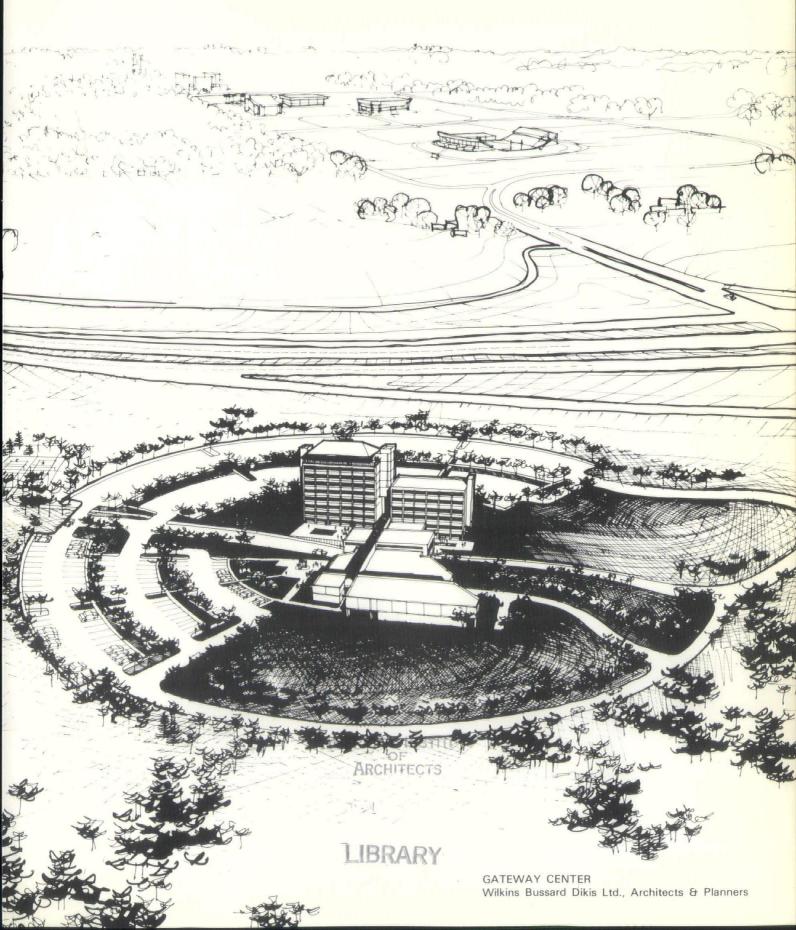
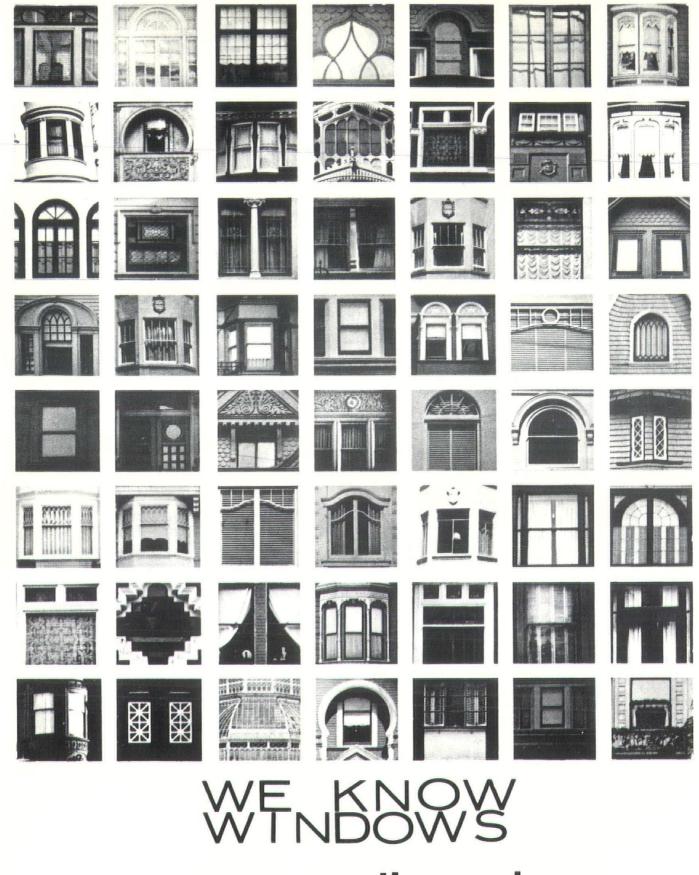
IOWA ARCHITECT

Winter 1976





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The State of The Profession:

Ken Bussard, the state chapter's outgoing president, looks ahead to the future roles of architecture.

CPMI:

A look into a company that offers owners as well as architects a service.

Support Your Local Attorney-Send Your Son To Medical School: Eugene O'Neil, a member of the AIA Committee on Insurance, warns of the growing cost in staying insured.

Cost Estimates-Put It In Writing: An attorney outlines the architect's responsibility to his client on cost estimates.

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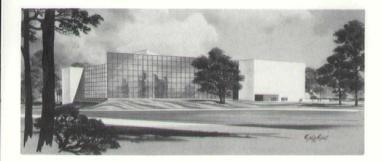
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Buildings In Progress



Henry A. Wallace Building

The state's newest office building will be a five-story building of white brick and reflective gold insulative glass, consisting of laboratories on the first and part of the second floor with open office areas else elsewhere. It will include an underground 800', two level pedestrian/utility tunnel to the Employment Security Building and a two-level open parking ramp.

The 212,000 square structure is tentatively scheduled for occupancy by the Department of Agriculture, Conservation Commission, Natural Resources, Soil Conservation, Public Safety and Environmental Quality. There will be multi-use conference rooms located on each floor as well as 300 seat auditorium at the main entrance area. The lobby will contain a landscaped atruim, aquarium and display areas for art as well as exhibits representative of the occupants of the building.

The architects for the project are Durrant, Deininger, Dommer, Kramer, Gordon of Dubuque. The estimated completion date, for the \$10,000,000.00 structure, is April 1977.

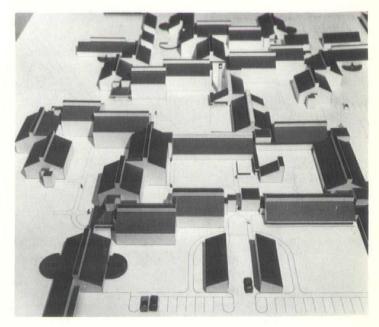


N.W. Bell In Des Moines

Construction of the 6.7 million dollar computer center for Northwestern Bell is underway. The project designed by Charles Herbert and Associates is located on Keosauqua Way, just North of downtown Des Moines. The parallelogram shaped building has four floors plus basement/covered parking area. The main level contains building and employee services and a large work area. Floors above are divided into two open plan work areas by a core which contains vertical transportation, services, toilets, and lounges. Work areas have access-type flooring.

The building structure is caisson supported and composed of cast-in-place column and floor systems. Walls are precast concrete, and all glazing is thermopane.

Completion is expected by Fall of 1978.



Friendship Village Of Columbus

The Friendship Village, a complex of 316 residential units and a 96 bed medical center, has been designed with "variability" as the essential quality in providing for the requisite utilitarian functions of a planned retirement community. This "variability" must ultimately be understood as simply an expression of the character of its population.

The character of the project is strongly intimated by its name. This is to say that the architectural conceptions used in the formulation of FVC are strongly rooted in the nature of "Village". The corridors of the project are conceived of as lanes which wander onto views and spaces of distinctly different character before terminating at the Commons surrounding the "Village Square". Ample, varied places are provided to meet with friends along the way or to sit comfortably watching the passing world of village life. These interior lanes connect directly to the exterior walks traveling through the site, which, in turn, offer their own surprises and delights.

Architects for the project are Engelbrecht / Rice / Griffen of Des Moines.

The State Of The Profession

by H. Kennard Bussard A.I.A.

I sincerely believe that history will record that during the last quarter of the twentieth century our profession will have changed more than it had in all of the four hundred some years since Michelangelo practiced architecture. Architecture has been practiced within the same client-architect-contractor relationship since our Universities have been giving degrees in architecture.

Some have written the profession off as unable to cope with the constraints of contemporary society. "You are too slow, time is money, I can't wait for your Mr. Architect....I am going to hire a package builder." Or, "We can't afford an architect, we just want a simple functional building that is economical." Or, "Your profession can't possibly survive a zero population growth society."

Without question, there are those who will not survive, and there will be those who will become intimidated by the competition. With the imposed restrictions on energy consumption, code restrictions, competition from package builders, sky-high liability premiums, more restrictive land use policies, and the multitude of construction related problems, one could certainly not be criticized for "Bailing out."

To say this is a once in a four hundred year challenge is perhaps rhetoric. However, to say that you want to be a part of it should not be without a great deal of soul searching. There is one thing I am sure of....if you intend to practice architecture like you did in 1946, 1956, 1966 and now in 1976 in the year 2000....you will be working at the Smithsonian! I am further convinced that the best thing that will happen to our profession will be the changes imposed by the values of our new society.

Architecture can not go on as a luxury afforded only by those with time and money. The problems can't wait. We have cities that need saving today and a delicate environment that is teetering on the edge of disaster. Frankly, I am not distressed with the great number of students enrolled in architecture at our Universities. Obviously, they are not going to find jobs as practioners as you and I know it. However, they can be the most influential group of architects our two hundred-year-old society has ever known.

The new non-practitioner architects will find themselves in government, resolving the problems of reclaiming cities and sorting out the priorities of tomorrow's society. Business will offer this new architect the challenge of venturing capital into renovation, highly restricted land development and new towns. There will be architects that do nothing but manage projects from their conception to occupancy, experts in putting order to new and highly accelerated processes. Industry will need architects to coordinate new manufacturing technology to be housed in complicated structures producing new products. Architects employed by institutions will have the enormous task of deciding which buildings should or can be renovated, restored or retro-fitted, plus the responsibility of planning complexes for larger concentrated groups of people.

The new architect in practice will be coordinating a multi-disciplined team. Construction could very well be the end product of their efforts. Cost control, time, value engineering, system evaluation, conformance to energy standards will be paramount to the process. Ethics will allow financial participation in projects. Development will be a natural extension of an office's expertise. Offices with specific experience will be joint venturing on a national and international basis. A more educated and sophisticated public, which spends only half their time working, will demand a high quality of design, imaginative housing, offices and factories....and an architecture that is in harmony with the environment.

Depending on your age we are confronted with several options. If you are still a student one should look beyond the traditional opportunities. Recognize your abilities and education, seek out the opportunities in government, business, management, industry and institutions, as well as those in the profession. As a young architect in training one should be concerned about his or her development research, read, guestion and discover what makes the construction industry tick. Non-principal architects should reach out and broaden their backgrounds with continuing education, question the firm's philosophy toward diversification and if asked, develop new markets and areas of expertise. As a principal of a firm it is imperative that the leadership, enthusiasm and commitment originate from you....it is important to the profession and your employees.

Personally I am excited about the future role of our profession. There is no other profession that concerns itself with the built environment that has the qualifications, talents and imagination to take this world into the next century. What an opportunity!

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CPMI Cost Planning And Management International

by Dan Brennan

Every owner planning major, new construction accepts ultimate responsibility for resolving numerous, often conflicting, requirements. To meet basic objectives, intelligent decisions must be based on responsive, analytic support incorporating accurate, quantified data.

-FUNCTION

Spaces must be adequate. Rooms and support systems must be meaningfully related to efficiently satisfy current needs with sufficient flexibility to meet future needs.

—BUDGET

The project must be justifiable in terms of expected benefits and affordable in terms of available funding.

-QUALITY

Materials and workmanship must be consistent with adjacent and related structures. They must provide a reasonable useful life at reasonable cost and acceptable life cycle cost.

-OPERATIONAL COST

The owner's long term cash flow requirements must accommodate projected energy utilization, staffing and maintenance costs.

-SCHEDULE

The project must be ready when it is needed. Planning and coordination can optimize manmaterial efforts during pre-construction and construction, reducing project costs.

-IMAGE

The project must present an appropriate image of the owner in keeping both its surroundings and the owner's stature.

Objectives often conflict, with different emphases supported within the owner's organization. To achieve the optimum balance among objectives requires compromise.

Intelligent compromise demands careful analysis of all viable alternatives from each point of view and synthesis of appropriate levels of satisfaction for each major objective.

Optimum project decisions depend on thorough planning, responsive feedback and comprehensive management from the project's conception through its delivery. It requires organized coordinated interaction and cooperation among all parties—owner, designers and builders. This is what we do.

The following describes our role in the building

process and summarize the services we proved. The process should not be understood as rigid, but rather as a description of our general approach to the building process.

Programming/Planning

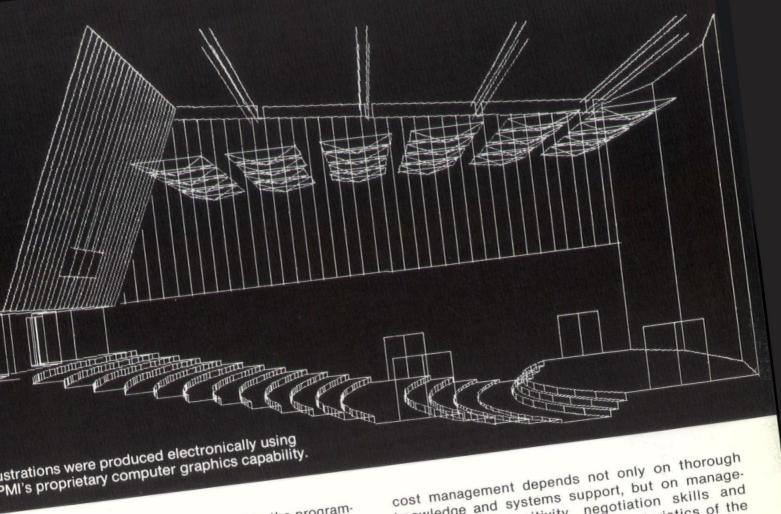
During this most crucial phase, our goal is to provide the owner with definitive, quantitative data to help resolve conflicts between objectives regarding function, cost, life cycle cost, quality, schedule and image. From these resolutions, we, interactively with the owner, set design parameters and establish initial project strategies. Our primary emphasis is on Computer Aided Functional Graphic Analysis (CAFGA). Using this tool, we analyze adjacency relationships, establish realistic net requirements and net-to-gross ratios. Key individual spaces are analyzed and resolved in terms of their equipment and function. Where applicable, we analyze site relationships to existing structures to create a design framework.

Using quantities established in this manner, historic unit costs are computer retrieved by functional building system. This establishes a conceptual projection for construction cost and supplies data for preliminary scheduling. Budgeting calculations include awareness of cash flow requirements and, in commercial projects, include finance costs, depreciation and rate of return calculations. Operating budgets are established based upon life cycle cost assumptions. This information is structured in a computer feasibility model to be updated throughout the project to function as a framework for decision making. With this information in hand, we can help the owner establish the optimum project strategy and accordingly, help select the optimum design team. This team is supplied with a complete package of program information, design parameters. schedules and intelligent preliminary decisions regarding bidding strategy.

All decisions are based upon a thorough analysis and understanding of the owner's objectives and are aimed at achieving the optimum mix of the six major variables.

Design/Contract Document Phase

During this phase, our goal is to assure development of an optimum design adequately satisfying all six owner objectives within the framework and ac-



cording to the priorities established in the programming and planning phase. Functioning as a coordinator of the design team, we work interactively with the architects and engineers testing the solutions for program compliance and, if desireable, providing

During this phase, our primary emphasis is on them with CAFGA support. creative cost management. Cost management and

control begins with the establishment of the initial budget and progresses interactively through the conceptual and design phases of the project. Design decisions are reviewed from a cost point of view as they occur. An important element of cost management in the early stages of a project is the ability to translate concepts into realistic cost projections. This must be done responsively to enable the Project Manager and Designer to interact effectively. The purpose of cost management is to assure

maximum value within established cost parameters. Maximum value is a complex concept involving initial cost, life cycle cost and ultimate satisfaction. Assuring maximum value employs three separate disciplines: Cost Analysis, Life Cycle Cost Analysis (LCAA) and Value Analysis (VA). The effective Project Manager has the ability to evaluate and analyze planning and design alternatives from all

The emphasis here is on management: Effective hree points of view.

knowledge and systems support, but on management ability. Sensitivity, negotiation skills and clarity of goals are essential characteristics of the

The cost management effort is augmented and eneffective Project Manager.

hanced with a thorough planning and scheduling effort of the design process and a comprehensive financial status reporting system. The planning and scheduling effort is an important component in establishing the optimum bidding strategy for the pro-

The financial status reporting system tracks and ject.

documents scope development throughout the project and provides the necessary tools for managing

Having established bidding strategy with the the project budget.

owner, CPMI will develop a detailed construction schedule for the guidance of bidders to be attached to the contract documents. This schedule will demonstrate plausibility of meeting the owner's time objectives and reduce the "guess work" of the contractors, resulting in better bids. This schedule will clearly identify contractual requirements so that bidders are firmly committed to time requirements. CPMI, where legally possible, will pre-qualify bid-(continued on next page) ders.



Construction Phase

During this phase, our goal is to implement decisions made and design developed during previous phases. Bidding strategy has included pre-qualification of bidders and the establishment of specific schedule requirements attached to the contract documents.

Award of bids may be in a single phase, or in "fast track", may occur at several points during the construction of the project. During this phase, our primary emphasis is upon implementation of our Management Information and Control System (MICS). This system merges cost with a precedence diagram schedule and provides reporting for schedule control, disbursement control and cash flow projections.

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Following bid award, CPMI works closely with successful contractors to develop a contract schedule using the contractor's methods, sequences and durations and which meets the owner's objectives, as expressed in the contract documents.

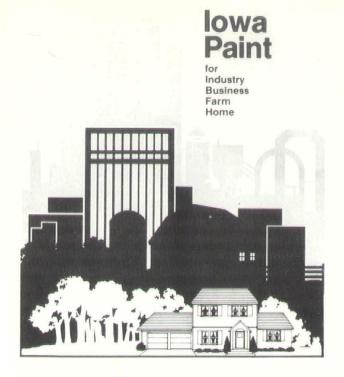
The schedule is monitored monthly, or more frequently if needed, providing a solid basis of communication among all parties, a method of documenting project progress and a model for analyzing and optimizing the project schedule.

CPMI will organize scheduled meetings between owner, architect, contractor and project manager and provide comprehensive documentation of project progress.

In many cases, CPMI will provide quality control employing a resident professional. In other cases, these services duplicate existing capabilities of the owner and are not provided.

Change order evaluation and control is another major function during construction. We can assist the owner and architect in documenting owner initiated changes and can provide thorough cost and schedule analysis of all change orders. Once again, all CPMI services during the construction phase are based on understanding the owner's overall objectives and are oriented toward achieving the owner's goals. Using our systems and techniques, we can achieve delivery of the facility on time, within the budget and according to plan.





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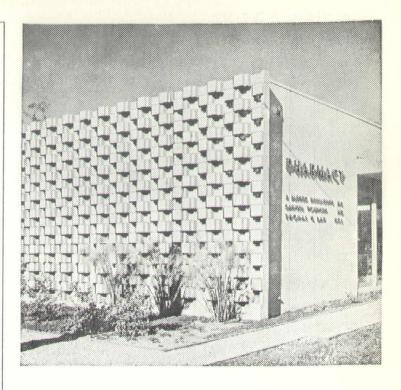
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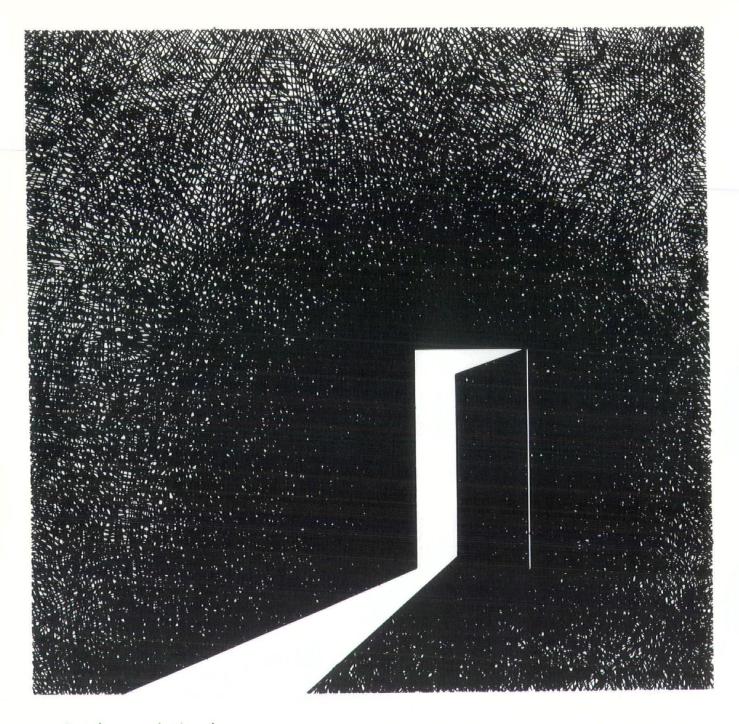
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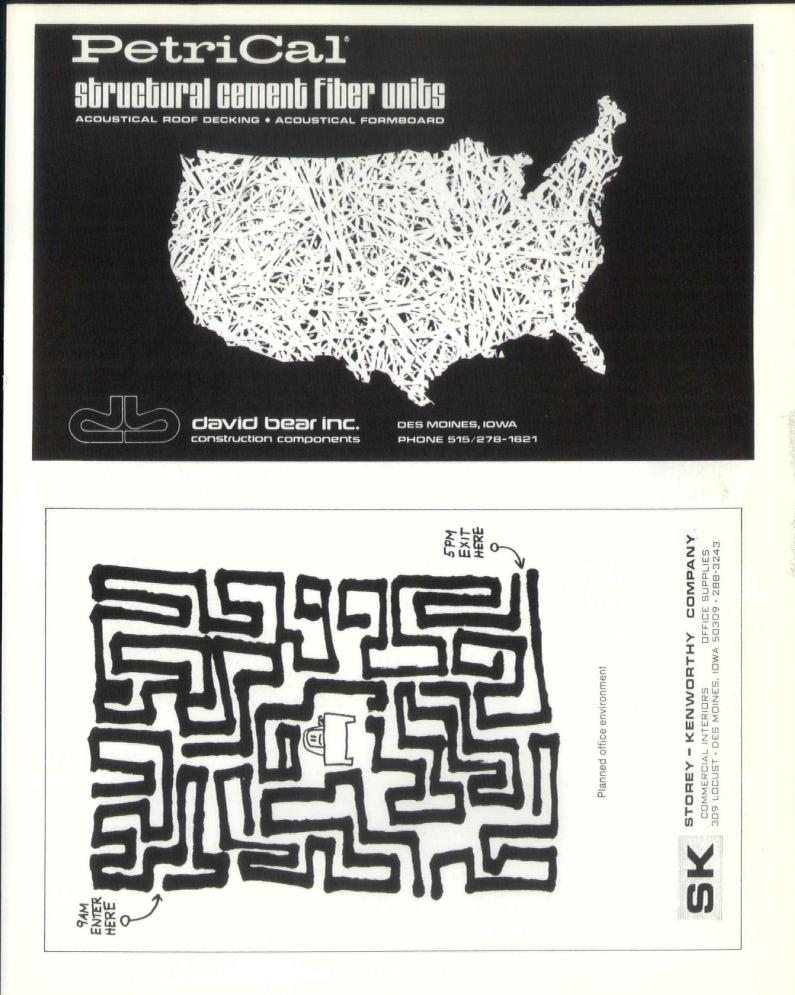
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"Support Your Local Attorney Send Your Son To Medical School "

by Eugene O'Neil A.I.A.

Not too many years ago, Architects and Engineers might have smiled at the adversity of the medical profession. Premiums for Errors and Omissions insurance, the Architect's counterpart of Medical Malpractice, have erased most of the smiles and Doctors are no longer held to have adversity detached from the realities of Architecture. One recent report established that the average premiums for the Doctor's Malpractice Insurance increased 103% last year, while the premiums which Architects paid for the same year's period, increased over 300%. Who's smiling now? The legal profession of course, because the increased number of claims and the larger dollar amounts of claims against Architects, have made their future work prospects even brighter.

The first basis of duty of the Architect and Engineer is to the Owner he represents. He carries through that professional duty in service into the construction process, sometimes to a degree that the Owner's original purposes and intents are clouded in the melee of getting the project built.

The main problem of Architects at the present time is not the availability of Errors and Omissions Insurance; it is readily available, but the cost of the insurance has become so high that it should be an item of extra cost beyond normal fees. Architects have been hesitant to accept this extra cost premise. Many Architects have elected to "go bare", particularly in areas where the lack of work volume has caused excessive competition among practitioners. The New Jersey Chapter of the AIA reported that more than 17% of their state's Architects practiced last year without any coverage whatsoever.

The Standard Architect-Owner Agreement B-141 is under pressure to add paragraphs which contractually assure the Owner that the Architect carries adequate Errors and Omissions Insurance.

Economic pressures have caused Architects to look into other areas of activity where their unique expertise could effectively contribute. "Fast-track," "design-build," "builder-owner-developer" arrangements, particularly those in which the Architect takes his fees in partial ownership of the project, all tend to place the Architect in a new and more vulnerable exposure. Attorneys advise that there is a risk of "strict liability" involved in these situations, which unfortunately goes beyond the area of coverage of most Errors and Omissions basic policies. Such changes in the way Architects fit into the construction delivery system make the premise of proper insurance coverage very difficult.

The obvious way to control premiums of insurance is to reduce the exposure and risk, but Architects are pursuing relationships that tend to broaden the exposure. Errors and Omissions Insurance is intended to cover Architects acting in the legal interpretation of being a "professional," namely: (1) The completion of a specialized course of learning, including education, apprenticeship, and license, (2) The application of judgement, and (3) The use of care in discharging the duties of professional responsibility. Capabilities in these items can be systematically evaluated. Changing the legal exposure makes a more difficult problem.

Statistics are difficult to make interesting, but cannot be ignored. One out of four professional firms will have a claim in 1976. The average claim value in 1960 was \$1,700. In 1974, the claim had risen to \$9,440, and is still climbing since that time.

In numbers of claims 95.1% fall within the first \$25,000 of insurance coverage; only 1.2% exceed \$100,000.

In size of claims, 57.3% incurred loss in the first \$25,000 of coverage; 14.3% incurred loss above \$100,000.

In size of all claims, which reach the insurance carriers are closed out before they reach the court. The frequency of claims against professionals has increased from 12.5 per 100 firms in 1960 to 28.4 per 100 firms in 1975.

So much for claim statistics, and the only logical conclusion is to understand they will continue to increase in both numbers and amounts. It is within the Architects control to reduce his exposure in many ways, and in so doing, he will tend to reduce the premiums of all professionals. Hopefully, this will help stabilize the cost of Architectural service to the client.

Victor Schinnerer Company and Continental Casualty Company maintain that more coordination by professionals in the design phase, against the owner's genuine needs and program, together with more coordination in the documents and construction phase would significantly reduce exposure, and claims against them. Unfortunately, professionals do not review each other's work, except sometimes in court.

Legislative relief in the form of a Satute of Limita-

tions would help the most in stabilizing exposure. Legitimate recourse of injured clients would not be significantly changed by such legislation, because most claims arise within the first two years of building occupancy.

Higher, and more realistic payments under workmen's compensation policies would also reduce the number of claims. Third party claims are particularly regrettable to Architects, because the cost of defense is a major dollar amount despite the relatively strong defense position the Architect has in most claim actions.

The most interesting development of the Architects and Engineers, in joint national Liability meetings is the possibility of establishing a reinsurance program by the professional organizations. Such reinsurance would help assure the continuity of availibility of Errors and Omissions Insurance, and there is no law that says the insurance must be offered by any carrier.

Twice during the years of availability of this type of insurance, there has been a strong possibility that no insurance would be available to Architects and Engineers. This reinsurance program may be finalized early next year. It would greatly help those who carry their insurance with Continental Casualty Co. Turnaround is fair play! Even the lawyers are having problems. The legal profession spent time during

their recent national convention discussing the ramifications of the favorable court decision and award to the Doctor from Wilmette, Illinois, The doctor successfully counter-sued for the legal costs he incurred in defending himself, against a "capricious" action. The Architects and Engineers need to "get their act together," for a workable solution to the dilemma of the legal pitfalls of their work.



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Compensation-- Put It In Writing!

by T. Scott Bannister

In the course of initial business negotiations between an architect and potential client, building costs will often be discussed. The client may suggest a general top-dollar figure, and the architect might respond affirmatively by saying something to the effect that "it would be no problem to design the desired structure within that cost range."

A dispute may late arise when contractors' bids, based on the completed design, come in over the original cost limitation. That limitation may have been only generally discussed, though the client may remember differently. The client may totally reject the design and seek help elsewhere. After such an occurrence, a question may remain concerning whether the architect's services should be compensated.

This issue is collateral to the problem of professional malpractice and evolves from the theory that the architect holds himself out as an expert and is employed because he is believed to be such, and in making statements about building costs, he should not be negligent. It also arises from the belief that persons engaging an architect have a right to assume that a building will not cost more than the sum represented by the architect in their discussions or as set forth in an employment contract.

The general rule, absent a contractual provision establishing the rate of compensation, is that an architect is entitled to receive compensation for the reasonable value of his efforts. "Reasonable value" is generally proved by reference to sums customarily charged by other architects for a similar project.

There are, however, two notable exceptions. The first exception provides that if the architect's estimate is too low, then he cannot recover compensation for his services under any circumstances. The second is less restrictive, because it bars recovery by the architect only when the cost of construction **substantially** exceeds the agreed maximum cost.

The first and more restrictive exception is based upon the rationale that an architect, to be entitled to compensation for his services, **must** stay within the cost set by the owner. As a result, if the client can prove, absent a written contract, that the architect asserted that a building of his design could be erected for less than a stated sum, and all bids are in excess of that figure, the architect is not entitled to compensation for his efforts.

Most states do not adhere to the restrictive exception to the general rule, but rather rely upon the more moderate approach which allows the architect to recover his fee, unless the probable cost of the construction **substantially** exceeds the agreed maximum cost. Again, an initial question must be answered: was there a meeting of the minds between the architect and client as to an agreed cost limitation? In addition, what is "substantially excessive" must then be determined, and generally both are questions of fact for the jury to decide.

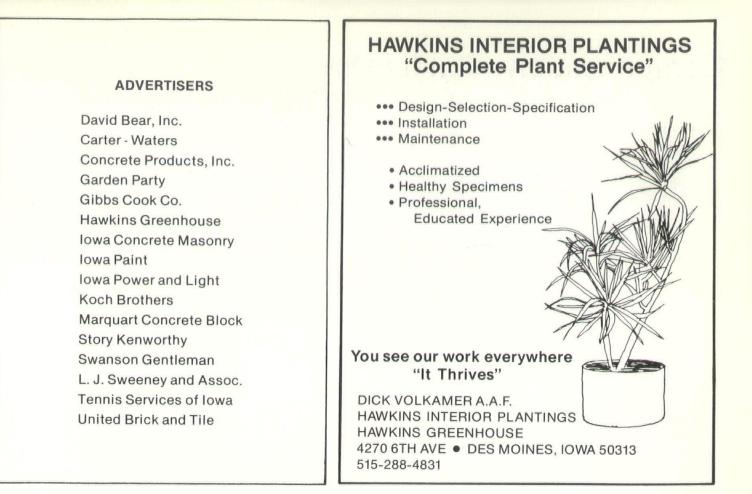
In a recent 1971 Nebraska case, the following was stated:

"...an architect or engineer may breach his contract for architectural services by underestimating the construction costs of a proposed structure. The rule to be applied is that the cost of construction must reasonably approach that stated in the estimate unless the owner orders changes which increase the cost of construction. It is ordinarily for a jury to say whether the actual cost is within a reasonable range of the estimated costs unless...the excess is so great that the Court can deal with it as a matter of law."

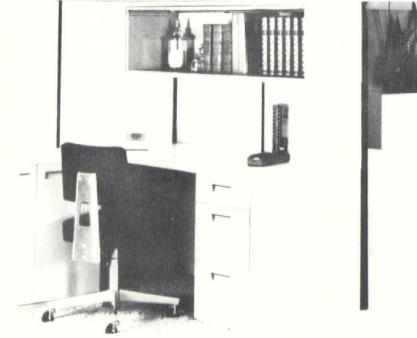
In the Nebraska case, the lowest construction bid was 72% above the architect's original estimate. As a result, the architect was denied compensation.

A 1974 Minnesota case set forth four elements to be considered in determining whether an architect is entitled to his fee. Those four elements are as follows:

- Whether the cost figure was expressed by the architect as an approximation or as a guarantee.
- 2. Whether the excess is a result of design changes ordered by the client.
- Whether the client waived any right to object, either by accepting the architect's design without objecting, or by failing to make a timely objection to that performance.



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Compensation (continued from page 16)

 Whether the architect, after receiving excessively high bids, suggested reasonable design revisions which would reduce the eventual cost.

Where it can be shown that the architect merely talked of construction costs in terms of approximation, most courts hold there was no actual agreement between the client and architect, and as a result, recovery by the architect should be allowed. However, if the architect has knowledge of a client's cost limitation and affirmatively represents that he can design a structure to come within that limitation, and fails to do so, then recovery may very well be denied.

If the architect suggests changes to reduce construction costs, then compensation will generally be awarded. However, if the bids are so much in excess of the cost figure that to bring the cost within the limit would require more than slight changes of Jetails, the architect may not be allowed to receive any compensation.

Conclusion

The right to compensation for architectural services is directly connected with: (1) whether a design cost estimate was conveyed to the client as a firm figure or a mere approximation; and (2) if the cost

figure was couched in terms other than as an approximation, whether the actual cost of construction is reasonably near the amount estimated.

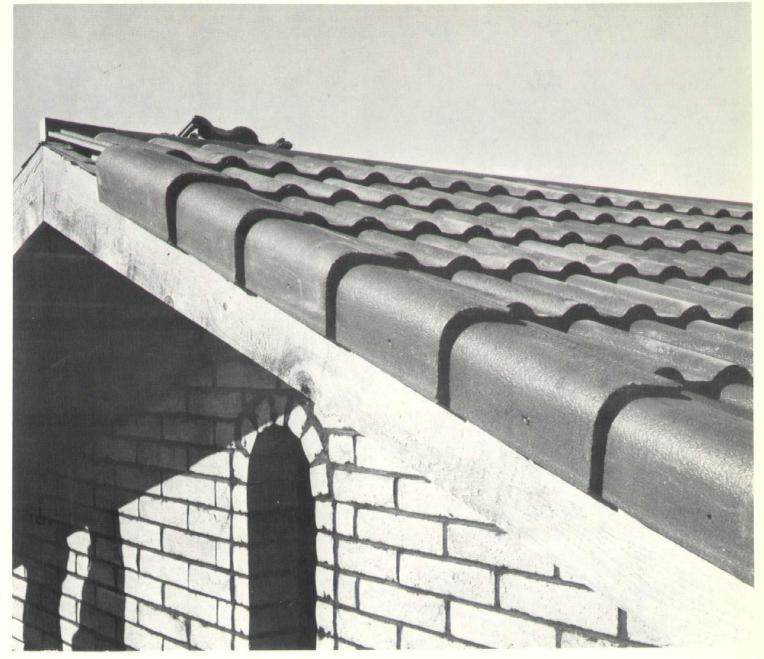
The architect should have a clear idea of the client's desires insofar as cost. In addition, the architect should avoid any promises or statements which constitute a guarantee that construction bids will, without question, be under the cost limitation.

Most importantly, it would be prudent for the architect and client to reach a clear meeting of the minds in regard to such matters as the project's scope, approximate cost, and professional compensation. After the architect and client reach a clear understanding in these and other particulars, all agreements should then be reduced to writing and signed by the parties. A lawyer, at this point, could provide invaluable assistance in drafting such an agreement. The type of dispute outlined herein, as well as the bitter feelings which might result, can then hopefully be avoided.

Mr. Bannister is a member of the law firm of Gamble, Riepe, Burt, Webster and Fletcher. He attended Augustana College, graduated with a BA from the University of Iowa, and received his Juris Doctor Degree from Drake Law School. He served on the staff of the Drake Law Review and currently is a member of the Polk County, Iowa and American Bar Associations.



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