, with unrestricted views toward Hilo Bay (much like the latest McDonald's restaurant terraces above Food City — which ironically is one of the few downtown Hilo structures which somewhat realizes the value of potential views toward the Bay). In addition, the concept suggests more futuristically inclined goods, services, and people-mover systems to be incorporated within the structural complex. Furthermore, the general intent is to suggest accommodation of Le Corbusier's "city-in-a-park" concept, rather than dispersed, noninterconnected parks within a nature-engulfing, intensely urbanized city.

ENVIRONMENTAL SYSTEMS PLANNING

The potential here for a more comprehensive development of the city and its center does exist; and in fact, the kinds of life-styles and environments that are most desired by the community have great potential to be developed further in recognition of the sensitive and responsible interrelationships between the County, State, and Federal governments. Some Federal financing, as well as other kinds of foundation grants may be necessary to accomplish this kind of creative planning and innovative development, but the potential certainly is here.

As with any developing organism, these cities will be shaped from within and without by internalizing and externalizing forces and factors, including disparate agreements and settled conflicts of interest at City, County, State, Federal, and international levels of problem-solving decision-making, policy-making, and environmental planning. So, utilization of the Systems Approach is herein promoted and strongly recommended for evaluation and implementation.

Eventually, we may be in a position to develop self-generating systems of greater quality and capacity for regenerative revitalization and less devastating reproductive characteristics. However, momentarily in the timespan of life on earth, man is in no position to educate



whole cities to learn to act on time, and with the proper expenditure of resources to insure that programmed instructions will follow costly but beneficial plans and designs of man and his technology — as a part of nature.

Furthermore, although it is commonplace in city planning to focus concentratedly on the internal sources of symptomatic urban decay, it may prove to be more worthwhile for contemporary man to attempt to solve urban ills by both performing the required surgical analyses and syntheses as well as relocating the entropic organism to other climate surroundings — adaptively adjusting its umbilical associations within complex problem networks. This could be accomplished in such a manner as to thereby render its current problem-status — as a solution in disguise — by attachment to a greater problem-set, or by reactive assimilation (resulting from cancellation by a similar or different problem fragment) in the complex set.

ARCHITECT-PLANNER-DESIGNER

As a profession, architecture is both an art and a science. It therefore follows that an architect is both artist and scientist — how much of each depends on the individual practitioner and/or theoretician. If we accept the fact that the developmental origins or urbanization and industrialization probably developed simultaneously, then we can better appreciate the role of the architect of tomorrow, who may very well more closely resemble the architect of ancient and renaissance yesterday, who also performed as city planner and urban designer as well as interior and industrial designer, mathematician, sculptor, and painter — instead of the prototypical architect of today, who is relegated to a somewhat technologically specialized designer-draftsman's role, performing in conformance to engineers' building codes, planners' zoning codes, and the laws of real estate development.

Keeping Hawaii Plastered



Another achievement in displaying the versatility and durability of genuine fireproof lath & plaster is their unique application in the construction of the Peter & Paul Catholic Church on Kaheka Street.

The steel beams supporting the ceiling assembly were furred out with channel iron and metal lath. The acoustic plaster provides a finish as well as fireproof protection. All interior walls and partitions were finished with troweled acoustic plaster for sound control.

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Letters to the Editors

Hawaii Architect:

The editorial which appeared in the March, 1973 issue of Hawaii Architect was most encouraging to us. Our organization has long been concerned about the practices used locally for architectural procurement for educational facilities and the adverse effect it has on school libraries at all levels.

Last year, at a publicity workshop, I spoke with Mr. Dumlao and I have had several conversations with Mr. Ernest Hara regarding the matter. (I had the pleasure of doing the functional planning for the Bishop Learning Center, Punahou, so had the pleasure of working with Mr. Hara and seeing the difference co-operative planning makes.) Also, last spring at the Hawaii Library Assn. conference two architects spoke about procurement procedures and the difficulties architects face in trying to complete a facility that is economically, functionally, and aesthetically pleasing, if the state is involved.

I had hoped to conduct a workshop for our membership regarding the writing of educational facility specifications

and suggestions for how the librarian can work more closely with the project architect and his staff, usually producing benefits for both. Unfortunately we got involved in a legislative audit and by-laws revision and the calendar became crowded. Next year though, I hope to see it on our calendar and hope that members of your group will participate.

If there is any way you feel our organization could aid in the promotion of the task you outlined in your editorial, please do not hesitate to let me know. If I may quote from the introduction I wrote for our BLC descriptive booklet: "We have tried to make the building as attractive as possible in the belief that a beautiful environment is as necessary to good learning as are quality materials and equipment." HASL endorses such facilities for all the school children of Hawaii.

ALICE H. BATTLE
 President, Hawaii Association
 of School Librarians

Hawaii Architect:

In all fairness to some of my dedicated and devoted students in the U of H Architecture 276 Environmental Design Studio class, I would like to take this opportunity to clarify for the record — the lead photograph caption accompanying your July publication article on the "Student Awards Ban-

quet" which should read (from left to right) — Russell Uehara (not Uehiro), Faith Yoshioka, Clarence Izuo, Raymond Tokihiro, and Patricia (not Patrick) Shimazu.

ANDREW YANOVIK, AIA

Hawaii Architect:

At the end of my term as president of the Women's Architectural League, I would like to thank all who helped me have such an enjoyable time over the past two years.

We have had very successful fund raising events and have been able to donate to many causes: Friends of Iolani Palace, Aloha United Fund, Festival of Trees, Student Award ("The W.A.L. Award") and University of Hawaii, School of Architecture — \$2,500 in two years.

The W.A.L. would now like to recog-

nize their new officers, duly elected on June 30, 1973: Gretchen Cobeen, President; Lovelle Fairweather, 1st Vice President; Shirley Ladd, 2nd Vice President; Betty Luke, Treasurer; Liz Lowry, Secretary and Betty Crocker, Recording Secretary.

The W.A.L. enjoys participating with the AIA in any way, and will look forward to continuing helpful association.

SHIRLEY LIPMAN
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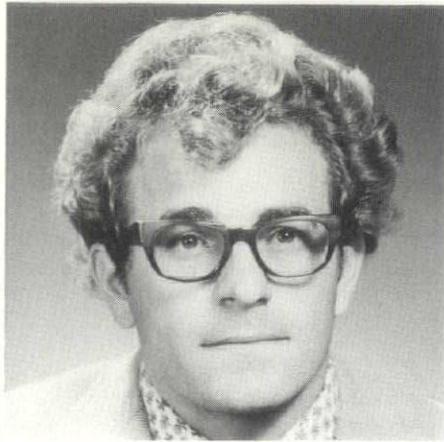
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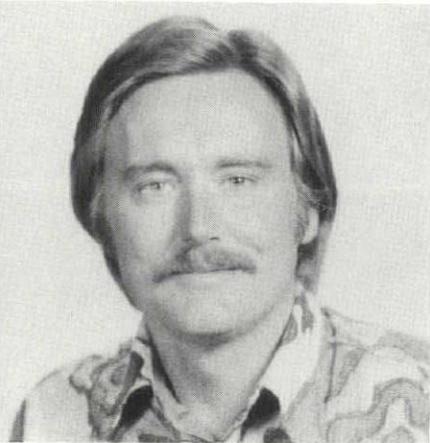
George S. Berean has been named an associate in the Honolulu architectural firm of Wimberly, Whisenand, Allison, Tong & Goo.

Berean, with the firm since 1971, attended Oregon State University, Lower Columbia College, and received a Bachelor of Architecture degree from the University of Washington in 1969. He is a member of the Architectural Scholarship Honorary, Tau Sigma Delta. His professional training consisted of several years' work with various architectural firms in the Seattle area. He was with Ashley-Myer-Smith of Cambridge, Massachusetts before coming to Honolulu in 1971.

Berean has traveled extensively throughout the Orient and South Pacific and has worked on various projects in these areas as well as in Hawaii.

Berean is a registered professional architect in Hawaii and a member of the American Institute of Architects.

Corporate Member



Jim Pearson — Corporate Member — Employed by EDW. B.S. in architecture at California Polytechnic, San Luis Obispo. Married. Wife: Janice; children: Michelle 9, Michael 4. Hobbies: Photography, Music, Water Colors.

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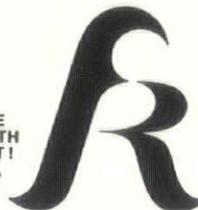
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The San Francisco Urban Design Plan

reviewed by Virginia Murison

The Urban Design Plan for San Francisco is just a small part of the Master Plan. It exists alongside plans and studies for education, housing, transportation and others all aimed at ultimate inclusion in the latest revision of the Master Plan. The author, and director of the San Francisco City Planning Department, Allan B. Jacobs, has described urban design as having to do "above all, with the visual and other sensory relationships between people and their environment, with their feeling of time and place and their sense of well-being." He goes on to explain that the Plan was adopted as a guide to the important decisions affecting our physical environment that lie ahead. In essence the plan seeks to define physical quality for San Francisco stated in terms of human need. It identifies what is good and should be conserved, what needs to be improved and what criteria should be applied to proposed changes." It is meant to initiate concern and activity.

The approach that the Plan takes, in response to citizen pressure, is the pre-

servation of the existing form and image of much of San Francisco.

Two incidents prior to the adoption of the plan indicate that the fear of excessive traffic and the belief that current building trends would destroy the character of many streets, hills and views were conditions the majority of the citizens wouldn't allow. These incidents, the freeway revolt and the near passage of a referendum requiring that all new building above 40 feet must be approved by a citywide vote, pressed the completion and adoption of the Urban Design Plan.

The beginning of the Plan outlines the following concerns, based on neighborhood polls, as those topmost in peoples' minds:

- 1—Traffic.
- 2—Maintenance of houses, yards and streets (such physical improvements, it is believed, seem to go hand in hand with greater public concern and involvements).
- 3—Initiative needed for private improvement.
- 4—Open space, both natural and

paved, is threatened by the need for more land for development.

5—Views.

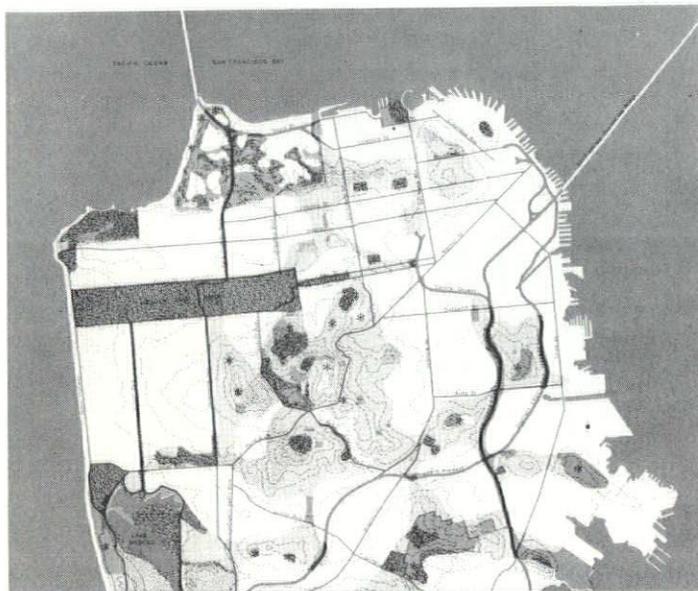
6—Erosion of the city's heritage of historic buildings.

Four categories are isolated, an outline of which follows. In each category a major objective summarizing the human needs outlined in the introduction to each chapter is stated, principles which define application of the objective are listed, and policies for implementation are suggested. In the section that follows, each major objective is quoted, followed by a principle which illustrates each concern. In addition these concerns are translated visually into many maps isolating existing conditions and suggesting areas for the implementation of the policies.

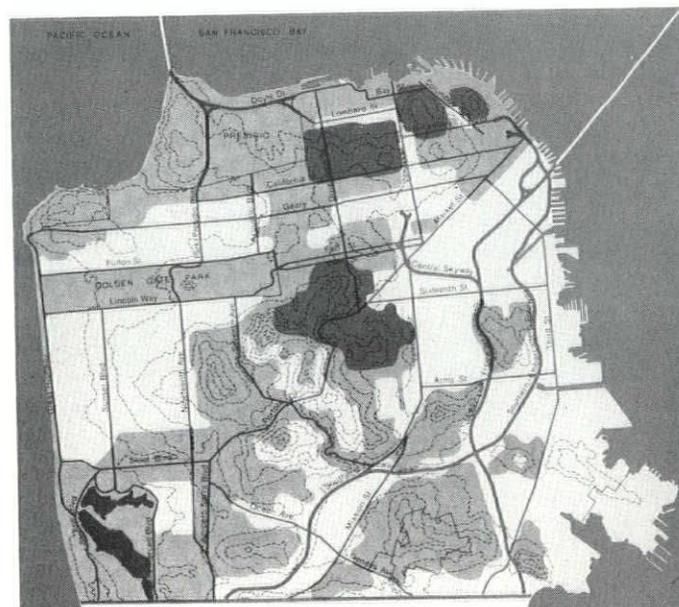
In this section the human needs are for orientation, identification and view; those things which make the city visually comprehensible.

CITY PATTERN

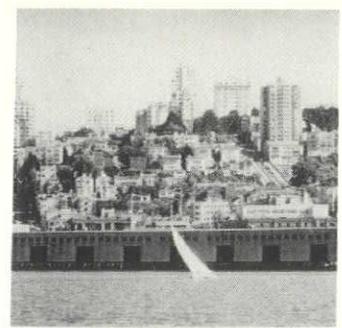
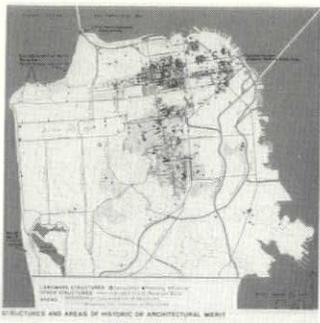
Objective — "Emphasis on the charact-



PLAN TO STRENGTHEN CITY PATTERN THROUGH VISUALLY PROMINENT LANDSCAPING



QUALITY OF VISUAL FORM AND CHARACTER



eristic pattern which gives to the city and its neighbors an image, a sense of purpose, and a means of orientation.” Objective – “Emphasis is on the characteristic pattern which gives to the city and its neighbors an image, a sense of purpose, and a means of orientation.”

Principles

2. Street layouts and building forms which do not emphasize topography reduce the clarity of the city form and image.

A. Tall, slender buildings at the tops of hills and low buildings on the slopes and in valleys accentuate the form of the hills.

B. Contour streets on hills align buildings to create a pattern of strong horizontal bands that conflict with the hill form.

3. Clearly visible open spaces act as orientation points, and convey information about the presence of recreation space to motorist and pedestrians.

10. Views from roadways that reveal major destinations or that provide over-looks of important routes and areas of the city assist the traveler in orientation.

CONSERVATION

Objective – “Conservation of resources which provide a sense of nature, continuity with the past, and freedom from overcrowding.”

Principles

1. Natural areas and features such as sand dunes, cliffs, hills and beaches – particularly where a relatively undisturbed natural ecology exists – are irreplaceable and of special public value and benefit within an intensely developed city.

4. To conserve important design character in historic or distinctive older areas, some uniformity of detail, scale, proportion, texture, materials, color and building form is necessary.

10. Preservation of some older, low and small-scaled buildings and grounds amidst larger building towers will help conserve unique cityscape character, maintain a sense of openness and green space, and produce a more livable environment.

MAJOR NEW DEVELOPMENT

Objective – “Moderation of major new

development to complement the city pattern, the resources to be conserved, and the neighborhood environment.”

Principles

1. The relationship of a building’s size and shape to its visibility in the cityscape, to important natural features and to existing development determines whether it will have a pleasing or a disruptive effect on the image and character of the city.

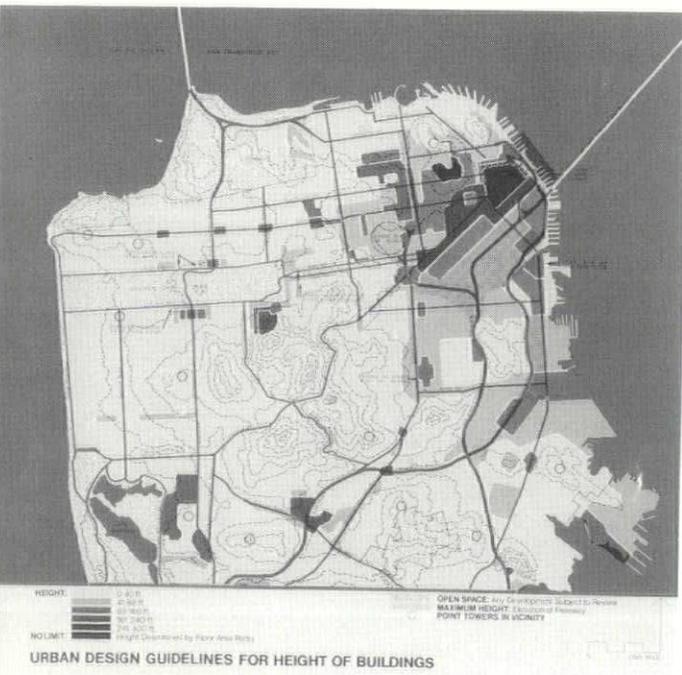
A. Tall, slender buildings near the crown of a hill emphasize the form of the hill and preserve views.

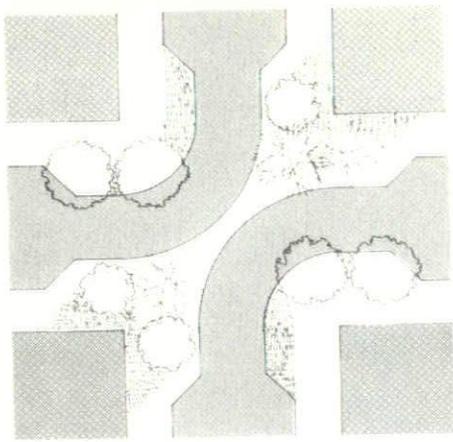
B. Extremely massive buildings on or near hills can overwhelm the natural land forms, block views, and generally disrupt the character of the city.

C. Low, smaller-scale buildings on the slopes of hills, at their base and in the valleys between complement topographic forms and permit uninterrupted views.

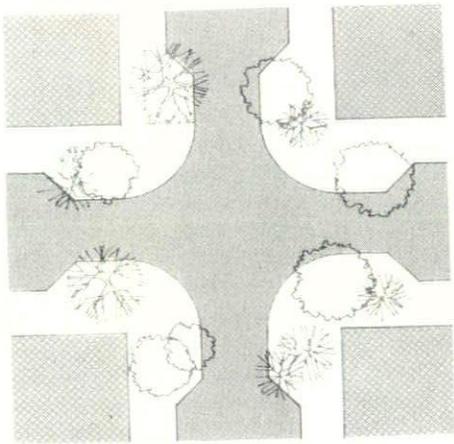
D. Low buildings along the waterfront contribute to the gradual tapering of height from hilltops to water that is characteristic of San Francisco and al-

Continued on page 12



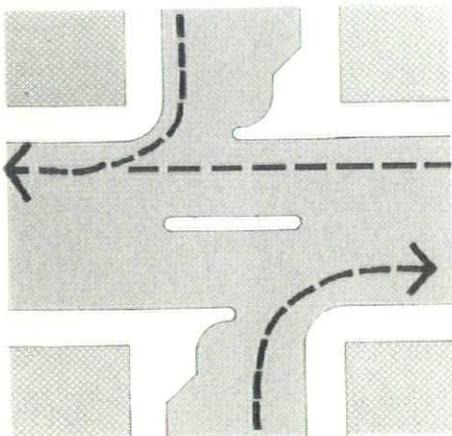


Diverters at intersections to prevent traffic from following a straight and through path.



Narrowing of the pavement at intersections to slow traffic, reduce the length of crosswalks and increase the caution of drivers.

Controlled access to and from arterial streets that makes the local streets discontinuous.



Murison from 11

lows views of the ocean and the bay.

E. Larger, taller buildings can pleasantly with small-scaled areas if the change in scale is not excessive and if their form or surface pattern is articulated to reflect the existing scale.

This section — especially the principle quoted above has had the greatest impact to date in terms of new legislation. This is the concern which initiated the adoption of the height and bulk regulation, and is where the plan will come against its toughest test from developers.

NEIGHBORHOOD ENVIRONMENT

Objective — “Improvement of the neighborhood environment to increase personal safety, comfort, pride and opportunity.”

Principles

12. Excessive speeds and amounts of traffic in residential neighborhoods can be reduced by a variety of design techniques, including narrowing of streets or intersections, landscaping, diversion of traffic and closing of streets.

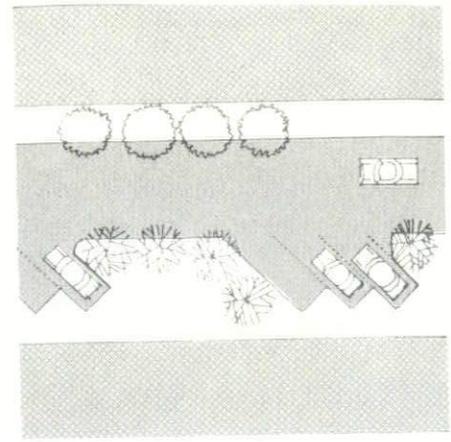
14. Separation of pedestrian and vehicle movement eliminates conflicts and contributes to pedestrian comfort.

23. Attractive and well-maintained public buildings, streets and parks can stimulate private improvements.

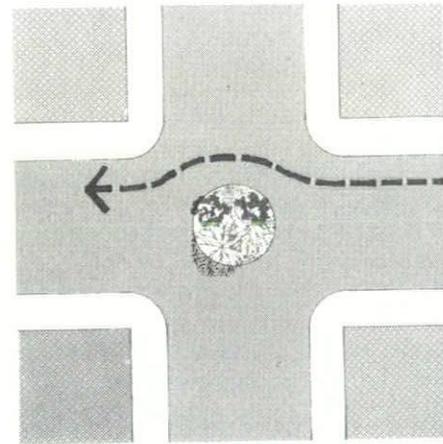
27. Improved and diverse means of transportation can increase the value and use of parks.

The Plan, as a public document, treats only the image of the city from the public spaces, especially streets. This is an image that is prized as well as one that is highly threatened. The entire Plan, including its presentation, is oriented around imagery.

It is not an urban design approach in the sense of creation of urban spaces but rather more of a preservation statement. In this respect it has application only for cities and/or areas within cities, which have built up in a layered and natural manner an urban space which is pleasant and viable socially. Too often, in the face of new development, an area's worth is measured by its economic viability, with a “now” orientation and a short-term outlook. Its social worth may or may not be evident, but is definitely difficult to measure. San Francisco, as a group of concerned citizens, has recognized that a social viability exists which is self-generating and which may even have an economic viability as a by-product.

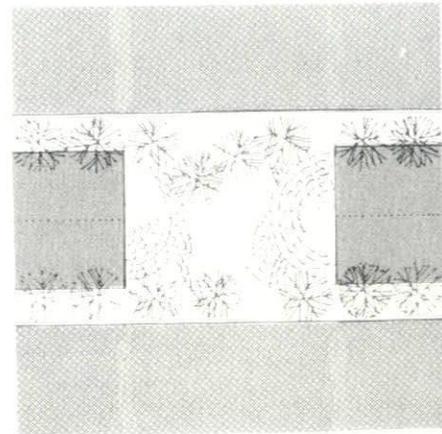


Narrowing of the roadway without loss of parking spaces by alternating of landscaped areas with diagonal parking.



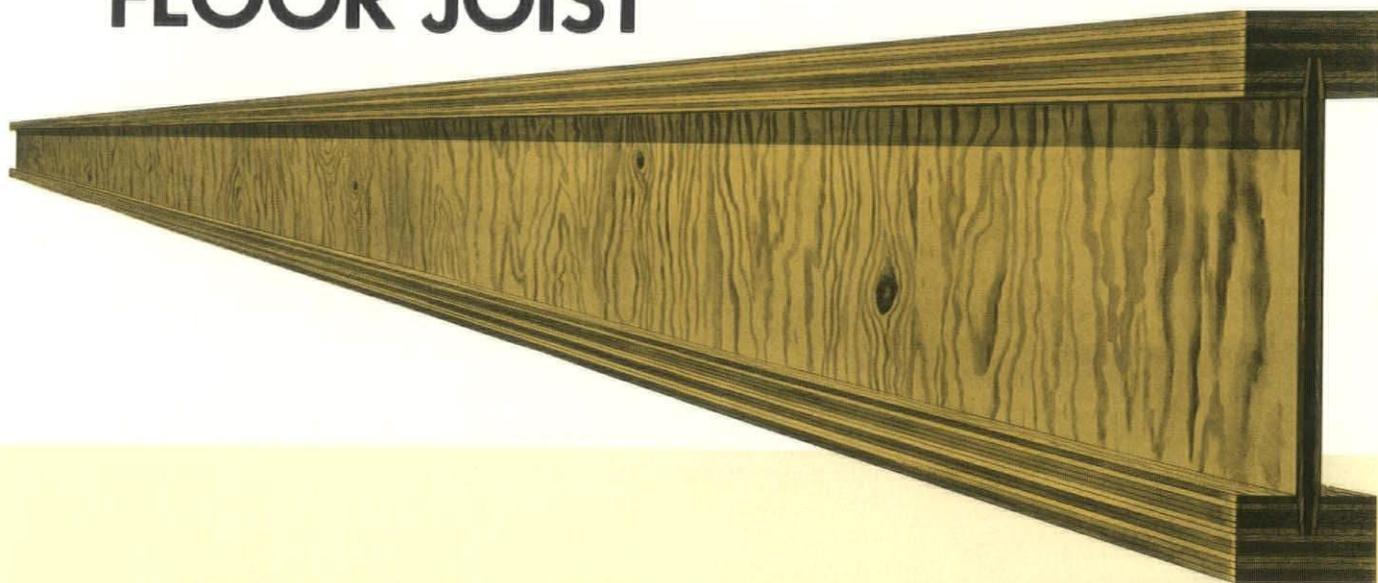
Highly visible landscaped islands to slow traffic at intersections.

Closing of a small section of street to traffic, with access still provided for emergency vehicles.





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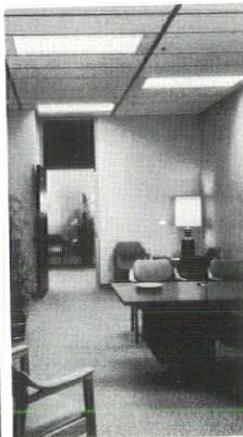
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possible to make the building free of OSHA violations. Should violations later be alleged or cited, the designer will be able to demonstrate his efforts to design a complying building, thus decreasing his chances of being held liable. In addition, very early in the project the designer should notify clients of his and their own responsibilities under OSHA and advise clients of possible costs involved in OSHA compliance. Every transaction should be documented in writing and filed.

To avoid possible liability for an OSHA violation on the job site, the designer should make his own employees fully aware of OSHA provisions. (The designer's responsibility to become fully familiar with OSHA provisions was stressed throughout the conference.)

If an architect's or engineer's representative observes a possible on-site violation by the contractor (by law and contract the party responsible for safety and health on the building site) he should immediately note the violation, relay this information to the job superintendent and leave the site. The client should then be informed of these actions. In almost every case the client should insist that the contractor correct the violation.

These actions also should be fully documented, and the procedure should be followed for every job on which OSHA standards apply.

The significance of Farquhar's remarks lies, of course, in OSHA's complexity. Also, as Jasper Hawkins, chairman of the AIA Codes and Standards Committee, pointed out, design professionals encounter problems with OSHA's retroactive provisions, its language and interpretation, its conflicts with existing building codes, its appeals and consultation procedures, its provisions for establishing state occupational and occupant safety. These factors make it hard for the design professional to exercise his judgment to come up with the best results, Hawkins said.

AIA, the engineering societies, and other groups in the construction industry are working with legislators and with the Occupational Safety and Health Administration to alleviate the problems. The need for "continuing dialogue" in this area was stressed by Alan Burch, director of the Department of Safety of the International Union of

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Operating Engineers, and by most of the speakers from the Occupational Safety and Health Administration.

Another to stress this point was Rep. William A. Steiger (R.-Wis.), coauthor of the Act. Input from the design professions is needed badly, he said, to improve the law; he pointed out also the "special responsibility of the design professional to know what it means to have a safe work place," one free from structural hazards, toxic substances, damaging noise, and the like.

Meanwhile, however, Steiger told the audience, OSHA is "here to stay," and while it will certainly be amended, it "will not be significantly changed."

In addition, the architect/engineer can expect "more inspectors and inspections, greater probability of random inspection, and more state inspectors with strong enforcement authority," according to Thomas C. Brown, director of Federal and State Operations of the Occupational Safety and Health Administration.

Brown was one of a group of speakers from OSHA who described the law and its administration — the standards themselves, the structure of OSHA, state OSHA programs, target programs and inspection priorities, variance procedures, training, consultation and appeal mechanisms, and the like. In addition, the functions of the Occupational Safety and Health Review Commission, and independent adjudication group established under the Act, were described by Richard Wise, executive director.

The chief among the OSHA contingent was Chain Robbins, deputy assistant Secretary of Labor and administrator of OSHA. As a conference luncheon speaker, he introduced an international note to the proceedings by describing a recent trip to Japan during which he and other Labor Department representatives studied the new Japanese occupational safety and health act. Robbins and the group also visited a number of industries to see the Japanese law in action.

In addition to the AIA, the conference was sponsored by the American Society of Civil Engineers, the Consulting Engineers Council of the U.S. (as of July 1, the American Consulting Engineers Council), and the National Society of Professional Engineers. More than 300 architects and engineers attended.

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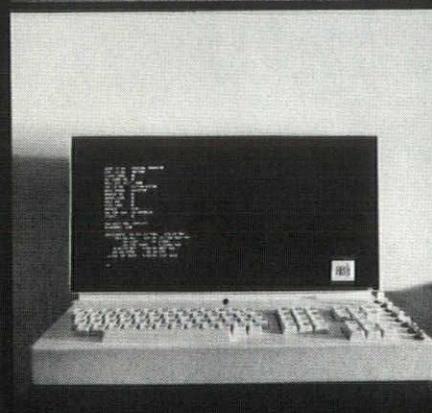
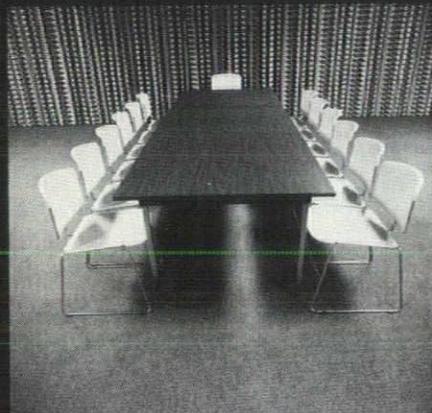
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2A-01 General

This section shall govern any and all items herein listed, and shall apply whether the building is finished or not.

2A-02 Whims, Wishes and Changes

The Architects, their draftsmen, secretaries, wives, children and relatives shall have access to the property and to the Contractor's equipment at all times. Any instructions, verbal or otherwise given by any or all of the above listed persons, shall be considered by the Contractor to be both drawn and specified and shall be executed in a workmanlike manner whether possible or not.

2A-03 Inconsistencies

Wherein, however, whichever, whatever and whyevery, any part of the building which after construction has started, shall seem to be inconsistent with good practices of construction, these items of work shall be carried out regardless of the wishes of the Contractor and shall be guaranteed FOREVER at no expense to the Owner.

2A-04 Drawing Mistakes

The Contractor shall disregard any drawing mistakes and build the building in accordance with the desires, whims and wishes expressed above without recourse or payment thereof, waiving all arbitration.

2A-05 Subcontractors

Any and all subcontractors shall be completely bound, maybe hand and foot, by any of these items in the prosecution of his work. Prosecution shall not be considered persecution, whether it is or not.

New Urban Planning Book Now Available

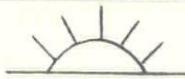
"New Towns in America: The Design and Development Process," has just been published through the cooperative efforts of The American Institute of Architects, the Department of Housing and Urban Development, and John Wiley & Sons.

The book draws upon the combined experience of 22 specialists and more than 350 professionals who participated in an AIA-sponsored conference on new communities, and reflects the conviction of the AIA Urban Planning and Design Committee that the architectural profession needs to be informed about community-scale development.

The text, photos, plans, drawings, and diagrams offer an authoritative analysis of where our nation is today in the art of new town development, where it has been in the past, and where it may be — and should be — going.

Editor James Bailey takes the reader on a "guided tour" of the new town design and development process, from the comparative land-use plans of 32 historic and current American new towns to the 1972 report of the AIA National Policy Task Force. The book explores virtually every aspect of the process, beginning with an overview of systems design, through a step-by-step description of how its myriad parts are identified, unified, and solidified, and finally a deeper analysis of the parts — economic, social, physical, and political.

Clothbound, 165 pages, with photos, two-color diagrams, and an extensive bibliography, the book is available from The American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 20006 at \$19.95 retail, \$16.95 to AIA members.



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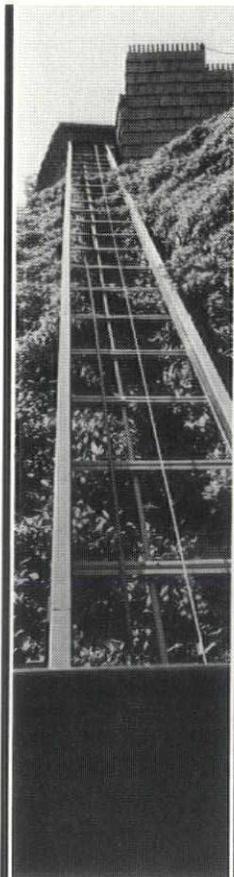
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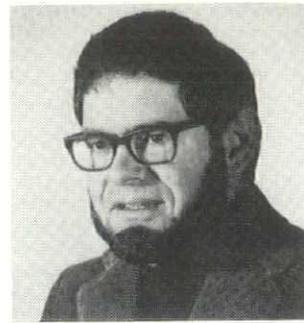
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SOLVE VERTICAL TRANSPORTATION PROBLEMS

Some Thoughts on The State of the Art and Science

by Grant Hildebrand AIA



The current cliché has it that the profession is changing. Like most clichés, this has its basis in truth. Also, like most clichés, it glosses over, or avoids, the nuances and details of the truth on which it is based.

In the first place, not everything about the profession is in state of change. The old Vitruvian/Wottonian trilogy, Firmness, Commodity, and Delight, are still there. What we mean by change — what I mean by change — is that these three categories of determinants are seen in different ways, with different emphases than before, and that their synthesis into design hypothesis also proceeds in an identifiably new and different way. Yet so far as I know no single discussion of distinctions of the immediate present and the supposed near future has yet attempted to catalog the particular differences. The purpose of this essay is to do so, and having done so to examine, though briefly, some of the prospects and problems of these differences.

A search of recent theoretical literature, discussions with a number of leaders in architectural education and practice, and some quiet meditation lead me to conclude that the architectural task in the present and very likely in the near future is distinct from that of the past in at least nine ways. These I identify as:

1. An increased concern with objective processes in design methodology.
2. An increased concern with an architecture which serves a non-traditional client. Architecture as represented in its best-known examples through time has been an architecture in the service of wealth, and the same is roughly true of many published current efforts. There is now a ground swell of concern for service to all components of human society, with concomitant emphasis on the needs of the user.
3. An increased emphasis on the detailed and complex ways in which man interacts with his architectural environment, often in ways contrary to those commonly presumed or supposed.

4. An increased emphasis on the context of the building in a physical sense; its relation to its neighbors and its neighborhood.

5. An increased concern with the building's impact on ecological balance. This is somewhat related to the preceding concern but is indirect rather than direct, and deals with such things as the building's energy consumption, water runoff modification, natural vegetation displacement, wastes processing, and water consumption and modification.

6. An increased emphasis on technological innovation.

7. An increased emphasis on the breadth of the architectural task, extending in the pre-design direction into feasibility/desirability studies, and in the post-design direction into post-construction evaluation.

8. An enlargement of the tool resources available to aid the design process, far and away the most significant being the computer.

9. An increased concern for a serious research component in both professional education and professional practice. This concern is implicit in many of the above, but is of such significance that it seems to merit an independent listing.

Those are the trends, as I see them. What are the implications?

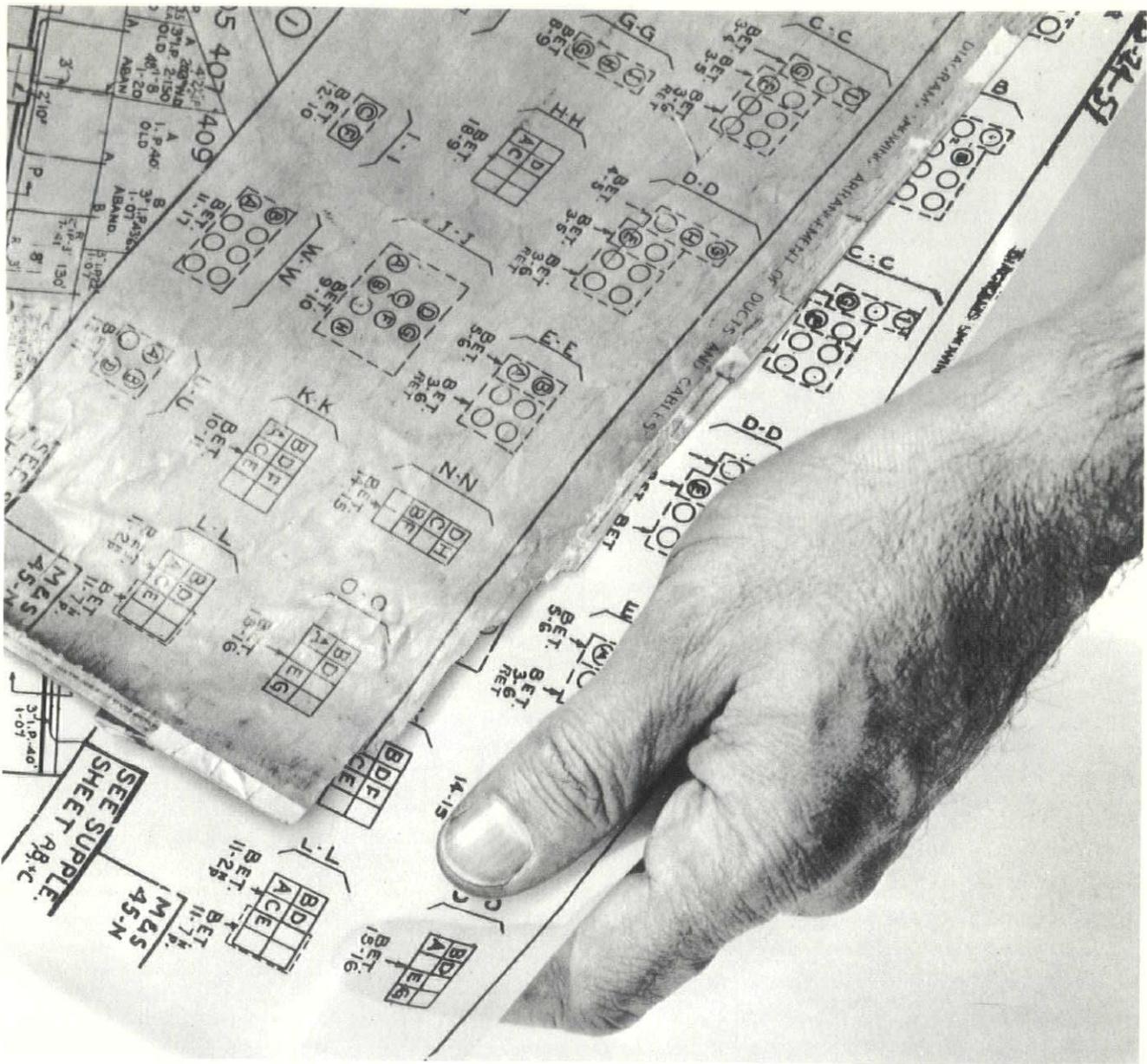
(1) Objective methodology in design has had its ups and downs. The seminal work of recent years was, no doubt, Christopher Alexander's *Notes on the Synthesis of Form*; seminal because it addressed the nub of the matter, the synthetic act rather than data collection. Interestingly Alexander now seems to have recanted his earlier focus and was recently quoted as saying, "I am persuaded that the emphasis on methodology is a waste of time." His change of heart seems to be based on the fact that methodological theory is appealing, but has not demonstrated a clear and superior usefulness in the field and especially in that area to which his work was addressed, that is, synthesis.

Thus the advocacy of objective synthetic methodology as a real design tool may be premature (a point we will elaborate further in a discussion of the behavior-environmental design alliances). Those who still champion objective methodology to the exclusion of more intuitive or subjective processes must face this same objection. It's a formidable one. But perhaps both the objective and the subjective camps overlook the possibility that each complements the other, as in fact they always have in varying degrees. When we look to objective methodology as the whole answer we ask too much of it; and if we abandon our search for objective methodology we forego an exercise of great value, a point stated more poetically in the famous Zen dictum: "Develop an infallible technique, then wait for inspiration." We need to continue the attempt to objectify design decision making not because it will perform all tasks for us, but because it will increasingly describe and prepare the conditions and criteria pertinent to design judgement. Laws, after all, are not law-courts; they provide an agreed-on framework for judgemental decision-making. We come full circle to Alexander again. His recent work on what he calls Pattern Language most closely approximates the above model in which language = law; designer = law court. (Incidentally, this analogy has its limits, but it should not be attacked on the ground that laws are immutable, unchanging; in the socio-political use of the term they are not.)

(2) Service to all components of human society is a concern to which every designer except the avowedly ignoble would, I suppose, subscribe. The action here, however, lies in the traditional private practice/client remuneration arena. The client and the architect engage in a relationship consummated by the provision of a service and payment of a fee; thus these parties and these alone are privy to decisions. Yet

Continued on page 20

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The current cliché has it that the profession is changing. *Hawaii Architect* is presenting a series of thoughtful evaluations of what these changes are or are not and what some people think they should be.

Hildebrand from 18

the result may impact a public, or a user, who are distinct from, but affected by, the decision making process. The field of Urban Planning long ago and of necessity found access to the public organization and remuneration format; seemingly architecture must also do something of the kind if it is to do more than pay lip service to "all components of society." It must also find an answer to a problem which still plagues the planner as well, that of finding a workable concept of participatory decision-making which involves user and/or public in an organized, constructive way. This problem is even tougher than that of remuneration, and even more important, since without a solution the established power structure will continue to call the tune whether or not the design is executed by public bodies and paid for by public monies.

(3) Man-environment interaction is one of the hottest areas of design education at the moment. Interest in it is based on the belief that the social sciences, and psychology in particular, can provide defensible generalizations about human behavior in architectural contexts, and that these generalizations will represent an improvement upon presumed or intuitive beliefs because based on controlled, documented, and interpreted observations gathered in systematic ways. The corpus of material in this area is growing rapidly, founded on the invaluable work of men like Robert Sommer and Gary Winkel. But here I would play the devil's advocate by suggesting that while the alliance between social sciences and architecture is pregnant, it is, to continue the metaphor, premature — its day of delivery has, perhaps, not yet come. No need to abort — the fetus shows every sign of being a prodigious child — but more gestation is in order. These are heretical words, but I say them after giving considerable thought to this matter. In a recent article in *Scientific American* Gunther Stent defines a premature scientific discovery as one whose "implications

cannot be connected by a series of simple logical steps to canonical, or generally accepted knowledge"; and thus those in the appropriate field do not "seem to be able to do much with it or build on it." Here, I think, is precisely where this alliance is premature. Design process as practiced is an elaborate and sophisticated skill capable of synthesizing unusually large numbers of variables into a hypothesis to be tested by evaluation of the designer, then recycled for another try. To date I know of no specific design which has been able to assimilate any particular contribution from the new body of behavioral data. I don't say it won't happen, perhaps it will quite soon; I only say I don't think it has happened yet. I see two reasons for this. The first is that to date behavioral data have been derived from relatively simple cases (i.e., Sommer's *Personal Space*) and such cases seem to lie somewhat below the threshold of the architect's design intervention. The second reason, perhaps more fundamental, is that behavioral data do, by their nature, derive from observation of existing conditions, so that the more inventive and original the design hypothesis, the less applicable are the behavioral data. Thus it seems to me that we need to look for, and support, two developments in this area of concern; namely the extension of behavioral investigation into more complex areas of design problem-solving, and the expansion, generalization, and codification of behavioral knowledge so as to be applicable to design hypotheses which are significantly different from any particular known condition. When those developments are realized we can expect a real quantum jump in the relevance and success of our professional skills.

(4) Concern for the physical context of the building is, of course, the province of Urban Design, and it has been discussed a great deal already. Its significance is probably not a point in question, and by reason of common agreement on that point its development is

under way at a number of schools and in a number of practice situations. In terms of this article, therefore, I leave it to state its own case and chart its own destiny.

(5) This one is for real. The problem of the building's impact on energy resources and ecological balance is perhaps the most urgent and unavoidable of all the concerns noted here. It is receiving appallingly slight attention. Ralph Knowles at Southern California has done distinguished seminal work over the last ten years in studies of building morphology as related to energy resources. John Reynolds at Oregon has attempted to understand and teach environmental controls systems as a study of the complete cycle of the various fluids serving the building. No doubt others are at work on similar efforts. Still, the list is finite; this in spite of the fact that depletion of earth-originating energy resources, and unacceptable modifications of ecological balances, are now understood by a very large segment of society. It would seem clear that buildings with their appurtenant gadgetry are the primary consumers of electrical energy, and quite possibly of petroleum energy as well, though that is more debatable. Certainly architecture shares with transportation systems a major responsibility for modifications to natural ecosystems. Do we not have the most pressing responsibility to deal with design in the context of the building's impact on Spaceship Earth? Do we not have the most pressing need to conduct massive research and development toward this end? We'd better do it soon or we'll be doing it in fur coats by candlelight.

(6) Buckminster Fuller is our Lieber Meister in technological innovation, but whoever follows in his footsteps must proceed, as Fuller does, with one eye firmly fixed on the immediately preceding comments.

(7) Many firms have dealt with feasi-

Continued on page 22

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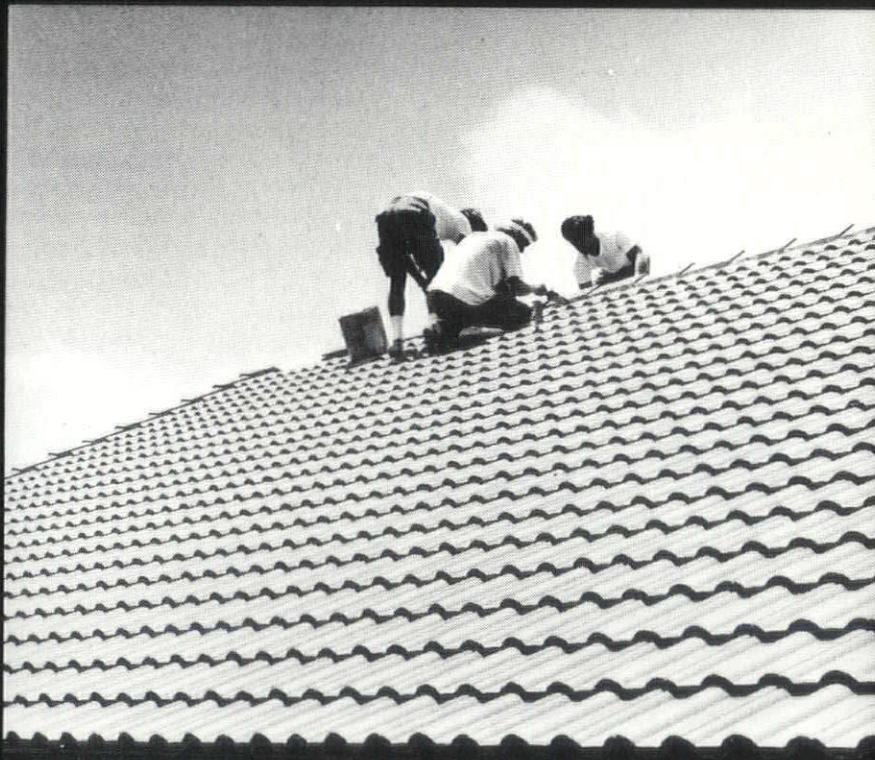
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Hildebrand from 20

bility issues as a matter of course for decades, perhaps centuries. Desirability is a stickier issue, and one in which the architectural profession may have an interest conflict of such intensity that it tests the strongest conscience. Like the concern for service to all components of society, with which the desirability issue is linked, a third party, a public body may be necessary to keep the offense honest. Zoning, codes, and the city council review boards seem demonstrably inadequate. A recent Urban Renewal proposal in the Pike Place Market area of Seattle was successfully opposed on socio-humanistic grounds of (un) desirability; it may well be a watershed in the area of desirability studies but it was decided only after inordinately exhausting expenditure of human energies and emotions, and thus may have been a Pyrrhic victory. Sometimes, as in that case, the answer from a desirability study is "no," and the architectural profession must find the moral strength to accept, encourage, and support this possibility, or for the sake of long-range professional health must support an independent authoritative body capable of doing so.

Ex post facto evaluation of building performance, like feasibility studies, also has a long history. The Pharaohs of the Old Kingdom no doubt asked, consciously or subconsciously, how the tomb performed with regard to its program, and developed the type accordingly, as did the cathedral builders. In our century the work of Albert Kahn constitutes an interesting example. In his factory designs the needs were urgent, and performance relative to them was measurable to a degree, in terms of cost per unit, flexibility, employee turnover, and so forth; and thus Kahn could proceed to a subsequent design having possessed himself of some fairly firm data about the performance of the preceding one. In fact the serious study of architectural history is itself the evaluation of building performance, whether seen from the socio-philosophical viewpoint of Scully, Frankl, or Wittkower, or the

Grant Hildebrand is a native of Battle Creek and a graduate of the University of Michigan (B. Arch. '57, M. Arch. '64). Between 1957 and 1964 he worked with a number of Michigan architectural firms including Paul Hazelton (Traverse City), Albert Kahn Assoc. Inc., and Minoru Yamasaki. In 1964, with his wife Judy and two boys, he went to the University of Washington in Seattle to teach design and history; he

more socio-utilitarian viewpoint of Fitch, Condit, or Giedion. Nevertheless I think most practitioners would agree that there is a world of work to be done in evaluating in more immediate context the building's performance in terms of its intentions. We may learn from our mistakes, but we should be learning systematically and on a widespread basis. This may cost us, and ultimately the client, more in terms of dollars, but society is likely to agree its worth the cost if a school, or housing project, or whatever, really performs as we say it will and as they intend it should. I know of only two firms in Seattle concerned with formal, systematic evaluation; both plan to do it but neither has yet. One of the firms envisions an evaluation team making a one-day visit to the completed building. Most of those who think seriously about evaluation have in mind something considerably more extensive than that. Methods and techniques germane to the task can be found within the social sciences, and are relatively sophisticated. The work of Sommer and Winkel as cited in (3) is pertinent; that of Henry Sanoff is even more so.

(8) Use of the computer in architecture has had considerable examination and publicity already and needs no further elaboration here.

(9) Research as properly understood involves certain essential characteristics. It must intend and achieve the systematic discovery of new knowledge (happstance discovery, while useful, isn't research); it must describe the nature and purpose of this knowledge; it must submit this knowledge to objective and methodical examination; and it must disseminate this knowledge to concerned areas of study and application. Satisfaction with lesser standards of definition can only thwart the proper and useful progress of our profession. Furthermore, if research is to lead to real professional growth, it must address itself to really significant problem areas. I am in fact often appalled at the level of investigative significance considered by

remains there as Professor and Associate Chairman of the Department of Architecture. From 1965 to 1970 he was one of a partnership formed to design the UW's new building for the College of Architecture and Urban Planning, and he has recently completed a book, *Designing for Industry, the Architecture of Albert Kahn*, to be released by M.I.T. Press in July.

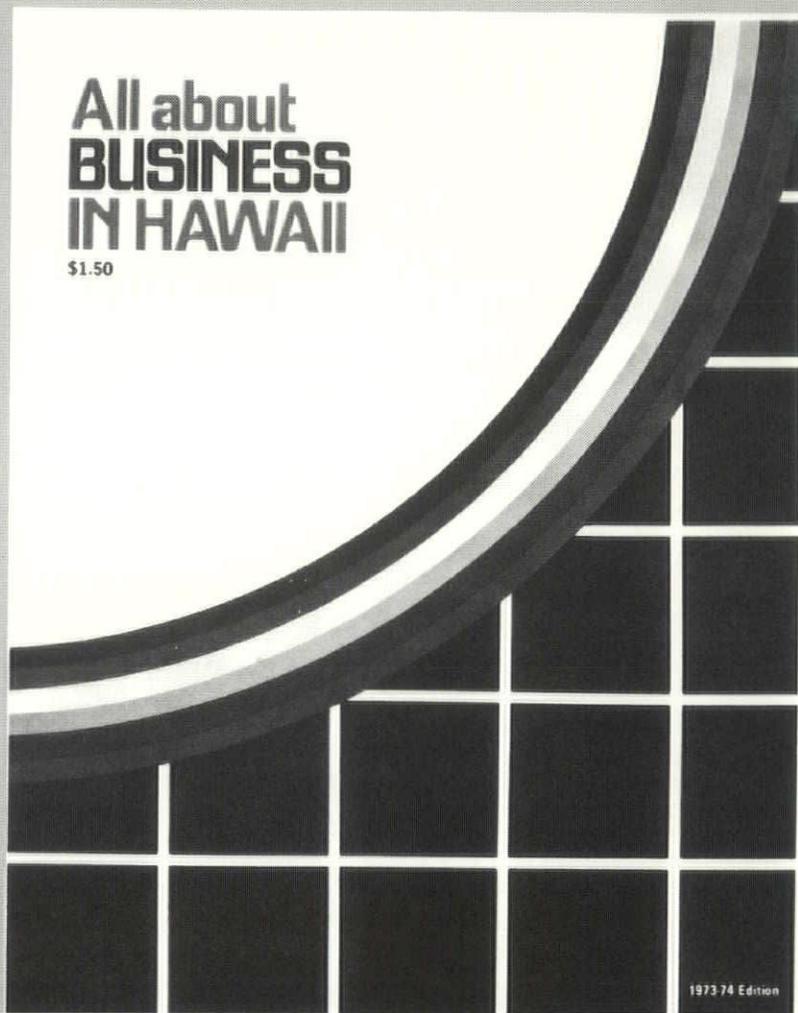
many firms to constitute serious research. Materials testing, for example, does not represent the depth and profundity of investigation most needed. Many of the above eight concerns may more appropriately suggest more pressing problem areas. Architectural education has not usually stressed systematic and sustained research, and accordingly has not usually offered a curriculum which provides necessary grounding in methodology and techniques. Nor has the profession itself adequately taken up the gauntlet, partly because, as just noted, these who comprise it lack the necessary and specialized training, and partly because the fee structure tends to militate against a strong research and development time commitment. The State of Michigan is fortunate in having a University which for a long time has been a leader in research interests and which now is one of a very small handful of schools offering a Doctoral program directed toward preparation for a professional research career. Whether other schools will do likewise, and whether the profession can respond in both its monetary and attitudinal aspects, remains to be seen.

I don't pretend that the issues as described here, or my analysis of them, is necessarily correct or complete. Others may see things in other ways. I do intend, however, to open a discussion of the full range of specific changes confronting the profession, and hope that such a discussion might supplant piecemeal or vague discussions of change. Such a discussion, it seems to me, should help us to see not only where we seem to be headed, but by what paths, and whether that is where we want to be headed, and if so whether those are the best paths, and whether some paths are more fruitful or more important than others. As Toffler has already pointed out, change need not be man's master; it can just as well be his servant. But he must be prepared for mastery; he must have a plan. For that matter, some elevations and a section or two wouldn't hurt.

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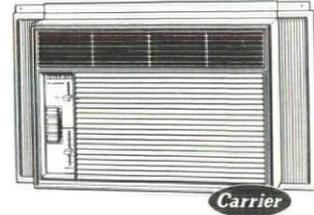
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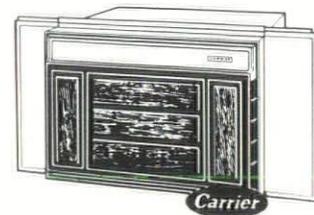
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