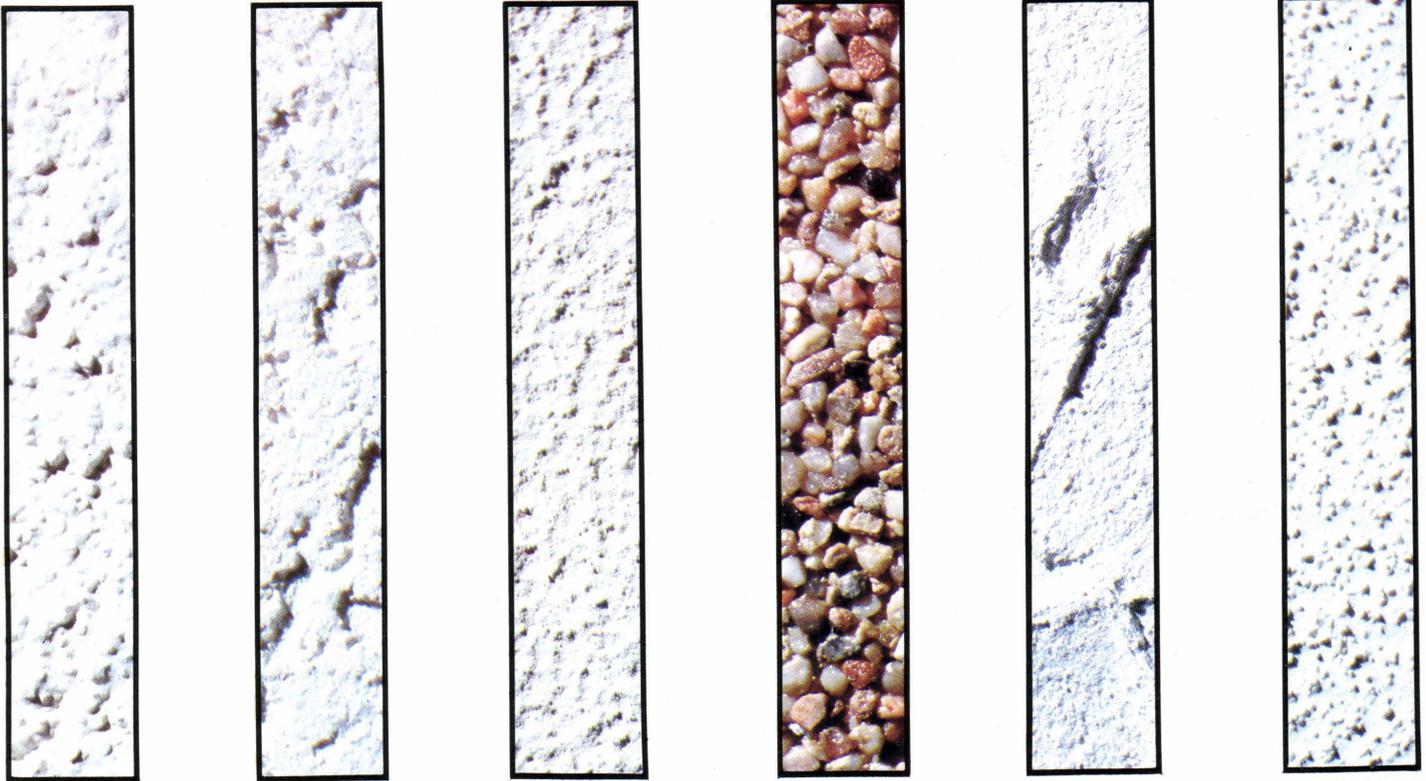




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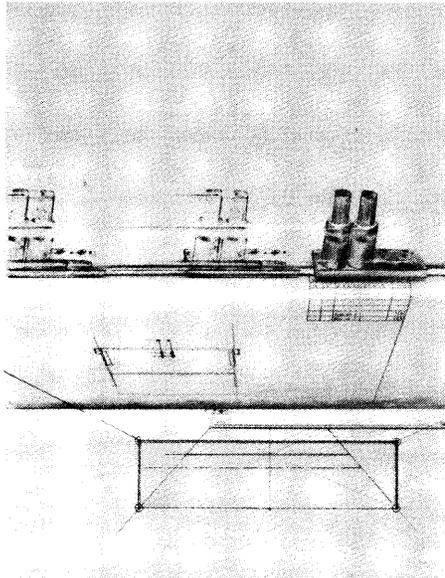
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On the cover: An illustration of the new computer-aided design and drafting (CADD) system.

## Microcomputers in the Small Architectural Office 4

Looking ahead to the NCAIA Winter Convention, experts discuss the advantages and benefits of this new technology in four separate articles, followed by an *NCAIA Office Practice Survey*.

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**Coming Next Issue:** The 1982 NCAIA Awards for Excellence in Architecture.

# Small Architectural Office

Exhibitors will be present at the convention representing microcomputer work stations in all three areas: data processing, word processing, and computer aided drafting. The seminars, time permitting, will allow for "hands on" operation. In addition, manuals will be distributed to participants that they can then take back to the office and use as a working notebook and update. The manual will contain articles on the considerations on selection of a microcomputer for your office, and representative product literature from the individual manufacturers illustrating the nuts and bolts capabilities of their computer, storage capacity, software availability, leasing arrangements, and general working design of the unit.

In summary, the individuals above will be charged with the task of convincing *you* that computer technology is here to stay in the architectural profession and that "computer" is not an "untouchable" — that microcomputers are one of the most effective and affordable management tools that can be used in the progressive architectural office. ■

## The Stone Age Versus Automation

By RAYMOND J. FRANK, AIA

**I** read an article the other day about the Aborigines in Australia. It was difficult to believe that those people are just beginning to develop beyond the stone age. The Aborigines have survived without benefit of fast food chains, shopping centers, and automated systems. Their way of life was good enough for their ancestors, good enough for them, and may be

good enough for some of their children.

In much the same way, we tend to say that cutting paragraphs and whole pages from old project specifications and pasting them together to form new project specifications is a time-tested, satisfactory method which was "good enough for my father and is good enough for me." Why, just look at the progress we have made since dry copiers and magic mending tape came to our aid. And when we use some of the secretary's white-out, we can have camera ready copy in "gig time."

How long can we go on fooling ourselves? Time is money. Service is all we

have to offer, and service is measured in terms of time. You can spend your time updating a good specification master and edit selected portions of it for a project, or you can continue to take chances on making errors through omissions and through the use of antiquated project specifications. Remember that the man or woman who offers better and faster service usually gets the job.

In order to advance beyond "stone age" methods in preparing specifications today we need three things: hardware, software and editable text. Yes, and money, but you need that anyway; there is no such thing as a "free lunch." Finding hardware (anything from an electric typewriter with a memory to a stand-alone word processor) is not a problem. They are advertised in almost every newspaper and magazine which comes to your attention. Software is the prewritten program which causes the hardware to manipulate the text as you make editorial changes. The text you use is the most important item. The most sophisticated and expensive hardware in the world will not improve a second rate specification master.

Selecting the right hardware will be much less difficult than making the decision to go to automation. There are at least a dozen salesmen who will demonstrate their equipment for you at the drop of an invitation. Look at all of them if you have the time, but rule out the gimmicks, look carefully at the software, be sure that the system can be kept up to date and, above all, be sure that quick, reliable service is available.

Selecting the proper text is essential to writing good specifications. There are two excellent specification masters on the market. There are many other

# Small Architectural Office

The concept being developed in foreign countries is not directed at design and drafting alone, but rather the idea that the entire field of architecture, engineering, construction and related fields should have a common goal from automated communication and development. In the United States this concept has often been discussed but in most cases is avoided because of possible government involvement and the amount of time and money it would take for such an effort.

As a result of the concern of private enterprise to maintain its status, we may be feeling the effects of possible retardation in developing a future for Computer Graphics in the fields of architecture and engineering. Our current abilities in the realistic uses of Computer Graphics are limited to the basic effort of drawing undefined lines. Undefined meaning that in the graphics storage of information, a line or series of lines does not contain information characteristics other than a starting and ending point on an XYZ coordinate grid system, and collecting various simple forms of bills of materials.

Our current need for Computer Graphics is to provide a supplement for our dwindling ability to obtain drawings and draftspeople. To this goal, the method of Computer Graphics is unsurpassed by any other method currently available. What Computer Graphics is currently presenting to our professional field is probably the greatest potential for advancement in the past 50 to 100 years. The unknown potential of increased production in less time provides A/E firms with the ability to do more projects and/or provide more review time for the current amount of projects.

The problem that our discipline has at this point is that we are looking at providing our services on more projects rather than using Computer Graphics and other computerized methods to provide better products through additional analysis. We also are not taking complete advantage of our opportunities to expand our abilities to produce a better product through new ideas created by additional analysis.

If we look at the potential of Computer Graphics, and, in turn, the many other computerized methods of production and analysis available to our efforts, it is possible to anticipate a completely revolutionized method of A/E services. Our corporation this year began a five-year commitment to spend large amounts of

money and time to develop what we anticipate as a total mental and physical turn-around in the production of A/E efforts. We are not doing this at our own pace and inertia, but rather because we are being forced into this position by the requirements of our clients. Clients now demand that we produce more evaluations and drawings prior to solutions and construction.

Our goals include many things that at this time are only ideas and have very little, if any, study behind them. Although these areas of development are evident, we have committed our efforts to search out, document and develop each of these unknowns.

We anticipate that at the end of the five-year period, our computerized efforts will produce what we call "intelligent drawings" which will be able to provide us with such things as totally automated schedules, budgets for time and manpower as well as construction dollars, analysis for energy conservation, sound transmission, structural design, civil site analysis, mechanical air and water supply and return, drawings, perspectives, colored C.R.T. analysis, paperless mail, and inter-office communication of drawings and information between cities, etc.

We look at this project as a total effort between us as an A/E firm and all of those disciplines related to our product. With this viewpoint, we are making an

attempt to develop a system by which we can obtain computerized information from the manufacturers of products we specify. This will allow us to establish a series of standards by which those products are assembled, detailed, catalogued and displayed as information in construction documents.

In the area of product design, we anticipate that it will be possible for us to inquire a perspective drawing of a facility and ask for an internal energy evaluation as we change the exterior construction materials, location of the facility on its site plan, and the internal heating and ventilating designs. We see this ability as being a singularly controlled function or a multiple controlled function as several design perimeters are changed or changing at the same time while displaying their analysis criteria or being challenged to resolve an optimum or predetermined set of perimeters.

We are looking forward to having, through our corporate history system, previously designed information interact with our future design attempts.

---

What Computer Graphics is currently presenting to our professional field is probably the greatest potential for advancement in the past 50 to 100 years.

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# Small Architectural Office

monitor every commission in the firm.

I can also type and manage a master specification file, just for your firm. It is easy for me to prepare complete finish schedules, door schedules, or any other schedules you wish.

I can do many other things for you too.

I don't have any references to give you, since I haven't been employed yet. But I can give you a brief description of one of my cousin's work load. He is employed in a 7-person A/E firm and is quite busy. They call him Charlie, but his technical name is this: Radio Shack TRS-80 model 1, 48k, with 2-disk drives and an 80 character dot matrix printer. His total cost was approximately \$3,500.00.

The following programs were purchased and modified (by in-house staff) to suit. One program was developed by a professional programmer to suit a client's special needs.

●Budget Management..... \$20.00

Modified to accommodate all transactions against a project during its development. This program monitors various budgets against goals. This service is provided as part of the firm's project management services and is a great time saver.

●Monthly Billing Program (Developed)..... \$300.00

This program enables the firm to provide, as extra services, data processing services for two clients, for whom the firm previously designed buildings.

This program was modified slightly and is also used to help analyze direct-mail questionnaire responses.

●General Ledger Program..... \$99.50

This program handles all of the firm's checks written, income, assets, liabilities, income statements, and transaction reports. This is a necessary program as is, for financial management.

The program was then modified to process the firm's own time management system, in combination with MBT (Management By Timesheet, a booklet by the author, available through EMA Management Associates).

Computer printouts of all of the commissions are also used with a timesheet overlay to pick up all titles and commission numbers.

A similar system is used for posting Xerox copies, postage, in-house printing, etc., against appropriate commission.

The firm uses this same program to provide similar

The best feature (is) allowing the professional to become more involved in the projects and less involved in trivia administration.

data processing services for approximately 10 clients.

●Inventory Control Program..... \$100.00

The firm uses this for in-house inventory processing. Presently, it provides Inventory Control data processing services for several clients.

●Computerized Filing System \$79.50

This program was used to process and print individual FINISH SCHEDULES and DOOR AND FRAME SCHEDULES.

Computerized filing system for computer disk.

Daily report data processing for 2 clients.

●Word Processing Program \$100.00

All specs utilizing the firm's own master spec. Certain letters (matrix is not letter quality). Notes for drawings, keynotes, etc.

In-house memos, project programs, etc.

100 DISKETTES at approximately \$4.00 each —

\$400.00

Total cost, software — \$699.00

diskettes — \$400.00

computer — \$3,500.00

TOTAL — \$4,599.00

If you take this total cost and divide by 2080 (the number of hours per year for the average employee) you will see that the hourly rate, amortized over one year, is only \$2.21.

Should you wish to consider my employment further, there are many agencies from which you can obtain additional information. Thank you very much for the interview.

Could you imagine turning a possible employee away after an interview like that? Can you imagine having those benefits available to your production system? You would experience many time-saving features. But, the best feature we are experiencing is the microcomputer allowing the professional to become more involved in the projects and less involved in trivia administration.

How do you know which microcomputer to select?

You don't. And neither do any of the salesmen. You must work through a process. After you become just a little knowledgeable about some of the things a micro can do for you, only YOU can put a value on it. Initially, that value will probably be less than one-half of what you actually find after you start using a micro. That's normal. Again, be conservative. But, don't allow anyone

# Small Architectural Office

as well as allowing for a potentially higher level of productivity.

However, while the Institute has made substantial progress with master specifications on computer software and computer-based financial management services (as well as too early efforts in computer aided drafting and design), the Institute now needs to catch up with the marketplace and the new needs of the membership.

In the last eighteen months, the computer market has changed greatly. Entrepreneurs are providing valuable lists of software vendors as well as exchange systems. The

costs of computer graphics systems have been, in some areas, halved. While construction management and design-build may have been the new "cutting edges" of practice five years ago, the new firm of the 1980s may offer software design services for other architects rather than construction administration.

But as in any Institute effort, we must not only recognize the advanced firm but take their experiences and make that knowledge available to the small firm. So on November 16 and 17, the Institute will be brainstorming with representatives of a diverse group of small, medium and large firms who provide such disparate services as:

- computer generated space allocation
- energy analysis software
- word processing
- cost accounting
- financial management
- developer projections of financial feasibility
- codes and standards review

The group of attendees was chosen so that all would be resources people as well as contributors to the discussion.

We hope to find new areas where the Institute can both help the profession and use the 36,000-plus membership in an effort to develop new programs. The programs will pass over areas where a need is filled by others already in the market and will not duplicate

efforts of others. The Institute chooses to emphasize the unique needs of architects and to develop ideas, some of which may be finished in a year, some of which may take five years; some that may deal with software development, some that may move towards making the

Institute directly accessible to the membership via microcomputers and some that may involve the development of large data banks.

The critical question to be answered is "What to do first?" Once the order and direction of development is defined, the Institute will then continue to provide the programs and practice aids for the 1980s, much as it

has with publications and conferences on management subjects in the 1970s.

What will those programs be? That won't be clear until after the roundtable meeting. But conceivably the future practitioner could use an in-house microcomputer to generate geographic leads for marketing. When a client is found, the architect could use a national time data bank to assist in the development of cost based compensation by comparing estimated costs against national trends. When the fees are agreed upon, the architect could access the AIA documents base, select specific pertinent documents, modify them appropriately and have them printed out directly in his or her own office. After developing a prototypical design on computer, the design will automatically calculate from symbols and lines, quantities of materials and develop a cost for construction from a national data base maintained by a national estimating firm. Energy analysis will be calculated simultaneously to keep within prescribed guidelines. All specifications will be generated from microcomputerized Masterspec. Project monitoring for both CPM and for in-house design completion is maintained in-house as are cash flow considerations. And the most amazing thing...

This is all technically available right now. ■

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While the Institute has made substantial progress... (it) now needs to catch up with the marketplace and the new needs of the membership.

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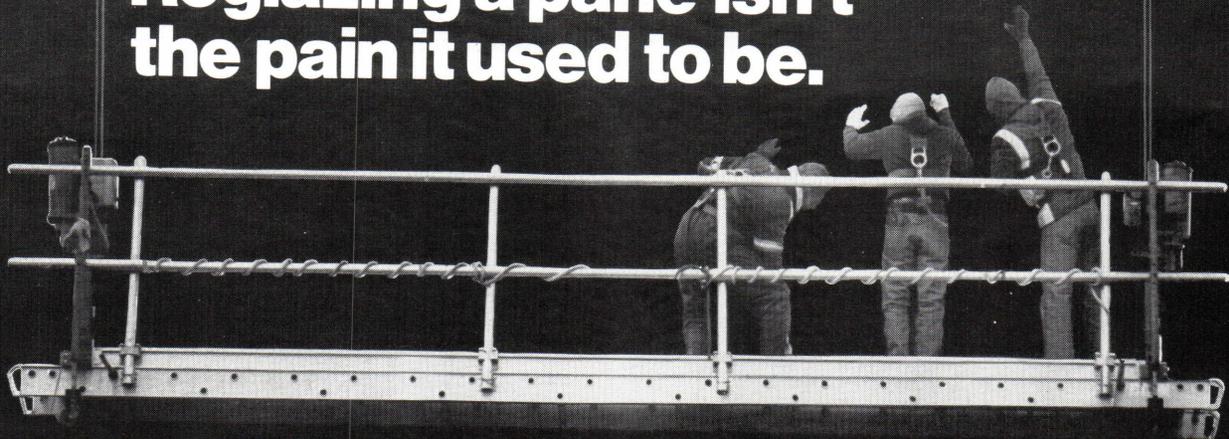
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*The first is still  
the best.*

# Books

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An eclectic mixture, broad in subject and diverse in tone, *Design By Choice* constitutes, in the editor's words, "a universe unified by Banham's perception of it." While everything in *Design By Choice* will interest very few, there are selective delights for almost everyone. For the serious historian, the longest articles, "Sant'Elia" and "Mendelssohn," both written in the mid-Fifties, offer scholarly, passionate arguments for reassessing the important roles of those then-neglected figures of the modern movement. (Indeed, their reconstruction has been so complete by now that their current reputations seem excessive.)

For the architectural mainstream, Banham's obituary for Le Corbusier, "The Last Formgiver," correctly identified Corb's pre-eminent role as esthetic innovator rather than as intellectual point man of the international style. "The evidence of the eyes is that for thirty years he discovered, codified, exploited, demonstrated — even invented — and gave authority to more forms than any other architect around." And quoting the exasperated Alison Smithson, "When you open a new volume of the *Oeuvre Complete* you find that he has had all your best ideas already, has done what you were about to do next."

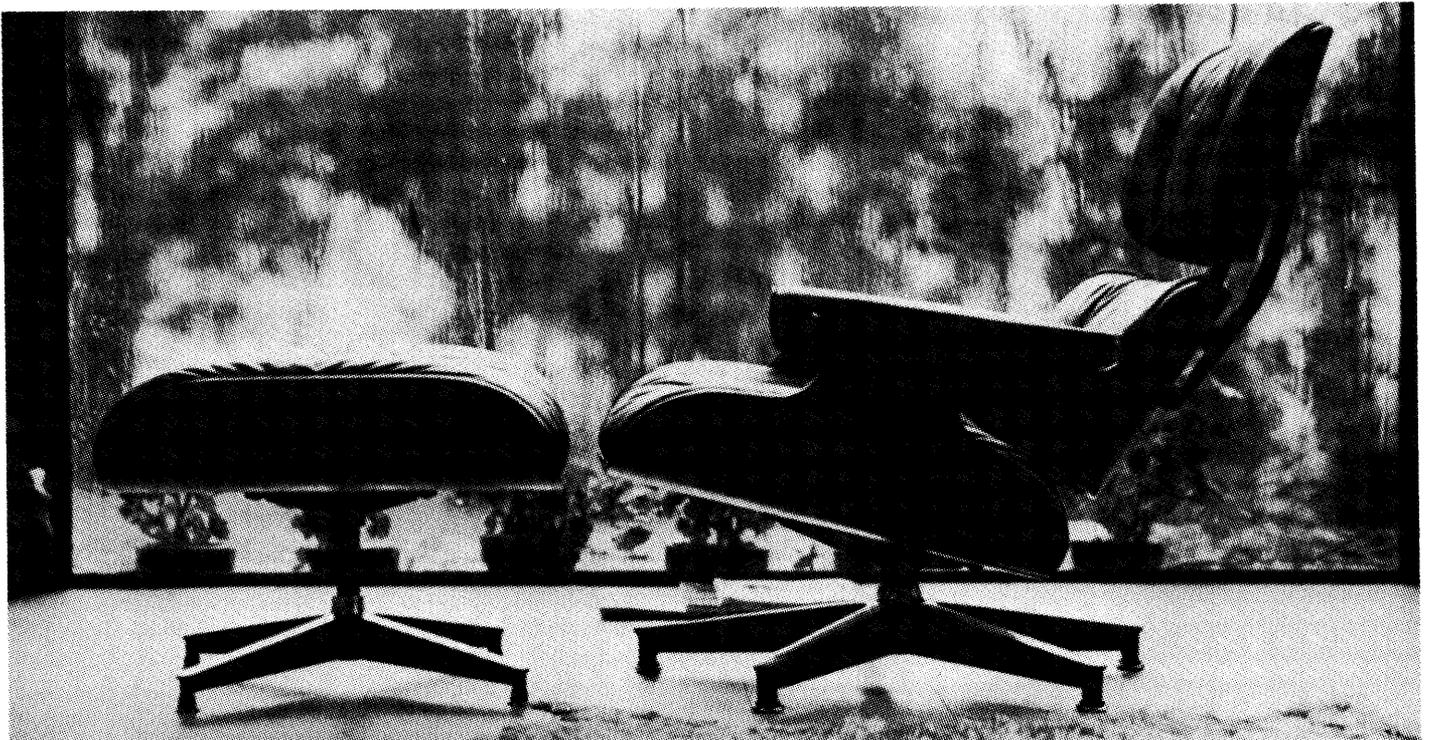
"Towards a Pop Architecture" (the title itself an irreverent play on Corb's famous manifesto) examines the relevance of the Pop esthetic and ethic and, like Robert Venturi almost a decade later, discovers valuable lessons and opportunities for architects in the commercial and spec housing vernacular.

James Stirling's Leicester Engineering Building is generously assessed in "The Style for the Job" as the

"natural machine-age architecture of the sort that must have been in the minds of the Werkbund's founding fathers or Antonio Sant'Elia."

The architecture section concludes with a spirited defense of Norman Foster's glass-faced Willis Faber Head Office by attacking the "bankrupt ideological position" of Banham's old outlet *Architectural Review* which apparently was offended by the startling vocabulary of Foster's controversial design.

Articles in the Pop Culture section examine automobiles — high style and low — furniture, *Playboy* magazine, and *Star Wars* in order to understand how they are conceived, designed, and produced. In a long essay which gives the book its title, Banham looks at a cross-section of mass-produced consumer products such as the VW Beetle, the Olivetti typewriter, the Braun radio, and the Bertioia chair and concludes that styling and psychological significance have superseded function as criteria of acceptability. He points out that while architects in the past claimed and were, in part, accorded hegemony in the field of product design, the increasing technical complexity of today's products has reduced the role of the architect-product designer to styling the outside of machinery designed by someone else — a position they affect to despise in other designers. The article entitled "Design By Choice" suggests ultimately that the only path still open to the architect who seeks to maintain control of the interior environment of his buildings is through creative "choosing" among the vast array of mass produced furnishings and products available rather



Charles Eames chair and ottoman, 1956. (Reprinted from *Design By Choice*).

# Chapter notes

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## Chapel Hill

Tom Wolfe, author of **From Bauhaus to Our House**, will appear as a special guest speaker at the University of North Carolina at Chapel Hill this Spring during a weekend seminar on the subject "American Architecture and American Values."

The weekend seminar is part of UNC-CH's Spring seminar schedule offered through the Program in the Humanities for the Study of Human Values, and is sponsored by the College of Arts and Sciences, Division of Extension and Continuing Education.

During the seminar, Wolfe will discuss his belief "that Americans abandoned their own artistic heritage for the utopian but unworkable ideas of the Bauhaus School of German Architecture. As a result, 200 years after the Declaration of Independence, we are still fighting the Architectural Revolutionary War."

Joining Wolfe will be Claude McKinney, Dean of the School of Design, North Carolina State University; cultural historian John Kasson, UNC-CH; and art historian Edson Armi, UNC-CH, who will also explore other aspects of the urban landscape. Throughout the seminar, the speakers will discuss questions such as: "Is there a distinctive American architecture?" "Did experts inflict modern architecture on us?" "How can we make our cities livable — and fun?" and "Can architecture be immoral?"

The weekend seminar will be held Friday and Saturday, March 19 and 20. Registration fee is \$50. Lunch and dinner will be served to participants for an additional charge, or you may make your own plans for meals. Participants needing overnight accommodations on campus may stay at the Carolina Inn. Requests for rooms, however, must be received two weeks before the required date to be assured of space.

For more information on this and other UNC-CH seminars, contact the Program in the Humanities, 209 Abernethy Hall 002A, UNC-CH, Chapel Hill, N.C. 27514.

O'Brien/Atkins Associates of Chapel Hill has been selected to head a design and engineering team for the permanent facility of the Microelectronics Center of North Carolina (MCNC).

The multi-level structure of approximately 60,000-square-foot will be on a 20-acre site in the Research Triangle Park, according to Sherwood Smith, a member of the MCNC Board of Directors and chairman of its Building Committee. (Smith is chairman and president of Carolina Power & Light Company.)

Completion of the facility for supporting education and research related to the design and fabrication of microelectronics chips will take about two years, according to Smith. Construction costs are included in the \$24.4 million MCNC appropriation authorized last summer by the General Assembly.

Smith said the design team assembled by O'Brien/Atkins includes firms which have extensive experience in the various specialized technical needs of construction for the integrated circuits industry. They include Practicon Associates of Palo Alto, Calif., which has worked on mechanical engineering aspects of more than 40 integrated circuits installations, and Ackerman Engineers, also of Palo Alto, which has handled electrical engineering for a similar number of microelectronics construction projects. Bolt, Beranek and Newman of Boston, Mass., will be the vibration consultant. The company has been involved in this capacity for over a dozen integrated circuits facilities.

Local consultants for the O'Brien/Atkins MCNC project are Ezra Meir and Associates, structural engineers located in Raleigh, and TRW Environmental Engineering in the Research Triangle Park.

Smith said he hopes ground-breaking for the unique state-supported microelectronics center can take place by April or May.

The Microelectronics Center is the centerpiece of Gov. James B. Hunt's program for attracting microelectronics-related enterprises to the

state. The only undertaking of its kind in the United States, it links the educational and research programs of six participating institutions. They are N.C. A&T State University, N.C. State University, the University of North Carolina at Chapel Hill, the University of North Carolina at Charlotte, Duke University and the Research Triangle Institute.

## Charlotte

Stacy E. Simmons, AIA/ASID, president of Omnia Design Interiors and Graphics Consultants in Charlotte has been appointed vice chairman of the National AIA Interiors Committee by Robert M. Lawrence, FAIA, National President of the Institute. According to Lawrence, the committee "develops programs to improve and promote the unique capabilities of the profession to understand, perform, coordinate and manage interior design services."

Simmons was the first architect in the Carolinas to be accredited by the National Council for Interior Design Qualification in 1970, and has designed two architectural projects which were cited for design excellence by the South Atlantic Region of the AIA. "Our society tends to fragment the disciplines of architecture and interiors," Simmons said. "which, at their best, cannot be separated."

Most recently, Omnia Design was the interiors and graphics consultant for Hotel Europa in Chapel Hill, and worked in conjunction with O'Brien/Atkins Associates of that city.

## Greensboro

Robert L. Trotter, AIA, who serves as architectural physical planner at Duke University, has been hired as director of campus design and construction at the University of North Carolina at Greensboro.

Trotter's new appointment, which became effective Dec. 14, was announced by Fred L. Drake, vice chancellor for business affairs at UNC-G. Drake explained that the position is a new one in the division of business affairs, and said that



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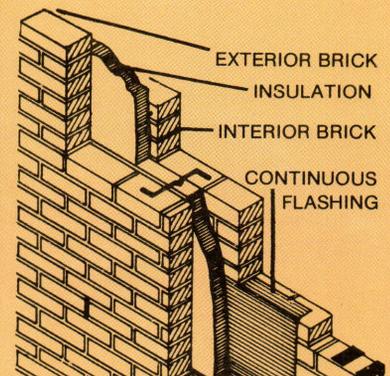
We've earned the reputation for making the most beautiful brick. Sanford Handcraft faces. Styles that recreate the warmth, dignity and mellow richness so admired in old landmarks. In our wide range of authentic colors and textures you'll find a face that will enhance the architectural features of whatever you're building.

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# Chapter notes

thriving Piedmont city of Winston to set up his architectural practice. And for the past 75 years, the firm that grew out of Northup's innovation has woven into the city's urban landscape a diversity of building designs including: housing for the elderly, residences in affluent neighborhoods, churches, schools, hospitals, banks, offices and industrial complexes, shopping centers and art centers. "We've done at least one of everything you can think of," laughed Luther Lashmit, a retired partner who joined the firm in 1927. Lashmit, who now lives in Southern Pines, is a primary link between the original partners and the firm's current staff.

Since the early 1970s, the firm has operated under the leadership of Michael Newman, FAIA (Cornell University, 1962), managing partner and architect; and Tom Calloway, AIA (North Carolina State University, 1970), partner and architect. They were soon joined by Donald Johnson (University of Illinois, 1957), partner and architect; and Wallace Winfree (Virginia Polytechnic Institute, 1948), partner and structural engineer.

In recent years, the firm has become well-known for its work in the fields of housing for the elderly and arts-related buildings. Its list of retirement communities includes the Triad United Methodist Home and Country Village in Winston-Salem, Covenant Village in Gastonia, and Kirkwood in Goldsboro. Two arts centers designed by the firm — the Southeastern Center for Contemporary Arts, and the "Workplace" at the North Carolina School of the Arts, both in Winston-Salem — won two of the five NCAIA Honor Awards of 1980. The firm is currently involved in renovating the former Carolina Theatre in downtown Winston-Salem as the Roger L. Stevens Center for the Performing Arts for the N.C. School of the Arts.

Now that they're celebrating its 75th year, what does the future hold for the 15-member staff? "I don't think we'll grow much larger," Newman smiled. "And we will continue to emphasize a close personal relationship with our clients."

The firm also plans to begin computerized drafting, according to Newman.

## Special Exhibition

The Southern Historical Collection of the UNC-CH University Library is the state's repository for papers and other collections of material related to architects and architecture. The collection is making note of its holdings in this area with an exhibit of memorabilia from the papers of Charlotte architect Louis H. Asbury, AIA, (1877-1975), whose influence can be seen in many homes in the Myers Park area of Charlotte. A display case containing material from the Asbury papers is on exhibit in the Southern Historical Collection, located in the basement of Wilson Library.

## Solar Energy on T.V.

Although most architects and "laymen" accept the principles of solar energy, they also believe that it is too experimental and expensive to use in their own homes. "Building With The Sun," a new PBS special, is designed to change all that. Scheduled to air in April, this program is a series of four half-hours dedicated to increasing public awareness of the potential of passive solar energy for home heating and cooling.

The programs are hosted by Dick Ellis, who uses models and graphics to explain the operation of several basic passive solar designs. Examples of the design as they are actually used in passive solar homes have been filmed at a variety of locations. Several homeowners explain how their systems work and talk about the experience of living in a solar-heated home. Because North Carolina has the most varied climate on the east coast, four climate zones of the state have been used to illustrate how the same passive design will perform in different climate conditions. The programs provide enough detail so that homeowners, builders, designers, and the general public will be able to make intelligent assessments of the best ways to adapt particular passive solar design features to individual needs in both new and existing buildings.

The program is a production of the UNC Center for Public Television. Executive Producer is Bob Royster. Jim Bramlett produced and directed the series.

## National Notes

The American Institute of Architects will mark its 125th anniversary in 1982 with a nationwide series of public events celebrating past

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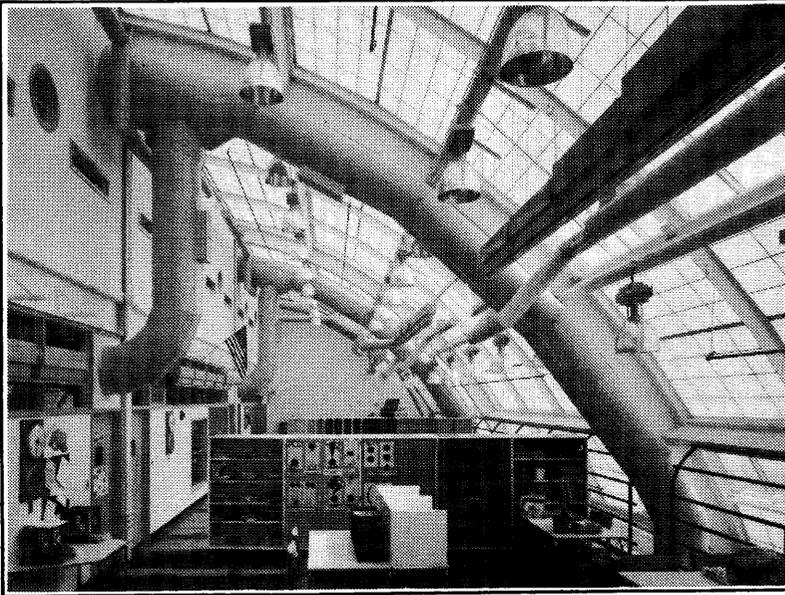


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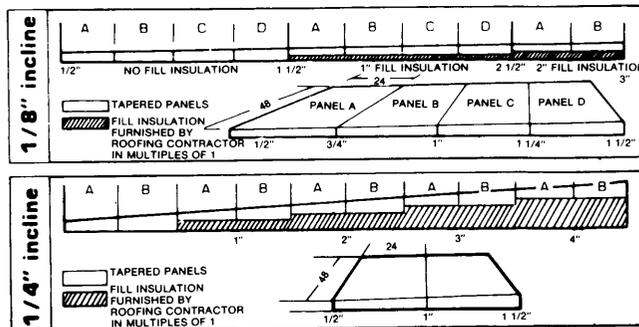
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	B	3/4" - 1"
	C	1" - 1-1/4"
	D	1-1/4" - 1-1/2"

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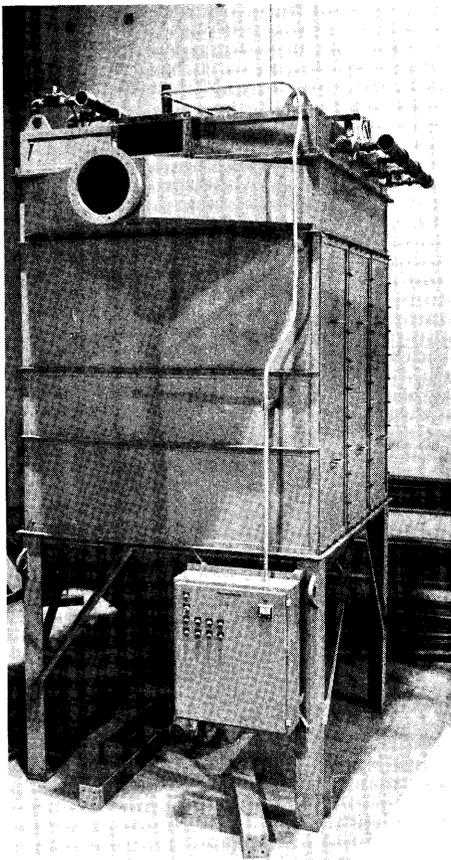
*North Carolina Architect* introduces a new feature for 1982. . .

# MARKETPLACE

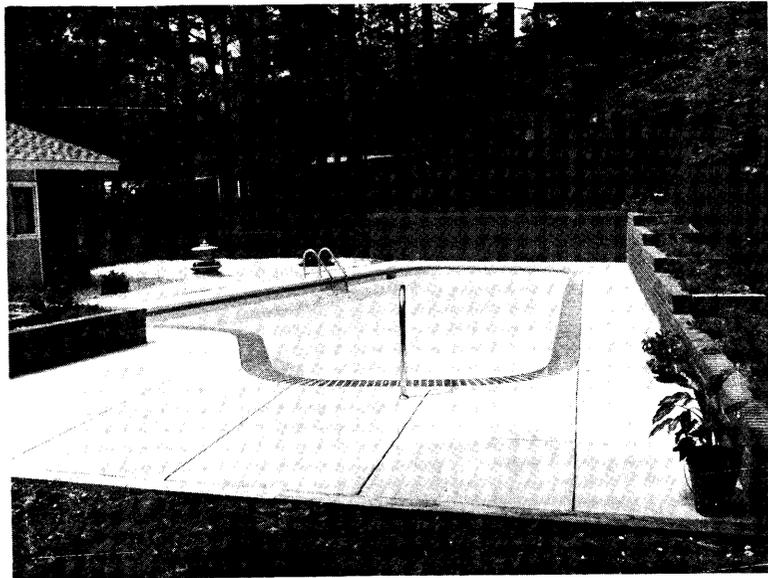
A guide to new sources and products for North Carolina's  
architects and designers.

# Marketplace

**Environmental Control Products, Inc.**, Charlotte, N.C., has announced the addition of a high temperature cartridge house to their line of standard and custom engineered solid and liquid waste incinerators and air pollution control equipment. Advantages offered by the E.C.P. line of cartridge houses include lower capital investment, energy efficiency, high temperature applications and expandable design. They are available in standard sizes from 500 ACFM to 27,000 ACFM with larger sizes available upon request.



"Conservation is not a four letter word," is the motto of **Energy Works** in Durham, N.C. Energy Works houses all energy conservation products under one roof while providing in-store energy conservation educational facilities to the consumer.



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# Here's the dirt on our new energy saving office.



More than half of our new Gastonia office is underground. For two very good reasons. Energy savings and aesthetics.

The building looks great. And it's also highly energy efficient. The earth around the office acts as a natural insulator. And that's only one of the energy savings features of this unique new structure.

Another is task-oriented lighting: the placement of florescent lights only where they are needed. The building is efficiently heated and cooled too. Thanks to a thermal storage system that utilizes six underground water storage tanks. A 13-ton chiller heats and cools the water during off-peak hours when the demand for electricity is low. And the heat

recovered from this chilling process supplies the daytime energy needed for heating and cooling.

Our hot water needs are also efficiently handled, with solar collectors that provide energy for our water heating system.

We think the Gastonia office is the building of the future. And we'd like to show it off to you. Because if we can get more people interested in designing and building places like this, we can go a long way towards solving this nation's energy problems. So call or write for a tour. Contact J.M. Foreman, Duke Power, P.O. Box 33189, Charlotte, NC 28242, (704) 373-4697.

In the meantime, if you'd like a free booklet that explains in detail

the energy efficient features of our new office, clip out the coupon and send it to us.

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