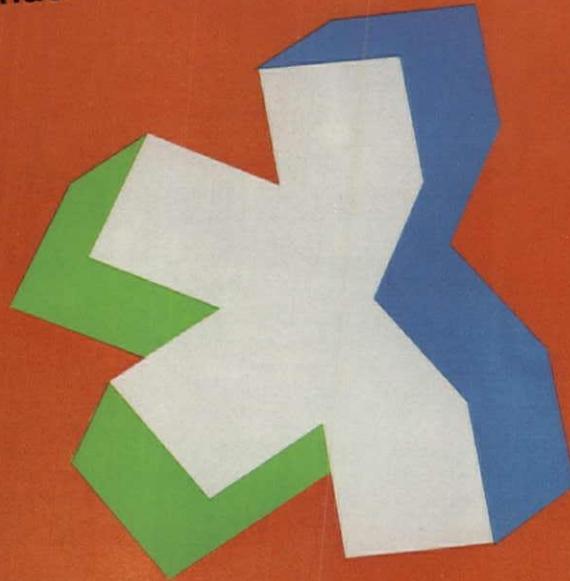


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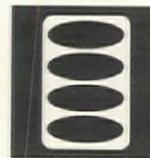
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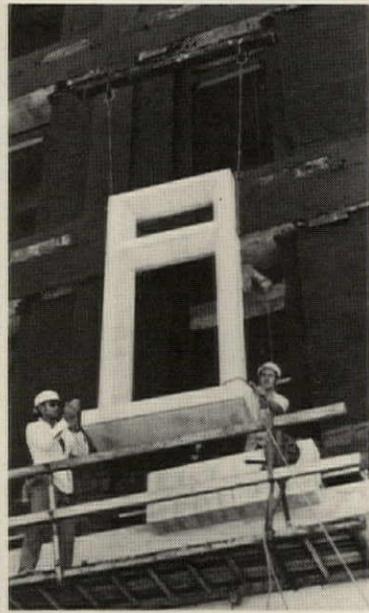
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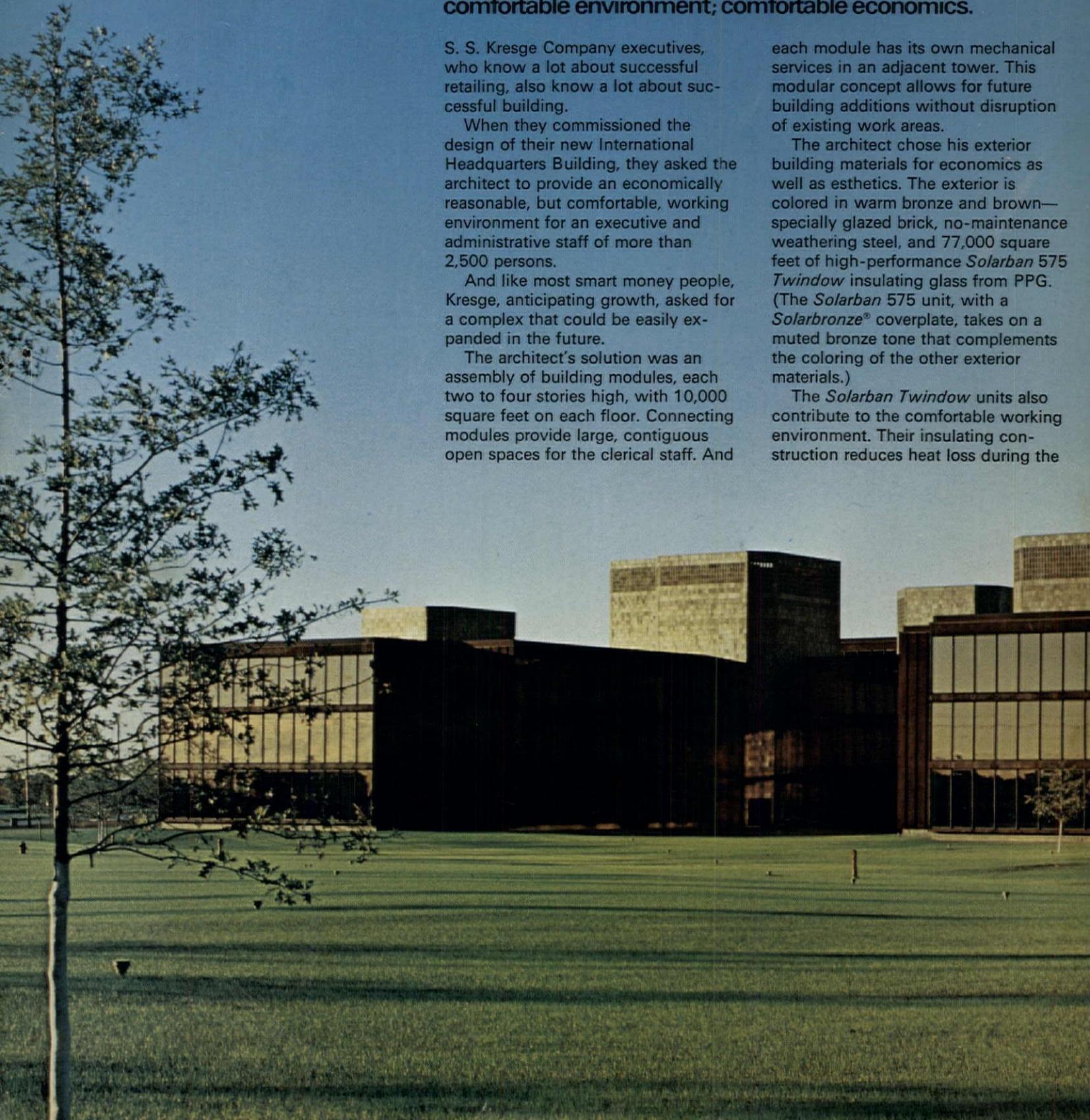
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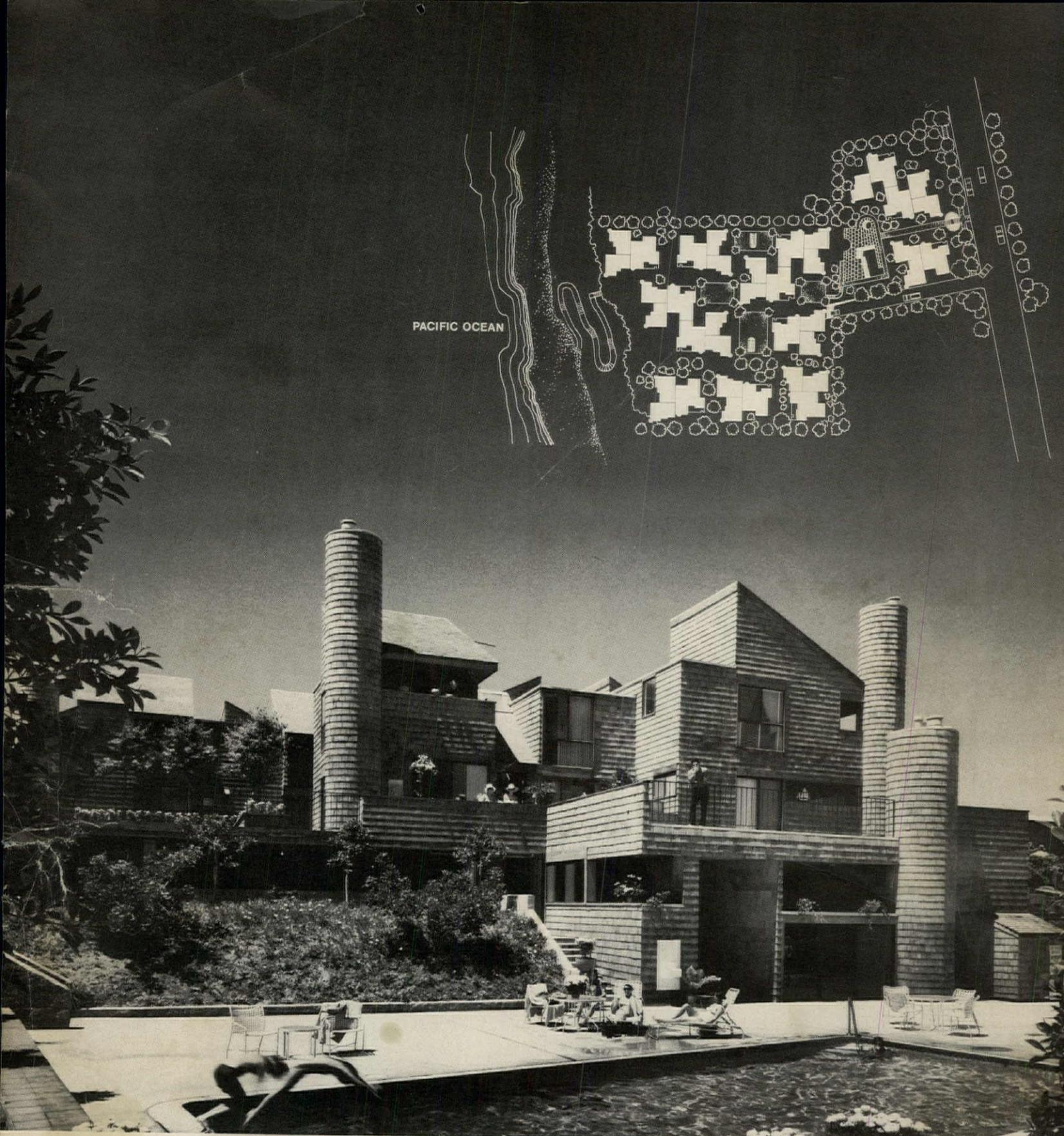
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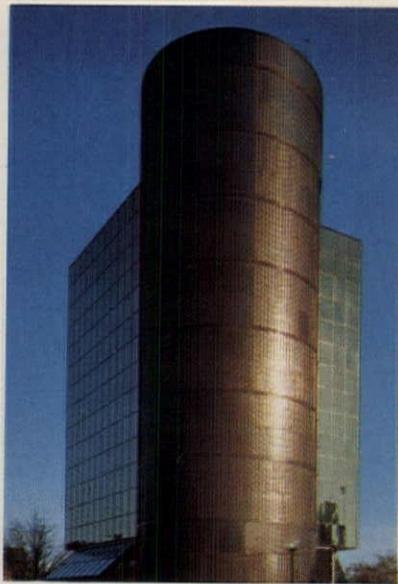
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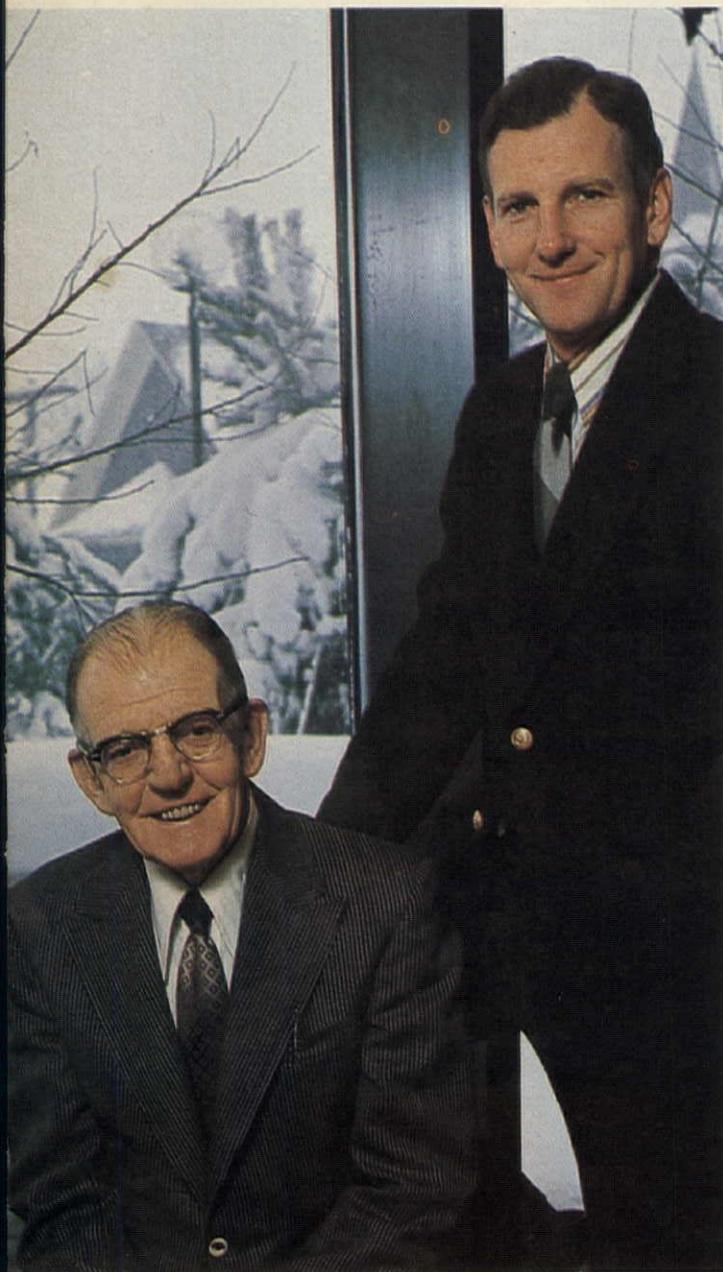
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# **"WE LIKE THE IDEA DOESN'T HAVE TO FROM NATURE PROTECT**

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# THAT A BUILDING SEPARATE PEOPLE IN ORDER TO THEM FROM IT."



*Don W. Seaton, Chairman of the Board;  
Kenneth D. Seaton, President,  
Detroit & Northern Savings & Loan, Hancock, Michigan*

Detroit & Northern Savings & Loan brings an open-world philosophy to bear on its new headquarters building in Hancock, Michigan.

"The area around the building is known as 'Copper Country,' and we wanted the building to reflect Detroit & Northern's long and close involvement with that area's people and industry," says President Kenneth Seaton. "The exterior of the building features copper tones, set off by reflective glass with a golden Vari-Tran® coating."

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# LOF

# Comment and Opinion

**Barrier-Free Architecture Begins at Home:** As this issue of the AIA JOURNAL goes to press and we are packing for the move to the new headquarters building of The American Institute of Architects behind the Octagon House in the heart of monumental Washington, I am reminded of the emphasis on the barrier-free aspects of the seven-story structure. From the 18th Street side, the entrance and elevators can be reached without going up steps. Washroom facilities have no impediments to use. Corridors, elevators and several telephone booths are large enough to accommodate wheelchairs.

In the case of the designers of the project—Norman C. Fletcher, FAIA, and Howard Elkus, AIA, of The Architects Collaborative—this was no afterthought, for the firm has been making a study in some depth for over a year of facilities for handicapped people. All of which has led Sarah P. Harkness, AIA, who is coordinating the research at TAC, to come up with several pertinent observations, which a number of other architects undoubtedly have encountered in their practice.

Before offering her comments, it should be noted that since 1968 there has been a federal law requiring that all buildings constructed in whole or in part with federal funds be made accessible to the physically handicapped. In addition, 48 states have passed counterpart legislation, the exceptions being Nevada and North Carolina. As Mrs. Harkness points out, "We are very much in sympathy with the objectives of these regulations. However, we have found that there can be many different interpretations of the individual codes which may result in physical layouts that are not, in fact, 'accessible to and usable by the physically handicapped.'

"Beyond crucial dimensions and figures that influence design, we are exploring *how* the variously handicapped people move about and *why* they need what they do in their physical environment," Mrs. Harkness continues. "Although we are presently designing buildings with a better understanding of the needs of handicapped people, there are more important questions still unanswered. Among them: 1) What is the best arrangement of bathroom and lavatory fixtures that will be suitable for the greatest number of people? 2) What is the minimum size of a bathroom that will incorporate these features—an extremely important issue in housing, for example, where square footage is at such a premium? 3) What is the best height for kitchen sink and oven, or should these be adjustable?"

In any event, it is good news to know that work is being done in the private as well as the public sector. To cite another example, an article entitled "High Test Architecture" in this same issue describes how an architect has designed a prototype Texaco station for the Avenues of the Americas in Manhattan so that the physically handicapped will have easy access to all parts of the structure. It is, to the best of our knowledge, the first time that such a facility has been created for paraplegics, yet in numerous cases the automobile is a significant part of their lifestyle.

As far as the Institute is concerned, its activities are being coordinated through the Committee for Barrier-Free Architecture of the Potomac Valley Chapter AIA working in conjunction with the Committee on Barrier-Free Environment. Chairman of the latter, which is an arm of the President's Committee on the Employment of the Handicapped, is Leon Chatelain Jr., FAIA, a former president of the Institute and of the National Easter Seal Society for Crippled Children and Adults; vice chairman is Edward H. Noakes, AIA.

In passing, I would like to mention that just about every week we receive at least one request, often for copies in quantity, of the article "Buildings for All to Use" which appeared in the JOURNAL for March 1969. While we have long exhausted our supply, including a large reprint order, readers can purchase this piece, either in microfilm or xerographic form, by contacting University Microfilms, 300 N. Zeeb Road, Ann Arbor, Mich. 48106, the same organization which can supply complete magazines or individual articles going back to 1944. ROBERT E. KOEHLER

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# Outlook

## From Postage Stamps to Highway Systems: Assembly Aims to Improve Federal Design

The nation's largest planner, builder, landlord and printer has recognized its responsibilities to give the country a well-designed environment. Last May President Nixon set forth four avenues to follow for the improvement of quality in federal design: 1) the organization of a first Federal Design Assembly; 2) the review and expansion of President Kennedy's *Guiding Principles for Federal Architecture*; 3) the implementation of a program to improve federal graphics and publications; and 4) the review of selection procedures for federal employment of architects, artists and designers.

The initial element of the President's program will be the first Federal Design Assembly to be convened April 2-3 in Washington, D.C. Sponsored by the Federal Council on the Arts and the Humanities under a grant from the National Endowment for the Arts, the assembly will seek to establish that "effective design of public services is in itself an essential public service;" that design is not a cosmetic luxury; and that good design can save money and time and enhance the effectiveness of federal programs.

The theme of the assembly, "The Design Necessity," will be established on the evening of April 2 at a program for federal agency heads, deputy heads, members of Congress, governors, state art council directors and representatives of the design professions and the press. The following day federal administrators will examine case

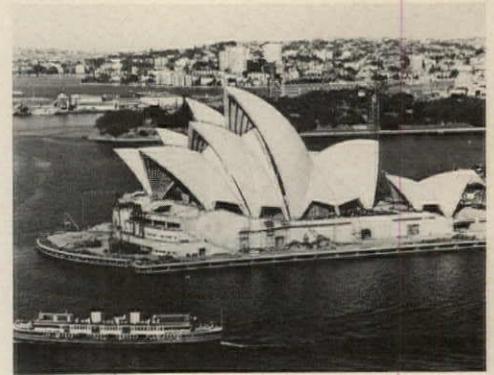
studies which exemplify effective government design in architecture, interiors, industrial design, visual communications and the landscaped environment.

The program, a publication, exhibits and a film will document the assembly. The plan is to make wide distribution to the public of the book, exhibits and film.

A task force composed of eight federal representatives and five design professionals is planning the assembly. Its chairman is J. Carter Brown, chairman of the Commission on Fine Arts and director of the National Gallery of Art. Program co-chairmen are designer Ivan Chermayeff of New York City and Richard Saul Wurman, AIA, of Philadelphia.

"We hope the assembly's concept will provide the pattern and tools for motivating states and communities to follow the federal initiative in improving their governmental design," says Nancy Hanks, chairman of the Endowment.

Meanwhile, President Nixon's concern for the arts is evidenced in his proposed budget to Congress for fiscal 1974. The appropriation for the arts and the humanities is nearly doubled the current year's sum. The budget calls for a total of \$160 million with \$72.5 million for the Endowment. It is empowered to receive \$7.5 million in private contributions. This sum, if received, would mean that the Endowment would have considerably more than its current budget from federal funds of \$80 million.



The new Sydney Opera House will be the site of the California Council AIA's third Pacific Rim Conference scheduled for this coming fall.

## Almost Ready to Sail on Cultural Seas, Opera House Called Engineering Marvel

Construction on the long-awaited Sydney, Australia, Opera House is scheduled to be finished this month. It's been 14 years since work started on the structure.

Danish architect Jorn Utzon was selected as the designer in a competition in which there were 223 entries from 32 countries. Utzon resigned in 1966 because of a dispute about rising costs and what he considered his lack of freedom. "Australian architects were aghast," commented one of their colleagues, Robin Boyd, at the time. Boyd reported in the architectural press that architects, students and others marched to Parliament House from the site of the opera carrying placards stating, "We want Utzon." But the conflict could not be resolved, and Lionel Todd, Peter Hall and David Littlemore were appointed by the Australian authorities to finish the structure.

The opera house is a marvel of engineering technology, incorporating techniques never tried before in architectural history. During all phases of construction, computers have been used. "It has been estimated that computer work undertaken would have occupied 1,000 mathematicians for more than 100 years," the magazine *Japan Architect* has written.

The major engineering achievement is the construction of the shell roofs. Spheroid in curvature, the shells and all roof surfaces have the curvature of a sphere with a diameter of 492 feet. The shell-like arches of the roof rise as high as 221 feet above sea level. The roof has 2,420 precast concrete parts, and the total weight of the segments is more than 21,000 tons. Each shell is supported by 15-foot long ribs made up of from 5 to 13 wedge-shaped segments. Stressing cables bind the ribs together, the total length of them being 217 miles.

The entire structure is mounted on a special foundation frame. Supported by concrete piers, some of which are sunk more than 70 feet below sea level, the building looks like sailboats in the harbor.

The opera house has five performance halls, a restaurant and a performers' facility. It will accommodate 5,350 persons, and all its rooms are versatile enough to hold a variety of shows ranging from opera to lectures, ballets, festivals, conventions and

*continued on page 51*

## Death Takes Stephen Cram, Recent HRC Coordinator at Institute, at Age 28



Stephen Cram

Stephen D. Cram, 28, formerly on the AIA staff, collapsed and died of an apparent heart attack on February 11. A former basketball star, Steve was competing in an industrial league game at the time of his death.

Steve was employed by the Institute in 1969 to coordinate the use of VISTA volunteers in community design centers. In 1970-71 he worked as the assistant administrator of the Community Services Department. He then became coordinator for all Human Resources Council programs. He left the AIA in December 1972 to work with the firm of Robert J. Nash of Washington, D.C.

Steve was graduated from Cornell University in 1968 with a bachelor's degree in architecture. At Cornell he played varsity basketball and was on the All-Ivy League Team. In 1966 he won the Cornell Student Athlete Award.

During his junior and senior years at Cor-

nell, he was a member of the Honor Society. He was also a member of the Gargoyle Honorary Architecture Society and received the Alpha Rho Chi Architectural Award in 1968. Upon graduation, he served as a VISTA Volunteer in Pikeville, Ky.

He is survived by his wife Bonnie and his son Matthew who was born on February 8.

## AIA Task Force Focuses on Energy Crisis

The AIA has formed a task force of members to make a comprehensive exploration of the long- and short-range aspects of energy conservation. The work of the task force is being funded through a contract with the AIA Research Corporation and the National Bureau of Standards.

Leo A. Daly, FAIA, Omaha, is chairman of the task force. Its members are George T. Heery, AIA, Atlanta; Frithjof M. Lunde, AIA, New York City; Richard G. Stein, FAIA, New York City; and Herbert Swinburne, FAIA, Philadelphia.

Among the issues to which the task force will devote attention will be ways the design professions can help reduce the unnecessarily high levels of energy consumption and encourage more efficient use of shrinking power resources.

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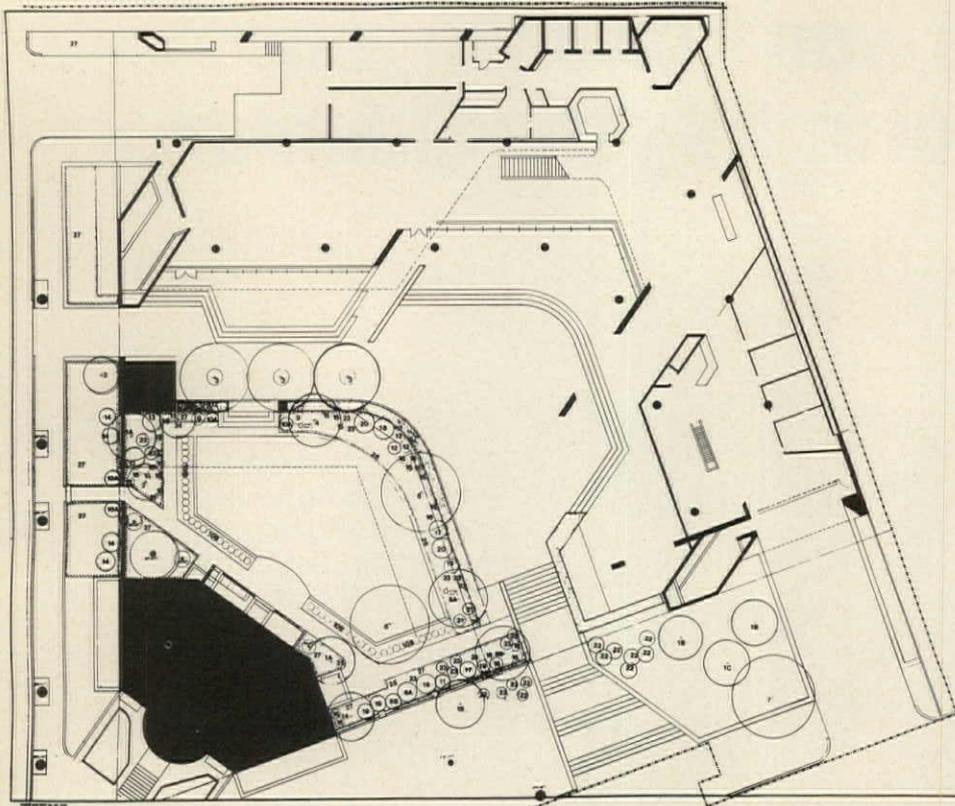
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## The AIA's 'Welcoming Face'

by WILLIAM H. SCHEICK, FAIA  
*Owner's Representative*  
*AIA Headquarters Project*



Last November the Washington-Metropolitan Chapter AIA scheduled its noon-time meeting for a preview of the Institute's new headquarters building. Attendance records were broken when some 200 members showed up. The AIA Board of Directors got its preview when it met in Washington, D.C., early in December.

Interest is high and reactions are good. The public seems to like it, too. Though sightseers were not admitted during construction, they walked through the new terraces from 18th Street to New York Avenue at all hours, evidently enjoying the environmental appeal of the enlarged garden.

The new complex of Octagon House, garden and headquarters fulfill admirably the spirit of the program so thoughtfully written by Stanley McGaughan, FAIA, of Washington, D.C., professional adviser for the competition in 1964 that initiated the action to have a new headquarters building.

Norman C. Fletcher, FAIA, principal, and Harold Elkus, AIA, senior associate, of The Architects Collaborative, who are the architects of the new seven-story building, have achieved the quality of a sympathetic and unobtrusive background for the historic Octagon House insisted upon by the Commission of Fine Arts. They have done so at no sacrifice to their strong statement of contemporary design.

The exterior materials are limited to concrete and glass. The precast concrete is gray, textured by sandblasting to etch out the integral trap rock aggregate.

The Octagon House and the new building are joined by restorations of the original brick garden walls, the old smokehouse on 18th Street and bold, simple new iron gates at both New York Avenue and 18th Street entrances. The large new brick terrace makes a transition of brick texture from the verticality of the garden walls to the terrace's own horizontality. The brick terrace paving, which extends without interruption into the building's ground-level lobby and exhibition space, becomes a dominant material in the garden scheme, with the warmth natural to the material.

The original Octagon garden almost looks as though it had not been torn out to build the underground garage and basement level of the new building. The garden proper (exclusive of the new brick terrace) is almost exactly its former size; landscape plantings are still those of a "Virginia garden."

The top five floors provide flexible office space with fine views. AIA staff operations occupy the entire third floor, laid out as an "open" plan with Reff storage units 56 inches high delineating office areas.

Some 65,000 square feet in the top four floors are fully leased to professional firms and associations, including the National Council of Architectural Registration Boards. Total rentals from tenants, including the AIA, provide the \$1 million income necessary to offset amortization and operating costs.

The most exciting part of the new structure is undoubtedly the combined first and

second floors. The spatial elements of the two floors could hardly be described separately because of their integration into a unified concept.

The ground floor (beginning at the New York Avenue end) contains the library, the entrance lobby and the exhibition gallery. Service elements occupy the north side.

The second floor contains the conference center—including the board room which projects boldly beyond the rest of the facade—and two conference rooms, the social gallery in the center and the executive offices in the west wing. Space for staff offices is north of these.

The spaces described above are essentially those in the program which differentiates the AIA headquarters from an ordinary office building. The ground floor will attract many visitors. The second floor is where AIA members on national committees will do their work in Washington. Many other persons from the related professions and the building industry will be drawn to the conference center.

Traditionally, the AIA has some rather large social events connected with the openings of exhibits and with some of its important conferences. Receptions and catered buffet suppers become a part of these activities. Traditionally, too, national committeemen enjoy "stand-up" luncheons at noon where, as Bob Durham likes to say, some of the most important ideas are exchanged and friendships cultivated.

The social gallery on the second floor was programmed for such functions. The architects then tied this gallery with the ground-floor exhibition gallery by means of a grand staircase worthy of some of the past fellowship ceremonies which sought such a stage.

The focal point of the ground- and second-floor interior spaces is the two-story high tempered plate glass with strong mullions of the same material. From within, the great expanse of glass perfectly frames the entire Octagon House and its garden as the ever-present symbol of AIA's beginnings on this site. From outside, the interior spaces are practically integral with the garden terrace.

Thus, then, at the intimate level of the pedestrians who are flocking into this new urban open space is the welcoming face that the Institute is presenting to the public. □

# DEVELOPMENT BUILDING: THE TEAM APPROACH

C. W. GRIFFIN



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This book is a large-scale road map to guide architects (and other professionals) toward successful project development. 130 pages. Retail \$15.00; AIA members \$12.00. **M135**

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## An Initial Look at the New AIA Headquarters

The new headquarters building of The American Institute of Architects, to be occupied early this month, presents "a welcoming face" to the public, as is pointed out on the Institute Page. The seven-story structure provides "a sympathetic and unobtrusive background" for the Octagon House, which has played a significant role in the nation's history and in that of the Institute. The exterior views here will give the AIA's far-flung membership an orientation and may entice them, we hope, to come visit the new headquarters.

Architects: Norman C. Fletcher, FAIA, and Howard Elkus, AIA, of The Architects Collaborative.  
Contractor: The Volpe Construction Company, Inc.

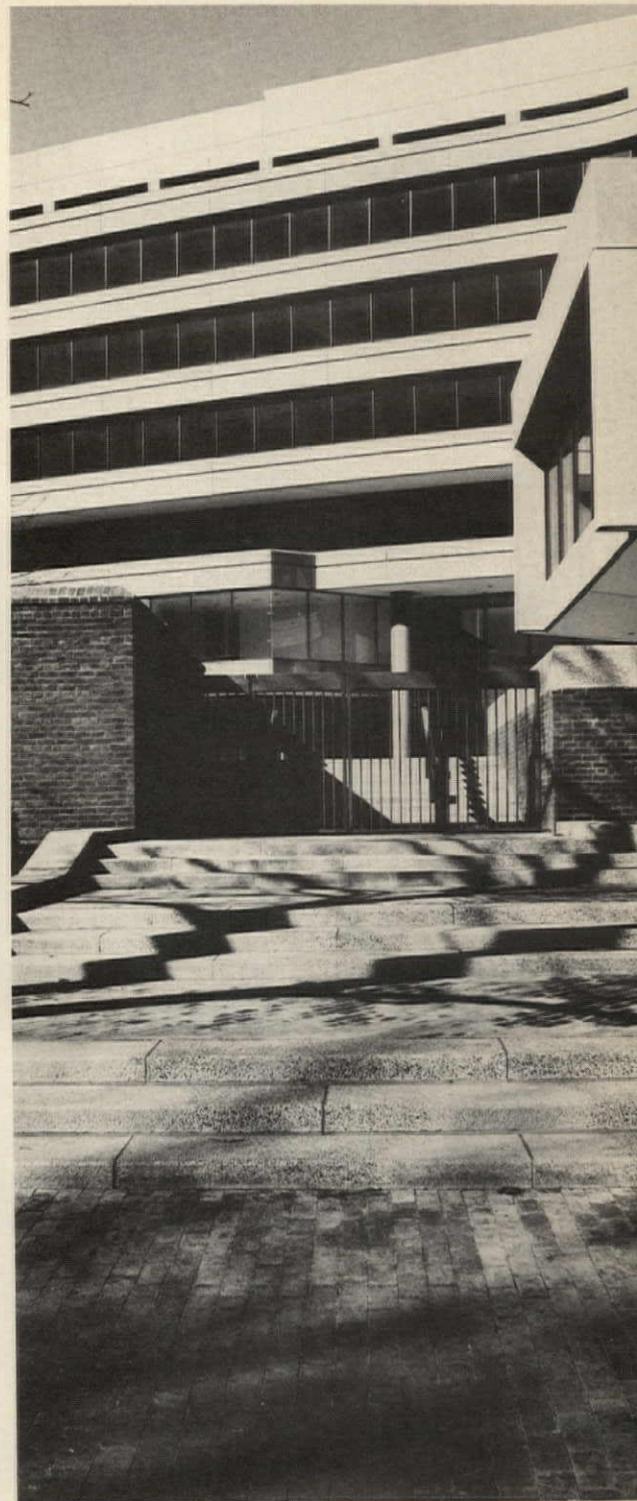
Photographer: Robert C. Lautman.



The New York Avenue view reveals the entire complex.



The Octagon House continues to dominate the corner.



New iron gates join the original walls at the main entrance.

The smokehouse, moved during construction, is back at its initial site.



The boldly expressed Board Room provides a covered entrance.





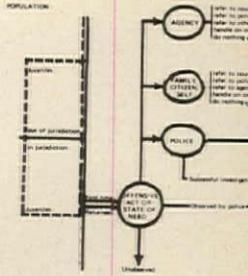
A landscaped garden connects the old and the new.



The late 18th century architecture harmonizes with that of the 20th.

Textures are expressed in the 18th Street stair tower and spandrels.

# Concerning Us All: Juvenile Justice



**If the designer of a juvenile correctional facility is to deliver a scheme that serves the purpose according to present-day philosophies and goals, which put stress on helping rather than punishing the offender, he must have a thorough understanding of how the correctional system works, he must know what to look for from the client and he must know the aims of correction officials. The Management and Behavioral Sciences Center, The Wharton School, University of Pennsylvania, has prepared the volume *Planning and Designing for Juvenile Justice\** as a suggested guideline for anyone concerned with any aspect of this field, including architects. The AIA JOURNAL presents an abstract from this guideline, with emphasis on the all-important planning stages and on the critical entry point of detention.**

*\*Planning and Designing for Juvenile Justice* was prepared under a grant from the Law Enforcement Assistance Administration by the Management and Behavioral Sciences Center, The Wharton School, University of Pennsylvania, in collaboration with Wallace, McHarg, Roberts & Todd and David C. S. Polk, consultant. Senior staff of the Management and Behavioral Sciences Center: Russell L. Ackoff, Charles E. Dwyer, Thomas Gilmore, Howard V. Perlmutter, Marvin C. Rees, Thomas L. Saaty, Eric Trist; junior staff: Jack E. Chang, Burt Cohen, John Eldred, Jorge Gana, Robert Levine, Panayotis Papazoglou, Marc Riedel. The opinions expressed do not necessarily reflect the position or policy of the LEAA. Single copies of the full report are available without charge from the US Department of Justice, LEAA, National Criminal Justice Service, Washington, D.C. 20530.

Among increasing sections of the public as well as among the authorities, disenchantment has become widespread over the relevance and effectiveness of incarceration, either for deterring or rehabilitating the juvenile offender. The mounting seriousness of the problems he creates for himself and for society is strengthening the determination of agencies and communities alike to search for other ways.

Nowhere are the dilemmas greater than in the early phases of the apprehension-adjudicative process. They focus on the issue of detention. Whom do we detain? For what specific purpose? How long, where, under what conditions and by what means? What are the effects?

Many areas of the country entirely lack specialized facilities for the purpose of detention, while those possessed by others are seriously obsolete or grossly unsuitable. For better or for worse, many detention centers will be built or rebuilt in the next few years. How these are conceived, constructed or remodeled, used or misused, will set the scene for a very long period ahead.

For fragmented juvenile justice systems planning is more than usually necessary. Many divergent forces are at work and decisions made at one point can have monumental effects (too often unintended and negative) on others. Without improved planning, juvenile justice seems likely to deteriorate.

If it costs time, money and talent to develop and sustain a planning process, it costs far more of all of these, plus destroyed lives and wasted effort, to proceed without it. For without it, clients, administrators, staff (and the public) are all apt to get pushed into untenable positions by the forces of the moment.

Perhaps the most significant activity in preparing for planning is the selection of participants and determination of the roles they are to play. Given that there are significant values to the participants in any well conceived planning process, then a broad

range of participants should be involved with specific participants being required for particular efforts.

*The decisionmaker/planner.* In juvenile justice the decisionmaker/planner frequently represents only a small segment of the total system. He often has little to do with the juvenile before he enters his specific phase of the apprehension-adjudicative process and even less after he leaves it. Too rarely is there any overall authority. This fragmentation causes serious difficulties for each constituent decisionmaker/planner. In successfully executing their own function, they may seriously hinder the activity of others.

One response would be for the decision maker/planner to include as participants his counterparts, at least in the function which precedes him and that which follows. As far as possible his peers at other points in the system should all be planned into the planning process as consultant participants.

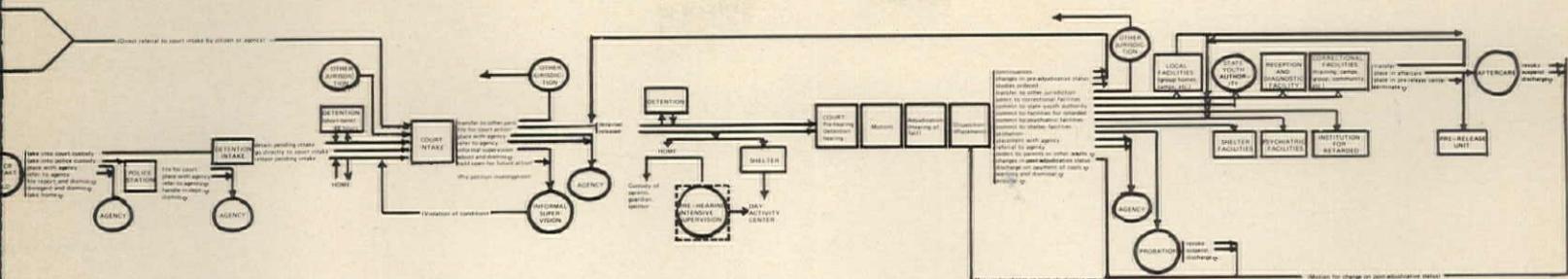
*The client.* Adequate provision must be made for participation by present, past and potential juvenile users of the system. There is no need to guess what juveniles like and dislike about it, what they would wish to see expanded or eliminated. One need only ask them.

Many professionals in juvenile justice may find such participation objectionable. But if the needs of young people are to be served, then these same young people can make important contributions to the planning effort. Juveniles are among the foremost experts (from one point of view) and their aid can be invaluable if properly provided for in the planning process.

Participation can range from informally sought suggestions, to formal reviews or plans, to a negotiated planning role with authority for allocating some resources or determining some aspects of new programs, policies and facilities.

There is a strong tendency by adults to plan *for* rather than *with* young people. This tendency is even stronger when those young people are offenders. If such a tendency prevails, an important opportunity to show real concern for and genuine respect for the ultimate clients of the system will be missed; so will an opportunity to promote their rehabilitation as well as to benefit from their contribution. We must experience their contribution and experiment with some of their suggestions before we can assess their worth.

*The staff.* Staff members who must ex-



ecute plans are a significant resource in the planning process. They have knowledge and expertise unavailable elsewhere. They are always sensitive to how proposed changes might affect them and can frequently spot troublesome elements in a proposal, for which they can suggest remedies. The more they have a hand in creating plans, the more likely are they enthusiastically to support their implementation. At a minimum, staff should be given an opportunity to know what is being planned and to react to proposed changes before final action is taken.

**The community:** There have been strong attempts to hide various components of the juvenile justice system from the community. This is a mistake, particularly in an era of community-based corrections. So far as the decision maker/planner aims to reintegrate the juvenile into the community and arrange that the juvenile need never leave his community while moving through the correctional process, it is incumbent upon him to prepare a place for the community in the planning process. The willingness and ability of any community to accept juveniles back, to aid in their reintegration and resocialization, to live literally side by side with offenders in open community-based facilities depends, in large measure, on the extent to which the community is involved in the planning process.

Community acceptance of experiments in juvenile justice has been slow. If the community is left out of activities which it believes crucial to its values, it will never accept them.

Community holding power, the ability to keep juveniles out of the formal justice system, needs to be, and can be, significantly

strengthened, but certainly not by a planning process which excludes the community from participation in choosing what is to be done.

**The juvenile justice administrator.** All the key administrators who have responsibility for a given subsystem must work closely with the decision maker/planner. Their roles in the planning process are crucial. They will not all be involved with the same intensity (depending upon the focus of any given planning effort), but they should always be kept informed and brought in whenever decisions affecting them are being considered.

**Consultants.** While consultants should never draw up plans for an organization, they have invaluable roles in the planning process. Expertise should be utilized whenever it is available, appropriate and affordable. Planning the planning process necessitates a specification of what expertise is required, where it is to be found, how it is to be recruited and how it is to be used. This task is difficult and delicate since experts can as easily disrupt a planning process as facilitate it. The decision maker/planner should personally brief and screen potential consultants. Their roles have to be made clear and an assessment made of the specific contributions they can make. In no case should they have any decision-making authority or final approval of plans.

**Quality of participants.** In all cases the best people must be sought. The planning process cannot be left to the talentless people with time on their hands. Personnel decisions in preparing for planning are difficult. They hurt because good men have to be taken from the management of crises and from operations and diverted for at least a substantial portion of their time to activities with longer range payoffs. The harshest and most outspoken critics may have to be recruited. Political friends who have "just the perfect candidate" may have to be resisted. These decisions have high costs. But if the quality of the participants in the planning process is diluted, it will become dysfunctional.

**The roles of participants.** The representation of key groups does not imply that everyone must be completely satisfied with the process or its products. Participation by

many individuals does not imply that all are to participate in the same way.

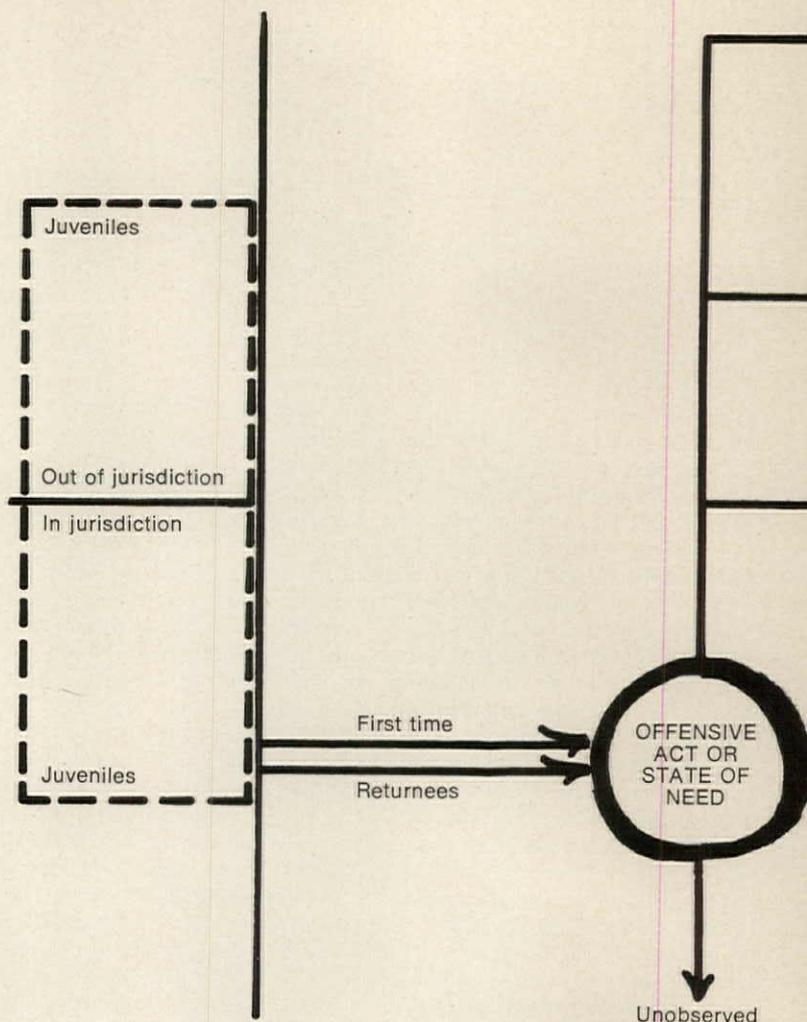
Participative planning requires neither compromise mechanisms nor democratic voting rights for all involved. The role of each group, perhaps of each participant, must be worked out in detail, in advance. Is he (she) to be an adviser, sounding board or fully enfranchised member of the team?

There are substantial dangers in participative processes unless the nature of the participation is clearly stated and agreed to by prospective participants. Otherwise what is seen by the decision maker/planner as an advisory role may be taken by the adviser as a decision-making role. Such lack of agreement leads to counterproductive conflict.

**Size and composition of the planning group.** While the composition of a planning group will vary considerably over time depending on the nature of the tasks with which it is confronted, the size of the nuclear group should remain relatively stable. A nuclear group of less than five is likely to contain too little diversity in special talents and viewpoints. But when the nuclear group grows beyond 10, inefficiencies, communication blockages and other difficulties begin to emerge. If substantially more than that number seem necessary, or if a large number of people are thought to have something of value to contribute at specific times, advisory boards can be established to provide inputs and feedback to the nuclear group.

**Timing.** Some attention must be given to the question of when to announce the formulation of planning groups and planning

POPULATION



efforts and to the timing involved in bringing planning ideas from nuclear groups to advisory and review boards. Sometimes tensions must be allowed to build up before the need for, and acceptance of, a planning process is realized. Preliminary ideas sometimes need quite some time for digestion before being brought up for formal review. A lag between initial plan and final approval can be used effectively in political ways. All this must be thought through in preparing for planning.

**Systems Analysis**

Effective planning for a system requires an understanding of how it operates. This is seldom complete when planning is initiated. Hence the prologue to planning is to conduct an analysis of the system that yields a detailed description of its operations. This is best recorded in the form of an annotated flow diagram, which can then be animated by simulation techniques to test options. This chart can be used to describe any existing system by eliminating options which do not apply. The process of elimination itself has a value. It helps identify options which are not (but might be made) available.

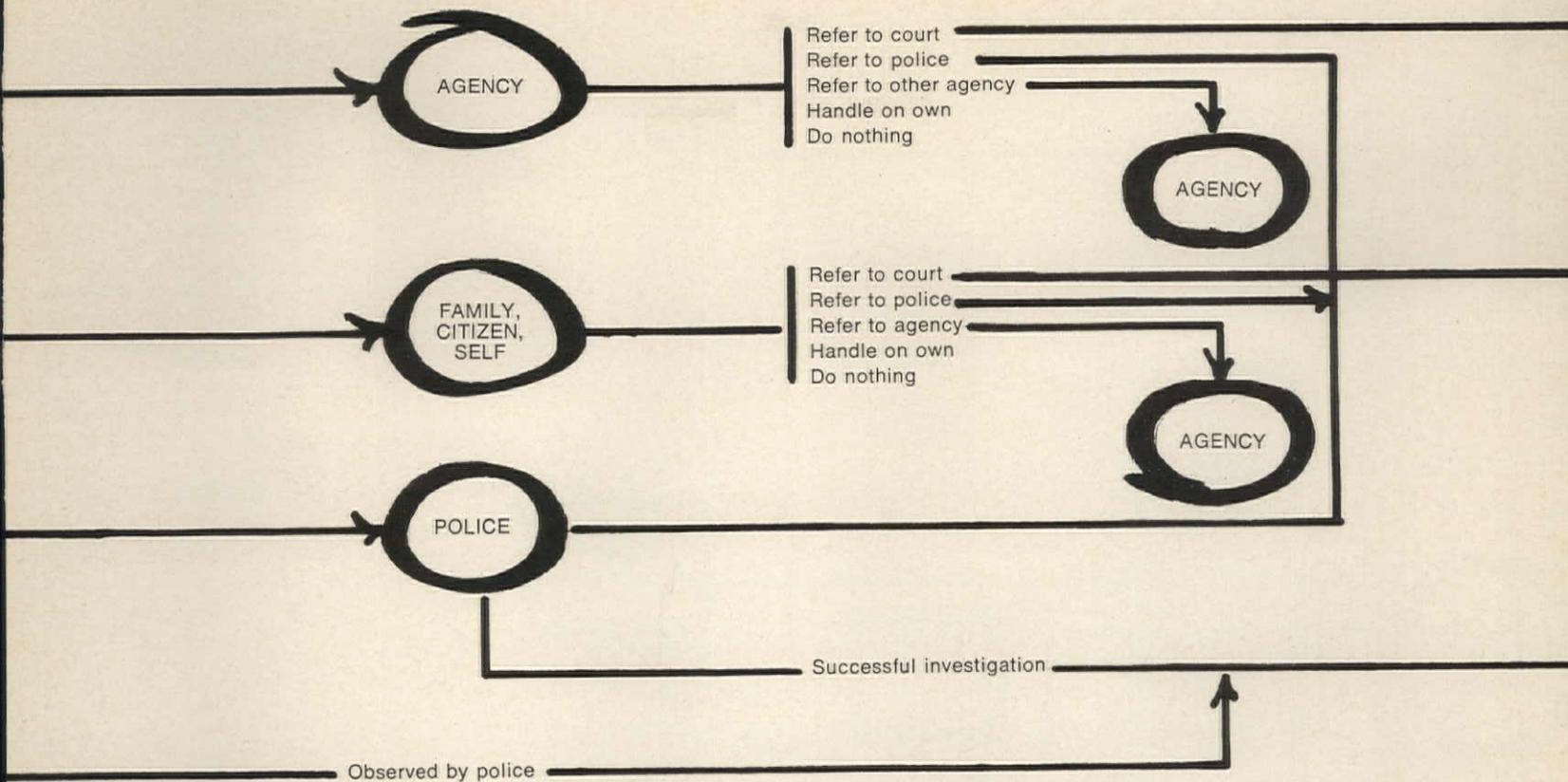
Inclusion of an option in the flow chart does not imply that it is desirable, only that it has appeared somewhere. Such charts are descriptive, not evaluative. Nevertheless, they facilitate evaluation of alternative procedures and facilities.

**Population:** Each juvenile justice system has jurisdiction over a geographically bounded and age-defined population. Its number changes as the age mix of the population changes. It also changes as the law changes its definition of "juvenile," and as families move in and out of the area.

Estimates of future demand on a jurisdiction are usually based on trends in population. School planning data are often used. Some jurisdictions look at the entire population under the upper age limit; others examine the age range most frequently involved in delinquency (13 to 17). By separately examining the categories that contribute most offenders, one can differentiate between increases in delinquency rates and increases in the size of the relevant age group.

**Offensive act or state of need:** Included under this heading are not only the full range of delinquent acts and troublesome behavior, but also states of neglect, dependency, incorrigibility and abuse. Obviously some offensive acts are committed by those in some state of need. The number of offenders and of those in a state of need depends on legal definitions and community norms.

The juvenile justice system only comes in direct contact with those who are apprehended, a small fraction of all juveniles who commit offenses. Moreover, many with whom it comes in contact have committed no offense but are victims of the offenses of others.



**Source of referrals:** There are four sources of referral to court intake: agencies, citizens (parents or self included), police or other jurisdictions. For each there are different procedures: petitions, bench warrants, arrests, complaints to police, etc.

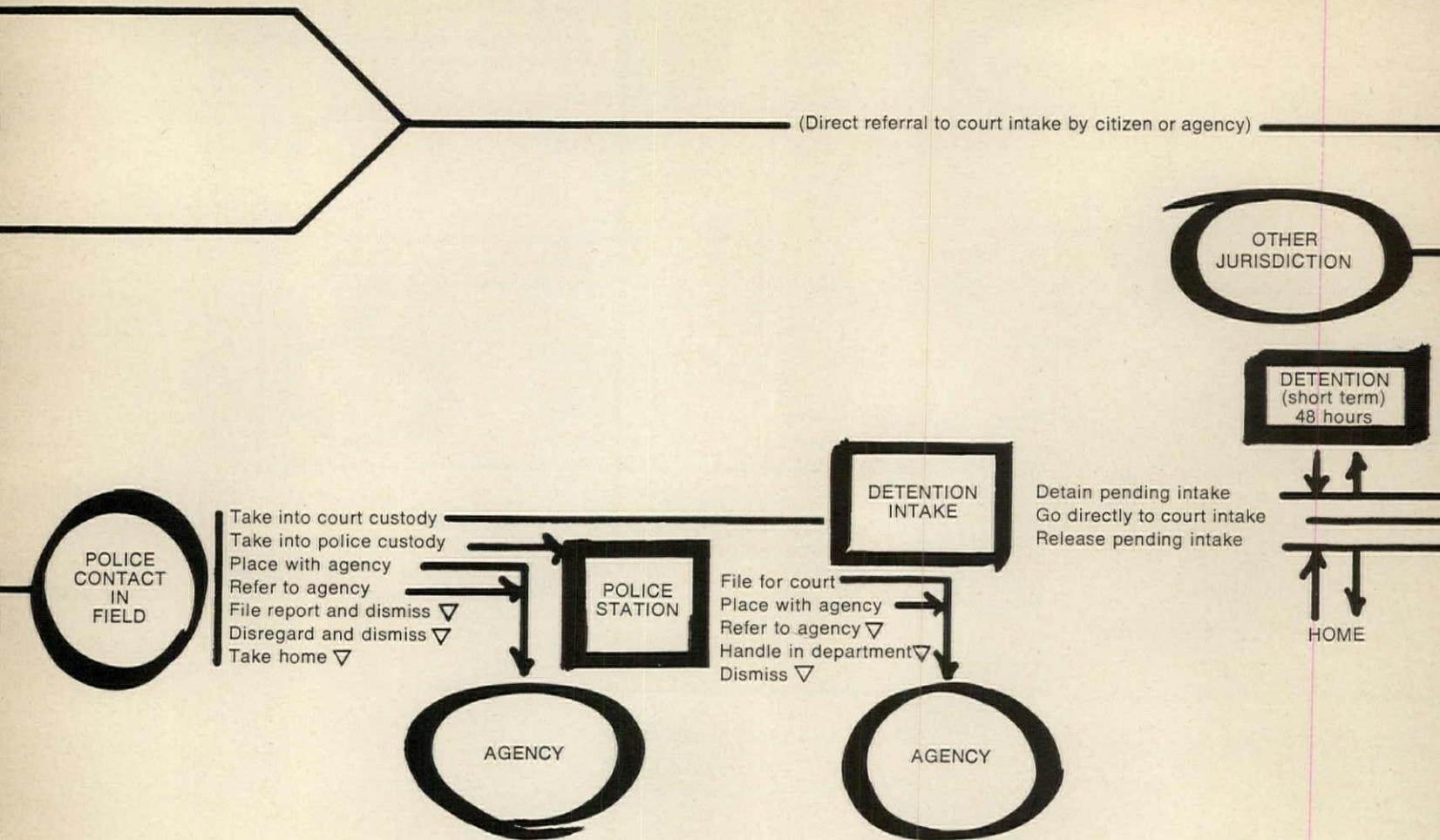
The term "agency" represents the full range of public and private community resources and institutions that act on behalf of troubled youth. They range from those offering only a few services to those offering comprehensive services such as a Youth Services Bureau. Planners should lay out the entire network of agencies. They can then examine how effectively that network is meeting the demands that referrals from the juvenile justice system place on it and vice versa.

In the options for the police (and other decision makers involved) the difference between "refer" and "place" is the difference between an informal recommendation and an actual transfer of jurisdiction with the capability of follow-up implied.

Whenever a juvenile is referred to or placed with an agency, the process can begin all over again if the agency cannot handle him. In some situations the agency can refer the case to court on the original charge if the client has been unresponsive.

Most jurisdictions have only limited choices, especially in the early phases. They often lack any intermediate agency or person to contact (special school program, youth worker, family counselor) before calling in the police or referring the juvenile to court. This forces decision makers—agencies, citizens, even police on the beat—either to do nothing or to take a more serious action than the situation may warrant. Consequently, some juveniles are brought too early and some too late.

Troubled youths brought into initial contact only to be released because their situation is not "serious enough" often represent lost opportunities for preventive programs. The scale of this problem is indicated by the percentage of juveniles (sometimes as high as 80) initially detained but then released at court intake hearing the following day. Designed to overcome such deficiencies is the Youth Services Bureau.



**From contact to court intake:** This phase is plagued with problems because it mediates between the round-the-clock occurrence of delinquency and the limited hours of formal intake. Some jurisdictions have instituted a 24-hour detention intake (on call, at the court, or at the place of detention). The discretion allowed a duty officer, however, varies between merely completing a police request to detain and full authority to refer or release. Most social service agencies do not offer help on a 24-hour basis. The task of coping with the night-time crisis is left to police and detention staffs.

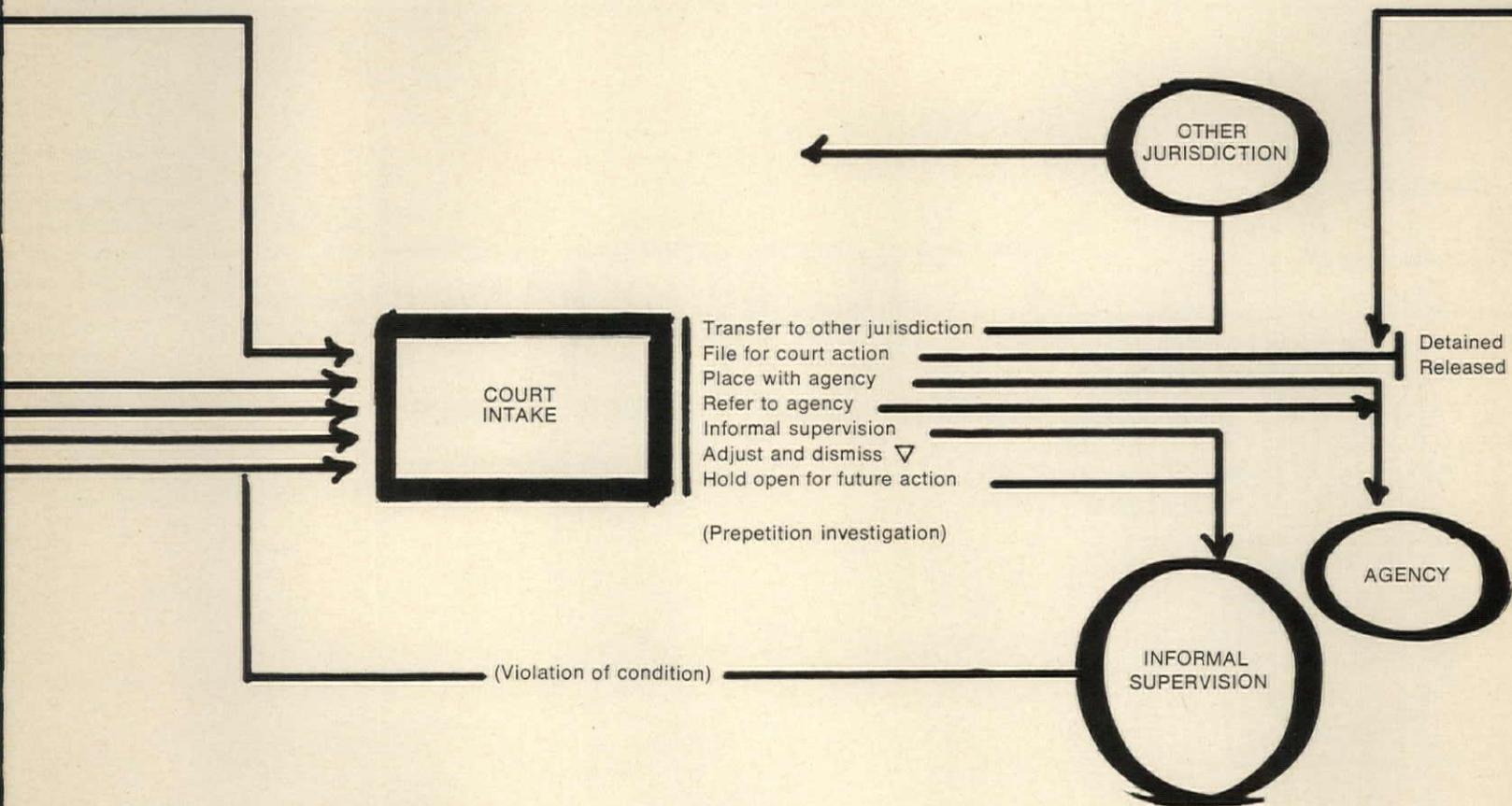
Parents may be difficult to locate. Police may wish to conduct investigative interviews. Emergency medical or drug cases may come in. All contribute to the trauma and confusion of the apprehended juvenile, particularly after hours. During court intake hours some offenders, whose parents can be located quickly, can be taken direct to court intake.

In some jurisdictions a juvenile is taken to the police station for initial screening either by a regular policeman or a specially trained juvenile officer. In others the deten-

tion center, whether regional or local, is the first place to which a juvenile is brought. In a few jurisdictions he goes to an office of the Youth Services Bureau. Here, initial intake decisions are made by a full-time youth worker. A mixture of these procedures also occurs. Less serious cases are taken to a Youth Services Bureau; more serious ones directly to detention intake.

Sparsely populated regions or states with regional detention facilities have at times to hold a juvenile overnight pending court intake. Such overnight detention may be provided by use of a secure room in a fire-proof building, a hospital or a court house (but *not* a jail), with on-call staff for the rare occasions on which it is used.

Some detention centers have a separate intake area in which such cases can be kept. This avoids interrupting ongoing programs for those awaiting a court hearing.



**Court intake to court:** The options at this stage vary widely from jurisdiction to jurisdiction. They greatly depend on the policy of the court.

The decision to file for court action is shown as a decision logically made prior to the detention decision, though frequently made at the same hearing.

The "detain-release" decision is shown as a two-alternative decision in conformity with the nationally accepted definition of detention as physically restricting. This is intended to reinforce the principle that a juvenile be detained *only* on the basis of nationally accepted criteria: serious danger to self or community; strong likelihood of leaving the jurisdiction; or formal requirement to hold for another jurisdiction.

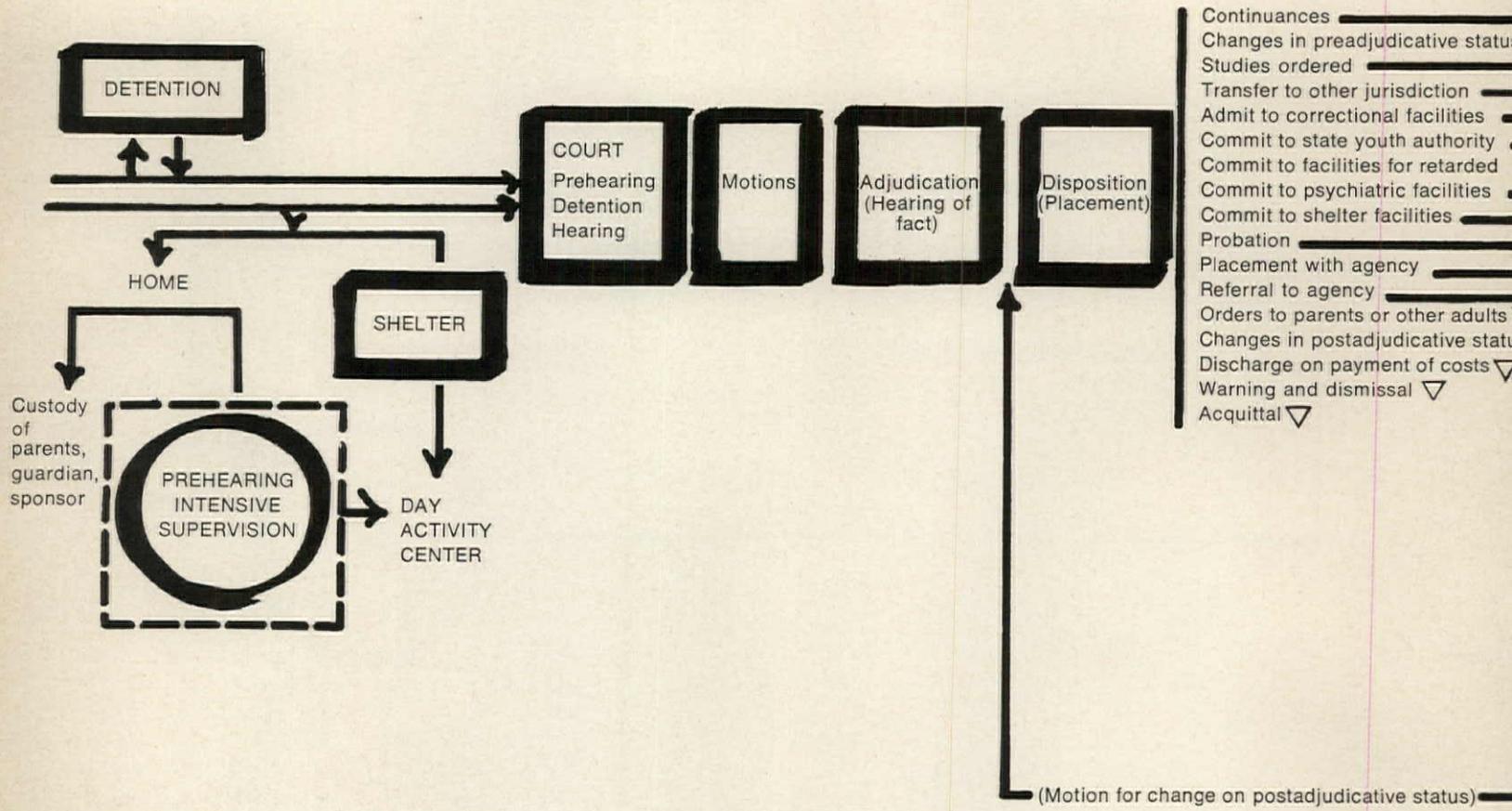
Only after these criteria are considered should family circumstances be taken into account. A "harmless" offender may need substitute arrangements (shelter or foster placement—not detention) because his family is unstable. But an adverse family situation will force a decision to detain him if substitute short-term arrangements are not available to provide the protection required. This is far too often the case, with serious consequences.

A clear distinction has to be made be-

tween a shelter placement as a final disposition without pending court action (listed as "placed with agency") and a shelter placement with a pending court date. The same agency may be responsible for both, but those in the former group leave the juvenile justice system.

The term "shelter" denotes various forms of care for those awaiting appearance in court: volunteer foster parents on round-the-clock call, group homes, etc. All are *alternatives* to detention.

Alternative disposals for youths who can be released pending a hearing must be rich enough to deal with the differences in their circumstances: day activity programs for those with working parents; shelter for the abused or abandoned; intensive supervision where the parents and juvenile need daily support to cope with their situations.



- Continuances —
- Changes in preadjudicative status —
- Studies ordered —
- Transfer to other jurisdiction —
- Admit to correctional facilities —
- Commit to state youth authority —
- Commit to facilities for retarded —
- Commit to psychiatric facilities —
- Commit to shelter facilities —
- Probation —
- Placement with agency —
- Referral to agency —
- Orders to parents or other adults —
- Changes in postadjudicative status —
- Discharge on payment of costs ▽
- Warning and dismissal ▽
- Acquittal ▽

(Motion for change on postadjudicative status)

**Court through disposition:** Court procedures are sufficiently varied to justify a study of their own. Particularly important is to distinguish between the physical movement of the juvenile and the progress of his case. The fewer times he is moved the better; the more rapidly he is processed the better. Unfortunately, frequency of the former (too common) does not connote speed in the latter (too rare).

Two aspects of the court are critical: 1) the average rate at which cases are processed and 2) the disposition emphasis, i.e., the numbers placed in community programs in contrast to the number sent to correctional institutions.

An overriding aim must be to increase the rate at which cases are processed while increasing the proportion placed in community programs.

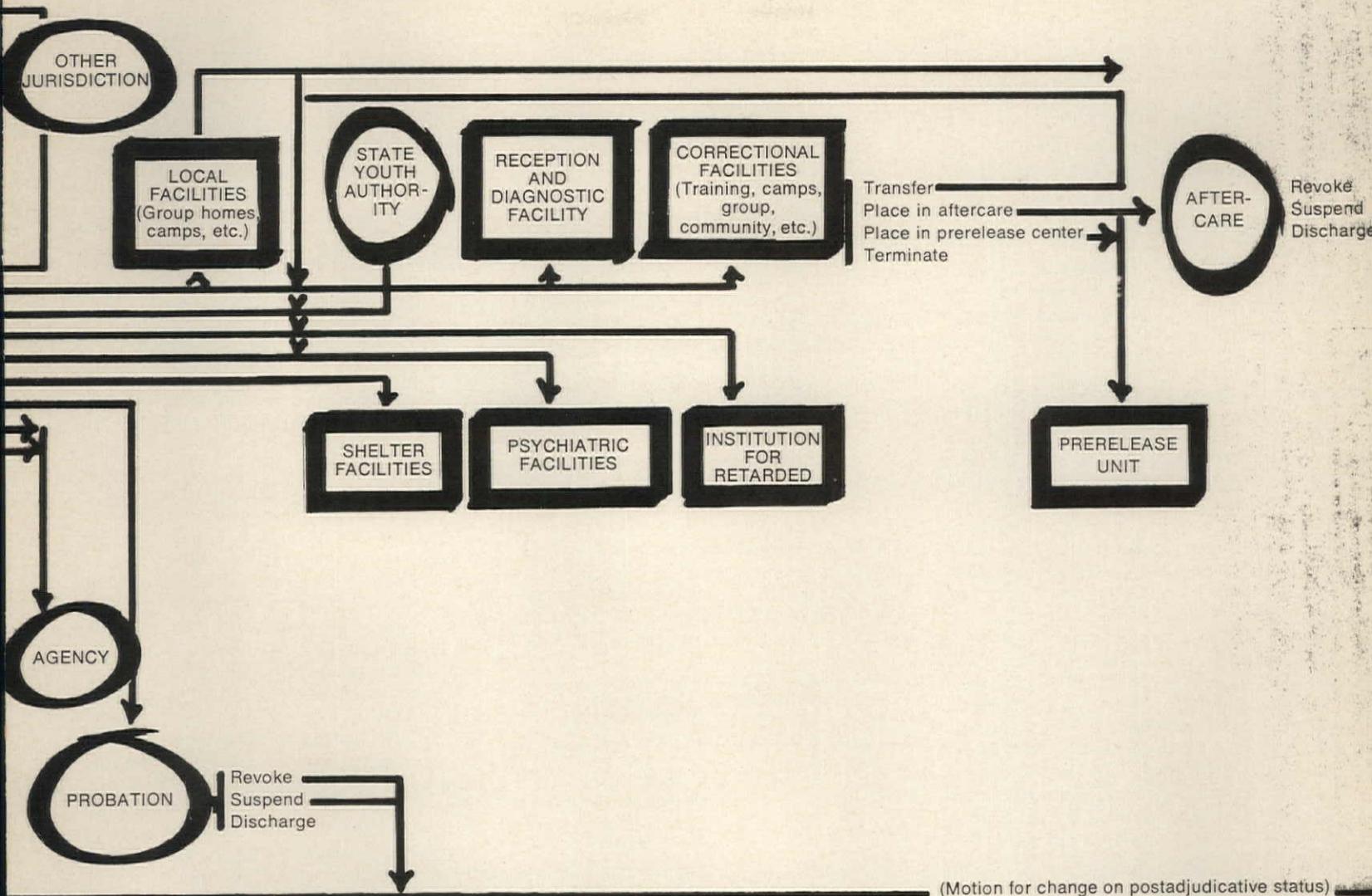
Planners and administrators need to be able to separate those in prehearing detention from those held for court-ordered studies and those in postdisposition detention awaiting placement in an institution. Only by identifying these separate classes can one learn what influence each has on the workload of a detention center.

Despite the large number of different possible court procedures, we have shown only the three major phases:

1. A prehearing (which is also a detention hearing for those detained).
2. Adjudication (a hearing of fact).
3. Disposition (placement).

Many juveniles will proceed directly to disposition from an initial hearing; others will have multiple hearings, motions, etc.

The number placed on probation is needed to estimate future manpower requirements at the county level and the workload on the county's network of services. In most states probation and intake are county functions, but some states work with state-funded and operated probation and intake. Most of the other dispositions involve collaboration with the state or other social agencies.



**Dispositions:** A juvenile can be referred to another jurisdiction such as an adult court of the same area or a juvenile court of another jurisdiction.

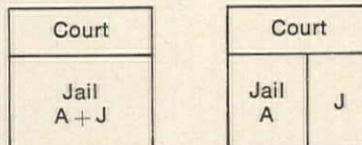
Frequently a juvenile certified for trial as an adult will be kept in juvenile detention. His waiting time must then continue to be recorded. Juveniles awaiting adult trials can take up a significant portion of the total number of detention days because delays associated with their trials are usually much longer than in juvenile courts. The possibility of transferring such offenders to other facilities should be considered.

For purposes of disposition, "agency" refers to a wide variety of facilities. These may constitute a comprehensive system of urban homes, group homes, camps and after-care and daytime activity programs or elements not yet organized into a comprehensive system.

**Detention Centers**

Out of the juvenile court movement at the turn of the century fundamentally different concepts emerged for the handling of juvenile offenders on the one hand and law-breaking adults on the other. The first step was to separate juveniles from adults in jail from concern over the danger of assaults and possible instruction in the ways of crime.

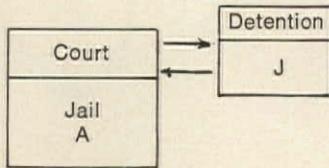
Because of the hope that new juvenile justice procedures could avoid the stigmatiz-



ing aspects of the adult system, the next response was the construction of a separate facility, apart from the jail and court. This could now be differently designed.

Originally many of these facilities were

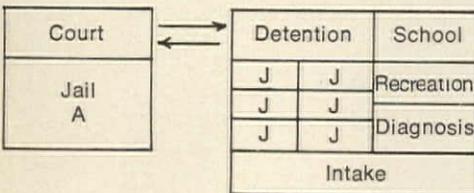
converted homes, not well suited for the purpose. By 1915 several new buildings had



been constructed in major cities expressly for juvenile detention.

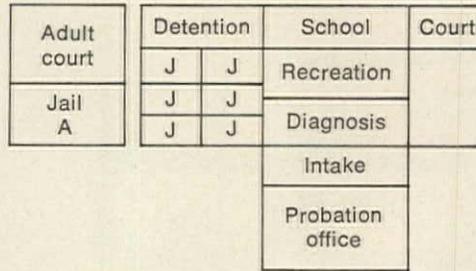
Despite the aims of the reform movement, the detention center developed more as a reaction against the jail than as something positive in its own right. Throughout much of the literature, one reads that it should not be jail-like, not have bars, not have cells, but should ultimately serve the same function: to hold juveniles in a secure setting pending a hearing.

After making the distinction between adult criminals and juvenile offenders, further distinctions began to be made within the juvenile population itself. To prevent the unsupervised interaction of serious juvenile offenders and youths detained under the social welfare function of the court, separate rooms were recommended, and the unit concept emerged. This allowed for grouping by maturity, size and circumstances. Diagnostic

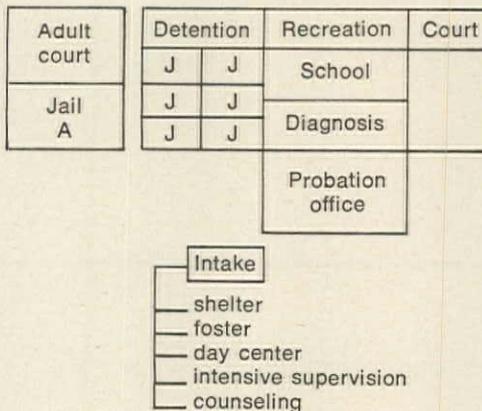


facilities were provided, and educational and recreational activities added to compensate for the restrictions imposed.

The next step was the addition of court intake to the detention center, and finally the complete merging of the juvenile court and the probation department in one complex that dealt with all juvenile services.



In less densely populated areas which could not even support a small facility (some 90 percent of all counties) the concept of regional detention led to a pulling apart of some of the functions of the center



and providing for communication and transportation links for a network of services.

Along with regional detention a number of states became involved in providing technical assistance, guidelines, subsidies, inspection programs and other forms of help or supervision.

Juvenile detention then began to acquire the stigma that only jail used to have. The response to this has been to make further distinctions among offenders in order to divert as many as possible from detention and to shorten the stay of those detained.

Shelter facilities were provided for juveniles who did not require security. Attempts were made to increase the numbers who could be kept in their homes through inten-

sive prehearing supervision. A probation officer offered support in coping with family circumstances and neighborhood influences which led the juvenile back into trouble. Day centers have also been developed.

Finally, the Youth Services Bureau has brought together many of the fractured services in a way which divorces them from the juvenile court. The intent is to absorb all those who do not require the possibly stigmatizing attention of the court. The Youth Services Bureau has been developing local activities, using services and facilities which are part of the community.

What conclusions for the future can be drawn from this brief history? First, there will be further attempts to discriminate between types in the juvenile population and to tailor responses to individuals. A corollary is the increasing concern with the rights of juveniles. They are also being encouraged to take an active, voluntary part in their adjudication rather than to accept that the court always knows best.

Second, reliance on formalized procedures with attendant labeling and stigmatization will diminish. Such procedures will be used for progressively smaller groups defined more by our inability to develop alternative programs for them than by any specific characteristics that they themselves possess. Consequently, strong efforts should be made to diminish this inability by systematic experimentation within and without detention centers. The detained group itself will require increasingly specialized staff and services.

Third, states will become more active in planning and coordinating services. They may develop regionalized services for youth, with the more specialized activities centralized and the less specialized met in the local community.

A high rate of change has characterized the present century but particularly the last two decades. Moreover, ideas, methods, institutions, programs and technologies are still changing rapidly. Ways are emerging of establishing a continuum of control, so that society needs impose only the degree of restraint necessary for each individual. This will be a big step forward from depending on broad categories such as low,

medium or maximum security; open or closed facilities; community-based or institution-based program. The refinements will perhaps be developed first in the post-disposition phases but will eventually be applied to the earlier phases. The ability to learn and to change are the keys to the development of prehearing strategies and facilities which will better meet the needs of troubled and delinquent youth.

The juvenile detention center is a place of transition between the commission of an offense and formal court procedures. If one could give a juvenile a fair hearing immediately upon arrest, the reason for detention would disappear. The center has to take over a crisis situation by detaining those who, in the opinion of the designated decision makers, are likely to harm others seriously, harm themselves, or flee from jurisdiction. It has to reduce our ignorance about those detained to assist the court in making an effective disposition. It must also serve the needs of the juvenile himself, helping him in every way to cope with his crisis and preparing him for his hearing. To reduce the uncertainty of his status by keeping him well informed on what is happening and why will contribute to his adjustment.

For the detention center to fulfill its mission, it must avoid both overcrowding and unmanageable variety. To design a facility that will contribute to the performance of this mission, the architect must assume that appropriate managerial strategies will be adopted. The solutions to managerial problems cannot be provided through physical design.

The architect, in almost all the institutions he designs, is concerned with a social group which has some natural cohesiveness and which persists over some length of time—as when he is designing a house, a college residence, a school, an office or a work place. In most instances the individuals are there voluntarily, suggesting that at least some of the organization's goals are shared by them. Frequently, they enter as a group or join a group which is relatively stable. Apprenticeships, entry rituals and orientation sessions introduce them to each other and to the organization. These procedures allay initial fears. In many instances, one returns from this new experience to a familiar base, perhaps in the evening, or at weekends.

The detention center is a "total institution." Residents are selected involuntarily because of negative attributes. They arrive at all hours of the day and night. They stay for widely varying lengths of time. They face an uncertain future that may range from four years in a training school to dismissal of charges. There is no opportunity to drop out or to return to a more familiar base to collect oneself.

Although the living unit is talked about as the building block of the detention center, it functions as a location for a series of activities such as dining, recreation, classes and sleeping rather than as a social unit. Conventionally, some 10 to 15 individuals share a living area. With an average length of stay of two weeks and with new entries and departures taking place every day, turnover is high. Medical examinations, special interviews, visits and hearings remove individuals at different times so that even within a day the group is not cohesive.

In the detention setting the one who "knows the ropes" is one who has been detained before. Because he has failed to profit from previous experience of juvenile justice, he is likely to have a negative attitude toward new efforts to assist him and to communicate this to those there for the first time. For all these reasons, a detention living unit is vastly different from a cottage unit in a treatment facility in which there is time for the group to develop cohesiveness, assimilate new recruits and establish social control over individuals.

The following concerns apply directly to the physical design of a detention center:

1. The architecture should aim to reduce uncertainty, unfamiliarity and disorientation while demonstrating to each juvenile that someone cares and recognizes that he is undergoing an ordeal.
2. Regardless of policy and arrangements with related services, the center will have to cope with a certain variety of cases, at least for short periods of time. Architectural response to these mixes must be provided.
3. The design must physically acknowledge the many diverse, outside people who, in addition to the center's staff and the juveniles, have a legitimate claim on its various parts: police, court officials, parents, probation officers. The architect must determine the places affected and acknowledge the outsiders' use of these spaces.
4. Because of the need to learn about those detained in order to assist court dispositions, the architecture must not evoke behavior which is reactive against the environment and the way it is managed rather than be-

havior which is informative about the individual himself.

The physical design of a place limits (though it does not determine) the behavior of the occupants. A room with only a bed and toilet in it and with no other furniture or possessions severely limits the range of constructive behavior a resident can display. By placing him in a closed facility, we make assumptions about what kind of person he is. We also limit the degree to which he can by his own behavior prove us to have been wrong. We think he may not appear for his court date. Physical security prevents him from proving otherwise.

Therefore, the physical environment must 1) support a reasonable repertoire of behavior; 2) offer choices, including the opportunity for some abuse; 3) allow staff to change systematically the opportunities present.

The architect becomes involved at a particular point in the development of detention services in a community. The existing situation—no facilities, outdated buildings, or inadequate relationships with agencies providing detention services—makes the consideration of options that have a physical aspect imperative. All concerned, including the architect, should first ensure that physical construction is absolutely essential to the improvement of services to juveniles and the community. Second, if building is necessary, they must build for only as many places as are required. Finally, they must initiate the necessary plans and controls to ensure the appropriate use of new facilities.

The physical environment is but one of many influences on the detention experience of juveniles. Because of its critical position as a point of entry to the juvenile justice system, the physical setting must demonstrate a concern for the well-being of juveniles during a stressful waiting period and support the mission of the juvenile court as a helping rather than punitive institution. □

# 'High Test' Architecture

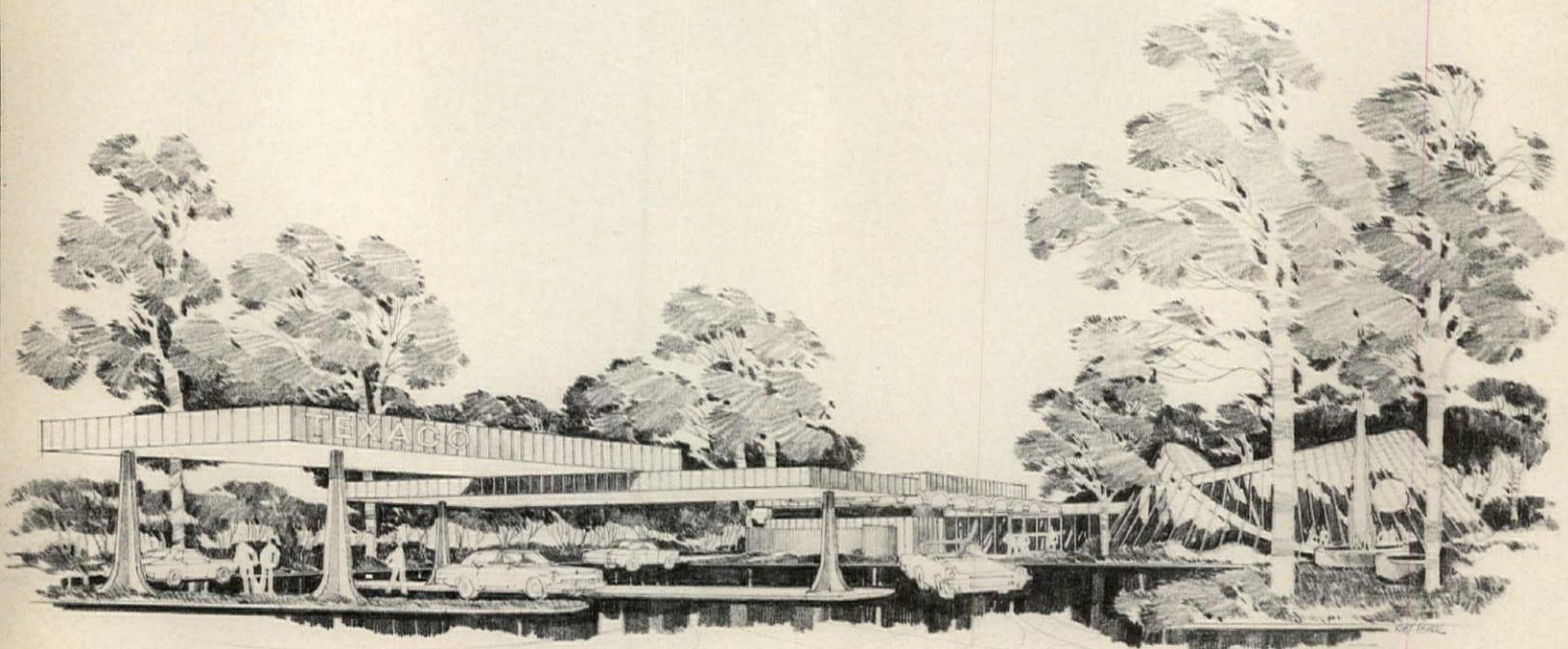
**As a nation on wheels, we require service stations for the automobiles that are the mark of our lifestyles. It's in the public's interest—as well as coins in the till for the oil companies—to make this necessary facility one that enhances its neighborhood. A service station need not be unsafe, unpleasant, noisy, ugly or smelly, as one architect continues to demonstrate.**

Last year Steven P. Papadatos, AIA, a 32-year old architect who heads his own four-member firm in New York City, conducted an informal survey of the mayors of some cities in Connecticut, New Jersey and New York to get their opinions on service stations. The letters that he received in response to his queries indicate that the major complaint of communities is that most service stations are dirty and degrading to their surroundings. As a result, building departments and boards of standards and appeals in most areas offer the most discouraging delays to petroleum companies for the construction of service stations. "Communities and their review boards," comments Papadatos, "look upon service stations as if they were carriers of the plague."

The mayor of a town in New Jersey wrote the architect that the oil companies apparently like his city as a location, but that in the last couple of years or so only two new stations have been built, both of which were "commercialized colonial design." The mayor was of the opinion that none of the stations in his city is "worthy of any awards."

Meanwhile, although the city has received several proposals for new service stations, everything is in limbo because the city council imposed a year's moratorium on all gas stations pending new legislation which would set standards of design, maintenance and operating conditions. "We also are proposing," wrote the mayor, "standards which would eliminate flashing colored lights, gaudy penants and other such carnival trappings."

The mayor of a large New York State city calls the design of most service stations "absentee architecture." He sums up his ideas of why oil companies should be both willing and eager to change architectural practices, writing, "First, many cities have

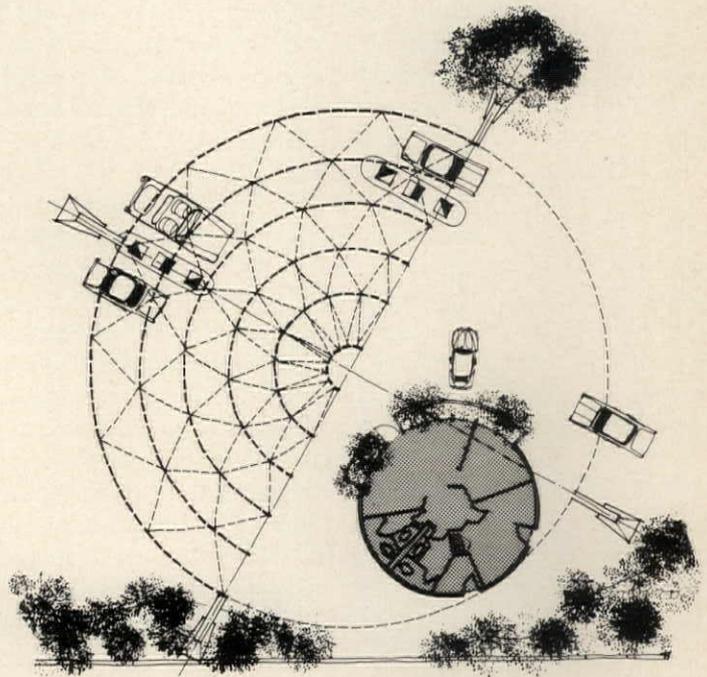


*Prototypical service station*

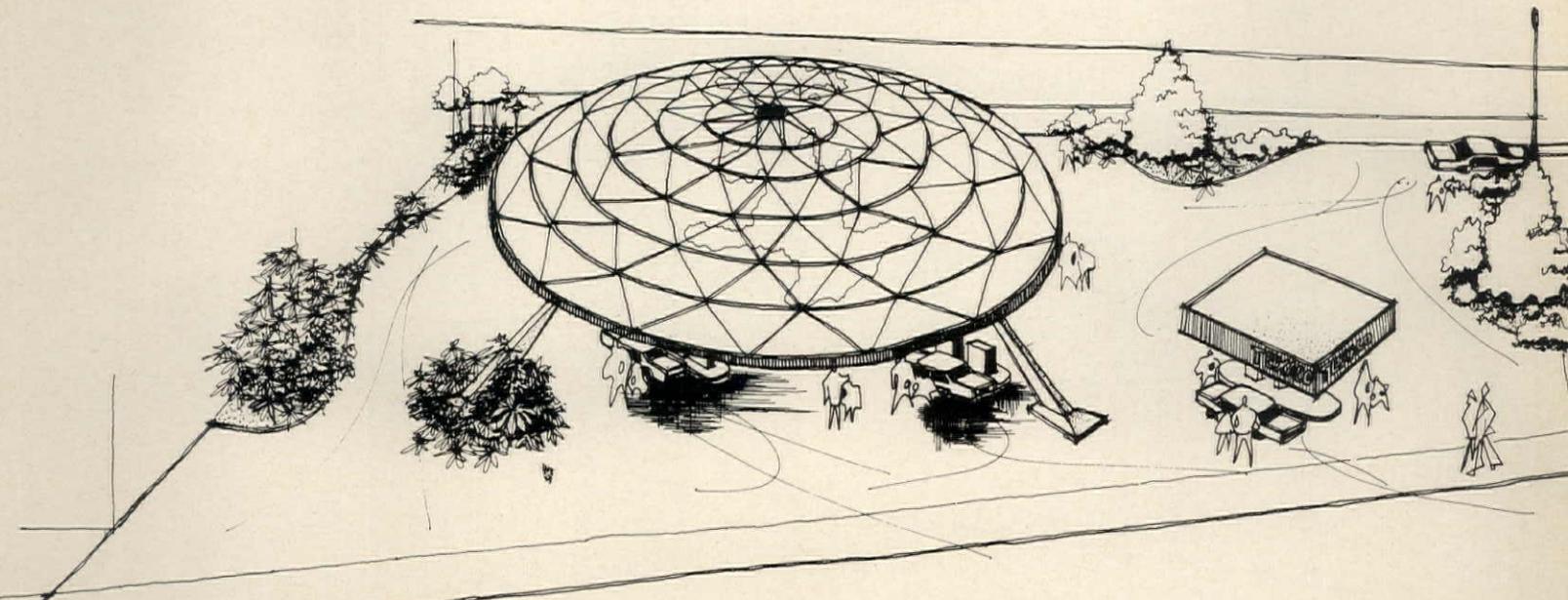
established strict zoning guidelines for the location of gas stations. The existence of such guidelines means that the municipality is restricting the number of sites available for use for such facilities. The necessity of such restrictions was prompted by the inadequate design approach used by petroleum marketers. In short, gas stations create nuisances and are not good neighbors." He continued that he thought good design "could reduce if not eliminate problem areas" and as a result municipalities "would be more favorably disposed to amend zoning ordinances and provide a greater choice of locations for marketers." He also suggested that petroleum companies with vacant or abandoned gas stations on their hands would have less difficulty in selling or converting them to a new use if the stations were well designed.

The mayor of another city in New York State wrote Papadatos that his city "was blighted with ugly-looking gas stations." He wonders if some form of compatible legislations "at all levels of government should be approved mandating responsible architectural design before franchise is initiated." And the director of planning in another city in the same state remarked that "innovative ideas have not been employed simply because oil companies are concentrating their efforts in capitalizing on the increasing need for gas stations rather than their design."

Papadatos wants to give everyone his day in court, and he also conducted a survey of the major oil and refining companies to get their views on the design of service stations and the various problems of gasoline retail facilities. Many of those who replied mentioned the plagues problem of zoning and planning committees in various sections of the country. And a Canadian company wrote about the "growing perplexity of regulations and



*New York City's Avenue of the Americas service station: designed by Papadatos with Meyer Dorfman, consulting structural engineer, and Economides & Goldberg, consulting mechanical and electrical engineers*



codes which vary for this type of establishment" from cities, provinces and the national government. The marketing manager of a Texas company commented that most city officials object to "the idea of building 'one more filling station in our town'" because of inadequate implementation of zoning ordinances, poor urban planning on the part of municipalities and overzealous construction programs by the petroleum industry. Some of the executives cite inconsistent requirements placed on the industry by such things as zoning ordinances, interpretation of building codes, the Occupational Safety and Health Act and the Environmental Protection Agency. One of them said that the communities' "overreaction to new commercial development" is caused by the rush to suburbia with the attendant growth problems "coupled with vast ecological considerations and a renewed interest in good city planning."

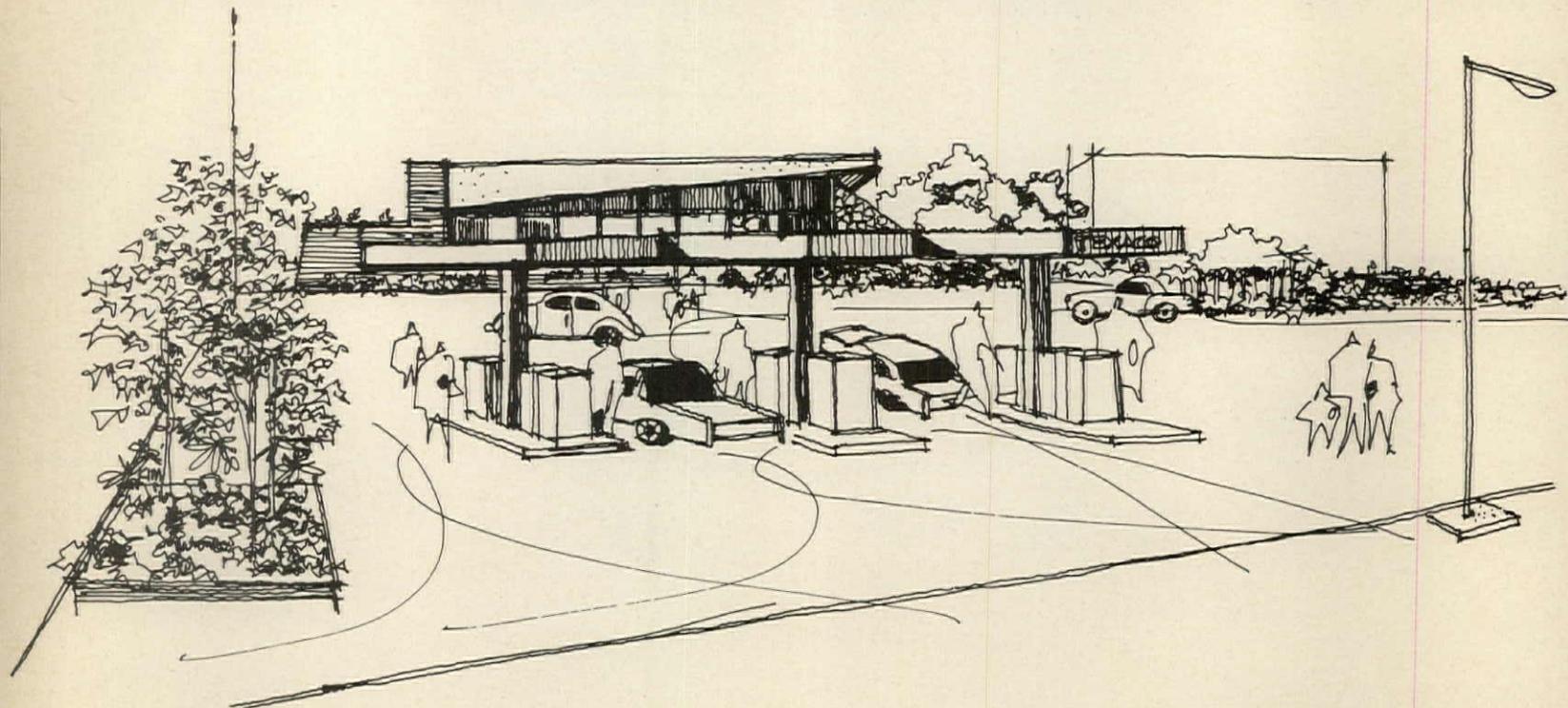
Nearly all of the companies who replied to Papadatos reveal a concern for well-designed service stations. "Rising construction costs," wrote one executive, "indicate that we must be innovative in facility development and, in turn, be given reasonable latitude by the governing authorities to implement such innovations." They speak of how escalating construction and maintenance costs have dictated an unending search for new materials and techniques in both construction and renovation. They mention a number of things that could be done to improve service stations such as better landscaping and background screening; an emphasis upon esthetic values in perimeter lighting, color coordination and signage; sidewalk safety islands, etc.

One continuing problem, evidently, is the high rate of obsolescence of retail facilities. A Texas marketing manager

summarizes it as follows: "Retail facilities have had to be modified and renovated long before their depreciable life has been reached. The planning system utilized today must possess the flexibility to account for such factors as changes in marketing concepts and special demands of local communities." The overall design must allow for revisions, new uses and additions to occur during the lifetime of the facility.

Architect Papadatos' interest in gasoline retail facilities is no new thing. He has been working for a long time to do something about upgrading the design of service stations. When he started practice in 1969, he wasn't exactly overwhelmed by clients beating on his door. Being resourceful and imaginative, and also wanting to make a contribution to contemporary urban architecture, he mulled over his problems and decided that he should select a building type which usually lacks architectural design. Any person who lives in a city, or even a rural district for that matter, knows that there are a tremendous number of automobiles to be serviced and maintained. Papadatos was also aware of the fact that most filling stations anywhere in the United States are gruesome to behold at worst and sterile in design at best. His approach, then, would be to design service stations that would be an asset to any community. He consequently set about learning all that he could about them and ways in which he could improve their design.

Texaco liked his ideas well enough to commission him to rehabilitate one of its stations in Greenwich, Connecticut. This job won for him in 1972 both the Northeast Regional Award and the Grand National Contractor of the Year Award of the National Remodelers Association. Parenthetically, Papadatos



*Texaco station in process of being designed*

has been awarded the 1973 Northeast Regional Award by the association for his interior design of the executive offices for O & R Excess, Inc., in New York City.

The total job cost Texaco \$22,000 for the Greenwich station. This was indeed a small price to pay for an efficient rehabilitated station and for the praise that the station received from the community. Consequently, Texaco commissioned Papadatos to rehabilitate other stations in the Northeast. He has also got other jobs, including the development of prototype designs canopies for the Alcan Aluminum Corporation, which may be used for both single- and double-island service stations.

One of his more important commissions, however, is for the construction of an entirely new Texaco station on the Avenue of the Americas in Manhattan. This is a new concept in that the complete facilities have been designed to accommodate the physically disabled. These people will have easy access to all parts of the structure, and toilets will be provided with convenient grab bars.

The station also will be a prototype, demonstrating that such facilities can be an asset in the heart of a great city. Plans call for a 72-foot diameter structural steel dome with translucent plexiglas panels set between the framing members. The dome will cover the pumps and the 22-foot-in-diameter sales office. The clean look of the station's exterior is enhanced by its equally pleasing interior. Dark bronze aluminum-facing panels and solar bronze plate glass will be used for the sales office. Perhaps Papadatos' greatest pride, however, is the soaring dome whose ceiling will have a tremendous lighted map of North and South America, appropriate for its Avenue of the Americas location.

Papadatos has some definite ideas about the design of service stations. Commenting that oil companies have done little about the esthetics of their facilities, directing their major attention toward ease of maintenance, the architect thinks that if they gave more thought to good design communities across the nation would not be so opposed to them. "Why make them all alike?" he asks. Rather, each should be individualized to blend into its surroundings. At the same time, he knows that for the sake of economy, the petroleum companies must consider prototypes. "Although the basic design concept must be the same," he remarks, "minor modifications can create the individuality." At any rate, he is of the opinion that it would be easier for the petroleum companies to establish a policy of self-policing. In this way, communities would not have to impose their restrictions which often create hardships for the marketeers.

Also it's good business to have an attractive station. Sales increase after rehabilitation, Papadatos has found. "The oil companies," he says, "must consider using various prototypes to renovate their stations in order to decrease the costs. These designs must be compatible with a few typical buildings. Construction bids should be let at one time so that the contractors bidding on the projects will have greater flexibility on prices of materials and labor with the greater volume of work involved."

Papadatos wants esthetics combined with ease of maintenance and with individuality in the stations. He thinks that colonial brick facades and mansard roofs for service stations are passing fads. He'd like to have more permanence in the appearance of such retail facilities.

He has little admiration for big lighted corner signs. He



Station projected for Manhattan's First Avenue

thinks that "all those big gaudy signs" in a common exposure cancel out their marketing effectiveness. If there must be a sign, he says, it should be no larger than 10 square feet. "Instead of several large signs screaming out the brands of gasoline sold, tastefully executed smaller ones dramatically lighted would be 100 percent more effective." His Manhattan station will carry out what he preaches. The only identification of Texaco will be on a canopy in bold white lettering on a black background.

Another thing that Papadatos doesn't like is the white porcelain enamel type facing on most conventional service stations. "They look like a hospital and repel customers," he comments. He likes warm cheerful colors, and his award-winning Greenwich station has tan colored trowel-on-brick facing and bronze windows.

Papadatos thinks that designers of filling stations should be constantly on the outlook for new materials and techniques. "The rapid rise of the cost of materials, equipment and labor will force a new look at the architectural construction techniques, and architects must take advantage of the latest technology." With the advantages of prefabrication, he notes, "The service stations of the future will be erected in a few weeks and at a low cost." To save money for all concerned, he suggests that a group of oil companies create a joint venture in design and construction of their stations. "The basic concept would be the same," he remarks, "and with minor modifications individuality for the companies could be created."

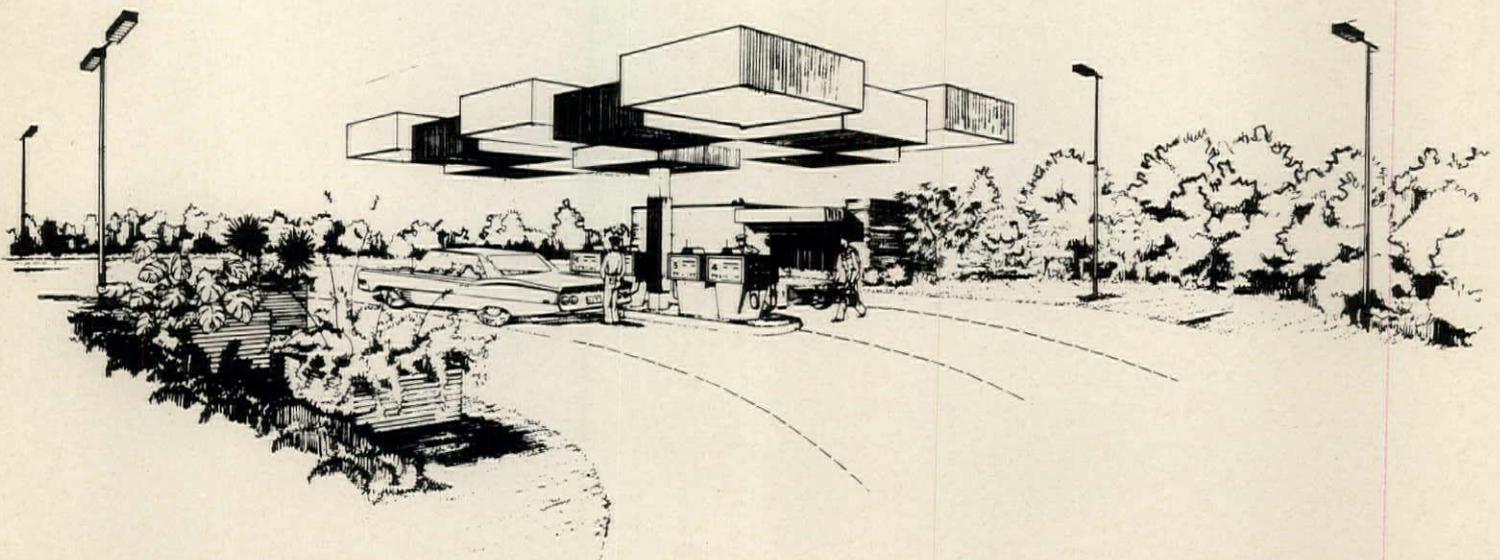
One of the greatest problems, thinks Papadatos, is the illumination of stations. He believes that service station lighting is being designed on a quantity rather than a quality basis. The higher footcandles being used have no regard for comfort and glare. "Mercury vapor is being employed as the prime source of high intensity lighting," he says. "Unfortunately, it also creates a harsh and unappealing color. By adding low intensity,

warmer colors and low mounted shrubbery lighting fixtures, spaces can be made more attractive. With properly controlled and designed lighting equipment and techniques, the structure and the site can be rendered in light to enhance the architectural characteristics." He comments that service stations try to outdo each other with greater lighting intensity. The structures should be well lighted, but Papadatos wants warmer lights such as "the golden glowing quartz-iodine type" rather than the mercury vapor ones which "make both people and property look unattractive."

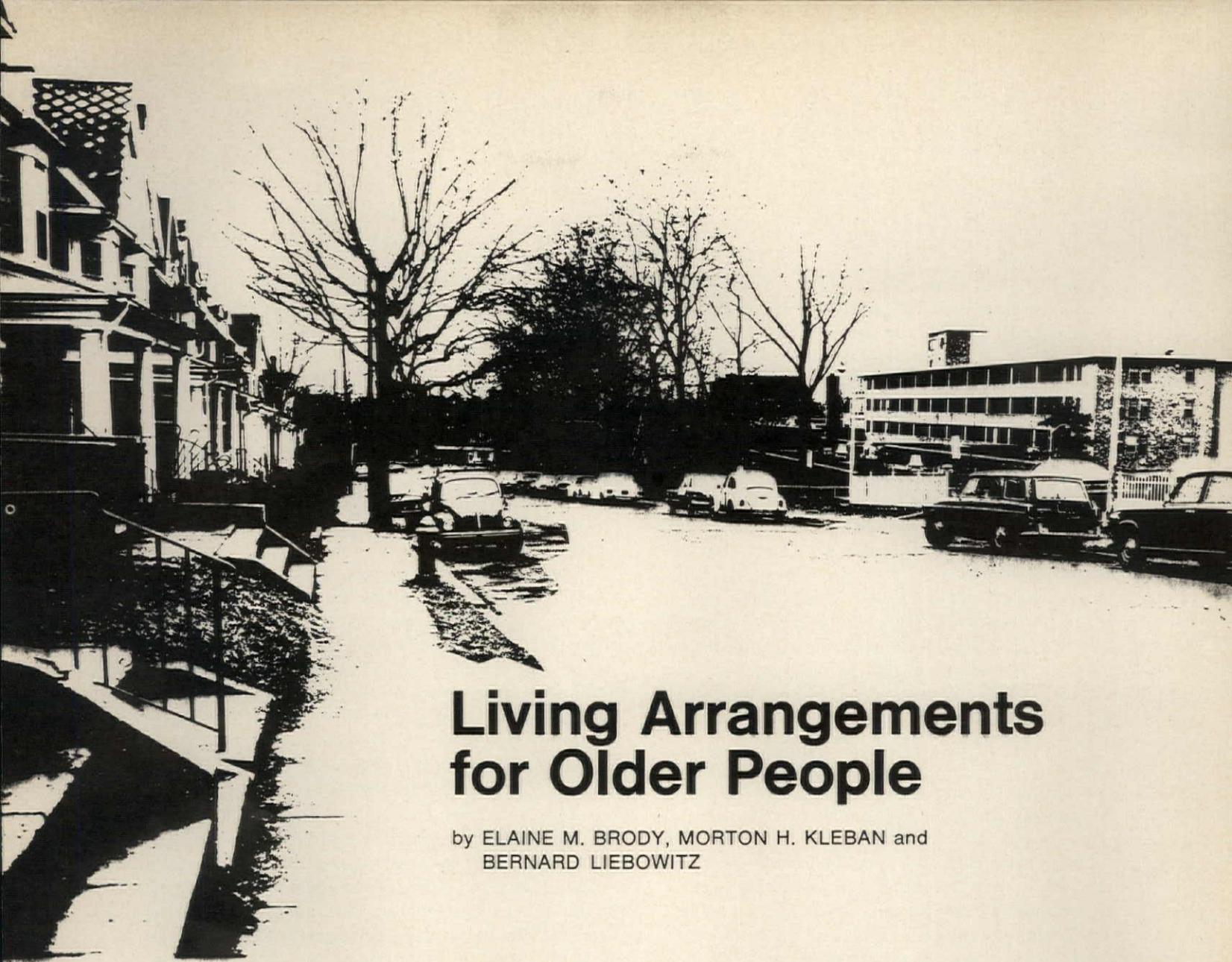
Although dominating the American landscape everywhere, service stations have been surprisingly neglected in the literature of architecture. In an article titled "An Oilman Talks Esthetics" in the August 1966 AIA JOURNAL, however, Stanley D. Breitweiser, executive vice president of the Arkansas Petroleum Council, outlined some design principles for the oil companies. "If we fail to take action," he commented, "we may find ourselves the only industry that ever stopped growing because of its own ugliness." The letters to Papadatos from executives in the industry indicate that some action is being taken. One large company reports that it has centralized all retail architectural/engineering design at its headquarters and employs a staff of professional architects, engineers and designers. Still others use consultants for architectural and landscape design. Another oil executive writes that his firm has developed a site treatment manual which also covers problems of lighting, signage, etc.

One of the mayors who answered Papadatos' questions asked for suggestions himself as to "how we might encourage better design in service stations without incurring the 'wrath' of the oil companies." What Papadatos really wants is for both communities and oil companies to be happy, and he thinks that this is entirely possible with well-designed service stations.

MARY E. OSMAN



Canopy designed for Alcan Aluminum Corporation



# Living Arrangements for Older People

by ELAINE M. BRODY, MORTON H. KLEBAN and BERNARD LIEBOWITZ

**How to strike a happy medium between the extremes of totally institutionalized and totally independent community living for healthy but aging persons? The nonprofit Philadelphia Geriatric Center, which includes the 340-bed Home and Hospital for the Jewish Aged, two apartment buildings for 500 people, the biochemical, behavioral and social Gerontological Research Institute and a facility for the mentally impaired now under construction, has found a solution: It has refurbished existing structures in an age-integrated neighborhood adjacent to the center, a solution which could well inspire similar projects in other cities.**

To foster independence in older people, their environments should supply varying amounts and types of architectural prostheses and supportive services. This is a view now generally held, and it evolved in recognition of the heterogeneity of the elderly, who vary widely in age levels, health, functional capacities, socio-economic circumstances, life experiences and lifestyles, family compositions, personality and other dimensions.

In all areas that concern our aging population the need has far outstripped action to meet it. The lag has been due in part to the present large number and proportion of older

people, which is unique to this period in history. Awareness of the impact this group would have and the implications it would cause came slowly. At the turn of the century the over-65s represented about 4 percent of the total population (about 3 million individuals) compared with 9.9 percent (20 million) in 1970. Projections for the future indicate that by the year 2000, there will be a minimum of 28 million Americans 65 and over.

The elderly now include at least two generations: the old and the very old. The aging phase of life, which can span 35 or 40 years, is longer than any other phase.

Of particular interest to architects and planners is the fact that the older segment of the elderly, those 75 and over, is growing faster than the total aging population. In the decade between 1960 and 1970, the 75 plus group increased three times as fast as the 65 to 74 group and now constitutes 38 percent of all those 65 and over. This oldest segment of the aging experiences the highest incidence of functional impairments and therefore is in most need of specialized housing.

Research to date offers some clues as to the preferences of older people with respect to living arrangements. In general, they prefer to live close to but in separate households from adult children. However, that choice may be limited by

constraints of income and health. Retirees expect to maintain living standards similar to those of the preretirement years. Among those who wish to move, a major aim is to seek smaller dwelling units. Important considerations are accessibility to services, safety, lack of difficult steps, terrain, view and climate.

Studies of diverse groups of older people who move to specialized housing indicate positive results in terms of their well-being. While older people move less frequently than the total population, their reasons for moving include dissatisfaction with neighborhood, deterioration of community and the need to be free of responsibilities connected with household maintenance.

Within these broad generalizations the individuals who comprise the heterogeneous older population, like those in younger populations, vary greatly in what they want for themselves. Consequently, it is by now conventional wisdom in gerontology that no one program or service is a panacea; each reaches a specific target population. The test of effectiveness is not universal applicability.

With the heterogeneity of the elderly in mind, there are nevertheless certain generalizations that can be made which speak to the need of older people for specialized environments. Their increased sensory defects and functional impairments require environments that are prosthetic and supportive. In comparison with the rest of the population they have less biological vigor and therefore must expend more than the usual amount of energy coping with situations where they are selectively at risk: low income, poor transportation and a shrinking social world. To state it another way, older people are more vulnerable to environmental barriers, stress and hazards, have fewer resources with which to deal with these problems, and are more deprived in that few attempts have been made to meet their needs.

The term "living arrangement" as used here implies more than physical shelter. "Arrangement" by definition involves bringing things together. In the instance of living arrangements the ingredients to be brought together in different combinations include the individual, the physical structure, the larger physical environment, the social or interpersonal environment and the service environment. The best possible architectural design to serve older people depends on the degree to which it has taken note of these factors.

To repeat, successful living arrangements for any population group are not solely determined by the characteristics of the target group nor those of the physical/social/service environment alone. The interfaces among the various factors are of paramount importance. With older people these relationships are highlighted. M. Powell Lawton of the Philadelphia Geriatric Center has characterized as the "environ-

mental docility hypothesis" the view that as competence or status of any kind decreases, the probability becomes greater that behavior will be influenced by environmental constraints or facilitators.

An additional dimension to which inadequate attention is paid is social policy as it affects and interfaces with both services and environments. Thus income maintenance programs, building codes, zoning regulations, mortgage loan and insurance provisions, rent subsidy programs, regulation or prohibition of services all have a direct impact and may either facilitate or constrain the development of needed living arrangements.

One possible "arrangement" which attempts to combine a specific group of older people with an appropriate physical/social/service environment in the framework of existing social policy entitlements is the Philadelphia Geriatric Center's intermediate housing for the elderly (the corporate name is Community Housing for the Elderly). This project evolved from the center's experience with a successful pilot program over a six-year period. Large numbers of older people had become known to us who urgently required new living situations but for whom institutions or highrise apartment buildings were not always suitable, available or economically feasible. Many wished to maintain as much independence and privacy as possible but needed some services to enable them to do so. Supporting information was supplied by a series of studies of those who inquired about admission to our existing facilities. Other studies and demonstrations identified groups of elderly people unable to move from substandard housing in depressed areas due to lack of economic means and/or available housing.

In the pilot program, two semidetached one-family homes were bought on a street adjacent to the center. They were renovated to accommodate three or four elderly individuals and to test the efficacy of different physical arrangements and service patterns. Each house was converted into three individual efficiency apartments which consisted of a bedroom and kitchen. The large living room was shared. A powder room was installed on the first floor; the second floor's bathroom was shared. The houses were carpeted throughout, and the center supplemented furnishings supplied by the tenants.

The service "package" included one main meal a day prepared by the center and delivered in frozen form; a "hot line" telephone to our hospital for medical emergencies; weekly housekeeping and linen service; building maintenance; access to the recreational and sheltered workshop facilities of the institution; and limited social service. The tenants were required to retain the services of their own physicians since the center did not undertake to meet their medical needs. Rent, including utilities and services, was set at a figure that would permit recipients of public assistance to avail themselves of the housing. Occupants were screened for their physical ability to manage.

The strengths and deficiencies of the pilot houses pro-

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Mrs. Brody and Dr. Kleban are principal and co-principal investigators of the research project studying the housing at the Philadelphia Geriatric Center; Mr. Liebowitz is executive vice president of the center. The research aspects are supported jointly by the National Institute of Mental Health and the Administration on Aging (MH 19936).

vided guidelines for expansion of the program. Experience indicated the positive value of the combination of social space and private space; of the age-heterogeneous neighborhood that contributed to the sense of "normal" community living; of the proximity to the center and its services, religious facilities, shopping and transportation; and finally of the exchange of services among tenants and the participation of their families. On occasion the residents gave each other post-hospital care; family members helped not only their own relatives but their fellow tenants with shopping and small tasks.

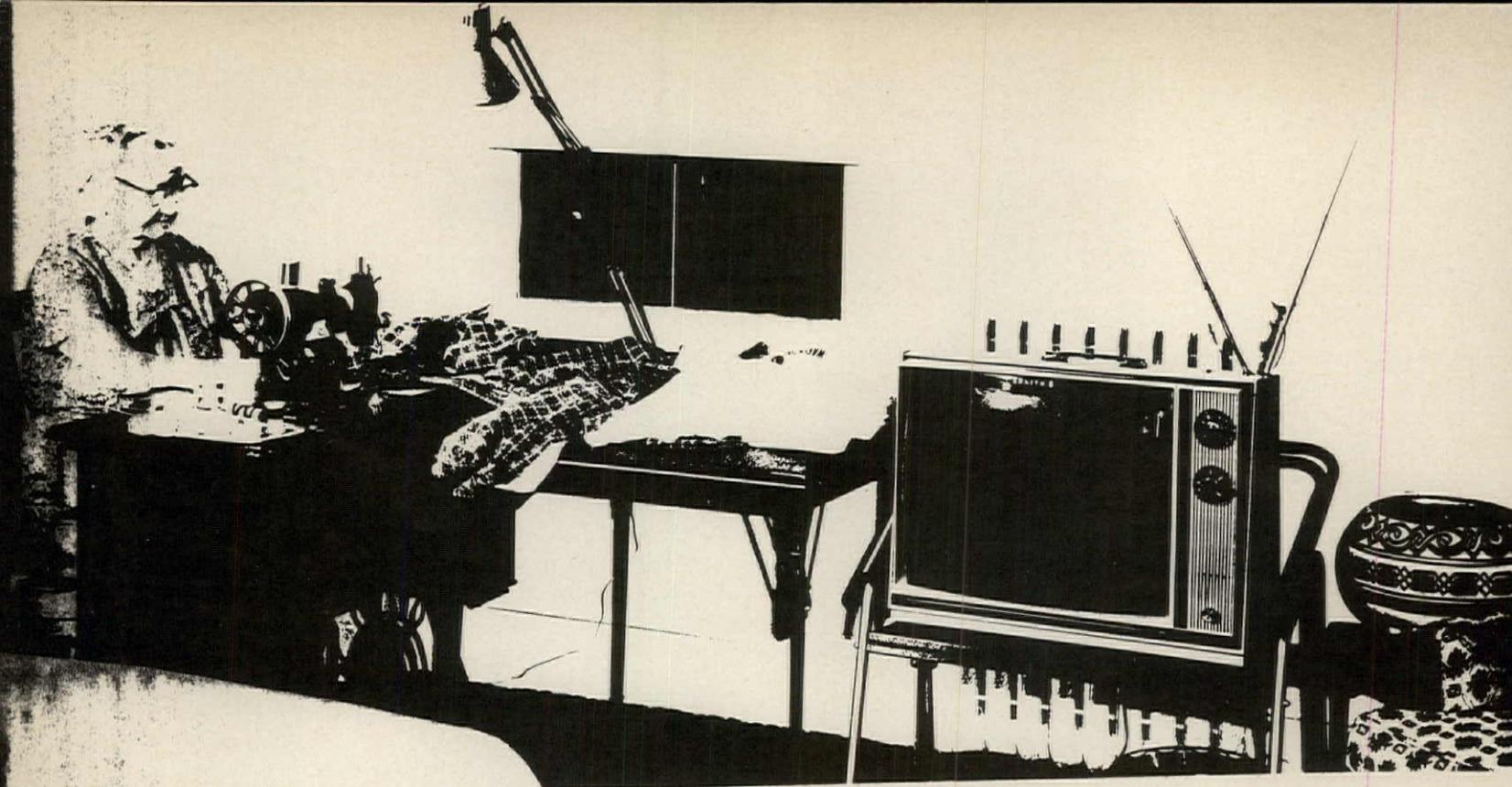
The center has now completed renovation of nine homes on two adjacent streets. Two of the houses back directly onto the center "campus"; the remainder are directly across the street and are interspersed among the privately owned homes on the block. The residential neighborhood has remained

relatively stable over the years, changing only ethnically slowly but perceptively.

The architect, Mitchell N. Cohen, states that redesigning the houses for occupancy by the elderly presented a unique opportunity in urban design. He wished to retain the integrity of the small units, which presented an interesting contrast in scale and architectural style to the large center structures, particularly its highrise apartment buildings. Though limited funds were a constraint, the good basic structure of the old houses provided a sound foundation for the redesign of their interiors.

Cohen's goal was to retain the charm and residential, noninstitutional character of the houses. Toward this end, whenever possible he kept the existing wood paneling, stained glass and leaded windows, bay windows with window seats,





and wood mantels and accoutrements. The exteriors were left relatively untouched so as to continue to blend with the neighborhood. At the same time, to insure safety, every effort was made to eliminate barriers in the physical environment. For example, outside steps have handrails and are treated so that they are not slippery. There is good interior and exterior lighting, color coding of doors and trim to identify houses easily, recessed door mats, tamper-proof locks, mercury flip switches installed at a lower height than normal, inside stair rails with touch indicators for first and last steps. The bathrooms have nonskid floor surfaces, single-lever faucets and temperature controls, grab bars and shower seats. Each house contains three efficiency apartments for individuals or couples.

Had the architect had the freedom to work with the total neighborhood, he would have liked to see the street which separates the houses from the center complex turned into a limited access street. A mall could then have been created with benches, plantings and appropriate spaces for outdoor activities such as shuffleboard and picnic tables.

Total cost of each house, including purchase and renovation, was about \$24,000, or \$8,000 per apartment. The 40-year mortgage is insured by FHA. Using the same criteria as for public housing, the Department of Housing and Urban Development provides rent subsidies for 40 percent of the units. Public assistance recipients are eligible, as are those who meet the HUD criteria for the \$50 monthly rent subsidies (\$5,000 maximum assets; \$4,320 annual income for individuals or \$4,860 for couples).

The basic rental, computed by HUD at \$98 and \$95 for first- and second-floor apartments respectively, includes utilities, maintenance of the buildings and the interiors, janitorial service, furniture when necessary, a telephone hot line to the center's hospital for medical emergencies, and social services. Optional extras at nominal cost will be trimonthly house-cleaning and linen service (\$10 monthly), and daily frozen main meal delivered to the occupant's refrigerator (\$20 monthly). The houses do not constitute a medical facility; the tenants were encouraged to establish relationships with local community physicians. Services available from existing

community agencies are not duplicated, but the center staff undertook to mobilize and coordinate them.

The nature of the population served is determined by the constraints imposed by the physical facilities and the services available. These are expressed in the eligibility criteria: The physical and mental status of prospective tenants must be such that they do not require constant nursing supervision or intensive medical care; they must be functionally capable to the extent demanded by the physical facilities. Since housing tenants exercise self-selection (i.e., go to environments that offer the particular services they need), they usually need one or more of the services available. In order to assess applicants and to assure that the environment is congruent with the capacities and needs of the tenants, the screening process used measures and ratings previously developed by the center's research staff.

The program is now being evaluated by a formal research study financed by the National Institute of Mental Health and the Administration on Aging to assess its effect on the older people. An experimental group (27 persons) is comprised of those who moved to the intermediate houses; two control groups (80 persons who are also 62 and over) consist of persons who moved to other arrangements and of persons who did not move.

The objectives are to 1) identify the characteristics of all the subjects who indicated a desire to move and to compare the groups with respect to the effect of the different types of living arrangements on health, morale, socialization, use of time, satisfaction, functional capacities, use of needed services and facilities, and general well-being; 2) study the older people systematically as they functioned prior to, during and after the move; 3) evaluate the effects on the families of the older people of their elderly relatives' different types of living arrangements; 4) provide guidelines for new programs; 5) compare the cost of the shelter and service aspects of the intermediate housing with the cost of other types of living arrangements.

Some preliminary research information is available regarding the nature of the population that appears attracted to

this particular form of housing, since over 100 applicants have been interviewed. The median age of the applicants is 72 (age range is 58 to 84) and they are predominantly women (about 78 percent). More than half are widowed, about one-fifth are single, one-fifth are married. Almost 80 percent have at least one adult child. The self-reported figures on income indicate that economically, they are very poor or on the borderline, with almost 70 percent having less than \$250 monthly. The overwhelming majority (85 percent) lived in their own apartments or houses at the time of application, and the remainder in boarding houses, with children or friends, or in hotels. None were in institutions. Broad indicators of health status are that all but one person were able to come to the office for an interview and to manage the short flight of stairs, most were unaccompanied, none showed gross signs of confusion or disorientation, and almost all were living alone.

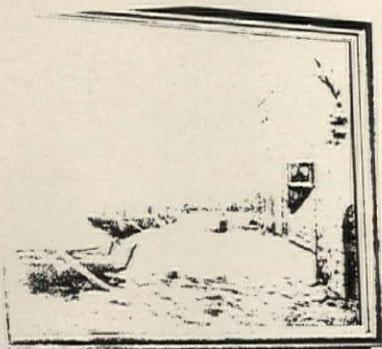
This brief demographic information indicates that the applicants to intermediate housing are different from those who apply to the center's other facilities, i.e., the institution and the apartment buildings. They are significantly younger and enjoy better health physically, mentally and functionally.

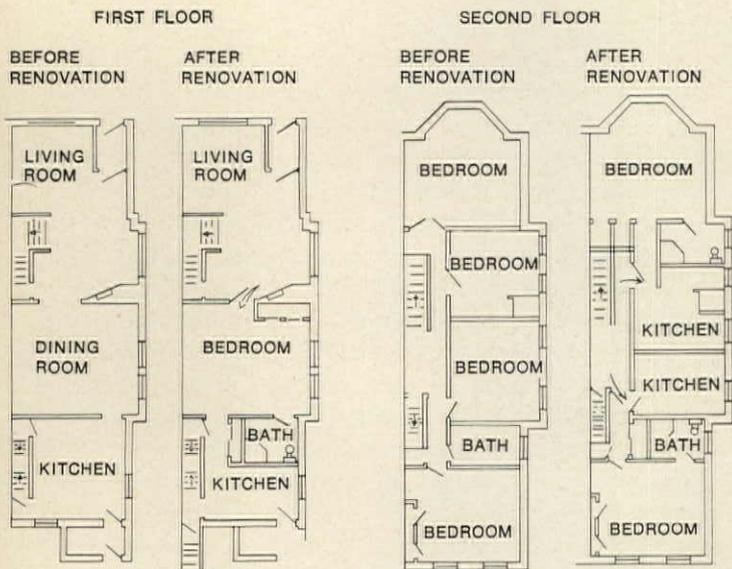
Most intermediate housing applicants offered multiple

reasons for wishing to move. Half were motivated by intense fear engendered by the high crime areas in which they lived, and often also mentioned a yearning for human contacts and services from which they had been cut off by the environment. Some were isolated in alien ethnic groups or occupying deteriorated housing with rats and roaches. The sheer terror in which some of these old people lived, the robberies and attacks to which they had been subjected, and the psychological and physical stress they had endured are beyond description. Other reasons offered were isolation, desire for social contacts, diminishing physical capacities leading to loneliness and restricted activities, financial stress, wish for services, transportation and proximity of recreational opportunities and the protection of the center, and poor boarding arrangements.

This total group may not, of course, be an accurate representation of those who actually move to the housing. Our research will permit us to compare those who do with those who do not move and with those who choose to move elsewhere. At the least our experience to date underlines the need on the part of a specific target population for this particular kind of physical facility and its associated constellation of services.

Our experience also highlights the knowledge and per-





Close proximity to medical services, religious facilities, shopping and transportation is one of the salient features provided for the aging by the Philadelphia Geriatric Center in its Community Housing for the Elderly. The row of renovated structures for older people is in center foreground; beyond them are, left to right, Home and Hospital for Jewish Aged, York House South and North, both apartment buildings.

sistence required to guide such a project through social policy barriers, constraints and entitlements at all three levels of government to its fruition.

In brief, federal funds (FHA mortgage, 236 rent supplement program) were the enabling mechanisms. However, to use the programs in developing the housing requires a high degree of sophistication in dealing with the complicated procedures and requirements of different levels of government (i.e., in rent computation, cost changes, inspections of construction). The fiscal risks involved may prevent small non-profit auspices from undertaking such projects. Among the center's suggestions are that a position of "expediter" (or facilitator or ombudsman) be created within HUD; that HUD differentiate between small and large projects with appropriately differing administrative and fiscal requirements.

The difficulties encountered are viewed by the center as subject to constructive change. The project is considered to be well worth the effort when balanced against the immense and intense need of the older people it was designed to serve. Certainly, such attempts should continue in order to create and test a variety of models under a variety of sponsors or auspices, and in different types of neighborhoods and geographical areas. □



# It's a Wide Open Field: Construction Management

**It's not a new ball game,  
only the application and refinement  
of the process are new.  
Still, the major stumbling block to using  
this logical means of tackling a job  
is in the architect's mind.**

by PHILIP J. MEATHE, FAIA

One of this nation's—and in fact all nations'—great weaknesses is falling in love with “buzz words.” Today we think everything has to be “relevant”; yesterday it had to be “sincere.” If I tell my son I prefer wing-tip shoes, he says I'm “square,” but if I forget to get my hair cut and it grows over my collar, my older daughter says I'm “cool.” And my tab collars are “strictly out of it,” yaps my 15-year-old.

We architects have had our share of buzz words too, and professional magazines or panel speakers always find ways to work them in somehow.

For a while, all of our buildings had to have a “sculptural quality.” Then as we got deeper into the construction phases of our projects, we discovered the words “critical path method” or CPM.

We now have a new term: construction management. You have heard it hundreds of times wherever people talk about the problems of programming, design and delivery of projects. Construction management is indeed a new and important idea, but it is a lot easier to learn the words than it is to learn the underlying principles.

We have had a number of very successful construction management projects at Smith, Hinchman & Grylls, but we also had one outstanding lemon. In the successful ones, the clients understood what both of us had to do and what we would gain if we did it. In the failure, the client wanted all the goodies of the construction management approach but refused to understand what he had to do to get them. He learned the buzz word, but he never learned the ideas behind it.

The underlying concept behind construction management and the reason it is so important to us as professionals is that it brings the skills of modern management practices to the process of *planning, designing* and *constructing* a physical facility. Unlike almost every other management action in our world, it has changed little since we have begun constructing modern buildings. Construction management means four simple actions:

1. Identifying the problems and the problem areas.
2. Reviewing the various options to which these problems might respond.
3. Making decisions based on this evidence.
4. Implementing those decisions as quickly as possible after they are made.

At one and the same time, construction management is offering to our profession both its greatest opportunity and its greatest danger. Opportunity because it gives us the control of the building process which insures that we will give our clients the quality buildings we designed for them; and danger because if architects rush into construction management without knowing what they are doing, we may be hearing the death bell of our profession.

As you well know, architects catch all kinds of flack: We don't know costs; we don't observe budgets; we don't know the construction market. And we catch this abuse when all we are doing is the design of a building. Imagine what they would say about the architect who tried to manage a project without knowing cost estimating, scheduling or the interplay among all the building trades and their specialists.

I'll tell you what they would say. They would say that “architects don't know a damned thing about building and shouldn't be trusted with the management of the building process”; and “architects aren't any different from any other subcontractor or supplier; we'll let the construction manager decide what they should and should not do.”

Tomorrow's construction managers are not going to be architects automatically, but they also are not going to be general contractors automatically, or management firms automatically, or anybody else automatically. This field is wide open and it is going to go to those who learn four great skills:

1. Cost estimating. Not cost guessing, even if it is good guessing, but the thorough knowledge of all the factors that go into costs. We are going to have to know labor rates and contracts, availability of that labor or material in the marketplace, temporary dislocations of the law of supply and demand in one or more trades, instant comparisons between all of the options available to us (and that means expensive and sophisticated computer capabilities) and last, but not at all least, efficient management of our people so our own costs don't mushroom.
2. Critical path method scheduling. We are going to have to understand how to make a construction schedule and meet it. We must know the interface and interaction of all subcontracts; we must know the order in which the various systems have to go into the building and the time they need; we must be familiar with the latest technology in all of the trades; and we must

# In the construction management process, it is essential that the client understands what is expected of him.

know people well enough to get maximum performance from them with minimum friction.

**3. Financial planning.** Implicit in construction management is the ability to forecast and manage the cash flow of the client. We must be able to match up the cash needed for work put in place with his ability to have the cash available. Architects have been notorious for their abysmal ignorance of money matters, but if we are going to be tomorrow's construction managers we will have to be top notch money managers. Consider the situation of a corporate or industrial client: The cash needs for the project may mean the issuance of bonds or the borrowing of large sums of money. In either case the client wants no surprises; he doesn't want payment demands at a time when he hasn't the money and, equally, he doesn't want to borrow money or issue bonds in advance of when he actually needs it. In any commission from a major industrial client, the architect should be working closely with the financial people, and he had better know the client's needs and requirements because a matter of days can cost millions in interest one way or another.

**4. Client relations.** The one thing that will sink us quicker and deeper than anything else is to have a client who doesn't understand what he must do in the construction management process, or if he does understand, doesn't do *what* he is supposed to do *when* he's supposed to do it. Remember, the time and money clock keeps ticking, and you won't be able to shut down the construction management team just because the client is late with decisions. With too many delays, the total fees on the job can become so high that the client will scream in pain—even though the pain is self-inflicted. But if you make him a real member of your design team, if you clearly outline the decisions he has to make and the time he has to make them, the performance of every aspect of design and engineering will be improved.

One of the problems we face is the demand for new physical facilities and the shocking facts of how long they take to achieve and how much they cost. Today, when escalation of building costs amounts to almost 8 percent per year (and that's after the effects of wage and price controls!) and when the programming, design and delivery of a complex project like a major urban general hospital might take six to ten years from decision to delivery, you have a situation, unfortunately, where no original cost estimate can be more than a guess, and not a particularly educated guess at that. The budget for your new

building that you planned so carefully can turn out to be hopelessly inadequate and a nightmare to live with.

There is little we can do about some of the underlying factors in cost escalation: We cannot affect labor rates or materials costs or the cost of financing. However, we can, through intelligent scheduling and good management, attack the process of building itself, the way a building gets designed and built.

The traditional linear, sequential process demands that every last doorknob be designed, every last detail decided before a building goes out for bids. Many state laws and most federal laws forbid the beginning of any building until the plans have been approved in every detail by the agencies concerned.

Like every other logical process, the design of a building involves making successive decisions based on the decisions made earlier. But in the conventional process, no action is taken on the first decision until the last one is made, even though the cost information on which we made earlier decisions is no longer valid because of escalation factors.

When we do put our completed design out for bids, each bidder must estimate how long it will be before his particular labor and material will be installed, and must base his bid on what he thinks his costs will be at that time. The farther away his involvement is from the basic bid date, the wilder his guess has to be about cost escalation. If he guesses too low, he might go broke, so he tries to guess high. And guess who pays the bill?

Let me give you an example. Under a lump sum bid our firm asked for subbids on carpeting for a major urban hospital when the installation of this carpeting was four years away. We didn't get a single true subbid. How could we? The manufacturers don't even know what the fiber will cost four years from now, let alone the cost of the finished carpeting and the labor to install it.

But this doesn't have to be the process. Our firm has just completed three important projects cutting years off the traditional timetable, saving millions of dollars in cost escalation and recouping rental charges for this needed space. Most important of all, the facilities were available for use, and I don't mind adding, for the production of income for the owner/clients.

The first project was an 11-building complex of offices, laboratories and classrooms for health sciences students at the

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**Mr. Meathe** is president of the Detroit-based firm of Smith, Hinchman & Grylls Associates, Inc.

# Construction management will go to those who know cost estimating, CPM scheduling, financial planning and client relations.

State University of New York at Stony Brook. We delivered these buildings to them nine months after being commissioned. These were not prefabs or factory-built units of any kind but were of quality materials and equipment and were well designed and landscaped. The escalation in building costs that we avoided amounted to more than \$4 million, and almost that much in rental charges which the university did not have to incur for temporary facilities.

The second project was a \$21 million graduate chemistry laboratory on the same campus. It was a complex, sophisticated seven-story building which we turned over to the faculty and students just 26 months after we took on the job.

If you will accept my estimate of how long it would have taken by conventional methods and how much cost escalation would have taken place in that time, and how much it would have cost to have rented this kind of laboratory space, I think I can demonstrate that we saved the State of New York as much as the entire \$21 million cost of the facility.

The final example is a 100-bed addition to a Detroit area community hospital that was brought in on a 28-month schedule. This is not just for construction time but for programming, design and construction. More than 18 months were cut from the predicted schedule.

These three projects proved that the design and construction can be managed, that the two processes can be overlapped and telescoped, and that much of the escalation of building costs can be avoided with no sacrifice of quality in design, materials or equipment.

This is important. You couldn't interest me in a system to build buildings fast, or build them cheap, if that's all there was to it. The system only makes a difference when you can retain the highest standard of design, unimpaired quality and the kind of usefulness and flexibility that your client has a right to expect.

We at SH&G call this the Unified Team Action Program, or UTAP, and it is just that: a team. It calls for the full participation of the owner/user in the decision-making process. It doesn't just call for it: It demands it because the client is the one who must give the team the clear criteria that he and the architect, the engineers, the construction manager and the contractors need to turn program into bricks and mortar.

Once a team decision is made, it is implemented immediately if possible. For example, we started clearing the Stony Brook site as soon as we decided how much area the buildings

would occupy. In addition to that, we started bringing utilities to the site without having any idea how or where they would connect with the buildings. All we had to know was that we would need them.

UTAP calls for dividing contracts into the optimum number of bid packages to get the most bids and therefore the best prices. If we had let either of the Stony Brook jobs as a single general contract, we would have been lucky to have received two bids. But since we split the job into 13 different packages, we got over a hundred bidders for the various pieces, many of them being smaller local contractors who wouldn't have had a prayer of bidding on the whole package.

UTAP calls for bidding those contracts as close as possible to the actual installation, so the contractor doesn't have to pad his bid for contingencies. It calls for the construction manager (that's us) to manage each prime contractor's work and to get maximum efficiency in the scheduling of this work. Finally, it calls for tight management of the client's cash flow and payment schedule.

This managed construction isn't new. I cannot say that we have invented fire or the wheel, or discovered penicillin. Many of our large industrial clients have been using a version of construction management for years. What is new is the application and refinement of the process, and also that we are managing the project instead of letting the project manage us.

One of the most significant advantages in the UTAP approach is the systematic way it forces decisions to be made on schedule. The client, architect/engineer and the construction manager team meet regularly, and when problems pop up this team has the responsibility and authority to make decisions on the spot. The team knows that the agenda for each meeting calls for the resolution of certain matters and the team members come to the meeting knowing that they must be resolved. If the team is not prepared to make the decision at that time, they know exactly what any delay will cost in time and money.

This has worked, it is working and it will continue to work. The major final obstacle standing in our way is the stubborn insistence of the human animal that the old way is better than the new. There may even be people who still insist that castor oil is more effective than penicillin, just as we have engineers who think a slide rule is better than a half-million dollar computer. We must use this new tool to improve our practice. We have a world of evidence that the old ways won't cut it any longer. □

# 1972 Naval Facilities Awards Program

## First Honor Awards



**Bachelor Officers Quarters and Mess**, Navy Supply Corps School, Athens, Georgia.

**Architects:** Stevens & Wilkinson, Architects/Engineers/Planners Inc.

**Jury Comment:** This is a handsome building in a beautiful landscaped setting. The contrasting red brick and light colored masonry fit well into the classic traditions of the South. Broad overhangs afford protection from the sun and give the inhabitants large spacious windows. Existing trees have been preserved by judicious use of retaining walls and wells.



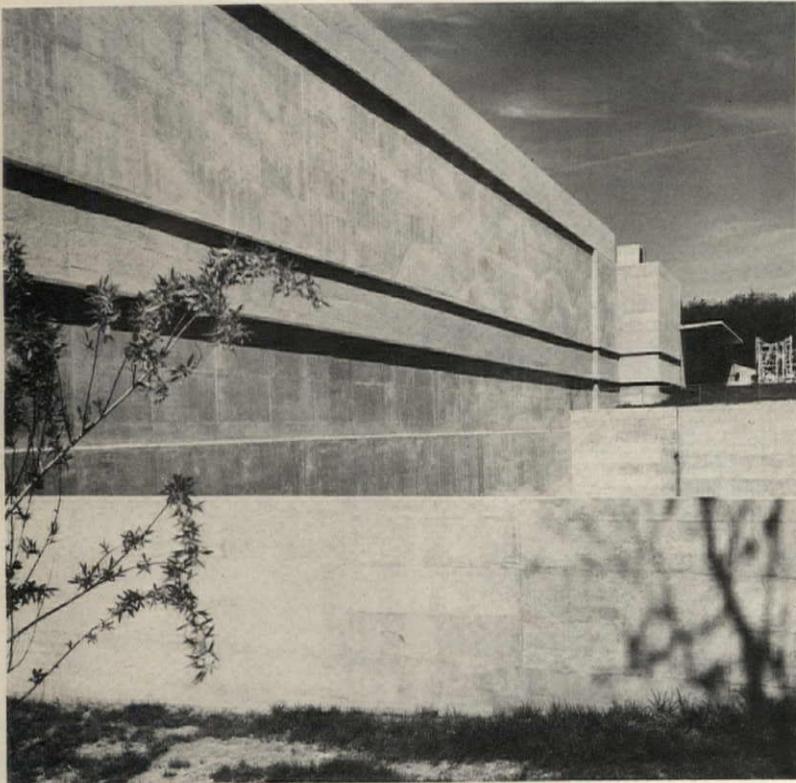
**Service School Barracks**, Naval Training Center, Great Lakes, Illinois.

**Architects:** Loebel Schlossman Bennett & Dart.

**Jury Comment:** This a simple straightforward solution to a difficult problem. Housing is grouped in campus form on a rectangular site, with building entrances tucked away, thus giving a welcoming feeling which leads one from outer to inner spaces and then into the structures themselves. The composition results in a sense of balance between masses and open spaces. Interiors are warm and friendly. Sawn wood ceilings give a homelike atmosphere to a lobby span which is otherwise constituted of "hard" materials such as birch and metal.

A mess hall and a service barracks are among the award winners in the third biennial awards program for distinguished architectural achievement sponsored by the Naval Facilities Engineering Command of the Department of the Navy in cooperation with The American Institute of Architects. The other winners are two laboratories, an elementary school and an addition to a library. □ The jury applauded NAVFAC for the encouragement of good design in all of its facilities and commended its demonstration of the fact that good architecture is possible even when budgets are tight. Jurors were William A. Carlisle, AIA, chairman; John Carl Warnecke, FAIA; and architectural student Cortlandt G. Liddell, University of Illinois at Chicago Circle.

#### First Honor Awards



**Gamma Ray Facility**, Naval Ordnance Laboratory, White Oak, Maryland.

**Architects:** Gilboy, Stauffer, Giombetti, Skibinski & Davies.

**Jury Comment:** The facility is a powerful massive building that combines two differently scaled functions into a cohesive whole. The concrete needed for shielding is effectively used to express the size and function of the building. The facility is well placed, with the rolling site used effectively to accommodate the diverse requirements of large and small spaces.



**Thompson Medical Library Addition**, Naval Hospital, San Diego.

**Architects:** Delawie, Macy & Henderson.

**Jury Comment:** This relatively small project owes some of its success to the original building to which it is attached. The library reflects the same fine design character, atmosphere and details, and as part of the total structure, it extends the proportions to better relate to the sizes of other buildings on the grounds. The plan is simple, straightforward and functional, with diverse interior spaces. The exterior expression directly reflects the plan, resulting in excellent architecture. Interiors are colorful.

# 1972 Naval Facilities Awards Program

## Awards of Merit



**Price Elementary School**, Mangilao, Guam, Mariana Islands.

**Architects:** Mackinlay/Winnacker/McNeil & Associates.

**Jury Comment:** Simple, direct and functional, the solution reflects well the tropical environment in which the school is located. Deep overhangs seem especially appropriate. The semienclosed spaces have a good scale and feeling for children. This is an excellent place for learning.



**Chemistry Laboratory**, Naval Research Laboratory, Washington, D.C.

**Architects:** Hayes, Seay, Mattern & Mattern.

**Jury Comment:** The well-detailed and proportioned structure is a good solution to what might easily have been a large uninteresting mass. The facades are clean and well-proportioned. Stacking the labs allows large landscaped areas. The uncluttered interiors are flexible and adaptable to change.



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by Albert O. Halse, AIA

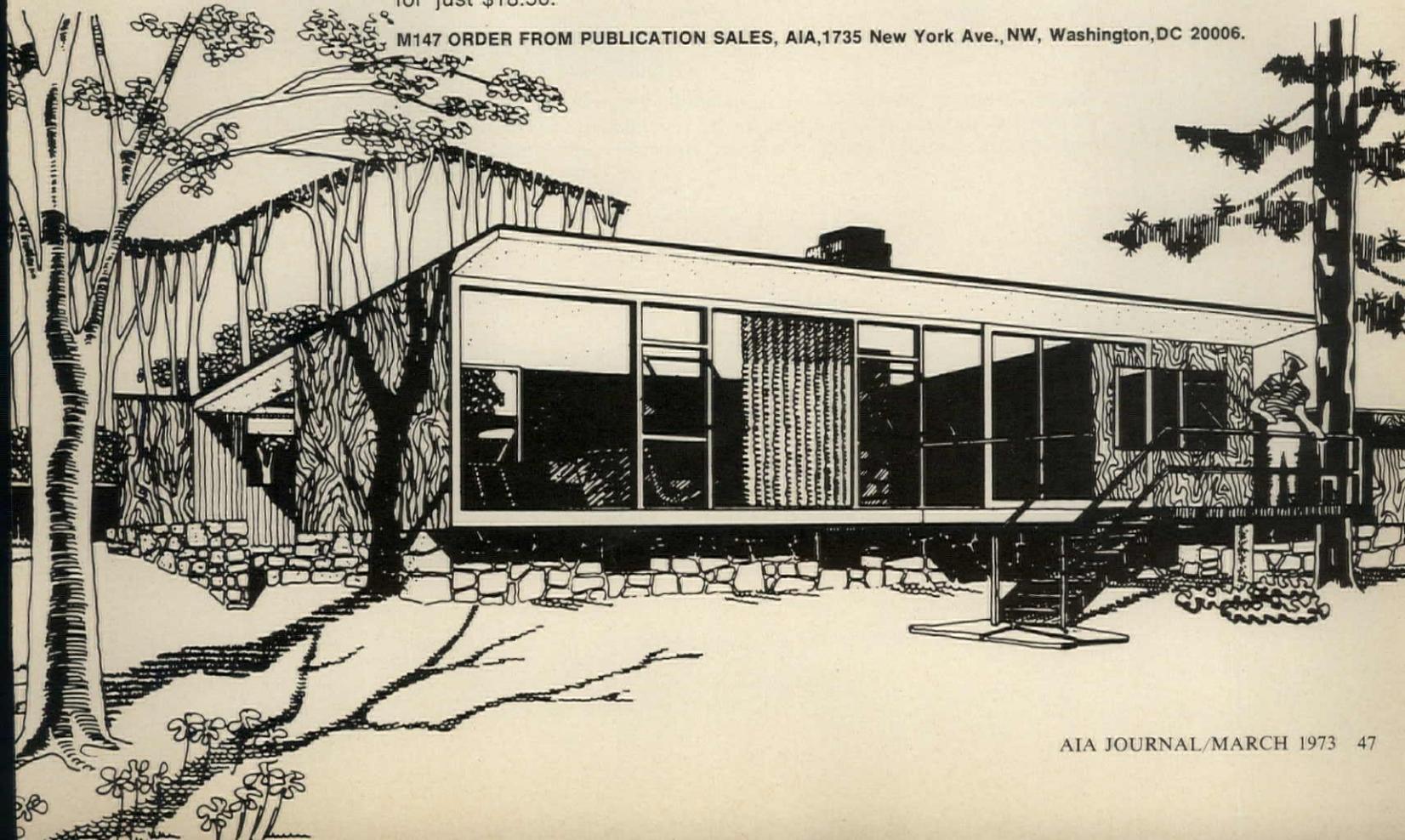
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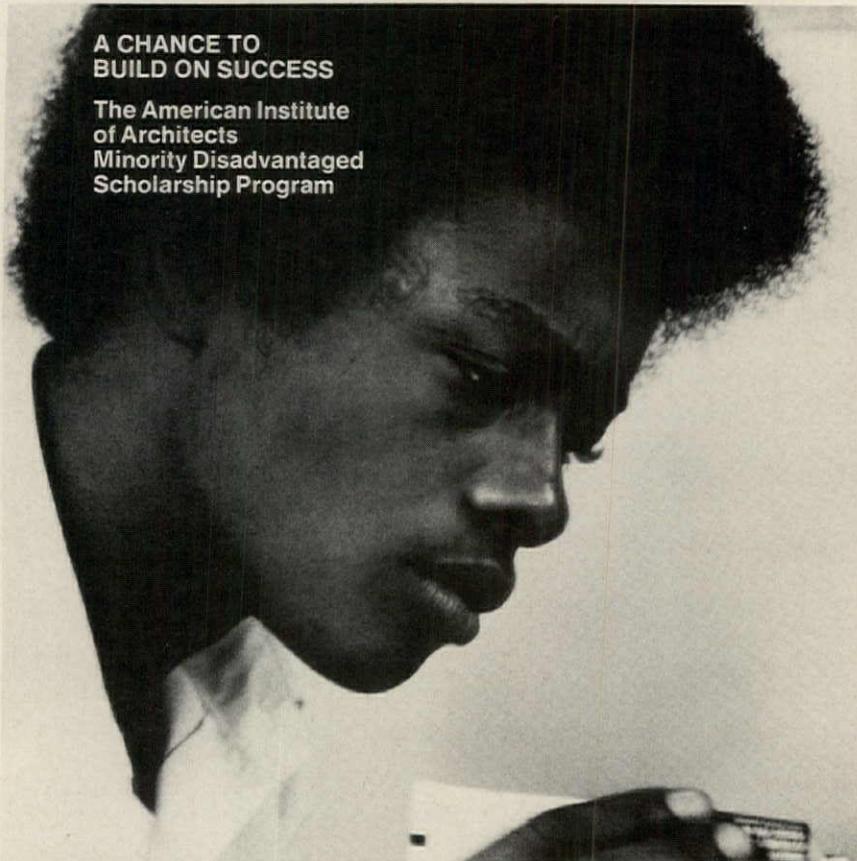
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# How to Design a Client

**NYSAA/AIA may be blazing trails in that it has established a development corporation to sponsor nonprofit housing for the low and moderate income elderly. A design competition conducted by the association for an apartment complex provides other innovations in the winning entry. Altogether there are lessons for other architectural associations and for practitioners generally.**

At its 1971 convention the New York State Association of Architects AIA discussed the concept of the group's forming a corporation as a nonprofit sponsor of housing development. The idea had originated in the association's Housing, Urban Development and Community Planning Committee, whose co-chairmen were, and are, Joseph D. Monticciolo, AIA, deputy director for the New York area office of the Department of Housing and Urban Development, and Frank Visconi, AIA, director of architecture for the New York State Division of Housing and Community Renewal.

A resolution sponsored by the committee was passed at the convention, and the committee was instructed to develop a program to form a nonprofit housing corporation to develop and construct housing for families of low and moderate income. On September 19, 1972, a Certificate of Incorporation of the New York State Association of Architects Development Corporation, was filed with the attorney general. The certificate of incorporation was finally approved by the appropriate New York State authorities on December 19, 1972.

This may be the first time that a development corporation has been established by an architectural association, although individual architects and firms are becoming increasingly involved as developers. Indications of this trend are given in *Development Building: The Team Approach* by C. W. Griffin (Washington, D.C.: The American Institute of Architects, 1972).

The NYSAA hopes "to demonstrate that housing quality can be achieved with a client who uses architectural services for maximum effectiveness and to pioneer a new role for architects in responding to the social challenges of their time." By its certificate of incorporation, the NYSAA Development Corporation is explicitly committed not to practice architecture. "What we have done is to design a client," comments Thomas F. Galvin, AIA, president of the association and of the New York Chapter AIA.

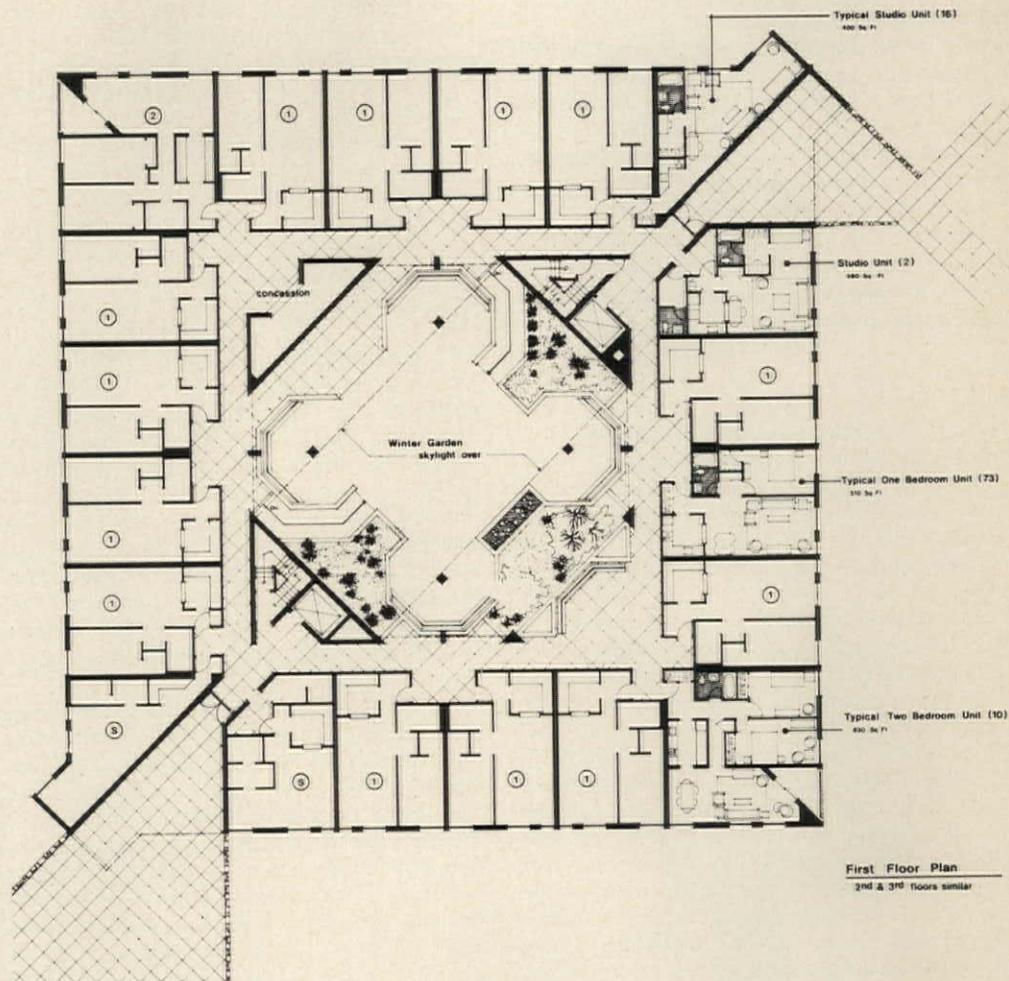
The new corporation decided that its first project would be housing for the low and moderate income elderly for several reasons: the maximum present need and optimum marketing prospects; the availability of spe-

cial funds earmarked for such housing; and the exceptional possibilities to make architectural contributions to a building type that needs and often lacks human amenities.

Dependent entirely on public funds for financing the project, the nonprofit sponsor had to select a site on which to build, and urban renewal property seemed the best buy. The association circularized all the local renewal agencies in New York State and received responses from 12. They were subjected to thorough analysis, and it was de-

The architects of the winning design state that they are trying "for an interesting facility rather than an interesting design." Their structure is intended to encourage a sense of community both among the residents and between them and their surrounding neighborhood.

The concept is a square "doughnut" cut on the diagonal into three- and six-story segments. A 65-square-foot garden will be covered by a sloping skylight. The designers want the occupants "to have a window on



cial advantages over all the others. It was already cleared and immediately available; it was owned by the city's urban renewal agency. Its location near the main business district and adjacent to a new shopping mall was satisfactory. Moreover, the site has splendid views of the Mohawk Valley and the hills beyond.

The city agreed to provide tax exemption and any required zoning revisions. The project is expected to be developed with a variety of funds from state and federal sources. Plans are to begin construction by September 1.

A competition for the design of the project was initiated by the association with 83 architects from New York State participating. In January the jury decided upon the winners. First prize went to Hawks/Garment Associates of White Plains, a firm established in November 1972. It will design the 100-unit apartment complex.

the world." It is expected that this "winter garden" will be used by both residents and by the community for exhibitions, parties, performances, etc., with a possible newstand or a lending library as possible attractions.

The architects have designed the building so that within one structure there is the option for either a garden or a highrise apartment. And in later years residents who first prefer to live closer to the ground in walkup apartments may move into elevator apartments later on.

The jury members for the competition were John Fisher, dean of the school of architecture, Syracuse University; Patrick Quinn, AIA, dean of the school of architecture, Rensselaer Polytechnic Institute; Joseph Stein, commissioner of the Department of Buildings, City of New York; David Todd, FAIA, New York City; and DeForest Winfield, director of planning, Utica. The professional adviser was H. Dickson McKenna, AIA, executive director of NYSAA. □

# Selling the Architect's Services

**The AIA will provide the architect with new agreement forms shortly to assist him in rendering expanded services for a client. Steven H. Rosenfeld, director of AIA Professional Practice Programs, reminds practitioners that they should not limit themselves narrowly to basic services when even a small office can merchandise its talents to attract clients and to sell such services as are necessary for a given project.**

The profession has been talking in earnest about comprehensive services since 1960. It was then a buzz word that architects found useful as a sales tool, but the concept has not proved to be as successful as its potential would have indicated.

The abilities and talents of the architect are not being properly sold in the marketplace due to inadequate preparation by the profession and inadequate education of the client/public. From the wide range of potential practice areas available to the architect, many practitioners have continued to limit themselves to a narrow concept of "basic services." This term is useful to the architect in a contractual/legal situation, as it relates to The American Institute of Architect's standard documents. However, it has been both a crutch and an anchor to many architects and should no longer remain as a mental block to architect and client alike.

As used in the standard agreement forms, basic services are those services that the architect agrees to provide in his contract with the owner for the basic compensation. They are not limited to the language found in the agreement forms, nor is the language fixed or rigid. The agreement can include any number of services required for a project, simply by adding them to the printed form. Basic services must be defined for every project, as only a generalized standard is provided in the printed form.

It must be noted, further, that additional services are those not provided for as part of basic compensation. Any of the additional services listed in the standard forms could just as easily be sold—and should be—as a basic service, if required for the project. These items are listed in the standard form only to note for the client that they have not been included as services to be provided for under basic compensation unless specifically included.

The broad range of services offered by the architect should satisfy most project requirements. Other services can be provided

through a consultant. Thus the list of available services can continue to expand. The reluctance of some architects to sell comprehensive services, which in itself may be a disservice to the client, forces the client to look elsewhere for the needed services.

Part of the problem with comprehensive services may be the term itself. "Comprehensive" is too inclusive a word, and most architects are not prepared to define the word or to expose themselves to possibly unnecessary risks. Perhaps "expanded services" is a better title, as it permits the architect to limit the services he chooses to offer. Whatever term is used, it should be in the context of broadening the narrow concept of basic services which may limit architectural practice.

The AIA's book *Comprehensive Architectural Services*, a compilation of AIA JOURNAL articles published prior to 1965, is one of the few sources of information available. Otherwise, architects are left to their own devices to determine services, old and new, that they may wish to offer their clients.

The size of a firm is not a critical factor in marketing expanded services. Even the smallest office can offer its clients many services, and the addition of new services can be used to attract clients through the proper merchandising of these skills. The architect should never undertake to provide services under false pretenses, but he should not hesitate to open up his practice to new ideas. Selling the client means examining the proposed project to analyze just what services are required and then selling the services that the firm can provide.

One of the major drawbacks to *expanded services* was the problem of compensating the architect for the services offered. Many clients are quite willing to accept these services from the architect but are unwilling to increase the compensation beyond the recommendations shown in the AIA chapter compensation schedules. This is another reason why "basic services" has become a problem; if the expanded services end up as money losers, who needs them?

Many services offered by an architect have nothing to do with the construction of a building. The use of the standard AIA agreement forms with their orientation toward building projects makes the selling of front-end or nonbuilding services even more difficult. Expanded services are usually indefinite in scope, and the time and effort required to provide the services may make the establishment of a fixed fee a gamble. If a sum is agreed upon for a particular service, the architect must be prepared to deliver, or it must be understood in advance with the client that when the funds allocated for performing the services are expended, the work stops and a finished product may not be the result.

Under the standard agreement forms promulgated by the AIA, the services provided on a project can be expanded as required, but the documents do not adequately define the scope and responsibilities of all expanded services. To attempt to have them do so would create a cumbersome form. For this reason, an attachment should be added to

the standard agreement which defines the services to be provided by the architect and, if necessary, how he is to be compensated. The standard provisions for additional services in the basic agreement forms should be adequate for defining the method of compensation and need only be referenced.

A new generation of agreement forms is being developed by the Institute to facilitate the providing of expanded services. Four of them now available are: 1) Standard Form of Agreement Between Owner and Architect for Interior Design Services (B707), 2) Standard Form of Agreement Between Owner and Architect for Special Services (B727), 3) Standard Form of Agreement Between Architect and Consultant (C431) and 4) Joint Venture Agreement (C801).

The first is designed so that the architect can sell interior design services on his own projects or as a distinct and separate service unrelated to his building projects. Its availability, hopefully, will encourage architects to expand into this rewarding (economically and professionally) area of practice.

The special services agreement is a form designed to accommodate services that are not specifically tied to a building project. This agreement will be used primarily for front-end services, i.e., feasibility studies, site selection and programming. This form will make the securing of architectural services more attractive to clients who are not sure that they really need an architect and who would not sign a contract that apparently commits them to a building project.

The architect/consultant agreement provides a vehicle for the architect to secure various specialists which may be needed for a project. It can be used prior to the negotiation of the contract with the owner and then sold as part of basic services or as a reimbursable cost item. Any number of consultants can be included in the architect's team for presentation of capability to do a project.

The joint venture agreement permits smaller firms to attract larger commissions or to affiliate with out-of-town firms when a major commission is in the offing. The architect can acquire instant specialization and a reputation for a building type or service for which he would have been overlooked previously.

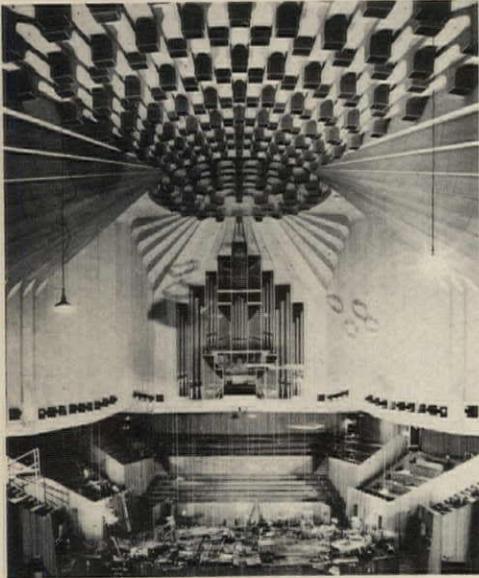
One area of service in which the architect is currently fighting for a piece of the action is construction management, with competition for dominance coming from contractors and so-called specialists. While some architects may scramble for the projects currently available, mostly from public agencies, the risks and the unknowns leave many leery of the entire concept.

No legal definition of what is or is not a proper service of the professional construction manager has been reached. If the architectural profession and the clients continue to develop this type of service, however, it could create drastic changes in the practice of architecture.

The architect as construction manager will receive important legal definition when the AIA publishes its first construction management agreement form, possibly some time late in 1973. □

telecasts. The opera house is under the direction of the Minister for Public Works.

Just what the opera house cost is rather indefinite at this time. Various amounts have appeared in published material. Back in 1967, however, Michael Baume in the book



The opera house has five performance halls; their interiors are all handsomely detailed.

*The Sydney Opera House Affair* stated, "Its estimated cost has risen from a bad guess of less than \$8 million to another guess of more than \$50 million in nine years."

### Education of Code Enforcement Officers Is Central Theme of Landmark Symposium

"As a nation, we cannot afford to continue the haphazard selection, education and training of code enforcement officers that currently exists," said Richard L. Sanderson, president of the National Academy of Code Administration, at a symposium at the University of Texas recently. The NACA, which was established in 1970, has as its aim the development of regulatory code administration as a recognized profession.

The theme of the symposium was "Educating and Training Code Enforcement Officers." It was conducted by the NACA and sponsored by the National Conference of States on Building Codes and Standards in cooperation with the Texas Department of Community Affairs.

As a result of the symposium, the NACA has declared that it will endeavor to 1) function as a clearinghouse for code enforcement education and training information; 2) coordinate all code enforcement education and training activities; 3) provide curriculum guidelines for institutions of higher education; 4) provide in-service training program guidance for state and local governments; 5) encourage the recruitment of code enforcement personnel from sources other than, but not to the exclusion of, the building trades; 6) establish minimum qualification standards for code enforcement personnel; 7) establish a certification program for code enforcement officers that will provide national recognition for

qualified individuals and encourage mobility of code enforcement personnel between levels of government and between political subdivisions at the same level.

A compilation of papers presented at the symposium, abstracts and workshop recommendations are available at \$15 a copy from the NACA, 1313 E. 60th St., Chicago, Ill. 60637.

### Prefabricated Home Is Tested in Alaska, Designed to Withstand the Arctic Cold

The largest Eskimo settlement in the US is in Barrow, Alaska. The 2,800 residents of this remote northern community have been spending some of their time recently examining a model house specifically designed and built by PAE Architects & Engineers Inc., Los Angeles, for rugged testing this winter. If the house passes the test of Barrow's harsh weather, it may become a prototype for some of the 1,200 units of housing to be built for Alaska natives.

The Remote Natives Housing Program was created by Presidential proclamation. Placed under the jurisdiction of the Department of Housing and Urban Development, the program has involved also the Alaska State Housing Authority, the Alaskan Federation of Natives and the Arctic Slope Regional Corporation.

PAE says that its model "constitutes the first building effort designed and engineered to meet the socio-economic needs of the natives of the North Slope," a low and vast treeless plain jutting into the Arctic Ocean.

Prefabricated in Seattle, the house was flown into Barrow after being barged to Anchorage and trucked to Fairbanks. During the planning, PAE had to take into consideration the short period of ice breakup in the Arctic which makes transportation timing critical. But the firm made its schedule, and the house was assembled in 10 days.

A representative of PAE who visited the



A central community living room allows the house to accommodate more than one family.

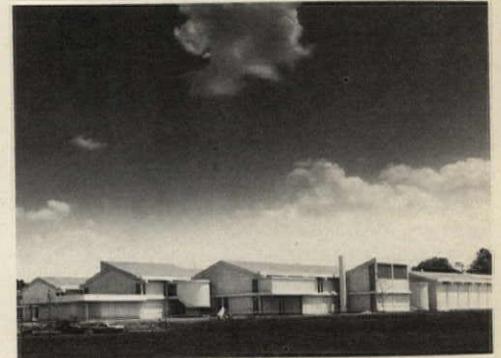
house in January reports, "Our house was bright, cheery and warm and was withstanding the cold extremely well. The wall panel at the porch area is painted a burnt orange—the only exterior bright color I saw on any dwelling in Barrow." At the time, the temperature was 35 degrees below zero.

The house has 1,000 square feet of living space with three bedrooms. Sandwich core walls of heavily compressed polyurethane foam, a corrugated aluminum roof and double glazed windows are features of the

dwelling. It rests on a foundation 2 feet above ground so that snow can blow under and through rather than piling against walls. Monomatic plumbing and a water storage system are provided because no sewage or water lines can be built in permafrost. The unit's price tag is \$52,000.

### Two Buildings Honored by Administrators In Newly Instituted Awards for Schools

The annual Exhibition of School Architecture is a joint endeavor of the AIA and the American Association of School Administrators. The exhibition is held in conjunction with the conventions of the AASA. There is



Palo Alto High School (top) uses traditional materials in a contemporary expression; Parkway North School (bottom) relates space and function to overcome a feeling of bigness.

a jury which selects the projects to be exhibited from the preliminary submissions. This year the jury also has chosen recipients of new awards named in honor of Walter Taylor, FAIA, former AIA director of Education and Research, and Shirley Cooper, Hon. AIA, longtime executive secretary of AASA.

Shirley Cooper and Walter Taylor first met in 1949 to find ways to improve relationships between architects and educators. One of the outgrowths of their efforts was the establishment in 1950 of the Exhibition of School Architecture which has been held annually ever since.

At its February convention in Atlantic City, AASA presented the Walter Taylor Award to the Parkway North Senior High School, St. Louis. Accepting the award were Louis R. Saur, AIA, of the architectural firm of Hoffman Saur Associates, and Wayne W. Fick, superintendent of the Parkway School District, Chesterfield, Mo.

The AASA will honor another school at

its San Francisco convention in March. The Palo Alto High School, Palo Alto, Calif., will receive the Shirley Cooper Award. The award will be presented to Alexander Taries, president of the architectural firm of Reid & Taries, and Harold T. Santee, superintendent of schools, Palo Alto.

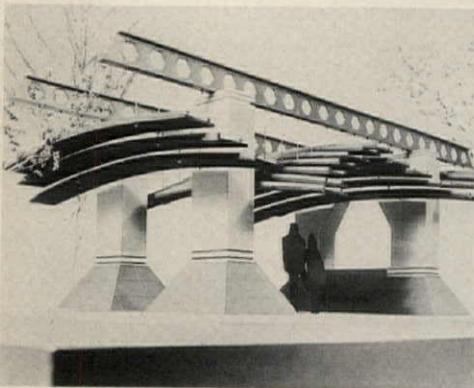
The jury called the Missouri school "excellent fulfillment of sound educational planning, resulting in a fresh and bold architectural statement." The California school was praised as "an eminent example of combining a new facility with an old to accommodate a changing educational program."

The jury studied approximately 350 preliminary submissions and selected 220 for the 1973 exhibition. Members of the jury were Harry W. Berry, AIA, Tacoma, Wash.; Lillard E. Law, superintendent of schools, Westfield, N.J.; Wendell Locke, AIA, Oklahoma City; Carroll W. McGuffey, professor, College of Education, University of Georgia; Ewing H. Miller, AIA, Terre Haute, Ind.; John W. Nicoll, superintendent, Newport-Mesa Unified School District, Newport Beach, Calif.; Earl D. Patton, superintendent of schools, Springfield, Ill.; and R. Randall Vosbeck, AIA, Alexandria, Va. The jury also selected 23 projects other than the award winners for special citations.

#### **Picnic Pavilion Sited in a Denver Park Will be Made of Recycled Glass, Rubble**

Panels made of used glass bottles and jars and demolition rubble are being used to construct a large open picnic pavilion in Denver's Washington Park. The "ecological" building material was developed by the Colorado School of Mines Research Institute.

The pavilion will be 100 percent Colorado in creation. Its architect is Denver's Maxwell L. Saul, AIA; the used bottles are being collected by local soft drink bottlers;



This coming summer Coloradans will be able to picnic in the "pavilion that ecology built."

the demolition rubble is from the city's urban renewal project; and local industries and organizations are paying for construction. The project will cost about \$60,000 including setting up a pilot plant to manufacture the panels of which the pavilion will be built.

Panels for the shelter will be in a combination of 14 colors and textures to blend with the environment. Manufacture of the required 1,534 panels will require about 29,000 pounds of rubble, about 15,000

pounds of reclaimed container glass and about 2,800 pounds of clay. The pavilion will be 36 feet long and 27 feet wide.

#### **Store Interior Design Winners Named In Four Diversified Classifications**

The National Association of Store Fixture Manufacturers and the Institute of Store Planners recently presented trophies to the winners of the third Store Interior Design Contest.

Winner of a top award in the major department store category was Welton Becket & Associates for the interior design of Bullock's in Northridge, Calif. Robert Young



A flexible theater lighting system and vibrant colors are features of Bullock's store.

Associates, Inc., won the award in the specialty store under 15,000 square-foot category for its design of Jas. K. Wilson in Dallas. R. W. Shipley Associates, Inc., was honored for its interior design of Mark Shale, Woodfield Shopping Center, Schaumburg, Ill., in the specialty store over 15,000-square-foot category. For a shop within a department store, Morganelli-Heumann & Associates received the award for its work for Saks Fifth Avenue, Beverly Hills, Calif. Other firms received awards for outstanding merit.

#### **Architects for Governor's Home Chosen, Selected from Among Eight Finalists**

A new residence for the governor of California will be designed by the Los Angeles firm of Buff & Hensman. The choice was made by a selection committee headed by Fred Hummel, FAIA, state architect. The committee also included Whitson W. Cox, FAIA, president of the California Council AIA; Verne Orr, state director of finance;

James Moe, state director of public works; and Frank Oliver, deputy state director of general services.

The project is expected to cost in excess of \$1 million, including special security features and site work. The house will be erected on the banks of the American River in the Sacramento area.

The seven other finalists, selected preliminarily from 70 statewide applicants, were Black, Pagliuso, Kikuchi & O'Dowd; Bull, Field, Volkmann & Stockwell; Wong & Vrochini; Esherick, Homsey, Dodge & Davis; A. Quincy Jones, FAIA; Marquis & Stoller; and Donald MacDonald, AIA.

#### **Liability Insurance Premium Credit Will Be Offered to MASTERSPEC Users**

Design professionals who have subscribed to MASTERSPEC for a year or longer will be receiving a \$50 credit on their professional liability insurance premium from Continental Casualty Co. beginning in 1974.

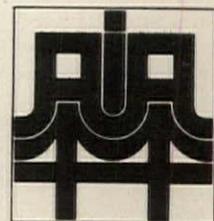
J. Sprigg Duvall, president of Victor O. Schinnerer & Co., administrators of the professional liability insurance program commended by the AIA and the National Society of Professional Engineers, noted in his announcement regarding the credit that his firm and Continental view MASTERSPEC as a positive effort on the part of the design professions to improve the quality of project specifications. "We are convinced," he said, "that widespread use of MASTERSPEC will reduce the professional liability losses which result from inadequate specifications."

MASTERSPEC is the national master specification system developed by Production Systems for Architects and Engineers. PSAE was established by the AIA to develop automated master production systems for the design professions.

#### **'The Challenge of Growth and Change' Is Theme of Upcoming AIA Convention**

The host AIA chapters for the Institute convention to be held in San Francisco on May 7-10 are Northern California, East Bay and Santa Clara. They are planning a series of tours, field seminars and social events for attendees.

The general theme of the convention is "The Challenge of Growth and Change." The keynote address on "The Challenge of the Future" will be given by Dr. John Caldwell, chancellor of North Carolina State



University, on Monday, May 7. On the following days plenary sessions will consider the theme of the convention with outstanding national figures participating.

One of the big attractions will be the Marketplace of New Ideas which will have a ceremonious opening at 11:30 a.m. on

May 8. The exposition will be integrated into other activities such as equipment demonstrations, workshops and AIA service centers. The entire show will occupy over 89,000 square feet of space in Brooks Hall and will be open from 11:30 a.m. to 5 p.m. each day from Tuesday May 8 through Thursday May 10.

The convention's business sessions have been scheduled to avoid conflict with the happenings at the Marketplace. There will be booths for exposition exhibitors, architectural exhibits, a host chapter hospitality lounge, open and closed theaters for seminars and workshops, centers for every AIA department to provide architects with professional information, food bars and resting spaces.

The marketplace program will incorporate technical subjects which have been selected through recommendations of AIA commissions, committees and task forces; case studies that will focus on San Francisco's solutions to typical urban problems; and opportunities for architects to discuss subjects of professional interest with speakers, panelists and colleagues.

#### College Town in Mountains of Virginia Will Be Site of Researchers' Meeting

The fourth annual Environmental Design Research Association will meet at the College of Architecture, Virginia Polytechnic Institute and State University, Blacksburg, Va., on April 15-18.

Six themes will underline the program of EDRA 4. One major theme will be the social and political context of environmental design research. Others will include environmental cognition, theory of man/environment relations, design languages and methods, computer-aided design and quantitative techniques in environmental analysis. Except for a limited number of invited papers, there will be no full-length presentations. Summaries of papers will be made, followed by discussions among authors, panelists and the audience.

"Most of the events will be attuned for maximum interaction among participants," comments one of the organizers of EDRA 4. "There will be plenty of opportunity for everyone to 'lobby' for research ideas and other things." A "supermarket" for the dissemination of information materials by conference participants will be provided. EDRA 4 will be documented by two published volumes. The first will contain the proceedings of the conference and papers; the second will include a complete report of the workshop sessions.

#### New Honorary Fellows, Members Will Be Cited at the AIA Convention in May

A highlight of the AIA convention in San Francisco in May will be the investiture of Honorary Fellows. The title is reserved exclusively for "architects of esteemed character and distinguished achievement" who are not citizens of the US and do not practice in this country or in any of its possessions.

Recently elected to Honorary Fellowship by the AIA Board of Directors are: Nikolai

Barfolomeitch Baranov, USSR; Justus Dahinden, Switzerland; Robert LeRicolais, France; Nikola Nikolov, Bulgaria; Fabio Pentead, Brazil; Roland Rainer, Austria; Cyril Frederick Thomas Rounthwaite, Canada; Takeo Satow, Japan (posthumously); Manuel de la Sierra-Amieva, Mexico; and Sir John Newenham Summerson, U K.

Another high honor bestowed by the Institute is honorary membership, awarded to persons not eligible for corporate membership but who "have rendered a distinguished service to the profession of architecture or to the arts and sciences allied therewith."

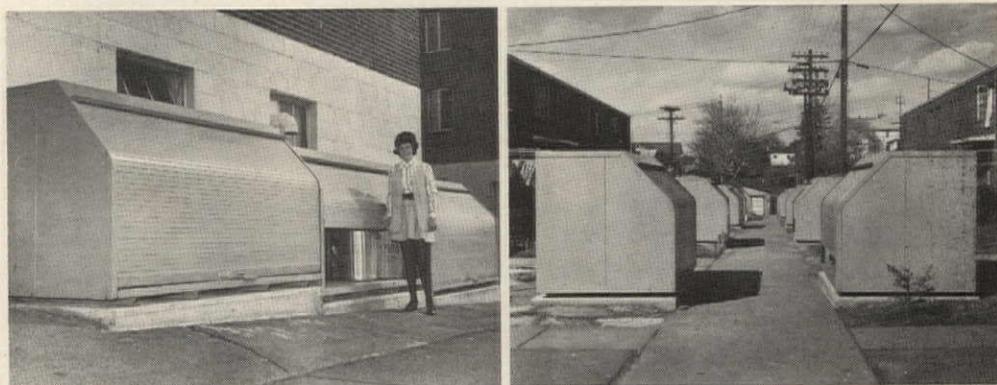
Honorary membership will be presented to three women and seven men during cere-

monies at the convention. The new honorary members are: Lieutenant General Frederick J. Clarke, chief of engineers, US Army; Ben E. Graves, project director, Educational Facilities Laboratories, Chicago office; Nancy Hanks, chairman of the National Endowment for the Arts; Vernon E. Jordan Jr., executive director of the National Urban League; Rita E. Miller, recently retired executive secretary of the Southern California Chapter AIA; Arthur F. Sampson, administrator, General Services Administration; Betty Silver, executive secretary of the North Carolina Chapter AIA; Herman D. J. Spiegel, dean of the Yale School of Architecture; James Johnson Sweeney, former di-

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Double Depth Tee-M Units for 30 gallon cans				
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rector of the Museum of Fine Arts, Houston; and Paul N. Ylvisaker, dean, Graduate School of Education, Harvard University.

### Highrise on Near North Side Will Offer Chicagoans Choice of 12 Restaurants

"We were faced with an unusual challenge: how to design a multistory building to house 12 restaurants and a nightclub and avoid making it appear as though it were an office building with restaurants in it," said a spokesman for Edward Durell Stone & Associates recently. The Restaurant Building



The extended second floor's roof will allow outdoor dining in above-sidewalk cafe style.

is planned for the southwest corner of Rush and Walton Streets in Chicago. In addition to all the other restaurants, there will be a terrace for outdoor dining.

The firm's problem was complicated by a small site that would not facilitate parking even though a large volume of traffic would occur at peak dining hours. Special attention had to be paid as well to the problems of food deliveries to the multiple restaurants, to the need for large service areas away from public view and to elevator facilities to rapidly transport patrons from the ground floor to any of the restaurants in the building's tower.

The building is placed at a 45-degree angle to face the street intersection and provides a large covered motor court at ground level protected by a second floor overhang. The 14-story tower gives the appearance of large bay windows from the third floor upward. Actually these bays are 25x25 feet octagonal dining modules. The tower is composed of 14 of these modules, each containing 575 square feet. Seven are devoted to dining and bar space, one to elevator foyer and coat room and the remaining six to kitchen, elevators, toilets and exit stairs.

Patrons will have a "vision panel" created by placing the window sill 30 inches above the floor, or at table height, and the top of the window 4 feet above that.

### Building Tenants and Highrise Neighbors Provided with Landscaped Roof Garden

The Los Angeles Beautiful Association has given a special commendation to the planning, architectural and engineering firm of Daniel, Mann, Johnson & Mendenhall and to Realtech for their design of a roof garden at their headquarters on Wilshire Boulevard. Called "Park in the Sky," the garden is located at the fifth level on top of the building garage adjacent to the 22-story bronze glass tower.

Mrs. Virginia Baldwin, president of the association, commended the two firms for creating a beauty spot which is landscaped with trees, flowers and plants and boasts a fountain and pool. She said that the two-thirds-acre space could have been used more economically for parking cars, but instead the firms chose to provide a parklike environment for both the building and its



The "Park the Sky" is at the fifth level atop the building garage and adjacent to the 22-story bronze glass tower. Plants are hoisted from the street level to the garden.



Nearby highrise neighbors as well as tenants of the building enjoy the landscaped garden.

highrise neighbors. It is hoped that the garden will encourage more highrise developers to incorporate planted spaces into their plans not only at street level but also in those areas that are visible to highrise neighbors. As Mrs. Baldwin indicated, roof gardens today are as visible as those on street level.

Both the garden patio and the 22-story bronze tower are the design of Anthony J. Lumsden, AIA, vice president of architecture for DMJM. Landscaping is by Armstrong & Sharfman of Los Angeles. The building was developed by Realtech and is the world headquarters for DMJM. The firm occupies three floors of the structure.

### Winner of AIA Centennial Medal in 1957, Architectural and Planning Leader

On its 100th birthday in 1957, the AIA conferred upon Ralph Walker, FAIA, of New York City its Centennial Medal of Honor for his talents and energies in many fields of public service. It is said that Frank Lloyd Wright called him "the only other architect in America."

Walker, who died on January 17 at the age of 83, was a long-time principal in the Manhattan firm of Voorhees, Walker, Smith & Smith. After his retirement, he continued as a consultant to the successor firm of Haines, Lundberg & Waehler.

Among Walker's principal designs were the Bell Telephone Laboratories, Murray Hill, N.J.; buildings for General Foods in White Plains and Tarrytown, N.Y.; IBM Research Center, Poughkeepsie, N.Y.; Argonne National Laboratories, Chicago; the New York Telephone Company building and the Irving Trust Company building in Manhattan; the AFL/CIO headquarters and the Belgian chancery in Washington, D.C.; and several structures for the New York World's Fair in 1939-40.

Active on many Institute committees, Walker was a past president of the AIA and the first chancellor of the College of Fellows. He also served as president of the New York Chapter AIA. He was a vice president of the International Union of Architects, a director of the Regional Plan Association and a member of the National Institute of Arts and Letters and of the National Academy of Design. He was appointed to a four-year term on the Fine Arts Commission by President Eisenhower in 1959; he was a member of an advisory committee to the State Department for the design of overseas buildings; he served on the Pennsylvania Avenue Advisory Council.

Walker was born in Waterbury, Conn., and was educated at the Massachusetts Institute of Technology. In 1916, he held the Rotch Traveling Scholarship. He was actively involved in many educational and art organizations, including his service as a trustee of the Lavanberg Foundation and of the New School for Social Research in New York City and as president of the Municipal Art Society.

An obituary in the *New York Times* states that Walker's influence "in architecture and government was not just a matter of example. He was often what his colleagues called a 'human catalyst.'"

## Deaths

RAY ALDERSON  
*San Diego*  
PETER BERNDTSON  
*Pittsburgh*  
ERLING G. DOLLAR  
*Wilmington, Del.*  
JACK FOLLETT  
*Bronxville, N.Y.*  
ALTON E. GREEVEN  
*Austin, Tex.*  
HAROLD B. HORTON  
*Houston*  
JOHN D. JARVIS  
*Flossmorr, Ill.*  
CHARLES A. KLOPP  
*Palatine, Ill.*  
SADI KORU  
*Gainesville, Fla.*  
CLAYTON J. LAPPLEY  
*Harrisburg, Pa.*  
RALPH LARSEN  
*Cresskill, N.J.*  
HARRY A. McMILLIN  
*Pittsburgh*  
WILLIAM H. O'CAIN  
*Hendersonville, N.C.*  
RENO O. RAMIREZ  
*San Turce, Puerto Rico*  
WILLIAM P. SMITH JR.  
*Plymouth, Mich.*  
SEARLE H. VON STORCH  
*Clarks Summit, Pa.*  
EMORY S. WHITE  
*Houston*

## Newslines

**The Royal Institute of British Architects** will present its Royal Gold Medal for Architecture to Sir Leslie Martin at a special ceremony at RIBA headquarters in London on June 12. Sir Leslie was architect to the London County Council, 1953-56, and head of Cambridge University's School of Architecture from 1956 until his recent retirement.

**Henry L. Kamphoefner, FAIA**, has received an honorary Doctor of Laws degree from Ball State University. He was cited for his 35 years of distinguished leadership in architectural education. For 24 of those years, he was dean of the School of Design, North Carolina State University. He was recently succeeded by Claude E. McKinney, former director of the Urban Life Center, Columbia, Md.

**The American Film Institute** is granting awards of \$200,000 under its Independent Filmmaker Program. Proposals for any type of 16mm or 35mm films will be considered, maximum individual awards are \$10,000. Any US citizen or permanent resident may apply to AFI, 501 Doheny Road, Beverly Hills, Calif. 90210.

**National Historic Preservation Week** will be observed May 6-12. One of the major events planned by the National Trust for Historic Preservation, the week coincides with the Trust's annual awards luncheon.

**A huge jetport in the Florida Everglades** will not be built for at least two years. The agreement which halted its construction has been extended for this period of time. Rogers C. B. Morton, Secretary of the Interior, said that although a new site has been found "that promises to be compatible with the protection of the fragile Everglades environment, there is still much work to be done in land acquisition, planning and development under the terms of the original agreement."

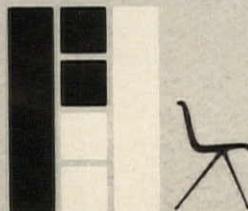
**Edward H. Matthei, AIA**, vice president of Perkins & Will, Chicago, has been elected to a three-year term on the board of the National Easter Seal Society for Crippled Children and Adults.

**Design information on underground cast iron soil pipe** and fittings installations is contained in a recent manual published by the Cast Iron Soil Pipe Institute, 2029 K St. N.W., Washington, D.C. 20006. Titled *Cast Iron Soil Pipe and Fittings Engineering Manual*, the publication is free to architects and engineers.

**The National Institute for Architectural Education's** aim is to encourage and promote architectural education and to provide a means of communication between students and professionals. Hugh N. Romney, AIA, of Hawthorne, N.J., was recently elected to serve as chairman of NIAE's board of trustees for 1973. NIAE is located at 20 W. 40th St., New York, N.Y. 10018. □



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**Clearcut: The Deforestation of America.** Nancy Wood, San Francisco: Sierra Club, 1971. 151 pp. \$2.75.

For the most part, this book is a polemic against the management of the national forests by the US Forest Service. We are warned of this by the term "a Sierra Club Battlebook" and the subtitle "The Deforestation of America" so that although we may hope that the fight will be a fair one, we do not expect impartiality.

Michael McCloskey, executive director of the Sierra Club, has written a foreword which raises the question of fairness before we get to the main text itself. He comments, "The Forest Service felt its job was to provide the raw material to make it all possible and it did not want any cranky conservationists standing in its way. Progress consisted of logging trucks loaded with 6-foot Douglas fir logs roaring down the highways." Impugning of motives is a poor way to argue at best. In this case, McCloskey imputes a motive to the entire Forest Service that probably could not be properly charged to any individual in the service. Statements like this may make the entire book suspect to some readers and may also do harm to the work of the Sierra Club itself.

Mrs. Wood's comments have a much better balance. She recognizes differences of opinion within the Forest Service as well as differences between policy and execution and intent and result. She also recognizes that the service has been increasingly short of funds for repair and regeneration of forests due to pressure by the Administration to increase production, requiring increased expenditures and the failure of Congress to appropriate additional funds.

Overriding all of this, however, is the recitation of case after case of havoc and destruction wrought in recent years under the name of clearcutting. There is no doubt that there has been much mismanagement, and the Forest Service is hearing about it from all directions. It has truly sown the wind and is reaping the whirlwind. This book is probably the best available quick listing of these crimes against the forests.

The magic words in timber production are "sustained yield." This covers a range of practices from that of a forest owner who employs a small crew to harvest lumber from his land year in and year out, with production sustained by new growth, to the practice of computing the growth of timber in all the national forests and contracting at certain sites for cutting that many cubic feet each year. Obviously, the latter practice can and does result in cutting timber on slow growth land that may not regenerate for decades if at all, although a comparable amount may grow somewhere else each year. This is particularly disastrous when clearcutting is used on arid high altitude land. It is small solace to know that the replacement timber is accumulating somewhere else when dust is blowing 10 or 15

years later in an area that was once a forest.

Again and again the picture is drawn of huge clearcut areas with the earth torn by operating machinery and the dragging of logs and the most fertile soil washed from the slopes into stream beds, leaving a scene of complete devastation as far as the eye can see. Mrs. Wood points out, as have hundreds of others, that this is a violation of the Multiple Use Act, which stipulates that the national forests shall be managed to provide 1) recreation, 2) watershed man-



agement, 3) wildlife preservation, 4) timber production, 5) mining and 6) grazing.

When the ground is torn by building roads and lumbering without safeguards to protect the soil, erosion begins, watershed management is no longer possible, there is no place for wildlife or grazing. If this is done on a huge area, recreation is lost also, leaving only one other possible "multiple use": mining. It would seem that there is actually a seventh implied multiple use, that of *being*—that the forest as such must remain. This is possible with clearcutting if the areas are small. Then the beholder, whether it is man, bird or animal, can always see standing forest on four sides of the clearing that has not lost the protective shield of the woods. Clearcut areas of 25 acres or plots of 1,000 feet square have been suggested and seem reasonable.

Mrs. Wood states that "the truth is that clearcutting is the most destructive tool ever applied to the American forest." Clearcutting can also be productive in terms of regeneration if applied at the right time, in the right place and in the right way. The polemics and the "battle" should be directed at incorrect clearcutting rather than at all clearcutting.

There are many other ways to ruin the forests. This reviewer spends a few days hunting each year in the Adirondack forests near the site made famous in 1858 by the Philosophers Camp of Ralph Waldo Emerson, Louis Agassiz, James Russell Lowell, John Holmes (the brother of Oliver Wen-

dell), the artist William J. Stillman and eight or ten other famous writers and artists.

The forest of 1858 is immortalized in a series of paintings that now hang in museums. This was a glorious forest of mixed hardwood, pine, spruce and hemlock. Emerson measured a pine near his tent as 16½ feet in circumference at shoulder height. There is a maple in one of Stillman's paintings of the camp that must have been of equal size. There has been no clearcutting in this area in the years since 1858 and no great fires or other disasters. The area has been lumbered either three or four times, three since 1900 that I know of. Each time the lumbermen selected the best trees of the kind marketable and left the rest. Evidently the shade was penetrated very little. It is now possible to follow the course of the most recent lumber roads by the stands of young spruce and balsam fir that grow where the light comes in. These strips are sometimes as narrow as 8 feet, indicating how small an area is really necessary for clearcutting.

All of the rest of that once splendid forest is solid shade-tolerant beech with an occasional stand of equally shade-tolerant hemlock. One wonders whether the land owners realize what has happened through the process of selective cutting on the basis, not of forest management, but of market demand. Some clearcutting now would solve the problem, but who would be interested in clearcutting a beech forest?

There are some minor errors in the book such as the use of "maximum" where "minimum" is intended, and the substitution of the name of Senator McGee for Senator Metcalf in one place. Mrs. Wood fell into a trap when she was led to attack the new softwood lumber size standards. She was not told that a dressed 2x4 has not been 2 inches by 4 inches in the memory of anyone now living, and that the new standards increase the number of board feet used to build a house very slightly if at all, while the net weight and volume of lumber is reduced about 10 percent. She may be right in her suspicion that someone makes more money on the new size than on the old, but there is no clear evidence of this.

*Clearcut* points up the need for a book on forests and lumbering that has not been written. It should be a book on general forestry written for laymen by a professional, covering typical forest and forest management problems in all parts of the country. Dispensing with the polemics, it does not need to be dull. The problem is one of the most fascinating that is before us today. This book should tell us how to produce lumber and to regenerate forests of the kind that were there when lumbering began. Such a book would help us develop common sense positions between the euphoria of lumber company advertisements and disastrous reality of the worst practices of today.

HUGH B. JOHNSON, AIA

**Innovation in New Communities.** Brown Miller, Neil J. Pinney and William S. Saslow. Cambridge: MIT Press, 1972. 380 pp. \$15.

I started to read this book after returning from the annual meeting of the American Orthopsychiatric Association where social workers, psychologists, psychiatrists and sociologists had bemoaned "the lack of commitment to human services demonstrated by current national, state and local administrations." In lectures, panels, rap sessions and films on poverty, mental retardation, prisons, day care, family therapy, urban communes, women's lib and the impact of war, concerned professionals had searched for innovative ways to deliver human services "as federal funds dry up."

I was struck again by three distinct similarities between the concerns of social scientists and architect/planners: 1) The urban environment is part and parcel of the delivery of human services; 2) the ultimate responsibility for the planning and financing of human services, including housing and cities, lies with the government; and 3) the military budget must be drastically reduced to allow adequate financing of human services, including housing and cities. So it was in this frame of mind that I opened the pages of *Innovation in New Communities*.

The preface warned me at once not to expect a compassionate humanistic approach to new communities. The three authors describe their material as presented "in terms of rationale from the corporation's point of view," and express thanks to the Housing Division of Boise Cascade for initiating the project, providing basic financing and contributing to its "refinement and direction."

A glance at a few headings—accelerated market aggregation, profitability, economics of scale, dispersal strategies, scenarios and alternate scenarios—further suggest what "innovation" is all about, i.e., how to make the planning and building of new communities profitable for the corporate giants. Working at a time when the Vietnam War appeared to be winding down, the Massachusetts Institute of Technology/Harvard University/Boise Cascade research complex was apparently aware of a new climate in official Washington: "Given the impetus of emerging governmental policies and legislation and increasing financial feasibility, the opportunities (read: for big corporations) can be viewed as a continually cycling and self-reinforcing series."

If, for the sake of discussion, community design can be split into sociocultural and technoeconomic halves, then this book is an excellent half-book. Its grasp of current and anticipated technological developments and their evaluation in terms of performance and expenditures of money and energy is superb.

The most important part of the book is its discussion of the four basic urban systems: transportation, energy, communication and waste management. We can appreciate the vast amount of research that went into its preparation. The list of references is impressive. In the section on movement, we learn about a variety of terrestrial and aerial means of transportation, from "Dashaveyor" to V/STOL airbuses; in the part on energy,

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we read about a multitude of present and future modes of transmission and generation of energy; in the communication section, we discover the new technological world of computers and holographic 3-D video systems. The most practical part, however, is the discussion of waste management. We survey the many means of collecting and disposing of the huge volume of liquid and solid waste of modern America. The book also includes a section on street and road layout and a comparative study of some of the best known new cities in the US and Europe.

Its sociocultural half, however, is a different story altogether. To me, it describes a world of statistical nonpeople whose social, racial, political, economic, educational and health problems have been happily solved—by whom, how, why and when, the book does not reveal. Its discussion of health, education, child care and religion gives me a chilling feeling of 1984 transposed into a white suburbia or an arcological megastructure. The image brings to mind the “genuine-artificial” sociocultural environment—the kind of instant happiness that I see on TV commercials. I do not doubt that the future technocratic/managerial elite, living in secluded neighborhoods, may well enjoy this kind of lifestyle, but if the 1972 statistics of unemployment, poverty, street crime, political delinquency, inflation, tax loopholes, etc., etc., are harbingers of “things to come,” then the sociocultural “innovations” assumed in this book should be taken with cautious skepticism.

Although the book caters to the corporate rationale and almost overlooks the social and political roots of the present urban crisis, it is nevertheless an important publication which should prove most useful to the student, the practitioner and the corporate giant since we are told, “The next 30 years will witness the construction in the US of as many dwelling units as have been built over the past 300 years.” JAN REINER  
*Architect*  
St. Petersburg, Fla.

**Libraries for Professional Practice.** Edited by Patricia Calderhead. London: Architectural Press (distributed in the US by Crane, Russak & Co.), 1972. 127 pp. \$11.50.

With architectural information ever on the increase as reflected in thousands of publications every year, an architectural firm's library must be organized as an efficient tool for easy retrieval of materials by any person on the entire staff. This is true whether the library is small or large.

In today's world a professional library may well be more than a repository of books, periodicals, trade publications, government documents, etc. It may have the added function of serving as a central record of work undertaken by the firm. Whatever the library contains, it is of little use unless organized efficiently. Even the largest firm's library cannot be comprehensive, and much depends upon the library staff's ability to know where to get information from outside sources.

Some years ago the *British Architects' Journal* published as a series a number of

articles on the architect's professional library and how it could be organized effectively. There was such a constant demand for reprints, as well as a need for updating the information, that a new publication was called for. This completely revised compilation of the articles is a boon to anyone who wants a professional library. Although it takes a British outlook, it is of tremendous value to the American architectural firm which realizes that it cannot keep abreast of new developments without some kind of information center.

The book opens with a chapter on why have an office library, how big it should be, what it will cost, how to set it up and how to run it. It is succeeded by advice on formulating a policy for a library and a description of procedures and techniques to follow.

There are chapters as well on such topics as how to obtain information (which must be modified to meet US sources); equip-



ment and accessories; space requirements and layouts; how to classify the materials; and the preparation of materials for publication, a task often assigned to the firm's librarian.

Bearing in mind that much of the information in this book will have to be adapted for the American firm, the book is nonetheless essential for a firm which wants some orderliness in an information center. It is comprehensive, practical, lucid.

This reviewer worked for seven years in an architectural library and for other periods of time in other specialized libraries. It was astounding how often a patron, even though a college graduate, had no idea how to use a library nor how valuable it would be to have this knowledge. Perhaps an architect who isn't thinking specifically of developing an office library will find the book profitable reading. It just may open up new worlds.

MARY E. OSMAN

**Animals and Architecture.** David Hancock. New York: Praeger, 1971. 196 pp. \$13.95.

Various nonhuman animals are presented as both architects and clients in this book. It is essentially a survey of the relationship of animals to their environments. There are overviews of such matters as insect farming,

pigeon loft architecture, reptileries, aviaries, zoos and animal research facilities. The author provides the reader with a look at an area of architecture and environment on the outer edges of a world of increasing technological and electronic environments.

The history of zoo development is a rewarding part of the book. Through an excellent collection of historic photographs and drawings, we see the beginnings of animal display structures. The authoritative text in these chapters indicates that the author has a knowledge of the historical significance of these early buildings. The old Berlin Zoo must have been a superb experience for visitors.

Any architect who is contemplating or beginning a design for an “animal client” will enjoy the book for its suggestions of animal disciplines and for its design philosophy.

The final chapters on “Psychology of Restraint” and “After the Zoo” deal with problems of our present-day encounter with animals and how we can benefit from an understanding of our natural environment through a rapport with “the beasts of the fields” and “the birds of the air.”

CHANNELL GRAHAM, AIA

**Real Estate Financial Reporting.** Urban Land Institute Real Estate Reporting and Steering Committees and Touche Ross & Company. Washington, D.C.: Urban Land Institute, 1972. 40 pp. \$10 AIA and ULI members, \$12.50 nonmembers.

**Optimizing Development Profits in Large Scale Real Estate Projects.** Michael D. Wilburn and Robert M. Gladstone. Washington, D.C.: Urban Land Institute, 1972. 64 pp. \$10.

This pair of minibooks from the press of the Urban Land Institute reflects the heightening interest in and growing sophistication of the real estate development process. Both heavily stress financial aspects, adding to the body of knowledge required of any architect entering the development field. Both are obtainable through the AIA Sales Publications Department.

*Financial Reporting*, a committee recommendation, is concerned with preparing and reading/evaluating financial reports of real estate companies. The frequently complex nature of these companies and their differences in character from the normal industrial corporation demand innovative approaches to accounting procedures and preparation of financial statements. Model uniform formats are recommended for basic financial statements, following commentary leading to the recommendations. The short glossary of selected terms will help the reader to understand some of the concepts explored.

The second book, *Optimizing Development Profits*, is the collaborative work of two experienced economic consultants. While concerned primarily with large complexes, such as comprehensive new towns and planned unit developments, the analytic techniques for predicting profitability can well be applied to more modest sized projects of land development.

Detailed chapters cover development potentials analysis, development programming

and land use optimization, and financial analysis. The reader is taken through the entire process in orderly fashion and in language familiar to the pragmatic architect. Each step is carefully explained. The theoretical discussion in Part 1 is brought to life in Part 2 in a composite case study which delineates all elements of the analytic system. Nineteen tables replete with illustrative numbers flow from market analysis into financial analysis and projected cash flow.

Readers who have been introduced to the AIA's publication *Development Building: The Team Approach* should find the knowledge of Wilburn and Gladstone an additional asset in their understanding of the economics of the development process.

ROBERT ALLAN CLASS, AIA  
Director  
AIA Technical Programs

**Environmental Management: Planning for Traffic.** Jim Antoniou. New York: McGraw-Hill, 1971. 171 pp. \$19.50.

One of the many that have recently been produced on the physical design of urban transportation systems, this book follows in the footsteps of that hallmark production by Colin Buchanan entitled *Traffic in Towns*. The title of Antoniou's book suggests that it is more comprehensive in its analysis and proposed solutions; in fact, it focuses strictly on the physical aspects of urban mobility. Most of the photographs are examples taken from the United States and Great Britain, few of which have been seen in print before.

The first of the book's five chapters deals with the role of the motor vehicle in transportation planning. The second is concerned with the environmental consequences of the automobile. Chapter 3 emphasizes pedestrian movements and visual pollution due to the automobile. The fourth and fifth chapters are devoted to design techniques and special applications of the principles that were described earlier in the volume.

While the book is not as significant as Buchanan's in regard to the literature of urban mobility, it does deserve a place in the libraries of the designers whose prime interest is urban transportation systems.

MICHAEL BARKER  
Administrator  
AIA Department of Environment and Design

**Contractor's Management Handbook.** James J. O'Brien and Robert G. Zilly, Editors. New York: McGraw-Hill, 1971. 608 pp. \$24.50.

This is an excellent reference work for both contractors and architects. While not all of the 29 contributors are of the same stature and ability, the handbook provides a clear understanding of the methods and procedures used by contractors in the day-to-day operation of their business.

Those architects who plan to become involved in providing construction management services for their clients will be particularly interested in the chapters on CPM, estimating, purchasing, cost engineering and others which relate directly to the services of a construction manager.

The only really disappointing discussions in the book deal with the "or equal" clause

in specifications and "supervision" as performed by the architect during the construction phase. Someone has been asleep these past few years!

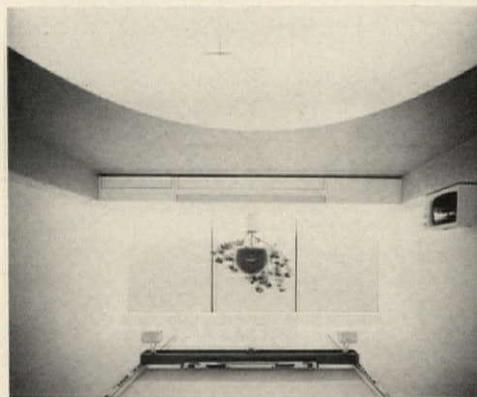
Fortunately, most of the information in the volume provides a fairly succinct reference to the full range of the duties, responsibilities and services required in the contracting business.

STEVEN H. ROSENFELD  
Director  
AIA Professional Practice Programs

**Young Designs in Color.** Barbara Plumb. New York: Viking Press, 1972. 176 pp. \$15.95.

Aggressive use of color, comments the author of this book, intimidated people until recently, but now the most visually conservative people use brilliant color in interior design.

The rooms in this colorful book are rather dazzling. The selection of homes vary from one-room apartments to country estates. There are both exterior and interior views. Interspersed among all the photographs are Mrs. Plumb's descriptions of how the owners and their decorators have used furniture,



wall coverings and hangings, fabrics, rugs, lighting, art objects, etc., to create handsome abodes.

The homes of some architects are included. For example, the rooms in the carriage house of Warren Cox, AIA, are handsome with prints and paintings on wooden ledges and a sculpture which camouflages a radiator.

Mrs. Plumb, who is architecture and environment editor of *American Home* magazine, has chosen some stunning examples to demonstrate that color is a marvelous thing. If you have any intention of redecorating a home in the near future, you'd do well to take a look first at this book.

**Portland.** Edited by Martin Dibner. Portland, Me.: Greater Portland Landmarks, Inc., 1972. 235 pp. \$15 hardbound, \$6.95 paperbound.

Like almost every other city in this country, Portland, Maine, has seen many of its old buildings collapse before the wrecking ball to make space for new structures and complexes. In order to combat "wanton destruction," the Greater Portland Landmarks, Inc., was formed in the '60s. One of the aims of the organization has been to carry out an educational program for the general public. A part of this program has been to make an inventory, which is still in progress, of every street and every building on a street. Work on the survey resulted in this commendable publication.

The book is more than a guidebook. It is really a general and architectural history of the city which begins in 1628 when Walter Bagnall, the first permanent settler, established a trading post on Richmond Island, and continues to 1912. Well illustrated with many drawings and photographs, the book reveals all the color of dynamic personalities, stirring local and national events and an architecture of tremendous variety.

The section on lost buildings has a disturbingly familiar ring—buildings destroyed; a characteristic flavor going. Among Portland's lost landmarks is the birthplace of the poet Longfellow which endured from 1800 to 1955 when it was destroyed to make way for business expansion.

The book has two additional helpful features: a glossary of architectural terms for the lay reader and a street guide to the buildings mentioned.

**Studies of Historic Iowa Architecture.** Wesley Shank, Project Director. Ames, Iowa: Engineering Research Institute, Iowa State University, 1972. 10 volumes. No price given.

Funded jointly by the Iowa Arts Council and the Department of Architecture of Iowa State University, these in-depth studies are commendable examples of research into historic architecture.

The 10 booklets are about Old Main, Morrill Hall and the Farm House at Iowa University; Trinity Cathedral in Davenport; Madison County Courthouse in Winterset; the Swain-Vincent House in Fort Dodge; the Iowa Institution for the Education of the Deaf and Dumb's Main Building in Council Bluffs; the Franklin County Courthouse in Hampton; the Arthur L. Rule House in Mason City; and the James Frederic Clarke House in Fairfield. The booklets contain historical information about each of the structures, elements of architectural design and sources studied. There are reproductions of photographs in each booklet.

**Palliser's Model Homes.** Palliser, Palliser & Co. Felton, Calif.: Glenwood Publishers, 1972. 96 pp. \$4.95.

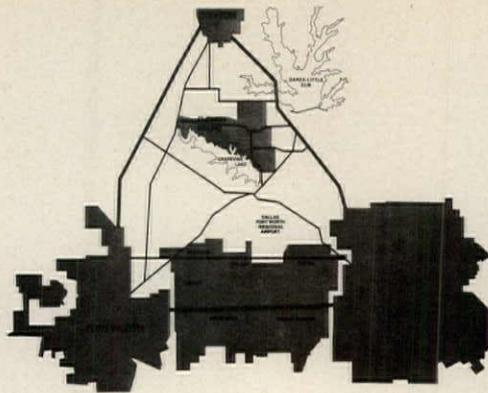
Kermit L. Darrow, AIA, has provided a foreword to this reprint of a work first published in 1878. He remarks that the architects Palliser & Palliser worked during the Civil War reconstruction period and that they published this book originally because

they wanted to help people who built homes without the aid of an architect. "It is interesting to note," comments Darrow, "that the work of Palliser & Palliser is completely original to the detail, a virtue that was not common in those days." The student of American architectural history will be glad to read the remarks of these architects who were contemporaries of Henry Hobson Richardson but unlike him in that theirs is "the work of small town architects introducing original designs for clients of that day." The book is illustrated with drawings and floor plans by the two architects.

**Flower Mound New Town.** Dallas: Raymond D. Nasher Co., 1972. 120 pp. \$10.

Flower Mound, a new town to be built on over 6,000 acres in the Dallas/Fort Worth area just 8 miles from the new regional airport, is expected to have a population of 65,000 or more by 1990. The Department of Housing and Urban Development has provided a governmental guarantee of \$18 million of the private borrowings issued by the developer for land acquisition and development. Unlike some other new communities, the new town is located within the jurisdiction of an existing municipality.

This report is a summary of the planning process, the planning determinants, community services and their possible implementation, the general development plan and the first phase plan. As is pointed out in the report, "Planning is necessarily a continuous process, and the general development



plan will be modified periodically to reflect planning process outputs and the views of the new town residents."

Carefully detailed with maps, plans, charts and photographs, the publication will be of interest to anyone who is involved in the planning of new towns or in planning for land use in general.

**Frederick Law Olmsted's New York.** Text by Elizabeth Barlow; illustrative portfolio by William Alex. New York: Praeger, 1972. 174 pp. \$12.50.

Published in connection with a major exhibition, organized for the Whitney Museum of American Art in New York City in the fall of 1972, this book documents how the work of Olmsted contributes to the amenities enjoyed by present-day Manhattanites.

The year 1972 was the 150th anniversary

of the birth of the great landscape architect. To celebrate it, exhibitions were held at the Whitney and at the National Gallery of Art in Washington, D.C. (See a review of other books about Olmsted in the Nov. '72 AIA JOURNAL.)

As this book indicates, Central Park in New York City was Olmsted's initial and revolutionary contribution to the American urban scene. A great deal of attention is given to this park in the book, but there is also much information about other New York parks and his work as New York City's first master planner.

**Our Programs.** National Endowment for the Arts. Washington, D.C.: US Government Printing Office, 1972. 83 pp. \$1.

This booklet has been prepared to help interested persons and organizations determine if the National Endowment for the Arts has a program under which they might receive assistance. Divided into sections which correspond to program offices, it gives practical information on such topics as grant amounts, eligibility, how to apply, and deadlines. The Architecture + Environmental Arts Program is of particular interest to the architectural student or professional.

**Inventory of New York State Agencies Responsible for Design, Planning and Construction: Phase 2, Methods and Procedures.** New York: New York State Council on Architecture, 1971. 142 pp. No price given.

Phase 1 of the New York State Council on Architecture's inventory of agencies published in 1969 found that 10 of them were responsible for 90 percent of the dollar volume of design, planning and construction under contract in the state for fiscal 1968-69. These 10 agencies are the subject of review in phase 2 by Daniel Sullivan, AIA, who acted as consultant.

In this report, Sullivan presents his own interpretation and conclusions about the work of the agencies. He gives a profile for each of them which includes such pertinent information as architect/consultant selection, architectural fees, architectural contract, site selection, functional programming, design procedure, drawing/specification format, contractor selection, cost accounting, financing methods, construction format, contractor selection, construction procedure and research. It is an admirable and orderly presentation which provides an example for other state architectural councils to emulate. This objective examination is followed by a section called "Comments and Recommendations" in which consultant Sullivan makes his statements without prior review by the agencies.

**Building Materials and Methods Technology.** Charleston, W. Va.: AFL/CIO Appalachian Council, 1972. Various pages. \$15.

Actively involved in the development of human resources in the Appalachian region since 1966, the AFL/CIO Appalachian Council has developed various programs for the training, retraining and upgrading of workers and journeymen craftsmen.



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In an effort to acquaint trainees with new materials and methods in the construction industry, the council prepared this manual under a grant from the US Office of Education. Hence the cost of the publication is on a nonprofit basis.

The loose-leaf manual contains 250 technical information procedure sheets called TIPS, which have been abstracted from information supplied by the manufacturers.

**CRSI Handbook: Based upon the 1971 ACI Building Code.** Chicago: Engineering Practice Committee, Concrete Reinforcing Steel Institute, 1972. Various pag. \$15.

Of value to engineers, this publication is the latest in a series of design handbooks prepared under the auspices of the Concrete Reinforcing Steel Institute.

There are detailed tables that are useful in preliminary estimating, in establishing sizes and clearances and in comparing different types of construction. Applicable only "to the particular condition of span loading and eccentricity specified," the tables do not replace "experienced judgment when selecting types of structure, proper loads, stresses, moment factors, eliminating eccentricities, providing proper stiffness and in obtaining the most economical design." The tables apply to design of columns, square and rectangular tied columns, round columns, strength design—flexural members, serviceability design—flexural members, one-way solid slabs, one-way concrete joist construction, two-way solid flat plates, beams, indi-

vidual square footing for columns, cantilevered retaining walls and reinforcing bar splices. To extend the range of the tables, the engineer can make use of the basic computer programs used in the handbook to prepare similar tables.

#### Bargains in Paperbacks

**Architecture in a Crowded World: Vision and Reality in Planning.** Lionel Brett. New York: Schocken Books, 1971. 181 pp. \$2.75.

**Cities.** Revised ed. Lawrence Halprin. Cambridge, Mass.: MIT Press, 1972. 240 pp. \$4.95.

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**Dutch Art and Architecture, 1600-1800.** Jakob Rosenberg, Seymour Slive and E. H. ter Kuile. Baltimore: Penguin Books, 1972. 500 pp. \$9.95.

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**Man-Made Philadelphia: A Guide to Its Physical and Cultural Environment.** Richard Saul Wurman and John Andrew Gallery. Cambridge, Mass.: MIT Press, 1972. 104 pp. \$3.95.

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**Space Grid Structures.** John Borrego. Cambridge, Mass.: MIT Press, 1972. 200 pp. \$4.95.

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**Will They Ever Finish Bruckner Boulevard?** Ada Louise Huxtable. New York: Collier Books, 1972. 268 pp. \$2.95. □

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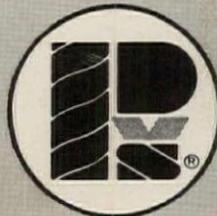
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## Cathedral Architects

I have read with interest the obituary of Philip Hubert Frohman, FAIA, in the December issue, in which his part in the design of the Washington Cathedral is commented upon. I am distressed, however, that insufficient credit was given to Henry Vaughan.

My concern arises from the fact that as a draftsman for him I was quite intimately familiar with his part in the design, and I feel that his share in the work has been unfairly eclipsed by his successor. It should be known that Henry Vaughan was highly regarded in his day.

It was generally understood that when the architect of St. John the Divine in New York City died, the structure being then incomplete, that Vaughan was asked to take it over, rather than his contemporary Ralph Adams Cram. Vaughan declined, saying that he did not want to do two great cathedrals at the same time. Of the five apsidal chapels, Vaughan did design three, plus the pulpit, for which I did the detailing.

With reference to the Washington Cathedral, the original drawings creating the design and conception were a series of ink line drawings at quite small scale and were not a complete presentation of all parts of the building. These were always ascribed to George F. Bodley and Vaughan. Making his own interpretation from these, Vaughan developed the working drawings and details for the Bethlehem Chapel and the superstructure of the apse. When I went to work for him, he was doing the same for the choir.

At this point in the work, the church authorities in charge decided on a publicity and fund-raising campaign and asked for Vaughan's assistance. It was only then that it was realized that nothing adequate was available for the purpose and, in fact, that the whole conception was not completely worked out in some respects. To remedy this deficiency, Vaughan was asked to supply a model of the whole building.

The construction of the model was given to John Evans of Boston, still remembered perhaps by a few old timers, and the required working drawings for the model were assigned to me to develop. Now it was necessary to get out the original ink line drawings and to interpret their intention as well as possible. With Vaughan's guidance, I entered upon the task with all of the enthusiasm of a recent recipient of a degree from the Graduate School of Architecture at Harvard. The result was the model which is still to be seen in the Cathedral's crypt.

The structure today is sufficiently far advanced so that its totality may be envisioned. It is tranquility of spirit in stone, soaring to the nobility of beauty rare in the procession of today's creations. Caught up by the

grandeur of the opportunity, both Vaughan and Frohman made their contributions to inspired architecture. We shall not argue who was greater but only wonder if someone else will finish the west end equally well.

LLOYD M. HENDRICK, AIA  
Bourne, Mass.

## Wisdom as Power

With reference to the letter of William M. C. Lam in the November JOURNAL, I recommend that AIA members read the editorial in the November issue of *Lighting Design and Application*. A careful reading of the editorial will help separate some of Lam's opinions and facts and will perhaps put them in the perspective of a balanced judgment concerning the so-called energy crisis and illumination levels recommended by the Illuminating Engineering Society.

There is a much larger issue involved here, however, than whether one can read and write as well with 1- or 2-footcandles as with 500- or 1,000-footcandles. On a typical sunny day, it's not at all unusual to experience 3,000- to 4,000-footcandles of illumination without suffering ill effects. I find it difficult to believe that the problem really centers around whether we should have a lighting level of 3 to 5 percent of daylight values in our schools and offices.

Lam's implied charge that somehow the power companies and lighting fixture manufacturers profited greatly by their promotion of higher lighting levels during the '60s is not only inaccurate but also misleading. Lam certainly has been close enough to a lighting manufacturing company to know that the average fixture cost has actually decreased even though inflation labor rates and material costs have all taken quantum leaps.

The thesis that the energy crisis is the rationale for the attack on both the IES and scientific research in vision and illumination seems a little spurious. The so-called energy crisis is not one in energy but a crisis in wisdom in developing power sources. The major issue is administrative wisdom, not how much power we choose to use, whether for lighting or any other application.

The government is primarily responsible for the tunnel vision and the legislation which have enabled the oil and coal industries, and then the atomic energy industry, to monopolize research and development and power production in this country. Every day the US receives in energy from a pollution-free source, i.e., the sun, more power than it could conceivably ever use, and this does not include the other pollution-free source: geothermal power.

Fortunately, there are dedicated scientists who have continued to work on the problem of turning solar energy into usable power. Only a few million dollars have been al-

located for research on solar power as compared to the billions spent for atomic energy and coal and oil research and development.

Significant breakthroughs, however, have been accomplished, and equipment and techniques have been developed which make possible the direct use of sunlight for power production. The other source that should be developed, and again minimal research has been possible because of lack of funding, is geothermal power. Both solar and geothermal power are nonpolluting, clean and abundantly available sources of energy which could solve the fossil fuel problem within the next decade if adequate research and development funds are made available.

Lam's statement that "the AIA should declare a moratorium on participation with the IES on any activities" is analogous to what the government has done with regard to power production. Certainly a new awareness by all AIA and all IES members is called for to develop ecological judgments based on wisdom rather than self-interest.

PAUL PERRAULT  
Vice President  
Pemco Corporation  
Philadelphia

## Supplemental Dues

A letter to the AIA membership dated November 15, 1972, from Elmer E. Botsai, Institute treasurer, calls for a mild rebuttal.

The letter concerned alleged inequities in supplemental dues. The difference in supplemental dues calculations between partnerships and corporations is indeed very real, but Botsai's claim of inequity may be somewhat misleading.

Firms incorporate their practices for a variety of reasons, not the least of which is the opportunity for substantial tax savings and miscellaneous financial advantage. In evaluating the move to incorporate, the principals consider the off-setting added costs. These include Federal Insurance Contributions Act payments, state disability and unemployment insurance, local payroll taxes and other payroll based expenses. The decision to incorporate is made only when the advantages outweigh the disadvantages.

The added supplemental dues paid by the principals of corporate practices may be, in effect, paid from a portion of saved tax dollars. Additional supplemental dues from partnerships, however, would be paid out-of-pocket, some already vacuous.

If Botsai's theory of inequity were to be carried further, I could foresee governmental agencies with visions of new revenue windfalls. Why not collect all the various payroll taxes from the self-employed of every description?

The theory of supplemental dues is for firms to contribute to the work of the AIA,

relative to their own volumes and earnings. Lacking other methods of measurement, the Institute, in its infinite wisdom, chose payroll as an indicator. I am sure that it's probably one of the more reliable yardsticks, but I'll bet fellow architects can fill many volumes with examples of the inequities already inherent in the system. I venture that these would exceed those inequities which may be claimed by corporate practices. But as long as we must apply a method which is generally, but not always, reliable, it should be considered that generally, but not always, the incorporated practice is more able to pay a little more in supplemental dues than the partnership whose financial position does not warrant incorporation.

WILLIAM B. REINER, AIA  
San Francisco

I have given considerable thought to Mr. Reiner's letter and would like to express some further views of mine on the subject.

First off, I certainly agree that the decision to incorporate is to a large extent a financial one, although I do not believe that the areas he pointed out are necessarily pertinent. To the best of my knowledge, FICA, state disability, payroll taxes and unemployment insurance do not vary widely in any state due to firms acting as a partnership or a corporation.

In my mind, no matter what you call them, supplemental dues are an AIA tax on firms. As such, they are an attempt to equalize the burden of support in relation to the ability to pay (somewhat like the federal graduated income tax) as well as to offset the obvious benefits that a firm receives from the AIA vis-à-vis an individual. If one can accept this view, then it is hard to rationalize the distinction between corporations and partnerships as far as the AIA dues structure is concerned. This is my position on the inequities of the existing system.

I am not disputing the contention that there are other inequities in the system, but if anyone knows of such inequities, I personally would like to hear about them. Any proposals for improvement, or even concerns of other inequities, will receive the utmost consideration by the Finance Committee and by me.

My firm is also a partnership, which is a final note of passing interest, and the proposed change will affect me personally. I also, by the way, fully expect the partnership to pay my share.

ELMER E. BOTSAL, AIA  
AIA Treasurer

### Fire and Earthquake Hazards

The articles in the January issue on the effect of fire and earthquake on highrise buildings are particularly pertinent at a time when we are studying these problems. Our hearings on highrise buildings in the Los Angeles and San Francisco areas provided testimony indicating similar concerns to those presented in the articles.

ALFRED E. ALQUIST  
Chairman  
Joint Committee on Seismic Safety  
California Legislature  
Sacramento, Calif.

## Events

### National

- Mar. 23-24:** Built-Up Roofs Institute, University of Wisconsin, Madison, Wis.
- Apr. 11-13:** National Conference for the Building Team, Drake Hotel, Chicago
- Apr. 25-27:** American Society for Church Architecture Annual Meeting, Scottsdale, Ariz.
- May 3-4:** AIA Invited Attorneys Meeting, Stamford Court, San Francisco
- May 5-8:** National Architectural Secretaries Association Convention, the Hyatt on Union Square, San Francisco
- May 6-11:** National Conference of States on Building Codes and Standards, Hotel Sonesta, Hartford, Conn.
- May 7-10:** AIA National Convention and Exposition, Brooks Hall, San Francisco (Hawaiian portion, May 11-15, Honolulu)
- May 8-9:** Chicago Committee on High Rise Buildings Seminar on Mechanical and Electrical Systems, Sheraton-O'Hare Motor Inn, Chicago
- June 4-6:** National Interfaith Conference on Religion and Architecture, Hotel Radisson South, Minneapolis
- June 5-7:** Annual Plant Operation and Maintenance Seminar, Hofstra University, Hempstead, N.Y.
- June 13-15:** Pacific Coast Builders Annual Conference, Fairmont Hotel, San Francisco
- July 9-26:** Summer Program on Management in the Construction Industry, Massachusetts Institute of Technology, Cambridge, Mass.

### International

- Apr. 12-30:** International Professional Seminar on European Building Systems, University of Wisconsin, Madison, Wis.
- May 7-9:** International Conference on Urban Housing, Wayne State University, Detroit
- May 17-18:** International Colloquy on the Prevention of Professional Risks in Building and Public Works, Stockholm
- June 17-22:** International Design Conference, Aspen, Col.
- July 1-28:** Graduate Course on Environmental and Social Planning in Britain, University of Manchester, Manchester, England

### Awards Programs

- Aug. 1:** Entries due, Design of Mobile Home Exteriors. Contact: Mobile Home Design Competition, Reynolds Metal Co., P.O. Box 27003, Richmond, Va. 23261.
- Aug. 1:** Entries due, Lowrise Building Projects Using Architectural Aluminum Products Awards Program. Contact: Architectural Manufacturers Association, 410 N. Michigan Ave., Chicago, Ill. 60611.
- Sept. 1:** Entries due, Community Quality of Life Awards Program. Contact: *The Environment Monthly*, 420 Lexington Ave., New York, N.Y. 10017. □

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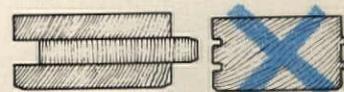
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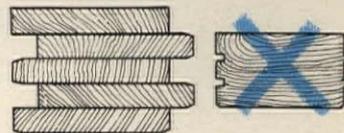
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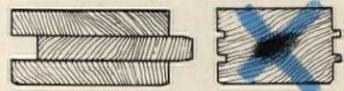
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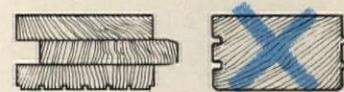
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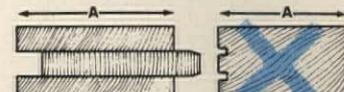
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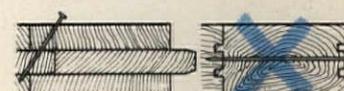
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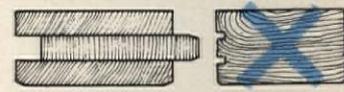
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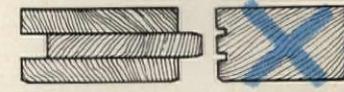
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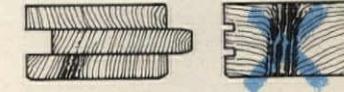
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