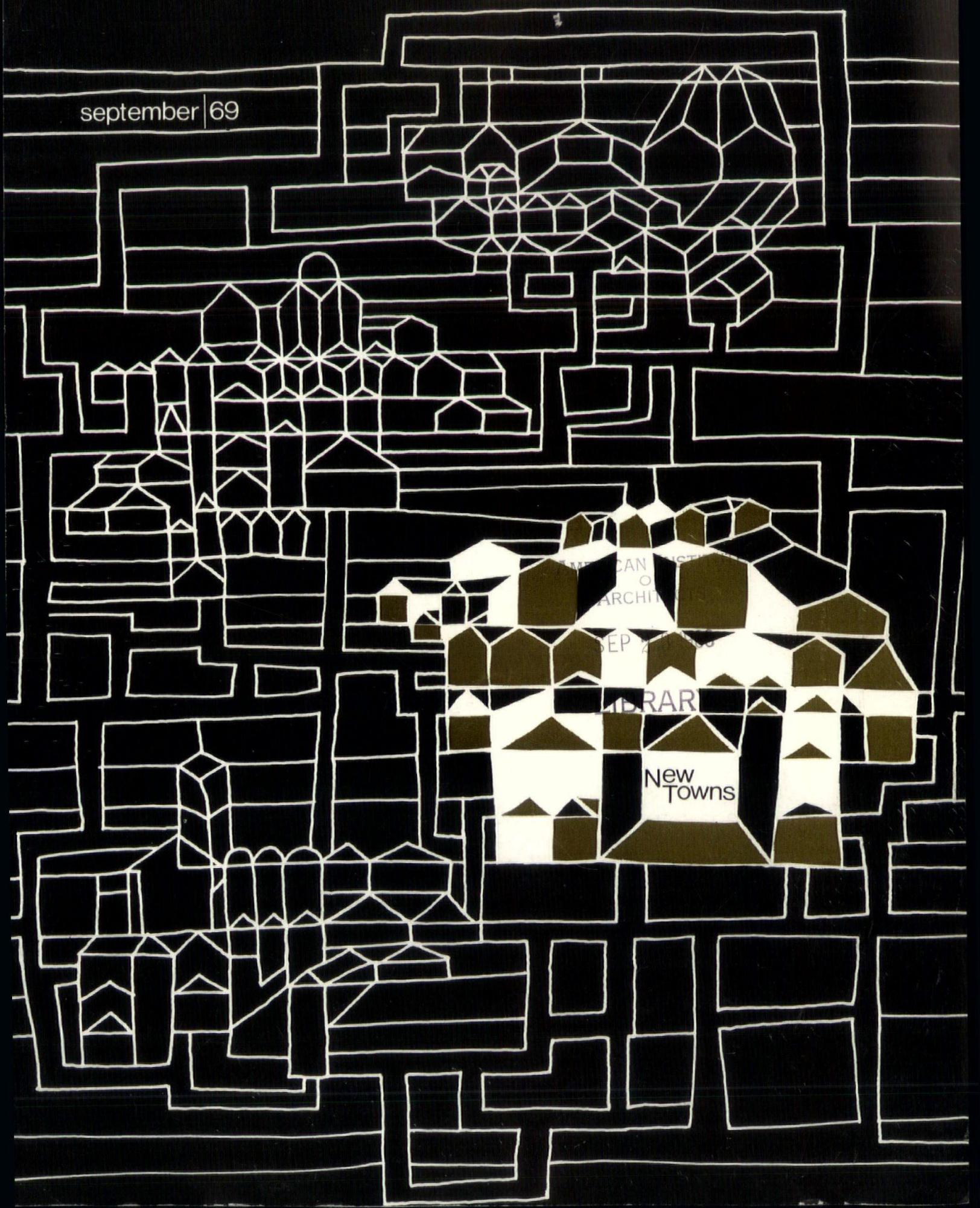


september | 69



AMERICAN SOCIETY
OF ARCHITECTS
SEP 27 1969
LIBRARY
New
Towns

exposed aggregates

c.i.a. file: 4a

Prepared as a service to architects by Portland Cement Association
clip along dotted line

Exposed aggregate provides concrete surfaces of unusual beauty and variety. To emphasize the gleaming freshness, true colors and textures of the aggregate, architects, today, choose concrete made with white portland cement. It is also an excellent tinting base for mineral coloring pigments.

Reveal of precast concrete panels is largely determined by aggregate size. When panels are to be viewed relatively close, less reveal is needed. When panels are some distance from the main flow of pedestrian traffic, greater reveal is required for a rough textured look.

Polished panels of pastel colors tend to appear white when viewed from a distance due to the high reflectance of the surface.

Shown at right is a table which demonstrates the unlimited range of colors possible with commercial aggregates and white cement.

Write for additional free information (U.S. and Canada only.)

VISIBILITY SCALE

aggregate size	distance at which texture is visible
1/4" - 1/2"	20 - 30 feet
1/2" - 1"	30 - 75 feet
1" - 2"	75 - 125 feet
2" - 3"	125 - 175 feet



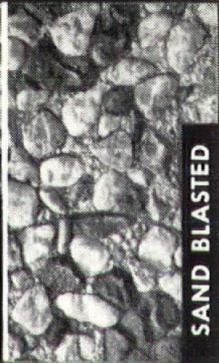
First National Bank, San Angelo, Texas. Architects: Abel B. Pierce and George Pierce, A.I.A., Architect & Planning Consultants, Houston. Structural Engineer: Walter P. Moore, Houston. Contractor: Templeton & Cannon, San Angelo



CRUSHED



NATURAL



SAND BLASTED

TABLE OF COMMON COMMERCIAL AGGREGATES

GLASS*	ARTIFICIAL	SIZE	USES	SOURCE**	COLOR RANGE
CERAMIC		1/4" - 1 1/2"	stained glass, walls, panels	Mich., N.J., Texas	brilliant and almost unlimited ranges
		1/4" - 1 1/2"	curtain wall panels, ornamental work	Ark., Ariz., Mich.	any color
SAND		fine to coarse	plain or sculptured panels	all areas	white-buff-yellow
PEBBLES		1/4" - 6"	fill-up walls, panels, walkways	west & southeast	white-red-orange-buff-black
MARBLE		1/2" - 2"	curtain wall panels	all areas	white-red-buff-yellow-black
GRANITE	MINERALS	3/4" - 2 1/2"	fill-up walls, panels, walkways	midwest & west	red-gray-buff-dark blue-black
QUARTZ		1/2" - 2"	curtain wall panels	east, west, south & midwest	white-pink-gray-clear

*Reactivity: some glasses may react with alkalis in the cement to cause expansion. Consult glass manufacturer to determine if glass is reactive.

**List of manufacturers available.

wisconsin architect



Volume 40, No. 8 September, 1969

Wisconsin Architect is the official publication of the Wisconsin Chapter of the American Institute of Architects, published by the Wisconsin Architect, Inc.

ELLO BRINK, Executive Editor
David Radbil, Advertising Manager
John Reiss, Art Director
Subscription Rate: \$5 per year. Individual copy 50c.
Address all matters pertaining to Editorial or Advertising to
785 North Jefferson Street
Milwaukee, Wisconsin 53202
Phone 272-4668

Wisconsin Architect, Inc.: President, Willis Leenhouts; Vice-President, Maynard W. Meyer; Secretary-Treasurer, Ello Brink, 785 N. Jefferson Street, Milwaukee, Wisconsin 53202.

Board of Directors: Harry Bogner, Richard Diedrich, Thomas L. Eschweiler, Ronald Hansche, E. John Knapp, George Schuett, Sheldon Segel, Gary V. Zimmerman.

Wisconsin Chapter American Institute of Architects: 3902 N. Mayfair Road, Milwaukee, Wis. 53222. Phone 464-4520. Executive Secretary, Mrs. Jane Richards.

Executive Committee: President, Robert L. Yarbro; Vice-President, Thomas L. Eschweiler; Secretary-Treasurer, Sheldon Segel, 200 N. Jefferson Street, Milwaukee, Wis. 53202; Lawrence E. Bray, *ex-officio*; George A. D. Schuett, Milwaukee; E. John Knapp, Madison; Brian F. Larson, Eau Claire; Richard P. Linde, Sheboygan; Willis C. Leenhouts, Milwaukee; Wayne Spangler, Rice Lake; John A. Findlay, Madison; Mark A. Pfaller, Milwaukee; Mark T. Purcell, Madison; Nathaniel W. Sample, Madison; Leonard J. Urban, Neenah; E. William Johnson, Milwaukee.

Southeast Section Officers: President, E. William Johnson; Vice-President, John F. Funck; Secretary-Treasurer, Richard P. Blake, 330 W. Silver Spring Drive, Milwaukee, Wis. 53217.

Western Section Officers: President, John A. Findlay; Vice-President, Gustavs M. Martinsons; Secretary-Treasurer, Jerry W. Spencer, 810 University Bay Drive, Madison, Wis. 53705.

Northeast Section Officers: President, Leonard J. Urban; Vice-President, Richard E. Gustafson; Secretary-Treasurer, Ronald Hansche, 52 Eveline Street, Oshkosh, Wis. 54901.

Northern Section Officers: President, Brian F. Larson; Vice-President, Wayne Spangler; Secretary-Treasurer, William C. Roberts, 221 N. Main Street, Rice Lake, Wis. 54868.

Wisconsin Architects Foundation: 4685 N. Wilshire Road, Milwaukee, Wisconsin 53211. Telephone 962-5844. Miss Dorothy Schweitzer, Executive Secretary.

Allen J. Strang, President; Harry Bogner, Vice-President; E. William Johnson, Secretary-Treasurer; Ralph H. Kloppenburg, Clinton Mochon Lawrence E. Bray, Julius S. Sandstedt, Fitzhugh Scott, William P. Wenzler.

wisconsin architect / september, 1969

Application to mail at controlled circulation rates is pending at Milwaukee, Wis. 53203

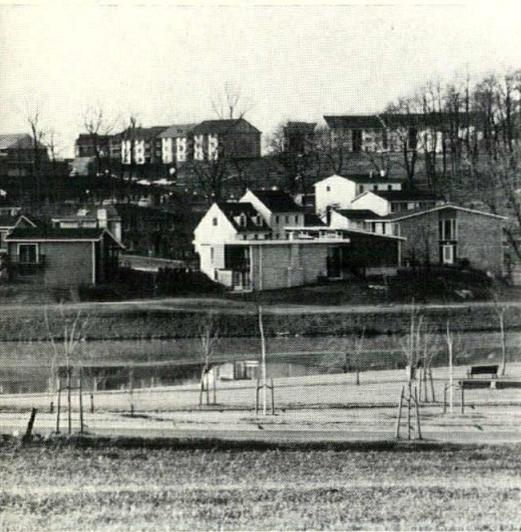
index

- 6 **A New Kind of City**
Leo Molinaro, President
The American City Corporation
- 12 **New Towns — Are They The Answer?**
Mrs. Kirk R. Petshek
Member of the City Plan Commission
- 14 **New Towns On the Metropolitan Horizon**
Dr. J. F. Mangiamele, Professor of City Planning and Urban Design, Department of Urban Design and the School of Architecture, University of Wisconsin-Milwaukee
- 16 **Full-Spectrum Lighting**
Herbert A. Anderson,
Vice-President, Duro-Test Corporation
- 22 **Welcome**
- 23 **Wisconsin Architects Foundation**
Dorothy Schweitzer, Executive Secretary
- 26B **News Notes**

a New kind of City

*Leo Molinaro, President
The American City Corporation*

Below: The Bryant Woods neighborhood of Wilde Lake Village is built around a center consisting of a school, store, pool and day care center.



The Wilde Lake Village Green. Stores and shops face a landscaped square.

Despite the mounting concern about The American city and the multiple attacks currently directed at its problems, we are not engaged in any city in the U. S. in a systematic attempt to discover what a city would be like that worked well for the people who live in it; what it would cost to transform it, how its institutions would function; what the operating arithmetic might be of a city that was doing its job well.

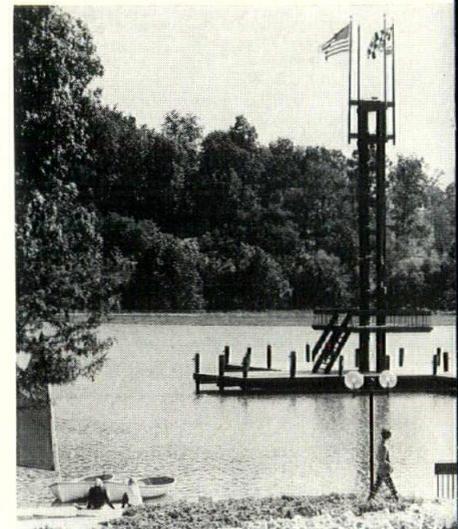
The many urban programs that have been mounted are largely in response to crises and are directed at the symptoms of the city's troubles rather than at underlying causes. They are designed and launched in piecemeal fashion without relationship to one another nor to any overall goal regarding the quality of life within the city.

For example, there is tremendous pressure on housing and employment, but bad housing and unemployment are not the basic causes of the city's unrest. It would not be enough to rebuild our cities brand new — exactly as they are — and place everyone in a job tomorrow. The same forces that have dragged the city down in the past would be at work to drag it down again. Bad housing must be replaced with good housing, and people seeking work must be able to find it. But good housing and jobs won't overcome the fear, loneliness, poor health, poor education, lack of hope, lack of dignity — lack of effective community that saps the city of its vitality and is at the root of its troubles.

Huge school building programs are authorized and must proceed. To educate students coming from what kind of community? In what state of health? With what preparation? From what kind of housing? Aren't these the beginning points for education?

State and Federal funds support Medicaid to help the poor and indigent sick. It has been demonstrated that caring for the sick, while

Below: Lake Kittamaquidi from the town plaza.



Right: The Town Plaza, Lake Kittamaquidi is a 32 acre lake bordering the plaza.

necessary, is really attacking the problem too late. Might not comprehensive health care including education in pre-natal care, child care, and nutrition actually cost less per capita — while helping to produce a better community?

Crash programs in job training and job placement are announced — but there is still no comprehensive systematic collection of data to identify the current and prospective employment needs in the community. Can't job need, job training, and job placement be organized into an intelligent system that permits a man or woman, a public or private employer to find his way through the system and get the assistance he needs, when he needs it?

Capital programs for public transportation are near the top of the priority list in most big American cities. How are these crucial systems being planned? Will the planners simply project present growth trends and lock in the current obsolescence of the city for decades to come? Or if not — then on what other assumptions about the life and functions of the city? Will the huge capital expenditures for public transportation help or hold back the formation of healthy, new communities in the old city?

These are illustrations of the many well-intended but unrelated thrusts at the urban problem.

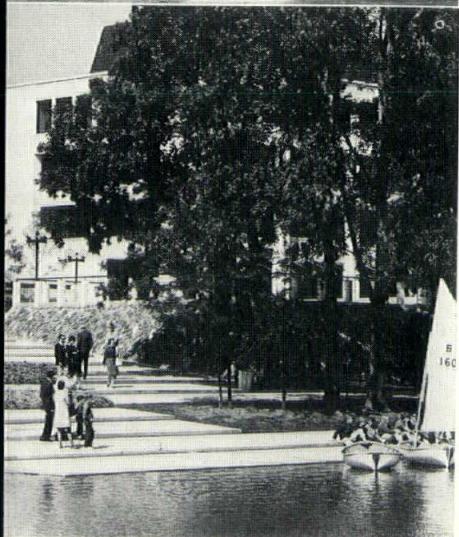
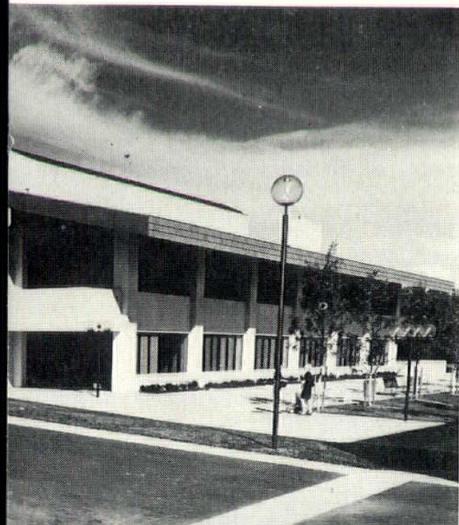
Each is incomplete because it proceeds alone — independent of, and largely unrelated to, other programs directed at other conditions. We proceed in the American city as if housing, employment, education, health, transportation, and other processes and institutions were to operate in a city foredoomed to failure and frustration — as if each separate program is to do the best it can under conditions that are sure to be inefficient, inhuman, and destructive. We fight random battles in a war no one expects to win and, in fact, with no overall expectation of victory nor any strategy for achieving it.

The inevitable and recurring failures have produced a weariness about the city — a pervasive disbelief that we can really make the American city efficient and humane.

But, this is neither a necessary nor rational state of mind. Surely the most prosperous and affluent nation in the history of man with the greatest management capability in the world can so organize its cities that the fruits of its civilization can be available to nourish the growth of its people.

On the threshold of the scheduled flight to the moon, I cannot resist the overworked analogy between organizing our energies and talents and resources for getting to the moon in ten years to tackling the task of redeeming our cities — or at least one city — in the same

The Exhibit Building.



The fountain in downtown Columbia, Maryland.



frame of mind, with the clear goal to make a city healthy and workable; with conviction that it can be done; organized to face the problems — to design solutions — to plan and program the restructuring, reshaping, revitalizing process that will make the city work.

This change in state of mind from the disbelief that breeds timid, disconnected, incomplete, piecemeal thrusts at the city to conviction that the city can be transformed is essential to the kind of goal setting and programming that must direct the city's efforts.

To bring about this change in state of mind throughout the country we need an image of a city that works:

- an authentic and believable model of a new kind of old city in which the best that we know about education, health, employment, law enforcement, housing, community formation, transportation, and the other processes and institutions of life are simultaneously and systematically examined in creative and supportive relationship with one another;
- the physical plan of which emerges from the reshaping of these processes and institutions to form healthy, dynamic new communities within the city;
- the arithmetic of which has been carefully calculated to show capital costs — development schedule — new assessable base; income — and operating expenses. We have never seen a balance sheet and operating statement of a successful American city — only of cities that work badly.

On July 1st, The American City Corporation will begin work on just this task in the Greater Hartford region. We have entered into a contract with a non-profit group, The Greater Hartford Corporation, organized by twenty-one leading business and industrial leaders. These men have reason to be proud of what Hartford has achieved in many areas of urban revitalization. But they are far from satisfied. They are very much troubled by the civil unrest, the increasing social and economic costs of unrelated, piecemeal projects, the chronic and crucial crises in local governments, and the other signs that the promise of urban life is not being delivered to more and more people, in spite of more and more programs to do so.

Our task in this endeavor is to develop a comprehensive process of investigation and deliberation with all elements in the region through which can be examined the institutions and life support systems of the region. During this initial phase, taking perhaps six months, we will be looking for those essential ingredients for building a sense of community in which people feel involved, supported, important and for which they feel responsible.

It is well known that these ingredients include:

- a human scale in terms of population and in terms of physical identification;
- community facilities, services and institutions that are needed for schooling the young, building and maintaining physical and mental health, stimulating and guiding creative efforts in the arts and sciences of local life, providing opportunities for recreation and communication;
- relationships among people as neighbors, between the young and old, the poor and well-off, workers and employers, public agencies and private interests, people and their institutions — relationships which generate free communication and shared responsibility.

Before going further let me say this is no "Ideal City" for a 21st Century of supermen. We hope to be able to describe the conditions that constitute a new kind of community that is believable, desirable and deliverable *in our time* through talents and resources *now available*. We aim to lay out at least the outline of a new economic model which shows how capital costs, operating costs and revenues might be generated, financed and scheduled to make the whole thing feasible. In short, we will attempt to lay out a program of work to be followed which systematically puts to work the best we know or can discover about making a city and its region work for its people.

Moving from this descriptive and exploratory first phase to more detailed planning and programming, we will produce an implementation model that will include:

1. A comprehensive data base and information system drawn from the basic processes and institutions dealing with shelter, employment, education, health, transportation and communication. The inventory will be devised so that it could be carried on by local staff recruited and trained during the planning period. The inventory will be constructed in terms of:
 - Who is served?
 - How are services provided and how delivered?
 - What do services cost?
 - What incidents of dysfunction occur?
 - What gaps and overlapping occur?
 - What processes have been established for leadership and staff development?
 - What performance standards have to be used to evaluate services, staff, costs and plant?

A specific, functional role will be developed for resident groups and individuals from key areas in Greater Hartford in gathering and analyzing information. Techniques will be devised to make

all information available, continuously, to any and all policy-oriented groups whether they are residential, commercial, industrial, professional, or political in make-up and outlook. The aim is to develop an "early warning system" for both citizens and city officials, for the private and public sectors.

2. Land use proposals will be formulated for utilizing the full range of capacities and capabilities of all existing institutions and combining the impacts of capital projects so as to produce the maximum quality in staffing, service, physical design, and the maximum efficiency in funding, construction and maintenance.
3. Based upon land use proposals and the costs for public services, a comprehensive economic model will be developed to include all operating and capital expenditures of Greater Hartford, and sources of income for the city and region. The aim is to uncover new ways to generate public capital as well as new ways of relating expenditures so that they generate greater private investment with public benefits.
4. A full employment program will be formulated with specific strategies for creating new jobs and improving existing jobs. Priority will be given to upgrading entry-level jobs with special attention to part-time jobs for retired persons with adequate capability, motivation and need, students and others with employment needs that do not fall within the standard categories now operative. A data bank on employment will be devised in which all employers would participate as well as all institutions with programs for human resources development.
5. An implementation schedule will be made which will specify when and where major staff efforts are to be made and identifying major policy decision points and participants in these major policies.
6. A citizen participation model will be developed with citizen groups defining a range of participant functions in planning and implementation, assistance for various citizen groups and individuals to make their participation effective, and sources of funding for these activities.

Throughout this first two year period, The American City Corporation will respond to any opportunity that will permit early implementation. In other words, we will not simply plan and study for two years. If an opportunity arises for making a significant change for the better in the quality of any aspect of life, we will respond without hesitation.

Obviously we cannot carry on this work

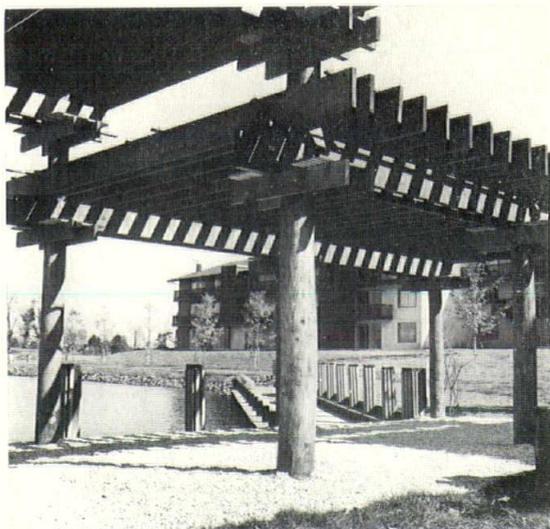
alone. We will seek to establish working relationships with all the public and private agencies and groups currently engaged in regional and city development. We know full well that we cannot go into a region of 650,000 people and 30 or 40 local governments and tell them what to do. Our aim will be to establish a comprehensive process of thinking about these matters and a positive attitude of looking for new combinations of existing values that can be demonstrated and learned.

We are borrowing much from the Department of Agriculture's long-established methods of demonstration and discussion among farmers whenever new techniques were introduced. We are betting that people are weary enough of "business as usual", "politics as usual", "planning as usual" to welcome a different approach. Most of all we are borrowing lessons learned from the process used in the planning and development of our new city of Columbia, Maryland. We fully realize that there are great differences between building a new city out of raw land and working with a long-established city in a fast growing region. Nevertheless, the process which evolved and the assumptions underlying the process seem to us to have validity for urban development generally.

This process is best described by Mr. Morton Hoppenfeld, Vice-President for Planning and Design of The Rouse Company, and a central participant in the development of Columbia. I would like to quote his description of the process.

"Columbia is a city growing in Howard County, Maryland, emerging from ideas to reality. The important idea in the development process is the attempt continually to see the whole in spite of the knowledge that a city is made of countless social and physical parts interacting in ways complex almost beyond description. At every stage from concept through building, we have tried to keep the parts in relation to each other. This simple idea of the need systematically to understand the changing but critical relationship of all parts, is fundamental to the proper design of the city in both its physical setting and the family and institutional life within. At the same time, it is this very concept of wholeness which made Columbia possible to be built at all; in making it credible and attractive to one of the nation's leading investors, Connecticut General Life Insurance Company; and in making it credible and desirable to the citizens of Howard County, Maryland.

From the beginning of the Columbia process, we sought to conceive everything in its optimum form knowing that later the pulls



Wilde Lake. The Cove apartments offer all the advantages of on-the-water living.

and tugs of conflicting interests or existing real-world constraints would require us to settle for less than the optimum condition in any of its parts. The value of this process rests not in seeking the best of any one piece of a city but in the realization that any one piece, such as an educational system, the delivery of health services, or recreational opportunities, is critically related to others for fulfillment of its maximum potential. We started traditionally to think in terms of designing a plan for the development of land and the buildings and spaces between them. To do this well required exploration into the living fabric of the city and soon resulted in planning, simultaneously with the land, for the creation of new institutions and the interrelationships between all the city's life forces. The design process we followed required the most intensive knowledge and understanding of the physical environment, the disciplines inherent in the slope of the land, soil conditions, tree preservation, keeping streams natural and creating lakes. In the gaining of this knowledge, design opportunities were revealed. The intent was to avoid preconceptions of shape or urban form end, instead, to let the design emerge from the given natural environment and other planned or existing conditions. Further design decisions required understanding of the human purposes to be served by the physical environment. As we sought to understand and describe desired relationships between individuals, families, and the institutions created to serve them, the best possible physical arrangements began to emerge. The Columbia General Plan is an expression of this process to translate the natural and social forces into physical de-

velopment terms. This same process continues as the city grows and as we can feed into each subsequent decision the lessons of previous development.

In order to conceive of this city in the holistic terms described, we had first to find the human resources necessary. At the outset the Columbia planning team was made up of the typical set of "experts": planners, real estate developers, architects, and engineers. Each had his own set of biases about "a good city", based essentially on his limited experience and reading. None was really objectively or fully aware of the availability of data or enlightening conjecture on the interactions of people and the institutions of the city. Unwilling to act upon our own biases, we set out to gain knowledge of facts and insights into probabilities, to find a satisfactory technique for choosing among the infinite combinations of facilities and systems which would make up the "physical city" and germinate urban institutions and life styles. We came quickly to the conclusion that there were no easy routes, no few individuals who were the repository of wisdom on urban life patterns. In fact, we chose not to consult those who made such claims. Instead, the ideas lay in many minds in separate fields of interest and often in forms not directly applicable. The task was to bring these traditionally separate disciplines together and discover the richness of their interaction and the pertinence of their discoveries.

The idea emerged of creating a group from a cluster of individuals, each with "expertise" in generally defined areas such as education, health, recreation, and so forth. By their own admission, these were people without firm commitments to "a way of doing things" but fully aware of their respective fields and prepared to build upon them. Included in the group were advisors from the fields of government, family life, recreation, sociology, economics, education, health, psychology, housing, transportation, and communication. Typically, this "work group" met for two days and one night (important to sustain a thought pattern in depth). The meetings took place twice monthly and lasted in disciplined form for about six months through the evaluation of sketch plan alternatives and the analysis of these by the group.

Each function was addressed in turn, from individual and community health through libraries, active recreation, and the needs of home-bound young mothers, or children, and the aged. The individuals with "expertise" in a given area prepared to articulate "optimum" conditions. These papers

served as grist for the interdisciplinary mill and traditional boundaries crumbled. For instance, the church could serve a need in counseling and became part of the health system; nurses and doctors, in turn, part of the education system. Perhaps the library should sell paperbacks, or private restaurants cater meals to the school system. No consensus was sought during this process. It was in fact the ultimate responsibility of the principal planners and developers (also acting as members of the group) to put together the pieces of a plan and courses of action. (Important to note here that these decision-makers will vary depending on the nature of a project.) Difficult decisions between "optimum" goals and existing conditions continue to be made in the light shed by these sessions.

A conscious decision was made afterward not to codify or publish the results of this process. A summary was attempted and it woefully failed to capture the essential value of the group meetings. It is impossible to describe the personal experience of the involved planners in thinking through and living with ideas subjected to the rigors of a systems concept where all parts are inter-related and dogmas and traditional "standards" are scrutinized. However, this experience still nourishes the decision-making process in Columbia.

Fundamental concepts have come out of the work group, been given life, and are now in various stages of transformation and execution not by the developer, but by those ultimately assuming responsibility for the institutions of the city. For example, the Howard County Board of Education has adopted a new grouping of school grades altering its previous arrangement. The Board enacted substantial changes in curriculum and other school system concepts. Our relation with the staff and Board of Education is one of mutual respect where good ideas become the focus of attention. The first schools in Columbia will benefit from this process but, importantly, so will those built and operated throughout the county.

The Johns Hopkins Hospital has committed itself to develop a program for a health system looking more to preventive and positive health conditions than the traditional diagnostic and cure emphasis of medicine. The churches in Columbia have created a "cooperative ministry" and a Religious Facilities Development Corporation to build common facilities and enlarge their service opportunities while reducing capital costs. They are building low-rent housing units and conceive as part of their mission the

fruitful integration of racial and socioeconomic groups.

Art and music programs by major institutions are being formulated to serve both in education and the market place, and The National Symphony of Washington, D. C., plans summer concerts in an extraordinary pavilion seating 3,000 under cover and 2,000 more on the grass in the midst of downtown's 40-acre park.

The obvious conclusion from this is that the traditional approach of making a plan and then effectuating "the plan" is archaic. Plans need to be conceived as continually fluid and responsive to the feedback of operating agencies and development processes and opportunities. The feedback process is essential both to the quality of the plan and its fulfillment.

The essence of our planning technique is the continued amassing and refining of a reservoir of pertinent data and knowledge to be applied in the daily need for decision-making; even the postponement of a choice becomes significant in the process. The plan is at once as general and as specific as the situation demands. It can concurrently consist of the assignment of a broad category of possible activities (land uses) to a piece of land, the detail site plan of a development area, and the specific design of building and landscape.

There are few aspects of Columbia which, in separate form, have not been attempted elsewhere in the United States and more often than not, rejected by communities not very different from Howard County. Time and time again, well-intended people have tried to introduce change in existing communities, whether it be in the form of multi-family housing, new industry, commercial facilities, group medical practice, or the sharing of a religious facility, and the proposals were and continue to be rejected. These efforts fail because they are isolated; Columbia succeeds because the efforts are interconnected, conceived and presented in the context of a whole new urban pattern.

In short, by being a whole city, Columbia does, in fact, offer something of value to almost everyone. This is the very essence of a city's purpose. And while the citizens of Howard County might find certain aspects of this new city to be undesirable to their personal interests, they were willing to accept aspects which they considered less desirable as an integral part of a whole which had far more benefits to offer than risks."

New Towns

are they the answer?

By Mrs. Kirk R. Petshek
Member of the Milwaukee
City Plan Commission

That the United States is suffering from the effects of maldistribution of population is a point on which few will disagree, and the statement recently attributed to Barbara Ward, the well-known economist, that America will have to spend about \$100 billion a year on new homes and community facilities, in any case, to care for a growing population in the years ahead, and that the choice is between spending it well to create a more balanced population pattern, or spending it ill on a continuance of urban sprawl, needs no corroboration. Whether the British New Town concept which has been referred to as the brightest hope for population dispersal could be successfully transplanted here is a suggestion which needs to be carefully examined, however. What were the conditions which spawned the British New Towns? And what of the governmental structure that supports them?

1. At the time the New Towns Act was passed (1946) the supply of housing was much lower than the supply of jobs in Britain. For several years after World War II Britain had a very low national unemployment rate so that it was much easier to find a job than it was to find a home. Creation of New Towns was therefore a way in which the dual policies of providing jobs and home could be implemented concurrently, but the primary coercion was applied to industrial location with the housing being made available for a newly mobile work force. It had been recognized that the basic need was to make possible the best use of limited land resources for industrial location rather than to rehouse large segments of a maladjusted urban population as a first priority.

2. A city in Britain is not as completely dependent on its local tax base for supporting municipal and social services as it is here. There is a more direct relationship between the local municipality and the national government and this greatly reduces the element of competition between municipalities for the economic activity generated by industry.

3. All local authorities in Britain derive their powers directly from the national government, and all significant local authority decisions are subject to overrule by the national ministries. This eliminates intergovernmental conflicts, but could hardly be expected to appeal to the state capitols throughout the U.S. The major objectives of land use planning are national and all local development plans are expected to reflect this.

4. The capital investment necessary for a New Town comes directly from the national Treasury in the form of a long-term (66 year) low interest loan. The lead time necessary to ensure that jobs and homes are concurrently available means high initial outlay for the installation of essential services. Some effort has been made to provide for this for new communities in the 1968 U.S. Housing Act.

Responsibility for providing homes and jobs had been accepted as a national policy in Britain since

the 1930's. The depression years, however, saw little possibility of implementation of these policies, except through public housing programs, which created some jobs in the building trades and hardly scratched the surface of the needs of the large industrial centers. And so in 1939 Britain went into World War II with large unmet need for housing, particularly for lower and middle-income families, and virtually no program for industrial expansion which was in any way dependent on mobility of labor. The destruction wrought by the Luftwaffe, the complete mobilization of all resources, material and human, into an all-out war effort, and curtailed activity in foreign markets, all intensified the problems which had to be faced when hostilities ceased in 1945. Despite the impossibility of implementation or experimentation during the war years, however, exigencies which arose on the domestic front stimulated a great deal of thoughtful planning for the best use of the resources of a tight little island once peace was restored.

The New Towns Act was passed in 1946. At that time Britain was faced with a housing inventory which while woefully inadequate in 1939 was further depleted by unprecedented destruction; a complete hiatus in building activity over the previous six years; a labor force which had been channeled into war-oriented activities and in which recruiting had been at a standstill for half a decade; no market for materials, either at home or abroad; and the need to resettle in both jobs and homes almost the entire able-bodied population. These were the hard facts of economic life. Contributing to the political feasibility of this program at that time was a nation which had been conditioned to the need for government control of distribution of resources—from space in an air-raid shelter to the quantity of gold in a wedding ring. The 1945 national election reflected this when a government led by scholarly but lack-lustre personalities committed to the concept of rebuilding Britain on thoroughly egalitarian lines so soundly defeated a party led by a national hero credited with playing such a large part in the recent won victory. While our problems may be as great here and now as they were in immediate postwar Britain, awareness of them has been painstakingly forced upon us by events reflecting neglect and indifference over a long period of time. In contrast, Britain then was a nation newly relieved of the effort of combatting external forces, united in the euphoria of victory and ready and anxious to build a brave new world for her people. So much for the emotional climate.

The New Towns Act, therefore, became a catalyst for programs which could be carried out under legislation originally adopted to relieve disparate parts of an overall problem, administered by the Ministry of Housing and local Government. Included in these national policies is provision for control of the location of all significant new industrial construction, and the

ionalization of land development values. This Act is a tool with which to put the legislative machinery work on a coordinated basis so that full advantage would be taken of the various governmental measures available when they were applied as complementary factors in a planned totality, instead of as stop-gap, piecemeal measures to shore up a well-worn, patchwork edifice. Deceptively simple as this may sound, this coordination means securing the cooperation of such national ministries as the Board of Trade, the Ministries of Transport, Health, and Education, all of them subject to pressure from other programs to be funded and staffed, and all of them trying to establish a rationale upon which to base program priorities. While the high initial outlay for the installation of services in the New Towns can be justified by economies of scale resulting from the possibility of projecting future growth, it would not be feasible to expect a private utility to underwrite this expenditure. In addition to the direct Treasury loan other funds going to a New Town include some which would in any case be available for subsidized shelter in already existing communities. These funds can be diverted to New Towns at the request of any community eligible to receive them if it wishes to export industry and the necessary work force to a New Town, and it is the case, old, congested cities which do this. Although several years after the war, aside from pockets of unemployment resulting from local factors in some geographic areas, Britain had virtually no unemployment, and continued to be concentrated in the overcrowded industrial centers until government intervention encouraged industrial relocation.

The New Towns then, were created to take the industrial overspill so that housing built there was allocated on a priority basis to workers who were accompanying a plant which was moving from one of the overcrowded cities. This created a break in the cycle which had kept large segments of the British work force tied to jobs in cities because they had to stay there, albeit often inadequate. No employer could be expected to make the capital investment necessary in a plant outside the city if there would be no work force available. The low unemployment rate in Britain meant, too, that those electing to remain behind in the city could still find jobs if they wished to do so. Those accompanying the employer to a New Town, however, reaped a "fringe benefit" in the form of subsidized housing, whether bought or rented.

Perhaps the biggest problem we would have if we tried to adopt this concept here is the need to compensate the cities for the tax lost by industries moving to a more bucolic setting. A greater burden of health and welfare service costs falls upon the local jurisdiction here than it does on the local authority in Britain. This would be intensified if the productive members of the community who make up the work force accompany an industry which relocates in a New Town. The cities would then be left to house only the hard-core problem families who lack the employment incentive to move to a New Town at one end of the socio-economic ladder, and at the other end the urban sophisticates who restore and live in historic shrines, report the arts, head south in the winter and north in the summer.

Also important to an industry-exporting city is the hidden cost of demolishing or renovating the vacated plant, unless the New Town activity represents only plant expansion. This is a cost which has to be borne by some unit of government other than the local municipality, unless the program is to become self-defeating. If the vacated structure is to be used for some less desirable industry, or to remain unoccupied, it will simply escalate the downward spiral of the city's physical stock rather than benefit the city by decongestion.

While we could undoubtedly learn a great deal from the mistakes made by the British in their pioneer efforts to create New Towns, as well as from their successful implementation, we must not lose sight of the fact that Britain's New Towns were created with the full force of a long accepted public policy and national government financing to undergird them and an administrative structure that eliminates much of the competitive element between jurisdictions. Furthermore we have yet to see the cultural and social consequences of succeeding generations raised in these bastions of working-class complacency. Anything we do in an effort to create New Towns in the U. S., such as those at Reston and Columbia, may escape this cultural hiatus through the more broadly-based socio-economic level of their residents. It must be remembered though that these towns were created primarily to provide pleasant living for members of the Washington D.C. work force which has a high ratio of professional and white collar workers. That both of these U. S. "new towns" were planned as industrial host communities only to the extent necessary to provide the tax base for the services their residents would like to enjoy points up the difference between the stimulus for the U. S. New Towns — to provide Arcadian living — and that which generated the concept in Britain — to relocate industry and its concomitant work force. Our resources have never been strained to the point where the population would readily accept the degree of government control over distribution that was experienced by Britain between 1939 and 1945; free market factors have enabled us to maintain a more even balance between jobs and homes and to sustain a more mobile work force. The focus of our maldistribution is the urban concentration of those who are ill-equipped to enter the work force and these are citizens who would not be affected by the creation of New Towns.

That New Towns could be successfully established in the U. S. is not doubted. But in order for them to thrive independently and not to flourish at the expense of the cities we now are trying to save, we do need to make some far-reaching adjustments in the way in which we use our tax resources. As long as our local municipalities are dependent on the local tax base for the services they have to provide, we should not further deplete these resources by stimulating industry and its work force to leave the old established cities to die from undernourishment while creating essentially one-class communities whose children will develop an existence remote from the city with its rich heritage of social and cultural resources so necessary for human growth.

New Towns

on the metropolitan horizon

By D. J. F. Mangiamele*

1. *New Town Principles Emphasize Basic Truths*

American cities are relatively young compared to European cities. But they do not possess some of the inner strengths of the older forms. This fact in itself would lead us to believe that new towns or new cities might not be an improvement over the present urban scene — especially on our own continent. Yet the new town concept may indirectly, as well as directly, give a basic revival effect to our metropolitan areas. A better understanding of the idea may serve to convert them from merely urban areas to true cities, both in form and character.

The main reason for this is that to start to develop a new town from scratch takes us back to the very basics of city building. And in order to do this, we must examine what makes a town or a city function when it's at its best and what detracts from it at its worst. Therefore, the very re-examination of these old "truths", enables us to look at our existing cities or agglomerations in a new light. One of these old "truths" was stated by the ancient philosopher, Aristotle, who said that the city "comes into existence for the sake of mere life, but exists for the sake of the good life". It's in this latter part of the statement that we in America seem to have lost our vision. We are still working in the area of the early stages of "existence for the sake of mere life".

2. *Is the Basic Urban Goal a Broader Tax Base or "the Good Life"?*

Many city officials would have us believe that cities merely exist to produce and broaden the tax base or to merely provide the basics of life. And this quite clearly describes some of the main forces at work in our cities, for few of our cities have gone far beyond sustenance level in their development, except in some fragmented ways. But in looking toward the development of new towns, we must also look toward their justification and toward developing the good life — for the severest critics of new towns usually criticize them on the basis that they have not made all of their inhabitants happy people. Imagine criticizing our existing cities on the basis that they did not make some of their inhabitants happy? These critics, however, help us to focus on the question of what city development is all about. The philosophical answer is that the city is meant to improve our lives — to provide the means to strive for the good life — yes, perhaps bring happiness into the lives of most of its citizens, if not all of them.

3. *New Towns Within the City*

We cannot only aim at bringing an improved way of life to self-contained new cities or towns some miles from our concentrated population centers but we can try to convert these population agglomerations into real cities themselves. For the same basic concepts which apply to the development of new towns apply to the redevelopment of the existing cities. Revitalizing the city is not merely a process of forced renewal, nor a naive notion of making old things new, it is the idea of building new cities — new social communities — with our existing cities.

4. *Appearance and Environment*

However, new towns have been criticized for their appearance and for their inadequately developed environment. In many cases this criticism is quite valid, but if we were to criticize our existing cities, holding up the same criteria, we should have a great deal left to talk about. The current discussion of the new towns idea shall, however, bring about a reappraisal of our existing thoughts about planning. For example, we might ask, "What should town living or city living be, and how do we really obtain many of the promises of city life?"

5. *The Hierarchy of Community Elements*

For the purposes of this article, I prefer to limit my discussion to the concept of the "new city within the city" rather than the isolated new town. Therefore, many of the criticisms of an isolated new town located away from a cultural center will not necessarily apply here. Furthermore, this is not an untimely discussion for in this country we are very much involved in rebuilding vast sections of our metropolitan areas. Moreover, the "Model Cities" program itself is one or two steps removed from the notion of "a city within the city".

If we divide the city into smaller units, which we might call towns of the city to avoid confusion, it seems that we move closer to a natural process. For even in the biological world, the various elements and organs reduce themselves into organizations complete in themselves but still continuing to form a part of the greater organization. The scientist, Julian Huxley and others, have pretty much described the laws of hierarchy and optimum size in nature. Every organ, specie and cell evolves until it reaches the best size for its particular function or performance.

The town units of a city, or the boroughs as they

called in New York and London, indicate that the city might also be reduced to its sub-organizations, and they in turn viewed as a group of cells or "neighborhood units", and moving further down the scale, they are made up of numbers of people living in thin dwellings either as families or individuals. Therefore, each city, regardless of its size, might be structured as a hierarchy of sub-organizations closely resembling both those of nature and of society.

6. *Re-creating Our Environment*

Once we accept this hierarchy of urban units, which not only makes it possible for the human being to relate both to these types of human-oriented organization and to relate also to human-oriented environment, we can then start re-building our cities along new town principles. Finally, this organizational structure offers many possibilities, not only in terms of re-creating an environment according to human requirements, but making it possible to organize our socio-political structure in scale with the human being. He may then work within a functioning democracy toward a better life rather than in one controlled by undefined or mythical laws of economics.

But here is where our biological analogy breaks down. For a human being is not like a cell of a biological organism which exists for the life of the total organ. The human being has himself created the social organization for the purpose of improving his own life. And although that social organization may in turn govern his life to a great extent, he can, if need be, at least theoretically extricate himself from it and survive on his own. So we must continuously remember that regardless of how many of these organizations and hierarchies we develop, they exist for us — first of all to make life possible, and secondly, for the sake of the good life".

7. *Toward a Practical Approach*

More practically therefore, with the Federal Government involved in urban renewal programs, we can take great areas of our cities and truly develop them as "new towns within the city". This doesn't mean, however, that we should take the bull-dozer and scrape away every form of life, community and human relationship along with the physical structures of the area. The human relationships must be preserved and vitalized. Many of the existing physical elements must also be preserved through various phases of the renewal process.

8. *Town and Neighborhood Scale*

In this way, we can master-plan the new town with the active assistance of the people living in the area — neighborhood by neighborhood. Moreover, we do not relocate or dislodge the people from these communities. And with renewal on a neighborhood scale, we can operate within a town framework. This, therefore, puts us in a position to plan toward meaningful goals, giving preference to people and to the immediate scale of human environment.

9. *Human Scale Needed in Metropolitan Planning*

Metropolitan planning and metropolitan government can now be observed in its proper perspective. To this extent we can reshape our metropolitan areas into human-oriented cities and call upon the powers of the individual states to establish the boundaries both within and around the metropolitan areas. Of course, Federal funds will serve as an important stimulant. As the problems which cry for these solutions are here with us, many of us can understand the urgency. Regardless of our history, tradition and type of government, sufficient and proper motivation similar to the call for interstate and urban freeways shall have to be brought about so that the development of the new towns, both in the countryside and within our existing cities can soon become realities.

10. *Forces at Work Toward New Town Development*

Each nation approaches its own problems through the socio-political means at its disposal. The question is not "how other nations have brought the new towns about", but "how do we in this country take the new town idea and whatever lessons there are in other experiences and make this work for us." We have several current forces which seem to be converging on the problem:

- 1) is the manner in which national urban renewal policies are developing, for example, the "Model Cities" program seems to stimulate people's imagination far more than those of the government officials — here is one hope;
- 2) the need for metropolitan government and metropolitan space arrangement along lines taken by principal cities in France, England, Sweden and others seem more readily accepted by the average citizen, more so than by local government officials; again, there is hope in the citizenry; and,
- 3) the American form of government under the current conditions is drawing the state governments and their powers into the so-called "urban crisis" area, placing states in the position to establish regional and metropolitan boundaries and in deciding disputes which cannot be settled locally.

Therefore, the merging of these three forces involving the Federal and the state governments and the metropolitan areas shall soon make it possible to develop new towns of the type closely related to the metropolitan area, some of these "cities within cities" and others satellite towns and still others completely new cities away from existing metropolitan areas.

However, every new adventure has its pitfalls and dangers — sometimes other people's experience provide good lessons, but in most cases, each venture produces its own unique situations pointing toward its own solutions. At the present time, the new towns seem to some to be new and unlikely solutions, but the world's current experience with new towns has been over half a century in developing. The benefits of this experience holds more hope than any other idea in relation to the problems of the city. It is the only sensible approach available to this generation.

Full-spectrum Lighting

Herbert A. Anderson
Vice President, Duro-Test Corp.
North Bergen, New Jersey 07047

Sunlight is the Most Important Environmental Factor controlling and molding Life on Earth.

Evenari, M., "Recent Progress in Photobiology", Blackwell Scientific Publications, p. 161, 1956.

What do we mean by Full Spectrum Lighting?

Generally, we mean a man-made light source that duplicates or simulates natural outdoor light — the light from the sun and sky. According to the CIE (International Commission on Illumination), a standard has been approved for natural outdoor light at a color temperature of 5500° K and a Color Rendering Index of 100. This standard represents sun and sky on a clear day. It has been approved internationally by the CIE.

Natural outdoor light is, of course, full spectrum and therefore true color. Color Rendering Index (CRI) is a method of evaluating color rendition established by the CIE. Since natural outdoor light has a CRI of 100, many fluorescent lamps as well as other light sources can be compared to this standard by assigning a CRI number to the lamp, based upon its proximity to natural outdoor light.

The artificial light source that most closely duplicates outdoor natural light at the present time is the xenon arc lamp. High intensity xenon lamps are usually built from 1,000 watts to 20,000 watts in size. They are generally used for military applications and in such other critical areas as solar simulator chambers to duplicate the energy of the sun for evaluating many components used in our space program.

What has been described as the "most exotic floodlighting job in the world" was installed before the Apollo 10 launch at Cape Kennedy. Both of the Apollo moon launches were floodlighted by a bank of forty-two 20,000 watt high intensity xenon floodlights. These lights are used round-the-clock for several days prior to launching, for all fueling, maintenance and other prelaunch activities. Xenon was selected for its intensity as well as its true color and duplication of outdoor natural light because approximately 150 movie cameras are used to record these prelaunch operations and the lift-off itself. It is, of course, desirable to use the same outdoor color film as night as well as during the day. Xenon floodlights provide approximately 200 foot candles on the Apollo, at night, with true color characteristics so that the same daylight color film can be used. (For comparison, most office lighting averages 50-100 footcandles.)

In reviewing the history of Full-Spectrum Light Sources, the carbon arc has many desirable features but is expensive to operate because of high maintenance costs. Also, cleanliness is essential in many applications, and this also discourages the use of a carbon arc source. Filtered incandescent lamps have been used to achieve certain full-spectrum characteristics which may be satisfactory in limited applications where high intensities

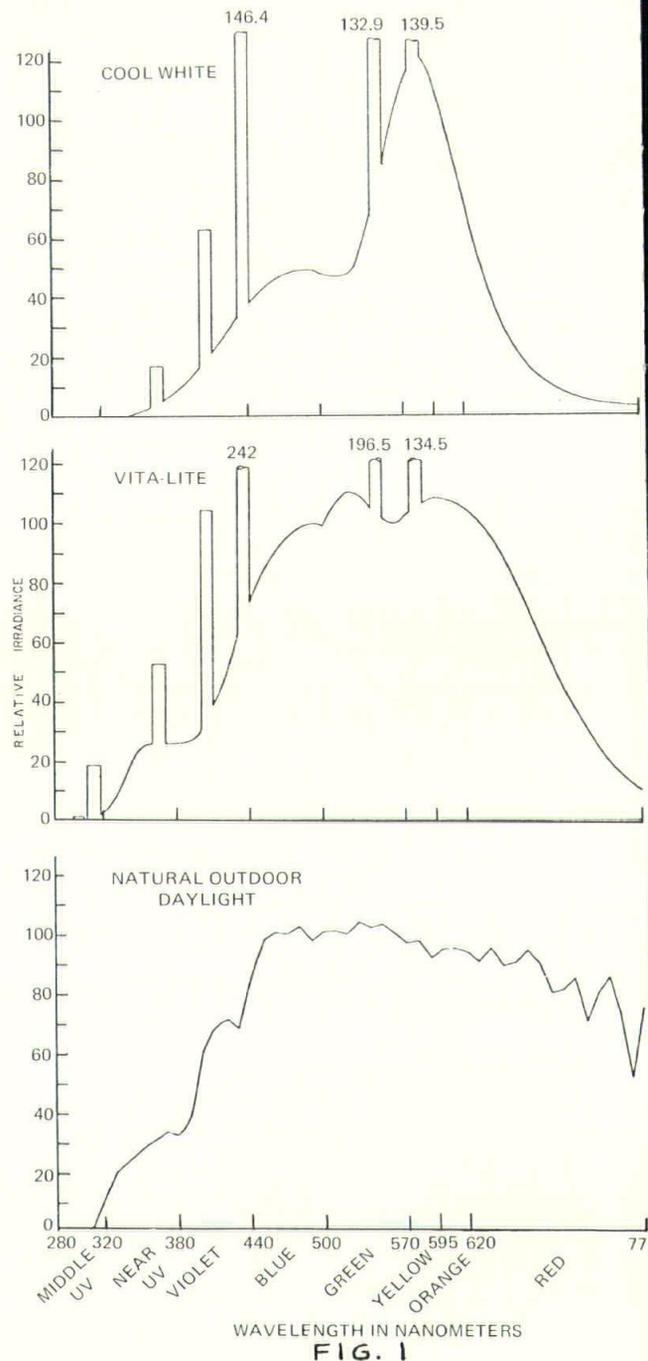


FIG. 1

FIGURE LEGEND

Fig. 1. Emission spectra of cool white and Vita-Lite source compared with the CIE D-5500° K phase of natural outdoor daylight. Curves are normalized to 100 at $\lambda = 560$ nm. Spectra were measured by spectroradiometry.

are not required. Unfortunately, where high levels of light are desirable, blue-filtered incandescent lights require very high wattage with resultant heat problems that also limit their use.

With the advent of fluorescent lighting, it soon became apparent that this type of light source would have the best economic potential for full-spectrum light. In the early 1940's, industry leaders predicted that fluorescent lamps would some day accurately duplicate natural outdoor light. After 30 years of research and development with many types of fluorescent phosphors, the first full-spectrum fluorescent lamps were introduced. The OPTIMA fluorescent lamp, with a Color Rendering Index of 91, was introduced as the first general-purpose lamp simulating the visible spectrum of natural outdoor light. (Cool White's CRI is 68, Warm White 56, Daylight 75.) Optima, at a color temperature of 5500° K and subsequent lamps of 7500° K (CRI 93) have been accepted by the U.S. Department of Agriculture for cotton classing, grain inspection and for grading fruits and vegetables. More important, it is a superior general illuminant that facilitates all seeing tasks.

Recently, the graphic arts industry received new lighting standards established by the U. S. A. Standards Institute: full-spectrum standards at 5000° K for viewing color prints and engravers' proofs; and 7500° K for comparing printers' proofs with engravers' proofs. Heretofore, fluorescent and incandescent lamps were frequently mixed in the same fixture in order to provide the full spectrum. Now COLOR CLASSER fluorescent lamps

are available to provide the full-spectrum characteristics at either 5000° K (CRI 91) or 7500° K (CRI 93) for graphic arts applications.

A new general-purpose fluorescent lamp was introduced about 2 years ago that duplicates outdoor natural light both in the visible as well as in the invisible (beneficial ultraviolet) regions. This full-spectrum lamp, called VITA-LITE, has a Color Rendering Index of 91 in the visible area and provides the same ultraviolet advantages as would be obtained outdoors at equal light intensities. It duplicates outdoor light at the 5500° color temperature phase.

In the development of Vita-Lite as well as other full-spectrum fluorescent sources, it was necessary to have precise spectro-radiometric equipment. The Hilger & Watts Spectro-radiometer, known to be the most accurate in this field of measurement, was used to obtain spectral energy distribution curves for Vita-Lite as well as standard fluorescent lamps. In Fig. No. 1 the emission spectra of Cool White and Vita-Lite fluorescent lamps can be compared with that of the CIE D-5500° K phase of natural outdoor light. As explained previously, natural outdoor light has a CRI of 100, since all colors are true. Cool White fluorescent, the lamp most widely used in commercial and industrial lighting, has a CRI of only 68. As can be seen by the charts, approximately 1/3 of the natural light qualities are missing in Cool White. This is especially apparent in the red end of the spectrum, as well as in the blue and ultraviolet areas. The Vita-Lite full spectrum fluorescent has a CRI of 91 and duplicates quite closely the curve of natural outdoor light.

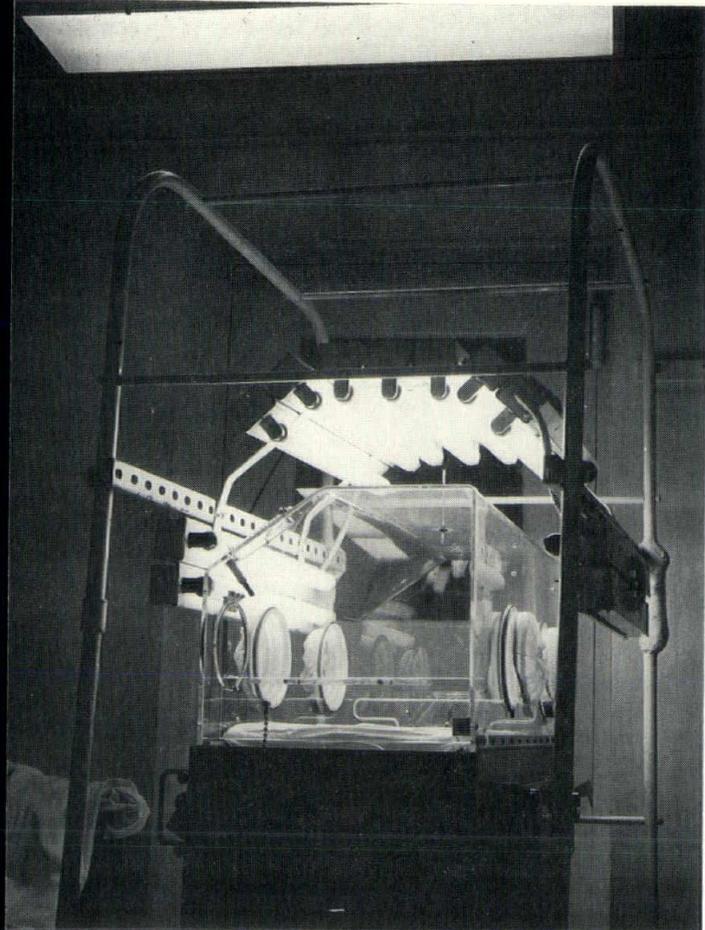


Fig. 2 Brooklyn Hospital, New York uses Vita-Lite as overall nursery lighting (about 100 footcandles) to maintain constantly-high see-ability, enhance visual diagnosis, and reduce bilirubin levels. Cases of hyperbilirubinemic are treated in intensely-lit (500 footcandles) isolettes with duration of exposure varying according to severity of condition. There is also an impression that incidence of infection has been reduced.

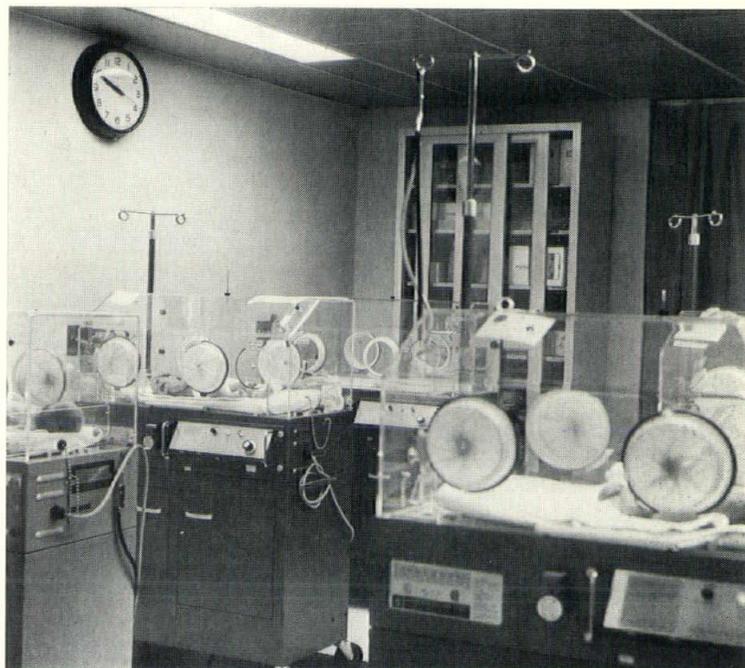




Fig. 3 Flick-Reedy Corporation, Bensenville, Ill. manufactures quality air and hydraulic cylinders in a massive award-winning building completely equipped with Vita-Lite in plant and office.

Company vice president says about Vita-Lite "very beneficial . . . easier to read by . . . less eye strain . . . colors stand out clearly . . . prevents accidents . . . believe that we have less colds

Lighting has heretofore generally been thought of only with reference to seeing as far as its effect on humans, but recent scientific studies indicate that light is also important with regard to environmental health.¹ Biological considerations of light are becoming increasingly important to the medical field in connection with people as well as animals and marine life. Dr. Richard J. Wurtman, associate professor of Endocrinology and Metabolism at MIT states in a technical paper that from information currently available, light has biologic effects and that they may be very important to the health of the individual. Data have been available for some time showing that environmental lighting influences well being, performance and other biologic phenomena which are difficult to measure.²

Full-spectrum lighting has been effective in exhibiting animals in zoological gardens as well as for maintaining their health in this artificial environment. For example, the reptile house, small mammal house, primate building and other areas of the New York Zoological Park (Bronx Zoo) uses Vita-Lite successfully in maintaining animals in a healthful condition. The holding and exhibit areas in the Bird Department also utilize Vita-Lite. It is interesting that for the first time in captivity, the rare Puffin bird laid an egg which proved later to be fertile and in good condition. In the Houston Zoo, it is reported that the skin of snakes and reptiles resumed the natural shine when the animals were kept under Vita-Lite. It was also observed that many of the jungle animals in captivity improved the texture of the fur as well as general well being when under Vita-Lite. In the Brooklyn Cumberland Medical Center of New York, Vita-Lite fluorescent is used as overall nursery lighting to maintain high seeability, enhance visible diagnosis (because of true color) and also reduce bilirubin levels in premature infants afflicted with "yellow jaundice." Severe cases of hyperbilirubinemia

(jaundice) are treated under higher levels with Vita-Lite fluorescent in Isolettes with special lighting units. This nursery is shown Figure 2.

Full spectrum office lighting can result in many benefits for employees as well as building operators and owners. Users of full spectrum lighting in large offices (Figure 3) report improvements in appearance of the environment through true color; less eye strain through better seeability and less absenteeism, especially in winter months. True color through full-spectrum lighting is, of course, especially important in lighting application where good color is necessary as in art schools, museum displays, retail establishments, the graphic arts, beauty shops and other critical color areas.

High intensity fluorescent lighting has only been in popular usage for about 25 years. What is it doing to people who work daily under such lights, 8 to 10 hours per day? Humans today spend most of their waking hours under artificial light sources which were designed to satisfy cosmetic consideration and whose spectra bear little similarity to the natural sunlight under which life on earth evolved. If, in fact, excess exposure to artificial light or inadequate exposure to natural light has harmful biologic effect, we may find ourselves in a generation or two worrying about "light pollution." This possibility ought to be ruled out now.³ Lighting designers, architects and other charged with the responsibility of designing buildings and environment must assume a new responsibility. In the past, lighting was designed only for seeing or for decorative appeal. We must now give serious consideration to light for living with improved health benefits in human environment.

1. Thorington, L., "Polluted Light?", Hospital Practice, p. 9, January 1969.
2. Wurtman, R. J., "Biological Implications of Artificial Illumination", paper presented at National Conference, Illuminating Engineering Society, p. 6, 1969.
3. Wurtman, R. J. "The Pineal and Endocrine Function", Hospital Practice, p. 3, January 1969.



A Good Team.

Your Qualified Electrical Contractor and You.

You want the best in lighting for your client, consistent with the dollars he has to spend.

Your Qualified Electrical Contractor wants the best for you. As a member of the National Electrical Contractors' Association, your QEC has a continuous feed of information on new lighting applications. Draw upon his



specialized knowledge. Take full advantage of his specialized skills, his great inventory of equipment and his staff of expert lighting technicians.

Your Qualified Electrical Contractor and you. Working together for the total satisfaction of your client, you'll make a good team. A great team.

ELECTRICAL CONTRACTORS' ASSOCIATION
MILWAUKEE CHAPTER

808 N. 3rd St. MILWAUKEE, WISCONSIN 53203 PHONE 273-6916



Thomas E. Hoye
Heating Company
MECHANICAL CONTRACTORS

1906 WEST ST. PAUL AVENUE
MILWAUKEE, WISCONSIN 53233
PHONE 342-9355

- HEATING • PIPING • POWER PLANTS • VENTILATING •
- AIR CONDITIONING •

INDUSTRIAL — INSTITUTIONAL — COMMERCIAL

Quality Installation and Service Since 1906

GEORGE H. VOLK, Pres. R. E. IVERSON, Vice-Pres.

35 YEARS EXPERIENCE

Has Given Us

KNOW-HOW

- As . . .
- PLUMBING**
 - HEATING**
 - SHEET METAL**
 - AIR CONDITIONING**
 - CONTRACTORS**

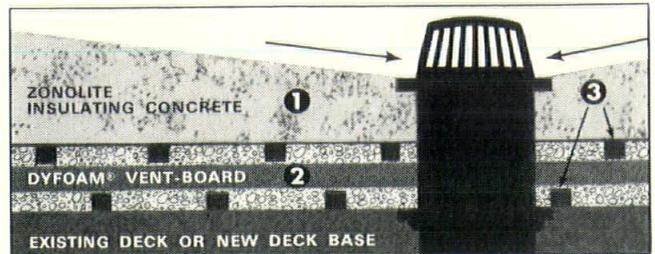


COMMERCIAL and INDUSTRIAL

the **WENNINGER CO.**

1728 W. National Ave. 671-0192

**New double-insulated
Dyzone roof deck
is self-venting**



1 On top, a layer of seamless, permanent Zonolite lightweight insulating concrete that can be sloped to drain easily and economically, so leak-making puddles and ponds don't stay on the deck.

2 Below, Dyfoam Ventboard. It's composed of Dyfoam expanded polystyrene boards sandwiched between laminating material. The insulating concrete combined with Dyfoam Ventboard gives you economical U values down to .03.

3 Vents are built right into the Dyfoam Ventboard. Water vapor passes through the laminating material into the vents, and is channeled out to the edges of the roof.

No joints, no tape, no adhesives, no vapor barrier are needed with the new Dyzone roof deck. A thin slurry of Zonolite insulating concrete serves as the bonding agent between deck and structure.

Zonolite roof decks can only be applied by applicators we have trained and approved. Upon completion, the decks are certified to meet specifications.

MAIL THIS!

ZONOLITE CONSTRUCTION PRODUCTS DIVISION
GRACE W. R. Grace & Co.
Cambridge, Mass. 02140 WA-09

Gentlemen: Economical insulation down to U .03! Certified! Versatile! No messing around with joints, tape, glue or vapor barriers! Please send me complete information and specifications on DYZONE roof decks right away.

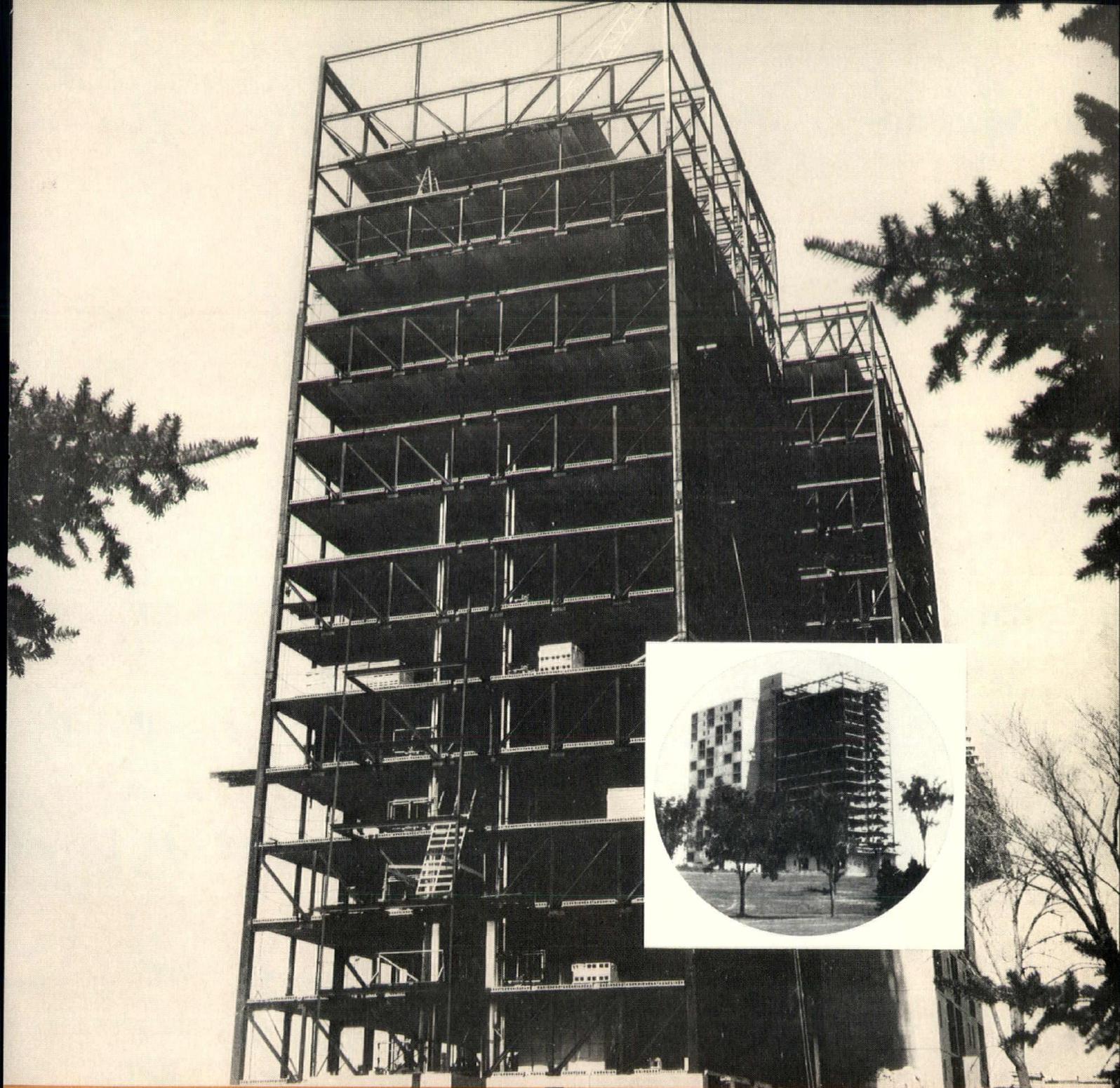
NAME _____

TITLE _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____



Spancrete...working part of structural system

Spancrete precast concrete planks become an integral part of the structural system on this apartment for the elderly. A steel framework with a unique system of staggered trusses required a thin, rigid flooring system that would transfer wind loads on a horizontal plane from one truss to the other. Six-inch-thick Spancrete planks with

a total floor-ceiling depth of eight inches proved to be the answer. The Spancrete planks span a 23-foot area, allowing for flexible apartment plans. Low sound-transmission qualities, fast erection, and lower fire insurance are other advantages of Spancrete apartment construction.

*St. Paul Housing & Redevelopment Authority
Project — 17-story, 187-unit apartment
St. Paul, Minnesota
Architects: Bergstedt, Wahlberg and Wold, Inc.
Structural Designer: Bakke & Kopp, Inc.
Structural Engineer: Schuett-Meier Company
General Contractor: Knutson Construction Co., Inc.*

Spancrete Industries, Inc.

10919 WEST BLUEMOUND ROAD, MILWAUKEE, WISCONSIN 53226

PRECAST, PRESTRESSED CONCRETE HOLLOW CORE PLANK FOR ROOFS AND FLOORS



welcome

CORPORATE:

John V. Defenderfer, AIA
BORN: April 25, 1933
RESIDES: Kingsford, Michigan
WITH: Nelson Associates, Iron
Mountain, Michigan
DEGREE: University of Wisconsin,
Madison — B. S. Degree
Advanced from Professional Associate

John E. Blassick, AIA
BORN: November 27, 1935
RESIDES: Madison, Wisconsin
WITH: John J. Flad & Associates,
Madison
DEGREE: University of Illinois — B.S.
in Architecture
Advanced from Professional Associate

Herbert B. Polacheck
BORN: August 1, 1932
RESIDES: Green Bay, Wisconsin
WITH: Berners, Schober & Kilp,
Green Bay
DEGREE: University of Minnesota —
B. of Arch.

James P. Schlueter
BORN: April 30, 1931
RESIDES: Green Bay, Wisconsin
WITH: Berners, Schober & Kilp,
Green Bay
DEGREE: Iowa State University — B. of
Arch.
Advanced from Professional Associate

Duane D. Anderson, AIA
BORN: December 14, 1938
RESIDES: Milwaukee, Wisconsin
WITH: Wisconsin Ev. Lutheran Synod,
Milwaukee, Wisconsin
DEGREE: Illinois Institute of Technology,
Chicago, B. of Arch.

Robert M. Kueny, AIA
BORN: February 21, 1931
RESIDES: Kenosha, Wisconsin
FIRM: Self-Employed
DEGREE: University of Wisconsin,
Madison — B.S.

PROFESSIONAL ASSOCIATE

Paul A. Otto
BORN: May 7, 1937
RESIDES: Green Bay, Wisconsin
FIRM: Berners, Schober & Kilp,
Architects, Green Bay
DEGREE: Kansas State University —
Bachelor of Architecture

Edmunds Ozolins
BORN: February 11, 1928
RESIDES: Eau Claire, Wisconsin
FIRM: Ozolins, Gavic, Gavic, Assoc.
Architect & Engineers

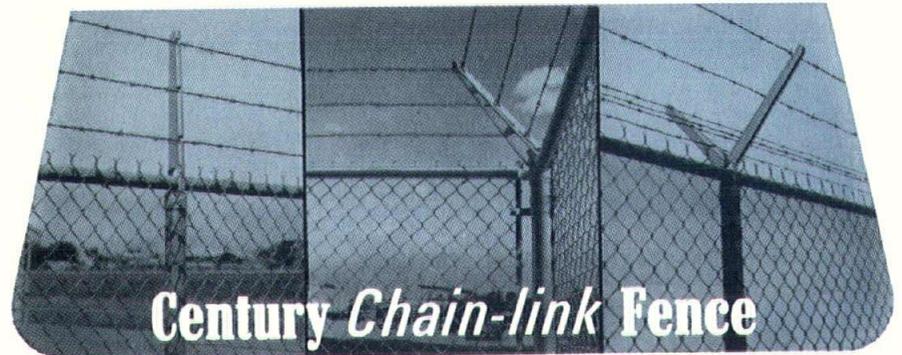
ASSOCIATE

Elmer J. Henry
BORN: August 4, 1919
RESIDES: Milwaukee, Wisconsin
WITH: City of Milwaukee, Bldg. Const.
Inspector
New Member

Richard L. Meyer
BORN: February 16, 1944
RESIDES: Madison, Wisconsin
WITH: Potter, Lawson, Findlay &
Pawlowsky, Madison
DEGREE: University of Illinois — B. of
Arch.
New Member

Theodore K. Mrochinski
BORN: August 1, 1937
RESIDES: Menomonee Falls, Wisconsin
WITH: Charles William Luedtke,
Milwaukee
DEGREE: University of Wisconsin —
B.S. degree
New Member

Peter F. Dreger
BORN: March 22, 1942
RESIDES: Fort Atkinson, Wisconsin
FIRM: Krueger, Shutter & Associates,
Madison
DEGREE: University of Illinois—B. Arch.



Would be vandals, trespassers and thieves can't top this unclimbable fence. Neither can competition. There's a Century top style for every outdoor storage need: 45° Rampart type, Bulwark "Y" arm as well as other Palisade, Rampart and Bulwark types. And Century can give you the gate for every purpose. All posts and fittings are hot dipped galvanized to withstand the ravages of the elements... and now... all chain link fabric is hot dipped *aluminized* to endure time and weather even years longer. Materials can be purchased separately or completely installed by Century erection crews from your nearby Century office.

Phone for **FREE estimate** — no obligation



Century Fence Company

North 11 W 24711 Silvernail Rd. Highway TJ
Waukesha, Wis. 53186

WAL'S Gift to the School of Architecture

From time to time tribute has been paid on this page to the conscientious fund-raising by the Women's Architectural League of Milwaukee, Inc. for Wisconsin Architects Foundation's past program of aid to Wisconsin architectural students receiving their training out-of-state. Since 1963 WAL has averaged \$1,000. per year, to a total of \$6,200.

Through an arrangement requested by WAL's officers in 1963, one-half of each thousand dollar contribution was invested by the Foundation for future use by WAL when a School of Architecture was established. WAL's faith in the eventual reality of that School was an encouraging factor in the Foundation's serious efforts to promote this greatly needed educational facility in the State of Wisconsin.

Those efforts recorded here thru the years, and headed by "Phases", probably failed to show the actual blood, sweat and tears of those most closely involved, nor did the recent article "Trauma" portray what went on behind the scenes when the threatened budget cut predicted dire consequences for the fledgling School. On the indisputable authority we now have assurance that the School will be funded, and most everything is proceeding as scheduled. The fact that there is not enough room at UWM, the School must be housed temporarily at the downtown Extension Building, has daunted Dean John W. Wade. As he reflected recently, the urban exposure is good, and the students certainly will learn "how not to build a building." To be among the first to come to the aid of the School is the aforementioned WAL. With a request to the Foundation that their \$3,000. invested fund be withdrawn, they have presented the entire amount to the School of Architecture for a Slide Collection. WAL's considerate election of funding a library of slides is a noteworthy beginning of valuable aid to the new School, and it should serve as inspiration for other thoughtful contributions.

WAL's gift was preceded by one other, the significant \$10,000. endowment of a chair by the Eschweiler family of Milwaukee.

As has been previously announced, the Foundation has made monetary commitments to the new School. Comprehensive planning is currently in progress for a State-wide fund drive.

Halquist throws a party

In reporting contributions, the Foundation has reiterated the names of organizations associated with the profession, particularly in appreciation of their remembrance on an equal basis. The purpose was not only that of gratitude because it is comforting to have thoughtful people to depend on, but, hopefully, that others would be similarly inspired.

There are some organizations which do not contribute on an annual basis, but their occasional offerings are equally important and sizeable.

Equally among these is Halquist Lannon Stone

Company, Sussex, Wisconsin. Every few years they entertain at a dinner at their plant members of the Southeast Section of the Chapter, always a heralded event. Because they know the members are reluctant to accept free drinks and food, they charge a nominal cost. The total amount accumulated is turned over to Wisconsin Architects Foundation, the members being advised accordingly. The most recent Halquist party netted \$400.

We salute Halquist for its unusual and valued fund-raising, proving that the benefits of good public relations can benefit the Foundation as well.

And, Gropius

How often has the Foundation stressed the fact that an important part of income derives from Memorial Contributions? There are Chapter members who consistently think of the Foundation when a memorial tribute arises. Some members, either unaware of this special kind of memorial, or thoughtless at the time, should realize how significant such a gesture can be. What is more thoughtful than contributing toward that which is close to an architect, architectural education. When one considers the millions of dollars that are contributed to the Heart Fund, the Cancer Society, Churches, to name some of the most worthy, would not gifts-in-memory to the Foundation serve a very appropriate purpose? Those who do contribute in this manner are often asked about the work the Foundation is accomplishing and are pleased to know there is such a worthwhile mission.

A recent memorial of most touching tribute was made by Architect Harry Bogner for the Great Walter Gropius. There should have been other Chapter members so inclined, particularly the several who were privileged to study under him. There is still time.

And what about all the Chapter members who managed to pass their State license examinations under the able tutelage of Clarence J. Gruhl? His widow is so appreciative of the few acknowledgments she has received in memory of her husband who for countless years did so much for the Wisconsin architects. There is still time.

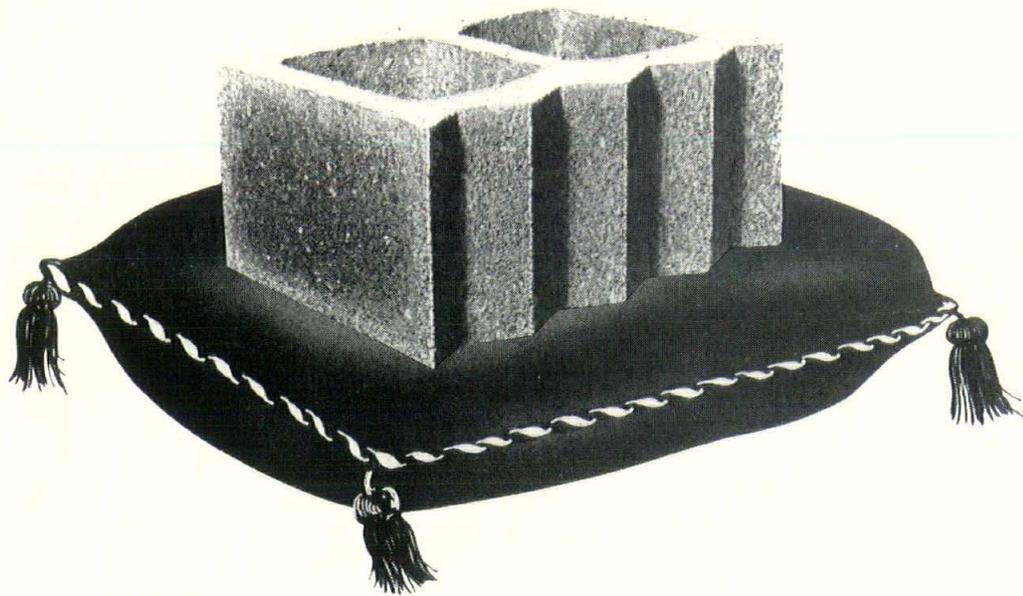
Contribution

Writer and Lecturer, Joan W. Saltzstein — \$50.*

*Donation of fee received from the Northeast Section for lecture at Fond du Lac on her favorite topic "Adler (grandfather) & Sullivan". (Note: A highly recommended feature for other Section meetings.)

In Memoriam

To the Bray Family of Sheboygan, the Directors of Wisconsin Architects Foundation and the Executive Committee of the Wisconsin Chapter AIA extend sincere condolence in the recent tragic death of John W. Bray. Mr. Bray was a member of the firm of Lawrence E. Bray & Associates, Inc. whose principal is a Director of the Foundation and Past President of the Chapter.



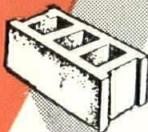
FLUTED THERMO-LITE BY FALLS BLOCK

The Royalty Of Concrete Block

The construction industry recognizes our Thermo-Lite block for its lighter weight, superior insulating qualities, plus greater fire protection resulting in favorable insurance rates.

You can count on Falls Block to provide you with the newest in design block to further your creative plans.

THERMO-LITE BLOCK



Consult with us on your next project

FALLS BLOCK & SUPPLY CO.

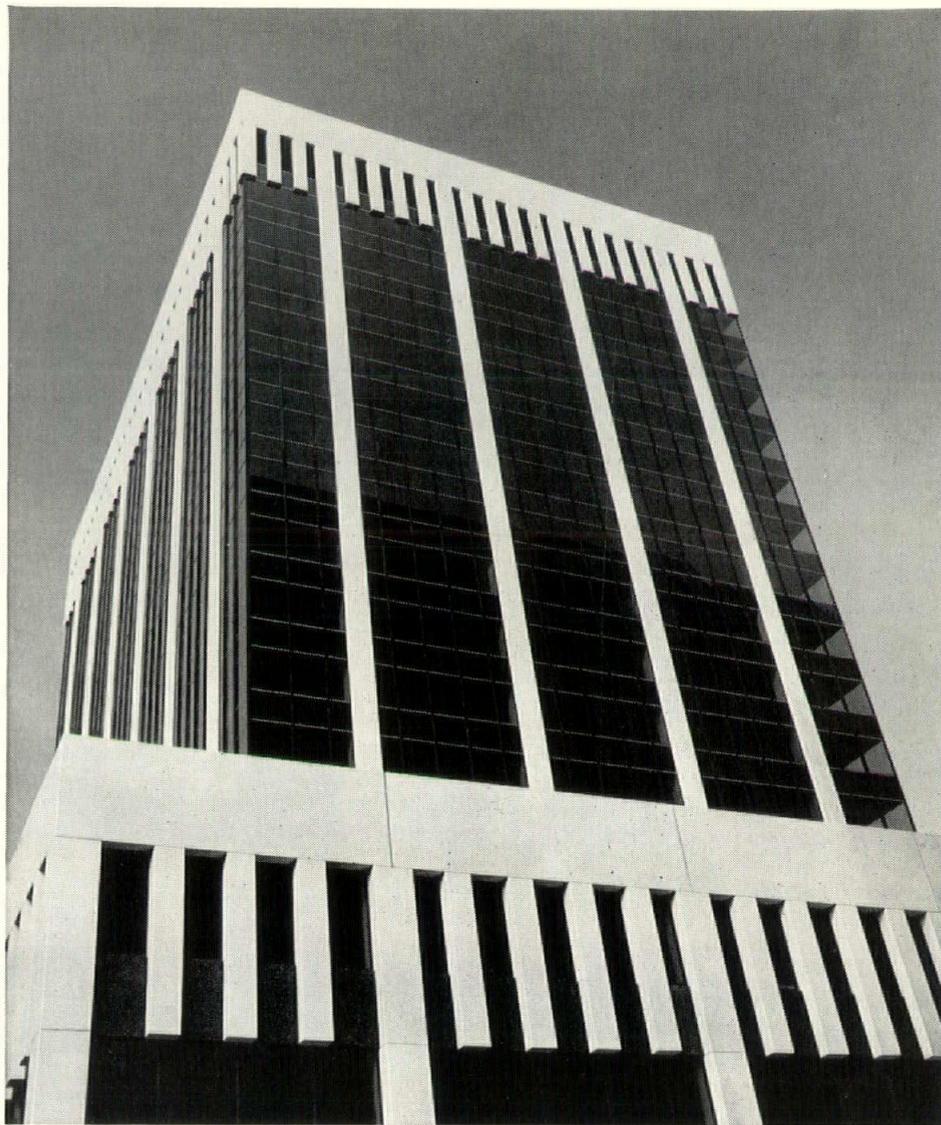
N91 W17174 APPLETON AVENUE

MENOMONEE FALLS, WISCONSIN

PHONE: 251-8330

MANUFACTURERS OF CONCRETE PRODUCTS

Precast
contrast.
In white.

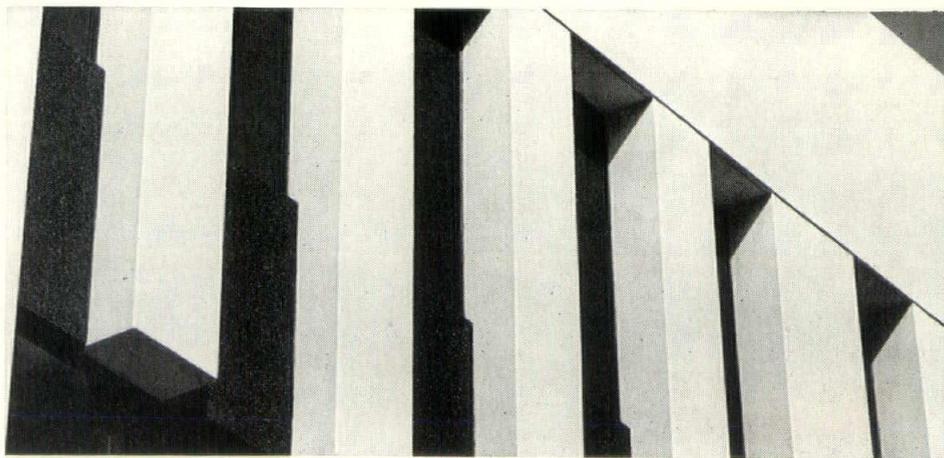


MEDUSA WHITE.

Investment Plaza offers striking contrast and sharp accent in white to the busy new face of East Ninth Street in Cleveland.

Units were precast of ground white Georgia marble with Medusa White as the matrix. Surface was ground to a shining, smooth finish.

Use Medusa White for striking effects in concrete color. Use it with confidence. Write for 24-page brochure. Medusa Portland Cement Company, P.O. Box 5668, Cleveland, Ohio 44101.



INVESTMENT PLAZA, Cleveland, Ohio. Architect: George S. Rider Co., Cleveland. Gen. Contractor: Turner Construction Co., Cleveland. Precast Producer: Sidley Precast, Inc., Thompson, Ohio.



MEDUSA PORTLAND CEMENT COMPANY

White and Gray Portland Cements • White, Gray and Custom Color Masonry Cements • "CR-85 Series"® ChemComp® Cement

For the Bold Look

**CONSULT WITH YOUR LOCAL KOHLER
DISTRIBUTOR LISTED HERE!**

GREEN BAY

Murphy Supply Co., Inc.

228 S. Washington St.
Phone: 1-414-432-3378

Builders Plumbing Supply Co.

1618 State St.
Phone: 1-414-432-3354

RACINE

Thomas Supply Co.

1430 Ninth St.
Phone: 1-414-633-8289

EAU CLAIRE

W. H. Hobbs Supply Co.

P.O. Box 188
Phone: 1-715-835-5151

LA CROSSE

W. A. Roosevelt Company

220 North Front & Vine St.
1-608-784-2082

SHEBOYGAN

J. J. Koepsell Co.

1010 S. 9th St.
Phone: 1-414-457-3646

MILWAUKEE

**Milwaukee Plumbing & Heating
Supply Co.**

1313 W. St. Paul Ave.
Phone: 1-414-344-3600

**Wisconsin Plumbing & Heating
Supply Co.**

822 S. 2nd St.
Phone: 1-414-645-3214

Crichton Corp.

1114 N. 4th St.
Phone: 1-414-276-8950

H. W. Theis Co.

3595 N. 127th St.
Phone: 1-414-781-5260

Glendale Supply Co.

1827 W. Glendale Ave.
1-(414) 264-7060

Builders Plumbing Supply Co. Inc.

2836 S. 16th St.
Phone: 1-414-383-0786

WISCONSIN RAPIDS

Mid-State Supply, Inc.

71 Love St.
1-715-423-6730



KOHLER'S LADY FAIR
SHAMPOO CENTER
AND BABY BATH

BOLD NEW COLORS!
(NEW ORLEANS BLUE)

WASH YOUR
HAIR...
OR YOUR
BABY
(BUILT IN
SPRAY ARM)



ONE OF OUR
HAPPY BLUES

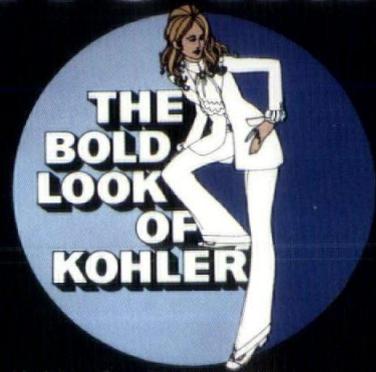


SWING
AWAY
SPOUT



SLOPED LIKE
A BATH

**Kohler says ho-hum
baths have had it.**



Kohler Co., Kohler, Wisconsin

newsnotes

In response to the "Orchids and Onions" article in the July/August issue, we were pleased to receive the following letter, and to set the record straight:

I was very pleased to see the coverage you provided the Capitol Community Citizen's Organization in the last issue of the Wisconsin Architect.

But, I was somewhat disappointed in the fact that you took approximately one quarter of a page to discuss their project to save Murphy's Creek but failed to mention the part played by the Madison Architects. As you will see by the enclosed clipping, the Western Section A.I.A. has been actively involved in the project for some time. The film has been shown to such groups as:

CITY PLANNING
DEPARTMENT
CAPITOL COMMUNITY
CITIZENS
CITY PARKS COMMISSION
DANE COUNTY
CONSERVATION LEAGUE

and many other organizations. It has received a great deal of publicity in the local press. At this time, members who have been involved in the project are working on a Murphy's Creek Brochure.

Terry Milne was Project Chairman and did the project with the help of Tom Bast and Jack Somerville.

Sincerely,
Jack B. Douthitt
Daverman Associates, Inc.

"50 Years of Bauhaus" Exhibition at IIT Campus, Illinois

In recognition of the 50th anniversary of the founding of the Bauhaus in 1919, an enormous exhibition sponsored by the West German Government is now making the international rounds. Preparations for the North American phase of the exhibition are now under way, and it will be on display in Chicago (on the campus of the Illinois Institute of Technology) during September of this year. The exhibition will thereafter be mounted in Toronto (November and December) and in Pasadena (March and

April, 1970). Negotiations are in progress to bring it to the East Coast (New York or Boston) in mid-1970 before scheduled showings in Japan and Australia. The exhibition has already been acclaimed in Stuttgart, London, and Paris where it drew record attendance and lavish Press attention.

A happy union of quantity and quality characterizes the exhibition: some 2000 displays filling 30,000 square feet of floor space include some of the best work of such masters of the modern art and architecture movement as Paul Klee, Wassily Kandinsky, Lyonel Feininger, Oskar Schlemmer, Laszlo Moholy-Nagy, Josef Albers, Johannes Itten, Walter Gropius, Mies van de Rohe, and Marcel Breuer — Bauhaus Masters all.

All aspects of the Bauhaus movement are covered, including the history and daily life of the Bauhaus and its teachers and students. The works of art and industrial crafts on display include paintings, prints, photomontages, sculptures, architectural plans and models, stage and theater designs, furniture, carpentry, textiles, stained glass, pottery, metalwork, typography and book design, wall paper, posters, programs, and advertising brochures.

Only an exhibition as varied and as rich as this one could properly salute the Bauhaus — an idea and an institution in one, which went to the roots of art and technological production and which is the root of much that is vital and valid to this day.

School Conference at Washington University, St. Louis

Architects and educators will have the opportunity to study the secondary and elementary school at a Washington University (St. Louis) conference, to be held Friday-Saturday, November 14-15.

Sponsored by the School of Architecture and School of Continuing Education at Washington University, the conference will present timely topics including: programming design and planning of new facilities; social psychological and technical problems in school design, and problems of schools in the city. The role of large corporations in education will also be discussed. The conference will feature two

case studies on "The Pittsburgh Great High Schools," given by Hellmuth, Obata & Kassabaum, Architects, St. Louis, and "The School House and Media," a study of elementary schools by Wilson, Morris, Crane and Anderson, Architects, Houston.

Speakers at the two-day conference will include: Christopher Arnold, architect of Building Systems Development, San Francisco; Dr. Verne S. Atwater, president, Westinghouse Learning Corporation; Dr. William W. Chase, Office of Construction Services, U.S. Office of Education; Alan Green, Educational Facilities Laboratory, New York; Jonathan King, vice-president, Educational Facilities Laboratory; Dr. William Kottmeyer, superintendent of schools, St. Louis; Dr. Richard Myrick, president, Performance Research, Inc., Washington and Hugh Valery, academic director, Study of Educational Facilities, Toronto.

For further information concerning the conference, or to register, write, School of Continuing Education, Box 1099, Washington University St. Louis, Mo. 63130, or call (314) 863-0100, ext. 4261.

Institutes For Architects 1969-70

*Announced by
The University of Wisconsin
The University of Wisconsin, University Extension, will conduct the following programs for architects and personnel in related fields:
For further information write or call:
Raymond C. Matulionis, Institute
Director
University Extension
432 North Lake Street
The University of Wisconsin
Madison, Wisconsin 53706
TELE: (608) 262-2061*

*Urban Environment and Its Effects
on Mental and Physical Health
September 30-October 1, 1969
\$70.00 Fee*

With the advancement of scientific research it is becoming increasingly clear that the environment modifies human behavior to a very significant degree. A two-day course designed for personnel in the planning and design professions will deal with urban environment and its effects on human behavior.

advertisers index

Belden Brick 3

Century Fence 22

Concrete Research 2A

Electrical Contractors
Association 19

Falls Block Co. 24

Hoye Heating 20

Kohler of Kohler 26, 26A

Medusa Portland Cement 25

Northwestern Elevator 5

OPI 27

Peters, J. W. & Sons 28

Portland Cement Association ... 2

Spancrete Industries 21

Ver Halen Inc. 27

Wenninger Co., Inc. 20

Zonolite 20



VER HALEN, INC.
EST. 1911

Ver Halen, inc.

CONTRACTORS - DISTRIBUTORS OF BUILDING PRODUCTS

Quality Products Plus Expert Craftsmanship
Equals Satisfied Customers

Acoustical Ceilings
Sound Control—Air Distribution—Illumination

Partition Systems
Movable—Demountable—Permanent
Wood—Steel—Glass—Aluminum
Plastic Laminates—Various Finishes

Floating Floor Systems
Raised Access and Data Floors

Pella Wood Sliding Glass Doors
For Weathertight Installations

Pella Wood Windows
Awning—Casement—Double Hung—Pivot Fixed
Slimshades—Rollscreens
For Residential and Commercial Buildings

Pella Wood Folding Doors and Partitions
For Flexible Space Dividers

Baker Steel Scaffolds
For Off-the-Floor Work

Branch Office

704 Lombardi Avenue
Green Bay, Wis. 54305
(414) 435-3791

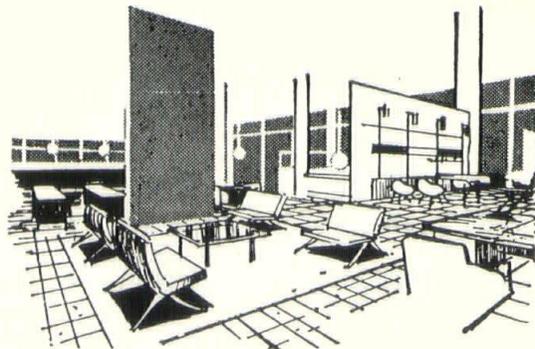
General Office

P.O. Box 8230
4700 N. 124th St.
Milwaukee, Wis. 53225
(414) 463-7700

Branch Office

5502 University Ave.
Madison, Wis. 53705
(608) 238-0241

Contract Interiors for Business



OFFICE PRODUCTS INC.

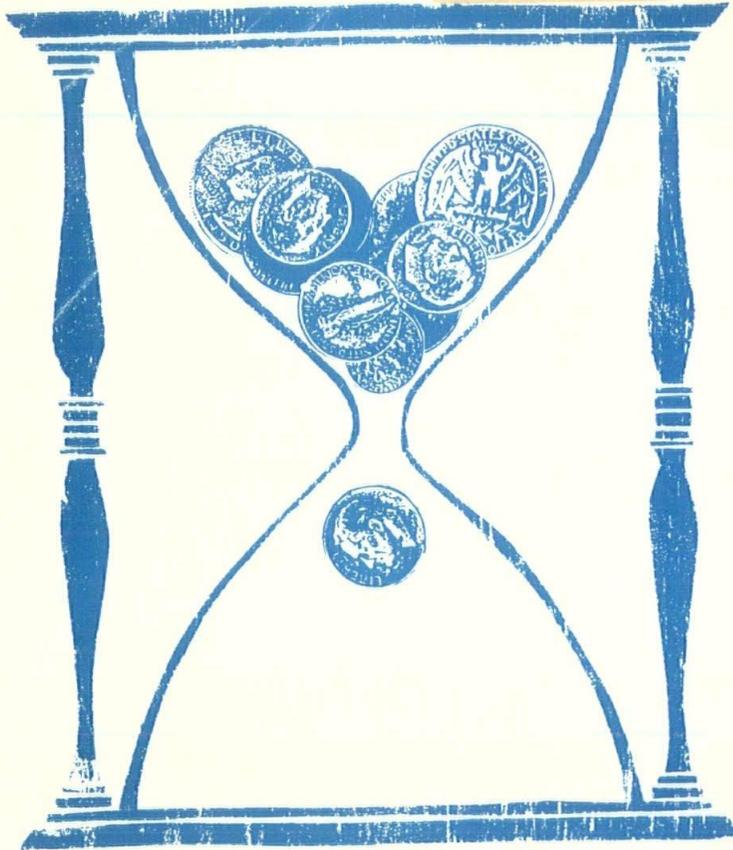
5415 W. Mill Road / Milwaukee, Wisconsin 53218
Phone: 414 — 353-7100

WISCONSIN ARCHITECT
785 North Jefferson Street
Milwaukee, Wisconsin 53202

Address Correction Requested
Return Postage Guaranteed

THE AMERICAN INSTITUTE OF
ARCHITECTS
1735 NEW YORK AVE. N.W.
WASHINGTON, D.C. 20006

● ● ● ● ●
BULK RATE
U. S. POSTAL
PAID
MILWAUKEE, WIS.
PERMIT NO. 16
● ● ● ● ●



Time

is

Money

Add time that is not actually needed to complete a job and you increase the cost, because time is money.

Take time away from a job and you'll find yourself with a client who is much happier, because time is money.

Best way these days to cut back on time, and money, is with Peters' Precast and Prestressed Concrete Products. Here's how we can help you:

While excavation and foundation work takes place at job site, we prefabricate the various members on a mass production basis. Then we deliver them as called for by contractors' work schedules. This shortens construction time.

Equally important, our units are erected directly from truck bed to structure without any need to stockpile or rehandle at job site.

And, of course, our plant production is not normally subject to delays because of adverse weather conditions, as often happens to job site operations.

There are other important savings, too. Additional economies are realized when you consider it requires little or no painting, protection or water-proofing. And, there's the durability and fire resistance factors which means low insurance costs.

The end result: Superior structures for less money—and the earliest possible occupancy.

If time and money are important to you, look no further. Depend on Peters where you'll find more going for you. Our business is helping your ideas work better. Make us prove it. Start with a telephone call, direct. We'll be glad you did.

J. W. Peters & Sons, Inc.

Burlington, Wisconsin

53105

414/763-2401, Burlington • 414/933-3374, Milwaukee • 312/945-6367, Deerfield

We can suit you to almost any "T"