how to go from concept
to construction

By the time preliminary plans for his building are completed, the client has an imposing array of talent at his disposal. There are the architect and those members of his office staff assigned to the project. There are the structural, mechanical and electrical engineers who are normally paid out of the architect’s fees (and can easily account for a third or more of it). There may be any number of other consultants, at extra fees, called in for advice showing how much of each item goes into every part of the building. The drawings, when reproduced, are often called the working drawings of the building. Along with the general drawings of the shell of the building are preserved and codified because the specifier must make clear exactly where the jurisdiction of one trade ends and the other begins.

Finally, as the project moves from conception to execution, the largest group of all prepares to join this legion: the contractors and workmen who will do the actual work of construction. While the consultants have been in on the countless decisions that gave shape to the building concept and have a clear idea of what the end product is intended to be, the contractors and workmen can only know what the client and architect tell them about the project.

One essential step remains, therefore, before they can begin their work: preparation of the architect’s working drawings and specifications, which must describe the building until the real thing rises from the site.

Plans, sections, elevations, and divine details

“In general,” says the Architect’s Handbook of Professional Practice, “information relative to design, location and dimensions of the elements of a project is the province of working drawings; and that having to do with quality of materials and workmanship belongs in the specifications.” To state it another way, what can best be shown is put in the drawings, and what can best be told in the specifications.

The drawings, when reproduced, are often called the “blueprint” for the building, although these days prints also come in other colors. They include plans, elevations, sections, the walls header, sections, slicing the building open at various points; and details. There are also “schedules” of finish materials, doors, windows and hardware, showing how much of each item goes into every part of the building. Along with the general drawings of the shell go separate sets for the structural frame and the heating, air conditioning, plumbing and electrical systems.

Their production involves a challenge in communications between the architect and his consultants, most of whom are prepared to produce drawings of the building elements in their charge. It is up to the architect to see that, in the end, they come out even: that every time a part of the building is shown it looks the same and that the elements in one set of drawings dovetail with those shown in another. Otherwise, to use an example that is not totally unheard of, the contractor may find that he is asked to put a heating duct and a beam in precisely the same place.

For all their communication aspects, the drawings are also acts of design. It is at this point that the details of the building, the places at which its various parts are joined together, are worked out, and in the current era of simplicity of surface, details are all important. The famous assertion by an architect that “God is in the details” may be dubious theology, but it underscores the loving care which today’s architects put into them.

The delicate art of the specifications writer

The writing of specifications is no less an art than the making of working drawings, but it is perhaps in a somewhat earlier stage of development. The drawings, to recapitulate, show what goes where in the building. The specifications define the “what” and provide precise instructions for putting every item in place. Their principal concern is quality: they must state the standards to be enforced for each item used in the building and also for all important phases of the work itself.

The specifications writer, then, is in part a purchasing agent for the project, providing a shopping list covering equipment and every building component. He is also almost like a judge, attempting to anticipate and settle in advance potential conflicts among contractors, suppliers and the jealous principalities of the building trades.

The need for accuracy and completeness

The volumes produced by these specialized authors generally have as their foreword, the basic ground rules for contracts. They include the bid and contract forms, the bid and contract forms, the bond requirements and the all-important General Conditions of the Contract. The bulk of the specifications is organized according to trades, and the sequence of trades is determined by the order in which they perform their jobs.

The trade sections of the specifications begin with a statement of the scope of the particular trade’s work. It must make clear exactly where the jurisdiction of one trade ends and the other begins.

Next comes a list of the materials and equipment required for the work at hand; provisions for any shop drawings or samples required to be approved by the architect and client before these items can be installed; procedures to be followed in construction of all elements of the building for which the trade is responsible; stipulation of any tests to be made of the work; instructions for cleaning up after the trade is finished; and, finally, the guarantees which will be asked of the contractor.

All of this may sound quite dry and technical, yet in a real sense the trade sections of the specifications tell the history of the American building industry. It is here, for example, that new and revolutionary methods that will change the course of the industry are often first recorded, for most building research is promoted by individual projects. It is here that new products and materials undergo the acid test. It is here, too, that anachronistic methods of building are preserved and codified because the specifier knows that more progressive ways would meet resistance from building officials or unions or convention-bound contractors. And it is here that jurisdictional judgments are recorded which, by assigning work to one trade over another, cin in the long run bring prosperity to the chosen group of contractors and craftsmen and eventual extinction to those excluded.

It is understandable, then, that the specifications are never prepared in a vacuum. While they are in preparation, the architect is beset with pressures, the vast majority of them perfectly legitimate. Fortunately for the client, sharing these pressures—knowing which suggestions and appeals to accept and which to reject—is part of the architect’s job.

Some of the pressures come from salesmen of building products and materials, whose relationship to the architect and client is something like that of the lobbyist to the legislator: the salesman is a special pleader, but he can also provide useful information. The salesman’s goal is to get his product specified by brand name; failing that, he wants to be sure the architect does not name another brand to the client, exclusion of whose products he knows the architect’s goal. He has considered all reasonable alternatives in his role as the client’s purchasing agent.

CONTINUED PG. 18
Among the religious structures receiving merit awards at the 29th National Conference on Religious Architecture were four from Florida. Three are presented herein; the fourth, St. Paul's-By-The-Sea Episcopal Church of Jacksonville Beach, was featured in the "Florida Architect" for April 1968. These designs express and reaffirm traditions of the church while giving new visual form and meaning to those traditions.
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NEXT MONTH:
The July issue will be a first in the publication history of "The Florida Architect": the issue is being compiled and edited by students at the University of Florida as the initial volume of a student publication.
When architects Pancoast/Ferendino/Grafton designed the new Creative Arts Center for Miami-Dade Junior College, they came up with an award-winning environment of exciting interior spaces for the study of art, music and drama. An indoor pool wraps around three sides of the 500 seat auditorium, and a series of interior bridges connects the three basic elements of the building.

To air condition this diverse combination of large and small spaces, versatile BOHN central station air handlers were specified as the design units. The result is a landmark learning-teaching facility that can be used year-round in total comfort.

Five BOHN multi-zones and three single zone units provide all the heating and cooling for the building. Units are supplied with chilled water and hot water from a central plant on the campus. Of course, each unit contains BOHN’s own superior heating and cooling coils, the product of the world’s No. 1 coil maker.

Whatever kind of space you’re air conditioning, your BOHN representative is a good man to know. Let him tell you the full inside story of the complete problem-solving line of BOHN equipment.


*Citation for Design Excellence from the American Association of School Administrators.
The First Methodist Church, Hollywood. The architects were Start and Moeller; the builder was Terry Tower. Subcontractors and suppliers involved were Prosser Plastering, Larson and Acton Masonry and Adobe Brick and Supply Co.

From tile roof to stucco interior, concrete offers a wide variety of construction elements to meet the demands of today's religious architecture. More and more, architects are utilizing concrete for designs that are ingenious and yet meaningful for today and generations to come.

Concrete provides the versatility, economy and permanence required for modern construction.

Low in initial cost, it gives superior insulation from heat, cold and noise. Additional savings are realized through the years because of low insurance rates and maintenance costs.
We first must consider the total value of the Chapel not only in the light of its effect on our Temple proper, but how it relates to our image and work in the total Miami community as well as its potential contribution to National Jewry.

We are dedicated to excellence in all phases of this endeavor; i.e., architecture, art, and the spiritual and intellectual attainment that we will create.

SPIRITUAL

We are striving in the Chapel and remodelling of Wolfson Auditorium to create a most religious and inspiring edifice. One that will engender to all who view it the emotional and subconscious spiritual feeling that is so necessary in any significant religious architectural work. We are creating spaces and feelings that must be reverently inspiring, whether the spaces be used for individual meditation, large group ceremonies, or for general religious services.

With architecture we are endeavoring to create a spiritual mood, a sense, a feeling. The entire architectural design is based on the following concepts: the infinity, oneness, and timelessness of God's creative world, as exemplified by the sculptured, shadowed, volumes of space; the ever-changing patterns of life, as manifest in the play of constantly changing light as it reflects off the sculptured surfaces of the chapel; the insignificance of individual man as he relates to a much larger and endless environment, as reflected in the soaring height of the concrete ceiling; the grandeur of God, as one sees the diffused, multi-colored light as it filters through the stained-glass windows and into the sculptural space that envelops the congregation. As the sun moves, as the light changes during the day, so does the shape, texture, and volume of the Chapel. As day gives way to night, a metamorphosis occurs, the Chapel dramatically changes; our stained-glass windows change from light to black, our flower-like chandeliers take on the role of illumination of the space. The interior is softened and is more in keeping with the night.

RELIGIOUS MEANING

This Chapel will endeavor to show the Jewish religion in all its glory. It is not to be just a chapel, as undefinable religious building, but rather in every part of its make-up, exemplifying the finest in Jewish thought, ideology, and theology. Many principles of our religion are incorporated in the structure and artistic embellishments.
I believe one of the primary responsibilities of the Architect is to seek out and express the uniqueness of his client. In church design, this should not imply complacently imitating traditional forms nor should it give license for creating conspicuous individualism for its own sake.

The Greek Orthodox Church had its origin and development dating back to the earliest day of Christianity. One of the most important elements of Orthodoxy is the Holy Trinity, which is emphasized not only in dogma, but also in the execution of the ceremony. As such, the Trinity is a major symbol in the design of this church and is expressed by the three barrel vaults spanning the length of the structure. The barrel vault was a common method of roof construction in the Roman Empire at the time Christianity was taking root and its use is continued throughout Christian countries along the Mediterranean.

Another element found in early Christian churches (Basilicas) was clerestory windows high above eye level functioning solely for the entry of light into the nave while shielding out the surrounding environment. In Saint John The Divine, Twelve clerestory windows are positioned on the side walls of the nave serving the same function as it did sixteen hundred years ago and symbolizing the Twelve Disciples of Christ.

The Church complex consists of two levels; the upper being utilized for the church itself, while the lower level houses eight classrooms, offices conference room, kitchen, social hall, and storage. Seating capacity in the nave is 350.

The structure is steel frame, concrete roof, brick exterior walls, textured plaster interior walls, all electric air conditioning. Total cost of construction excluding interior furnishings is $230,000.00.

TED PAPPAS
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Yet every panel has the rich low sheen look of hand-rubbed oil finish and has earned the Good Housekeeping Seal.
The site is in the northern part of Dade County, Florida, on the Oleta River. It is heavily wooded with a magnificent stand of live oaks. It is of great concern that as many of these trees as possible be saved, and, in a measure, this influenced the design.

The program, in functional terms, is basic to most young, progressive, Reform Congregations. Sanctuary, Chapel, Social Hall, School, Library, Administrative Offices, etc. It is necessary for the Sanctuary to seat four hundred fifty persons which can, on High Holidays, be enlarged to seat one thousand persons. During the remainder of the year, the part of the building used to augment the seating capacity of the Sanctuary, is to be used as a Social Hall. The School and ancillary spaces are to be added in increments as funds become available, with ultimately eighteen Classrooms. Yet, a deeper understanding is necessary to determine what basically the Synagogue is.

At the center is the Jew with his centuries of history, memories, religious feelings and individual sensitivity. Inherent in his religious experience are tensions by his belief in the discipline of the intellect and the power of the spirit, in the dignity and nobility of man and the omnipotent power of one God, and in his self-assertion and also self-negation. Of special meaning to the Reform Jew is the statement of Dr. Eugene Mihray, "Man is everything, and man is nothing in the presence of his Maker. He compromises neither but lives in the tension of the two." It is necessary therefore, to design a religious complex which would give primacy to the celebration of worship and education and thereby enhance the individual religious experience. The Sanctuary then must be a means to an end and not an end in itself. It must evoke prayer, petition, praise, song, reflection, and meditation, for it is man who speaks; without him, there is silence.

While the solution provides for the functional program, it, at the same time, expresses the theological program. Between the vocabulary of architectural forms used there is tension. But this tension is derived from theology and liturgy and reinforces the religious experience. The individuality of the Social Hall and the Sanctuary are clearly evident and yet it is the worship space which ultimately dominates visually.

The geometric solution was generated by space and usage requirements. It is basic that the Sanctuary be visually directional with principle focus on the Ark and reading table and secondary foci on the Rabbi's and Cantor's pulpits. Form, structure, light and materials are used to enclose and reinforce this space. Lighting sources both artificial and natural are concealed, and it emanates from below in increments. The roof is visible from above in order to reinforce the mysterious and all-encompassing power of God. Light intensity, slope of the roof, walls and floor, the rhythmic progression of structure, and the use of a vertical stone wall behind the Ark reinforce the direction of the interior.

The Social Hall is more flexible and can accommodate social groupings, dining tables, or assemblies as well as becoming a part of the Sanctuary when the movable wall is open. The necessity of enclosing a space that during High Holidays would not visually divide the congregation determined the height of the connection between the Social Hall and Sanctuary as well as the slope of the Sanctuary roof. The roof is visible from the seat most distant from the Ark and thereby connects the two spaces as well as reinforcing the directional character of the total space when the movable wall is open.

Fragmenting the complex into small elements allows easier individual expression of the different spaces; produces a richer visual experience; provides a reduction in scale in order to be more compatible with the surrounding neighborhood of single family houses; allows better adaption to the site with the resultant loss of very few trees; and in the future, provides ease and flexibility when implementing a continuing building program.

The use of native materials are also a part of the design. From a low base of native stone, which provides the transition between earth and building, rises the structure of laminated wood framework shingled in natural cedar. The interior is exposed wood structure and cedar decking above a base of native stone. The broad eaves and sheltering roof form suggest and provide protection from the elements.

It is anticipated that this building will express purpose and direction rather than an end. It suggests the past, is rooted in the present, and will hopefully point to the future.
JOHN G. WOOD is a leading home builder and developer in Central Florida. He knows from long experience that electric reverse-cycle air conditioning adds a major selling feature with recognized sales appeal and also produced excellent service per dollar invested.

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n homes, apartments, office buildings, industrial plants, retail stores, motels . . . reverse-cycle electric air conditioning is performance-proven in hundreds of thousands of installations throughout Florida. Flameless-clean. Flameless-safe. Compact and space-saving. Gives greater design freedom for architects and engineers. Eliminates big-expense items like boiler rooms, fuel storage, flues and vents. Costs less to install, maintain and operate.

AKEWOOD, beauty spot of Winter Haven, is an exclusively total-electric “Gold Medallion” subdivision by John G. Wood and Associates.
SMOOTH SELLING
BY GEORGE N. KAHN, MARKETING CONSULTANT
© 1967 George N. Kahn

“HOW TO SET UP AN INTERVIEW”

Fifty per cent of all interviews fail because the salesman assumes a passive role before the buyer.

This is especially true when the buyer reacts negatively to the seller. Sometimes the prospect only has to frown and the salesman trembles in his shoes. Before long he is pleading and whining to be heard.

The interview is the payoff, the moment of truth in selling. All your training, preparation, and planning are aimed at the moment when you stand before a prospect. The idea of blowing such an opportunity seems incredible, yet many do every day.

The major reason for this is that the salesman automatically adopts a secondary position. He becomes the pupil instead of the teacher.

Buyer Reaction

First, it should come as no surprise to the salesman when hearing the cold shoulder from a prospect. The latter is reacting according to his experiences with hundreds of salesmen, most of whom were mere order takers or worse. They didn’t know their story; they were phonies, etc.

So even though you may be a first rate man, you still must suffer for the sins of those who preceded you into that buyer’s office. He doesn’t know you and has no reason to expect that you’ll be any different from the others. The prospect has all his defenses up. You’re guilty before you even get a word in.

A rough game? Yet it is, but it gets easier if you start playing by your rules instead of his. If you have the guts and ability to survive those first few moments of hostility, you stand a better than even chance of not only walking out with an order, but of creating a permanent customer as well.

Show that buyer you are totally different than other salesmen he’s confronted. Let him know right off that you don’t want to be treated like the rest of the pack. Be more than a seller. Be a bearer of important facts and information which will help the prospect in a very concrete way. Make him believe that your coming was the best thing that happened to him all day.

Related Sales

An interview can fail even if you get an order. If you sell $1,000 worth of merchandise when you could have sold $2,000 worth, the interview was not a success.

So many salesmen today pass up an easy opportunity because they don’t think of related selling. Even a haberdasher clerk is alert to this possibility. When you buy a tie, he’ll ask if you need socks or handkerchiefs. And in supermarkets tartar sauce and lemons will be displayed over the frozen fish case.

Don’t isolate your line. If you have related items, push them. The customer can only say no and he is quite likely to say yes.

Ritchie Graves, a paper products salesman, said to me not long ago:

“We’ve got a natural setup for related sales—napkins, paper towels, bathroom tissue, etc. Yet it’s amazing how many salesmen in my firm simply never try to sell similar items. Some of them could be making twice as much money as they are.”

You’re actually performing a service for the buyer when you mention related products. If you don’t, he may very well buy them from your competitor the next day. He often needs a reminder.

Same Old Story

Interviews also fail because the salesman is dull, repetitious and a bore. He tells the same old story in the same old way.

The successful salesman is one who varies his approach, who is not wedded to a formula. He strives to be interesting as well as informative and, if need be, he can even be entertaining.

One way to lick this problem of dullness is to make a recording of your talk. Then put yourself in the position of a buyer as you play it back. How does it sound to you? Then deliver another talk, eliminating all the cliches, overworked phrases, repetition, etc.

Phone Ahead

You can precondition the interview to your advantage if you phone ahead for an appointment. This implies to the buyer that you are courteous and considerate of his time.

If you can’t make an appointment by phone, don’t give up on the buyer, however.

I once telephoned a man who refused to see me. The next day I went to his office and was shown right in. An hour later I had a $20,000 order.

I told him frankly that I had never expected to land such an order in view of his attitude on the phone.

“Young man,” he said, “I wanted to see how much persistence and drive you had. If a man is discouraged by a telephone call, then he shouldn’t be in selling.”

To sum up then: The interview should mark your supreme effort as a salesman. You must be authoritative, knowledgeable, interesting and alert to parallel sales. You must be the teacher imparting valuable and vital information to the prospect. You must strive to be different, to steer away from time-worn statements.
LETTERS

So happy to see ARCHITECTURE FOR FLORIDA LIVING available at last. It has been worth waiting for and I am very pleased at the fine job you and your staff have done. I am going to enjoy it and have purchased additional copies as gifts, etc.

Best wishes,
C. Ellis Duncan

Please accept our sincere and heartiest congratulations on the first issue of ARCHITECTURE FOR FLORIDA LIVING.

It is truly a factual and pictorial expression of a strong impact created by the members of the Florida Architectural Profession.

Cordially,
LAMBERT CORPORATION
V. L. Sinisi
President

The high quality of ARCHITECTURE FOR FLORIDA LIVING is pleasant to behold. Congratulations to you and to your staff for an exceptional job on your first edition. The standard you have established will be a worthwhile challenge for all future editions.

I am enclosing a copy of a letter to Dan Duckham. I thought his featured residence well deserved a place of honor.

Kindest regards,
Alfred Browning Parker, FAIA

JUNE, 1968

ELECTED to COLLEGE of FELLOWS

IVAN H. SMITH

Ivan H. Smith, partner in the firm of Reynolds, Smith, and Hills, Jacksonville, has been elevated to Fellowship in The American Institute of Architects. He is honored for Service to the Profession.

As chairman of the Commission on Professional Practice of the Florida Association, AIA, since 1966, Mr. Smith has organized a state-wide effort which has led to advancement in architectural services and improvement of interprofessional relationships as well as improved public understanding of the architect's role.

Mr. Smith is a past-president of the Jacksonville Chapter, AIA, past-president of the Florida North Chapter, AIA, and has held national committee membership.

He is also secretary of the Jacksonville Building Code Advisory Board, a director of the Jacksonville Safety Council, and a member of the Committee of 100 and the Florida Foundation for the Advancement of Building. In 1967 the Jacksonville Chapter of the Construction Specifications Institute recognized him for "Significant Services to the Construction Industry."

He has also won the Pularra Award, Florida Association of Architects, for outstanding service.

ROBERT E. HANSEN

Robert E. Hansen, head of his own Fort Lauderdale architectural firm—Robert E. Hansen, A.I.A., has been elevated to Fellowship in The American Institute of Architects. He is honored for Public Service.

A member of the Urban Renewal Agency, the Downtown Development Authority, and the Committee on Land & Building Elevation Problems, Mr. Hansen has received several Certificates of Appreciation from the city in addition to a Distinguished Service Award.

He is a founding member and past president of the Fort Lauderdale Association of Architects, a past president and active member of the Broward County Chapter, AIA, and has held many committee chairmanships in the Florida Association of Architects, AIA.

Mr. Hansen is also a past-chairman of the Broward County American Red Cross and is presently on the Broward County Board of Plumbing Examiners.

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The Daytona Beach Chapter, AIA which is hosting the 54th Annual Convention & Building Products Exhibit along with the state Convention Committee have been meeting over the past several months formulating the convention program which will take place October 25-27, 1968.

The Convention theme Systems & the New Technology was arrived at because the great demand for building construction in our rapidly developing world has made many of our current building techniques anachronistic. The architect's traditional intuitive approach is inadequate for the vast number of constraints required to design tomorrow's environment. Systems analysis, a method for solving problems with expanding limits, will contribute heavily to tomorrow's design techniques. If coordinated and controlled building systems provided by industry offer the answer to present fragmented methods:

*We will see change in the concept of the independent architect?*

*Will giant corporations with their own systems dominate construction in the future?*

*How can architecture keep up with current construction demands?*

The Florida Association of the American Institute of Architects presents these questions to architects and their guests as an objective and educational view of the relevance of systems technology to the construction industry. It is the intent of this program to bring engineers, contractors, and material suppliers together with architects for seminars on the issues presented after each major address.
ARCHITECTURAL AWARDS
JURY SELECTED

This year architects will submit their entries to be considered for Awards selection by means of a Full-Vu binder. The exhibit entries will be judged on September 5 and 6 by the following:

Lawrence B. Anderson, FAIA
Dean, School of Architecture
Massachusetts Institute of Technology

Charles Colbert, FAIA
Former Dean,
School of Architecture
Columbia University and now practicing architecture in New Orleans

Robert L. Geddes, FAIA
Dean, School of Architecture
Princeton University

After the jury makes its final determination of Honor and Merit Awards those architects whose entries have been selected will be requested to prepare a panel presentation for display at the convention and throughout Florida during the year. The Awards Program is open to all registered architects.

Material pertaining to the Awards Program has been mailed to registered architects.

PRODUCT EXHIBITS

The Building Products Exhibit arena will again be a focal point of convention activities. As shown on the accompanying layout of the exhibit booths only 57 booths are available this year. The exhibits will officially be opened with the Host Chapter party on Friday evening, October 25th. The entire convention has been purposely planned around a weekend at the request of architects. This will allow a greater number to attend and at the same time prevent being away from their offices.

Manufacturers desiring additional information on exhibit booths may contact the FAIA headquarters in Coral Gables.
It used to be that the specifications would be full of brand names followed by the term "or equal," but the trend is toward performance specifications—which, however, are tricky to prepare. Even though some trade organizations have developed helpful standards for many large and basic items, it still takes great skill to apply these standards to the particular situation at hand.

Pressures also come from the contractors, once they get a look at the plans and specifications. They may have favorite products and materials, favorite ways of doing things, at variance with what the architect has prescribed; they may have had a bad experience with an item in the specifications; they may be reluctant to experiment with new building materials.

Architects, except for those few who assume omniscience, will give their suggestions careful consideration. Indeed, they often call in one or more contractors for advice while the drawings and specifications are still being prepared. There is no substitute for the know-how that comes from direct experience in construction, a fact which places special importance on the care with which the contractor is selected.

Competition, negotiations, segregation—and money

When public monies are involved, there is a tidy division between the completion of drawings and specifications and the choice of a contractor. The contract documents are prepared, a public notice is issued inviting responsible builders to submit their bids, and the one turning in the lowest figure gets the job.

The system of open competitive bidding is a traditional part of the romance of construction. It is free enterprise at its freest and most frantic form. It virtually assures the client of getting the lowest available price tag on his building. It also has a great deal to do with the fact that Dun & Bradstreet reports a ratio of net profit (on sales) of only 1.18 per cent among building contractors.

If wide-open bidding is a perilous gamble for many contractors, it also has its shaky aspects for client and architect. The lowest bid is seldom the most realistic one, and a builder in danger of losing his shirt can find room for quality work. Two alternative methods are open to the private client. He can retain the benefits of competition but limit the bidders to a select list; or he can simply negotiate a mutually agreeable price with a chosen contractor.

The common element of these two methods, of course, is the screening of contractors in advance. Sometimes this simply means taking the architect's word that he has worked with a given builder and has found him capable and reliable. In other cases, however, it means looking into the success of the contractor's past projects, the size and length of service of his work force, his reputation as an administrator of construction and even the kind of equipment in his corporation yard.

The negotiated contract has the considerable advantage of allowing the builder to become a valuable collaborator in the final stages of design. Obviously, however, he must be a man well known and thoroughly trusted by both client and architect. If no such man comes to mind and the client opens the project to bids, the use of a quantity surveyor can help to put the bids on a more realistic basis (and also provide a preview of the eventual cost of the building while it is still possible to make changes). The quantity surveyor estimates the amounts of materials required for the building and sometimes the total man-hours of labor putting a price tag on each. This extra service is the rule in England and becoming more popular in the U.S.

Another form of protection for the client who chooses to invite bids takes the form of deposits and bonds. Each contending contractor is required to submit a deposit with his bid. If he is the low bidder and for some reason decides to pull out, the client gets the deposit. The amount is usually a lump sum determined by the architect on the basis of his estimate of the job's cost. Frequently, a percentage of the bid. The successful bidder also is required to put up a performance bond, insuring that the work will be finished even if he goes out of business, and often a labor and material bond guaranteeing payment of suppliers and subcontractors.

The contractor has been referred to in the singular, but, in actual fact, there are two basic ways to undertake construction: to engage a single general contractor who will subcontract whatever work his own force does not do or to engage separate contractors for each major segment of construction. The latter practice, sometimes called segregated bidding, usually involves the letting of individual contracts for the shell of the building and for its mechanical and/or electrical services.

The controversial role of the general contractor

The relative merits of the two systems are the subject of continuing controversy within the construction industry. The general contractors claim that they are in the best position to captain the job from start to finish and point to the advantages of having a single coordinator responsible for the entire project. The specialty contractors claim that this procedure no longer makes much sense in an era when mechanical and electrical systems account for an increasingly large part of the cost of buildings; they say it simply puts a superfluous middleman in the way of progress.

The decision between letting one or several contracts is usually determined by each specific building situation: the nature of the project and the customs of the local construction industry. If segregated or separate bids are taken, however, the client should be prepared to pay the architect an additional fee for the close coordination that would normally be the task of the general contractor. And regardless of which system is used, the client and architect should exercise the same care in screening specialty contractors as they do in the selection of the general contractor.

The final decision to be made in choice of contractors returns the client to the familiar subject of money. Bids can be requested in the form of a lump sum, or, if the contractor can simply undertake the work on the basis of actual cost plus a negotiated fee. The first system is simpler and more clear cut, but can tempt the contractor to shave corners if he begins to realize he has submitted a disastrously low figure. The second puts the contractor on a more professional basis, but does not offer as great an incentive toward economy. Sometimes a combination of the two is used in which the contractor agrees to a cost-plus-fee arrangement, with a guarantee that the total will not exceed a stipulated "upset price." Savings are split between client and contractor on a predetermined scale.

With such decisions made, the time has again come for the client to sign his name. Earlier, he contracted with the architect for a concept and a service, the net result of which was, to this point, a stack of paper. Now he is contracting for equipment, for materials and for labor. The net result this time will be his building.
Gas heating and water heating and shopping center complexes? You can’t beat it for economy and dependability. The figures prove it! And that vital fast recovery rate prevents hot water shortage."

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Built-ins are inexpensive during construction, often prohibitive later on.

JUNE, 1968
Over six months have passed since I was installed as your President. This causes me to reflect on what needs to be accomplished between now and when our new administration takes over in October at the Daytona Convention.

First, I find in my travels about the state, that the Governor and the legislators whom I have met possess an acute awareness of Florida's needs, created by such factors as: the rapid expansion of our population, industrial growth, business, deficiencies in travel and recreational facilities; and, above all, the need for an environmental quality unmatched by any other state. Due to this intense interest on the part of our state officials, we, as architects, must offer our knowledge of coordination, planning, and technical know-how in all areas by providing information which will serve the welfare of Florida.

Each legislator knows that the State of Florida is anticipating 20,000,000 tourists in the next year. They realize that 80% will travel by automobile. They are aware of the Road Department predictions that the automobile — not planes, helicopters, elevated trains, or buses — will be the main means of transportation for many years to come. Therefore in the area of comprehensive planning we must encourage the citizenry to provide proper housing plus recreational, cultural, business, religious and industrial facilities. These should all be located in a related manner to handle 10,000,000 residents (by 1975) as well as 25,000,000 tourists. Facing such figures may cause the ordinary citizen to throw up his hands. But, as architects, we should "just begin to fight."

Whether it is a city, county, or state problem, the welfare of the public is foremost. We, as architects, must shoulder our responsibility as I know we shall.

It is a well known fact that if there are more highways to provide better access to business facilities, recreational areas, and tourist attractions, there will be larger revenues for all (including taxes for the state treasury). Therefore we would need no increase in taxes. We will have been instrumental in generating new and expanded business, which in turn will contribute to a healthy environment.

It is my intent, as it is also that of your officers and Board of Directors, to do everything in my power to serve this principal aim:

To aid the officials, as lay people, in meeting our growing needs in an objective way so that Florida will be respected as the state that is the eighth in size yet the first in its concern for the welfare of its people, its business, and its tourists.

Now let us consider the educational program of the Association. Jim Garland, our Commissioner for Education and Research, has been performing a service for every parent in Florida. Not only has his education program served the young people who might be interested, but we would like to think it has proven helpful to Dr. Dayton Roberts in his work in the Department of Education, as well as to the schools of architecture in our state. The Association brought together most of the department heads of the junior colleges to discuss: (a) problems of the young boy or girl who may desire to be an architect, and (b) to discuss curriculum and how it benefits the student in his studies at the university. The willingness of educators from all over the state, cooperating to solve these problems objectively, was a heart-warming experience. At this first meeting I told these people that I, as an interested parent (more than as an officer in the Architect's Association), was most impressed by the job they were doing. Somehow I feel that all parents should know more about the service rendered them through people like Dr. Roberts, Dean Bolles, and James Branch to name just a few of the people attending this education meeting. The State of Florida can be proud of these people, each of whom is interested in the welfare of the young people who are trying to get an education.

In reviewing our program on preservation of historical buildings, I note that Professor Blair Reeves, our State Chairman on Preservation, has brought credit to the architects of Florida. He has been coordinating a program with the Governor's office and other agencies to record the historical buildings of Florida. As you know, one of our programs is to establish the "Historical Trail of Florida." This would form a triangle from St. Augustine down to Key West then up to Pensacola, encouraging tourists to visit the complete state. We are also planning to establish a catalog of historical places in Florida and to aid in the preservation of these places so that future generations might enjoy the history of Florida.

The programs of the committees on membership, professional practice, and design are involved also in the projects mentioned above. They have each made good progress and will continue to advance in subsequent years. The environment of all people in Florida is our concern and it is our intention to pursue vigorously this principle. I appeal to you to continue to support your local community in all matters of mutual interest.
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