Northwest Architect

MAY/JUNE 1970

ANOTHER TOTAL ELECTRIC BUILDING

Northwest Architect

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Area Notes

Architectural News from Five States

PEOPLE . . .

Afficionados of pungent writing should not miss **Sibyl Moholy-Nagy's** review of John McHale's "The Future of the Future" in the April **Architectural Forum.** Sample: "If nothing else survives, the mad oratory of Bucky's genius will stand forever as the first and last attempt to interpret the Electronic Age in terms of a World Religion based on a Synergetic Confession." McHale is Bucky Fuller's admirer, disciple and interpreter.

Among the 22 systems adopted by HUD for evaluation under its "Operation Breakthrough" is one developed by a local consortium headed by the Minneapolis builders and developers Pemtom, Inc. Twelve layouts using the basic 14-foot square box have been developed by **InterDesign, Inc.,** Minneapolis architects and member of the consortium. InterDesign's submittal is featured on pages 199-218 of this issue.

Harold Spitznagel sets a laudable example in architectural conservation. He has given a contribution and volunteered his services as consultant in the Clay County (S. D.) Historical Society's effort to acquire and restore the historic Austin-Whittemore house in Vermillion.

Winslow Wedin's "Ensculptic" house of sprayed foam near Maple Plain, Minn., had a four-page spread in the March 13 issue of Life magazine. Wedin, a former Minneapolis architect, is on the faculty of Auburn University in Alabama.

University of Minnesota student **Rolf Oliver** was awarded one of the six $1,000 scholarships given nationally by the Koppers Company.

The expanded firm name of **Patch Erickson Madson & Hanson, Inc.,** reflects the addition as officers of the company of John A. Madson and Robert D. Hanson. Donald M. Erickson is president and Robert W. Patch is vice-president of the Minneapolis firm.

Died: **Eugene Wasserman,** well-known Sheboygan, Wis., architect and Paris Prize winner of 1940, and **Paul M. Havens,** former faculty member of the School of Architecture at the University of Minnesota.

Waldemar W. Lange, formerly with Schuett, Erdmann and Gray, has opened his own office in Milwaukee. He is a graduate of the University of Minnesota.

The Des Moines and Sioux City firm of Architects Associated has changed its name to **Smith, Voorhees, Jensen Associates** because of its widening scope to include solid waste disposal, traffic control, air pollution and land development in addition to architecture.

Hackner, Schroeder, Roslansky and Associates of La Crosse have added an educational facilities consultant, Gavin M. Strand, former superintendent of the Cochrane-Fountain City school district.

Robert L. Thorson has been named a partner in the New York City firm Carson, Lundin and Shaw. Born in St. Ansgar, Iowa, he graduated in 1953 from the University of Minnesota and after graduate work at Harvard was with I. M. Pei and Associates and Ulrich Franzen and Associates before joining his present firm in 1969.

George E. Deininger of Durant Deininger Dommer Kramer and Gordon received the A. I. Dupont award from the Dubuque Jaycees.

The Cedar Rapids architectural-engineering firm of **Hukill-Pfiffner-Alexander-Duenow** (formerly Kohlmann-Eckman-Hukill) has opened an office in Ottumwa under the management of Richard L. Doak.

The Northfield, Illinois, architectural firm **Wendt, Cedarholm, Tippens, Inc.** has opened an office in Oshkosh, Wis., to serve their clients in that area.

Arthur C. Kuehn has opened an architectural office in Davenport, Iowa.

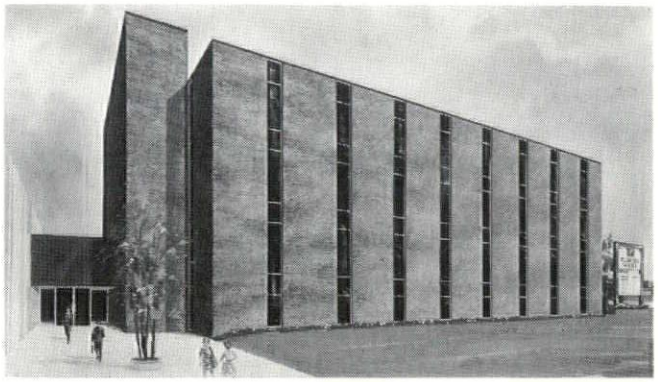
L. G. Laliberte, designer for Foss, Engelstad and Foss of Moorhead and Fargo, has been named an associate of the firm.

The Des Moines **Sunday Register** of March 8 devoted several pages of color photographs to the recent award-winning works of Iowa architects and **The Milwaukee Journal** devoted three pages of its March 1 issue to reviewing the three honor awards and eight merit awards in Wisconsin.

. . . AND PROJECTS

MINNESOTA

. .Travellers would have a distinct sense of place on arriving at the Duluth airport if preliminary designs for a new terminal building, prepared by **Morgenstern, Stanius and Thorsen,** Duluth architects, come to fruition. The free-form building, nestled behind berms contained within faceted retaining walls, studded with native conifers and granite boulders, and crowned with an irregular, mountainous roof, would be an immediately recognizable symbol of the North. The building is a part of a comprehensive scheme for the enlargement and development of the area to include an airport industrial park and other ancillary facilities which is being presented to state and federal authorities for assistance when funds become available.



Florida West

Glenn Cording, Minneapolis, is architect for a warehouse-office complex now building near Highway 12 west of Minneapolis. Joint owners of "Florida West" (because it is on Florida Avenue) are Volp Construction Co., consulting engineers Bruch and Morrow, Inc., Egan & Sons Company, plumbing and heating contractors, and Swanson & Youngdale, Inc., painting contractors.

Nearing completion is the Sun-Ray branch library in St. Paul, designed by **Freerks, Sperl and Flynn** of that city.

Minnesota Bible College, whose domed building on the corner of University and Fifteenth has been familiar to U of M students since 1913, is moving to a new campus in Rochester. The scheme for development of the wooded site in successive clusters is the work of **Prof. Byron Bloomfield** of the University of Wisconsin and architects for the initial two educational buildings and ten townhouse residences are **Gjelten & Schellberg** of Rochester.

A proposed 694-unit apartment and townhouse development for the Chester Park district of Duluth is being restudied as the result of objections from the residents of the neighborhood. **Aguar, Jyring, Whiteman and Moser** are the architects.

Medical: A $3½ million remodeling and expansion of St. Joseph's Hospital in Brainerd by **Ellerbe Architects; Trossen, Wright and Prokasky,** St. Paul, "will cooperate with a Moorhead organization" on the modernization and expansion of St. Ansgar's Hospital there; **Harold Hanson,** St. Paul, designed the new Braham clinic now under construction; and Fairmont Community Hospital underwent some pruning by **S. C. Smiley & Associates,** architects, when bids exceeded the $3.9 million budget.

Educational: Cannon Falls was to vote in May on a $3 million building program, for which **Matson & Wegleitner** have prepared studies, and a $1.3 million program in Le Center, by **S. C. Smiley & Associates,** is under construction.

Governmental: Alterations and improvements to the State Capitol totalling $1.7 million have been proposed by **Paul Cummings,** state architect. **Miller-Dunwiddie Architects, Inc.,** have designed a new fire hall, with second-floor space for future city offices, for LeSueur. **Pinault & Truszinski** of St. Cloud are developing plans for the alteration and enlargement of the Stearns County Courthouse there. Sacred Heart proposes a new municipal liquor store to be designed by **Philip Anderson** of Willmar.

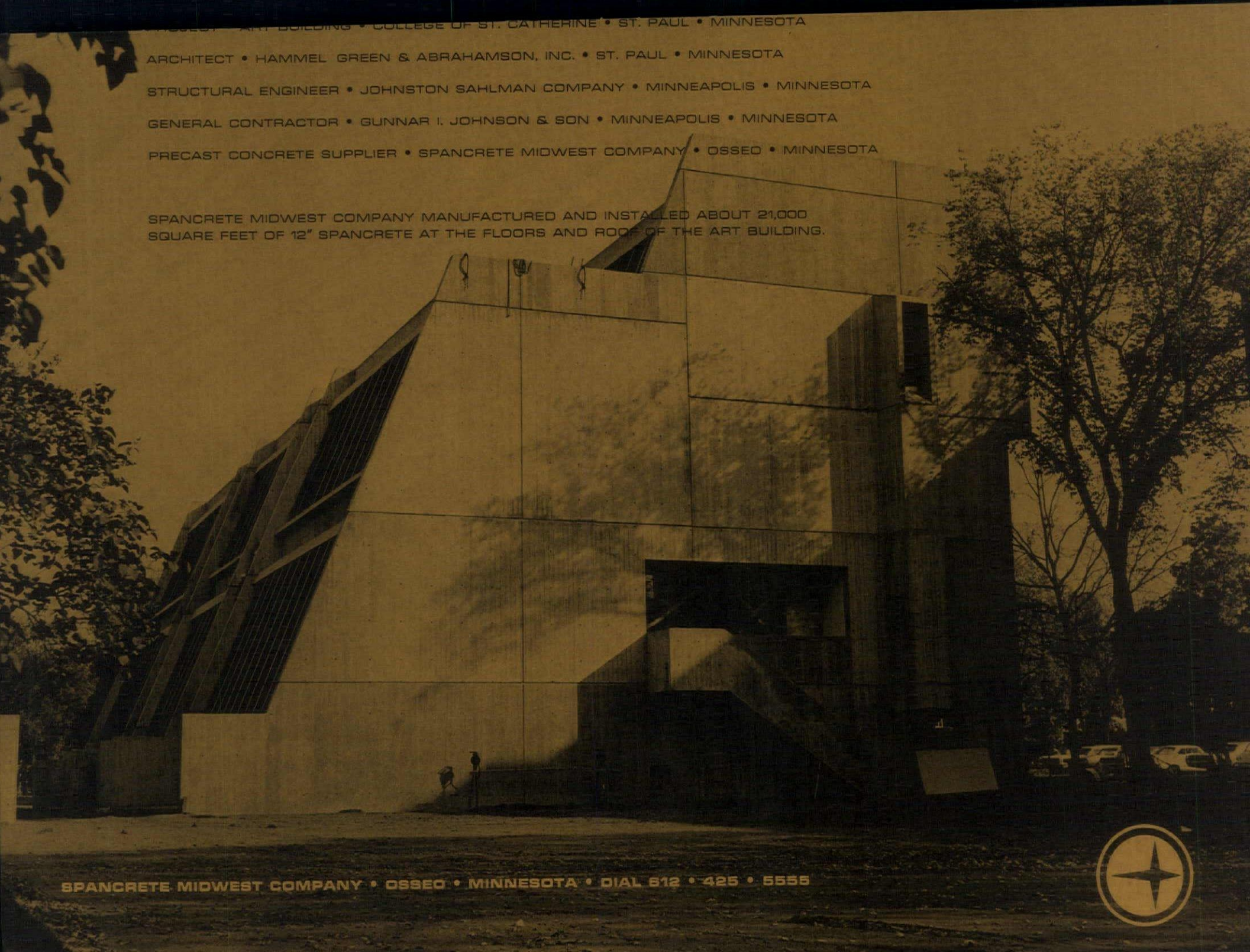
The rural Oakland Lutheran congregation near Albert Lea proposes to build a new $180,000 church adjoining its present site. **Hjelton-Schellberg and Associates** of Forest City, Iowa, are the architects.

A 10,000-square-foot building for Aero Systems Engineering, Inc., designed by **Hirsch, Stevens and Samuelson, Inc.** of Hudson, Wis., has been completed in St. Paul's Port Authority Industrial Park.

WISCONSIN

Plans for the Apostle Islands National Lakeshore are being opposed by the 3,000-member Apostle Islands Residents Committee, headed by William G. MacFadzean of Edina, Minn. The plan, to acquire and develop all of the archipelago except Madeline Island, would, they claim, be immensely costly for very little real benefit. The group supports further acquisition of land for recreation but would like it to be "undeveloped and left

(Continued on Page 232)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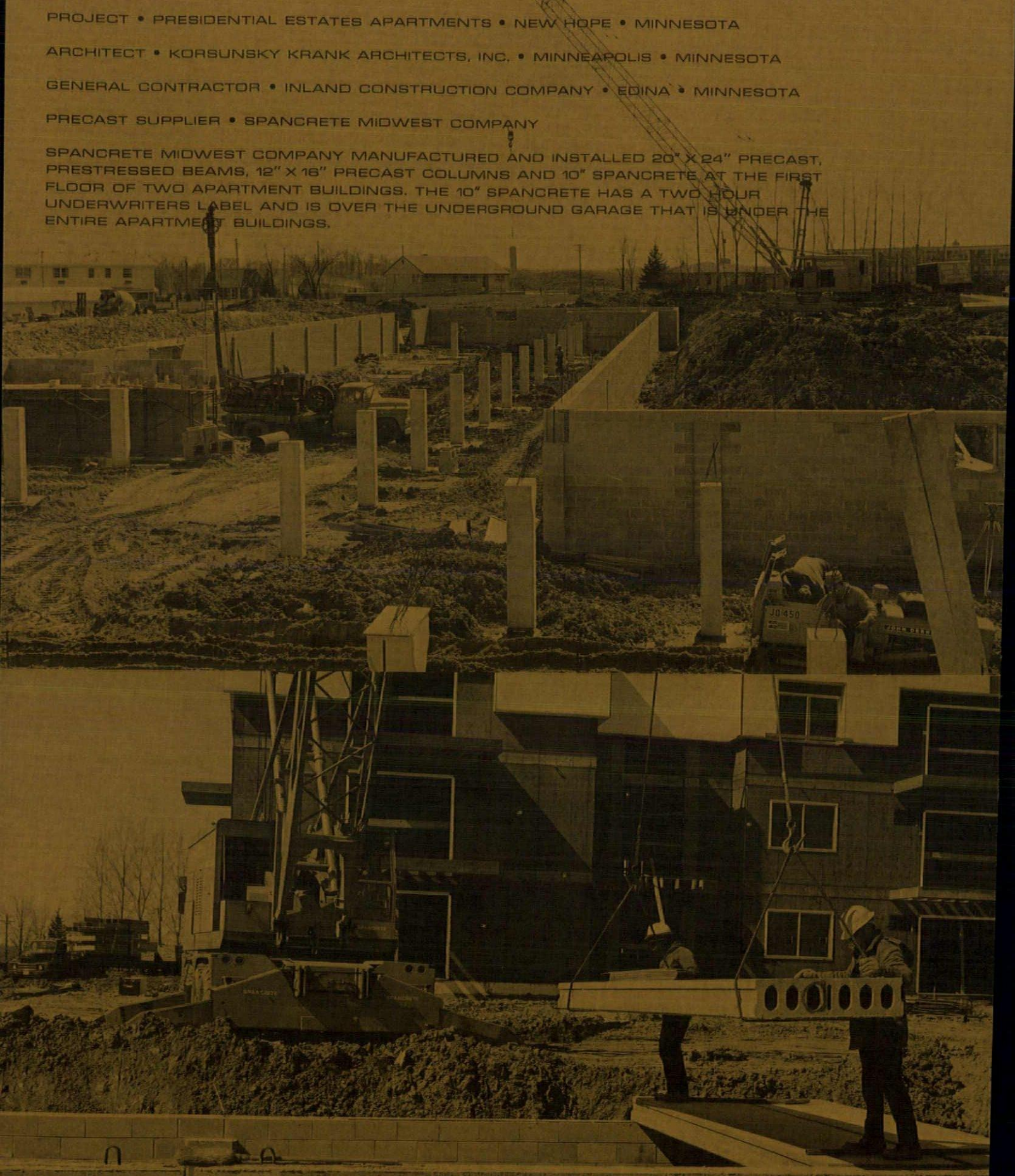

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NWA 670

The Economic Situation as it Affects Architects in Our Area

By Louis R. Lundgren, A.I.A.

Past President of Minnesota Society of
Architects and AIA Regional Director-elect

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epic of belief, it was the epic of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way—in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only."

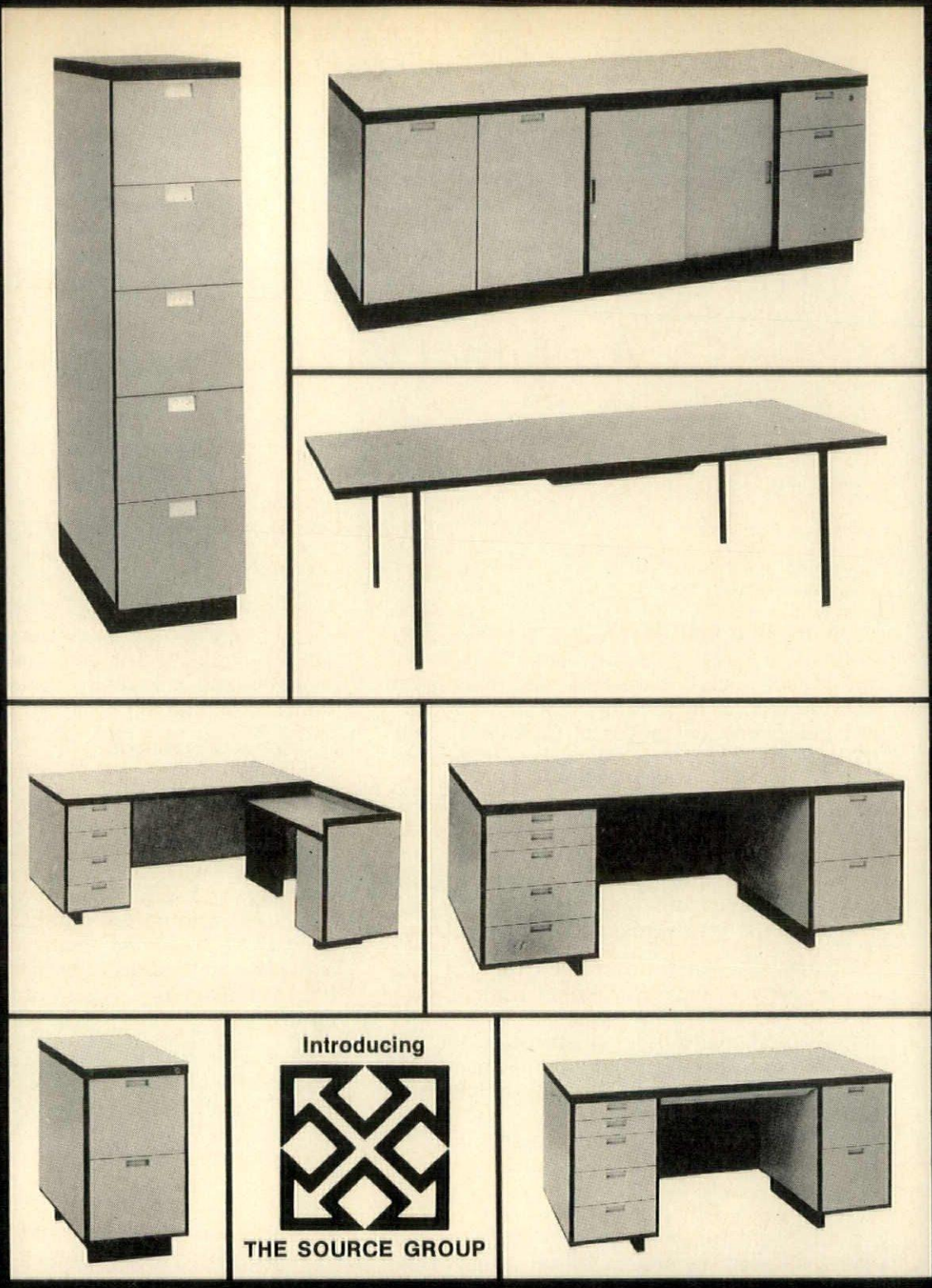
Charles Dickens' description of the era of the early French Revolution seems most apropos today. In an attempt to describe the architectural-engineering situation in the offices of our state and region, there appears to be many contradictions. While the contract awards in April for public building and heavy engineering projects were 271 percent above those of April 1969, and they indicate it to be the largest single month in the history of the nation, many of the officers are experiencing a sharp decline in new work. In fact, in some offices backlogs of previously scheduled work are being rapidly depleted.

Inflation, particularly in terms of building construction, is still very much with us while the limited availability of financing is severely restricting construction starts. In perspective, office building and housing needs continue to mount, while our ability to satisfy them continues to diminish.

The public reaction to bond elections for public buildings has become progressively more negative. There seems to be, in some offices, an excess of certain personnel while highly qualified professionals are still very much in demand. Some offices are extremely busy, others are facing severe financial problems. There is no uniformity or sameness. It appears necessary for many offices to curtail activities and reduce expenses at the same time as the nation needs all of the skills we can furnish.

It is a time of challenge, a time for right decisions, a time for preparation so we may be better prepared to serve!

Editor's note: Mr. Lundgren was asked to express his views in this area because, as immediate past president of MSA and regional director-elect, he has been most generously exposed to all the conflicting currents in today's industry. His quotation from Dickens seems particularly well chosen for history always contains parallels—except that our problems are here now and today and that is when and where we live!



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Hennepin: The Future of an Avenue

Hennepin Avenue revisited —

It is too facile to chastise Walker Art Center, using Roger Montgomery's now famous remark, that "it's a conceit to have an art museum walk up and down this avenue as if it were a canvas. . . ." Montgomery, who is professor of Urban Design at Berkeley, said this and much more in his summary to the two-day Open Forum held in Minneapolis in late April and titled "Hennepin: The Future of an Avenue."

The Forum was sponsored by Walker Art Center, the Minneapolis Downtown Council and the Minneapolis Planning and Development Department, with assistance from the Graham Foundation of Chicago. The participants were a spectacular group of artists and architects—solid, sound and establishment—certain one would assume to attract attention from the civic and political leadership and to offer proposals, remedies, suggestions, ideas—help for poor old Hennepin Avenue.

Hennepin Avenue is euphemistically called the entertainment street—the "Strip" of Minneapolis. How much is nostalgic remembrance of something that really never was is disputable. Today it is a high-traffic street with a good number of bars, a few notorious bookstores and a number of movie houses—from first run cinema to strictly "adult entertainment." The signs are there but they are tired. Coming from Nicollet, one block away, Hennepin certainly looks forlorn. It is difficult to accept that Hennepin has gone this long without anything being done. Not that it was being overlooked. In May 1969 Larry Halprin made public his study of Hennepin Avenue which had been commissioned by the Downtown Council. The study is thorough, handsome, professional and points the way to a meaningful redesign of Hennepin Avenue, a design meant to integrate Hennepin into the fabric of the city as the entertainment center. The study was read, publicized and nothing further happened.

Then, in an effort evidently to renew interest, attract attention, get something moving, this Forum was organized. The intent, explicit and implicit was to obtain some proposals, ideas, which could be implemented in short order, that would help to quickly and effectively uplift Hennepin Avenue.

The list of participants is impressive enough: **M. Paul Friedberg,** Landscape Architect, New York; **Philip Johnson,** Architect, New York; **James Seawright,** Sculptor, New York; **Barbara Stauffacher Solomon,** Graphic Designer, San Francisco; **Art Seidenbaum,** Los Angeles Times; **Walter Netsch,** Architect, SOM, Chicago; **Otto Piene,** Artist, Cambridge; **Tony Smith,** Sculptor, Orange, N. J.; **Robert Venturi,** Architect, Philadelphia; and the aforementioned **Roger Montgomery.** The selection is knowing and intelligent and well intended but that is exactly what the problem was and is generally with panels of this kind.

A number of very well known people, very busy, nationally and internationally recognized celebrities were asked to give, quickly, in an impromptu session, their ideas for Hennepin. The net result was that only one really gave a valuable suggestion, actually just a question. The question that Halprin also tried to cope with: what is the nature of entertainment? what is the nature of entertainment going to be? what is the entertainment center for **specifically** Minneapolis going to be? The questioner was Paul Friedberg. The other speakers' remedies, although serious, were for the most part easy and superficial. Not by intent, not by design, but by necessity. What could these people do? We can all write of the euphoria of happiness, but unless we know of some specific means of achieving this happiness, we will remain foolish or detached.

Conspicuously absent from the Forum were any local civic or professional leaders who over the years worked patiently to reshape and renew the city. They were absent, ostensibly because their views were known and always available if necessary. What is forfeited in such a situation is experience—years of involvement in the body of city politics, in the tedious quandries of effective lobbying and persuasion. This slow deliberate drudging work is the concomitant of large scale planning and to attempt to circumvent it by whatever pyrotechnics is wasteful. What is needed in the case of Hennepin Avenue is also what is needed for Metro Center '85, the Planning Department's beautiful new proposal for Central Minneapolis, **political leadership** and civic and commercial support.

It was certainly a great coup to obtain all these participants for one occasion in Minneapolis. Those that made fools of themselves, asked for it. Those that were puzzled, asked for it. And those that can not or will not hear, did not hear any more on those two days.

Walker Art Center need not be chastized. They should be commended for caring. Their concern and their efforts are to be highly commended and it is to be hoped that Walker will continue to show an interest in the city and its environment. It is also to be hoped that they will not always succumb to the temptation of the fashionable, the spectacular on a grand scale, but that they will, instead, attempt to catalyze their following—from the eminent board members to the lonely apartment dwellers —to bring pressures to bear and create the leadership that will make a better environment a broad community concern and develop a truly effective action force.

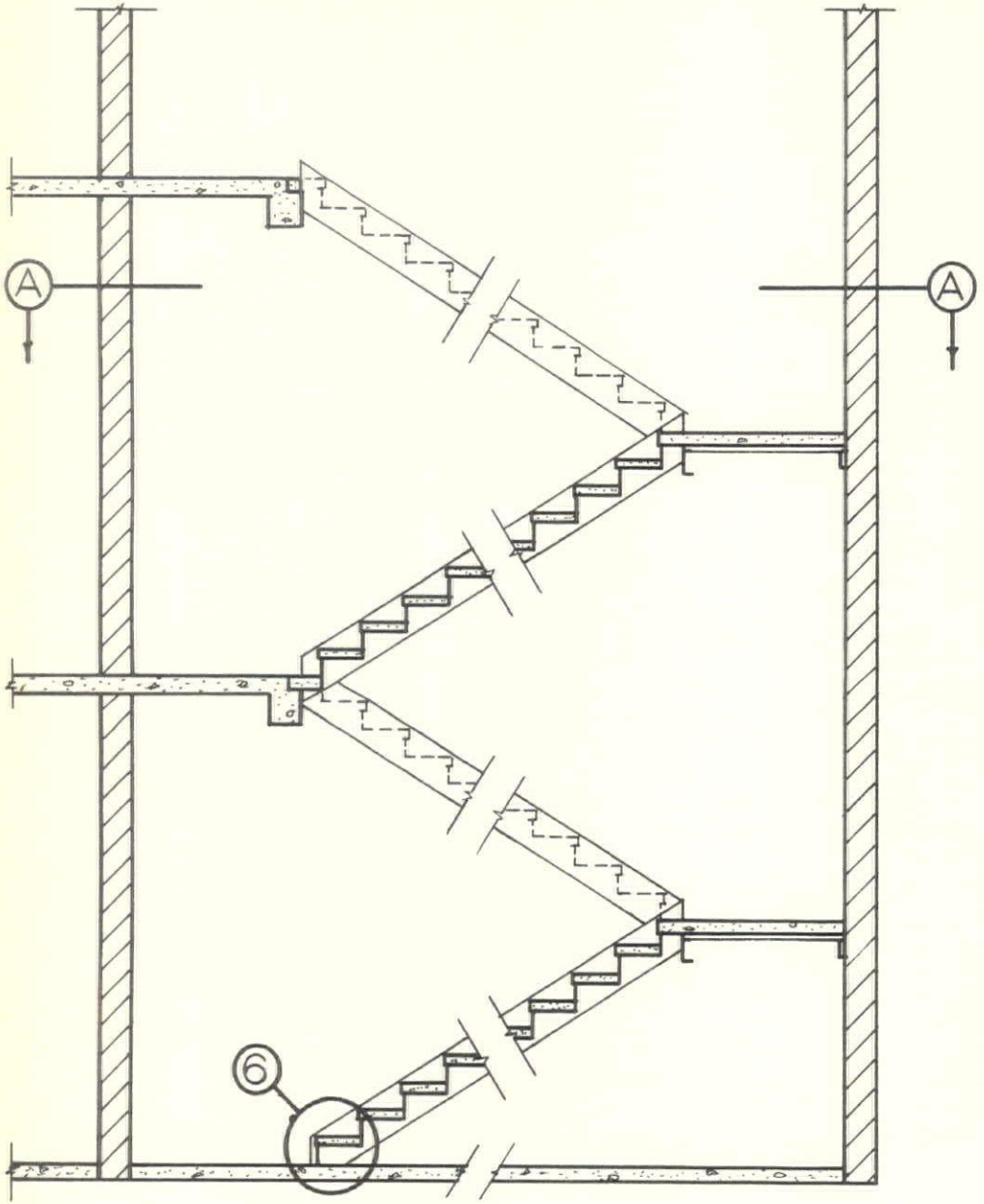
Bernard Jacob
Chairman, Editorial Committee

TRACING DETAILS

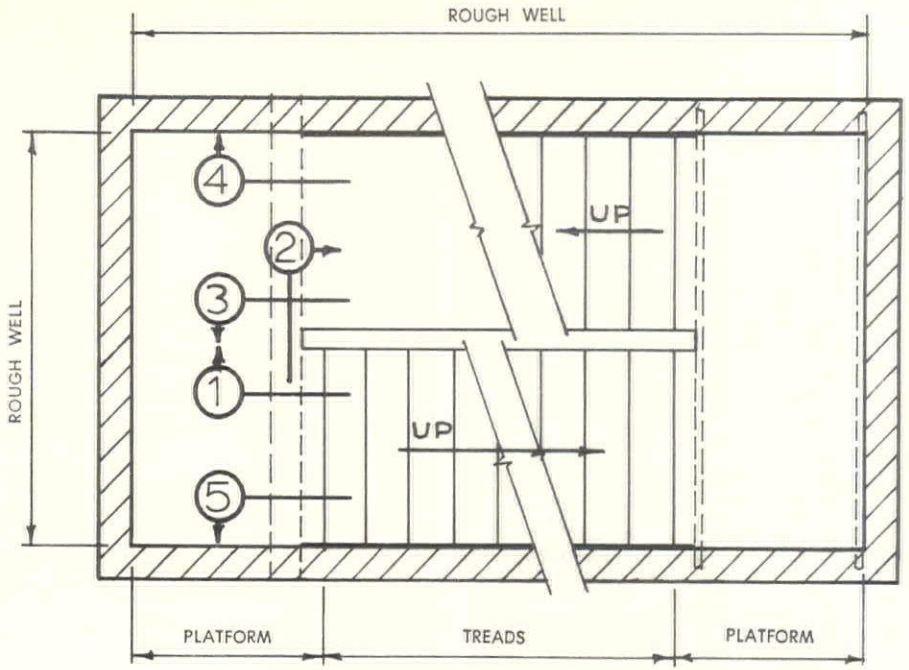
SERIES S NUMBER 1

STAIR — STEEL PAN

PLATFORM — POURED CONCRETE



ELEVATION



PLAN A-A

SPECIFICATIONS

PLATFORM — Poured in place concrete with formed continuous edge 2" x 3 5/8"

HEADER PLATE — A continuous 3" x 1/4" steel plate with 3/8" x 4" headed studs welded 1' -4" o.c.

STRINGER END ANGLE — 1½" x 1½" x 3/16" angle welded to wall stringer ends. 3/16" bent plate weldede to center stringer ends. All end angles are field welded to header plate.

STAIR DESIGN — Refer to your NAAMM STAIR MANUAL in Divisions 5 (metal) catalog for design of stair components. For technical assistance, call Larry Klick, 926-4393.

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TRACING DETAILS

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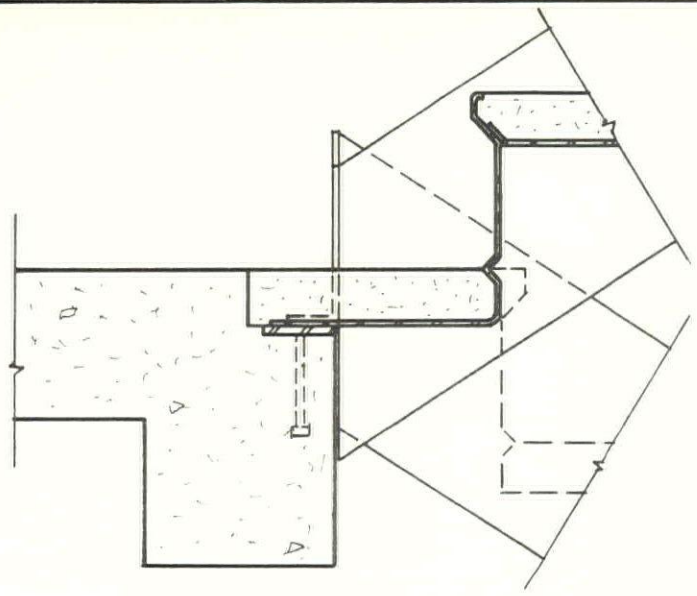
SCALE 1½" = 1'-0"



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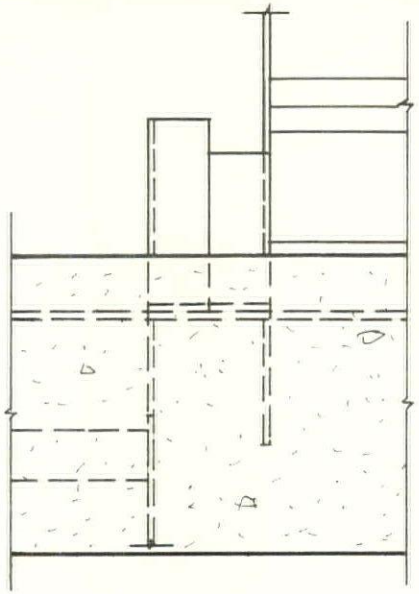

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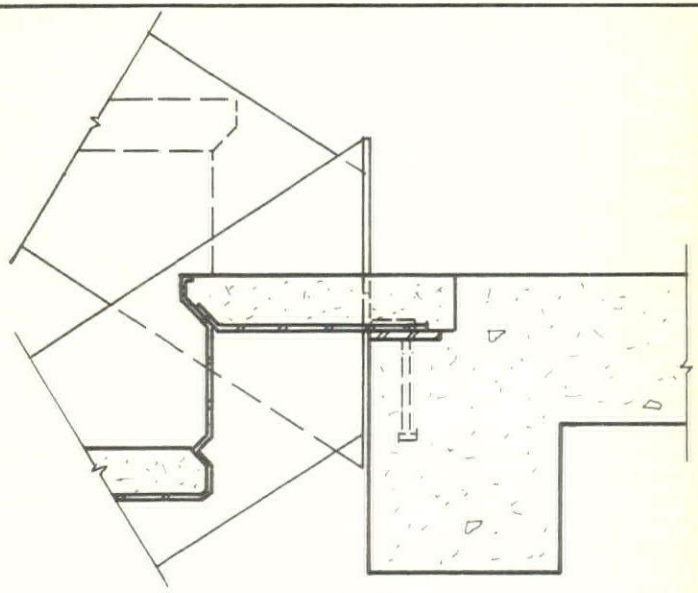

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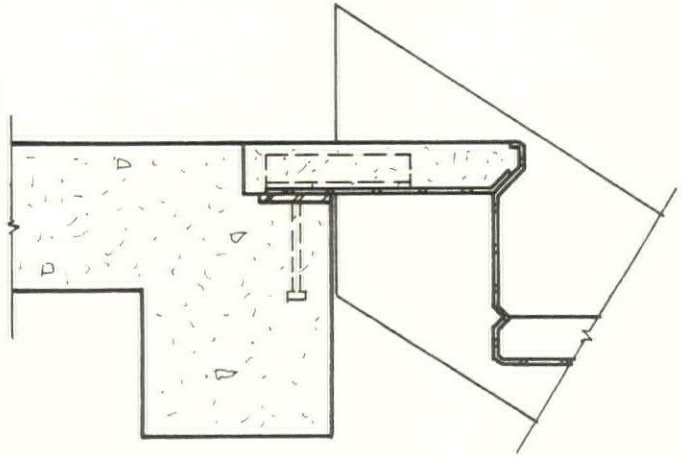

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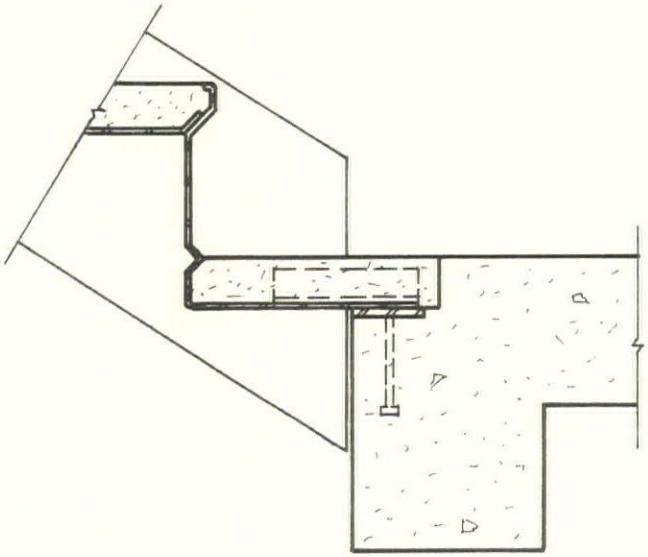

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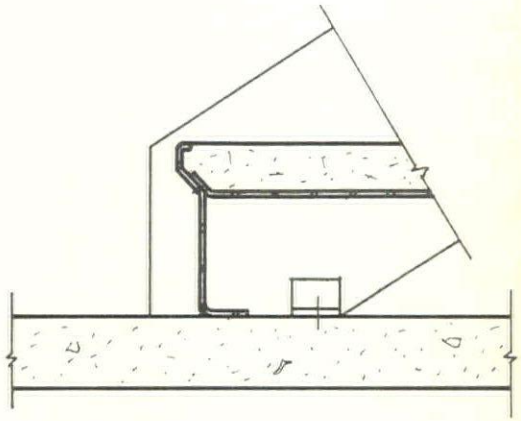

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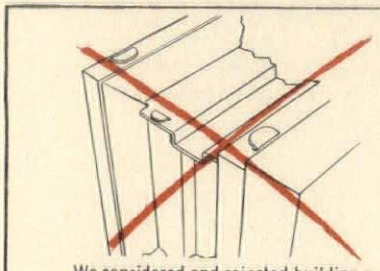
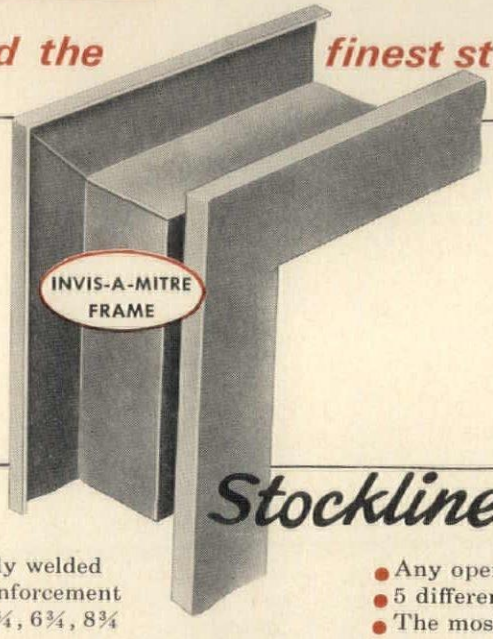
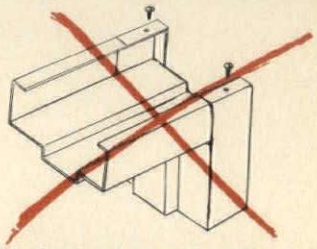


We considered and rejected building a stock frame with semi-butted corners held together with tin tabs, as not meeting TRUSSBILT quality standards.





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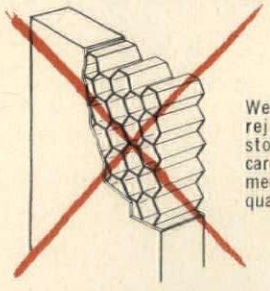

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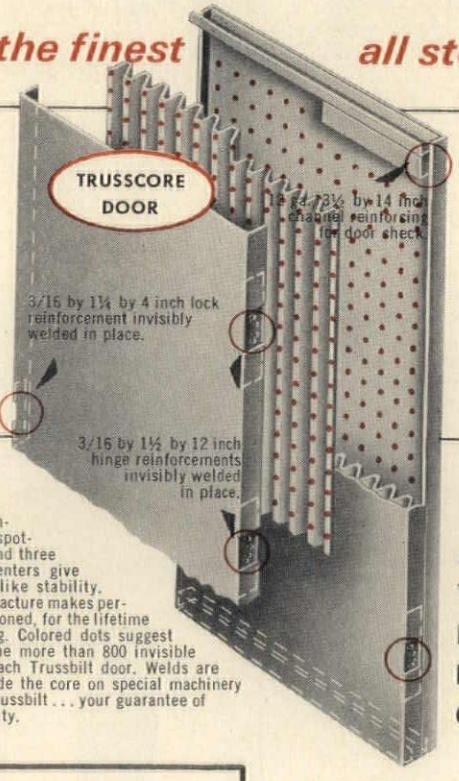

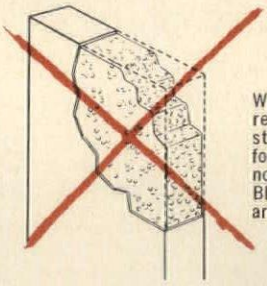

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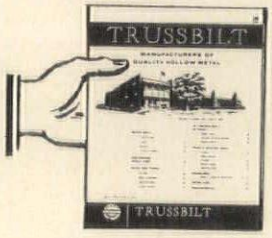

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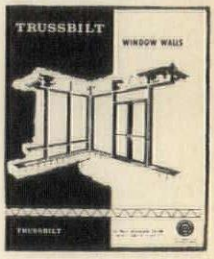

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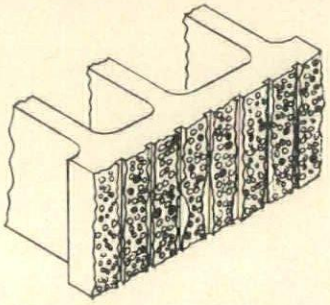

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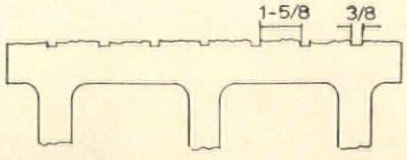

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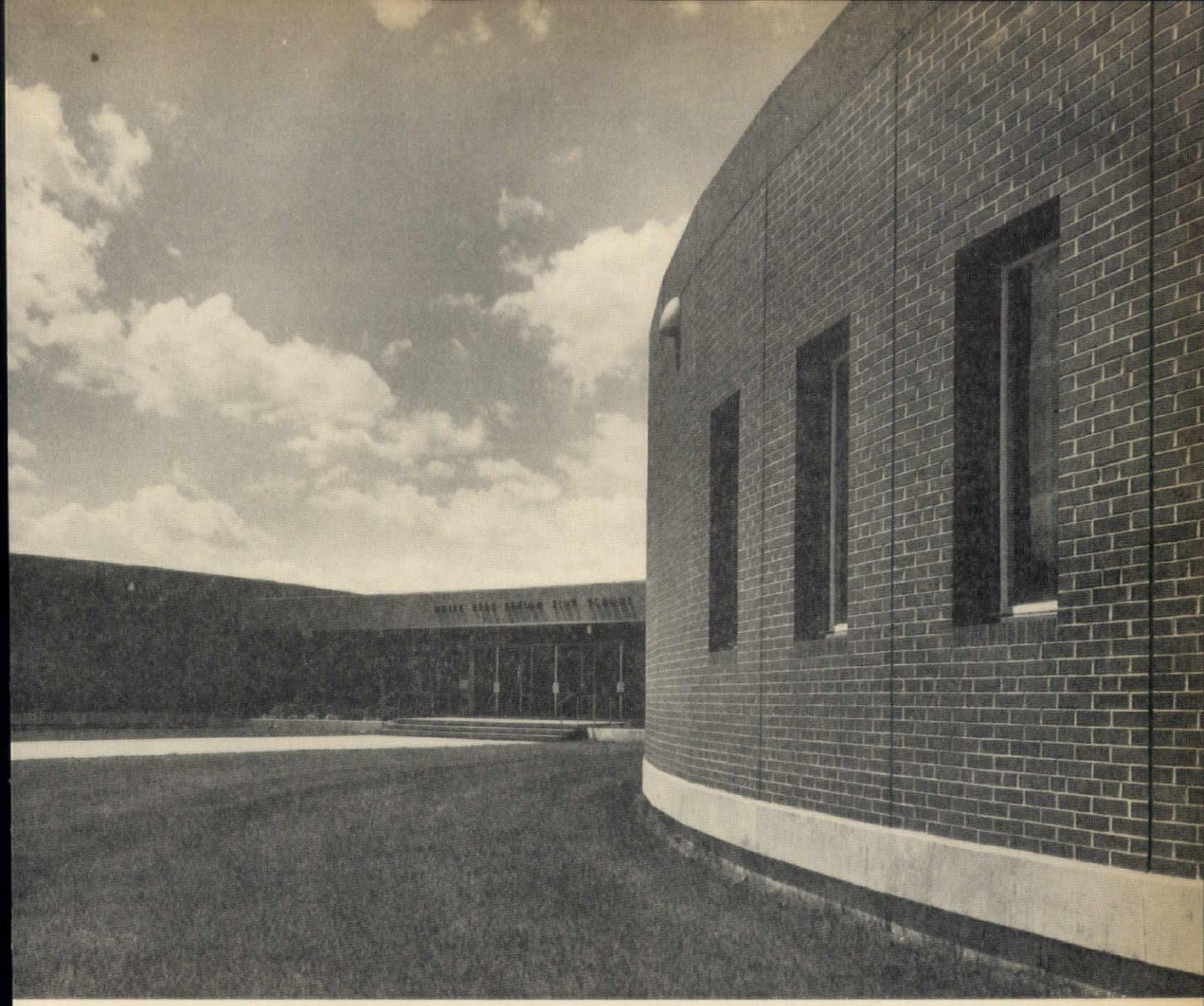

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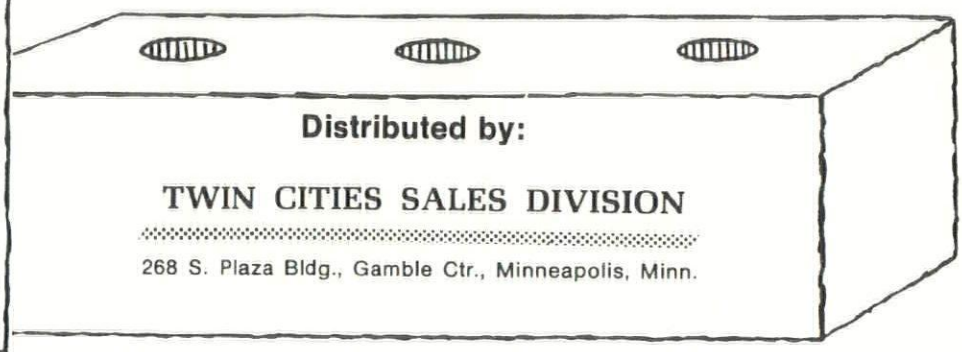

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Wells Prestressed News

WELLS, MINNESOTA 56097

MY BOSS LEO IS PROUD OF THIS JOB

I was leaving for Albert Lea and Leo said, "Follow me". We stopped at the local photographers and he showed me the picture (right) which he had taken. I said, "I don't see much precast". He said, "Take a look at that cantilever". Well, anyway, most of the interior including wall panels, beams, columns, and double tee roof are exposed, and there is a 10' cantilever, the job is stuck between two existing buildings, and it was erected in sub-zero weather with snow up to here. I would venture to say that he is so proud of this project because he converted this job from a "beep-beep" building to a concrete building. In fact, Leo even brought slides of this project for viewing at a recent international Leap convention in Fort Lauderdale, only Mel Larson had to show and comment on these slides while Leo was out golfing.

Wells production, engineering, drafting, erection and sales departments are also proud of this job.

"All is well that ends up Wells".

SCHEEL'S HARDWARE BLDG. FARGO MUTCHLER, TWICHELL & LYNCH ARCH.

W. C. P. CO. ENGAGES G. E. COMPUTER SERVICE

We have installed a Model 33 teletype which is hooked up to a General Electric computer in Minneapolis. This will enable us to solve problems in precast-prestressed concrete design in minutes which formerly were done by hand and took hours.

Architects and engineers will now be able to get answers from us to design problems almost immediately as to span, load capacity, camber, etc. for certain members under certain conditions.

ED HEINRICH AND WIFE CAROL MOVE TO WELLS

Wells Concrete Products Co. is proud to announce that Edwin Heinrich has joined our engineering staff. Ed has had 9 years of experience and is a registered professional engineer. Graduating from the South Dakota School of Mines with a Bachelor of Civil Engineering, Ed also holds a Master's in Business Administration. His recent employer was Union Carbide Corporation and Heinrich was responsible for structural design, project engineering, and modifying and developing their structural computer programs.

Mr. & Mrs. Heinrich have three daughters and will reside in Wells, Minnesota.

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LIGHTWEIGHT—approximately ⅓ lighter than ordinary blocks made with sand and rock. Reduces deadload without sacrificing strength or other desirable qualities.

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FIRE RESISTANCE—Underwriters Laboratories Standards for Safety UL 618, August 1958, tests rate 8" Haydite block, with a 1¼" face shell, at 2 hours. A 1¾" face shell is rated at 4 hours.

UNIFORMITY—in size, texture and color for accuracy and beauty.

ACOUSTICS—are improved by the cellular structure of the aggregate and the texture of the block. Approximate noise reduction coefficient of a medium textured, unpainted Haydite block is 0.45.

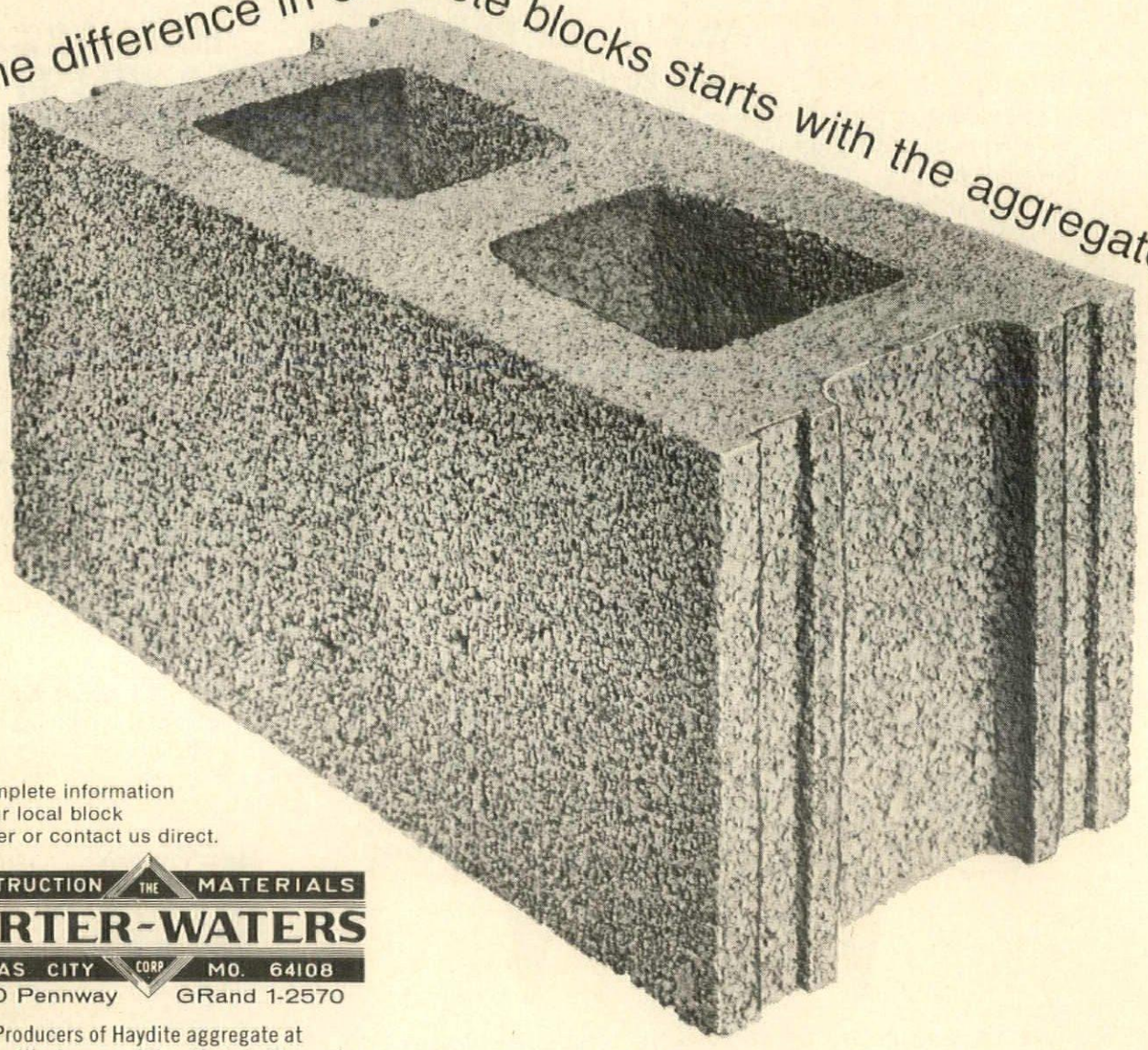
THERMAL INSULATION—the U factor (average) on 8" Haydite blocks is 0.32 and on 12", 0.29.

DURABLE—exceeds Federal and ASTM specifications for hollow, load-bearing masonry, above and below grade. Laboratory tests show 100 cycles of freezing and thawing without visible damage or loss of weight.

NON-STAINING & NON-CORROSIVE—the chemically inert composition of Haydite eliminates discoloration of the block, or to paint or plaster applied to the block.

ATTRACTIVE—a pleasing texture and natural gray color suitable for many applications without further treatment.

...the difference in concrete blocks starts with the aggregate



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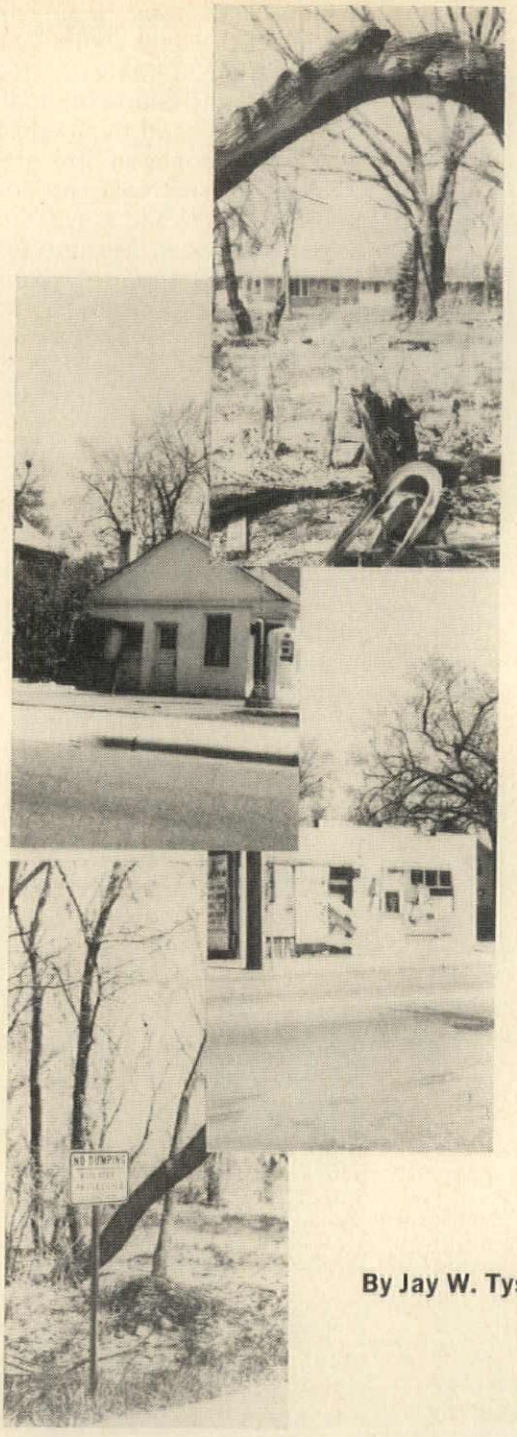
INVOLVEMENT



By Jay W. Tyson, A.I.A.

At the M.S.A. State Convention last November, someone, after listening to a speaker, stood up to offer a resolution that we (of MSA) resolve to involve and commit ourselves. I am in no position to doubt the sincerity of the person who offered that resolution but my first reaction was filled with many questions. How, when, where, with whom and what is to be accomplished by resolving to commit ourselves as professionals to greather depths of involvement? The more I as an individual tried to answer the above questions, the more I felt a great void that exists in my own capabilities to find a clear cut answer.

As more thought was given to the matter of involvement, I was reminded of a citizens' group in Minneapolis whose members, by the

nature of their existence, could, from a layman's viewpoint, offer some answers to the questions of why, when, where and with whom involvement could meaningfully take place. The Council of Community Councils is the umbrella organization of all neighborhood groups in Minneapolis. Its president, Phil Schmidt, agreed to give his viewpoints from an extremely involved layman's point of view. His answers do not provide one with a total answer but at least they offer some food for thought.

QUESTION 1

With much dialog being directed toward involvement and commitment, what would your suggestion be to members of MSA to facilitate their involvement also?

ANSWER:

We of C. of C.C. would welcome a delegation from the MSA to attend our meetings and possibly have delegates to the council, if your by-laws permit, and begin to see and feel the ways in which citizens from the entire city are endeavoring to seek ways to use a much-used term "save the city." There are instances where the expertize of qualified and trained persons could assist us in matters of zoning and land use, mass transportation and ordinances that we could possibly support that would tend to improve the total environment of the city.

QUESTION 2

What activities have the C. of C. C. been involved in where the professional experience and advice of individual members of MSA could be used?

ANSWER:

The C. of C. C. has gone on record in many instances offering opinions expressing the concerns of neighborhoods it represents. There was one instance of a street widening project that would have virtually destroyed the aesthetics of a very stable area. Another prime example where your group could possibly have assisted us occurred when a developer proposed to develop a two-square-block area in south Minneapolis by making application for the property to be rezoned from R1A to R5 so as to build 280 one-bedroom apartments (rental). This area is surrounded by single family owner-occupied dwellings. People in the area and some planners felt that the increase in density would be of no benefit to the area. It was also pointed out by one person with more than the average layman's knowledge of zoning, that if R5 zoning were permitted the developer could legally build more than 400 one-bedroom units. This idea was finally defeated, with pressure being applied to the aldermanic representatives of the area and members of the City Planning Commission.

Now another developer has proposed to build 120 town houses for sale. These units were to have possessed a sameness that also would not lend itself to what sociologists and planners refer to as a good neighborhood mixture. The prices were the same—$19,000 to $20,000—there were no garages and exteriors very much alike. With complaints being voiced against those aspects of the project, the architect suggested and redesigned the town houses so that the total design was sympathetic with their surroundings and they vary in size, exterior, price and lend themselves to being occupied by families with varying incomes, varying sizes and including all differences that exist in America.

Has your group ever looked around at our environment and come to a conclusion that your education, training and experience is not being used to its full advantage? Do you feel that you have negated your responsibility by not banding together as a group and strongly voicing your opinions? For instance, couldn't you as a group of planners and designers have exerted some influence on the Department of Highways before the ill-designed freeway system we have became a reality? Of course, all of us can **now** see how our cities have been raped for the sake of the automobile, which we now say causes so much of our air pollution. Mentioning freeways, it seems ironic that only a few months ago there was some official talk of metering entrances to the freeway within the city limits, which leads one to believe that the freeway may eventually prove to be of negative value to residents of the core cities. Also,

what are you doing to assist our planning commission to arrive at a land use plan for the city that is adhered to and not changed each time a developer has a different idea concerning land uses and density? You see, it has been stated many times and the statement is still true, "As the city goes, so goes the

surrounding areas." The suburbs will not survive unless the core city survives.

Then again, if you are seeking methods of involvement as individuals the best way to get involved is to live in areas of the city **where your presence necessitates being involved.** The action is in the city and by residing there no one is left to wonder about means of involvement.

QUESTION 3

What effect do you think the involvement of C. of C. C. has had on influencing decisions that positively affect the lives of the community?

ANSWER:

The C. of C. C. has in no way joined in what seems to be a current trend, that is, to look at all proposed changes in our society negatively. We may oppose an

issue but we offer plans that we think are good alternatives. We have supported legislation leading to the adoption of the dilapidated buildings' ordinance, exterior maintenance code, code enforcement and combined trash and garbage collection. We have been asked to and have provided representatives to the Urban Coalition, School Facilities Committee, Hennepin County General Hospital Plan, Group on Preservation of Historic Buildings, City Beautification Committee, Code Enforcement and the Sign Advisory Committee. As a result of our involvement and participation in all these groups, and many more, we are certain that the city and surrounding areas as a whole will benefit.

To sum it all up briefly, opportunities for **involvement** are there and very little effort need be expended in locating the avenue of involvement one desires.

MINNESOTA SOCIETY CONVENTION PLANNING STARTS

Appointment of Gary A. MacKenzie as general chairman of the 36th annual convention of the Minnesota Society of Architects, announced recently by MSA Pres. Leonard W. Anderson, marked the start of definite planning for the gathering. The convention will be held November 4-5-6 in the new Radisson South in Bloomington, Minn.

Mr. MacKenzie, a partner in the Minneapolis architectural firm of Zejdlik, Harmala, Hysell and MacKenzie, brings to his job of coordinating the planning for the convention a good background of experience, having been vice-chairman for the 1969 meetings and a committee member the past five years.

The MSA convention will again be held jointly with the North Central States Regional AIA Conference. Architects from four states—North Dakota, Wisconsin, South Dakota and Minnesota—will be invited to attend the conference/convention, which is scheduled to open Wednesday noon, November 4.

More than 1,200 architects, architectural employees, engineers, architectural students and members of the Associated General Contractors participated in last year's regional conference and convention.

The convention committee is making arrangements for an excellent building projects exhibit. Companies desiring to exhibit building products have been requested to contact Donald W. Hassenstab, executive director, Minnesota Society of Architects 514 Foshay Tower, Minneapolis, Minn. 55402.

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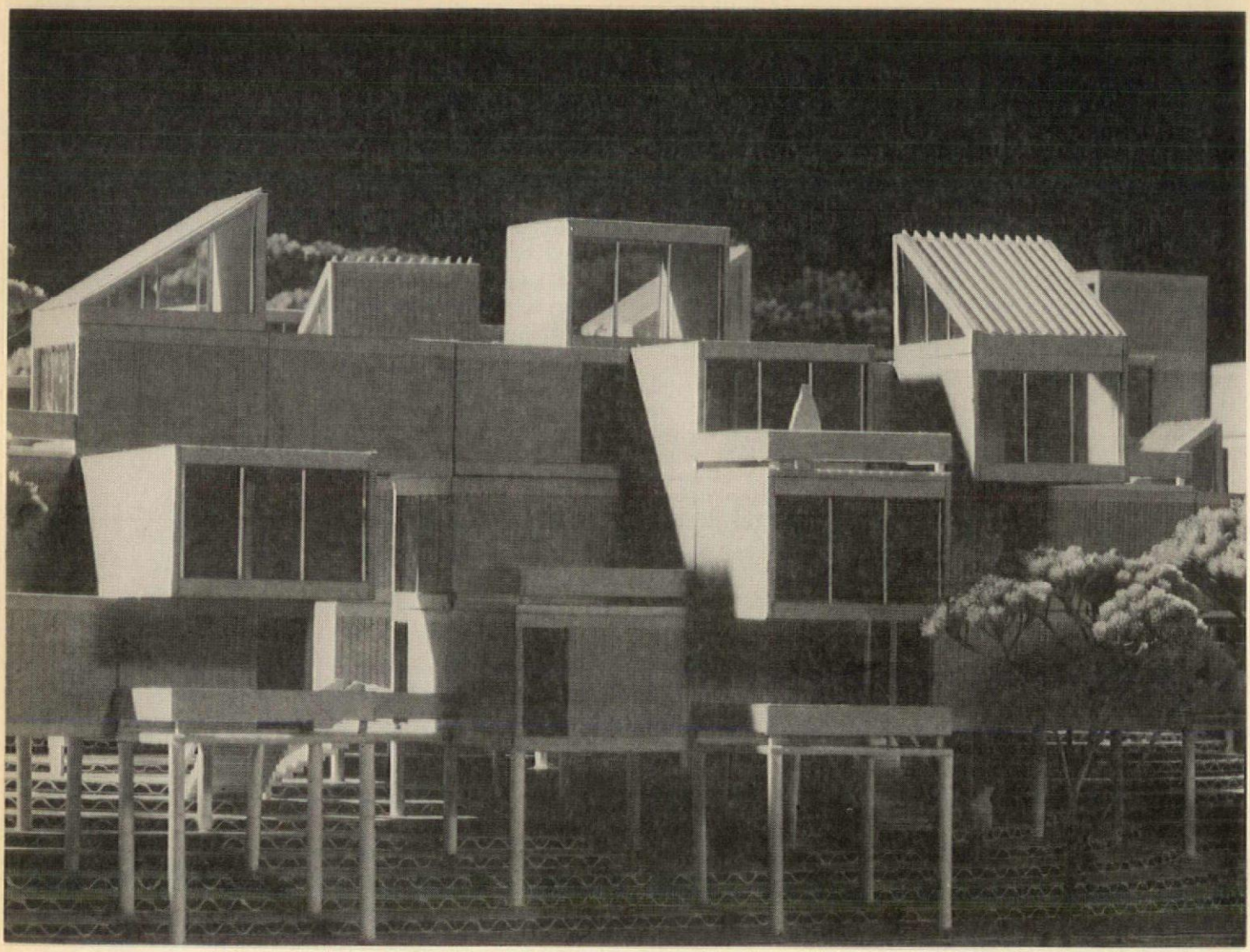


unimod

UNIMOD– Unitized Modular Housing System

By Duane Thorbeck, AIA
Architect, Inter-Design Inc.

This article is written to record and present the events that took place in late summer 1969 which resulted in a new system, called UNIMOD, for producing homes through the industrialized process. It is also written to illustrate the differences between system building and conventional construction to better acquaint the reader with the potential for facing design problems with new criteria and new procedures.

Background

The 1968 Housing Act as passed by Congress established the need for 26,000,000 new and rehabilitated housing units in 10 years. This required the construction of 2.6 million units each year. The conventional housing industry, however, was producing only 1.3 million units annually and thus it was apparent that a new approach to providing the required number of units was required.

In the fall of 1968 the U. S. Department of Housing and Urban Development began a program called In-Cities Experimental Housing Program which was an attempt to survey the country for available housing technology in order to identify potential volume producers. Kaiser Engineers were awarded the contract. However, within a short time it was becoming clear that this procedure was not going to move ahead fast enough.

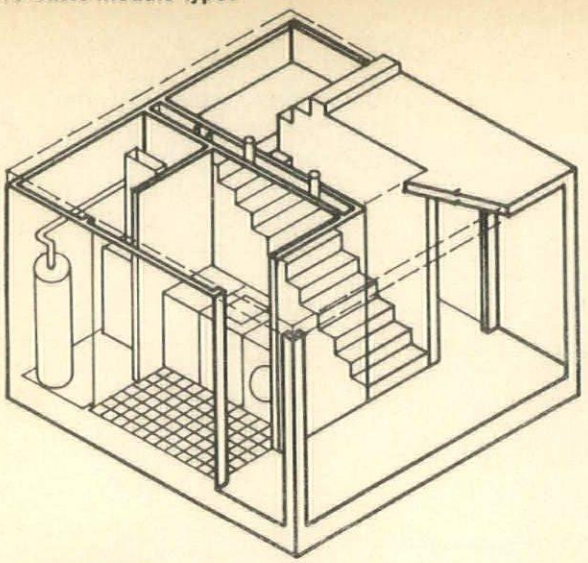
With a new administration, a new HUD secretary and the unsuccessful experience of the In-Cities project, HUD inaugurated in June of 1969 a new program—Operation BREAKTHROUGH—to provide housing for people of all income levels through the utilization of industrialized housing systems and large-volume production methods. This program to be run by HUD, was a request for proposals to plan and design, construct prototypes and volume produce **a total housing system.** The total system was to include, in addition to the building system design, a concept for management, financing, social involvement, land use and volume production. The proposal was due in Washington on September 19, 1969.

Housing System

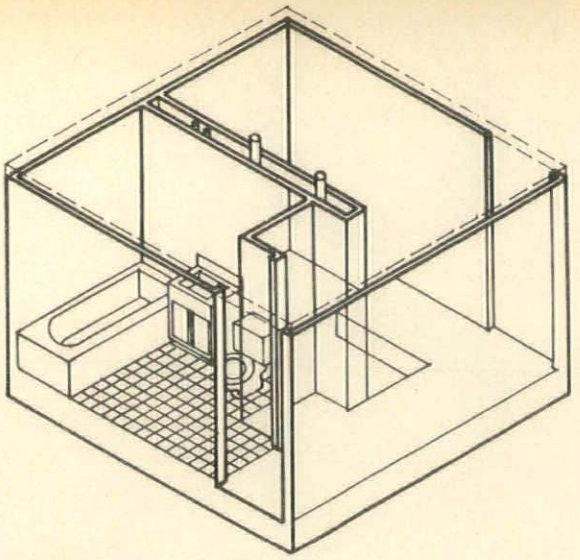
When InterDesign was formed in late 1968 we identified the housing problem as one area in which the interdisciplinary concept could make a valuable contribution. We had been researching a new polymer bonding technology for stressed-skin plywood with the 3M Company but had been unsuccessful in interesting the 3M Company to sponsor a research and development project based on their technology.

We also had been working for Pemtom, Inc. on several site planning projects and were aware of their efforts at developing a factory-produced mobile home concept which they called MOVILLA. When Operation BREAKTHOUGH was announced we saw it as a unique opportunity to pursue a new approach to housing and approached Pemtom about submitting a proposal. They were very interested so we reopened discussions with 3M and as a result it was agreed on August 11, 1969, that a proposal would be made to HUD with Pemtom as the prime proposer, InterDesign as responsible for the concept and design of the building system and 3M Company as a supplier of the technology and building products. In addition, Lorimer, Chiodo & Associates were retained by Pemtom to prepare the proposal and Jacus & Amble, Inc. were retained by InterDesign as engineering consultants. The proposal was to be called the Pemtom Living System.

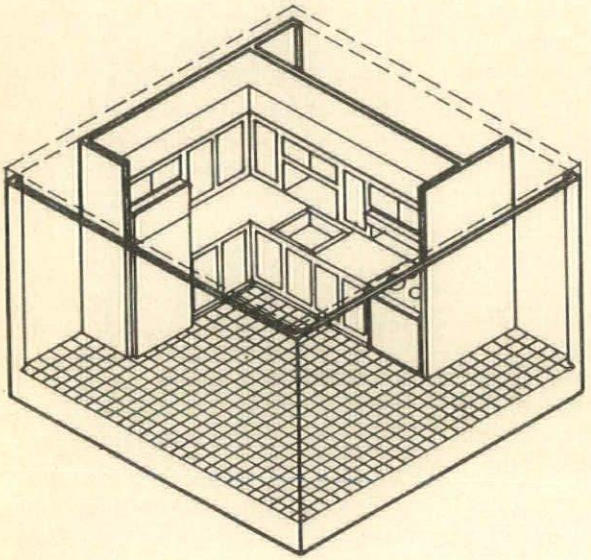
With approximately 30 days (including weekends) to complete the design and get it printed to



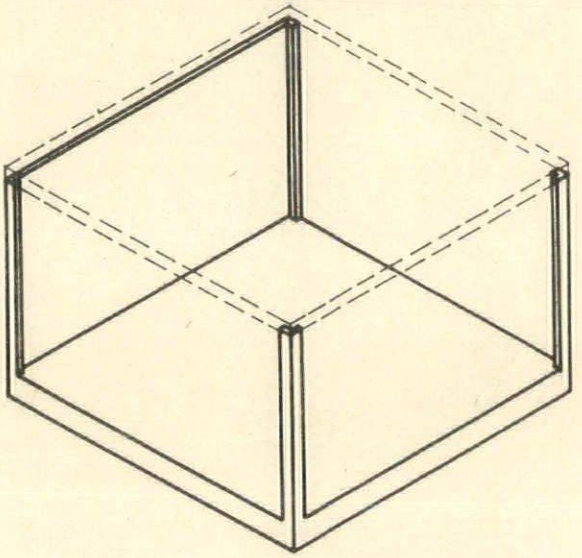
1 Stair/Utility



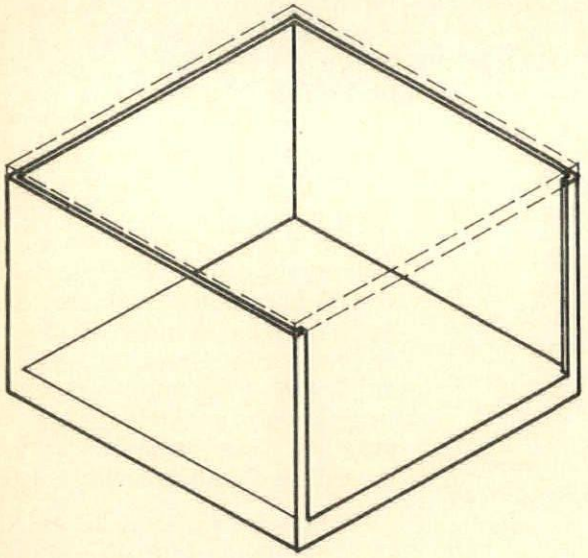
2 Stair/Bath



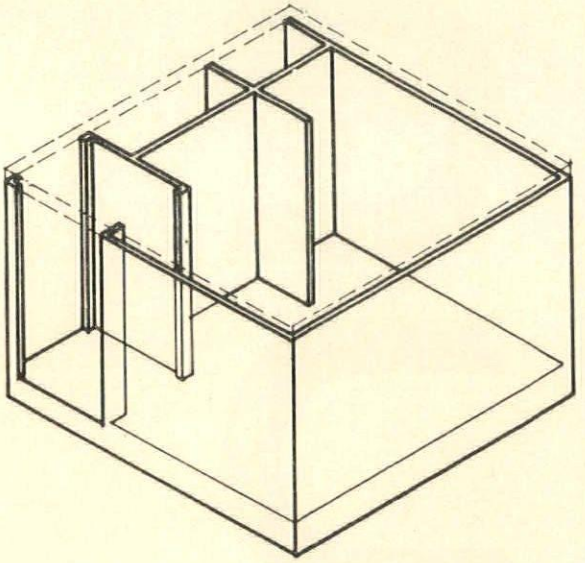
5 Kitchen



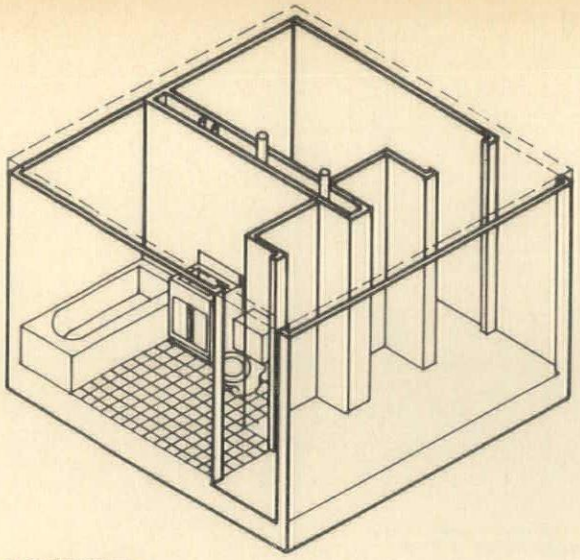
6 Dining/Living



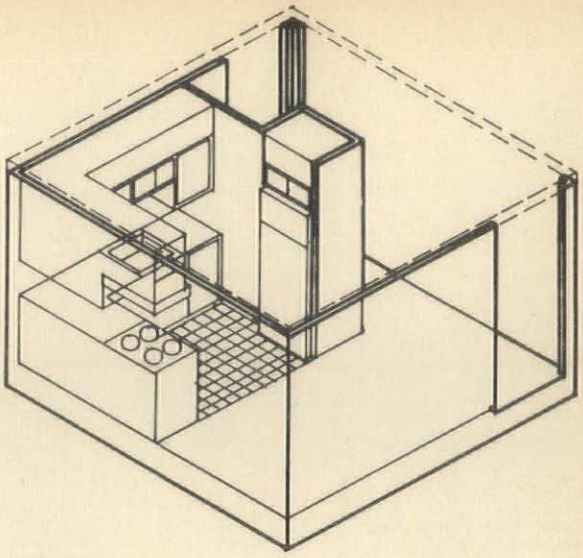
9 Bedroom/Primary



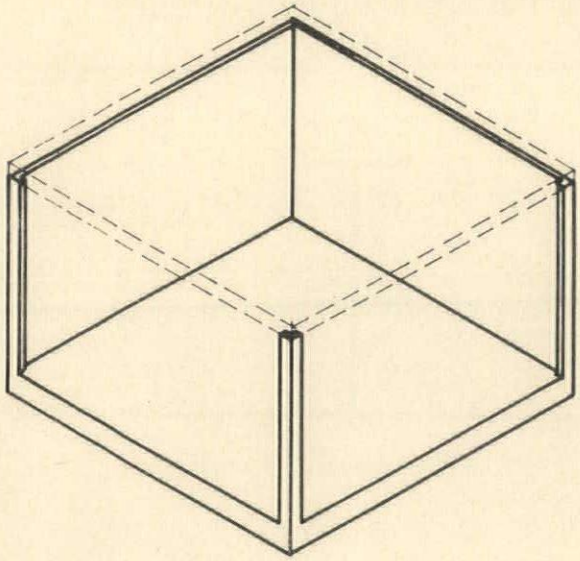
10 Bedroom/Secondary single



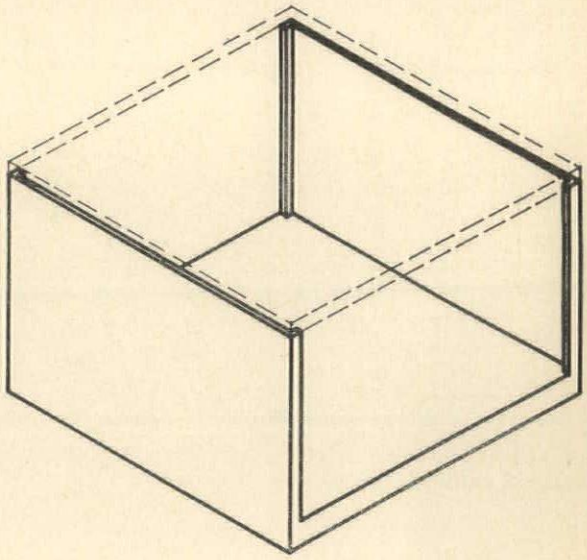
3 Bath/Utility



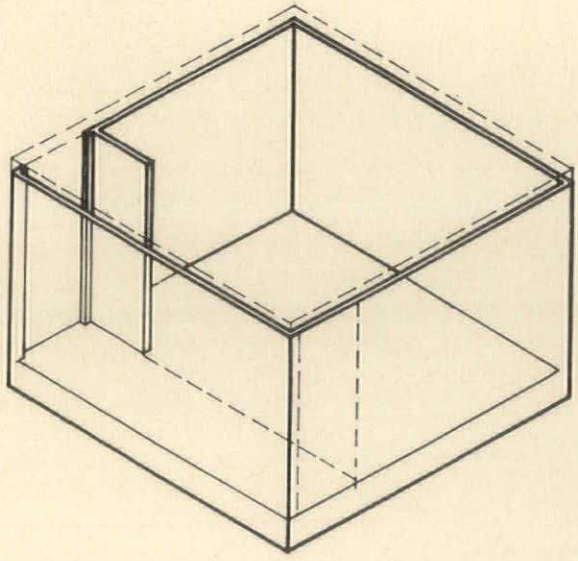
4 Kitchen



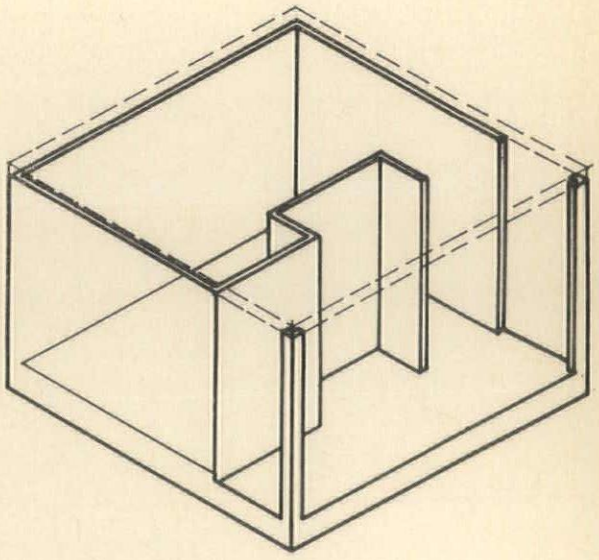
7 Dining/Living



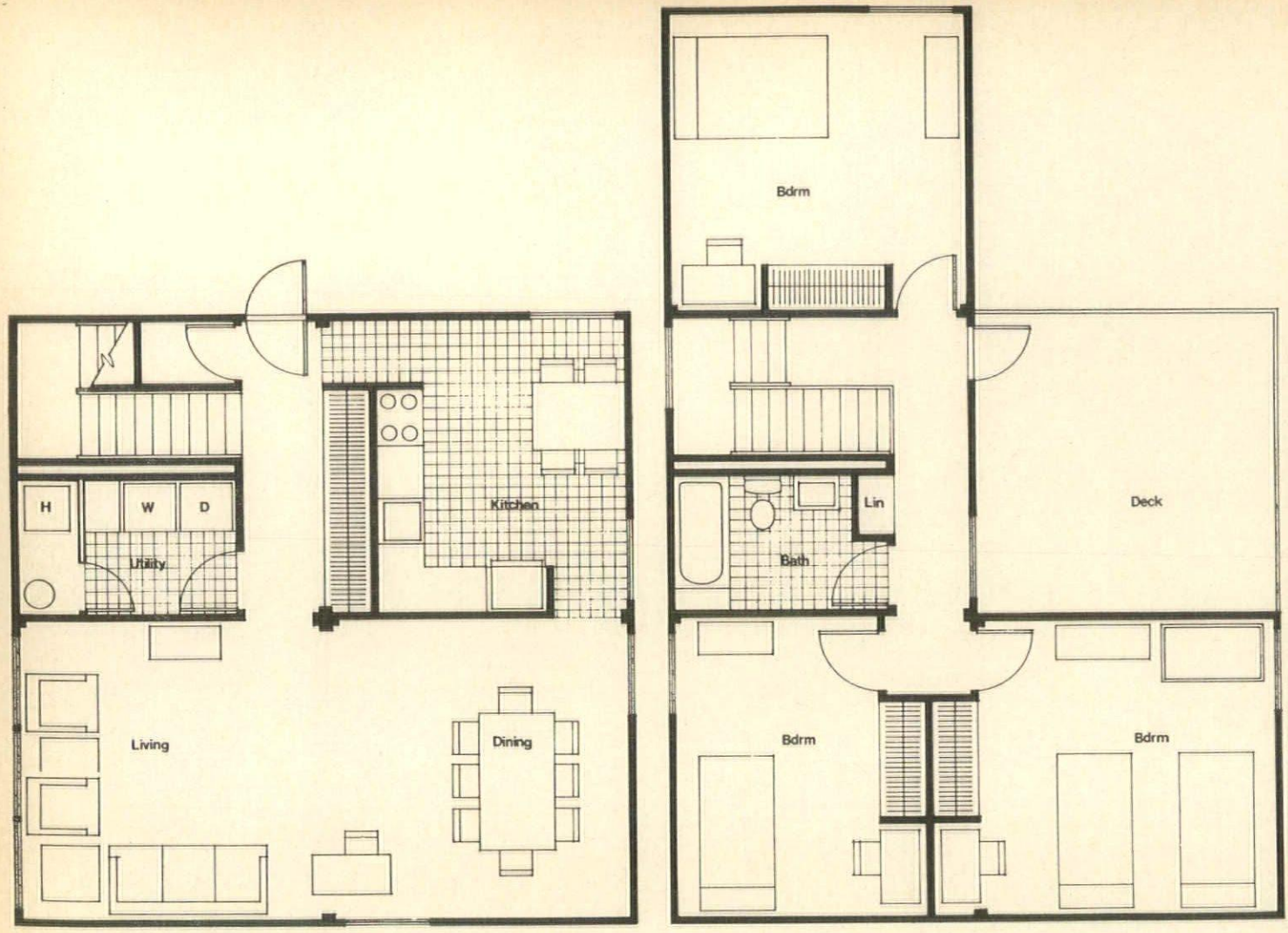
8 Living Room



11 Bedroom/Secondary double



12 Family/Storage



Typical 3 bedroom unit
8 modules, 2 stories, 1400 SF

deliver to HUD, a breakneck work schedule had to be established. This schedule had to coordinate the design and writing of the proposal with cost estimation and overall management, financing, production and land use concepts, and with development of the technology. Consequently this schedule outlined that we had only 11 days to prepare a rough draft of the entire building system—including written and sketch details of the components and illustrations of the methods for adapting the system to a variety of housing types and site considerations. With ours and Pemtom's past experiences we were able to immediately outline five basic criteria which we felt an "ideal" housing system should incorporate:

1—The building system should be designed to be an integral part of a total system that would include social involvement, environmental planning, financing and production methods.

2—The building system should be designed to utilize maximum factory production and minimum on-site assembly.

3—The building system should be a three-dimensional volumetric modular system whereby each single module could be positioned, stacked and rotated anywhere within a three-story structure.

4—The building system should be capable of responding to a full-range of housing types and site characteristics.

5—The building system should be designed to utilize existing computer capabilities for site design, production scheduling and monitoring of the market potential.

The housing system that we designed to respond to this criteria and utilize the 3M technology is called UNIMOD—Unitized Modular Housing System. It is based on a factory-produced volumetric module 13'-4" x 13'-4" x 9'-4" constructed of stressed-skin plywood panels held together by a polymer foam core and polymer bonded to form a rigid "monolithic" box. These boxes are manufactured into twelve different module types that are shipped to the site and assembled with a crane into the housing types. These boxes are then positioned into place and also polymer bonded so the total house becomes a rigid structure. Each box can be stacked and positioned anywhere within a three-story structure, can cantilever 13' and two boxes together can span 26'.

UNIMOD can obtain a wide range of architectural diversity by assembly in one, two or three stories to form housing types ranging from one-story one-bedroom of 4 modules to two-story five-bedrooms of 11 modules. There are also accessory items available, such as one- or two-car garages, pitched roofs, roof decks and room extenders. UNIMOD is designed to be used for infill housing on scattered sites as well as in planned communities and can be assembled as single family houses, townhouses and apartments.

The mechanical system is forced air that is carried through a floor plenum with interface terminals at the midpoint of each module. The electrical system is a perimeter line with similar interface and will utilize a low-voltage switching system. Both the mechanical and electrical components are embedded in the polymer foam to increase safety.

The application of computer technology to UNIMOD is designed into the basic modular concept through the principal of "add-only." This is a design concept whereby a single module forms the basis for other modules that are attached to form a house by only adding walls, windows, etc. With the ability of each module to be programmed to be positioned anywhere within a one-story to a three-story structure, the computer can be used for site planning, production planning, scheduling of the manufacturing process and determining market estimates.

With volume production methods costs can be stabilized and predicted. For UNIMOD it has been estimated that this can result in an installed cost of approximately $11.00 per square foot, not including land. With innovative land use concept and proper financing methods it is believed that UNIMOD can provide good homes for people of all income levels.

From a total of 265 system proposals, HUD has selected UNIMOD and the Pemtom Living System as one of 22 systems to be built as prototypes on ten sites throughout the country. A 55-unit UNIMOD project will be built in Kalamazoo, Michigan (Perkins and Will are the site planners) and a 45-unit project will be built in Indianapolis, Indiana (Skidmore, Owings, and Merrill are the site planners).

Design Process

The development of a building system varies from the traditional architectural process primarily because of the incorporation of production, marketing, financing and social requirements into the design from the beginning.

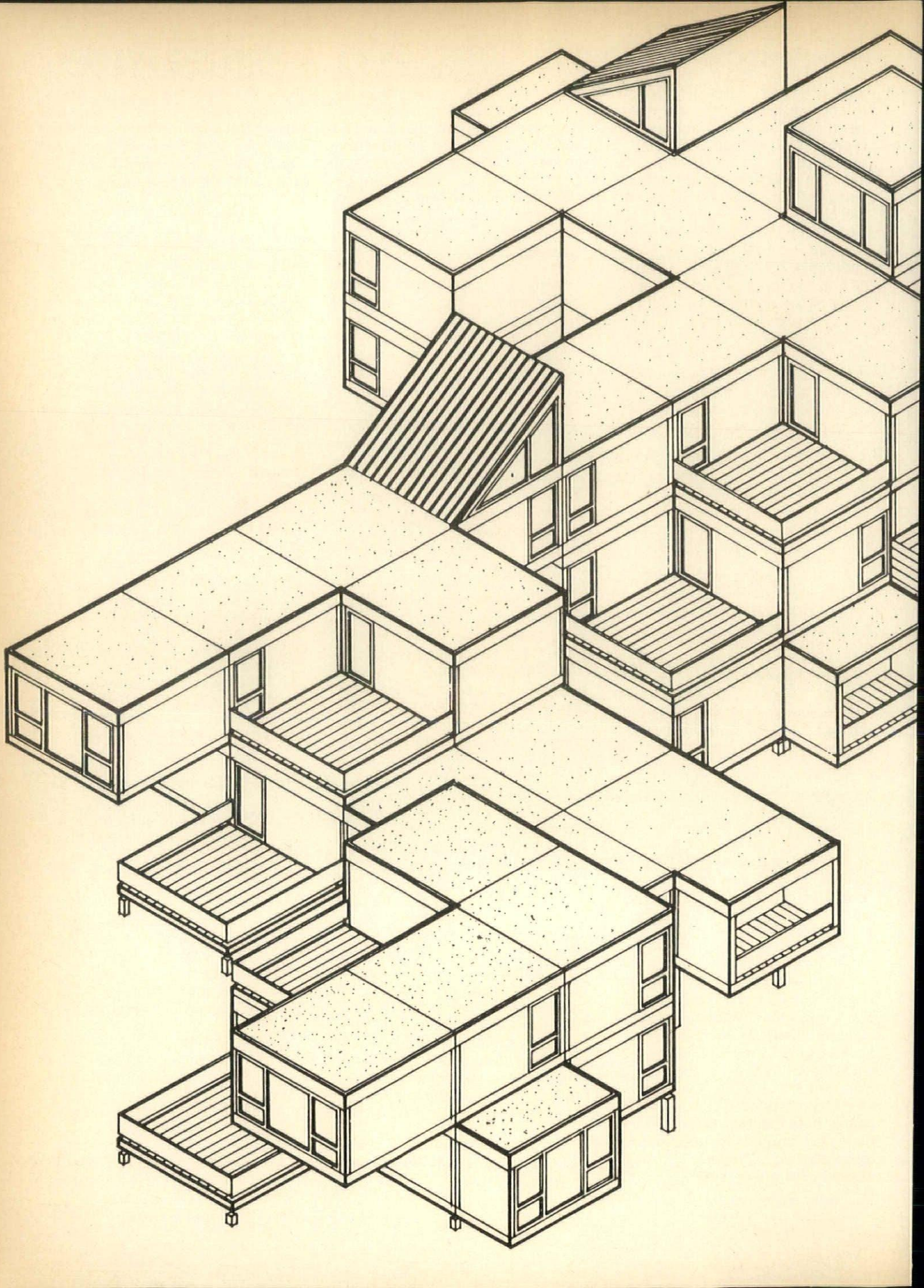
For Operation BREAKTHROUGH we assembled a design team and used the basic procedures of systems analysis to establish a project methodology which we generally followed:

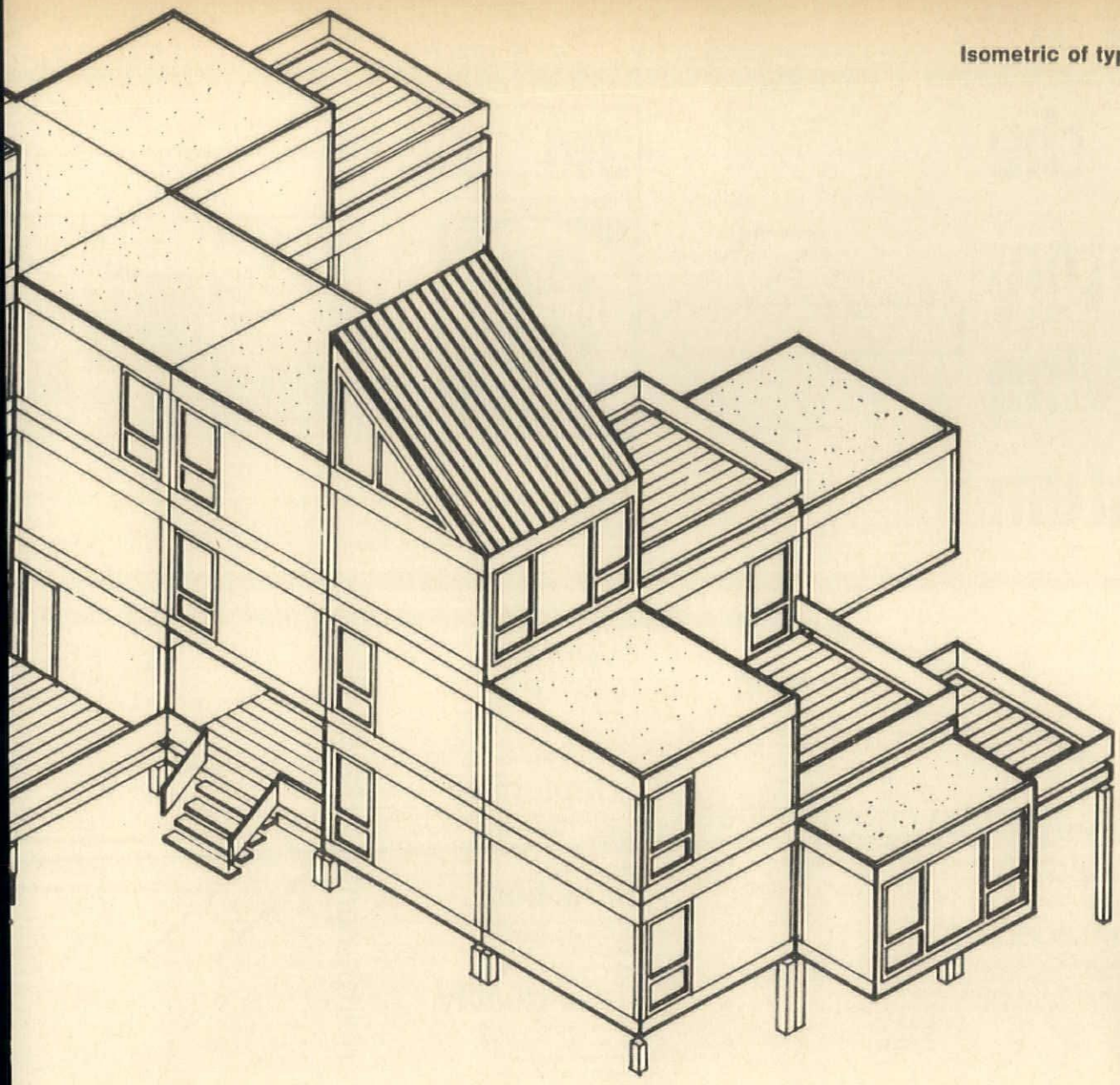
1—Definition of the problem and determination of the design criteria. This is based on NEEDS (people, environmental quality and community organization) and RESOURCES (technology available, production capability and market potential).

2—Determination of the design concept through alternative solutions. The major criteria is the creation of a living environment superior to that achieved by the best of conventional construction.

3—Evaluation of the alternatives to determine the best concept. The concept is evaluated both from a software standpoint (relating to needs) and hardware (relating to resources).

4—Design development of the preferred concept. This includes





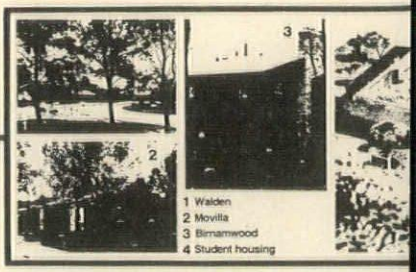
Isometric of typical assembly

Capsule explanation of

the pemtom living system

3M COMPANY Minnesota Mining & Manufacturing — Research and development in building

pemtom



InterDesign Inc. — Interdisciplinary approach to environme

marketing

a variety of types of ownership through direct purchase, condominiums, cooperatives, rental and leasing will result in maximum buyer appeal

balanced communities

planned neighborhoods are feasible with the modular building concept which places emphasis on total environment rather than individual dwelling unit

management

site analysis, density requirements and individual project designs are coordinated with modern production control and marketing techniques to combine the benefits of mass production with desired qualities in the social and physical environment

superior quality

stressed skin construction with polymer bonding results in dwelling units of superior quality and easy maintenance

adaptability

system adapted for hot (120° F.) and cold (– 40° F.) climates, wet and dry regions. Suitable for coastal areas

densities

compatible in rural, suburban and urban areas, design flexibility permits individual site design of varying densities

individuality

modular design and construction permits flexible planning, encourages individual decoration and "do it yourself" renovations

environmental adaptability

constraints/solutions

procedures to reduce the cost and increase the quality of housing

construction methods

the current archaic and fragmented methods of the construction industry must be replaced by a total building system, developed through the use of systems analysis and computer techniques

unions

new agreements to accept factory assembly of modular units through union supervision of fabrication process must be reached with the Building Trades

transportation

coordination on a National level to allow transportation of housing units up to 14' wide will increase the opportunity to achieve a desired environmental result

acceptance

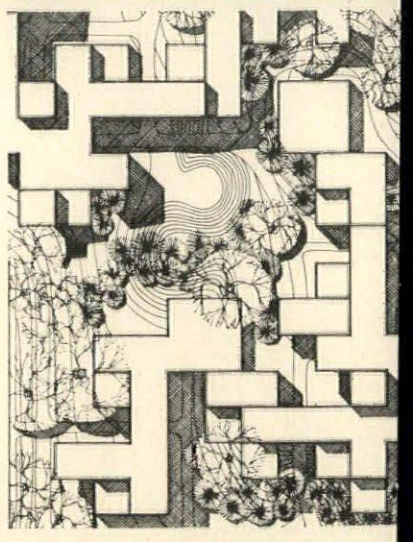
public unfamiliarity and past rejection of prefabricated housing by municipal ordinances will require a promotional effort through prototype construction to demonstrate potential of total building systems

codes

national standards must be developed to allow innovative technology and

costs

through coordinated land development, financing, marketing



Polymer bonding
Roofing
Heating panels

Marketing
market analysis, feasebility studies, design and development of environments like Walden, Birnhamwood and Scarborough

Manufacturing
(Plant for production of 1700 Movilla units under construction)

Financing
created concept of limited partnership, equity transfer and repurchase program

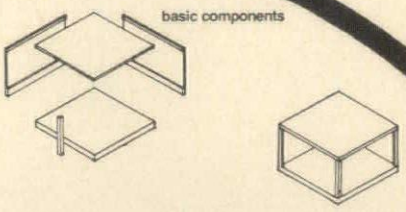
Concept and Design

unimod

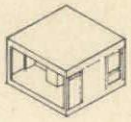
building sequence

factory fabrication

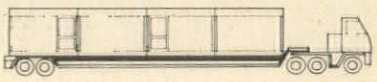
basic components



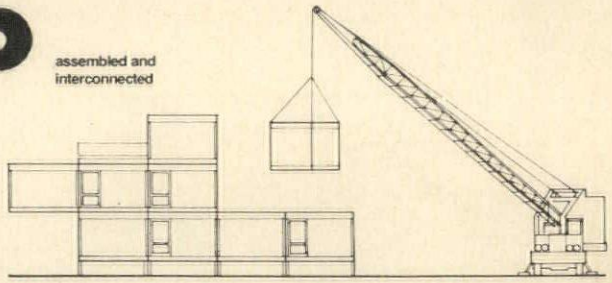
12 module types

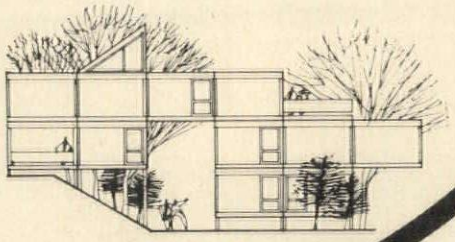


shipped to site

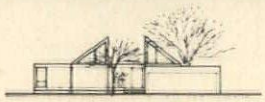


assembled and interconnected



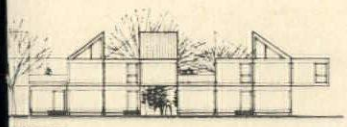


landscaping

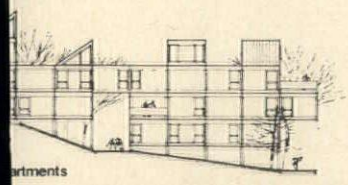


3 bedroom 1 story

edroom 2 story



n houses



rtments

design criteria

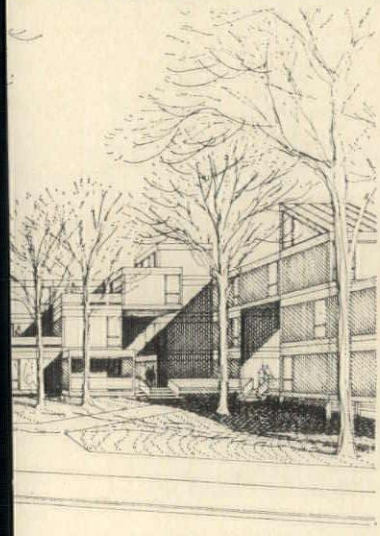
flexibility
numerous plan combinations possible, add or subtract a room, deck or balcony

housing types
single family, town houses, lowrise and highrise, apartments, vacation house, student housing

variations
accessories include pitched roof, room extenders, balconies, decks, garages and storage units.

site adaptabilty
designed for any topography, particularly adaptable for steep and difficult sites

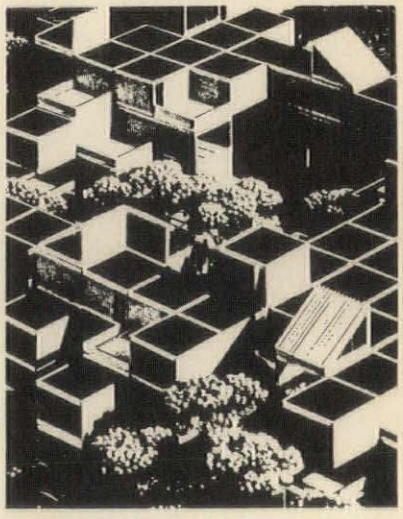
amenities
integration of community and recreational facilities, landscaping, graphics, parking, and exterior lighting with building system



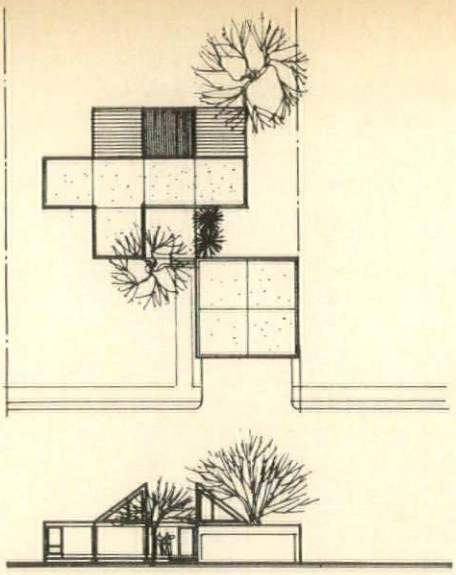
and mass produced factory fabricated housing units substantial improvements can be made to lower the cost and increase the availability of housing

time
the techniques of mass production substantially increase the rate as well as the volume of production, thus eliminating long lead times in planning and prolonged on-site construction. Computer control will minimize unnecessary delays due to material unavailability and delivery problems

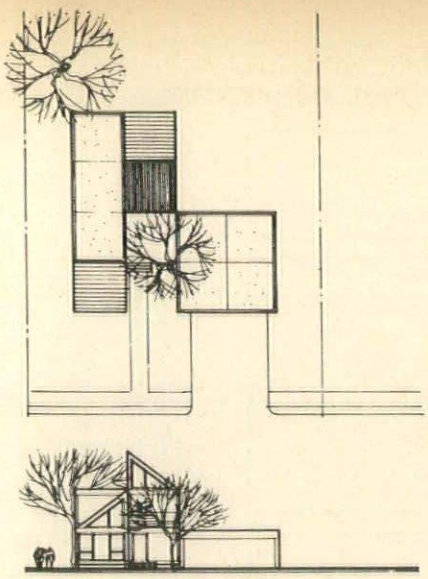
financing
superior construction, lower costs and maintenance will reduce the mortgage costs and thus reduce the costs of home ownership



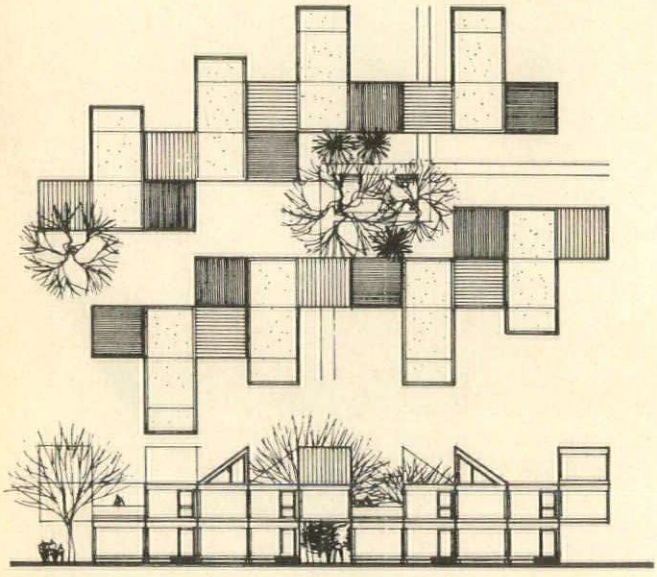
Range of housing types



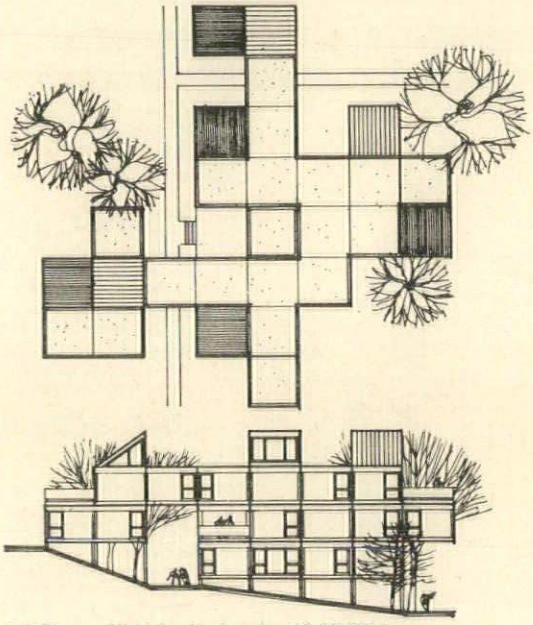
1 Story – Single-Family detached 2.5 - 6 DU/acre



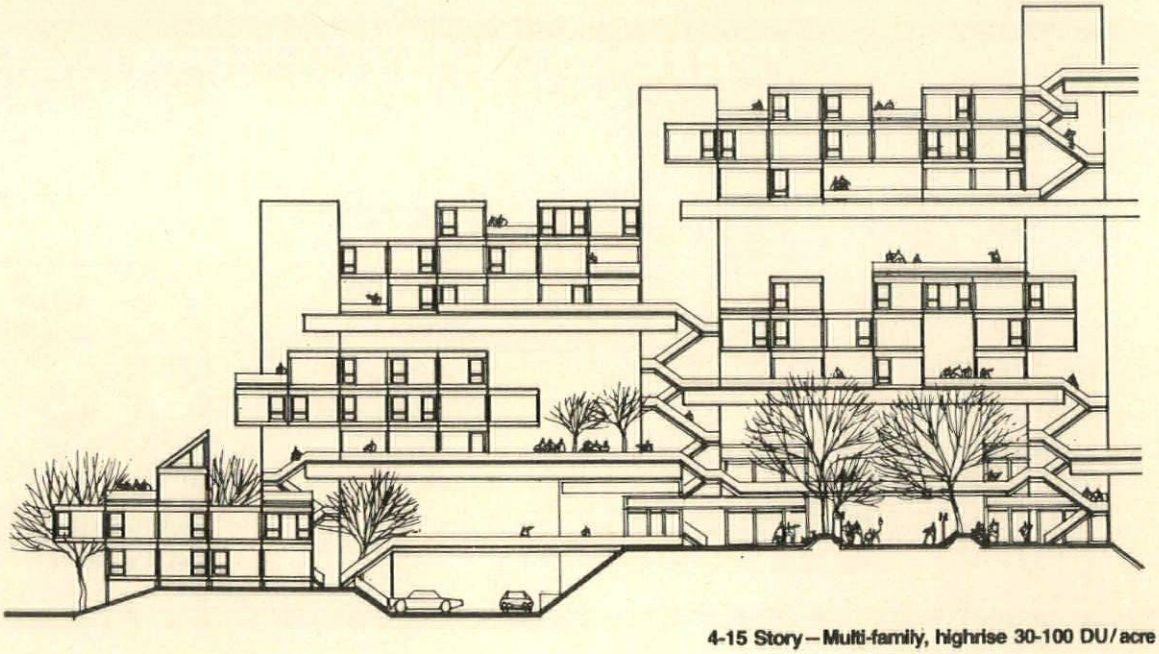
2 Story – Single-Family detached 2.5 - 6 DU/acre



2 Story – Single-Family attached 6-12 DU/acre



1-3 Story – Multi-family, lowrise 12-25 DU/acre



4-15 Story – Multi-family, highrise 30-100 DU/acre

identification of all sub-systems and their relationships, system adaptability to varying site configurations and system capability for total environment as outlined in the criteria.

5—Design presentation. This includes graphic and written material, models and diagrams as required to explain the total building system.

This methodology utilizes the principal of feedback throughout the design process because of the constant interaction of the design team at all steps. The design team for Operation BREAKTHROUGH, in addition to InterDesign, consisted of personnel representing manufacturing, marketing, sociology, technology and economics.

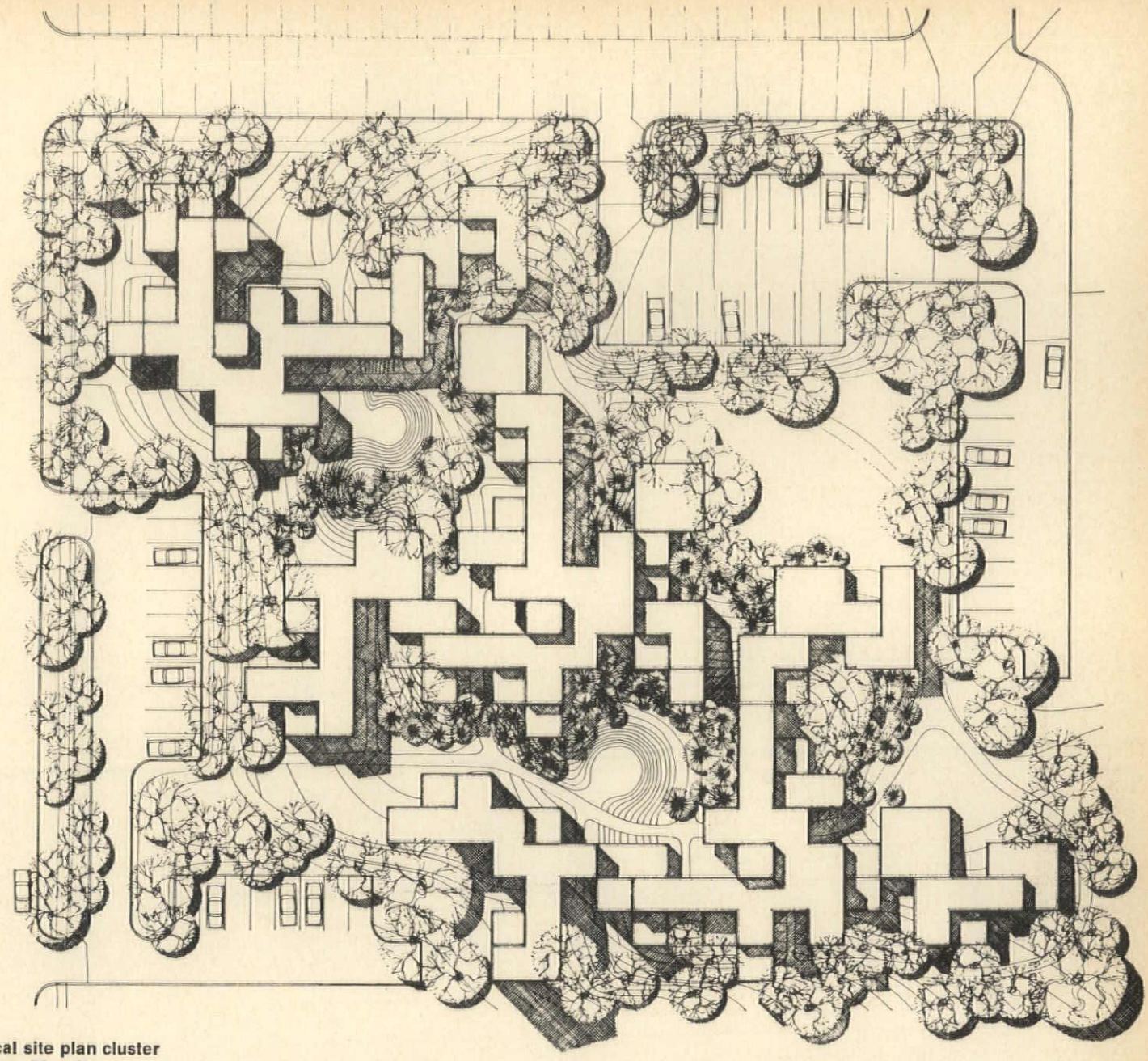
Summary

The Operation BREAKTHROUGH contract with HUD will consist of three phases—Phase I (6 months) for system refinement, site planning and working drawings and specifications, Phase II (12 months) for prototype construction, testing and HUD certification and Phase III for volume production on a national scale.

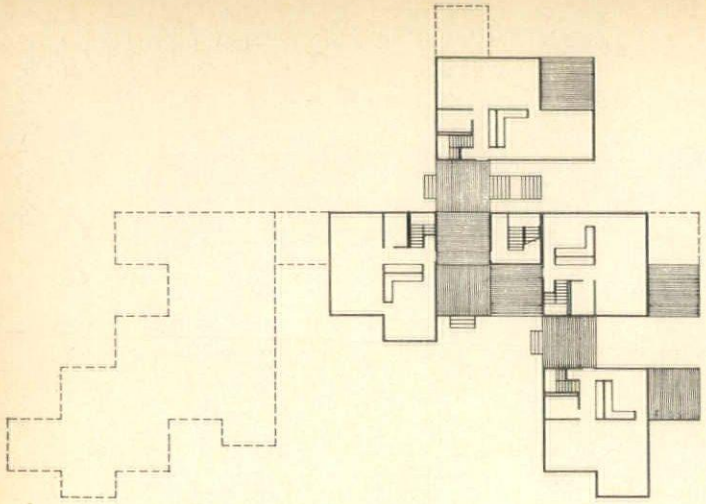
Pemtom has already negotiated an agreement with three international AFL-CIO building trade unions for the production of UNIMOD and its on-site assembly. With this "breakthrough" and Pemtom's program for management, production, marketing and financing it has been estimated that the UNIMOD Housing System can result in the installation of more than 60,000 houses per year. This will consist of houses within the central cities, planned sub-divisions in the suburbs, new town developments, vacation houses and housing for the elderly.

The need for constructing 26 million new and rehabilitated houses by 1978 increases each day that the necessary production schedule is not reached. Most housing experts agree that conventional construction will continue at a rate of approximately 1.3 million units per year and that the additional 1.3 to 1.5 million units required each year will only become a reality through industrialization of the housing industry.

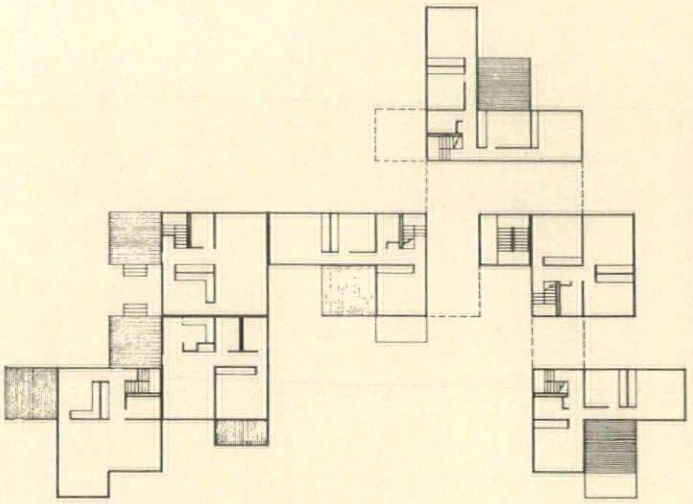
Although there is still much work to be accomplished, both within the BREAKTHROUGH program and within the Pemtom organization, we feel that the basis for a totally industrialized housing system has been established in UNIMOD and we are confident that it will succeed.



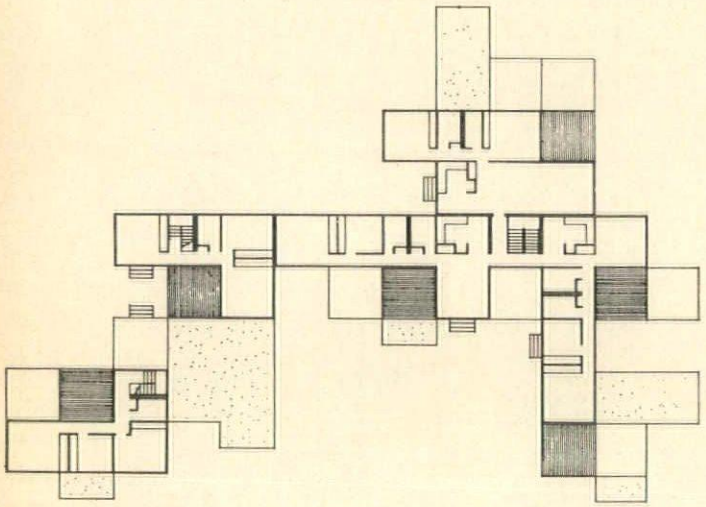
Typical site plan cluster
2 acres, 50 units



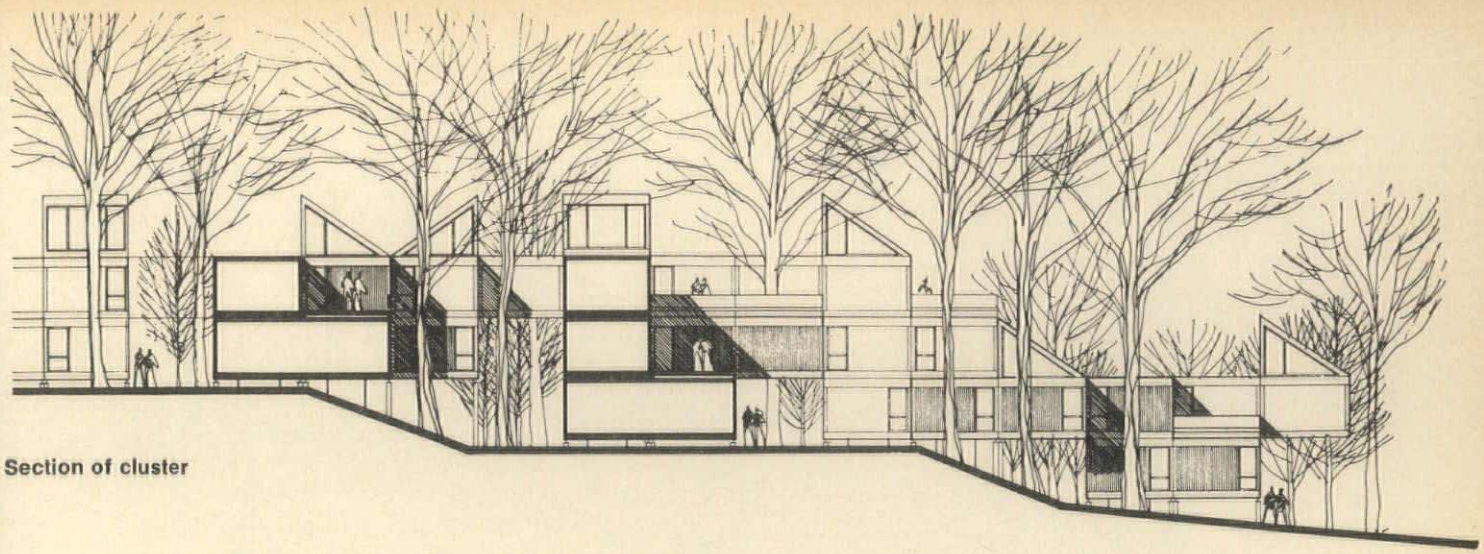
Ground level



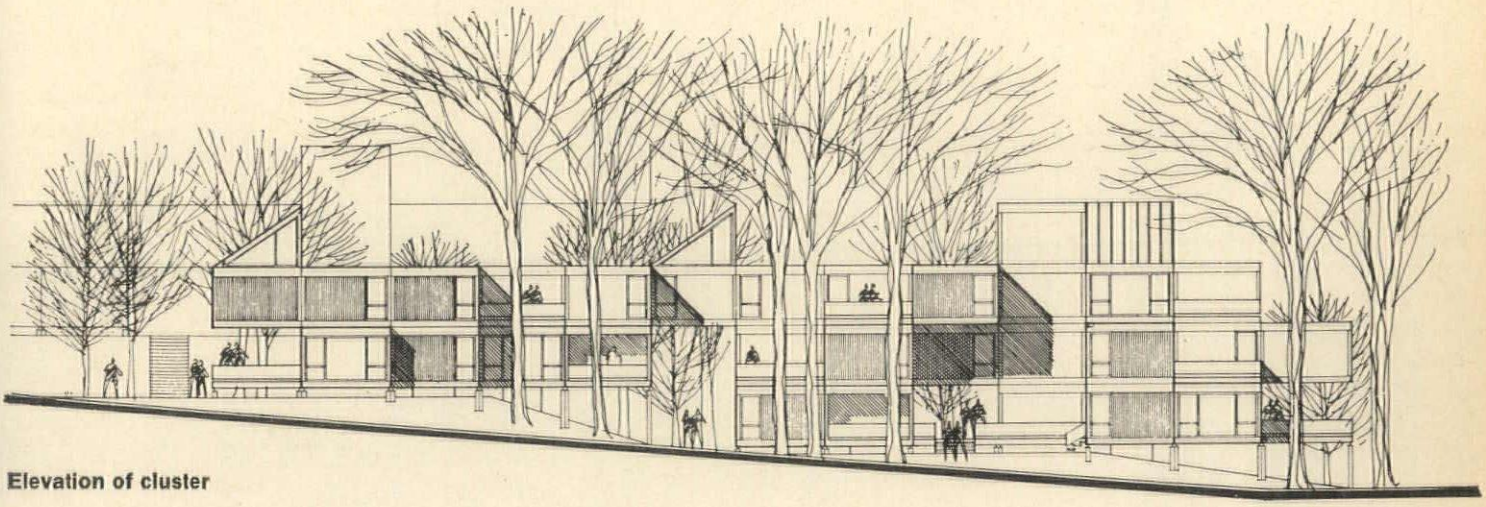
Second level



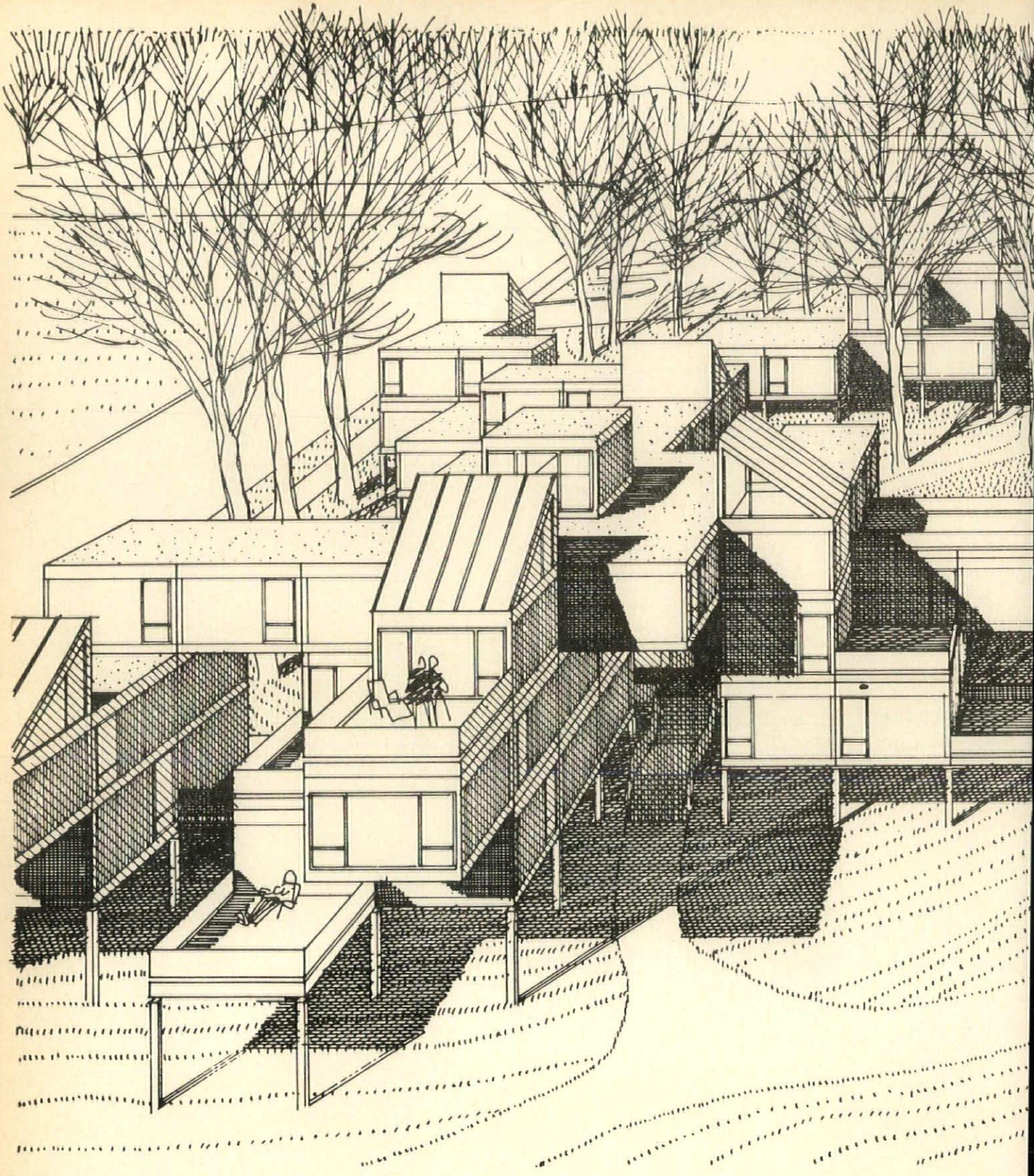
Third level

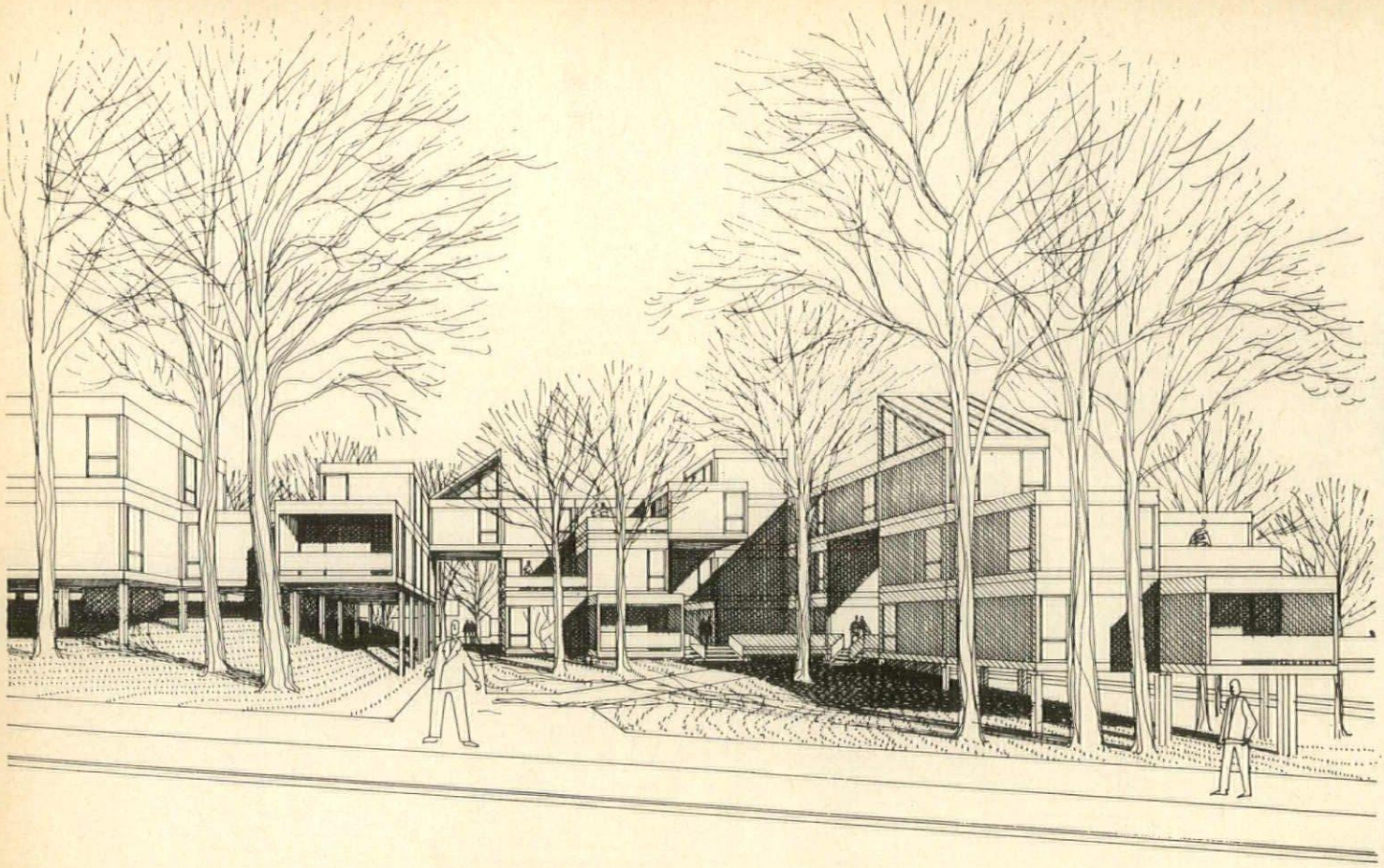


Section of cluster



Elevation of cluster





Credits

Pemtom, Inc. Bloomington, Minnesota	HUD proposer and director of the program
3M Company St. Paul, Minnesota	Technical advisor and supplier of building products for UNIMOD
InterDesign Inc. Minneapolis, Minnesota	Architects and Designers of the UNIMOD Housing System
Jacus & Amble, Inc. Minneapolis, Minnesota	Engineering consultants to InterDesign
Lorimer, Chiodo & Associates Minneapolis, Minnesota	Economic consultants responsible for preparation of the proposal
Community Involvement and Development Associates, Inc. Minneapolis, Minnesota	Social planning consultants to Pemtom

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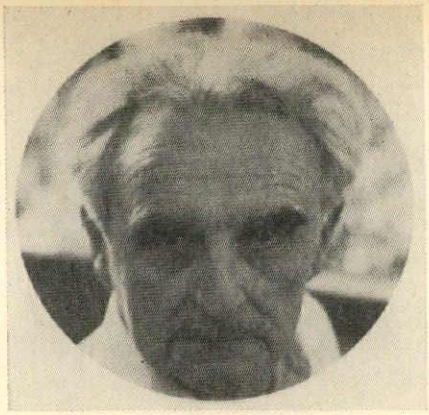


RICHARD NEUTRA, 1892-1970

Richard Neutra's trim, efficient chassis structures and sensitive site planning had a profound influence on many young architects of the 30's. His humanistic approach to design appealed to many who found little warmth in the current international style.

Neutra continually sought new structural methods and new forms but he deplored sensationalism in architecture. He scorned pilotties, cantilevers, redundant structure and visual overemphasis of minor elements. A screen or veil around a building would have been unthinkable for him as would the arbitrary moulding of building forms.

Neutra referred to himself as "a local boy from Vienna." The architects who most influenced him were Otto Wagner, the founder of modern architecture in Vienna, Adolf Loos, the first true modern architect in Vienna, and Frank Lloyd Wright. Neutra spent a year and a half with Mendelsohn but never assimilated the sweeping sculptural forms which became Mendelsohn's trademark. Quite possibly this was a result of Loos—inspired antipathy to the baroque.

Trained in engineering, Neutra designed a classical discipline into his buildings. His deep interest in the biological sciences, however, resulted in varied and inventive plans where building and site were one, yet both were clearly defined.

Prompted by Loos ("the most loyal American I ever met") Neutra came to Chicago in 1923. Two years later he moved to Los Angeles and established his own practice. Many talented men have served apprenticeships in his office, among them Gregory Ain, Otto Winkler, Peter Pfisterer, Harwell Hamilton Harris, Rafael Soriano and John Blanton. His buildings have had unusually sympathetic photographic coverage because Neutra introduced a gifted young man to the mysteries of architectural photography: Julius Shulman.

Neutra's early commissions were mostly private houses and apartments. For the Los Angeles Board of Education he designed an experimental school with no fixed furniture and with movable side walls so that classes could be held outdoors. One of his favorite projects was his ring school, which finally, after 30 years, was built at Lemoore. The school was named for, and dedicated to, Richard Neutra.

The VDL Research House dates from 1932. It employed a precast vibrated concrete joist floor and an earthquake-proof braced wood chassis. The building, in two sections, housed Neutra's office as well as his growing family. It makes skillful use of a rather small lot overlooking Silver Lake. Other buildings from this early period include the Garden Apartments, 1927; the Lovell house, 1929; Universal Pictures Building, 1930; Landfair Apartments, and Westwood Junior High School, 1938.

Some of the later houses were more opulent, but no less disciplined. These included the Nesbitt house and studio, 1942; the Kaufmann house in the Colorado desert, 1947 (the same Edgar Kaufmann); and the Bailey house, 1948.

Neutra advocated prefabrication of houses long before the idea gained respectability. He experimented with panel construction, using plywood and asbestos cement, and patented an ingenious adjustable foundation for on-grade construction. He carried on extensive studies and research in the use of steam-hardened diatomaceous earth as a construction material.

Like many architects, Neutra tried his hand at furniture design. One characteristic of his metal and laminated wood chairs was control of rearward tilt by means of a spring steel snubber. His folding tables were frequently included in the plans for his houses.

Neutra's humanistic philosophy is expressed in all of his books, beginning with "How America Builds" in 1926. He is the author of many other books, including "Survival Through Design," 1954, and "World and Dwelling," 1962. His latest writings included several co-authorships in the areas of housing and city planning.

There are many books available on Neutra and his work, in several languages. For the architect the most useful are the three Praeger volumes, edited by Boesiger, covering Neutra's buildings and projects from 1923-50, 1950-60 and 1960-65. The Masters of World Architecture volume by Esther McCoy provides a good overview of his career and representative work.

Neutra's wife, Dione, is an accomplished musician.

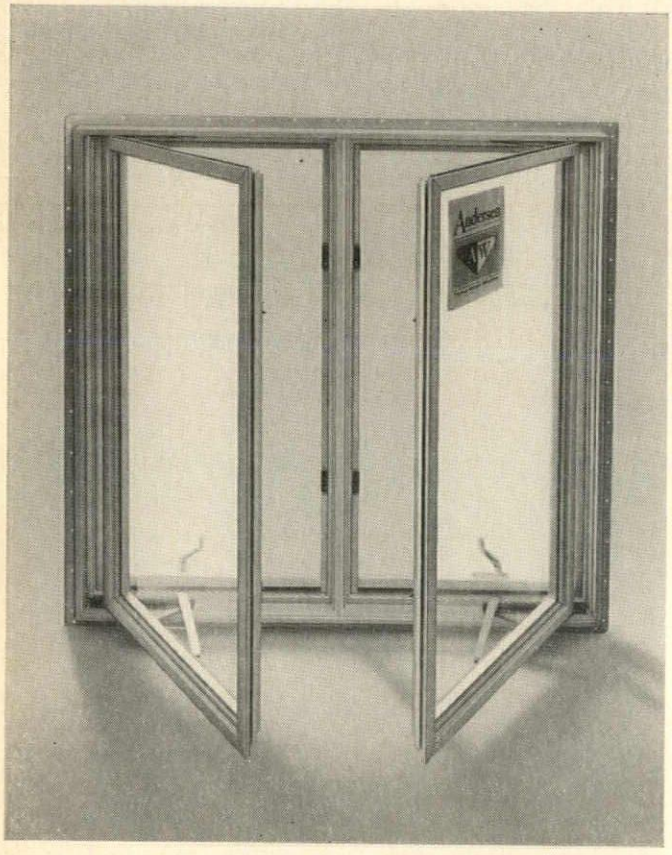
One of his sons and asociates, Dion, reports that Neutra died in Wuppertal, West Germany, after a strenuous day of photographing buildings.

Winston A. Close, FAIA

Personal addendum by Elizabeth Close:

When I was a child in Vienna, our house (designed by Adolf Loos) usually housed a student from some foreign country. Dione was with us for at least a year, studying the cello and being courted by her future husband. The marvellous sounds she produced on her instrument persuaded me to take it up. Thus Mrs. Neutra has had an even more profound influence than even her husband on the life of at least one architect.

Your clients don't have to care for it.



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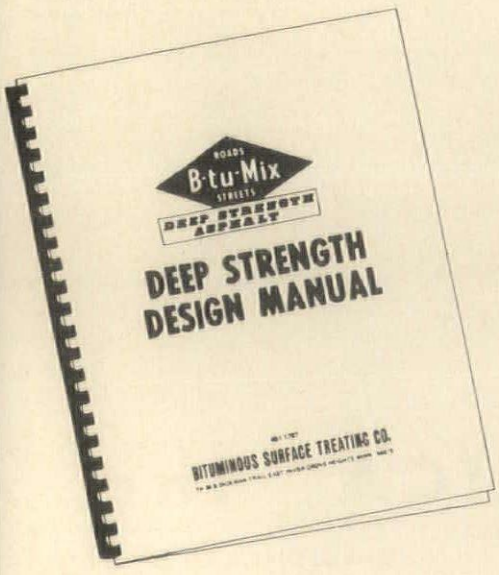

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CSI NEWS

THE CONSTRUCTION SPECIFICATIONS INSTITUTE

MINNEAPOLIS-SAINT PAUL CHAPTER

Minneapolis-St. Paul Chapter Elects

Dale C. Moll, CSI, materials engineer with Twin City Testing and Engineering Laboratory, will guide the fortunes of the Minneapolis-St. Paul Chapter of the Construction Specifications Institute during the 1970-71 fiscal year. Pres. Moll led the slate of officers elected at the chapter's annual election on April 20. Elected with Moll were Vice-pres. **Angelo A. Percich,** Buetow Associates, Sec. **Dale Q. Blomsness,** Haldeman-Homme, and Treas. **Clinton C. Fladland,** Minnesota Lathing and Plastering Bureau. Effective July 1 the chapter's board will be the above officers and newly elected Professional Dir. **Carl J. Agerbeck,** Cerny Associates, and Industry Dir. **Richard E. Matson,** Neal Slate Company, and returning Professional Dir. **Roy B. Osterberg,** Ellerbe Architects. Outgoing Pres. **Amardo J. Romano,** Edwards & Kelcey, will serve as advisory member.

No newcomer to CSI leadership, Moll has served as secretary-treasurer of the chapter and more recently as vice-president. Percich has served on the board as professional director the past two years.

In announcing the newly elected officers and directors Romano also commended the retiring board members for their service to the chapter and the institute. Serving for the 1969-70 term were Vice-pres. Moll, Sec. **Roger S. Heid,** Treas. **George R. Gohlke,** Percich and Osterberg, professional directors, and **H. Bruce Waldo,** industry director.

Large Delegation to Attend Chicago Convention

An impressive array of speakers, a dynamic technical program and a lively social and entertainment program await Minneapolis-St. Paul chapter members of CSI in Chicago, June 8-10, at the Institute's 14th Annual Convention. Some 30 members and wives from the Twin Cities plan to attend.

Institute Pres. Arthur W. Brown, FCSI, said that all aspects of planning and setting the stage for the convention were completed and that convention planners were anticipating another record breaking group to attend. Brown, completing a one-year term of office as president on June 30, will be the presiding officer at the convention.

The convention technical program, which has aroused considerable interest in the construction industry, will explore technological innovation which is producing revolutionary changes in construction. A group of 31 speakers and panelists will participate in the three-day program. The speakers come from government, labor, design professions, education, regulatory bodies concerned with construction and from the construction industry itself.

Three Awards for Specification Excellence

The Minneapolis-St. Paul Chapter of CSI made awards to three of its members for "outstanding skill in specification writing" at its April 20 meeting in Minneapolis. The honored members were **Kenneth H. Peterson,** AIA CSI of Sovik, Mathre and Madson, Northfield architects, **James A. Kellett,** AIA CSI of Team 70 Architects, St. Paul, and **LeRoy H. Palmquist,** AIA CSI of Armstrong, Schlichting, Torseth and Skold Architects, Golden Valley.

The awards came as the result of the chapter's first specification competition, held late last year. Winners were selected from eleven local entries by a jury of CSI members of the Kansas City chapter under an informal reciprocal judging agreement arranged by North Central Section Dir. **Wayne C. Brock** of Minneapolis. A local jury will judge a Kansas City competition later this year.

Peterson's winning entries were two specifications for the Northfield City Hospital Addition and the Minnesota Highway Department Area 6B Headquarters Building in Owatonna. Kellett's award was also for two specifications, the Merritt J. Osborn Research and Development Center Expansion in Mendota Heights and the Eagandale Research and Development Center, Eagan Township, both projects of Economics Laboratory, Inc., while he was with

Wold Associates, St. Paul architectural firm. Palmquist was honored for his specifications for the Thomas Jefferson Senior High School in Bloomington.

Entries were judged on the same criteria as used for CSI's national competitions except that there were no separate categories for project types and addenda were not required to be submitted. Among the jury's comments—attractive cover and title pages containing all essential information; sections cross-referenced well with scopes well defined, work included and not included shown; complete numbering and lettering systems and block style make location of paragraphs and items easy; content of paragraphs explicit; printing is professional looking and easy to read.

CSI Key Committee Chairmen Announced

Dale C. Moll, newly elected president of the Minneapolis-St. Paul CSI Chapter, has announced that your key committee chairmen have been appointed for the 1970-71 year to begin July 1. **Angelo A. Percich** of Buetow Associates, incoming vice-president, will serve as technical chairman, guiding the chapter's diverse technical activities.

New Professional Dir. **Carl J. Agerbeck,** Cerny Associates, will replace Percich as program chairman. Publications chairman and chapter editor will be **Richard E. Matson,** Neal Slate Company, incoming industry director. Matson replaces **H. Bruce Waldo,** Pittsburgh Corning Corporation, who completes his term on the board this June.

Continuing as membership chairman will be Professional Dir. Roy B. Osterberg of Ellerbe Architects.

CSI Elects National Officers

Ben F. Greenwood, FCSI, Houston, Texas, has been elected president of The Construction Specifications Institute for 1970-71. His term will begin on July 1. Greenwood will succeed Arthur W. Brown, FCSI, Boston, whose last official duties will be presiding over the Institute's 14th Annual Convention in Chicago, June 8-10.

Greenwood, the owner of an architectural firm in Houston, will complete a one-year term as an institute vice-president on June 30. He was a charter member of the Houston chapter when it was formed in 1958 and subsequently served the chapter as vice-president and president and as chairman of a number of chapter committees. Greenwood served as director of Region 9 from 1964-67, chairman of the publications committee 1965-67 and institute secretary 1967-69. He is an alumnus of Rice University, where he received both his BA and BS in architecture and was a winner of the Mary Alice Elliott Award in Design competition.

Three vice-presidents were also elected at this time. They are Charles R. Carroll, Jr., FCSI, industry member in both the Baltimore and Metropolitan New York chapters, who will complete his second consecutive two-year term as institute treasurer on June 30; Glenn W. Frazier, professional member, Chicago chapter, who will be completing a term as chairman of the institute's technical documents committee; and Arthur J. Miller, FCSI, professional member, Cincinnati, re-elected as a vice-president.

Elected as treasurer was Robert E. Simpson, Industry Member, Allentown. He is completing a two-year term as chairman of the finance committee. Richard E. Ehmann, FCSI, professional member, Portland, Ore., currently serving as institute secretary, will continue in office on his normal two-year term for another year.

PRODUCTS & SERVICES

CROSS-SECTION OF WHAT'S NEW

KINDEM SPONSORS BASEBALL QUIZ ON RADIO

For the fourth successive year A. A. Kindem & Sons, Inc., Minneapolis, is exclusively sponsoring "Kindem's Kwestion Korner" on WCCO Radio, emceed by popular sports figure Paul Giel.

The five-minute program follows Twin games every Saturday and Giel will answer baseball questions sent in by fans from around the state. Free baseballs autographed by Twins players will be awarded for questions used on the air.

CARNEY REBUILDS AFTER FIRE

On March 13 a disastrous fire at the Carney & Associates plant near Mankato, Minn., destroyed the warehouse, fabricating room, laboratory and office completely. Even trailers being loaded at the dock were destroyed and the merchandise damaged, the company reported.

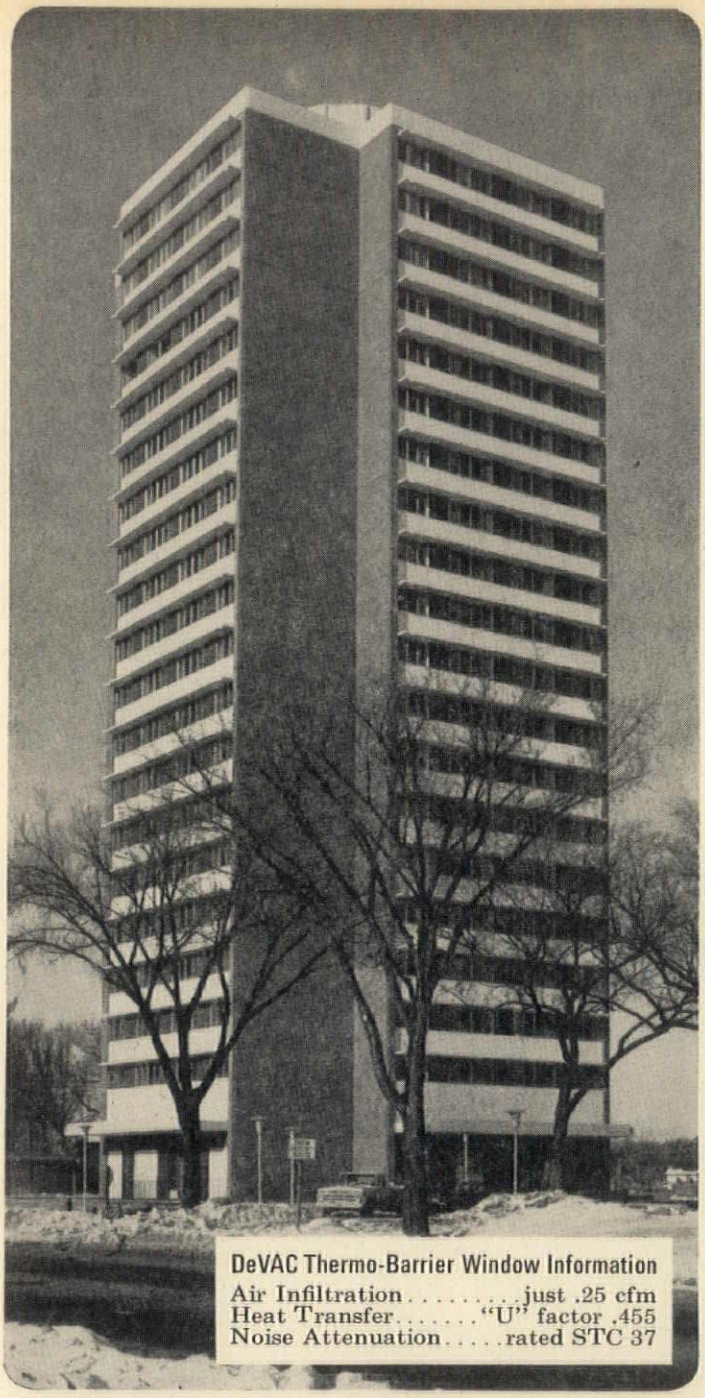
Harry Carney, president, stated that the company started rebuilding as soon as practical and the plant was to be ready to operate by about the middle of May. The old facilities destroyed are being replaced with new modern warehouse and office facilities plus additions and changes for more efficient production.

"Carney has been supplying quality building products to the industry since 1883 and has been a national leader in the hi-calcium fiber glass insulation business," he said. "Carney is one of the few fiber glass insulation companies which still specialize in industrial and commercial insulation projects."

PCA FORMS EDUCATION DIVISION

The Portland Cement Association has announced creation of a new Education Division to include the association's present educational services, manpower development and training and accident prevention departments, according to Dr. Harry N. Huntzicker, president. James D. Piper, senior vice-president, formerly in charge of market development, will head the new division.

"The decision to put all of our educational work under a senior officer recognizes the increasing importance of this area of association work," Dr. Huntzicker said. He added that PCA has manpower training programs under federal grants of more than $2,500,000 and that "we anticipate grants of several times this amount" in the next year.



Above is Project 2-11A, Housing For The Elderly, Minneapolis, Minnesota. Architects for this twenty-floor apartment were Raugland, Entrikin, Domholt & King, Inc. of Minneapolis.

No First Class Building can afford Second Class WINDOWS

Health and comfort are important elements in the design of Project 2-11A, Housing For The Elderly in Minneapolis. Occupants of this 151 unit high-rise are particularly sensitive to changes in temperature and humidity. The interior climate must be kept comfortable. Drafts, dust, pollen and excess noise, kept out. That's one of the reasons all 456 windows are DeVAC Thermo-Barrier.

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SULLIVAN'S OWATONNA CHANDELIERS WEIGHED

How do you determine the weight of 18-foot-long cast-iron chandeliers in a 62-year-old building without disturbing them?

Hydraulics proved to be the answer to this challenging problem faced by Security Bank & Trust Co. here, and the solution was provided by Owatonna Tool Co. with an ingenious application of standard equipment.

The famous bank was designed by Louis Sullivan and was featured in Northwest Architect, July-August, 1958.

The unusual assignment arose when a consulting engineer decided it was time to check the soundness of various parts of the venerable structure. A 17½-ton center-hole ram, a hand-operated pumping unit, a gauge and adapters were used. Above the 42-foot-high ceiling the specialists freed the threaded supporting shaft of one chandelier and, with an adapter, connected the ram's screw to the part of the shaft that protruded through the ceiling mounting plate. Hydraulic fluid was then pumped into the ram to extend its screw and lift the chandelier.

When the chandelier had been raised 1/32 of an inch the pressure reading on the gauge was noted. By multiplying this reading (1,400 psi) by the effective area of the ram (3.53 square inches), the bank's question was answered: each chandelier weighs 4,942 pounds.

NEW MANUAL ON ALUMINUM ENGINEERING DATA

The Aluminum Association has announced availability of a new publication, "Engineering Data for Aluminum Structures," intended to provide an authoritative and up-to-date source for basic engineering data on aluminum alloy products.

Using detailed tables and drawings, the 96-page manual presents data on the chemical and physical properties of specific aluminum alloys, engineering properties of various aluminum shapes and fasteners and other information such as beam formulas. The book is intended to be as complete a reference as possible, bringing together in one volume information culled from numerous other sources.

Among its many features the book contains a reference section of frequently-used structural formulas.

Single copies of manual may be obtained free of charge from The Aluminum Association, 750 Third Ave., New York, N. Y. 10017.

Special Advertising

NEW TREND— CARPETED WALL?

E. T. Barwick Industries, of Chamblee, Ga., tufted carpet producer, has announced a major diversification step with its entry into the soft wall covering business.

"Intended for use in commercial installations, the new wall covering will be sold under the Wallcraft label, produced in three basic constructions: tufted, flocked and needlepunch, using Nylon olefin and acrylic with blends of PVC," the release said in part.

"Aside from opening new design vistas for architects and interior designers, Wallcraft provides an array of functional dividends. Its insulating properties result in a 5-10 percent reduction in heat loss when used on exterior walls. Each type is completely washable and highly resistant to stains and abrasions. Also, Wallcraft's sound absorptive characteristics significantly lower noise levels, an important factor in many commercial installations."

AISC ANNOUNCES ARCHITECTURAL AWARDS

The American Institute of Steel Construction has announced its 1970 Architectural Awards of Excellence Programs. This is the eleventh year in which the institute, national association for the fabricated structural steel industry, has sponsored the competition to encourage the creative use of structural steel in building construction, according to Pres. E. H. Webster.

The program is open to all architects practicing professionally in the United States. They are invited to enter steel framed buildings of their design constructed anywhere in the 50 states and completed after January 1, 1969, and prior to September 1, 1970. Details of the competition rules and entry forms can be obtained from the American Institute of Steel Construction, 101 Park Ave., New York, N. Y. 10017.

CONSULTING ENGINEERS COUNCIL REPORTS 28% INCREASE

The Consulting Engineers Council of Minnesota had 15 firms admitted to the organization during the past 12 months, according to Earl Oxley, executive secretary. The firms included: Associated Consultants of Minneapolis, E. C. Bather and Associates, Inc. of St. Paul, Brandt Associates Inc. of Minneapolis, Buetow & Associates, Inc., of St. Paul, Lloyd W. Darg & Associates of Minneapolis, Alden Elstrom Associates of Minneapolis, Feyereisen & Boughton Inc. of Ramsey, Instant Testing Co. of St. Paul, Loomis Engineers of St. Paul, Meisch & Robertson of St. Paul, Donald H. Olson, Consulting Structural Engineer, of Minneapolis, Toltz-King-Duvall-Anderson & Associates, Inc. of St. Paul, Arvi W. Wahlroos of Edina, Carl Walker & Associates of Minneapolis and Robert R. Wallace & Associates, Inc. of Hibbing, Minn.

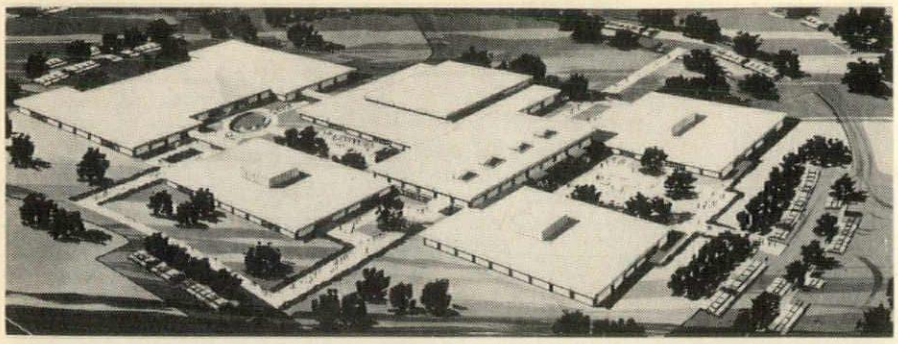
LUTHERAN SEMINAR PLANNED FOR AUGUST

The Commission on Architecture of The Lutheran Church-Missouri Synod, The South Wisconsin District and Concordia College will sponor a two-day seminar on "Architecture for the Church" at Concordia College, Milwaukee, August 2-4.

The conference will deal with the concerns of architects, pastors, building committees and mission boards related to worship, the changing church, programming, remodeling and renovation, first units making more intense use of existing facilities, good architecture for the church and contemporary religious art. Detailed information can be obtained from Uel C. Ramey, 830 N. Main St., Wichita, Kan. 67203. Registration deadline is July 15.

Area Notes

(Continued from Page 180)



in its natural state for as long as possible."

Several cities are working on schemes for urban renewal. Tidying and an increasing pedestrian orientation for Barstow Street is proposed to launch Eau Claire's effort. The Watertown "Times" wants more parking provided than at present proposed by architects **Durrant, Deininger, Dommer, Kramer and Gordon**—but its emphasis on river-edge parking lots betrays a lack of creative imagination. Menomonie's city manager George Langmack suggests that many of that city's master plan improvements could be undertaken by developers, at considerable saving to the taxpayer.

Educational: **Larson, Playter, Smith** of Eau Claire are preparing plans for a fine and applied arts building for Wisconsin State University-Superior, part of a nearly $5 million program. **Schutte-Mochon, Inc.,** of Milwaukee, Kenosha and Appleton have planned the $6 million Fox Valley Technical Institute being built in Outagamie County. **Davermann Associates** have been preparing studies for the proposed new

Fox Valley

North Crawford high school. Alterations and additions to the Nashotah elementary school are being studied by **Orput, Orput and Kurtz** of Milwaukee. Fort Atkinson's **Kettle Moraine Associates, Inc.,** in association with their consultants, **The Perkins and Will Partnership** of Chicago, are preparing a building program for the local joint school district. Vocational, technical and adult education is getting a 256,000-square-foot building in Green Bay by architects **Berners, Schober and Kilp,** who have also designed a similar facility to be built soon in Sturgeon Bay. The first new building on the Southwest Wisconsin Voc-Tech campus in Fennimore, by **Durrant, Deininger, Dommer, Kramer, Gordon,** opened in January. **Stubenrauch Associates, Inc.,** of Sheboygan have designed the $1¼ million elementary school being built on a 15½ acre site in Hartford. Three academic units to accommodate 540 pupils are clustered around the library-resource center and supplemented by a cafeteria-commons room and gymnasium and related facilities. **R. W. Surplice** of Green Bay is architect for the new $1.5 million Wittenberg-Birnamwood high school now under construction in Wittenberg.

The quiet hamlet of Green Lake is to be the site of a quarter million dollar executive conference center designed by **Robert C. Swanson** of Evanston, Ill.

Howard Needles Tammen and Bergendoff of Milwaukee are preparing plans for the $1 million terminal building to be built at Wittman Field, Oshkosh.

Housing: Hudson's 61-unit, $1 million housing complex for the elderly, designed by **Hirsch, Stevens and Samuelson,** is completed. Frederick's 21-unit low-rent project by **Miller & Melby** of Minneapolis is nearing completion. Chetek's 30-unit Lone Oak Manor, by **George E. Clayton and Associates** of Wayzata, Minn., got an additional $56,000 from HUD to insure construction of the $477,000 project. Ground was broken in March for the 33-unit, half-million dollar housing for the elderly in Albany, designed by **Bowen & Kanazawa** of Madison.

The Winnebago Children's Home in Neillsville, a private benevolent institution for emotionally disturbed children, is planning campus improvements and the construction of three 9-sided helical cottages designed by **Skidmore, Owings & Merrill** of Chicago.

A 200-bed nursing home is being proposed for the north end of Nagawicka Lake near Delafield. The $1,000,000 project's architect would be **Roger Sutherland** of Milwaukee. **Schutte-Mochon, Inc.,** are architects for the new Bump Medical Building in Rhinelander.

Public buildings: **R. W. Surplice,** Green Bay, is architect for the New Holstein city hall, recently completed. **Johnson, Wagner**

and Isley, Milwaukee, are designing the new Ripon public library. **Wilson-Haney and Associates** of Fort Atkinson have designed an interesting complex for Reedsburg incorporating the existing library with a new reading room, city offices, recreation center and fire and police facilities.

IOWA

Dubuque County has hired **Durrant Deininger Dommer Kramer and Gordon** to make a study of regional correctional centers with a view to the eventual replacement of the 115-year-old county jail. Seventy percent of the fee of up to $4,800 would be credited toward an architectural services contract if entered into later.

An "angel" in the person of a local bank official gave the Dubuque city council a check for $5,000 to move the Town Clock to a fitting pedestal in the new Main Street pedestrian mall.

THE DAKOTAS

Sioux Falls expects to build pool facilities in McKennan Park. There will be a 100x60-foot swimming and diving pool, a 45x60 wading pool and a 113x25 brick bathhouse. **The Spitznagel Partners** are the architects.

Yankton has three low-income housing projects. The 60-apartment Orchard Square development opened in March. It, with the adjoining 40-unit Meadow Hills group to be completed in 1971, is built under the FHA 221(d)3 rent supplement program, intended for low-income tenants who additionally qualify by reason of age, displacement or physical handicap. The third, Colonial Square, a 42-unit complex, will be completed in 1970 and is being built under the FHA 236 program, which is for low-income families but without further qualification. Architects for Orchard Square are **Koch, Hazard and Associates** of Sioux Falls.

Estelline, S. D. has applied for FHA approval of a twelve-unit rental project which might later be expanded by another twelve units plus a community building and supporting facilities. Architect **Frederick Herrmann** has worked out an ingenious cluster of four units easily adapted to efficiency, one-bedroom, and two-bedroom layouts.

Construction on Fargo's 22-story apartment for the elderly was halted for a few days in March while a six-inch deflection from the vertical on the lift-slab building was corrected. "It was nothing unusual," remarked John T. Jones of the Fargo Construction Co., the general contractor, adding that all buildings of the lift-slab construction type get out of plumb.

Minot's American Legion post plans a new clubhouse on a suburban site to cost between $350,000 and $450,000. **Brunner, Hoeffel & Bohrer** are the architects.

Because of lack of space in this issue the Directory of Suppliers' Personnel had to be deleted.

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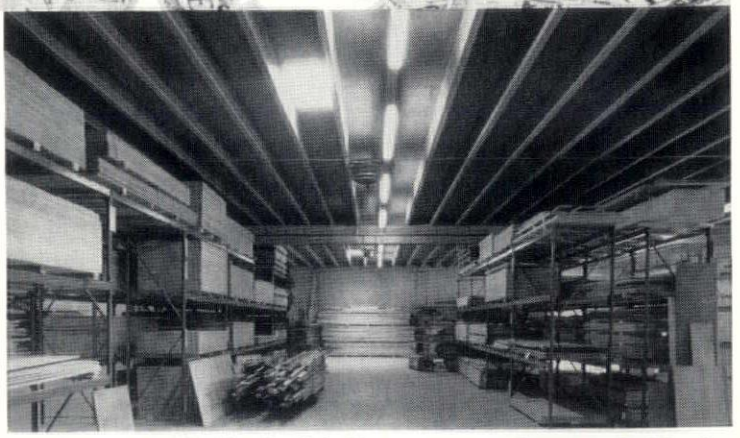

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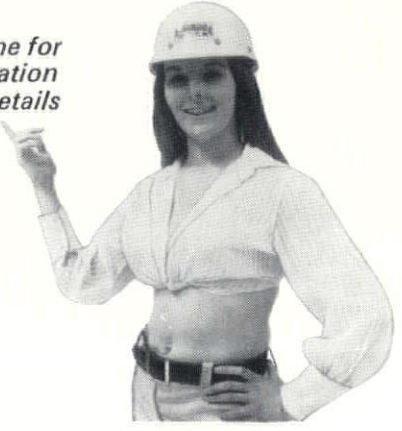

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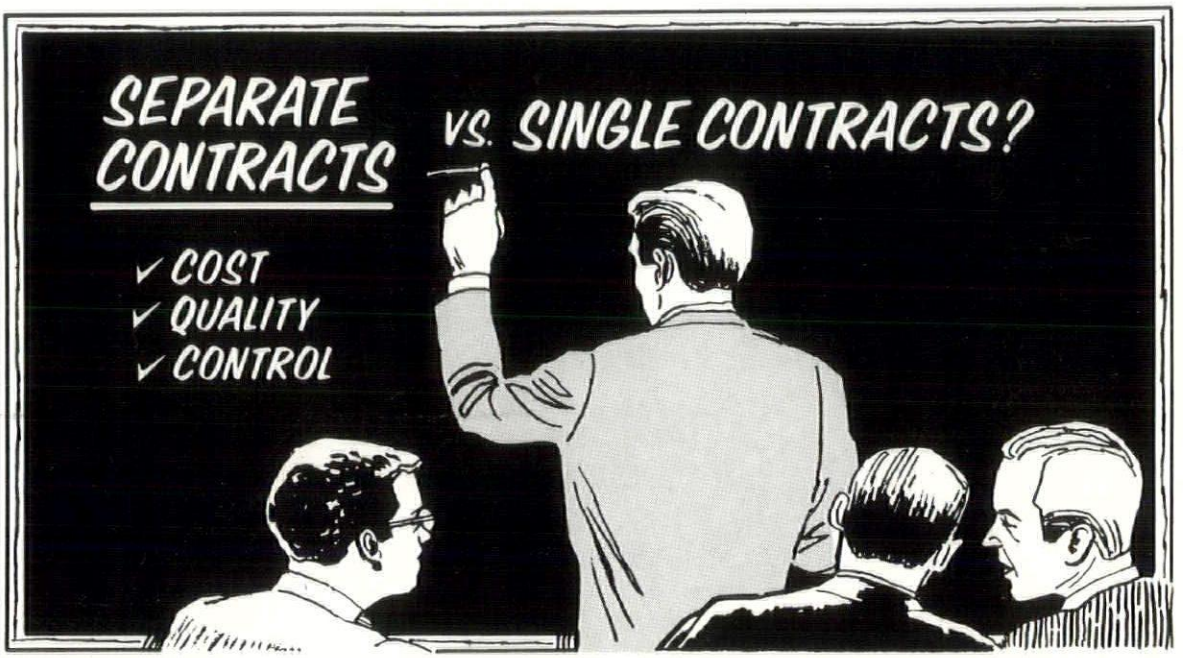

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