It has become clear in both moral and economic terms that our nation can no longer afford or pretend to intervene in the political and military affairs of nations throughout the world, maintain a military and weapons establishment of unlimited size, explore the moon and, at the same time, rebuild our decaying cities, provide an adequate supply of housing, and finance domestic programs needed to solve pressing social problems.

THEREFORE,

BE IT RESOLVED BY

THE ARCHITECTS OF AMERICA

THAT:

One. We call upon the President and the Congress to assume responsibility for a comprehensive reexamination and reordering of our national priorities, recognizing that we have neither unlimited wealth nor wisdom, and that we cannot sensibly hope to instruct other nations in the paths they should follow when we are increasingly unable to demonstrate that we know how to maintain a viable society at home.

Two. We call upon our leaders, at all levels of government, to recognize that an efficient and humane environment is basic to the maintenance of a harmonious and prosperous society and that the skills to produce it are well within our grasp. At the same time, we wish to remind our representatives that neither hope, time, nor technology will solve the problems that presently make urban life a dirty, difficult and dangerous experience. Only a wholehearted commitment of will and money will enable us to apply the skills needed to erase the shame of urban America.


The American Institute of Architects
1735 New York Avenue, N.W., Washington, D.C. 20006
Congratulations to Robert Cordes, Rolf Oliver, John McCarthy and Ian MacTavish for winning the Northern States Power Company 1969 Lighting Design Award.

These 4 University of Minnesota students were selected to share equally in this Award on the basis of their lighting designs for their assigned architectural projects.

Robert Cordes' winning design (on this page) was selected to represent the University of Minnesota School of Architecture in the National Allied Arts Competition at the National Technical Conference of the Illuminating Engineering Society of North America, held in Boston. Mr. Cordes won First Place honors in "Problems, Solutions, and Programs" for the University of Minnesota.
NORTHWEST ARCHITECT
Official Publication of the Minnesota Society of Architects
VOLUME XXXIII NUMBER 7 November-December 1969

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NOVEMBER-DECEMBER, 1969
Area Notes

Architectural News from Five States

PEOPLE

John W. Kornliebel has moved his architectural office from Jonathan to his home town of Hutchinson, Minn. A 1959 graduate of the University of Minnesota, he is registered in Minnesota and Wisconsin and with the NCARB and is interested in the economic development of rural areas.

Iowa area colleges in Waterloo, Kirkwood and Des Moines have graduated 29 from the first year's 12-month architectural drafting program; 58 have enrolled for the 1969-70 year.

John F. Glanton and Cheng-Shong Chiao have formed the civil engineering firm of Glanton Engineering in Minneapolis. Mr. Glanton for twenty years was with the Public Works Depart-

ment of the City of Minneapolis. Mr. Chiao is a graduate of Cheng Kung University and holds a master's degree in civil engineering from North Dakota State University. They offer a consulting service to architects as well as to state and municipal authorities.

Expansion of their work in the field of medical facilities has led to the restructuring of Horty, Elving & Associates, Inc., Minneapolis architects. Arnold H. Berg has been appointed to the position of administrative associate for structural engineering. Three present associates have been advanced to new administrative positions: Leslie E. Formell, administrative associate for architecture, E. A. Maleitzke, administrative associate for field coordination, and Barbara Kassanchuk, administrative associate for business management.

Setter, Leach & Lindstrom, Inc., Minneapolis architects and engineers, have formed an interior design department under the direction of Dan R. Fox, a 1961 University of Minnesota graduate who is rejoining the firm after a three-year absence.

Along with its change in name from Waterman, Fuge & Associates, Inc., to Kettle Moraine Associates, Inc., the Ft. Atkinson, Wis., firm is enlarging its field to include "turn-key" projects for selected clients as well as participation in lease-purchase programs.

Laszlo G. Fulop is in charge of the Wayzata office of the newly formed firm of Clayton & Fulop, Architects, Inc. The other principal is George E. Clayton, who also has an office in Grand Island, Neb.

After 18 years of independent practice Robert Cashin has rejoined the Madison, Wis., architectural firm of John J. Flad & Associates.

Ellerbe Architects, St. Paul, has promoted Gerald A. Crawford to manager of production services. Robert A. Wilson has been named manager of product research.


Robert Hysell of the Minneapolis firm of Zejdlik, Harmala, Hysell and Mackenzie, Inc., has been named an assistant professor of architecture at the University of Minnesota. He is a graduate of the U of M and has a master's degree from Harvard.

Mr. Glanton and Mr. Chiao

AND PROJECTS

MINNESOTA

St. Olaf College's Holland Hall has been sympathetically remodeled by Sovik, Matthe & Madison, Northfield architects. The Norman Gothic building established the use of Minnesota limestone, the continuation of which has resulted in an unusually harmonious campus.

A different look for state college campuses is being urged on architects by Raymond Calhoun, vice chancellor, who told the Legislative Building Commission in September that campus building can no longer "be allowed to proceed always in the same old traditional mold of stately, solid and expensive structures, etc., to endure for a hundred years." He suggests "new concepts in design and construction", including prefabrication, mobile units, etc. Perhaps an ephemeral architecture does best fit our ephemeral society.

Tax dollars flow more freely when they are not locally raised. Federally financed housing for senior citizens is being planned for Litchfield and Olivia. Miller and Melby, Minneapolis, are architects for the former, which has had preliminary approval. An application for the latter is being prepared on the basis of preliminary designs by Horan-Hustad Associated Architects, Inc., of Minneapolis.

Lippins build: a new parsonage in Adams by architect Ross Graves of Austin and a new educational unit for Vang Church in Northfield by Robert Quanbeck of Nerstrand.

Watonwan County Historical Society has employed Wick, Stansfield and Kagermar, Mankato, to design the county museum to be built in Madelia.

Construction of a $1,600,000 child-development center on the site of the old Ancker Hospital in St. Paul is scheduled to begin next spring. Architects are Hammel, Green and Abrahamson.

WISCONSIN

Low-rent housing projects in Wisconsin include: Chetek by George E. Clayton and Associates of Wayzata, Minn., Prairie du Chien by Hackner, Schneider, Rosinski Associates of Milwaukee; and Grantsburg by Herbert Fritz Associates of Madison.

A 91-resident retirement home is being built in Sheboygan under the auspices of the United Methodist Church. The architect is Stubenrauch & Associates.

School construction continues. A $1,750,000 project in Random Lake by Stubenrauch & Associates of Sheboygan has just been dedicated. Wausau West high school by John J. Flad and Associates will be completed in the fall of 1970. Wausau's Lincoln School by Donald Schoepke will be completed in early summer of the same year. Krueger, Shutter & Associates of Madison are to design various elementary school projects in Tomah. The need for a new $5,000,000 junior high school in Eau Claire's West Side was questioned by a representative of the union at a local paper mill, who said that "they were pushing inflation and taxes too far." Architects for this and related projects are Larson, Meese, Peterson and Foss of Huron designed the new music building and auditorium as well as the museum of art, an award winner. The new College of Nursing building was designed by Charles Herbert & Associates of Des Moines.

THE DAKOTAS

Meese, Peterson and Foss of Huron are designing the new courthouse for Stanley County to be built in Fort Pierre, S.D. Cost is estimated at $4,200,000.

Two high-rise housing projects for the elderly projects totaling $5,000,000 are to be built in the Dakotas, one in Fargo, N.D., the other in Madison, S.D. Design and construction are to be by a joint venture consisting of Trossen-Wright-Prokas Architects, Inc. and the Lovingver Construction Co., both of St. Paul, Minnesota.
Preparing for the Soaring 70's

By Louis R. Lundgren, AIA
President, Minnesota Society of Architects

1969 and the years immediately preceding it have been indeed a time of preparation on the part of the architect and others to begin to understand and grasp control of their environment. As we look forward to a new decade of exciting challenge, it may be worthwhile to review very briefly our current year.

During this year we have begun to establish patterns of new interest, involvement and effectiveness. We have a new Executive Director in the person of Donald W. Hassenstab, who is showing his energetic leadership more effectively each month. We have a Minnesota Society of Architects which is acting in concert toward the solution of the problems of our state and our communities.

We have been structuring our services and modifying them to fit the social and economic aspects of our time. We have been dealing with team concepts to prepare ourselves for the creating of a second America with a higher quality and standard of life than in the past. We have been concerned with the quality of man's environment and have noted the shortages in all phases of personnel in the construction industry. We have attempted, in terms of quantity, to increase technical personnel by helping in the technical vocational areas in regard to curriculum and teachers. We have attempted in a consultative sense to improve ourselves and to make our tasks more organized through seminars and service training programs and by critical reviews of our status, both internal and external. We have appointed a special task force for the purpose of enlarging the apprenticeships in the building trades to make the construction industry more effective.

We have established what we believe to be worthy goals which all individuals are entitled to and we have added them to the Four Freedoms:

- Freedom from pollution of the air, water and land.
- Freedom to experience unexploited nature.
- Freedom from man-made ugliness.
- Freedom from mediocrity and the manner in which we construct our shelters.

We believe each of us should be able to experience visually and auditorily and in every environmental sense the very best there is. In order to accomplish these goals we realize we must be more capable ourselves in our ability to work with others and we must train others.

We have seen in a recent issue of the Northwest Architect a vignette of the wonders and beauties of the Northeast and some exciting examples of what our colleagues in that area have been able to accomplish.

We have had a challenging convention, better attended programs, more satisfying economically and, in almost every way, a great convention. This is due to a great number of persons who have worked very hard for this goal. We have had a challenge from the students as to the social significance or pattern as exemplified by the honor awards. While the students' voices might not have been as loud or as articulate as some, they had a message which we all can ponder. It would certainly seem desirable for the honor awards committee, specifically, to rise to the challenge so that in coming years the honor awards will not only recognize the design of our colleges but also measure in some fashion the social significance of the projects presented. It may be well for the MSA board to give serious consideration throughout the year to the social significance of the various efforts which the committees of the Minnesota Society of Architects have set in motion.

In truth we have done a good job of preparing for the Soaring 70's. The challenge is with us. It only remains in each of the days of the next decade to prove that we have a contribution that we have to make.
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SPANCRETE CAST IN A PLASTIC REGLET TO RECEIVE THE RUBBER GLAZING SECTION.
Letters

The 1969 MSA Convention

Northwest Architect:

As a guest of the American Institute of Architects/Minnesota Society of Architects’ Convention billed around the theme “Involvement,” I was present at several lectures and the awards dinner.

During the three-day convention we heard Hubert H. Humphrey speak about the problems of our environment (not just about buildings), elaborating on the fact that the environment belongs to everyone and no one has the right to destroy it. We heard Stuart Udall, former Secretary of the interior, discuss his concern for conserving our natural resources, finding new ways to produce clean power, automobiles that neither pollute the air nor eat up the landscape and heard him endorse mass transit as an asset rather than a liability.

During the dinner a series of awards was presented. None of them really reflected the theme of the convention—Involvement—nor even the greater concern for a better environment (with the exception of a downtown pedestrian bridge).

Earlier in the evening it was announced that there would be a statement from the students of the University of Minnesota’s School of Architecture, which took place after the awards ceremonies. About 20 or 25 students (one even holding a child) marched up and posted themselves behind the head table. Their spokesman took to the microphone and read a statement criticizing you for “giving each other nice little awards” and your “lack” of Involvement.

Until then this seemed all within human reaction and response: the students’ request to be heard (and you receive credit for giving them a chance to speak) and your (and my) docile reaction to their challenge. There was applause and some hissing but apparently the majority applauded the students for their frankness. But, and this seems to me the real factor, none of you stopped or contradicted President Lundgren in quickly referring to the next attraction of the evening without even acknowledging the students’ request to be heard (and your [and my] docile reaction to their challenge). The students’ request to be heard (and your [and my] docile reaction to their challenge). The students’ request to be heard (and your [and my] docile reaction to their challenge). The students’ request to be heard (and your [and my] docile reaction to their challenge).

What is the point of this argument you might say. Well, you gave standing ovations to both Hubert H. Humphrey and Mr. Udall but failed to acknowledge the youth, the present generation, ready to build our environment. It was inexcusable to do nothing more than to applaud somewhat in the safety and anonymity of a semi-dark room. These students who took the time, effort and courage to fight the “architectural” establishment deserved an answer and I sincerely hope that you can find ways to “talk” to each other and to work together in the future.

Peter Seitz, Minneapolis

The Frank Lloyd Wright Special Issue:

Northwest Architect:

Congratulations on your Special Frank Lloyd Wright issue.

Years ago (1953) I was able to collect a number of your magazines featuring articles on Sullivan, Purcell and Elmslie. Even the National Architectural magazines cannot do better. Your publication is the only midwest item I miss since moving to the Northwest.

Milton Stricker, AIA, Seattle, Wash.

Northwest Architect:

We have enjoyed your marvelous Frank Lloyd Wright centennial issue and quite naturally would like to obtain extra copies if possible.

Charles Montooth, The Frank Lloyd Wright Foundation, Taliesin West, Scottsdale, Arizona

Northwest Architect:

If anyone there would be interested in a small keepsake that was printed for the last major exhibit of Wright’s work held during his lifetime (January of 1959, Midland, Michigan) I would be happy to send copies along.

Phil H. Feddersen, Architect, 818 No. Second St., Clinton, Iowa 52732.

CALIFORNIA LEGISLATURE PASSES FACTORY BUILT HOUSING ACT

The California legislature has passed a bill establishing a uniform statewide code for factory built homes. The code, after being signed into law, will pre-empt existing local building codes as they apply to factory built housing. This code will cover housing which is wholly or partly manufactured for assembly on site.

HUD has identified obsolete building codes as one of the chief obstacles to the expansion of the supply of low-cost housing. Its “Breakthrough” program is the main effort to obtain mass production of low-cost quality housing through a partnership of labor, consumer, private enterprise and all governmental units.

MARYLAND REQUIRES INSTALLATION OF UNDERGROUND UTILITY WIRES

Maryland has become the first state in the nation to require underground installation of virtually all utility wires in future construction. The State Public Service Commission said that on October 1, 1969, all new commercial and industrial buildings will be covered by an order in effect since last year that telephone and power lines to almost all new homes and apartments have to be buried.

A major stumbling block in Maryland, as in other states generally, has been the issue of costs and how to share them. In Maryland the extra underground costs of about $150 per 100 feet of lot are apportioned on a front-footage basis but the Public Service Commission said a separate and complicated formula has to be devised for splitting costs between industrial and commercial customers and telephone and electric companies.
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NOVEMBER-DECEMBER, 1969
**SHIELY KEYSTONE BASE**

**CASE REPORT** No. 38 Sports Arena Parking Facility

**JOB DESCRIPTION:**
Parking area for the new Roseville Ice Arena at County Road C, just west of Lexington Avenue, Roseville, Minnesota.

**PERSONNEL:**
Project Designer: Sherm Goldberg
Roseville City Engineer
Bituminous Paver: Munns Construction Company
J. L. Shiely Co. Representative: John Falda

**DESIGN CONSIDERATIONS:**
- AASHO A-6 subgrade soil condition must be adequately prepared prior to pavement construction.
- Subgrade soil is composed predominantly of clay loam and some loamy fine sand (medium consistency).
- Construction of the area will be late in the season (November).
- The base must perform throughout the first winter and spring seasons without the protection of a bituminous surface course.

**SPECIFICATION:**
Class 2 Aggregate Base
APPLY OVER THE COMPACTED SUBGRADE, A CRUSHED AGGREGATE BASE CONFORMING TO THE 1968 MINNESOTA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 3138.1, CLASS 2 AGGREGATE AND PLACED AND COMPACTED IN ACCORDANCE WITH SECTION 2211.

**RATIONAL:**
Shiely Keystone base was specified primarily because of the following factors:

a) **SUBGRADE SOIL.** General unsuitability of the subgrade soil ruled out the possibility of Class 5 gravel base performing adequately.

b) **TIMING:** Because of the lateness of the season and generally unfavorable working conditions, it is not known if the desired density had been achieved in the subgrade soil prior to the placement of the base. Therefore, the base material was required to "key" or "bridge" poorer areas in the subgrade without showing subsequent loss of support, in addition to functioning as a base material.

c) **BEARING CAPACITY.** Because of the high densities and high load bearing capacities exhibited by Class 2 crushed stone base, it was not necessary to place a bituminous surface course the first year, a feature certainly not characteristic of standard gravel bases.

d) **DRAINABILITY.** The dense, hard surface exhibited by the Class 2 crushed stone prevented severe rains from damaging the base and permeating the subgrade soil.

e) **COST.** Although Class 2 was the only feasible material that could be used under the conditions outlined above, an equivalent design utilizing Class 5 gravel base would have been more costly on a square yard basis even if the climate had been milder and the site conditions more favorable. The economy with Class 2 is best exhibited by:

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3) Less base aggregate required to expedite the job.
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NORTHWEST ARCHITECT
Involvement and the Role of the Architect

By Donald W. Hassenstab
Executive Director, Minnesota Society of Architects

“Involvement” was the theme for the tremendous 1969 North Central Regional and 35th Annual MSA Convention in the St. Paul Hilton Hotel. “Involvement” was the key to the entire convention this year from the planning of the committee, the wonderful co-operation of the exhibitors, the top-notch program and the tremendous attendance. There were more than 1,200 persons including 200 students, who attended the meetings and sessions and viewed the exhibits. As you read the convention reports in this issue of the NORTHWEST ARCHITECT we hope that you share this theme of “Involvement” so that we can carry it through to all the MSA projects during 1970 and future years.

Involvement means something from each of us. The president, the board of directors, the committees and the staff can become involved, but this is not enough. The future of the architectural profession depends on the involvement of each and every member. We can discuss the “social responsibility” of the MSA members and the role of the architect in the “total environment” in rather philosophical terms. We are beyond that point. We need action now.

Some months ago I received the following letter in response to a column in the Northwest Architect on “The Role of the Architect.” The author, Dale M. Mulfinger, is a Minnesotan by birth and an architect by degree from the University of Minnesota, class of 1967. His post-graduate experience has included Cottle-Herman Architects, St. Paul, and the St. Paul Housing and Redevelopment Authority (Summit-University project). Since September 1968 Mr. Mulfinger has been with the Architects Collaborative, Cambridge, Mass., and also teaching in the Boston Architectural Center. Mr. Mulfinger has authorized his letter to be printed verbatim on the assumption that it might stimulate dialogue concerning professional responsibilities of the architect.

Gentlemen:

"Being Minnesotan by birth and architect by degree from the University of Minnesota and retaining some desire to return to that state for practice in this field, I am impelled to comment on Director Hassenstab's statements:

"I am sorry to see the M.S.A. has saddled you on a dead horse—like Dan Patch, living on in legendary fashion only. Your dichotomous description-direction is true to illuminate the architect's no-where path. Professing "responsibility to total environment" while representing capitalist clients who "must be able to repose confidence in someone who will represent his interests and his interests alone" are hardly compatible notions. Professional journals remain filled with "client interests" while newspapers scream out the headlines of a society desiring more responsible environmentalists. Progressive Architecture publishes the latest scheme for Carlton Center in the Union of South Africa, designed by a most honored S.O.M.—a millions-dollar scheme for betterment of the white establishment in probably the most racist country in the world. Somehow some architect is detailing three bathroom types—white, grey and black for each floor of a modern lilywhite concrete box, while time is running out on remaking physical environments.

"Assuming your title has some meaning, Executive Director, might you not execute some direction worth professing? We need no pledges for enduring environments built on ego trips but rather evolving environments free for all to breathe life.

Dead horse??? Or involved profession!!!

Dale M. Mulfiger"
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JURY REPORT

The jury agreed that the entries were of extremely high quality. The choices were difficult and we wish there were a way to congratulate the architects of the entire state.

Especially remarkable to us was the number of well designed churches and houses. It is not surprising, perhaps, since historically Minnesota has always been a leader in these categories.

Many of the Honor Awards started as two-to-one choices before unanimity prevailed, but none of the jurors dominated the others—true meeting of the minds.

The choices represent, it will be noticed, a wide range of taste representative of the wide range in American architecture today.

PHILIP JOHNSON, FAIA, Chairman of the Jury
ULRICH FRANZEN, AIA
JOHN M. JOHANSEN, FAIA
SHELTER ON THE SOUTH SHORE OF LAKE SUPERIOR

THE HODNE/STAGEBERG PARTNERS, MINNEAPOLIS, MINN

CONVENTION PHOTOGRAPHS ON THESE AND THE FOLLOWING PAGES BY M. C. WANG
Jury Comment:
A design that artfully conceals art. The hole in the roof in plan, as well as in “elevation,” is a cheap but extremely effective device.
PEDESTRIAN BRIDGES—MINNEAPOLIS, MIN

Dain Tower-Minnesota Federal Bridge; Farmers & Mechanics-F

THE CERNY ASSOCIATES, INC., MINNEAPOLIS AND SAINT
Jury Comment:

The chairman disqualified himself, having recognized the bridge. The other jurors admired especially the successful handling of the Minnesota difficulty of bridges joining differing levels at differing angles. The joint to the building is especially subtle and effective.
CHURCH OF ST. JOHN THE EVANGELIST—HOPKINS, MINNESOTA

PROGRESSIVE DESIGN ASSOCIATES, SAINT PAUL, MINNESOTA
Jury Comment:

Residential in scale but monumental nevertheless, his church is a most intriguing group of roof angles. Reminiscences of Aalton in no way vitiate the quality of the design. Apertures sensitively handled.
RURAL RENTAL HOUSING—HERMAN, MINNE

ROBERT F. ACKERMAN AND ASSOCIATES, SAINT PAUL, MINNE
Jury Comment:

Modesty is a neglected virtue. These houses are near the very best until prefabrication finally (if ever) comes to our profession. Economy is obvious but in this case a virtue. No tricks, no taking.
PERFORMING ARTS CENTER, ST. CLOUD
ST. CLOUD, MINNESOTA

HAARSTICK, LUNDGREN AND ASSOCIATES, INC., DESIGN
WALTER BUTLER COMPANY, PRODUCTION DRAWINGS
Jury Comment:

Unusually successful solution of the horrendous stage house problem. Clear plan. Strong design of exposed concrete span-drels. The jury appreciated especially in the theater the steepness of the rake and the uncompromising straightness of the rows.
SHRINE OF THE MISSIONARIES FOR ST. MARY’S CATHOLIC CHURCH,
SAULT STE. MARIE, MICHIGAN

Jury Comment:
A handsome tower is a feature in these non-medieval designs. The arrangement of parallelograms is original, asymmetric but not affected. The materials, concrete, fits the idea.
RESIDENCE ON THE FOX RIVER—GREEN BAY

THE HODNE/STAGEBERG PARTNERS, MINNEAPOLIS, MINNESOTA
ASSOCIATE ARCHITECTS, GREEN BAY, WISCONSIN
Jury Comment:

A controversial but most successful use of the diagonal to create subtle outdoor and indoor spans within a disciplined cubic volume.
Neal Mitchell, Jr. PE, Boston—systems engineer and developer of the Mitchell system of modular construction.

I think someone who cares is really the problem that the Vice-president was talking about to all of you. I’m reminded again about the story of the chicken and the pig. It seems one morning the chicken and the pig were riding down the highway and they were very hungry so they pulled over to a little roadside restaurant and got out. They started walking and all of a sudden the pig stopped the chicken and he said, “you’re not going to eat there are you.” The chicken said, “Why not?” and the pig said “Have you read the sign on the door.” The chicken looked at him and he said, “Yeah, ham and eggs, our specialty.” Then the pig said, “With you it’s a donation, with me it’s a commitment.”

A research budget for HUD is two million dollars, the research budget for agriculture was 150 million dollars, the research budget for aerospace was in the billions.

You know it’s intriguing that in a society that has been able in aerospace to develop a technology to land on the Moon we are still using the performance requirements of 1910. As a matter of fact, the FHA standards for multi-family housing dates from a public health report of 1920. There has been no significant research on user needs since 1920 and I question whether that one was really significant.

I think our one set of credentials is that we’ve been investigated once by the American Society of Civil Engineers for malpractice and three times by the AIA for malpractice and nobody has yet been able to tell us what we’re doing.

I could walk by your house and say, “Look, you’re living in a slum. You don’t even maintain your property.” And I think the point that I’m getting at is that most of the urban poor are living in systems that are sufficiently bad so that no amount of effort can even make them stay at a marginal level.

The other thing we found, and I was tempted to put a picture of Saigon in here because I have one showing miles and miles of housing and on top of tin shacks, by the way. On top of each one is a television antenna, as you can see. Each one has a refrigerator. You know, it fascinates me that the American consumer industry has been able to sell its product while the architects have been unable to market space.

I think one of the things we found in talking with people is “you know you can save up about $150; you know if you want to buy a house that we designed, it costs like $20,000 and that’s pretty hard to put your hands on.” So we came to the conclusion we ought to find modules of space that $150 will buy because we found in the inner city that when you get more than $150 it’s easier to go out and get drunk than it is to save it. Having lived there, I fully agree.

The next thing we found, and this is typical of all low cost housing, you can see on the deck the reinforcing rods protruding. Everywhere we see a house designed by poor people it is always the provision for expansion. Whenever we see a house designed by architects it’s a finished volume. You know, it is almost as though architects don’t believe in sex. You know there is no opportunity to grow, to let the house dynamically respond to what people need.

The next thing we found is that we keep talking about industrialized housing, you know because we have to pump these things out. Old George Romney says we’re going to have railroad tracks and we’re going to put houses on things in Detroit and we’re going to ship them all over the country. One of the things that we found around the world at least was that the people wanted an individual identity. How can you build such a house with an opportunity for personal expression?

Another thing we found was that priorities change and very, very poor families tend to want location. You know they want to live near the center of the city, you know they can’t afford transportation. They can't
You want to talk systems. This is a single vent pipe, thin wall plastic plumbing system that we pioneered. It's kind of kooky because we packed this thing in urethane foam and did all kinds of crazy things. It got rejected by a building department and we had an assistant secretary of HUD come out and he argued for four hours with this guy in the community as to why we couldn't get passage of this thing. The guy kept saying, "It's incompetent, it's illiterate." There were 18 units and there was only one plumbing riser. I kept pointing out that this was systems building and with systems building you standardize the parts. Finally the guy looked at me and said, "I've never approved 18 houses with only one plumbing drawing." So we took the drawing in the other room and we ran 18 prints. We numbered them from 1 to 18 and we received plumbing approval. That's what you're going to face if you want to talk systems housing and you better have a strong stomach and a strong commitment because it takes time and effort and patience.

We brought old Doris in one night and she looked at me and said, "All right, Fatty, what do you want me to do?" I pointed out to her that she was to build the house of her dreams. So she took a house and she put it down and she put green grass all around it and a little picket fence and a little place for the car to go in and she got up and put her coat on and said, "OK, Fatty, I'm done; let's go." As she walked to the door I looked at her and said, "By the way, Doris, when you get home tonight tell the other two people living in your house that they've got to move." She stopped and she said, "Where are they going to go?" and I said, "Well, I don't know but I got to take that house down to give it to you." She said, "I'm not moving anybody out." I said, "Well, you already done that." So she marched by me and she took the two blocks and she put them back on and she said "They stay." I took the two blocks off and I said "They don't, if they stay you'll have less than what you want and you're going to bitch at me if they go." She put them back on and said they stay. I took them off and I said they go if you're going to have what you want. She put them back on and said, "They stay; I'm sorry, let's talk." (Continued on Page 55)
Robert Engstrom, vice-president in charge of planning and design for Pemtom, Inc., discussed his company's recent submittal to HUD on their systems approach for "Operation Breakthrough."

Some people feel that we can put people in a little box and our problems for housing are going to be solved. Well, they aren't. As was mentioned, we need an additional million housing units a year just to keep even. Demand is fantastic. Even so, if we could cut the cost of the basic framework of costs for residents of homes by, let's say, 10%, when you add in the finances, the tax system and so on you're still only talking of 2 or 3% of the total monthly payment, which is next to nothing. I wanted to show you a couple of things that have changed. As you know, we've gone from the gridiron street to streets that have little curves in them, a few cul de sacs and so on. We've managed to convince the man who runs the snow plow that maybe a cul de sac or a loose street will work and then a little later you can sometimes get a little island or things like that. But in most cases we still have to try to build according to a standard specification. . . .

Now with the help of some modern technology we give the gardener a little work to do and all in all I think we ended up with a development which, as far as the people are concerned, is very livable. I know as far as the children are concerned, it's very livable. I know as far as the children are concerned it's very livable because this is where my kids want to go on weekends. This is the sort of place we're working with because they don't have them where we live. With woods of course it's a little easier but one of the things I think are important is that within this concept some individual identity is sacrificed. I think the individual gains back some identity as being part of a neighborhood. . . .

It's easy to do a lot of things but right now we're in the price range of about $32,000 to $50,000 which is not satisfying the people who need housing. . . . Well, as I mentioned, this is not exactly satisfying the mass market but it does show that our system has been able to accommodate a different concept in the sense that the municipalities have been willing to change ordinances where necessary to accommodate this alternate form of home ownership and the people themselves have been able to change their thinking and as far as we're concerned the market is almost unlimited. . . .

As we got involved with the model home type of residential unit we became more and more convinced that you couldn't plant trees to cover up this type of thing. So we got involved with the manufacturing process and tried to make changes that could be accomplished in the system without somebody telling you to "go away, don't bother me" anymore and this was the prototype unit that was manufactured. Based on the public acceptance as such, or feeling that we had, we kind of felt that we were on the right track and we have pursued this plan of thinking to the point where we do have a manufacturing plant under construction in Marshall, Minn., for the manufacture of this type of mobile home. Now it still falls within the system as such, because the wheels are still on. If we had to wait for a lot of refinements within the system we wouldn't have had anything done because, as you know it does take a little time. . . .

These all still have the wheels on them, by the way. The frame sits on pure footings and the wheels are buried in the pit but it does conform to the system. We don't have to change any code or so on, just get permits the way it's supposed to be. Well, as I mentioned, even if we had the facilities, we do not have the number of men that are required to build the number of units that are required, so I think that this is certainly one of the advantages of manufactured housing—that a lot of labor can be done by people who are essentially unskilled.

Because of space limitations the luncheon speakers at the 1969 MSA Convention will be featured in the forthcoming issue.
William English, president of the policy and planning committee for Minneapolis Model Cities Program, covered the progress being made.

I'm sure that most of you who are familiar with the model cities program and know that it is a Congressional Act created in an attempt to deal with the physical and social problems facing urban communities. My own impression is perhaps it is a giant farce perpetrated upon the poor folks, in most cases black folks, in our urban areas across the country. However, it represents a farce to some extent with a potential and one of the most amazing things to me was that the potential seems to change depending upon who is in the White House and I guess that is a reality that those of us who are powerless are beginning to understand.

I don't know whether they are committed to doing anything but if they aren't that's their problem. You know we have lived in these hell holes for a number of years and three more years are not going to make that much difference if it means that much of the mess that was perpetrated on people before is going to be perpetrated on us again. Now, involvement is the theme, I understand, of this particular conference and I don't know whether you can get involved or not. To me that depends upon what kind of commitment you have and whether you clearly understand what the first gentleman who was speaking when I came in was talking about and that is whether or not you are willing to listen. As professionals in your field you obviously are going to have to learn about people.

So maybe we ought to quit talking about providing low income housing or moderate income houses and talk about providing housing that people like and enjoy. I think if we can get over that particular money hang-up we might lick the fantastic problem that seems to exist. The money hang-up—we are talking about a society that has a nine hundred billion economy, growing in spite of inflation. We're talking about a society that can subsidize every damn thing but people—a society that talks about welfare for people, yet that same society calls loans and outright grants, that are very often you know, dealt with very foolishly and outright robbed, as subsidies. Well, maybe what we ought to talk about is human subsidies, if that is what we need. We are talking about a society that already has committed itself to 4% unemployment for some people, and everybody knows 4% for white folks means 8% for black folks and God knows what for Indians. So when you're talking about what we can afford for some of us, that means we will never be able to afford a damn thing because we are constantly going to be part of that 8% that is unemployed.

What I am really talking about is a clear understanding, is that the problem of money cannot be allowed to be a hang-up or a barrier. If Congress and the administration can allocate the kinds of funds—and we hear something like 40 billion dollars plus whatever is hidden for the war (and I'm not making any comments because what I feel about the war is my business)—for whatever reason, it seems to me that 40 billion dollars could be made available out of 900 billion even if they spent 100 billion for the war, including what they hide. It's probably like that 60-40 that they make public, so then 40 billion for housing, see, makes only 140 billion, using simple mathematics, out of that 900 billion dollars that is out there someplace. Now I'm not an economist and I don't claim to be but it seems to me that that is a small amount out of a gross economy but nobody is talking about spending that for what needs to be spent.

Now if that's the problem why are we talking about design, because the gentlemen showed you the design, we already know that? Why are we talking about unions when they really aren't a problem? If the top blew off the White House tomorrow and if all the union folks were on strike, they would put the top back within two days. I assure you there's no question about it and you're going to tell me the unions are a problem. I can't accept that.

Now, if you are serious about what you are talking about involvement, if you are serious about talking about the housing (Continued on Page 52)
John Orofino is vice-president and general manager of Urban Planners Incorporated, which provides all the professional disciplines of architecture, engineering and planning for the various low- and moderate-income housing programs being developed by the U.S. Department of Commerce. He was the first man to set up the first training program for disenfranchised “ghetto” youth in the drafting arts in Washington, D.C. Orofino was founder and first president of Urban Rehabilitation Corporation, a non-profit D.C. corporation under the aegis of the Archdiocese of Washington.

In essence, the architect can only become involved when he considers himself to be the servant of the people... The architect was always the servant of the patron or a mercantile establishment. Now the architect is in a quandary because he is in essence responding to the people but through limited channels like FHA, damnit, the Public Housing Authority and Damn damn the government and damn damn concerned do-gooders and church groups. In essence, the architect is without a client that he can grab onto...

Almost the first thing the young architect learns when he gets out of school is that the money boys make all the decisions—the bankers, the developers, the insurance companies, the politicians—and all the architect can do is kinda add the Victorian trappings of a new order on top of what somebody else has decided should be done. So he is frustrated and then the individual architect, now frustrated beyond belief, if he is really a concerned individual, begins to acquire knowledge about FHA policies, about law, about politics, about financing...

Architects don’t talk to bankers. They’re the guys who are going to pay the bills and the architect doesn’t talk to a government official because if you upset that guy you’re never going to get a state commission to do a school building; but I was dumb...

When I went into the street, I have to tell you, I was unprepared. As tough as I thought I was, growing up on the streets of New York and knowing how to get involved with hands and feet, I was not prepared to go into the streets of Washington the way I had to in order to learn what was happening there. I was not prepared for the total rejection. I couldn’t understand. I couldn’t understand even after a priest threw me out for liking blacks. He called me Communist and all of those things when he didn’t want to contribute to my pension fund—I called it my pension fund—but I couldn’t understand why the people I wanted to help should throw me out, why they would call me a honky do-gooder, all kinds of the worst things you could ever think of. Then I had to take off my glasses and defend my dignity with a well placed kick and, I will be honest with you, I lost nine out of ten fights. I was beyond the age of really being able to hit these kids. But I kept going back and they figured I was either very dense or very concerned and they finally let me go to some of the meetings where I heard the people talk. I said that I understand there is one thing that an architect is allowed that other business men are not allowed. They said—what that?—and I said integrity.

There seems to be a tradition that should be dying in this profession in order for us to solve some of these problems. The only thing that upsets me is that the architect identifies himself at a cocktail party as a leader and the frustration is that he is a poor servant because any servant who acts as a leader is a poor servant. Then the other most frustrating of frustrations is that everybody talks to you about economics based on the dollar and never about economics based on social values. Those are the economics of what happens to a man living in a slum, of what happens to a man who can’t get proper medical aid, of what happens in a crowded community where the transportation system is expensive or non-existent, of what happens when the politician plays with a deaf ear to the will of the people, the small people who don’t really vote, who are apathetic mostly. This type of economics is what we should be concerned with and not the dollar criteria, where everything is measured by this yardstick of dollars, which is so frustrating...
The last, most frustrating thing that you have facing you is your own hidden fear of your own work, of your own security, of your inability to communicate and relate to other people. It all comes out when you walk into a strange community of hostile, mean, suffering people and you have to overcome the shakes, you have to overcome the adrenalin flow in order to cope.

I really didn't realize it until my father talked to me about it. He is 71 and he expressed that he has bitterness, a certain amount of bitterness that, as he approaches the end of his life, he didn't get to do all the things that he wanted to do. He said to me, whatever you do, make sure you do those things that benefit the society around you and I don't give a damn about the price you pay or what your wife and children pay, do those things which you have to do so when you die you can sleep heavily and comfortably. There is a joy in that. I feel that I have eaten up the burnt offering and, while it doesn't taste the greatest, at least I feel right, I feel that I'm doing something. Why—I don't know. But there are those joys. There is a joy in seeing people respond, there is a joy in finding out that I'm not alone.

You, the architect, are not—I don't want to upset you—but you are not the only humanist we have in our society nor are you the best of the humanists. There are sociologists and psychiatrists and doctors who are oriented toward community problems in their own ways and they have their own ideas but you have to join with them, you have to join with the clergy, you have to go to the banks and put pressure on them. I don't care what kind of pressure it is, if it means that you have to get a black group to threaten to burn down the bank—and I threatened landlords who wouldn't give me heat, I threatened to burn their houses down on Yom Kippur, so you know you can do that. Anyway, you are going to have to do that. You are going to have to face up to the fact that you are going to have to know the police and what happened to the society where we don't know each other.

So I would suggest to you that the architects go to their big fat clients, and I have hundreds of big fat clients now, and tell them that they have to make contributions, that I want to do this thing. I want to be selfish, I want to do my little thing for my little town, for my little people and you're the guy that pays most of my bills, you're my bread and butter account, how about joining with me to do some of this? You know something, it won't be as hard as you think. It won't be as hard as you think to walk into a bank or public official's office, and you, the individual, demanding of him what is he doing about it. Architects are the form givers who stabilize the society so you can—you can really. You don't have to be as big as the AMA, you don't have to be united in the AIA to do this thing; you can do it as one architect—concerned!

I want to wrap this up with three things, or four or five, and they are suggestions to you at large as an AIA, as a housing committee, as students and as individuals. One is that the young architect getting out of school, instead of all this fancy design ideas, propagating himself as the new Frank Lloyd Wright, or the Corbie or the Mies or whatever his savvy wants of his own weirdio thing, that he join the government, that he join FHA, that he join the housing authority. He is qualified for those jobs. He can go in and begin to turn over the system because if he doesn't go in the only way you are going to turn it over is with violence, so he should go in there and the AIA should sponsor him and the state board of regents, which controls his examination, should give him credit for going in there, in order that his young ideas and his interpretation of the law can lead to new ideas for the people outside. And I say to the young architect that you are obligated to join the government. Everybody waits for the government to do it but who the hell is the government if we don't join it? So you are obligated to

(Continued on Page 53)
Taylor Culver, Washington, D.C., is president of the Association of Student Chapters of the AIA.

I'm not a student talking to the profession and I don't believe that you are the profession listening to a student. I believe that we are all part of the same profession.

I would like to get off my chest a definition that I have of "poor" and the difference of poor and broke. I feel that "poor" is a state of mind and that many of my people are "poor." Broke is that which I find white people with no money and so I think that we should clarify the difference between poor and black, and poor and broke.

We question some things like why do we build an SST for ½ of 1% of the population when we have 10 to 20 percent of the population without enough food to eat? We could ask why is there war and we could ask a whole bunch of fundamental questions and the truth of the matter is that you're probably asking yourself the same questions.

There's been a lot of worries going around, the way I feel, about commitment and involvement and things of this nature: of course, when we made these kinds of demands of students and young people, you're going to say, what exactly do you want us to do? I'm not sure exactly what is your capacity to do, this is the first thing, and in fact I challenge you to come with us to discover what are the possibilities of you doing.

I don't know if the problem is architectural—the things that we're talking about. They are involved very heavily in political process and I don't know which line you're going to vote on but I don't think architects as a whole have made their voices heard in any way. You've been such gentlemen about the whole matter that I don't know what it is about you, it's such that you don't want to say anything, obviously. Maybe it is that you want to say something, maybe the guy next door to you who's a conservative intimidates you, maybe you are part of the silent majority who are in fact the good guys. I don't know, and I think it's about time that you stood up and said where you stand because this is the point at which we are now. I don't mean only black and white. I mean I think you're going to see the challenge in your kids. When he comes home with that long hair and talking about smoking and all like that, you see the revolution taking place right around your own house and I want to know what you're going to do about that because when we start talking about the black and white thing, I don't know that the students have their black and white thing together, that's the first thing right there. If we can arrest whatever we've been given here in society and deal with it at this early age we're not going to be locked into a system that gives us what we have today and I must say that I am proud to be of this particular generation, stone proud. I am proud to be this age and I don't know how you feel about yours but we are proud to be with us and we're going to straighten out the mess that we don't think is right.

I know a lot of you are just feeling peeved because you gave to the church and everything and your conscience is all salved and you are really ready and what you tell me is that things are getting better. I know, I can understand that. Things are getting better, I think that laws are wonderful but if they are so hip, then you take them and I will take the Constitution. If the laws that are passed are so beautiful give those to the white people. I will take the white man's constitution and live with that. Now I want you to think about that because I think all laws are just an insult. All civil rights legislation is just baloney because if I am really a citizen, you don't have to pass anything for me. The Constitution works for you as it does for me and these are the kind of inconsistencies that you are going to find no matter where you go. You are going to find them in Minnesota, you are going to find them in Mississippi and it is not just America. We are like, fed up with this hypocrisy that you have been feeding us. You know you claim to be liberals, you claim to do this, you claim you want to get involved...
but you are just mental masturbating and when you get into this thing it's like peeing in the ocean because none of the programs are really big enough to deal with the problem.

Why, if the architect is really intelligent and really the master builder, why in the hell are you putting up only 3.7% of the buildings? Because you are not needed and until you get some people-power you are not ever going to be needed. That's the point. If architects struck nothing would start, nothing would stop, you couldn't stop nothing and I want you to understand that. Until you start delivering the service, and I mean the professionals in here, that will be the fact... you are not going to have any power. We are not going to talk about changing any laws because you are not even going to be able to change direction.

You can sit here in this little glass bubble and pretend that everything is working out. However, I say that in the real world and the world that you are not even driving your car through there are some things that are going on—and I think some very serious things—that if you are a responsible, intelligent professional, I think you should start dealing with.

Why don't you show us what men you are, that you tell us you are, that's what we want to know. Why don't you just stand for something, rather than just stand in the way? That's the kind of commitment we want from you, not a donation, a commitment, a commitment to do something, not just making chin music.

You are losing a lot of students every year. We graduate 2,000 students and only 800 go on to offices. Others go into governmental structures and wherever they think the power lies because the profession has given them something that we don't think is strong enough. I personally want to stay in architecture but it takes some kind of commitment, some kind of professional action, to show me that it is worth it. That's the first thing. Like 800 guys and there are almost 9,000 offices in this country. Think about that. I don't want only to get a feeling on an emotional base. You have to start looking at this realistically. This is a dying profession. We are doing smaller percentages of the work and we are only getting 800 or 900 guys a year to man close to 9,000 offices in this country. And you understand in this area, as in almost all areas, there is a shortage of technicians to make those drawings. ... We have to win over those guys who drop out from architecture. I don't mean those who don't graduate from school. I mean graduate in architecture and choose other professions. We have to find a way to magnetize these individuals to stay with us and to make architecture a profession very viable and very strong, as are a lot of professions, I believe.

In winding up I would just like to relate what a professor at school told me which could solve a lot of problems, I guess. He said if we feel that we are right, and he meant the older generation he said that I wish for you to prove that we are right. I want you to challenge us, challenge us every day and make us know that we are right and make us prove to you that we are right. And that is all we intend to do and that is to challenge you every day!
BOOTHS selected for excellence in visual presentation at the convention:
Rochester Was Pretty<br>Keyed Up Because the<br>City Hadn’t Had a<br>New Hotel in 48 Years...<br><br>Now They Can Unwind...<br>They’ve Got the<br>Fabulous Sheraton!<br><br>We share some of the pride in this beautiful, comfortable hotel in Downtown Rochester. We were privileged to furnish much of the interior millwork for the 16-floor building... to supply the craftsmanship called for by modern architectural design.

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OFFICE BUILDINGS
An International Survey

By Reinhold Hohl. Published by Frederick A. Praeger, New York, Washington. Hard cover, 173 pp. illustrated. $18.50

Reviewed by David Nordale

The reviewer is a graduate of Macalester College, the University of Minnesota and Harvard University. He is a principal with Grover Diamond Associates Inc., Architects and Engineers, St. Paul, and is project manager of the Capital Centre Skyway Building now under construction in downtown Saint Paul.

The tremendous advances in developing tools for increasing the productivity and knowledge for office use has not been followed by a corresponding revolution in office planning and environmental solutions, although some new ideas are presently being explored. Office Buildings, by Reinhold Hohl, is an international survey of office buildings which treats with separate examples the office tower in the central business district, low rise solutions in outlying "open landscape," the traditional office block with its singular street facade and a fourth type, that of an isolated pavilion type building in a low-density residential neighborhood. This type is almost non-existent in this country due to our existing zoning laws. Even the image of a single high-rise building projecting above other low buildings in the town center has a distinct European feeling and was only recently possible due to the waiving of height zoning limitations which have been in effect for centuries.

The author indicates the rising concern for employees' welfare although the examples selected indicate the necessity of providing for these amenities within the building project when not being provided by the surrounding environment such as in "open landscape" areas.

The typical rectangular floor plan with its various building modules is briefly examined together with some examples of those with L, X and H configurations. The more recent large, open general office type of floor area commonly called "office landscaping," allowing for very flexible planning and relationships, is explored briefly.

A section dealing with technical aspects suggests the extent office buildings, especially in this country, are environmentally controlled with vision to the exterior being governed only by psychological requirements. Formal aspects of planning, such as site, landscaping, traffic considerations, etc., are covered together with factual information.

Certain economic and other information concerning these buildings, such as whether a building was developed for single or multi-tenant use, would be valuable to know in assessing the solution executed. Whether a building is a company headquarters (i.e., prestige) type of building or a rental office building affects cost and other factors immensely. The year the building construction was completed is also desirable information a reader should be given.

This book presents an interesting review of some of the latest examples of office construction and also raises questions of how new means of tele-communication, computer techniques and other technical considerations will affect functional planning and the future of the office building as we know it.

Such a survey indicates the limitations of this method, which finds new office building types containing multi-function facilities not represented in this book simply because these buildings are not yet completed, although some are now under construction. Representative of this type of building now under construction is the John Hancock Building in Chicago, which although being multi-function is designed as a single building entity.

Still farther we have the just evolving omni-building type of systems structure which deviates from the traditional single office building type but which may contain major office facilities together with commercial rental, parking, pedestrian circulation, storage, central services, etc. This has been developed often as a horizontal type structure also serving other interconnected vertical office structures in a supplementary capacity. These horizontal omni-buildings have introduced an element of size, scale and function which is not easily assessed from our traditional bastion of single building architecture. It may, however, tend to serve as a necessary catalyst in removing the limitations of traditional single block planning and force urban planners to begin thinking more of the systems required to properly solve some of our urban problems.

Although Office Buildings does not explore these new office building types the book would be useful in any office for its excellent reference value.

NINE CITIES—THE ANATOMY OF DOWNTOWN RENEWAL

Analyzes, in historical retrospect, the urban challenges and responses in Philadelphia, Pittsfield (Mass.), St. Louis, Midland (Texas), Newark, Detroit, Denver, Dallas and Peoria. Order from Dept. RL, The Urban Land Institute, 1200 18th St., N.W., Washington, D. C. 20036. $9.50 hardbound; $5 soft cover.
What do you suppose we consider to be our most important tool in the manufacturing of quality precast architectural concrete products? You won't find it in our back shop—and we really don't have a name for it, but it has one use—to enable us to provide our clients with the high standard of service that assures customer satisfaction. Of course, the beauty of it is that this tool never wears out, if used properly. Naturally, we take excellent care of all our tools. We're pretty fussy about that.
This academic complex includes applications of 24" double tees, 32" double tees, and 36" single tee prestressed units. 90' long x 36" single tee roof units frame the T-shaped swimming pool and spectator area. All single tees were made 7'-7" in width to meet coverage requirements. A departure from the conventional 8'-0" width is easily accomplished in the single tee form because of moveable siderails. The single tees received an acoustical plastic finish.

32" double tee roof units frame the lobby, lunchroom and study hall. Plant cast diaphragms cap the cantilevered ends of these units. Continuous top diaphragm plate and lower stem plates provide connection devices for stone fascia finish. 20" deep mechanical ducts with overhead diffusers run between double tee stems. Mechanical ducts are covered by an acoustical plaster and metal lath finish located 3" above bottom of stems. Masonry partitions running parallel to and immediately under double tee stems have a 3" high U-shaped G.I. closure secured to masonry and encasing stem bottom.

The Prestressed Division of Wells Concrete Products Company was again pleased to offer its P.C.I. certified plant facilities for the manufacture of the various prestressed roof components.
Region 7 and U of W Hold Institute on Construction Contracts and Specs

The Wisconsin Center in Madison was the site of the 9th annual Engineering Institute on Construction Contracts and Specifications co-sponsored by Region 7 of the Construction Specifications Institute and the University of Wisconsin. More than 120 persons, including 28 Minnesotans, participated in the two-day institute on November 20 and 21.

Rogers E. George, CSI, Region 7 director, of Grover Dimond Associates, St. Paul, keynoted the seminar with his remarks on "Specs to Building and Back Again." Following that general theme the first day's session explored project management and control in the construction phase. Panelists in addition to Mr. George included Max E. Fowler, AIA, of Cerny Associates, Robert D. Hanson, AIA, CSI, of Patch & Erickson, Ralph Martinson of Dayton-Hudson Corporation and Lyell Halverson, Minneapolis contractor. Each represented his particular field on the subject.

The second day's session included presentations on master specifications, including available and developmental automated systems, systems for construction data storage and retrieval (microfilm) and a spirited presentation and discussion on new developments in professional liability insurance.

Although this annual institute is held specifically for CSI's Region 7, which includes Minnesota, North Dakota, South Dakota, Wisconsin and Illinois, word of the excellence of the seminar has spread in many circles so that this year, in addition to Region 7 and the adjacent states, participants came from as far away as New York, Massachusetts, Texas and California.

Twelfth Conference of Region 7 CSI Held in Madison

Minneapolis-St. Paul and Red River Valley chapters CSI members attending the Engineering Institute in Madison stayed on an extra day, November 22, for the 12th conference of Region 7 CSI. Fifty members of the seven chapters of the region assembled in the Edgewater Hotel in Madison to confer on institute, region and chapter affairs.

Important issues explored included CSI's total communications concept and CSI and CSI Research Foundation activities in construction communications systems presented by CSI Vice-Pres. Ben F. Greenwood, FCSI of Houston, and an overview of Spec Data II, CSI endorsed microfilm catalog library, by James Murlin of Information Handling Services, Denver.

Mr. Greenwood explained CSI's approach to automated specifications through development of an open ended specifications system which he defined as a uniform nationwide system into which any user (specification writer) can enter and retrieve his own master specifications and take advantage of automation technologies through a service company. This long range concept for a system approach to specification writing has the goal of putting the specifier "on line" and differs from the work of the AIA sponsored Production Systems for Architects and Engineers, Inc. (PSAE), which will implement a content oriented automated master specification system operated on the basis of uniform fees for access to the masters and for data processing services.

The Spec Data II system, Mr. Murlin explained, will catalog some 3,000 manufacturers, in all 16 CSI format divisions, when it reaches the market early next year and will feature a system of filing by product parameters with access to catalog through a microfilm product selector section designed to CSI specifications. As with the other available microfilm libraries, Spec Data II will be sold to users (architects and engineers) on an annual subscription basis.

Rogers E. George, Jr., Region 7 director, presided over the conference. Wayne C. Brock of Minneapolis, CSI North Central Section director, spoke on the institute's financial status. A contingent of 16 from the Minneapolis-St. Paul Chapter was led by Amardo J. Romano, CSI, chapter president, Dale C. Moll, CSI,
chapter vice-president, and H. Bruce Waldo, chapter director and Minnesota—Dakota Producers Council president.

Also attending were past institute and chapter Pres. John C. Anderson, FCSI, Past Region 7 director and chapter president M. Lee Dahlen, FCSI, Past Chapter President James A. Kellett and Robert D. Hanson, Carl Agerbeck, Dennis Nilsson, Jack Lindeman, Burton E. Flick, Richard Dillon, Wallace E. Neal and guest Fred E. Wilbur, AIA.

Local Chapter Committee Reviews Proposal for Revisions to CSI Format

CSI Minneapolis-St. Paul Chapter's specifications methods committee recently reviewed an interim proposal for revising the CSI Format for Construction Specifications, reporting its finding to the institute in early September. By committee agreement only general comments were submitted and the committee did not continue to study the proposal with the view of resolving details which may need refinement.

For those who are not familiar with the interim document, some of the more significant proposed revisions are:

- A five-digit numbering system.
- Introduction of third level titles (dubbed "miniscope" titles by Bob Wilson, to follow the present broadscope and narrowscope titles).
- Changing Division 2 to "Sitework and Utilities."
- Adding a substantial number of titles to Division 2 to include many items of "utilities," such as yard piping, various pipelines, various distribution systems and treatment facilities.
- Additional titles throughout various divisions, some of which may duplicate or overlap Divisions 15 and 16.
- Substantial changes in Divisions 15 and 16, generally placing titles on a "systems" basis.

M. Lee Dahlen, FCSI, committee chairman, reported on the committee's work in the October CSI Chapter Newsletter:

"The proposal states the 'interim study contains a coordinated, distilled version of the work, conclusions and comments' of several special review committees as well as previous membership and industry comments. In part, the changes, particularly in Divisions 2 and 11, are proposed in response to the need to make the format more usable for heavy engineering construction so it will be a uniform format for all construction.

"It would be inappropriate, and impractical, to provide a comprehensive report of the comments of the chapter's spec methods committee. In part, without a thorough study of the proposal, some comments would be misunderstood and others meaningless with the background thinking of the committee.

"However, to summarize, it might be stated that in general the interim proposal was not well received by the chapter committee. In part, it may be due to a misunderstanding of the intent of the third level titles, which is not explained. Their need in a specification format is questioned. The proposal appears to suffer from inconsistent development of several concepts. Some useful elements of the present format have been dropped. Reaction to the proposed Divisions 15 and 16 was generally negative, in that they do not offer improvement.

"The concluding statement in the committee report to the institute was, 'It is believed a good deal of re-evaluation of the proposal needs to be accomplished, in detail and in principle. It is strongly urged another interim proposal be issued for review prior to any format changes.'"

Minneapolis-St. Paul Chapter CSI Technical Committee Assignments Announced

Dale C. Moll, CSI, vice-president and technical chairman of the Minneapolis-St. Paul Chapter CSI announced that all members of the chapter have been assigned to one or more of the chapter's 17 standing technical committees. Objective of the chapter's technical structure is to provide a flexible framework for formation of subcommittees for review and comment on specific proposals of the Institute's Technical Documents Program, for preparation of narrowscope technical studies in the institute for study of specific industry problems affecting the local area.

The committees and their chairmen are: Specifications Methods, James A. Kellett; Division 1, General Requirements, Robert Wilson; Division 2, Site Work, Jack Lindeman; Division 3, Concrete, Robert VanHoe; Division 4, Masonry, Richard Schumacher; Division 5, Metals, Al Nuhn; Division 6, Carpentry, Alex Gintner; Division 7, Moisture Protection, Dwight Jennings; Division 8, Doors, Windows, Glass, Richard Glumac; Division 9, Finishes, Kenneth Peterson; Division 10, Specialties, Bernard Leider; Division 11, Equipment, Dale Blomsness; Division 12, Furnishings, Robert Sorenson; Division 13, Special Construction, John Anderson; Division 14, Conveying Systems, Carl Agerbeck; Division 15, Mechanical, Milford Bird; Division 16, Electrical, Orville Oberg.
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English (Continued)

problem that faces us this year and next year, you cannot afford the luxury of allowing them—Mr. Nixon, Romney, LeVander or the damn state legislature which won't meet for another two years here—you can't afford to allow them to get away with it.

Most of you people, I want to generalize to some extent, are going to go home to very nice places tonight or next week and so you know you can afford to wait two years. The point I am trying to make is the theme of Involvement must be meaningful and I really don't mean to castigate you as individuals. I guess I am kind of generalizing about your profession. I can't believe that you are totally serious when you can sit back and pretend that I have told you anything earth shaking. You know I haven't. You already know these things. I can't tell you anything that your learned profession doesn't know already. It is a simple matter of how the power is used...

Then someone says there's a manpower problem. Well, I would like to tell you that the best figures say there are 30,000 black people in this community, which runs about 8% unemployment . . . I have a colleague, a gentleman by the name of Bellecourt, and he says there is 16% unemployment among Indians and they are ready to do the same thing . . .

I believe that manpower does exist—we just haven't tapped it. Any tomorrow when you put up a livable wage, he will be there. You don't have to ask me to find him for you. I will define his for you. All you have to do is to say that tomorrow we want 300 men, with no skills, who are willing to work for $4.00/hour and I can guarantee you that he will be there. No question about it. Then when your foreman tells you that he can't work with this guy, tell him you are going to give him $300 more per month to teach this guy to do the job and I will assure you he will teach him; he will teach him! Add $300 more per month to his salary and he will teach him. That is the incentive . . .

I think we could forge an effective coalition today to get the job done. If the architects' association and the builders' association and the people join hands we can make government respond tomorrow. And, as powerful as Dave Roe is in this state, I can assure you that we can make him move tomorrow too. All we need to do is to forge that coalition. We haven't done that. You work alone. Pentom is way out where the gardener comes out and, since I have never seen a gardener in my lifetime, never seen a guy cut my grass because I didn't have any grass, well, I can't understand you and you don't know anything about me. For the architects there's some guy who designed Northwestern National Life Insurance Company and he lives in Japan—but that is a cultural gap, isn't it, because I don't know anything about that? Nowadays we are forced to know each other. We need you and I can assure you that you need us. You don't think so at this point but I assure you that you do . . .

We want to put up something that we can live in, something which takes architects to design so, you know, we invite you to participate with us and, since we are told that the developers are the guys who can do the building, we are extending our hands to them. Now we might hold out for a little piece of the action, you see. We might say that you are going to build 250 units. If you will teach us . . . where we
don't know a thing about development, let us build
50 so we will learn how to build 50 thus we will
learn how to do it the way you have done it and
that's pretty smart because businessmen have been
done that for years anyway. You know you sub-out,
you grease a hand; you know we found that out
(what about Haynesworth?) you know that's an ef­
fective way of negotiating. Now that's all we are
trying to do, we are going to make it open and every­
body is going to know it. I don't think that is an un­
fair condition to hold out. We want a piece of the
action, a stake in the system as Mr. Nixon put it.
Therefore we are saying build 250, show us how it's
done, give us your expertise, make sure you can
build 150 more and we will build another 150. We
need the housing and you said you need manpower
and this seems to be the resources to do it, so it
seems to me that we need each other. . . .

People are frightened to death by the kind of
monsters that exist in the Model Neighborhood to­
day, apartment buildings—you know what I am talk­
ing about. You have seen them all up and down and
that happens in spite of zoning and all that. The fel­
lows just went downtown and wheeled and dealed
and got the property and got it rezoned and all that
and stuck up next to my single family dwelling. We
intend to prevent that from ever happening again.
We're not saying that a community in the city
doesn't have a kind of density that requires it should
go up. If we'd ever seen some of the apartment
buildings that looked like some of the things that
you fellows showed on the board today, who would
fight that? That would be crazy. They were really
groovy, we know, so we need that kind of thing.

Orofino (Continued)

join the government and to serve and if it means
that you get a draft deferment God bless you . . .

I would suggest that all architects, and this is
the hard thing when you have to make a buck, when
you're getting a project in public housing that you
do with the pat solution. Maybe you spend—
instead of one day on design with some young long­
haired kid and you let him run wild and then at the
end of the day you cut it off back when he goes
home—time to explore some ideas, that you do the
research, that you do the problem solving and you
do take it into the community, even if the public
housing authority, like the one in Wilmington, No.
Car., said to me "don't you dare go talk to the peo­
ple; I'll tell you what I want, otherwise you won't
get the job." We went into the street and we went
down there to talk to them. We found out about the
life style in the South of big porches, of high ceil­
ings.

The most important recommendation is that you
become the sole entrepreneur in this whole housing
field and you do it by respecting the dignity of other
individuals, that no matter what your training has
done to you, what your family life has done to you,
what circumstances have done to you, you will erase
any hatred of your fellow man, any fear, because
the fear in you, be it small or large, is destroying
our society. If you erase the fear in yourself and
the hatred, if you can honestly when you go to
church or temple face your Maker, I'll tell you, you'll
be a lot happier. Thank you.

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For details, refer to Sweet's Architectural File (22a/w)

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She worked for five hours after that, planning her neighborhood. She started telling us about how kids play; you know, how kids move, what kinds of things her kids needed to grow up and be reasonable citizens. And you know, by golly we learned a lot... My recommendation to you gentlemen, my recommendation is FHA won't permit you to do this. This doesn't make sense, you know; poor people can't afford it. But what we have to determine is what must they have in order to have a decent society and I think if we buy anything less than a decent society we're criminal....

Now it's fun to sit and talk about everything that is wrong. I propose to show you some of the things that we've done so that you can criticize them. We started by coming up with a post and beam system, columns being sized for industrialized forms that can be mass produced and if the frame is structural, the walls can be non-structural. That is environment barrier. We can make them wood, we can make them masonry, we can make them concrete block. We can make them any damn thing you want. And the idea is to begin to build with a system the capability for growth and change in a community.... we got three days to fabricate the components, seven days to get it to Washington, three days to build and then they decided that they were going to test it. They told us that it had to be designed for 40 lbs. per sq. ft. Now just to give you an idea, we questioned their design parameter and they told us that we couldn't, but just to give you a further idea, 40 lbs. per sq. ft. in the bathroom are 4 people sitting on the pot, 3 people in the bathtub, 6 people brushing their teeth, and 5 people waiting for an opening somewhere. Now I don't know but poor people just don't live like that, you know....

We built three prototype units. Again, the mayor of this town in order to build these units... couldn't get a contractor that would do it because, as I say, 21 violations of the ACI code and 11 major innovations in terms of technical sub-systems. We had a community all turned on in terms of what it was so the mayor looked at us and he said, "You know, I'm committed. Let's do it." So we got the mayor to by-pass the building code by executive order and then we got the local power company to put 40 K, which they gave to the Mayor which he put in his private account. Then we undertook the role of being general contractor, which obviously we can't do and the mayor took the role of being the paymaster and he paid the subs that we told him to pay and we handled the building process. Then we got investigated again because we were malpracticing and I guess what I'm trying to say is that I think we ought to start doing a little more malpracticing if we want to solve the problem....

Now what I really wanted to do is to hopefully get you thinking, number one about the research that's needed, number two about the acquaintance that we have to make with the community in order to find out what they want, number three to take a look at the kinds of industrialized housing that are possible. This is just one of many that are possible but this is a small component system and the kinds of flexibilities and architecture that are possible. I think that if you let your mind go it is very easy to beat down the old discussion that industrialized housing is going to sterilize the city. I don't think it need be so. Not if all of you become involved.
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Mr. Cordes is shown in the picture at right with his award winning design, while the above picture shows (l-r) Ian MacTavish, Robert Cordes, Rolf Oliver and John McCarthy.

One of the four winners of the Lighting Design Award sponsored by Northern States Power Company at the University of Minnesota's School of Architecture, Robert C. Cordes, went on to win first place in the National Illuminating Engineering Society Allied Arts Lighting Design Competition.

His winning design, Lighting for a Human Rights Pavilion, was a school design project. He is the third consecutive student from the U of M School of Architecture to win the first place national award, according to O. C. Oberg, supervisor of engineering and educational services for NSP.

The four Minnesota students shared the NSP award equally, which one entry from each participating school is judged, Mr. Cordes' entry won out over schools from all parts of the United States and Canada for "Problems, Solutions and Programs." The final competition was announced at the IES National Technical Conference in Boston.

ST. PAUL HOME-A-RAMA
SET FOR FEBRUARY

The Builders Exchange of St. Paul will again sponsor Home-A-Rama, annual home show, according to Pres. Fred R. Aichinger. The show will be February 21 through March 1 in the St. Paul Armory. Ray A. Thibodeau, Bx executive secretary, will again be show manager.

This will be the 13th annual home show sponsored by the exchange and will feature more than 150 exhibits of new products, equipment and materials for the home. Admission will be free.

Ralph V. Nardini has been named general chairman for the 1970 Home-a-Rama. Mr. Nardini

NORTHWEST ARCHITECT
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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Zenith Products Appoints Horwath and Biagini

Two new members of the staff of Zenith Products, Osseo, Minn., have been appointed to increase service to architects and others in the area construction industry, according to word from M. G. Brickson, company general manager.

Ray Horwath has been named to represent the company in sales in the Twin Cities' area for Spectra-Glaze and Burnished Masonry Units.

Otto Biagini is sales and technical representative in the company's new supply division. He has been associated with the terrazzo industry for many years and was technical representative of the Northwest Terrazzo Association before going to Zenith. Zenith will be supplier of aggregates, cement and other materials used in terrazzo, precasting and landscaping, the announcement said.

ARCHITECT NAMED DIRECTOR OF AMERICAN ARBITRATION ASSOCIATION

Max O. Urbahn, New York architect, has been elected to the board of directors of the American Arbitration Association, ac-
according to Donald B. Straus, president of the AAA. A past president of the New York AIA Chapter, Mr. Urbahn is currently regional director. He has received commendations for excellence in design dating back to his student days at the Universities of Wisconsin and Illinois and at Yale University.

Mr. Straus said the election of Mr. Urbahn as a director of AAA reflects the increasing use of private dispute settling techniques in all branches of the construction industry.

PCA AWARDS PROGRAM ANNOUNCED

The Portland Cement Association has set March 16 as the deadline for entries to its 1969-1970 Architectural Scholarship Awards Program. The Fontainebleau School of Fine Arts in Paris, France, will be host to eight finalists for 1970 summer studies under the current program. As in past years, two will be selected from each of the Association's three divisions (eastern, western and Canadian) and two will be at-large awards.

The scholarships provide transportation, room, board and tuition, with each total award not to exceed $1,500. Competition is open to full-time architectural students who are in their fourth (next-to-last) year of study in schools that are members or associate members of the Association of Collegiate Schools of Architecture in the United States and Canada.

Design solutions may be done in any drawing, photographic or similar medium. Entries must be designed to meet commercial, institutional, residential or religious needs and must be designed in concrete or other cement-using material such as concrete masonry, terrazzo or stucco.

A panel of architects and educators will judge entries. Winners will be notified on or before April 15.

Details can be obtained from the Portland Cement Association, Old Orchard Road, Skokie, Ill. 60076, or any PCA regional office.

SHIELY HONORS FARRELL ON SHOVEL

The J. L. Shiely Company of St. Paul puts great emphasis on its men and when it was faced with how to reward 55 years of service, recognized that a gold watch is nice and so is a portrait on the office wall. However, the firm came up with a really "earth-moving" idea. It named its new, 216-ton electric shovel, biggest in the Twin Cities' area, after Henri J. "Jerry" Farrell, longtime company secretary.

Mr. Farrell was first employed by Joe Shiely, Sr., as accountant,
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MCPA AND ARM HOLD FIRST JOINT CONVENTION

Realizing their community of interests, the Minnesota Concrete Products Association and Aggregate Ready-Mix of Minnesota re-
Recently held a joint convention in St. Paul. While certain business sessions were held separately, the two groups heard several speakers during joint sessions discuss problems of importance to both segments of the construction industry.

Ray Reierson of Model Stone Co., Minneapolis, was elected president of MCPA for 1970 and Charles Hammel of Cannon Valley Ready Mix, Inc., was picked to head ARM.

Among speeches to the joint session were those by Charles Russell, executive director of the Minneapolis Housing and Redevelopment Authority, who discussed "Functions, Operations and Future Projects of HUD," and Joseph H. Walker, vice-president for research and development, Portland Cement Association, from Skokie, Ill., whose topic was "New Developments in Cement and Concrete Uses."

Norman E. Henning of Twin City Testing and Engineering Co., addressed the separate ARM meeting on "After 20 Years—the Same Problems."

COLE-SEWELL ANNOUNCES FIBREGLASS SHOWER

The Royaline Division of Cole-Sewell Engineering Co., St. Paul, has announced a new 48-inch all-fibre glass shower stall. The new shower stall is now in production.

"The forming possibilities of molded fibreglass are almost unlimited, making possible extra features incorporated into the new model," Herb Sewell of the company reported. "These include a molded corner seat, allowing the bather full freedom of movement from a sitting position, a molded self-draining soap ledge at showering height, with a series of fins that hold a bar of soap off the ledge, and a molded door jamb for splash control.

"Royaline shower stall has been designed using the most modern fibreglass technology, which incorporates a sandwich wall construction," Mr. Sewell said. "Sandwich construction is superior for several reasons—it is stronger because the wall is a laminate, con-

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

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NOVEMBER-DECEMBER, 1969
sisting of layers of fibreglass and foam plastic; it is warmer because foam plastic is one of the best insulators known to man; and it is quieter because foam plastic deadens the sound of showering water. In essence, the Royaline sandwich construction makes the bath fixture stronger, warmer and quieter than ever before. It is an entirely new way of building a fibreglass shower stall.”

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Royaline proudly announces this brand new 48” x 32” shower stall with integrally molded soap ledge and molded seat. Fiberglass and polyurethane sandwich construction.

More complete information on request

Component Parts Reports New Systems

Component Parts, Inc., Minneapolis, has in production a new concept of composite design in flat roof and floor systems, named Spanjoists.

Eugene C. Day, president, said the company can offer architects, engineers and builders “a combination of economy, strength and lightness as Spanjoists add the strength of steel and plywood to common lumber for use in residential, commercial and industrial buildings.”

The components are available in spans up to 56 feet and in depths from 9 to 36 inches. A wide range of profiles is offered for bearing, bridging and duct use.

The new Spanjoist catalog is available upon request, Mr. Day said. Its address is 5720 Wayzata Blvd., Minneapolis.

Kindem Names Johnson Sales Rep

Alden Johnson of Red Wing, Minn., associated with the lumber industry for many years, has been

Mr. Johnson

COLE-SEWELL ENGINEERING COMPANY
2288 University Avenue, St. Paul, Minnesota 55114
Area Code 612 646-7873

Northwest Architect
appointed sales representative for Andrew A. Kindem & Sons Millwork Co.

Mr. Johnson's appointment represents intensified service to millwork dealers in southeastern Minnesota and Southwestern Wisconsin, Arne C. Kindem, president, said. The new representative had previously been with Gipson Lumber Co. and Lampert Yards, Inc.

St. Paul Curtainwall Weatherproofed by Ceco

Although not apparent at first glance, the exterior of the Northwestern National Bank Building recently completed in St. Paul's Capital Centre constitutes a major advance in the protection of metal curtainwalls from damage by weather and atmospheric contamination, according to Ceco Corporation, Chicago, manufacturers of the curtainwall system.

All metal components of the building's curtainwall are coated with Cecoclad, a polyvinyl chloride finish developed by Ceco. The deep brown plastisol coating was factory-applied to 576 fixed windows, 857 insulated steel panels, 1,344 14-gauge steel mullions and 3/16-inch steel fascia panels.

Application of plastisol cladding on such a large scale is a relatively recent development, although this type of permanent finish has been used for a number of years to eliminate the need for regular repainting of steel windows. More recently, the same type of plastisol coating also has been applied to aluminum windows as a low-gloss alternative to anodizing.

Grover Dimond & Associates, of St. Paul, who designed the Northwestern National Bank Building, have combined the dark brown plastisol coated metal components with precast stone panels to...
A new concept
of composite design in buildings
RESIDENTIAL
COMMERCIAL
INDUSTRIAL

We invite your inquiries concerning this new and remarkable combination of economy, strength and lightness in flat roof and floor systems. Component Parts' SPANJOISTS add the strength of steel and plywood to common lumber, providing the required deflection for all types of buildings. Write or Call for Brochure and Information.

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Jokake Inn
PHOENIX, ARIZONA

create a strip system, which has
vertical sight lines achieved by
alternating a strip of windows and
panels with a strip of precast stone panels.

This curtainwall encloses the
tower portion of the building,
which rises from a broader threestory base. The base, which
houses retail shops and a two
story banking floor, is enclosed
with special steel components. Since these components were too large to pass through Ceco's electrostatic finishing line, they were not coated with plastisol. Instead, they were delivered with a prime paint coat and then field painted in a deep brown color to match the Cecoclad coating.

The non-porous plastisol finish
is four times as thick as paint and completely covers all exposed surfaces, including corners, rabbets, radii and the insides of mounting holes. When such areas are finished with paint, they are vulnerable to flaking and corrosion but there is no way to get at them later on when maintenance painting is required.

This complete coverage is made possible by an electrostatic spray process. The coating prevents oxidation, rust and corrosion. It virtually eliminates maintenance. It will not crack, chip, blister or peel. Laboratory testing has shown that the finish will withstand continuous exposure to acids, alkalis, and corrosive atmospheres. The bond between cladding and steel or aluminum endures water immersion, distortion and impact tests without loss of adhesion.

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HOME • COMMERCIAL • INDUSTRIAL INSULATION SPECIALISTS
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Box 1237  Mankato, Minnesota
200 ATTEND NECA OPEN HOUSE

Nearly 200 architects, engineers, members and others attended an open house in the new offices of the Minneapolis NECA Chapter recently.

Jack O'Rourke, Minneapolis chapter president, said the new quarters are "highly functional as well as attractive—our 2750 square feet of carpeted space is comprised of four private offices, general offices, conference room, supply and store rooms. The building location—one block from a new freeway—makes our office quickly accessible from any place in the Twin Cities' area."

Hostess at the Open House was Mary Lou Williams, a former Miss Minnesota and daughter of NECA Contractor Melvin Williams.

ALUMINUM ASSOCIATION SETS UP LITTER AND WASTE PROGRAM

The Aluminum Association has announced the appointment of a full-time director for a program on litter and waste disposal. John C. Dale's duties include maintaining liaison with government agencies and other associations.

EDUCATION PLUS: What midwestern high school of 170 boys currently has alumni at Harvard, Princeton, Swarthmore, M.I.T., McGill, London and Oxford (Rhodes Scholar), welcomes Americans and produces great hockey teams?

### Directory of Suppliers Personnel

The following listings of current advertisers' personnel is set up for the convenience of architects and others who may wish to contact companies for materials, equipment and services. The company name is listed in boldface type, followed by the headquarters address and phone number. Representatives are then listed by name; in the case of those not working out of the headquarters office, the rep's local address and phone number, when available, are also given. Comments for the improvement of these listings in serving our readers are welcomed.

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