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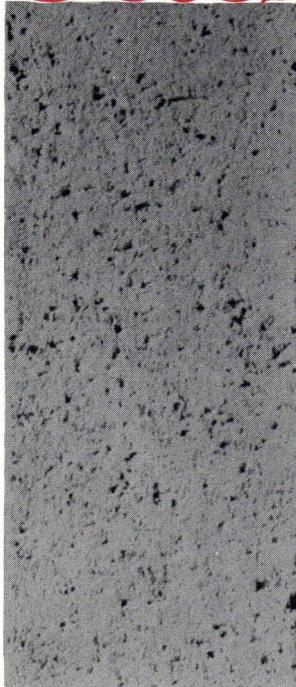
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From the President

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Publisher  
Editor  
Art Director

Ted Rowland  
Katherine Stuart Ewing  
Bruce Neckar

Advertising  
Ted Rowland  
P.O. Box 69  
Noblesville, IN 46060  
317/773-1829

ISA Editorial Board: Lynn Molzan, FAIA, chairman; Stanley Dziacko, AIA; Edmund L. Hafer, AIA; William C. Moe, AIA; Dean L. Upshaw, AIA

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# From the President



It seems as though we have just finished a very lengthy legislative session and now we find ourselves making plans for the next one. You may recall that among the numerous bills affecting architects which were introduced in the last session, the number one issue was Construction Management. There is a strong possibility that the number one issue during the 1982 legislature will also involve construction. This issue of *Indiana Architect* focuses on a very timely problem – construction financing. Although this subject can be very broad and include all phases of construction, one area of importance is the method of financing schools in the state of Indiana.

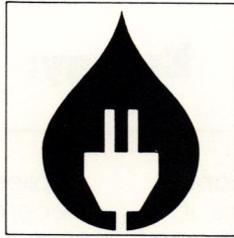
There has been a Legislative Council directive issued which mandates that, "A committee is established to study funding alternatives for the construction of public schools. In particular, the committee shall examine the use of cumulative building funds, the use of public and private school building holding corporations, and the use of bonding. The committee will also examine the impact of using uniform construction standards for all school buildings in Indiana."

This study committee had hearings on July 15, August 6, and August 11, during which school administrators, educators and exponents of various school construction methods testified. Of specific concern to the ISA were discussions on stock school plans and design-bid-build. A review of our legislative concerns in the last 10 years indicates that the ISA has taken a very strong stand against both of these methods. Several ISA members have spoken in opposition to these methods on numerous occasions to hearing committees. At this time we do not know what the study committee will recommend. However, we maintain a very active surveillance of the legislature and will keep you informed of what is taking place.

In the current issue of "*Sketches*," the ISA newsletter, I reported on the long-range planning report, 1981, which was sent to me by the national AIA. I think the concluding statement of that report is very apropos to the challenge that faces our profession and specifically the ISA. "The general public's perception of the practice of architecture and, indeed, the narrow view held even by some practitioners tend to limit the opportunity for leadership and diversification in the field of architecture. While many architects seem to be content to be designer/technicians rather than creators of the total environment and managers of the creative process, our free enterprise society is crying out for imaginative, creative and strong leadership in these areas so critical to the present and future well-being of humanity. That is why architects need a professional organization focused both inward at members' immediate concerns and outward at the society the professionals must serve. This requires fostering understanding of the collaboration and leadership of the design profession and the building industry. It means cooperation with other leaders of every major social institution. Finally, it necessitates clearly communicating to members of the profession and to the public that architecture is more than design. It is the management of the total building process, the adaptation of the built environment to the needs of the people who live in and use it."

*William C. Moe*

William C. Moe  
President



# ENERGY:

by Lieutenant Governor John M. Mutz, Director  
Indiana Department of Commerce



## The tax benefits of alternative energy sources

Nothing has fueled gadgetry like the energy shortage. Since conserving energy became popular, wizards and technicians have been spewing out doo-dads supposedly designed to save energy by the oil barrel-full. With so many gadgets around, salesmen with display cases full of the stuff have probably been to your office touting their latest marvels of energy efficiency.

Telling the winners from the clinkers is challenging. Equally important is figuring how to design and build energy efficient buildings while keeping costs down. There is nothing to be gained, and much to be lost, from an energy wasteful building. The key is to build an efficient building and bring it home at or under budget.

With construction and financing costs as high as they are, and with the need to conserve energy becoming more crucial all the time, Governor Orr and I wanted to broaden the scope of tax breaks available to builders and homeowners who use alternate energy sources. Three of the bills in our 19-bill economic development package which passed this year's General Assembly are good starts in the right direction.

- House Enrolled Act 1786 provides an income tax credit for geothermal and hydroelectric energy systems.
- House Enrolled Act 1886 creates a property tax deduction for geothermal and hydroelectric energy systems.
- House Enrolled Act 1714 makes oil shale conversion systems eligible for the property and income tax deductions already available for coal conversion systems.

Homeowners can benefit from switching at least part of the load for their energy requirements to one of these alternate systems. Builders and owners of housing developments and commercial buildings can profit from the tax breaks by using an alternative energy system, even though the first costs of the construction project may be higher because of the energy saving devices.

Technology and applied research has brought oil shale, hydroelectric and geothermal systems out of the Rube Goldberg stage. Many good systems are available, although they obviously can't be used in every building situation. Solar collectors on business buildings are just now becoming common enough not to rate a second glance from passing motorists. These tax programs and the existing tax credit for solar energy applications should help make saving energy affordable and attractive.

The Indiana Department of Commerce Energy Policy Division will determine if an energy system qualifies for the income tax credit and property tax deduction allowed for geothermal and hydroelectric

## Energy:

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power. The income tax deduction for oil shale conversion systems will be allowed on state returns if a federal income tax depreciation deduction is allowed for the same system.

The new laws have different beginning and ending dates. The income tax credit for geothermal and hydroelectric can be claimed on your 1982 returns and expires January 1, 1985. The property tax deduction

applies to property tax statements filed after December 31, 1981. The property and income tax deduction for oil shale conversion systems applies to taxable years after December 31, 1981 and expires January 1, 1990.

For more details, contact the Department of Commerce Energy Policy Division, 440 North Meridian Street, Indianapolis, Indiana 46204, 317/232-8940.

## *Energy seminars and Audits*

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*Within the Indiana Department of Commerce, Division of Energy Policy, the five energy specialists in the Field Assistance Branch help to serve the energy management needs in Indiana's commercial, industrial, institutional, governmental and non-profit sectors.*

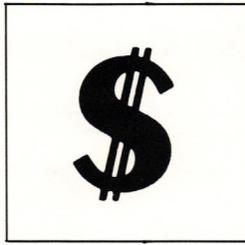
*Their varied services include on-site audits and seminars designed to promote energy conservation through better management of energy-related systems. Audits involve the use of a comprehensive energy audit form, a detailed on-site evaluation and personalized recommendations tailored to identify the best, most appropriate conservation measures. To date, the majority of Indiana's cities, towns and counties have taken advantage of this free service.*

*The one-day seminars, available upon request to the profit and non-profit sectors alike, can be either area-specific, or industry/building specific. Seminars have been given to Boy's Clubs, fire stations, the hotel/motel industry, the stone/clay/glass industry, the chemical industry and the primary metals industry. In September and October a series of seminars will be held for boiler operators and for*

*religious buildings personnel. Boiler seminar emphasis will be on providing techniques and methods to increase boiler efficiency, while the religious buildings instructional theme will target unique architectural considerations, usage patterns and in-house management. Future industrial seminars will focus on the fabricated metals industry and the plastics and rubber industry.*

*The Division of Energy Policy, Indianapolis, 317/232-8940, offers an industrial energy management manual to all interested Hoosier industries. Lieutenant Governor John Mutz, as Director of the Department of Commerce, which includes the Division of Energy Policy, is convinced, and the Division's task is to communicate, that the total lifestyle enjoyed by Hoosiers is directly linked to the ready availability of fossil derived fuels. By the judicious use of these energy resources, their availability can be insured far into the future, preserving the "good life" for future generations of productive Hoosiers.*

— Marlys Pedtke, Special Projects Coordinator  
Division of Energy Policy  
Indiana Department of Commerce



# IA ROUNDTABLE: CONSTRUCTION FINANCING

**C**onstruction financing does not exist in a vacuum. It is not, as John Donne would phrase it, an island. Inextricably linked to the myriad of complex interrelationships found within the economy, it both influences and is influenced by interest rates, lending institution policy, mortgage rates, industrial revenue bonds and any number of other assorted financial factors and features.

Because of this diversity, IA chose to invite to the Roundtable on Construction Financing a variety of people representing a spectrum of financial institutions, agencies and professions. Roundtable members were: David E. Carley, administrator, Division of Economic and Housing Development, Department of Metropolitan Development (Indianapolis); John Carter, economist and managing director, Research Associates, Inc. and a member of the faculty of Ball State University; Bruce Craig, vice president, Real Estate Loan Division, American Fletcher National Bank; David B. Hill & Associates (Seymour); Vern Holzhall, senior vice president, Mercantile National Bank of Indiana (Hammond); Richard L. Moake, AIA, Moake, Sheldon, Kratzat & Associates (Fort Wayne); Lynn H. Molzan, FAIA, Woollen Associates, Inc. (Indianapolis) and IA editorial advisory board chairman; D.V. Pace, president, M.J. Schuetz Agency (Indianapolis); Marie-Christine Pence, policy analyst, Business and Financial Office, Indiana Department of Commerce; and Michael Petersen, CPA, controller, Geupel DeMars, Inc. (Indianapolis).



**IA:** Mr. Carley, please describe the Division of Economic and Housing Development's functions as they related to commercial and industrial construction financing.



**CARLEY:** We act as a "hardware" agency for the city of Indianapolis. That is, we're the ones who buy real estate, negotiate the sale or lease of real estate, ultimately to put up some kind of building. We're the ones responsible for all the downtown city projects. Three years ago we started in the development of industrial parks in 10 city locations, and have more recently gotten into

neighborhood, commercial revitalization projects.

Most cities and municipalities are rather limited in the way they can participate in financing projects. Most often cities participate by writing down the cost of the ground. More recently some legislative changes have indicated that we can get involved in the financing of construction with certain legal and political limitations. In the UDAG applications on West Washington Street we have become somewhat involved in, through manipulation of federal and local funds, the field of construction financing as well as some of the permanent financing. That's really our first time involved in this particular subject.

**IA:** Is this something most cities are getting into?

**CARLEY:** I think most cities are into one form of assistance or another. Governments are going to have to become more and more involved in the construction of downtown and in-city projects, either through the regulatory process or the funding process.

## IA Roundtable: Construction Financing

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**IA:** What about Seymour, Mr. Hill?

**HILL:** The city tries to do a little. Primarily, most of the efforts are through the local Chamber of Commerce. The Chamber is the primary factor trying to get a revitalization of the downtown area, but not much has been accomplished in the 17 years I've been there.

**IA:** The Indiana Department of Commerce has been more involved recently in construction financing. How did this involvement come about?



**PENCE:** Before the last session of the General Assembly we had a program called the Industrial Development Fund. It provided a loan to municipalities up to 10 years at five percent interest rates. Those loans were for construction, putting in sewer lines or highways – those type of infrastructural-type projects. In the past the idea was to help the community be attracted to

development. Now, because we're limited in funds and really trying to go after the projects that will create jobs, we're tying it to industry-specific decisions. For example, if an industry wants to locate or expand in a community and the community needs assistance, we'll evaluate whether there's a specific commitment on the part of the industry – how many jobs this project will create. I think the thrust of the Orr/Mutz package was to create jobs. A lot of our new programs fall in with that pre-existing plan. We've got a highway set-aside fund. We have a sewer set-aside fund. We have a rural development plan which is specifically geared for communities under 10 thousand. We don't administer the tax abatement laws, but we're involved in the new tax abatements on new machinery and equipment, as well as the existing tax abatement on real estate development. Historically, we've had involvement with financing but not as aggressively as now. I think it's a part of the Orr/Mutz thrust.

**IA:** Mr. Craig, would you please explain the two different phases involved in construction financing?

**CRAIG:** As far as direct lending of funds is concerned, normally banks and mortgage companies are involved in the construction phase; they get the building built. Once the building is completed to specifications, a long-term lender pays out that construction lender.

The key to reasonable volume in the construction industry depends upon projects that can be financed by long-term funding that is economically feasible.

For years in this country, we've been used to a fixed-rate, long-term mortgage loan. But high inflation results in high interest rates and investors have found it necessary to re-evaluate their position. The result is that long-term loans are generally only available with some type of a kicker, or it might be a joint venture or an outright purchase depending on what they're looking for. What they've found themselves required to do is to make their investment as inflation-proof as they possibly can.

**IA:** Mr. Holzhall, would you like to add anything?



**HOLZHALL:** I've noticed one new thing this year. Rather than having a life insurance company come in two years after we've started construction, we now have an insurance company out of Dallas that says, "In two years, we'll buy this project for blank number of dollars subject to blank occupancy and review of leases, etc." This has been my first

experience with this type of takeout. I'm very happy with it, though a lot of paperwork is involved.

I've noticed in Lake County that a lot of the commercial lending we're doing now is moving from long-term residential mortgage loans to economic development revenue bonds where the banks who are the purchasers of these bonds are going in at a rate of 65 percent of prime. They're going in at a fixed rate of 12 percent and they're making tax-free loans. It's basically a backhanded mortgage but it's a tax-free yield to the bank. The one problem we're all having is that we're reaching our limit. We don't have anymore room for tax-frees.

Banks our size – we're about 270 million dollars – are not in a position to commit to a lot of long-term mortgage loans. We're paying 15 percent, 18 percent for our money today. So the banks have just taken an entirely different attitude. They're happy to provide interim financing but they're not going to do long-term financing.

**MOLZAN:** That's been our experience on a project we're involved in here in Indianapolis. We have industrial revenue bonding authority and we have a

## IA Roundtable: Construction Financing

construction loan from a local bank at 70 percent of prime. Supporting that is a standby commitment from a life insurance company in Dallas with option to purchase. We're in the process, also, of trying to sell industrial revenue bonds and are waiting for something to happen to the prime to make it a better picture for us. So far that hasn't happened. Wasn't there a bill in the legislature to change the industrial revenue bonds?

**CARLEY:** Yes. It would have provided that the Lieutenant Governor had to sign every non-industrial revenue bond that came through the state. It was killed in the house. We've argued that those shouldn't be strictly industrial revenue bonds. There should be some other kind of targeting so a place like Nashville, Indiana, that is dependent upon recreation, isn't eliminated from that method of financing. Each community's answer to disposable income varies so there has to be some flexibility in that law.

**CRAIG:** I think the economic development bond and, also, the open-ended construction loan which just recently opened up among banks, have been a vital part of what construction we've had, at least in the greater Indianapolis area.

**HILL:** It's difficult to show a pretty good margin of profit in banking now, isn't it?

**HOLZHALL:** For the small community banks it's become more difficult, yes. The cost of funds is so high.

**CRAIG:** High rates hurt the banks as well as industry.

**MOAKE:** How do financial institutions go about determining which projects will be successful?



**CRAIG:** Well, that generally ends up with the long-term lender. They do very sophisticated market studies. For instance, if it's retail, they'll check the traffic counts and all the factors that make a good retail area. Office and industrial warehouses seem to be the hotter items at this time for long-term investors. So, if it's an office, they'll analyze the need

and the rent rules and all those factors that go into a very viable project. They look at the total community. Really, those market studies are quite sophisticated.

**HOLZHALL:** I look at the question of attractiveness to the lender a little differently. We're concerned about what the risks are and whether we'll get our money back in an interim loan. When we talk about long-term loans, we look at the benefits to the community and who the developer is. Banks are profit oriented institutions. We're in it to make a dollar. We're looking for a good depository relationship.

**MOAKE:** Cash flow.

**HOLZHALL:** Obviously, cash flow is very important today.

**CARLEY:** Some businesses take the approach that as long as they can cash-flow it, go ahead. Interest rates mean nothing to, say, a major Indianapolis-based shopping center developer as long as the cash flow is there. But you've got other segments of the economy and clients who look at it entirely differently. When you get into markets that are used to almost a preferred lending rate there's a tremendous resistance to paying higher rates even if they can cash-flow it. They're just willing to bide their time and wait for rates to come down. It seems to vary according to the type of business.

**CRAIG:** Take the conventional apartment for instance. Most of your apartment projects today have been under the government program where there was a lower interest rate. None of the current projects are economically feasible with the rate they have to pay, at least in this area. The rent rates are not high enough to justify 16, 17, 18 percent long-term loans. I think office buildings are probably more popular because they can re-write their leases more frequently and build cost increases into the rent.

**IA:** Mr. Carter, it's been said that the ingredients are there for interest rates to come down, yet they stay high or come down very little. What are the ingredients which indicate the rates should come down and do you have any ideas on why the rates are remaining high?



**CARTER:** In terms of ingredients for making interest rates come down - first, you've got a very weak economy. I'm not ready to call it a recession but it is a very weak economic environment. That means that the demand for credit ought to be weak. We've just heard that it isn't very weak in some of the banking community. Yet, in some of the commercial-

## IA Roundtable: Construction Financing

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industrial lending that's occurring, I think it is weak. There's not a great deal of strength in some of the larger city banks for commercial-industrial loans.

Another, probably most important, ingredient is the fact that the inflation environment is considerably lower than it was in December of last year.

We've got the widest spread between the inflation rate and interest rates we've ever had. Back in 1956 and '57, the spread was wider than average; average being somewhere between two and three percent, something like the real interest rate. We've never had a seven and eight percent real interest rate. We've just heard an instance here where the margins in bank operations are very narrow which would suggest that the real interest rates ought to be good. They're not. The cost of money to these banking institutions has actually been higher than the return they can get. The mortgage rates are the ones that are damaging to a lot of the financial institutions. We've heard a great deal about savings and loans being underwater in terms of the return on their loans and what they have to pay for their money. They're buying short-term money to finance long-term needs and it just doesn't work.

One of the ingredients contributing to the high interest rate is the Federal treasury's tremendous financing. They've been in the market almost every month. We were saying, in our economic forecast, that the interest rates would begin to decline after the first of the year in 1981. The new administration came in and found they'd inherited the carry-over financing of the Carter administration. Some of that last-minute financing was just phenomenal. In terms of the two-to-three-year-and-beyond financing – which would be in competition with the kind of financing you've been talking about for building needs – the treasury was hitting the market very heavily. They were not only getting new monies; they were rolling over some of the older issues.

Another ingredient is that the Federal Reserve is now trying to give a great deal more credibility to the notion that they're going to keep a tight rein on, to restrain the inflation environment. In their monetary actions they have restrained the growth of money very successfully and it's had its dampening effects. I think those less-than-double-digit rates of inflation are very likely to continue for some time longer. Yet, the markets are not ready to identify that it's real. Now, they have a tax package and, in the public's mind, the cut in taxes means higher financing and higher deficits. Despite the record that we've had in the 1950s and the 1960s – the biggest one was the Kennedy tax cut which had tremendous benefits in terms of tax revenues over time – the public isn't ready to

accept the idea that tax cuts have the opposite effect, sometimes, of creating more taxes rather than less.

**IA:** What are your predictions?

**CARTER:** I guess if you forecast often enough and long enough, you'll be right. We've been saying for a long, long time that interest rates would be lower. The first of this year is when we thought interest rates would begin to track downward. The Federal Reserve came back in again and kept pressure on the federal funds rate – which is the market rate at which banks trade funds between one another – by forcing banks to adopt that market to discourage discounting. Every time there was any evidence that the federal funds rate was dropping just the least bit, the market rates would begin to plummet and prices of bonds and securities would rise. So there was all the evidence that the market was ripe for the decline but the Federal Reserve kept the pressure on the banking institutions by making their funds costly and difficult to get. The Federal Reserve is not going to let the plummeting of rates that occurred at this time last year be repeated. But I think the rates are coming down. I think by the end of this year you'll see considerably lower rates. Giving you an index to compare against, I'd say the prime rate is going to be way off the mark of 20 by the end of the year. Seventeen to 16 percent is a possibility. I've said before that the prime rate will be below 10 percent in 1982. I still contend that that's a possibility.

**CRAIG:** You've been speaking mostly on short-term. Do you see any impact, like the savings incentives in this new tax bill, to help long-term rates come down very soon?

**CARTER:** Yes, I do. I think that the 12 percent triple A utilities are likely to come down below double-digit range next year. Eight to nine percent is the range that I think, in time, is going to occur.

**CRAIG:** And mortgage rates will follow accordingly?

**CARTER:** I think we've got a new ballgame in mortgages. Mortgage rates are going to look more like the prime rate as time goes on, because the differences between financial institutions are so very narrow you have to draw the line as to what financial institution you're talking about. The savings and loans are looking more like banks and probably some of the banks are going to be encouraged to take on the troubled savings and loans. You may find that banks are going to be allowed to go into those kinds of savings and loan institutions as investment alternatives. So the mortgage rate could look more like a prime rate

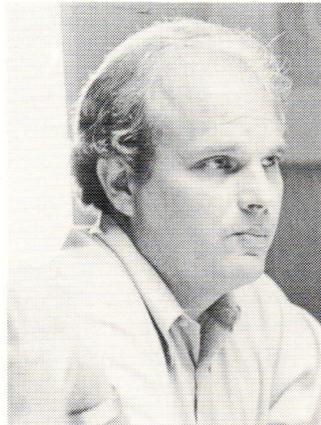
## IA Roundtable: Construction Financing

structure and not be as slow in its movement as it was in prior years. That's just a speculation. I'd be interested in your reaction.

**HOLZHALL:** I think you're right. I can't foresee our bank, and some of the other banks, going back to a fixed-rate mortgage loan. We're going to go with a variable rate; we're going to go with a balloon note; we're going to tie it to some index.

**MOLZAN:** What about the money-market funds? Where does that money go? Does it go back into local construction projects?

**CARTER:** No. The majority of it goes into large CDs at money center banks - banker's acceptance and commercial paper. The majority of it is not in treasuries. It's all tied up to the large money center banks.



**PACE:** What you're suggesting is that this money is being used to meet short-term needs. I have several contractor customers that are making enough money off CDs to cover their overhead. What few projects they pick up through the year just mean profit to them. I think if I was a developer right now and I had a good source of cash flow and someone

said the interest rates are going to go down in two years, I would say to the bank, "Let me talk to your trust department. How much money are you going to pay me for the next two years? Then I'll come down two years from now and talk to you about potential projects that we'd like to do. I can make more money by loaning my money to you." One of my customers made a real hit with his banker when he went in and asked his banker for the bank's financial statement.

**HOLZHALL:** It's true, your money markets are close to 17 percent right now and I think the banks earn about 18 percent.

**CARTER:** But it's only recently that those same investments are keeping ahead of the inflation environment. In the first quarter of this year they were behind. You'd lose money by investing in some money market mutual funds.

**PACE:** Even at that I saw my customers hanging onto their cash.

**IA:** Does Geupel-DeMars get involved in putting together financing packages for some of its clients?



**PETERSON:** We're just now starting to get into the whole development package, so to speak, including the financing. One of the markets that has remained fairly viable, I think, throughout this high interest rate period has been the condominium market and also retirement homes. You're getting a lot of up-front money from the people

that are going into these projects so you can reduce the debt that you're incurring on the front end. Five to 10 years down the road you can refinance it, hopefully at a lower rate. Even if you don't refinance, operations on the project at that time can fund debt reduction.

Another type of project that we've been working in is in the joint-venture area where the financing institution, the architects, the construction company and possibly a management group would get together and form a partnership, or joint-venture, to go in and build a project and to have an equity interest in the project. They're going to take more care in making sure everything goes right and in watching costs if they have an equity interest in it. Also, as a result of the equity interest our fees as well as the architect's fees are going to be reduced to some extent. At some point down the road we'll get it back in the form of cash flow. Those two types of projects have been successful for us.

**MOLZAN:** I assume some of the insurance company projects you have are financed by the companies themselves.

**PETERSON:** Yes. Right now that's about the only thing that is viable in terms of commercial construction, office space. It's only economically feasible when the companies can finance it themselves.

## IA Roundtable: Construction Financing

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**CARLEY:** I guess I'd take exception to that, particularly in the field of rehabilitation of the store structure. There are some tax incentives there. You have to take a packaging approach – tax abatement, industrial revenue bonds – to make a successful project. If we had a few more architectural firms in joint venture downtown, we'd probably rehabilitate every old, decrepit building they have. Architects have taken the lead in restoring downtown.

**MOAKE:** Is there any place in the selection of a project where the physical quality of the project, either in terms of the materials or the design, is considered by potential financiers for that project?

**HOLZHALL:** Well, I'd start out by saying that good architects add an awful lot of credence to a lender's views with respect to financing. One, we want the architect involved in the construction process all the way through. Two, good design, without a doubt, makes a lot of good sense to us. Three, when we have an architect that can build an attractive-looking building, we're going to have a greater acceptance by the leasing public. Four, good architects help ascertain the true cost of the project.

**CARTER:** I think that we lean very heavily on the architect during construction because we have to know that the building that is completed is the building we started out to build. That's a key point because the permanent mortgage lender has agreed to make a loan on a certain building. The architect and the contractor are the key parts in making sure the building is accomplished.

**CARLEY:** With the government being more involved with financing projects you've got to have an architect that's not only market-oriented but quality-oriented. This is particularly true in historic preservation where you have to please the historic preservation forces.

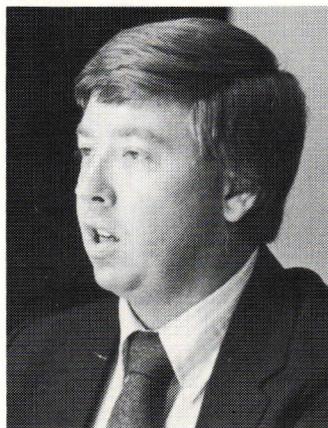
**HOLZHALL:** We've also found that an architect who comes in with a building developer can help answer a lot of questions as a team member.

**IA:** Ms. Pence, there was a time when Indiana was involved in a lot of construction projects such as mental hospitals, prisons, state parks. Recently, there's been a void in that area. Do you see the state getting out of direct funding of construction work?

**PENCE:** The state has had to cut down on construction projects due to decreasing funds and the need for these funds in other, more pressing areas.

**MOAKE:** An insurance company in Dallas has been mentioned here. Why do those companies finance projects in Indiana? Are they less conservative? Do they have more money? Why do we have to go two thousand miles to finance a project in Indiana?

**HOLZHALL:** Historically, the majority of insurance companies that invest in long-term financing are not located in Indiana. Many of the Indiana insurance companies still buy loans but they buy much smaller loans.



**MOAKE:** Another thing I've noticed with some of our clients – banks don't seem too interested in a 150 to 250 thousand dollar loan. They seem to want to talk seriously only about loans in the half-million or million dollar range. I'm talking about a construction mortgage. Are there break-off points for financial institutions that just aren't attractive?

**CRAIG:** That insurance company in Dallas is probably not interested in anything less than a million dollars if that small. There are smaller insurance companies that are interested in the 250 thousand to 500 thousand package. Your savings and loans were a good source of financing for that range when they had dollars to work with.

**MOAKE:** Where do these people turn?

**CRAIG:** Well, I think the financial community as a whole is in a period of transition. We're going to have to come up with packages that are viable for both the borrower and the lender.

**HOLZHALL:** We've had some success in placing the 100 to 500 thousand dollar loans. Lake County, Indiana is heavily union-oriented. We have and are working with a number of union pension funds where the pension fund will buy the long-term mortgage provided that the building is built with union help.

**CRAIG:** You know, that's an untapped market.

**CARLEY:** That size issue, of 100 to 500 thousand, has, in our experience, not been attractive in industrial revenue bonds because you've got fixed costs of issuing the bonds. It ends up an impractical rate at the market.

## IA Roundtable: Construction Financing



**HILL:** I find that both financing and construction activities vary greatly from metropolitan areas to small community areas. For instance, in southern Indiana a lot of people have a very conservative "wait-and-see" attitude, so many things have been absolutely frozen and very little construction activity is taking place.

**IA:** What about in Fort Wayne?

**MOAKE:** It's amazing. In the last month there have been more projects bid than probably in the preceding four or five months.



**MOLZAN:** There's a new construction newspaper out now and I'm amazed when I leaf through it at the number of major projects going on all over the country. What's keeping Indiana from being a boom state like we see happening all over the rest of the country?

**CARLEY:** Well, you know, you've got about one Volkswagen plant a year somewhere in the country. Now, how much is it worth to a local community to go out and fund those plants? Some states are cash-rich and can do that. Others are so poor they're desperate. That's just the way it is.

**MOLZAN:** Is Indiana's inability to go into debt, by state law, preventing it from growing?

**CARLEY:** Absolutely not. It really is a selling point. This is a state that's not going to get caught in deficit financing and, therefore, have to go out and double taxes to make up. It has to be viewed on a long-term basis.

**CRAIG:** When you raised the question about 250 thousand dollar loans, I don't know if I came across negatively and I want to clear the record. Our bank has made a lot of these types of loans but the problem is that our bank is not making fixed-rate loans for its own portfolio. And to make that loan on a floating

basis is just not economically feasible. I don't know of anyone that can do it.

**CARLEY:** What's interesting about this whole discussion is that it's supposed to be centered on construction loans and we've found ourselves wandering in the whole area of finance in general.

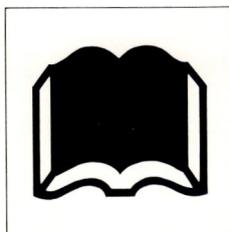
**MOAKE:** It sounds like fewer and fewer companies are loaning more and more funds.

**CARLEY:** And what we're doing is investing ready assets and sending them to New York.

**HOLZHALL:** But the money isn't coming back from New York. It's leaving the community. When money markets got over a hundred and ten, their assets were greater than the assets of 10 thousand of 14 thousand banks in the United States. How are the community banks going to make long-term mortgages?

**CARTER:** I think we're kind of winding down in a pessimistic tone. I'd like to leave it on a more optimistic note. In terms of both the financial and the construction facets, the opportunities in the 1980s look far more promising. We have had a mandate given by the general public last November of getting a better grip on this inflation condition. And inflation is a factor that has structurally shifted all these things that you raise as problems. It's going to take a long time to turn around, but I think the policies of the new administration offer a great deal more promise in terms of the construction industry. Competition is going to become keener in the financial institution market. Yet, it is going to be a more viable market in terms of providing funds. The institutions that are going to provide the size loans that you were asked about is one of the reasons why there will continue to be banking institutions of the size that will provide the 100 thousand to half-a-million volume of loans. Decontrol of savings, interest rate ceilings, are going to be a factor contributing to the capacity of financial institutions to meet the kind of requirements you have in that regard for funds. And, with the government being wound down with respect to its requirements and demands for new funds, there is a promising prospect that private industry, once again, is going to be put into control of the funds, where they're going to be found, and what use is made of them.

It's not all as bad as it might seem. I think we are really going to grapple effectively this time with the inflation problem that has contributed to all this imbalance and distortion you are finding.



# DESIGN-BID-BUILD A CONTROVERSY REVIVED?

by Katherine Stuart Ewing

**D**esign-bid-build is one of four delivery systems employed in construction. It is not, at present, a legally acceptable delivery system for the construction of school buildings in the state of Indiana. Of the remaining three systems (traditional, construction management and fast track), it is the traditional method which has been successfully used to construct the vast majority of Indiana school facilities.

An explanation of both the traditional and the design-bid-build systems follow.

## Traditional

1. The school corporation **selects** an architect after interviewing several candidates.
2. The architect reviews client's needs and prepares preliminary plans called "**schematics**," along with a cost estimate for the corporation's review.
3. When the schematics are approved, the architect proceeds with **design development** which includes drawings and other documents which fix and describe the exact nature of the project including architectural, structural, and mechanical-electrical systems and equipment. An updated cost estimate is furnished to the corporation as part of the design development documents.
4. After the approval of design development documents, final plans or **construction documents** are prepared for bidding and state agency approval.
5. The project is then advertised for **bid** by the corporation, bid on by a number of contractors, awarded to a contractor by the corporation, and final costs determined.
6. During **construction** the architect inspects the work, ensuring that the project meets standards and specifications detailed in the construction documents.

## Design-bid-build

1. The school corporation prepares a document outlining the needed educational and physical requirements of the school to be constructed.
2. Contractor/architect teams use the document to develop a set of preliminary plans and a guaranteed price and time of completion. This material is submitted to the school corporation.
3. Since several architect/contractor teams may be involved in developing preliminary plans, the school corporation evaluates each set of plans and decides which of those submitted best suits the school's needs.
4. Based on its evaluation, and with the possible assistance of a professional evaluator, the school corporation selects the best proposal.
5. The selected team then develops final plans and constructs the facility.

For a variety of reasons, some of which will be discussed in the ensuing article, Indiana architects and the Indiana Society of Architects, AIA, are opposed to the design-bid-build system's use in construction of school facilities. During an unsuccessful campaign to legalize design-bid-build for public construction several years ago, ISA declared that design-bid-build would not be in the public's best interest insofar as public construction is concerned (see sidebar). A new development – the formation of "The Interim Study Committee on Funding Alternatives for Construction of Public Schools" – is causing Indiana architects, as well as contractors, to restate the objections to design-bid-build.

**"... it is not in the public interest for public buildings to be built on the design-bid-build basis."**

– Jesse Jones, president  
Glenroy Construction Company  
Indianapolis, on August 11, 1981

## Design-Bid-Build

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The committee is composed of Indiana representatives and senators, as well as lay members (see sidebar for listing of committee members). As defined by Legislative Council directive, the committee's function is: "... to study funding alternatives for the construction of public schools. In particular, the committee shall examine the use of cumulative building funds, the use of public and private school building holding corporations, and the use of bonding. The committee will also examine the impact of using uniform construction standards for all school buildings in Indiana."

Indiana Architect editorial staff personnel attended the committee's meetings on August 6 and August 11, 1981. Transcripts from those meetings have been used in the preparation of the following summaries.

At its meeting of August 6, the committee heard testimony from a representative of the Concerned Citizen's Group, Northeastern Wayne School Corporation; from the superintendent of Vincennes Community School Corporation and from the attorney of a citizen's group in Vincennes. Bill Styring of the Indiana State Chamber of Commerce testified on alternatives to cumulative building funds.

In Northeastern Wayne School Corporation's case, the Concerned Citizen's Group readily admitted that school facilities were needed; the group questions the cost.

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**"... architects and engineers are professionals and ... are hired mainly through the interview process. ... Now, what makes us competitive? ... it's ethical practice (to) do the best you can for your client's needs. ... If we build schools that cost 100 dollars a square foot, you can't afford them so then we wouldn't be employed as architects and engineers."**

- Joseph S. Brown, AIA  
Everett I. Brown, Co.  
Indianapolis on August 6, 1981

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Since the school board was served with a subpoena on August 5, the Northeastern Wayne County School Corporation, on advice of its attorney, declined to testify. However, Representative Merle O. Brown, chairman of the study committee, endeavored to describe the school board's view of the cost controversy. Joseph S. Brown, AIA, Everett I. Brown Co., architect for the project which was designed using the traditional delivery system, noted, "We've been doing a lot of school buildings in this state for many years and this building probably has come in less (costs less) than any elementary school building that I know of in the last three years. We have dealt with inflation and, yet, it is

still less. It is approximately 50 dollars a square foot and I defy anybody designing a school building in the state of Indiana (to show me one) that has been built for 50 dollars a square foot in recent times."

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**"It's easy to say that buildings should be cheaper and probably any architect going can design buildings cheaper. But the public would not be well-served and, in the long run, our school corporations would be faced with enormous additional operating costs to try to deal with these maintenance concerns."**

- Raymond S. Thompson, AIA  
James Associates  
Indianapolis, on August 6, 1981

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Testimony from Vincennes was complicated and revealed that Vincennes residents question the need for a school building in their city. A remonstrance has been filed and was pending at the time of this study committee meeting.

There was general agreement that the time frame for filing remonstrances should be changed. David Dean, attorney for the Vincennes citizen's group, said, "... the existing law on remonstrating is woefully out of step. The remonstrance period in the lease context ... just, frankly, comes too late in the game." Wayne Ader, superintendent of schools, had previously stated his conclusion regarding the remonstrance period. Raymond S. Thompson, AIA, of James Associates, architect for the project which was designed using the traditional delivery system, agreed with both Ader and Dean, "... I would offer that the commission (sic) might consider the possibility of placing the remonstrance time frame and the review by the Tax Review Board at another point in the planning process. ... I would suggest that that review come at the end of what architects call the 'design development phase' - after the planning process has gone along far enough that costs can be pinned down to a substantial degree but, yet, we haven't gone through the latter 50 percent of the planning process where more dollars are spent."

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**"I can point you to school buildings all over this country that are literally falling apart, where architects have gone cheap, where the funding and the planning process in the states have not been as good as Indiana's."**

- Raymond S. Thompson, AIA  
James Associates  
Indianapolis on August 6, 1981

## Design-Bid-Build

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On August 11, testimony from numerous sources was heard: Dr. William Wilkerson, Indiana University School of Education; Jan Regnier, Department of Public Instruction; John Hart, Indiana Homebuilders Association; and Jack Peterson, Indiana School Boards Association. Of particular relevance to the question of design-bid-build was the testimony of Dr. William Day, Indiana University School of Education. Dr. Day is a long-time advocate for the design-bid-build system's use in school construction.

In the early portion of his testimony, Day revealed his agreement that the approval process needs alterations, "... there's too much time between the time we start and the time we get to the point of trying to sell bonds. I simply suggest ... we realign the players. ... we stop at the end of schematics. Some people would argue we go to design development, but the point is a little bit immaterial at this point. ... but take that schematic and have a cost estimate put to it and stop. Now we involve the public; now we involve all the state agencies and we find out do we have a viable need to continue or not. If we do, a budget is established with a little bit of leeway and we go. But, if there isn't a need, we stop there. We save a lot of taxpayers' dollars plus we save a lot of time on the part of school officials and patrons and other state agencies that can be spent on other kinds of things."

The early section of Day's testimony was the basis for controversy. He said, "... the last construction index that I looked at indicated that the only three states that were more expensive to build education facilities in (than) Indiana was (sic) New York, New Jersey and Pennsylvania." A bit later, he added, "You see, the main reason there (for excessive costs in Indiana) is there isn't any incentive on the part of the people involved in planning, designing and constructing facilities to try to control costs." He elaborated, "I think we over-design buildings in this state. ... we get into what I refer to as the non-instructional areas, the non-educational space - that's over-designed and ... many architects are not very responsive ... particularly when their fee may be based on a percentage of total cost."

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**"I just don't believe that architects purposefully increase the cost of construction to increase their fee. Our firm (and I think a lot of firms do this), to try to prove that point, ... will fix our fee after the design development phase so whatever the final cost (is) our fees do not get changed ..."**

- Raymond S. Thompson, AIA  
James Associates  
Indianapolis on August 11, 1981

Discussion concerning this testimony focused on the basis for the figures which indicate that Indiana is fourth in the nation in the cost of school construction. Joseph S. Brown, AIA, Everett I. Brown Co. pointed out that figures used by Day were as much as 15 percent above cost per square foot. Day responded that the figures represented total cost and stated, "... I think when we talk about what square foot cost is and total cost we've got to talk about what is the cost of getting the building ready to be utilized. You cannot pick out ... just what it costs to construct." Mr. Brown said, "I have to agree with Dr. Day that we must look at the total cost. But, for comparison purposes ... you must look at the cost per square foot ... not the total development cost. One project may have a sewage treatment plant; one may be connected to the sewers. One may need ... an outdoor track, the other one already have the outdoor track. The ultimate determination of what kind of equipment goes into a building is made by the owner. ... so when you make a true comparison I think you've got to look at the raw square foot construction cost." The disagreement was an important one, because Day bases much of his support for design-bid-build on supposedly lower costs, "... in 1976, there were 13 elementary schools completed. Considering all costs, the second and third least expensive buildings on a square foot basis were two design-build schools."

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**"... I would say that it (design-bid-build) is not more economical."**

- Jesse Jones, president  
Glenroy Construction Company  
Indianapolis, on August 11, 1981

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Even after others had testified, the subject of design-bid-build was re-introduced. Raymond S. Thompson, AIA, of James Associates commented that there are many successful school building projects in the state of Indiana and that these are not discussed often enough. He added, "I want to make a couple of comments on the design-bid-build process that Dr. Day talked about. And I guess I would have to say that in my judgment and in the judgment of our firm, it's not the best process. ... We don't believe that the design-bid-build process really can identify the materials and the systems that the building should have with enough accuracy to allow the taxpayers to get good competitive bids." Thompson further expressed concern about conflicts of interest which can develop during the construction phase of the design-bid-build delivery system. Robert N. Kennedy, FAIA, of Archonics Corporation, speaking to the same issue, said, "Design

## Design-Bid-Build

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professionals – architects and engineers – are in a unique position in that we have two clients always: first, the client that pays us, and (secondly) the public at large. Most other professions are not involved in that daily conflict. ... The best way to keep us as clean as possible is to get us to the point where we're actually serving the same guy, the public in both senses. The minute I start working for someone else a conflict arises because he's the man who is paying the bill and I cannot do something that he doesn't want me to do. ... It's not uncommon in this state for design professionals to do a big shopping center ... (and) as soon as he's designed the shopping center and the ... (client) starts construction, you get fired because he doesn't want you out there looking at his work. He hired some other person to come and do that. ... These are some of the things that you have to understand because, as a design professional – architect or engineer – to be a protector of the public, I've got to get my client closer to being ... (the public). ... There are thousands of places that you can reduce quality and no one will ever know the difference until they start maintaining it."

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**"I think what we could do is make a side resolution in our report ... that the people who are building deserve an option and our evaluation as to whether or not it (design-bid-build) does save money. It saves time. ... we could make a recommendation because there is the possibility that the legislature will face a bill of this nature."**

– Representative Merle O. Brown  
Chairman, Interim Study Committee on Funding Alternatives  
for Construction of Public Schools  
on August 11, 1981

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Jesse Jones, president of Glenroy Construction Company testified against design-bid-build on behalf of the Associated General Contractors Association of Indiana. Jones cited several reasons for the Association's opposition to design-bid-build as a delivery system for public buildings: "... one, you place the school board ... in the position of making decisions on materials and equipment which they are not qualified to make. ... (two) once you've decided on what you're going to build, then (the problem is) knowing whether or not what you've bought has really been delivered, because the design and the build ... (are) in the same house, the same ownership, the same profit motive, (and) might tend to not inspect as closely as if there were the traditional architect/contractor arrangement. ... Probably, the most important and overriding reason why design-bid-build is not recommended for

public work of any kind (is) because when you have local politicians and local bureaucrats and whoever happens to be in charge making the selections of millions of dollars (worth of construction) it will lead to mischief."

Jones referred to the duplication of plans in support of his contention that design-bid-build is not more economical than other delivery systems. "When there's one set of plans on the streets all the subcontractors will bid all the general contractors, because all he has to do is take off once. If he's a painter he can figure the painting on the Plainfield School and bid on it. Now, if there's five sets of plans ... the painter may get a little tired of going from office to office to figure the painting on each of these. And he may not figure the job at all, or he may just figure it with his favorite general contractor. So it's been our experience with this procedure that the guy has got to figure five different jobs to bid one (and that) causes an adverse effect on his mark-up because when he does get one he's got to cover all those costs in the bid. ... There's no free lunch and, if you've got five guys out there doing designs, sooner or later, they're going to get paid for it, in terms of their fees, or they're not going to participate."

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**"I can't see any difference in the time element because you can't take a subcontractor's bona fide bids on a design-bid-build until the plans are done."**

– Jesse Jones, president  
Glenroy Construction Company  
Indianapolis on August 11, 1981

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Concerning experts the school corporations could hire to oversee a design-bid-build project, Jones commented, "The expert advice ... is an advise and consent situation and the owner still would make those determinations himself. He might not take the advice. The advice doesn't come free. It adds another layer of fees onto the project."

In early September the Interim Study Committee on Funding Alternatives for Construction of Public Schools visited a design-bid-build school in Lebanon. **Indiana Architect** has been informed that discussion at that meeting also revealed some disparity in committee members' definitions of the term, "uniform construction standards" (see sidebar). As this issue of **IA** goes to press, the committee plans to meet again to finalize its recommendations to the Indiana General Assembly.

## Sidebar/Design-Bid-Build

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### When standards become stock plans

Do uniform construction standards for school buildings necessarily lead directly to stock plans? No, decided the Interim Study Committee on Funding Alternatives for Construction of Public Schools after debating the issue at their September 9, 1981 meeting. According to an informed source, the committee agreed that their mandate from the Legislative Council did not stipulate that they make recommendations on stock school plans. On the other hand, uniform construction standards have much in common with stock school plans. And uniform standards for schools can be the first step in establishing stock school plans.

While the American Institute of Architects and the Indiana Society of Architects, AIA, object most strongly to stock school plans, the interrelationship between stock plans and uniform standards make a review of the AIA's and the ISA's opposition pertinent. The following is excerpted from a report by the ISA executive director to the Speaker of the Indiana House of Representatives, and from a report prepared by the AIA Committee on School Buildings.

Stock plans of any nature:

- Deter experimentation and stifle innovation in educational planning.
- Must be reused repeatedly to effect even seeming economics. Studies conducted by the AIA Committee on School Buildings several years ago reveal that of 48 states who once had stock plans: "10 states had limited stock plans available at the time the study was conducted;

23 did not use them and never had; the remaining 15 had once used them and had abandoned them."

- Require expensive continuing revision to remain current.
- "Lock out" many potentially more economical materials and equipment suppliers by using **standard specifications**.
- Are expensive to adapt locally.
- Do not account for local geographic, geologic, demographic or materials conditions; (one can hardly imagine that Bedford would want a school with an aluminum exterior).
- Would not allow "systems" concepts to be developed.
- Place an overemphasis on materials rather than people and function.
- Are an instrument of service only and are useful only in the hands of a skilled architect.
- Do not take advantage of private architects' abilities to control costs.
- Tend to ignore the important initial (and highly localized) programming and planning activity.
- Would be created by architects who generally have no professional liability insurance and who could not certify further adaptations of such plans.
- Buy yesterday's building at today's prices.
- Infringe on private enterprise.

### What's wrong with design-bid-build

The ISA Committee of Architecture for Education has studied, in-depth, the design-bid-build issue in Indiana schools. Their report is contained in a 54-page booklet. The concerns the committee expressed in regard to employing design-bid-build in school facility construction are reprinted below.

#### Concerns for the taxpayer

1. Design-bid-build purports to take competitive bids on school building facilities with the bid

documents consisting of so-called "performance specifications," which in no way set out equal and/or explicit conditions for prospective bidders to bid upon.

2. Because of the gross generalization of performance documents, there is no basis upon which the end product can be accurately measured and/or quality standards enforced.
3. The process opens the door to sub-bid and material bid "shopping" by the successful low

## Sidebar/Design-Bid-Build

bidder, the end process of which results in hidden shoddiness, absolutely the cheapest possible products and/or systems for the numerous "behind the scenes" components. This "shopping process" puts the successful bidder in the position of unlimited profit gain at the sacrifice of acceptable quality materials and workmanship to the sacrifice of value gained for tax dollar expended.

4. The process restricts the planning process to the absolute minimum amount of time spent on judgments relative to proper planning relationships, building aesthetics and value engineering.
5. Taxpayers will be denied the proper architectural judgment relative to protection of life and property as well as building aesthetics as an essential part of the overall community environment.

### Concerns for the educator (and the student)

1. The design-bid-build process removes the architect from a compatible professional role with the educator, in attempting to develop, on an immediate and long-term basis, creative and worthwhile educational facility planning principles.
2. The educator will no longer have a role in shaping the design and/or relationship of public education facilities and will no longer have the opportunity to have dialogue with the school planner during the critical planning stages. (To say that this process can still happen within the context of design-bid-build is foolhardy and unrealistic. The architect in this relationship is placed in a definite adversary role, in order to survive economically.)

### Concerns for the architect

1. With the design-bid-build process the architect is removed from a professional role. Realistically, the opportunity for professional judgement and professional control of all aspects of architectural service is removed.

2. The process requires the architect to either minimize schematic and/or preliminary planning to a meaningless diagram, or gamble large amounts of design costs on a purely speculative basis. The long-term effects of this process are such that the professional cannot survive as an architectural entity. Architects will be forced to assume the combination architect-builder role, further eliminating the opportunity for unbiased judgments. The process is so inequitable to the architectural practice that successful architectural firms with long-term experience in school planning are not interested. The results of this situation create a climate where the potentially unscrupulous contractor can take over school construction projects.

All thoughtful architects with experience in school construction work are well aware of the serious responsibilities that architects have with today's economy to develop inexpensive school buildings within the capabilities of each community. The Indiana Society of Architects feels strongly that a design-bid-build process is not the answer to the problems created by our escalating economy and/or unrealistic approaches to previous school facility projects. The society urges all school administrators and all school boards throughout Indiana to give thoughtful consideration to the broad in-depth ramifications of the design-bid-build process. We urge that all school districts interested in this approach give time to architectural representatives to explain all aspects of this process. We urge that the American Institute of Architects' Design-Bid-Build Task Force Report be thoroughly understood and followed if this process is used.

Many architectural firms in Indiana and throughout the country have spent years developing competent staffs for school facility planning and have a sincere interest to serve the tax paying public in general and the educational systems in particular in a professional way. In many instances the approach to design-bid-build insults this integrity and seriously thwarts this worthwhile effort."

## The Interim Study Committee on Funding Alternatives for Construction of Public Schools

### Members

**Representative Merle O. Brown, Chairman**  
P.O. Box 24  
Webster, IN 47392  
**Senator Lillian M. Parent, Vice Chairman**  
P.O. Box 172  
Danville, IN 46122  
**Representative Ralph D. Ayres**  
P.O. Box 869  
Chesterton, IN 46304  
**Senator Clay P. Baird**  
146 Patterson  
Clarksville, IN 47130

**Representative Maurice Doll**  
P.O. Box 535

Vincennes, IN 47591

**Senator Katie Hall**

1937 Madison Street

Gary, IN 46407

**Senator Morris H. Mills**

7148 W. Thompson Road

Indianapolis, IN 46241

**Representative Paul J. Robertson**

R.R. #1, Box 77A

Depauw, IN 47115

**Representative Marilyn F. Schultz**

800 N. Washington

Bloomington, IN 47401

**Representative Richard L. Worden**

304 Cottonwood Drive

New Haven, IN 46774

### Lay Members

**Mr. W.M. Bane, president**

Baystone Construction Company

P.O. Box 2568

Muncie, IN 47302

**Mr. James P. Garland**

1221 North Grant Street

West Lafayette, IN 47906

**Mr. Harold Hiser**

P.O. Box 119

Danville, IN 46122

**Mr. James A. Hummel**

867 Gary Drive

Plainfield, IN 46168

# The Code Board

by Courtney E. Robinson, II, AIA

**F**INANCES ... the lifeblood of construction. Normally, nothing gets built until a financial institution makes a commitment. When a financial institution builds, what commitments do they make? And, because this column concerns itself with codes and life safety, what standards do they meet?

Indiana has more than its share of prudent architects and building owners who insist on their structures having a maximum of life safety, energy saving and other life-cycle cost considerations. These high standards are true even for Hoosier architects who leave their native soil to seek a living in the foreign lands of Chicago, or even California. Such an architect is Nat Owings, a founding partner of the firm responsible for the design of what will be Indiana's tallest, most energy efficient and safest high-rise building - the American United Life home office - now under construction in Indianapolis. The 38-story structure of 1,240,000 square feet will provide a most comfortable and safe environment for 5,000 fortunate workers.

Indiana's Energy Code requirements will be exceeded with the AUL building envelope walls having a U value of .10 and roof of .06. Coupled with these walls will be a ground water heat pump system for winter heating and summer cooling. This combination of envelope and efficient mechanical system will provide an energy saving over three times that of an ordinary system designed to current state energy standards ... and at less initial cost. The operating savings calculated over a 20-year cycle will exceed two million dollars. To insure these savings, a computerized automated control system will monitor and respond to weather and to user requirements.

In addition, the control center will monitor the sprinkling systems and fire detection systems (ion, photo and smoke) used throughout the building. This programmed automatic system will give the control center the means to:

1. bring elevators to the ground floor for immediate use by the fire services
2. Activate pre-recorded modulated voice commands to evacuate the fire floor plus selected floors above and below
3. notify the fire services with accurate details
4. pressurize all exit stairways to keep smoke from entering
5. activate smoke exhaust system
6. activate special elevators for the handicapped
7. communicate with floor fire marshals for personnel control
8. activate standby power

Also, because arson is a major source of fire, the control center will provide a means to maintain tight security throughout the building.

The American United Life high-rise office building will have greater built-in life safety features and, according to architectural studies, will be more energy efficient than any other in the United States, thanks to the architects' striving diligence and AUL management's insistence on the most advanced, efficient and safe working environment available today. The architects will turn over to the owner an outstanding building, with the latest life safety support systems. All codes will have been met or exceeded.

But what happens when a building is occupied? The National Safety Council, in a recent report, states that fires cannot be totally eliminated, even though the building is constructed of non-combustible materials and has every safety system installed. The hazards are the furnishings, the office supplies and other combustibles, combined with people. The greater the concentration of people and combustibles, the greater the fire risk.

Other prudent owners can follow American United Life's lead in working with their architects to formulate emergency plans for use when the structure is occupied. Consideration must be given to: fire, severe weather (tornados), bomb threats, main and secondary power outages, and personnel security.

In all buildings, especially high-rise structures, an organized, comprehensive program for emergency conditions must be prepared, placed in force and periodically practiced until all building occupants can react properly and automatically. The program, detailed in an illustrated handbook, must cover a minimum of:

1. evacuation of select floors or entire building to safe areas
2. detection and control of fire
3. detection and control of smoke
4. communications (zoned, coded voice commands)
5. elevator control
6. psychological features (anti-panic)
7. medical response
8. intruder detection and security
9. standby power
10. overall systems reliability and backup

The emergency response program at American United Life can be used as a guide for future buildings. The control center will have instantaneous response to fire, intruder, tornado, bomb threat and outages. Thus, the building occupants will be provided with the knowledge that the owners and their architects have anticipated most foreseeable emergencies with a program providing a maximum of life safety and comfort of mind.

Currently serving as chief architect, City of Indianapolis, Courtney E. Robinson, AIA, was, for ten years, Indiana's state code director, state architect and public works director.

# Tracings

**Baltimore, MD** ... The Baltimore Museum of Art is conducting a search for painted wire screens. According to Elaine Eff of the Museum, woven wire cloth was machine loomed as early as 1861 for many uses, including window and door screens for homes and businesses. Fine landscape pictures and advertising logos were painted or stamped on these screens to provide eye-catching decoration as well as privacy from the street. Figured screening was also sold by the yard for pie-safes and other domestic uses. If you have ever seen painted or stamped woven wire screens of nineteenth or twentieth-century vintage; or reference to their existence, use, location, or painters in America or abroad, please contact: Elaine Eff, The Baltimore Museum of Art, Art Museum Drive, Baltimore, Maryland 21218.

**Bloomington** ... After three years of construction, and 10 years of planning and fund-raising, Indiana University's new Art Museum is ready for occupancy. The 16,557-square foot structure, designed by internationally-honored architect I.M. Pei, will house 17,000 objects and was financed entirely through bond issues and private contributions.

**Elkhart** ... Simpson Building Supply Company announces that Tom Jann and Dave Kotoske have joined the firm as sales trainees. The two will handle telephone sales solicitation throughout northern Indiana.

**Indianapolis** ... Marcis Daiga has been appointed manager of Everett I. Brown Company's new Process Engineering Division. The division will provide computer graphics design services nationally for chemical, petrochemical and industrial clients. Daiga has ten years' experience as an engineer in the process industries, including work as a project manager or a process engineer in the refining, chemical, petrochemical, glass, automotive, plastics, and iron and steel industries.

**Indianapolis** ... The fifth annual "Christmas Candlelight Tour" of restored Victorian homes including private residences in the historic Old Northside, the President Benjamin Harrison Home, and the Morris-Butler House Museum will be held from 4-8 p.m. on Sunday, December 13, 1981. For ticket prices and more information, contact the President Benjamin Harrison Home, 1230 N. Delaware, Indianapolis 46202, or call 317/631-1898.

**Indianapolis** ... Raymond S. Thompson, AIA, chairman of the board, and Philip L. Hodge, AIA, president, of James Associates Architects & Engineers have announced several staff promotions. Named senior vice

presidents are Charles E. Parrott, AIA; H. Roll McLaughlin, FAIA; Thomas C. Dorste, AIA; and Howard L. White, AIA; all affiliated with James' Indianapolis office.

Robert F. Gassert, AIA; Forrest R. Camplin, AIA; and Kent D. Pierce, P.E.; with the Indianapolis office have been appointed vice presidents. Newly-named vice presidents in the Fort Wayne office are Jerry L. Firestone, AIA; and Kay L. Meyer.



**Indianapolis** ... The Aluminum Finishing Corporation of Indiana, Inc. has been awarded a major material contract for the Pemex Tower, the tallest building in Latin America and located in the heart of Mexico City. The company is based in Indianapolis and will supply aluminum Spandrel panels that have been finished with the company's exclusive "Anolite" process. Anolite is a special programmed anodizing process which includes the new Tru-Color anodized finishes. The corporation's contract calls for approximately .5 million pounds of these unique champaign bronze aluminum panels, which will be mounted to the 400,000 square feet of exterior surfaces on the Pemex Tower.

# Tracings

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**Notre Dame** ... The Department of Architecture, University of Notre Dame, has announced the schedule of 1981-82 University of Notre Dame Visitors in Architecture:

Thursday, October 8: William Caudill, FAIA  
Monday, November 9: Sarah Harkness, FAIA  
Wednesday, April 7: Dr. Faxlur Kahn  
Monday, April 19: George Kassabaum, FAIA  
Lectures commence at 4:00 in the Architecture Auditorium.  
For the Program in Rome:

Monday, October 12: Giancarlo de Carlo  
Friday, February 19: Christian Norberg-Schulz  
Advanced Design Review Panel at Notre Dame  
Monday, December 14: Charles Brubaker, FAIA  
John Holabird, Jr., FAIA  
Carter Manny, Jr., FAIA  
Jack Train, FAIA

For more information, please contact Ambrose Richardson, FAIA, professor of architecture and coordinator, or Robert Amico, AIA, department chairman and professor of architecture at 219/283-6137 or 6138, Department of Architecture University of Notre Dame, Notre Dame, IN 46556.

**Chicago, IL** ... President Reagan, in an exclusive interview with **Construction Equipment** magazine, predicted that his administration's Economic Recovery Program will trigger "a major investment boom" in construction in the next few years. President Reagan said he expects business fixed investment to rise to an average \$450 billion in a year in the 1981-84 period. This, he said, is approximately \$200 billion more than the prior four years. "It is quite clear that when the Economic Recovery Program is fully in place, the construction industry should be one of its major beneficiaries," Reagan said. Reprints of the interview are available from **Construction Equipment** magazine, 5 South Wabash Avenue, Chicago, IL 60603.

## Events

**Chicago, IL** ... International Energy Management & Facilities Improvement Show will be held in Chicago from November 10 to 12, 1981. Contact: Expo Management, 312/239-1191 or write Expo Management, Inc., The Apparel Center, Suite S2-132 Arcade, Chicago, IL 60654.

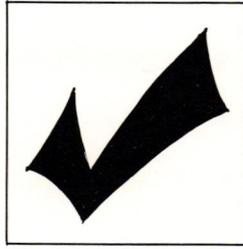
**Detroit, MI** ... American Concrete Institute (ACI) has announced some of its annual and fall convention sites through 1985: 1982 Annual Convention - January 19-23, Atlanta, GA; 1982 Fall Convention - September 19-24, Detroit, MI; 1983 Annual Convention - Los Angeles, CA; 1983 Fall Convention - September 25-30, Kansas City, MO; 1984 Annual Convention - Phoenix Arizona; 1984 Fall Convention - September 9-14, New York, NY; 1985 Fall Convention - Mexico City, Mexico. ACI Seminars on Concrete Parking Structures: October 20, Atlanta, GA; November 10, Chicago, IL; November 19, Orlando, FL; December 1, Lawrence, KS; February 17, 1982, Philadelphia, PA. Contact: Educational Department, American Concrete Institute, P.O. Box 19150, Detroit, MI 48219, 313/532-2600.

**New York, NY** ... The Society of the Plastics Industry, Inc. Reinforced Plastics/Composites Institute has announced Product Showcase '82, January 11-15, 1982, Sheraton Washington, Washington, DC. Contact: SPI RP/C Conference Information, 355 Lexington Avenue, New York, NY 10017.

**Philadelphia, PA** ... ASTM has announced the 1981 Symposium on Thermal Insulations, Materials, and Systems for Energy Conservation in the '80s, December 8-11. The conference is sponsored by ASTM Committee C-16 on Thermal Insulation in cooperation with the U.S. Department of Energy and the Oak Ridge National Laboratory. Contact: James A. Thomas, ASTM Standards Development Division, 1916 Race Street, Philadelphia, PA 19103, 215/299-5498.

**St. Louis, MO** ... The American Society of Interior Designers heralded its 50th year during its national conference and exposition held July 23-27, 1981.

**St. Louis, MO** ... American Society of Civil Engineers are holding their annual convention, October 26-30, St. Louis. Contact: American Society of Civil Engineers, 345 E. 47th St., New York, NY 10017, 212/644-7496.



# CORRECTIONS

Time is an enemy of all who would prepare Index listings. The listings must be prepared very accurately, yet quickly so as to "beat" address and firm changes. And then there is a necessary lapse of time while listings are typeset and printed. Within such deadlines there are bound to be corrections which occur after the Index is in its final stages. With compliments to the staff of the Indiana Society of Architects, AIA, and their continuing effort to make Index '81 even more accurate than its predecessor issues, IA furnishes the following changes to Index '81.

All Associate members should be listed as Assoc. AIA.

- Page 6: **Bruce R. Allum, AIA**  
c/o Architect Lee Scarfone  
Assoc. (ALSA)  
P.O. Box 886, Alkhobar  
13th Street & Prince Salman Blvd.  
Alkhobar, Kingdom of Saudi Arabia
- Robert L. Amico, AIA**  
233 South Hawthorne Drive  
South Bend, IN 46617
- Page 7: **Dale E. Ankrom, Assoc. AIA**  
7410 E. 106th St.  
Noblesville, IN 46060
- George A. Barnhart, AIA**  
4525 Patricia St.  
Indianapolis, IN 46222
- William L. Beaman, AIA**  
William L. Beaman & Assoc.  
3412 N. Academy Blvd.  
Colorado Springs, CO 80907
- Page 11: **Samuel R. Calvin, AIA**  
3111 Coliseum Boulevard East  
Fort Wayne, IN 46805
- Page 12: **Marion L. Collins, Jr., AIA**  
501 John St.  
Anderson, IN 46016
- Rupert D. Condict, AIA**  
310 S.E. 8th St.  
Evansville, IN 47713
- Page 15: **Orus O. Eash, AIA**  
7517 Oak Lane  
Fort Wayne, IN 46804
- Page 16: **Melvin "Bud" Erny, AIA**  
250 Willow Avenue  
Carlton Groves  
Merritt Island, FL 32952  
305/452-1159
- Page 23: **Thomas Keene, AIA**  
Change firm to P:ACE Design
- Raymond J. Konger, AIA**  
4656 West Jefferson Street  
Suite 260  
Fort Wayne, IN 46804
- Page 26: **Michael N. McCarroll, AIA**  
Change firm to P:ACE Design
- Page 27: **Henry McKinley, AIA**  
Change membership designation to emeritus
- Page 28: **Callix E. Miller, AIA**  
16174 Baywood Lane  
Granger, IN 46530
- James H. Miller, AIA**  
3230 Maple Ln., c/o B.E. Harker  
Fort Wayne, IN 46804
- Kenneth R. Montgomery, AIA**  
720 First Savings Tower  
Anderson, IN 46016
- Page 31: **Paul T. Pierson, AIA**  
2828 E. 45th St.  
P.O. Box 55126  
Indianapolis, IN 46205  
317/547-9441
- William G. Rammel, AIA**  
Deceased
- Page 32: **Donald C. Rennard, AIA**  
R.R. -1, Box SW 245  
New Palestine, IN 46163
- John F. Reynolds, AIA**  
Moved - no forwarding address

## Corrections

---

Page 35: **Terrance Short, AIA**  
Change firm to P:ACE Design  
**Clyde Shropshire, AIA**  
8887 Braeside South Dr.  
Indianapolis, IN 46260

Page 36: **John L. Sosenheimer, AIA**  
4656 West Jefferson St.  
Suite 260  
Fort Wayne, IN 46804  
219/432-0655

Page 37: **Patricia M. Stough, Assoc. AIA**  
210 Bunker Hill Ln.  
Dunedin, FL 33528

Page 45: **Northern Indiana Chapter**  
**Collins, Fredric W., AIA**

Page 46: **Kinkel & Kinkel, Architects**  
Change to Jack R. Kinkel & Son  
Architects

Page 47: **Architectural Firms**  
**James Associates -**  
Fort Wayne, Inc.  
3111 Coliseum Blvd. East  
Fort Wayne, IN 46805

Page 51: **Emeritus Members of the Indiana**  
**Society of Architects**  
Add - **McKinley, Henry, AIA**

Page 52: **Fellows of the American Institute of**  
**Architects**  
Add - **Charles M. Sappenfield, FAIA**  
**Indiana Construction Industry Council**  
David R. Epperson, Executive Director  
Sheet Metal Contractors Association  
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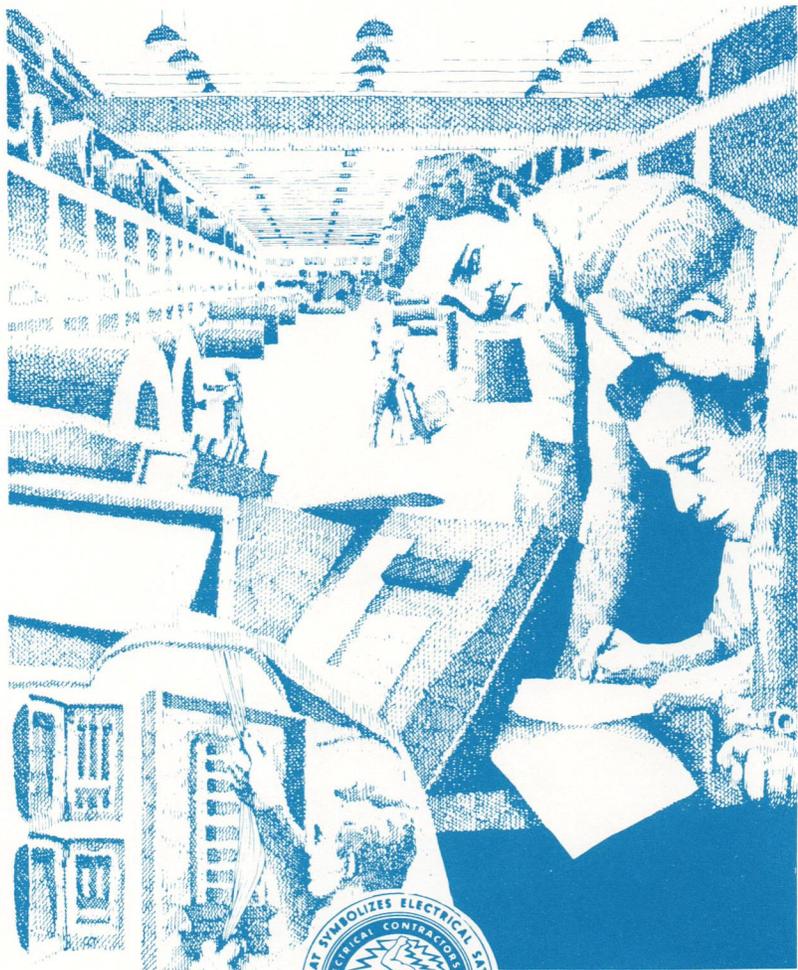
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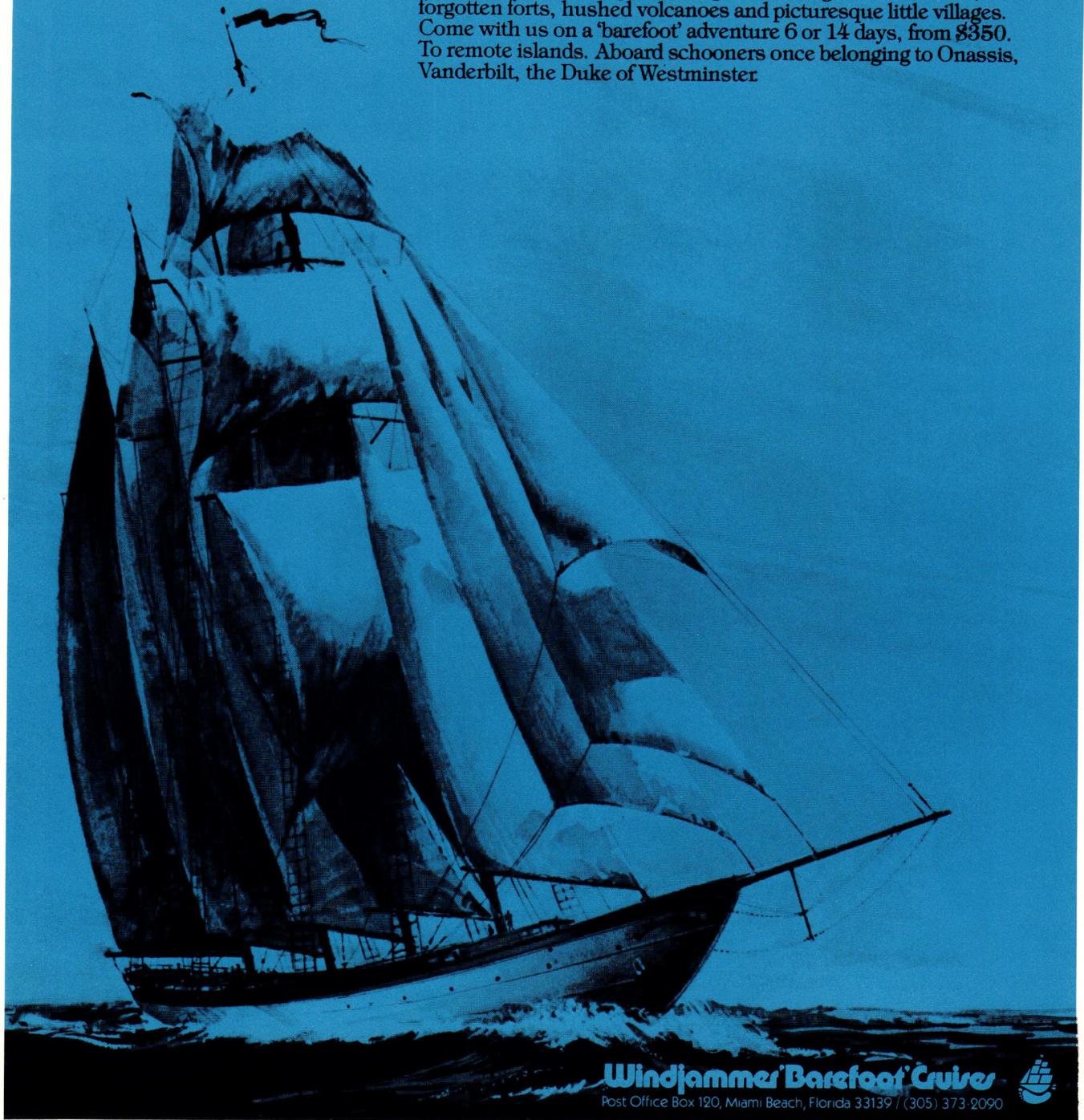
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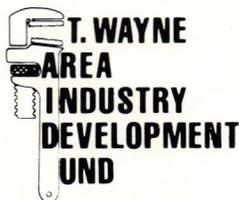
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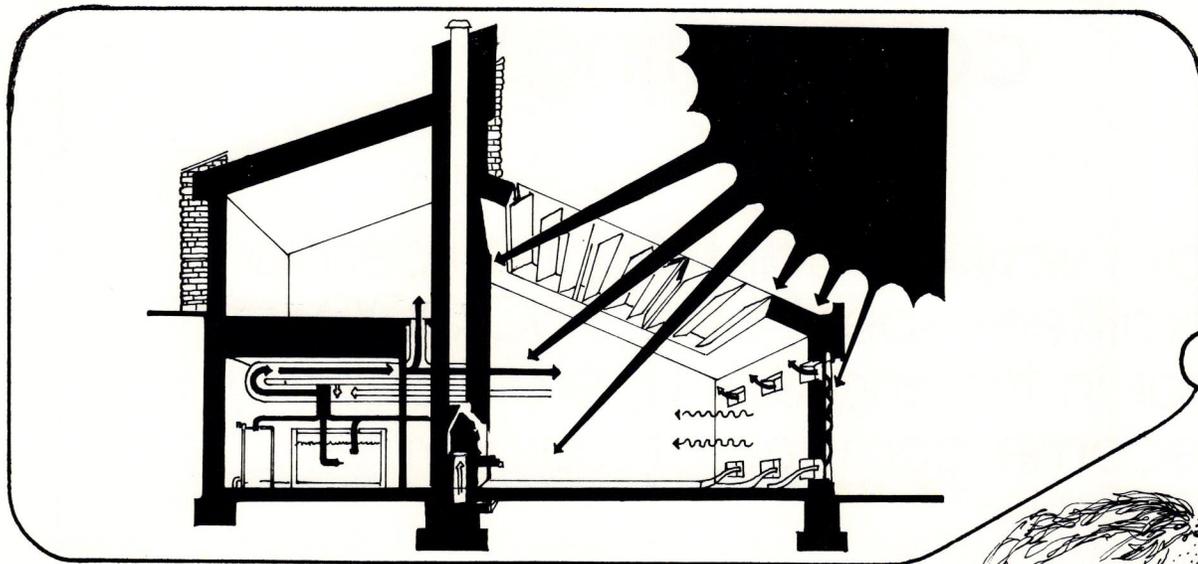


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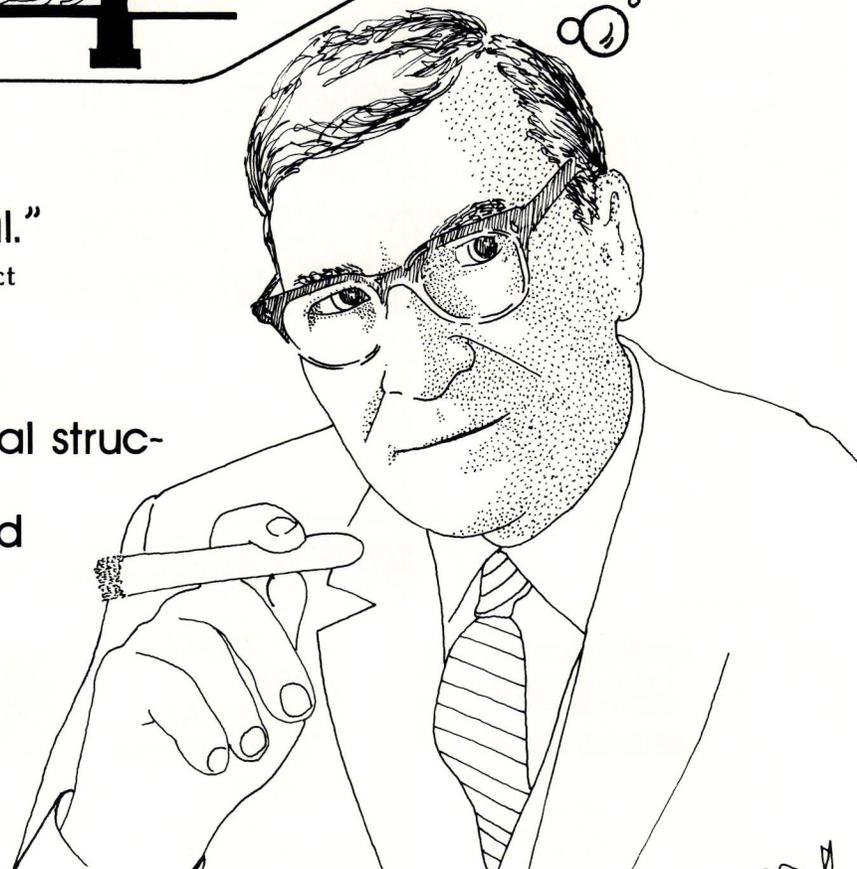


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