BUSINESS IN 1964 WILL BE ABOUT AS GOOD AS THIS YEAR. That's now the feeling of most economists in Washington — their tentative working estimate for Budget and planning purposes. It's quite an optimistic forecast, too, because 1963 is proving to be a thumping good year. But the experts feel confident things will go well —assuming those tax cuts finally become law.

The forecasters see gains of 5% to 5 1/2% in total output of goods and services. In dollar terms, this Gross National Product will rise $30 billion-plus. By contrast, the gain in GNP this year shapes up as about $28 billion. It adds up to high-level growth by nearly any standard of measure.

THESE FORECASTS REFLECT NEW OPTIMISM, compared to a month or so ago. Few were fearful of a recession in 1964. But some wondered if the rate of rise would be slow — merely an upcreep — or something like an old-time boom. With tax-cuts fairly likely now, though, the experts look for customers and business to continue spending steadily, keeping this middle-aged rise going.

This is the consensus of economists. There are dissenters, however, whose views are at least worthwhile noting. A few of the analysts think that an old-fashioned all-out boom is a real possibility; they think it would be accompanied by a renewal of inflation. But most are not this exuberant.

SPENDING FOR CONSTRUCTION IS EXPECTED TO GO UP BY NEARLY 3% in 1964. By comparison, the gains this year are shaping up as slightly more than 4%. (This is one area that will contribute only a little to the 1964 expansion.)

This is the way the specialists size up construction:

... Housing starts may rise 25,000 from this year's 1,520,000.
... Government outlays will level out at about the 1963 pace.
... Office and motel building will ease from recent high rates.
... Factory and hospital work is expected to expand somewhat.
Costs ... up 2% this year ... will rise a little less in 1964.

UNEMPLOYMENT WON'T DROP MUCH NEXT YEAR — the big flaw in the outlook. Fast-rising productivity means there'll be more output with few new workers. Yet more than a million job-seekers are joining the labor force each year. So even a strong upturn would barely cut joblessness below 5% ... from 5 1/2%. More than 3 1/2 million Americans would still be hunting work at 1964's end.

INTEREST RATES WILL REMAIN FAIRLY STABLE over the next few months. That's the feeling of key monetary policy-makers. As they view it, supply and demand for credit are in rough balance. This equilibrium could well last for some time in 1964, if the balance of payments picture improves — and if the current business rise does not suddenly turn into a real boom.

... Demand: Inventory accumulation won't rise much this fall. Investment in new plant is rising only about as projected. Consumer and mortgage debt isn't likely to make big gains.
... Supply: Corporations are generating huge cash flows from depreciation and profits. Individual saving is high, too.
This forecast, of course, can be upset by two developments:
... Another balance of payments crisis could force drastic hikes in interest rates to prevent the movement of funds abroad.
... A shift in expectations as to demand for credit or monetary policy could prompt a rush to borrow before the rates rise. But there's no sign of a payments crisis or a rush to borrow.

BROADER SCOPE FOR THRIFT INSTITUTIONS — savings and loan associations and the savings banks — is being pushed in Congress. Object of the drive is to change laws that restrict lending to homes and government securities. The savings institutions, for example, might be given the authority to make instalment loans ... loans to students ... and investments in municipal bonds.
The Ambassador 300 can be furnished factory glazed or field glazed. Designed for use with DSB, 3/16, 7/32, 1/4, 1/2 or 5/8" insulating glass. If field glazed, both the vents and fixed lites are glazed from the interior, eliminating costly staging. For detailed information, specifications or product presentation, write our Sales Engineering Division today.
A Report From Key Biscayne

beauty, dignity, economy at Key Biscayne Presbyterian Church is achieved with designs of UNIT glued laminated wood. Sixteen reverse-curved laminated frames form the sanctuary—and basic shape of the structure. These high-rising one-piece members meet at a center compression ring that supports laminated steeple members which rise an additional 32 feet above the arch tops. Forty-eight straight laminated beams form a low roof around the perimeter of the sanctuary to cover additional facilities. A finished roof of Southern Pine UNIT-Deck spans directly over all laminated members. The seemingly complex framing of this church was resolved quickly and economically with UNIT laminated members. Substantial additional savings were realized since the laminated members were furnished pre-stained and varnished at the factory. Take a closer look at UNIT. Mail coupon for more details.

The beautiful sanctuary of Key Biscayne Presbyterian Church is readily accessible to surrounding classrooms, nursery, offices, kitchen, lavatories.

For personal assistance call Chuck Hamilton, 686-7257 (Area Code 813) in Lakeland, Florida or Fred Omundson, 564-6114 (Area Code 305) in Fort Lauderdale, Florida.
CONCRETE FITS HIGH-RISE LIVING TO A TROPICAL SETTING ... WITH A BONUS OF TWO EXTRA FLOORS

Coral Ridge Towers, Florida's newest and largest cooperative apartments, make the most of sun and sea on the glamorous Fort Lauderdale "Ocean Mile" beach. Concrete contributes importantly to the beauty and efficiency of the structure's modern design. Precast, sculptured balconies and stucco-finished walls combine crisply with broad expanses of glass. Behind the attractive facade, a concrete frame and flat plate floors provide not only rugged strength but a remarkable saving in floor-to-floor height. This made possible an increase from 14 stories to 16 within the local 150-foot limitation for high-rise buildings. For today's progressive architects, no other material provides the versatility of modern concrete.

THE BEST IDEAS ARE MORE EXCITING IN CONCRETE
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THE COVER  Photo by Ezra Stoller ....... View of the Roof Garden along the Reference Reading Room of the Otto G. Richter Library, University of Miami, Coral Gables, Florida .... Designed by WATSON, DEUTSCHMAN & KRUSE, Architects and Engineers the Library for one million volumes was constructed by the M. R. Harrison Construction Corporation .... Consulting Engineers were Dignum Associates and Geo. J. Hladik.

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VOLUME 13 1963
NUMBER 11
THE FLORIDA ARCHITECT
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It Is Well To Know...

By ARCHIE G. PARISH, FAIA
President, Florida State Board of Architecture

Renewal Fees constitute one of the major problems of the State Board of Architecture . . . the President here solicits your cooperation in an attempt to eliminate them.

Your Board wishes at this time to bring to the attention of all registrants a serious problem with which it is confronted each year at the time registration renewals are due.

Section 467.12 of the Law states:— "Every registered architect who desires to continue to practice his profession in this state shall annually during the time he shall continue to practice, pay to the Secretary of the Florida State Board of Architecture during the month of July of each year an annual registration fee in such amount as the Florida State Board of Architecture may in its discretion determine, except as provided in 467.08; provided, however, that such registration fee shall not exceed twenty-five dollars; and the Secretary shall thereupon issue to such registered architect a certificate of renewal of his registration for a term of one year.

Upon failure to have his certificate renewed during the month of July in each and every year, except as provided in 467.08, the holder thereof shall have his certificate revoked, but the failure to renew said registration in apt time shall not deprive him of the right to renewal upon payment of said fee; provided, his application for reinstatement is made within one year after the expiration of his certificate."

Your Board, in an effort to insure that all renewals are received on or before July 31 of each year, has forwarded notices to all registrants advising them of the necessity for renewing their registrations.

It has been found that in certain instances these notices are returned due to the fact that registrants have moved without advising the Board of their new address. It is then necessary to ascertain the current address, if possible.

Other instances which cause unnecessary additional work are:—

1. Registrants forwarding checks in payment of renewal fees which are later returned from our bank due to any of several reasons. Each year we experience this problem. We then must adjust our accounting records and enter into correspondence with the registrant to secure replacement checks.

2. We have found during the present year instances where associated architects have forwarded one check covering several renewals without advice being received to show the identities of the registrants. Correspondence must then be entered into to secure the necessary information.

3. We receive correspondence advising that renewal requests have not been received—requesting such notices. In this regard, at the time the notices go forward, every current registration record is checked to insure that all receive such notices.

For the general information of all registrants, it is pointed out that all registrations, to continue current, must be renewed on or before July 31 of each year. Any registration renewed at a date later than July 31 can be renewed only upon payment of the stated re-instatement fee of $10.00 plus the renewal fee of $25.00, a total of $35.00.

It is regretted that your Board must advise you that as of September 15, 1963 there were forty-seven registrants who had not yet renewed their registrations. Appropriate notices have gone forward to these registrants advising that they may not legally practice their professions until such time as renewal and reinstatement fees are paid.

You will note under section 467.12 of the Law that such registration may be renewed within a period of one year, after the expiration of his certificate. If renewal is not accomplished within that period of time, the former registrant must file a new application for Board review before he can again secure registration.

To comply with the Law, it is necessary for the Board to advise the Secretary of State each year as to registrations which have been revoked. At the time such notice is given to the Office of the Secretary of State, notice is also forwarded to the Florida Association of Architects, local A.I.A. Chapters and Building Officials advising each that such former registrants cannot legally continue their practice of architecture due to non-payment of renewal fees. Under our Law, your Board has no choice in this matter.

The problem of renewals has been made subject of this article at this time since we have recently completed our new Roster. Inquiries will be received concerning certain registrants who may have renewed their registrations after the Roster went to press. Such renewals will be included in the supplemental Roster prepared after the January written examinations. I would like to briefly summarize actions which would greatly assist the Board in handling renewals:—

A. Forward renewal fees as early as possible so that re-instatement fees (Continued on Page 47)
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GUARANTEED as to materials . . . One homogeneous core of strong, tough, warp-resisting Fibron, edge-sealed to solid white fir stiles and rails and face-bonded on each side to three layers of cross-banded veneers to produce the 7-ply construction for which Thompson doors are famed.

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THE FLORIDA ARCHITECT
The allure of a tropical island was never more potent than the morning the Richard C. Murphys of Miami watched the sun rise in all its splendor over Fraser's Hog Cay. This beautiful island of the Berry group soon became the solution to their problem of escaping hectic city life. Sharing a runway which accommodates private and commercial aircraft on adjoining Chub Cay, it requires only 55 minutes to reach the island from Miami and 15 minutes from Nassau.

As soon as title was acquired to two acres of the island, Architect Peter Jefferson, A.I.A. of Miami
was engaged to design a “dream cottage” in collaboration with the interior design staff of the Richard Plumer Co. A site was chosen commanding sea and sky from east and west. Then began the many trips necessary to accomplish the results pictured.

While the house and its furnishings are delightful, a glance through the windows engulfs one with the pleasantness of the tropics — verdant foliage, cottonball clouds and aquamarine seas. Fishing and boating are the Murphys’ favorite diversions and a flock of tame peafowl their most frequent visitors.
MIAMI SAVES IN THE "GRAND" MANNER. Savings of $1,000 per month by changing over to natural gas fuel in two large pumping engines were forecast by C. P. Wertz, director of the City of Miami's water system. As reported in the Miami Herald, Wertz also pointed out that the water treatment plant is now independent of electric power so that it could continue operation in the event a hurricane knocked out power lines.

W. T. GRANT DOES IT AGAIN ... ALL NATURAL GAS! A 154-ton all-year natural gas air conditioning installation headlines Grant chain's big new Panama City store. Kitchen, lunch counter, water heating also 100% natural gas...of course!

PUTTING NATURAL GAS ON ITS METTLE...METAL. Among unusual industrial applications of versatile natural gas: Homogenizing oven for aluminum billets (Miami's Adams Engineering Co.); melting and moulding alloys (Jacksonville's Florida Smelting Co.); working heavy metals (Jacksonville's C. I. Capps Foundry).

VARIETY SPICES AIR CONDITIONING IN BAY COUNTY. New natural gas air conditioning installations in and around Panama City include a guidance clinic, loan office, airport terminal, two launderettes and radio station. Reports WDLP management: "Extremely well pleased."

NEW YORK WORLD'S FAIR A "GAS SPECTACULAR." Gas industry's $5-million pavilion will dominate main entrance artery...will apparently have no walls, yet provide complete air conditioned comfort. Fair will contain largest assembly of gas air conditioning equipment ever assembled—nearly all of the 20,000 tons of refrigeration required will be gas energized. Largest unit: Ford's 1,500-ton absorption system.

MORE AND MORE, THE "BIG NAMES" GO GAS. Major U.S. industrial firms who have installed one or more natural gas services in new Florida facilities since last report: A & P, Ryder Trucking, Montgomery Ward, Greyhound, B. F. Goodrich, Hertz Truck Rental.

ODD AND UNUSUAL ITEMS ABOUT NATURAL GAS IN THE NEWS. Jacksonville reports: Loop's Nursery heating greenhouses, Painter's Poultry sealing chicken wrappers, C. & S. Manufacturers processing plastics, Sanders Farms warming chick brooders, Railroad Terminal heating trains while in station.

COOLING OFF REAL HOT SPOTS. Typesetting shops, which handle large quantities of molten lead, are notorious for almost unbearable working conditions. But Miami Typesetting and Wrightson Typographic have solved their problems with 10 and 15 tons respectively of natural gas air conditioning. Incidentally, natural gas also fires the melting pots which make the shops hot in the first place.

GENERAL MOTORS ENTERING GAS TURBINE RACE. Allison Division of General Motors has announced its formal entrance into the industrial gas turbine field. Intensive research convinced GM that adaptation of their turboprop aircraft engine would provide an excellent prime mover for industry. Reliability and long service life were prime considerations.

"GASLIGHT ERA" REVIVED IN BUSCH GARDENS. New Swiss House Restaurant at Anheuser Busch Brewery's fabled Busch Gardens will create atmosphere of gracious living with 30 specially designed gas lamps.

FOR THE "REST" OF THEIR LIVES. Maximum health and comfort is assured for residents of big new 106-bed Palms Retirement Nursing Home, St. Petersburg. Natural gas facilities include all cooking, heating and water heating.
classical tapered aluminum post 149-S. Sculptured pattern shown. Available with a plain surface or inlaid natural wood.

Complete catalogue of railings and grilles available upon request.

Permanent display - Architects Building, 101 Park Ave., New York, N.Y.
Dear Fellow Architects:

The arrival of New Year is always celebrated gleefully by newspaper cartoonists with a great variety of brand new, ages old sketches depicting the cherubic new year and the dottering age of the old. I hope to avoid the dottering stage, for awhile at least, but the past few months have certainly revealed to me a more lucid concept of the meaning of those cartoons.

It seems no more than a month ago, tho my calendar advises it has actually been nearly ten times that long, that a new FAA president presided over his first Board meeting at the Langford Hotel in Winter Park. Bright-eyed—bushy-tailed—fired with enthusiastic determination—(and a slight vocal quaver, quite impossible to control)—A seven point program was presented to that Board, with an urgent appeal to accomplish its various goals.

And suddenly, it's fall! 
The voice has gained confidence—the quaver is gone. 
A little more "distinguished gray" has accumulated at the temples. 
There have been moments of triumph and defeat. 
Achievement has been balanced with a fair share of mistakes.

The short-lived year is nearly gone and it's time to compare January's enthusiasm with December's reality. It has not been an uneventful year!

To begin at the beginning, let's examine those seven points. (The diligent delver might refer to page 8, February issue of THE FLORIDA ARCHITECT.)

1 . . . The "pretty positive and well organized legislative program" met head-on with equally positive and more effective oppositions. This is not to say it was a total loss, however. True, the bill we sponsored did not pass, but we did make numerous new friends and nearly every other bill we supported did pass.

Our friends, the Professional Engineers, obtained changes in their registration law which should prove to be most beneficial to both professions. The new Lien Law may be a "dirty word" just about now, but for the first time our clients have a simple means of lien protection, cumbersome though it may be. Two years from now it is possible we will be highly appreciative of these two statute revisions in particular.

2 . . . Important studies of many characteristics of our membership are underway by Les May's Membership Committee and Francis Walton's Chapter Affairs Committee has now accumulated a substantial file of individual dossiers which should prove invaluable to each Chapter as well as to the Board and Staff. These studies will reveal basic information about the profession never before available. The effective work of these men deserves your considered commendation.

3 . . . The annual meeting promises to be one of the most enjoyable and possibly most exciting in our history. Our degree of success in making it the best ever will be measured by your attendance and enjoyment next week.

4 . . . It is hoped we will have an Executive Director to present to the Members at the Convention, (one more reason you should attend). He expects to assume his duties in December and will be anxious to meet and learn to know all our members as soon as possible.

Our Executive Director will make it possible to relieve Verna Sherman of many of the extra duties she has so graciously and capably assumed, and provide FAA once again with the staff so necessary to move forward with our numerous programs.

(Continued on Page 15)
Zonolite Insulating Concrete stays on, saves on roofs shaped like this

(Your Approved Zonolite Concrete Roof Deck Applicator is the man who makes it stick)

Zonolite Insulating Concrete can be used with structural concrete, form boards, or galvanized vented metal decks. It can be sprayed or pumped on, depending on the roof shape.

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Write to: Zonolite, 135 South LaSalle Street, Chicago 3, Illinois.
5 . . . I believe there may have been some progress toward increased educational activity, but certainly far less than is desirable. One educational seminar has been held and numerous of our members have lectured to student classes. We hope to have at least some tentative recommendation for greater activity in the field of scholarships and student awards before the year ends.

6 . . . A good case can be made for considerable progress toward developing major improvements in our P/R efforts, since each of our seven goals have great bearing on the P/R effort. Strong emphasis was placed on the P/R aspects of each committee’s charge in January. But, to be completely honest, we have not thus far made any progress toward the specific activity I had in mind in January. An effort will be made to earn a passing mark on this work ere the year ends.

7 . . . We have continued our direct activities concerned with state programs involving laws at about the same pace of previous years. In addition I have taken advantage of nearly every public speaking opportunity to express our concerned interest in these fields.

We have obviously not achieved all our goals—yet, I view our year’s effort as a rewarding one.

Through the mingled memories of trips and meetings, countless discussions, reading and writing hundreds of letters, listening and speaking—a number of events are particularly vivid.

Too many of our revered friends and colleagues have completed their journey through life during this year.

Long-time friend, fellow Architect, and Civitan leader, “Gene” Cellar, gave his last cheerful greeting and went on his way to join “Bud” Reeder, whose loss we mourned earlier.

In June, The Florida Architect said a sad farewell to its creator, Roger Wade Sherman, AIA.

Too many others have left us with these gallant men, and we have known sadness.

A special recognition has been earned by Sam Kruse’ and Verna Sherman for their determined devotion and brilliant accomplishment in continuing publication of this fine magazine, with the full support and assistance of the Staff.

Other names, too, stand out, and too few of us can possibly appreciate their accomplishments, and the cost.

It has often been said that to get a job done, give it to a busy man who doesn’t have time to do it. Perhaps that is why Forrest Coxen and Francis Walton, with their one-man offices, have contributed so generously and effectively of their time in your behalf. I hope you will also make the effort to say “a special thank you” to Bill Arnett and Bob Levison, without overlooking each member of your Board. My “Thanks” could not be more heart-felt.

We have seen the toil of past years efforts bear fruit with the ground breaking ceremony in June, for a new College of Architecture and Fine Arts in Gainesville. We observe the growing importance of our Chapters public service programs and the maturing of many long term efforts. We see new ideas born as dreams, gradually materializing as active programs. FAA is alive, it’s living and growing and serving its members, often better than they know.

As the year dies and is born anew, so it is with FAA, its men, its dreams and its realities. Only those who have been privileged to serve and be served in this same capacity can fully appreciate his feelings at this writing of,

Your President,

[Signature]

NOVEMBER, 1963
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Sixteen years have gone by but the memory of incidents minor is still clear. I recall the night we sat around an oval table and traced our thoughts in the foam—Marion Manley, Bill Green, Marjory Stoneman Douglas and I. We talked of form and function contrasting beauty in tradition with beauty yet to come, and in the acrid air of “The Happy Hour” pub on Coral Way, we built on the table with swizzle sticks, a building—an off-beat building, strong verticals accenting low stretching horizontals.

New buildings for the University of Miami were ever present in our minds and conversations in those days, and there amid the clutter emerged the first thoughts ever given to a new Library for the University.

From the beginning the Library dominated the master plan. Together with the Memorial Plaza, Administration Building and the Campanile, it was part of the central group of the Campus. Of this original concept the Library and the Ashe Memorial are the only buildings located as planned. The Carillon was mistakenly placed in the hollow shell reclaimed, the Campanile ended up on the cutting room floor and along with it went the front entrance to the University.

This unhappy set of circumstances had its effect. The Library was destined to become the new campus center and it had to be a building worthy of this honor.

Architecture is far behind some of the other creative arts in intuitive inspiration.
Inevitably the time lag between conception and execution has a stultifying influence.
It is difficult to maintain the freshness of originality through the tediousness of detail.
If you have beauty to express it is better that it be a new beauty.
For if it is sharp enough 
There is a chance that it can better withstand the abrasive action of comment and objection which always has some effect, however trivial.
It is human first to reject rather than first to accept. 
A new beauty, even if you are alone in seeing it and feeling it,
Make it be new
For off-beat beauty has a way of becoming on-beat beauty
The new cadence becomes a familiar rhythm that invites awe and participation.

By FRANK E. WATSON, F.A.I.A.

But how do you design a library? You can’t get it out of books or swizzle sticks on a bar room table. Rarely does an architect have an opportunity such as the one presented by the University. Three libraries were designed over a span of fourteen years—always to a gradually changing and expanding program, but the feeling persisted for a dominant stack area and a positive resistance to the post-war trend of low-ceilinged, rectangular, modular, box-like warehouses for books—for after all, books are human.

We filled-in the interims with research, but all we gathered were opinions from reliable sources that there were 7, 8 9½, 10 books to a linear foot of book shelf. So much for research. We did add to our vocabulary and philosophy various aphorisms invented primarily to justify our sketches; such as,

Libraries are to look out of!
Try knowledge for size!
A library should not be a mausoleum for dead authors!
Basic climate control axiom—that which is good for a book is likewise good for a reader!

And so with a stiff spine and unshakeable resolve, we waited. Finally, we heard from President J. F. W. Pearson that maybe we could get started.

Dr. Archie L. McNeal, Director of Libraries for the University, had a problem — twenty-three and one-half miles of books to be housed and not much money with which to do it; 1800 seats for readers, and a long list of other facilities that were operational necessities. After a preliminary shuffle or two by the staffs of the librarian and the architect, two major requirements of the program sifted down to determine the basic design. The undergraduate reading room with its 100,000 volumes and 800 seats that needed to be readily accessible and available, and the more or less static storage of hundreds of thousands of books of limited circulation.

This set the bulk of the building and logically was delineated by our pre-destined form, a horizontal wing designed for people and a vertical mass to house the books.

During the long period of waiting, part of the original library site had been occupied by the Law School and the new sketches immediately made evident the great extent of the ground floor which literally split the campus in

(Continued on Page 26)
It's inexpensive, easy to place. Soil from the site, portland cement and water are mixed together. Even worn out gravel or blacktop can be broken up and mixed in. Then machines and crews swiftly place the soil-cement, roll it solid, add a thin bituminous topping, and the paving is ready for traffic, that day!

It's smooth, maintenance free. Soil-cement stays level, never has ruts or potholes, never has low spots to collect water because the more water it gets, the stronger it gets. Florida's high water table, damaging to other paving, strengthens soil-cement.

It starts strong, grows stronger. Soil-cement is stronger than any other paving except concrete, gives years of trouble-free service. No wonder soil-cement is the fastest-growing low cost pavement. Its economy, low maintenance, and high performance are the perfect solution to all parking lot problems.

Offices and Plants in Tampa and Miami

SOIL-CEMENT SOLVES ALL PARKING LOT PROBLEMS
Man decided many centuries ago that nothing—except the limitations of technology—would stop him from erecting buildings and monuments of great heights. It was, it seems, his aspiration to build higher and ever higher throughout the ages.

The Hanging Gardens of Babylon, the Ziggurats of Assyria and Babylonia, the soaring and majestic vaults, towers and spires of the Gothic Cathedrals, the great and audacious domes of the Renaissance by Brunelleschi, Michelangelo and Wren, the Eiffel Tower in Paris and finally the American Skyscrapers which culminated in the Empire State Building, the highest structure in the world, all testify to the intrepid ingenuity of man in the realm of building science and to his fearlessness to erect buildings skyward.

In America the skyscraper received its impetus when the steel skeleton frame was invented and when Elisha Graves Otis demonstrated his first elevator at the Crystal Palace Exposition in 1853. With frock coat and whiskers he hoisted himself 45 feet in the air and when the hoisting rope was cut, the raised platform came to a stop and with the waving of his tall New Hampshire hat, he made the historical remark—"All safe, gentlemen"—and bowed to the approval of the audience.

From those pioneer days to the present, high rise buildings have mushroomed in metropolitan cities all around the world. America, however, leads them all.

The Empire State soars to 1245 feet; the Chrysler Tower to 1046 feet; the Manhattan Co. Tower to 927 feet; the Woolworth Tower to 767 feet; the Metropolitan Tower to 657 feet; the New York Life Insurance Co. Tower to 619 feet. These dimensions are to the highest pinnacle and not to the observatories of those buildings. They were all built between 1908 and 1930, the last date being that of the Empire State. The Eiffel Tower, which is not strictly a building for occupancy, rises to 1024 feet and was built in 1888, a great engineering feat, indeed.

Ever since the erection of these structures architects and engineers have vied with one another in spawning skyscrapers faster than ever before but none has exceeded the height of the Empire State. However, Frank Lloyd Wright proposed the Mile-High-Building to top them all and this caught the fancy and imagination of students of architecture, of practitioners and of laymen. Sketches of this building have appeared in professional periodicals, magazines and newspapers, but they were never accompanied by any detailed analysis of this structure.

The following analysis, therefore, may serve to satisfy the skeptics with raised eyebrows who want to know how practical such a structure might be; and it may serve to arouse the indignation of those who have complete confidence in dreamers whose dreams should never be questioned because of purely mundane considerations! Be that as it may here it is.

"Recently one of America's most highly regarded architects presented again the idea of using the advertising value of height in an office building. His much publicized Mile-High-Building would be somewhere on Chicago's lake front, south of the central business district. Because of the many practical and economic problems involved in a mile-high pro-

ject an examination of them is of interest.

Such a building, said the architect, would contain 500 stories. But 400 stories with floor-to-floor distance of 13.2 feet would measure exactly one mile and be more in line with present usage. Considering the probabilities, a difference of 100 floors, more or less, becomes a matter of comparatively little significance!

Height being the governing idea, the first problem, naturally, is one of getting up and down. Such a building would require no less than 40 banks of elevators of present advanced design, one bank serving each group of ten floors. At today's maximum speeds, which go to 1400 feet per minute, it would take five minutes or more to reach the 391st floor. That won't do, so higher speed is called for. To reach that same floor in one minute, which is not too long for a tower rise, the top speed required would exceed 10,000 feet per minute, with acceleration at a rate of six feet a second. Three feet per second is all that today's riders can take with comfort, but that can be dismissed as incidental. To obtain a proper waiting interval, 10 cars would be needed in the banks that serve the higher levels. The cost would be at least $300,000 per car. To get full benefit of so costly an installation, the floors served by these cars should house 1,920 people, indicating a floor area of 24,000 square feet at prevailing ratios.

We now begin to get some conception of the proportions of this building. If the same floor area were to be maintained through a mile-high building it would have 9.6 million square
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The Board of Directors has met five times this year: January 12, 1963 at the Langford Hotel, Winter Park; March 16, 1963 at the Holiday Inn, Gainesville; May 4, 1963 at the Skyways Motel, Miami. A special call meeting June 29, 1963 at the Landmark Hotel, Sarasota, and September 15, 1963 at the Palm Beach Towers, Palm Beach, and this year’s final meeting will be at the 5th Annual Convention, November 7-10, 1963 at the Grand Bahama Hotel, West End, Grand Bahama Island, B.W.I.

President Roy Pooley presided at each meeting, almost all Chapters were represented by Directors or alternates at every meeting, and we hope to have a full Board at the Convention.

This year there will be 38 delegates from the 10 Chapters of the Association to the Convention, and Delegate credential cards have been mailed to the Secretary of each Chapter, based on the number of members in good standing as of October 1, 1963. Voting for election of officers for 1964 will be by delegates only, as it was in 1963.

An agenda has been prepared and mailed to all members of the Board prior to each meeting, and will be sent to all members for the Convention meeting. This year there will not be a published Board Report prior to the Convention date. However, an agenda of the business to be discussed will be available at the Convention site. Reports of Committees will be submitted to the Vice-President in charge prior to the Convention, and will be included as part of the agenda. Also included in the agenda will be new business items and resolutions.

Resolutions desired to be presented to the Board by any Chapter or member should be sent to the Chairman of the Resolutions Committee, William T. Arnett, for inclusion on the agenda, or presented to him at the Convention.

Resolutions or motions pertaining to matters covered in Committee reports may be placed before the Convention during discussion of that particular report and need not be considered by or submitted to the Resolutions Committee. Amendments to these pertinent resolutions shall be in order while the original resolution is under discussion before the Convention. All other resolutions and all matters of new business shall be submitted to the Committee on Resolutions prior to the Convention for consideration by this Committee.

The Committee on Resolutions will take one of the following actions and report such action to the Convention on each resolution and item of new business received:

- Deem the resolution an item of Committee Report on the agenda and return it promptly with advice to present it to the Convention at the proper time. The Committee will have an advance agenda to enable it to make decisions.
- Deem the resolution inappropriate to come before the Convention, and return it promptly to the sponsor, with notice that it may be placed directly before the Convention at the time the report of the Committee on Resolutions is made, provided the consent of the Convention can be obtained by a two-thirds vote of the delegates present at the sessions.

With these ground rules, let’s review the accomplishments and plan the progress of the Association for the coming year.
WILLIAM H. SCHEICK, A.I.A.

Executive Director,
The American Institute of Architects

The A.I.A.'s dynamic Executive Director will conduct the Program scheduled for Sunday the 10th at 10:00 A.M. He will lead a discussion delving into ideas for future projects of the Institute, especially those possible under the supplemental dues program. He will attempt to stimulate the thinking of the membership and see how many ideas they might produce. In addition, he will answer questions on the "Advisory Form of By Laws" circulated recently by the Institute. Every member of the Association should be vitally interested in what William H. Scheick will say... and he will welcome participation from all members attending the convention.

HERBERT R. SAVAGE, A.I.A.

Convention Committee Chairman,
Florida Association of Architects

For the first time since the Association was incorporated in 1913 the Convention site is located outside the continental limits of the United States... too it is the first Annual Meeting to permit extended activities on the lighter side, as the letters from Herb have indicated! However, interesting business and professional programs have been planned... it is expected that EVERY Association member at the Convention will attend EVERY meeting listed on the Program. You owe it to yourself... and to our distinguished speakers. Members of the Committee are: William F. Bigoney, Jr., Robert A. Broadfoot, Jr., Kenneth Jacobson, Dana B. Johannes and Verner Johnson.

JIM LUCAS

Director of Public Relations,
Herman Miller Incorporated

An outline of A Commentary on Environment to be conducted by Jim Lucas on Friday at 2:30 P.M. indicates it will include... how man has evolved in his relation to architecture and product design... design and how it affects human values... the sociological implications of modern architecture... communicating the architect's skills to the public... challenges which the architect must face in an industrialized society... and approach to understanding the attitude of the scientist in today's society. These will be illustrated with 35 mm color slides and art films. Total time for the lecture and films is about an hour and a general discussion will follow.
J. ROY CARROLL, JR., F.A.I.A.

President,
The American Institute of Architects

The Association is extremely fortunate to have as Honored Guest and Speaker for the luncheon, Saturday, the President of the American Institute of Architects. J. Roy Carroll, Jr., F.A.I.A., was elected to his present office at the National Convention held at the Americana in May. Mr. Carroll is a Philadelphian and a Partner in the firm of Carroll, Grisdale & Van Alen. He was formerly Regional Director from Middle Atlantic States, 1956-59; A.I.A. National Secretary, 1958-62; and was elected to the First Vice Presidency in 1962. He has served on numerous chapter, state and national committees and therefore understands all phases of Institute activities and Professional affairs.

ROBERT H. LEVISON, A.I.A.

Director, Florida Region,
The American Institute of Architects

At the convention last year Robert H. Levison was presiding as President of the Florida Association of Architects, a post he held for two years . . . under his capable leadership and guidance the Association moved forward. As Regional Director, only since the National Convention in May, his work has really just begun . . . but already the impact of his ability, determination to accept any challenge, and untiring efforts have strengthened and united the Profession within our State. Mr. Levison will greet delegates, guests and members in a formal way at the luncheon scheduled for Saturday the 9th. However, he will participate in all Business Sessions and be active in Convention affairs relating to State and Region.

ROY M. POOLEY, JR., A.I.A.

President,
Florida Association of Architects

As President of the Florida Association of Architects, Roy M. Pooley, Jr., will preside at all Board Meetings and Business Sessions scheduled throughout the entire Convention. At the final Business Session, scheduled to be held Saturday morning at 9:30 he will introduce the newly elected Officers for 1964 . . . following the Program on Sunday morning the 10th he will officially bring to a close the Annual Meeting for 1963. In addition, he will greet members, delegates and visitors at the various scheduled social events listed as part of the Program. For a man who has been effectively busy all year . . . this would seem to be more of the same!
“Electrical cooking equipment provides the service, coolness and cleanliness which we anticipated,” says Samuel M. Miller, principal of Daytona Beach Seabreeze High School.

“Early in the planning of our new senior high school, we studied the type of fuel we would want for our lunchroom kitchen. We came to the conclusion that electrical equipment would be the proper answer to reducing the heat problem to a minimum in the kitchen. The results have justified our decision.”

“Year-round electric air conditioning operating costs are well within the original estimate,” says E. B. Drost, manager of Life of Georgia Insurance Co., Panama City, Florida.

“In addition to our all-season electric air conditioning units being very compact and saving a lot of valuable space, last summer they kept office temperature and humidity at a comfortable level every day. But the real test was in December during a record-breaking cold spell. They delivered everything we asked of them and without any attention or worry.”
"It's a pleasure to work in a hospital 100% electrified," says Col. John C. Carter, administrator of Hernando County Hospital, Brooksville, Florida.

"Electric cooking is cool, clean, safe... minimizes labor costs. Electric year-round air conditioning, individually room-controlled, we found very economical."

"The all-around benefits of electric air conditioning are priceless," says Herbert Gray, vice president-treasurer of Tampa Federal Savings & Loan Association.

"More than 100 tons of air conditioning is required to heat and cool our 30,000-square-foot building. We couldn't afford to take chances, so we selected a year-round all-electric air conditioning system. Our customers enjoy ideal temperature control and comfort every day... and we find that our personnel is more efficient in the pleasant-to-work atmosphere."

In hospitals, in school cafeterias, in commercial buildings of every type... all over sunny Florida, flameless electric demonstrates its matchless economy and unequalled simplicity and dependability.

The wisdom of choosing electric is proven again and again. The use of electric equipment offers the designer unlimited flexibility in the creation of efficient and comfortable interior spaces. Building design can be more compact because smaller areas are devoted to mechanical equipment. Better working conditions are provided for increased effectiveness and less absenteeism.
two. This led to developing a plan providing a pedestrian concourse through the building at ground level—a bold and straightforward solution to a very difficult situation. This passage through the building invites the student as he passes through, to stop in, use the library; makes it possible to isolate all service facilities and the rooms used by the public off-hours, without interfering with the smooth functioning of the library, and as it developed, simplified the erection, initially, of a very modest part of the ultimate building, in order to stimulate interest in the overall project.

After fourteen years, and by this devious route, we arrived at the beginning. We had everything going for us, a healthy atmosphere, genuine interest of the Library staff, respect for the building and for us, a feeling of personal pride in accomplishment, anxiety over the budget, zest and enthusiasm that persisted during the planning stage and continued on into the construction, vocal encouragement that carried us on through the Escalator Caper, when the panic button was pushed over the great flow of traffic at class breaks, and was solved by adding the escalator to handle the mob; exhilaration over the exciting inner reading court, a gem in the heart of the building for outdoor reading in a tropical setting which had to go because of maintenance fear, the colorful triptych in leaded glass and the subsequent bereavement over its demise...

The atmosphere for all moods is free to all
It’s there in the air for all to feel
Cup up your hands and some you will own clasped
in your fingers
What generally happens when we dare build a
building
This aura is sliced and hard to repair
And the separation of inside from outside creates a
miasm.
But given the proper combination of chemicals, every­
ting comes alive
The building is ready for form and design.
We began at the top — let the sky in
With sky domes that soaked the interior in the mood
of the day.

We banished the murrk of the night with light,
The glare of the day with shadows
A broad freize of sculptured concrete providing the
shade.
We sponged up the day and brought it inside and
squeezed it dry for the comfort of all.
We worked with the phantoms to create an environ­
ment.
A bit of nostalgia on a stormy day
When the sound of rain on the domes resembles the
drumming of rain on a metal roof
And it gives the feeling of being secure and comfort­
ably housed against the inclement outside.
We hung the grand stair in the magnificent well and
moved outside to finish it off.

Proudly we placed in on a broad stylobate of the
natural rock. This softened the transition of the crisp
architecture and blended it comfortably into the normal
landscape. Materials throughout resist corrosion, are free
of cliches and of compatible hue. Textures are contrasting
as they come from the earth — brick and marble, stone
and ceramic, and dominating all stands the grand tower
sheathed with tile, blue, green and gold, clean, durable
and ever-changing as it reflects the sky.

The sun found something bright to shine on
And it has become unnecessary for it to create its
colors out of itself.
But what of the night!
The exterior lighting is artfully planned
Each edge of the sheltering freize is brilliantly lighted
defining the horizontal lines of the the building.
The windows in shadow except as revealed by the
softened cove lighting that shines from within.
The subtle walls of travertine marble are bathed from
below with a luminous glow
That accentuates values unseen in the day.
And at twilight the Library stands in dignity
Silhouetted against the tropical sky
The final result of the efforts of many, intelligently
conceived, sympathetically designed and executed
with integrity.

(photo—Ezra Stoller)
A steel man cannot help being a little reflective when he finds himself in Minnesota. There's something about his chemistry that responds to the iron ores that lay beneath this soil. He knows that his industry begins with ore, and he recognizes the great contribution this area and its people make to that industry.

I am doubly reflective. For, not only do I realize the niche this section of the country occupies in our steel business, but I acknowledge and laud the efforts of engineers and designers, like yourselves, who take the product of our steelmaking alchemy and put it to meaningful use. It is a game of anagrams in a way. We supply the words, but you have to place them in order so they make an intelligent and worthwhile statement.

And how much easier it will be for you to make that statement when the new AISC manual close at hand. It was Thomas Carlyle, I believe, who said the "Man without tools is nothing; with tools he is all." The manual is such a tool: a guide which can help you use steel to its fullest design and engineering potential.

From the looks of the urban development plans for the Twin Cities, I would say the manual is in for a good workout. The next decade in Minneapolis and St. Paul is going to be an exciting time. I know what renewal can mean to a community. Back in Pittsburgh we have lived with our Renaissance so long, I am afraid we may often think of urban development as something we invented, but we are proud of how our rebuilding has helped to shape a new purpose for our town. Renewal can kindle fire inside men and inspire them to use talents they never knew they had. It can rally an entire people toward a common, yet uncommonplace, achievement.

And in the days ahead, when your imaginations are being put to the test, I hope you will reach for the new manual and ask yourself, "How can steel help me do this job? What does it offer in the way of solutions to my engineering problems? Just what can I get out of steel that's been put there for me?" These questions remind me of how the great Renaissance sculptor, Michelangelo, viewed his art.

He had a great reverence for his material... for stone and clay. He reacted to them almost as he would to animate beings. Often he would work for hours preparing a drawing of a subject he planned to create in stone, only to discard his sketch after studying his piece of marble. For to Michelangelo, the form he sought was imprisoned deep inside the marble, and it was his belief that he could never force upon it a form that was not already there.

He looked upon himself, then, not as the celebrated sculptor who created the DAVID and the PIETA, but as the stone cutter who released the figures locked within. He was a liberator. Michelangelo, of course, was not alone in his role. There's not a corner in the history of all mankind which has not been illuminated at some time by a liberator, a man who has used truth and knowledge to elevate from the mediocre, both the thinking and performance of his fellow man. Plato and Aristotle were such a pair. So, too, was Erasmus. For their philosophies and his teaching helped to liberate the minds of men.

And Columbus. Someone surely would finally have come upon this new world had he not, but Christopher Columbus shook off Dark Age thinking and became the first to prove the world was round. He liberated frontiers man never dreamed existed.

What of Anton Leeuwenhoek and Louis Pasteur and Jonas Salk? Who could question that these men were not liberators, freeing man from pain and disease?

Or the Wright Brothers. They freed man from his planet.

Then, there are those who succeed in freeing man's physical self. These (Continued on Page 30)
News & Notes

College Conference . . .
A two day Junior College Facilities Conference is scheduled to be held in Tampa on January 23 and 24; under the sponsorship of the Department of Education's Division of Junior Colleges.

The Conference will explore the present relationship of curricular activities and facilities, and attempt to describe the teaching methods of the next decade.

Outstanding educators and architects will moderate discussions of interest to all currently working in the Junior College Program of the State.

Complete and detailed information will appear in the December issue of this publication — be sure to look for it!

Seminar . . .
Professor James T. Lendrum, head of the department of architecture at the University of Florida, participated in a day-long Seminar conducted by The National Design Center in New York recently.

The changing face of America prompted the Center to organize the Seminar of significance to everyone in, or allied with, the housing industry. The various presentations encompassed a comprehensive and authoritative examination into the forces and factors that are influencing the industry as a whole.

The subjects explored covered every aspect of housing — from land to key. Professor Lendrum discussed "Building Products in Transition."

Florida Central Elects . . .
At a meeting of the Florida Central Chapter held on Saturday, October 12th officers for the year 1964 were elected as follows: PRESIDENT, Dana B. Johannes; VICE PRESIDENT, Jack McCandless; SECRETARY, James Jennewein; and TREASURER, Dale T. Kincaid.

Elected to serve for three years as CHAPTER DIRECTOR is Archie G. Parish, F.A.I.A., President of the Florida State Board of Architecture.

H. Leslie Walker, Chapter Presi-
(Continued on Page 40)
The challenge of the nation’s greatest building boom is forcing growing interdependence upon different elements of the construction industry with long-term implications for every phase of building, according to key industry leaders meeting in Washington recently.

Meeting at the 42nd Annual Meeting of The Producers’ Council, spokesmen for the architectural and engineering professions, as well as representatives of the contractor, home builder, investor, and building owner returned again and again to the growing need for coordination between each other and the manufacturer.

Speakers also stressed that the manufacturer must cease thinking of isolated building products and instead must consider their adaptability into larger “systems.” A “systems approach” toward the creation and assembly of building parts is essential to meet the challenge of tomorrow, one speaker pointed out. Others stressed the need for quality building products which meet specifications and which are delivered on time at a “fair price.”

Award-winning Washington architect, Francis D. Lethbridge, cautioned that even when these criteria have been met, building products still do not necessarily add up to “good design” without their close coordination with the architect.

“It should be self-evident,” he said, “that the exploitation of an efficient, and even handsome building product or assembly of products is not in itself sufficient reason for its use in the design of a building.”

According to W. W. Sproul, Jr., general manager of Westinghouse Electric Corporation’s Construction Group, “changing patterns of building construction” have shifted the manufacturer’s emphasis from individual products to complete systems such as electrical distribution, transportation, lighting, and thermal environment.

“The need for greater coordination with manufacturers was again stressed by William Blackfield, first vice president of the National Association of Home Builders, who called for more coordination and...”

(Continued on Page 32)
Steel...

(Continued from Page 27)

are the political liberators like Washington and Lincoln and Simon Bolivar who set whole peoples free.

The analogy could go on and on. But I think the point is clear. The progress of man has always depended upon the achievements of his liberators.

In a very real sense, gentlemen, your job, too, is one of liberation. Whatever the material, when you use it wisely and economically, you are freeing all its potential to work for you. And when that material is steel, you are releasing from it all the qualities and properties we have put there—the right chemical composition, the proper strength level, durability, toughness, heat treatment: all the ingredients and processes which go into a premium-quality and versatile product.

I want to discuss with you what the steel industry is doing to meet you at the drafting tables; what groups like the American Institute of Steel Construction, the American Iron & Steel Institute and companies like U. S. Steel are accomplishing through applied research projects aimed at finding more efficient ways to use old steels, new uses for new steels; how influencers of design, like yourselves, can help to liberate form through the use of steel; and how both of us—we, the producers; you, the users, can benefit from a sensitive, wide-awake and free flowing communications network which keeps each of us up-to-date on what's going on in the construction field.

Let's look first at a number of applied research programs in this area; programs which spawn new techniques to make every pound of steel work just a little bit harder; programs which, we feel, are as necessary to the metal's end usefulness as its chemical makeup. The new manual, incidentally, offers quite a few examples of how this kind of research has sired new design theories and concepts.

One of the most promising of these is in plastic design. Research has already developed this concept for designing structural steel frames to such a point that the method has been used in several hundred one and two story buildings. As you know, plastic design recognizes the additional load-carrying ability which individual structural members gain when they are incorporated into a rigid frame, a factor which is ignored in conventional design.

The next step is for us to get plastic design off the ground, to put the theory to work with high strength steels in multi-story buildings. Just such a program is under way at Lehigh University, and next year, we may be putting into your hands technical data which will permit you to build lighter, lower cost, plastically designed high-rise buildings.

Another concept which is gaining more attention in research and in practice is the theory of composite design. Here, of course, we're combining the best engineering features of two construction rivals—concrete and steel. But what great sense it makes to put the compressive strength of concrete to work performing a structural function. By bonding the concrete to its supporting steel beam, the two, in effect, become one composite material. This will result in eliminating, in the case of buildings, a need for additional concrete slab.


Business growing? A thorough study of your communications system might save your company money and time. For example, you may need a Call Director for more efficient channeling of internal and external calls. Or perhaps others of the many modern services available to business: Dial TWX Systems, DATA-PHONE service, Speakerphones. So, find out now about a study by a professional communications consultant. No obligation. Just call your Telephone Company Business Office.
Lighting in Architectural Design

By Derek Phillips. Published by McGraw-Hill Book Company, 330 West 42nd Street, New York City. Contains 304 pages plus index; 385 illustrations; 7 1/4 x 9 1/4". Price—$15.00, publishing date: October 1963.

"Lighting in Architectural Design" is a thorough presentation of lighting for architects and designers, from the basic visual, emotional, and esthetic needs that state the design problem, to the technical and economic considerations that control its solution.

"Recent advances in lighting techniques have out-stripped the capacity of architects to cope with them," the author explains, "and this book is an attempt to get at some of the basic principles by which later developments may be judged. Development of lighting techniques comes for the most part from lighting engineers and electrical companies, and it is difficult for architects to appraise this new material unless it can be translated into architectural terms. The book is designed to assist an architect in such an appraisal and to lead to a more positive approach to lighting design in which architectural thought takes its rightful place in forcing the pace of developments in lighting design."

"Lighting in Architectural Design" presents all aspects of lighting, both natural and artificial, and deals with light fixtures as integral elements of building design, to be planned and co-ordinated from the outset, rather than "applied" afterwards. It is designed to serve also as a useful interdisciplinary tool to help the illuminating engineer and electrical contractor and supplier understand the design problems of the architect.

The book is divided into three general parts: Principles of and criteria for design; application and methods of lighting; and calculation techniques. The first part contains chapters on light as a design factor, the lighting problem, the aspects of vision affecting illumination levels, the problem of glare and physical comfort as a lighting design factor, emotion and intellect in design, and lighting for safety.

In the second part of the book, the author discusses the nature of light (Continued on Page 41)
interchange of information, more cooperation, and more help from manufacturers on specific problems such as design, production and finance.

"The average manufacturer of materials appliances is far ahead in the design of his products," Blackfield said. "Is there any reason why some system of cooperation with builders can't be set up in the design of the whole house?" He recommended that this be carried out by a joint manufacturer-builder committee.

Bernard L. Boutin, administrator of the General Services Administration, underscored the government's need for quality building products delivered on time.

Quality in building products was defined by John E. Daly, chief engineer of the Argonaut Realty Division of the General Motors Corporation, as consisting of performance, on-time delivery, satisfactory service, and manufacturer integrity. If any of these elements is missing, Daly said, quality of the product is impaired.

A. M. Young, who was re-elected to the presidency of the Producers' Council, saw in the results of the meeting "great significance" for every element of the building industry.

"We are already well into an age where many of the old ways of doing things just aren't good enough," Young said. "The theme of this conference was, 'Viewpoints — The Customer Speaks.' He has spoken — at times eloquently — and indicated to us, the manufacturers, how we can help all of us do a better job.

"I can assure each building professional that individually and collectively — through the Producers' Council — the manufacturer was listening closely," Young said. "We had one indication this week of how the manufacturer can act in behalf of different sectors of the industry when the Council created a new program for the 'Residential and Light Construction Industry.' This will enable the manufacturer to move closer to this vital and growing segment of the industry."

"As president of the Producers' Council, I also intend to see to it that the surprisingly consistent recommendations of our different speakers are laid before the Council's more than 150 manufacturer-members for early consideration and action."
Steel...

(Continued from Page 30)

flooring. Similarly, in the case of bridges, composite design offers considerable economies by reducing dead-weight. Thus, both height and weight can be substantially trimmed without affecting the load-carrying capacity.

Still another research area is in orthotropic design, a concept which has excited great interest among engineers, but one which, unlike composite design, has generated little action so far. This subject will be discussed in full and completely later in our meeting, but I want to make one point.

The San Mateo-Hayward Bridge over San Francisco Bay will be an orthotropically designed structure. Only after the committee was convinced of its design capabilities and the economies available through its use, did steel get the nod.

At U. S. Steel we have been conducting a series of design studies on low cost apartment houses. This represents a market in which steel has been participating less and less since other materials have often been considered to offer greater economies in low-cost construction. We carried on our studies with several teams of architects and engineers in New York City where we investigated seven possible design methods.

The conclusive results of these studies showed what steel, with proper engineering and design, can accomplish. In our final design we were down to about eight pounds of steel per square foot, and the customer's architect conceded that steel was competitive in every way, while holding an edge over other materials in its speed of fabrication and erection. We're now in the midst of additional studies which we believe will indicate that a steel exterior for the building can be produced as economically as a masonry facade and will be of greater architectural interest. It's possible that our findings may open new design avenues for you to explore in similar projects.

We have also been testing hybrid steel beams to determine how they compare with ordinary homogeneous beams in the areas of static testing and fatigue bending and shear loading.

Hybrids, as you know, comprise higher strength steels welded to lower strength steels in the flanges or webs. For example, we might design a beam to include flanges of USS "T-1" or "T-1" type A steels and a web of A36 or one of the high-strength low-alloy steels—A242, A440 or A414.

Such an arrangement would put the strongest steel, "T-1," where its 100,000-psi yield strength level will do the most good—in the flanges to resist the bending forces. The web, on the other hand, which must resist the shearing forces, would be fabricated from steels in the 36,000 to 50,000-psi yield strength range, resulting in a reduction in web thickness and an over-all trimming of weight in the entire structure.

To date, our static and shear-load tests on hybrid beams have been highly successful. If the fatigue tests go as well, we anticipate no further roadblocks in the use of hybrid beams in construction; and we hope there won't be too lengthy a wait until some of you begin designing them into your structures.

Our people have also been experimenting with a series of pre-engineered steel wall units which perform an architectural as well as a structural function. One system, for example, is based on the familiar load-bearing truss and another features a tied arch as the principal load-carrying member.

Each of these framed sections would either be painted or sheathed in stainless steel. Then, once they had been installed to carry and support floors, panels would be placed behind them to form the architectural exterior wall. A variety of panels can be used—enameled steel alternating with glass; or opaque glass alternating with clear glass; whatever combinations catch the designer's interest.

The concept is versatile in yet another way. Since these sections carry one floor and support another, the engineer or architect is free to employ alternate design solutions for other portions of the outside wall.

These concepts represent only a sampling of the research effort going on to help you turn in a maximum performance in partnership with steel. And as promising and gratifying as these programs are, we know how far we yet must go in order to make steel the most competitive building material on earth. Just how far we have to travel is reflected in the remarks expressed recently by a high government official who sized up America's total effort in the field of applied research.

He is J. Herbert Holloman, assistant secretary of commerce, and his remarks, for me at least, put into clear focus what I believe is the sobering fact that our nation's total research effort is pretty much out of focus: that we've become so busy improving tomorrow that we've forgotten about improving today.

He reported that at least 50 per cent of the country's research and development expenditures have been reserved for the so-called glamour areas: electronics and aerospace to name only the giants. But only 10 per cent of our research effort, Secretary Holloman pointed out, is going into improving the things we live by—food, clothing, housing. Now, construction is as basic to life as the food we eat and the clothes we wear, and no flip of the coin is needed to decide for me what remains to be done.

There's only one direction in which to move: more applied research and development by the steel industry and by the AISI and the AISC, and more use of the results by you who influence design.

And here I've come to my second point—the part you play in liberating design by using steel, a material that offers your imagination an infinite number of aesthetic avenues to travel if you will only look for them. After all, what other material has 10,000 different varieties with strength levels varying from 33,000 psi to 100,000 psi and beyond? And what other material can be drawn, welded, forged, riveted, bent, bolted and braised—stamped, spun, sheared, split and soldered—punched, painted, porcelain-enamedled, or whatever else we might do with it, at a material cost averaging less than ten cents a pound!

But regardless of how superior we may know it to be, steel is only as good as the men who use it. The entire steel family of 10,000 grades and all the specifications and manuals are of little value unless engineers and architects make proper use of them.

Let me illustrate what I mean by citing two examples. Over in Omaha, a savings and loan company is building a new branch office, and the architect's plans call for a cantilevered, circular staircase spiralling 16 feet between the first and second floors. The entire structure was to be fabricated from steel.

(Continued on Page 37)
Ceramic Mosaics

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Steel...

(Continued from Page 33)

Three separate firms rejected the job. The precise engineering demands of the stair-case, they said, presented too thorny a problem. But not too thorny for one fabricator who took the assignment, and who, despite the unusual engineering difficulties, succeeded in twisting two eight-inch-wide, flanged I-beams to serve as stair frames. He exploited steel's formability.

The engineers of this fabricating company knew what kind of challenge they faced, and in succeeding they freed themselves from custom, tried an innovation and allowed steel to liberate design!

The spiral staircase is only a small example of the design fluidity possible with steel. But Chicago will soon have a very large example which should silence, once and for all, the critics who claim that steel is not a material for use in fluid design.

I refer to the monumental, 80-story circular apartment house planned for Wolf Point along the Chicago River. Although it's similar in appearance to the twin concrete towers of Marina City a few blocks west, the proposed structure will showcase steel and steel's strength and beauty in an architectural idiom akin, in many ways, to sculpture. It will rise nearly 800 feet on 14 steel piers. These piers will support five, equally spaced, giant steel rings. And resting on each of these rings will be an apartment tier of 16 floors. Walls will be glass, floor to ceiling. It's an exciting building which states its case boldly: don't count steel out of any design race until it's had a chance to compete.

When I think of how difficult it often is to get people to break with custom and to try something new, I'm reminded of my early experiences running plants for our American Bridge Division. In 1934 while I was in the Elmira, New York, plant, I introduced a rubber-tired lift truck for moving the lighter structural units about. Persuade as I did, I couldn't get the foreman to use it, and the workmen only snickered at it. On occasion, when they thought I was watching, some of the more sympathetic would relent and carry something with it, but mostly the little truck sat idle.

Then we received several contracts to fabricate buildings for the New York World's Fair. The structures were extremely complex as you'll remember—many elaborate curves and angles with little or no duplication and what seemed to us to be millions of small, separate pieces. One day at a production meeting, I noticed that we were running late on a couple of jobs, and I pressed the foreman for a reason. He gave me an answer I had not anticipated. All those small pieces, he told me, were too heavy to be carried by hand, but too light to require the overhead crane or steel buggy. And the rubber-tired lift truck—that dust-collecting idler—had broken down. The plant just couldn't run without it. From that time on, the plant became rubber-tired minded, and today, a fleet of those lift trucks scurry about all our plants performing a function which 50 years ago was snubbed as an unwelcomed innovation.

Behind every new advance over the years in the use of iron and steel in design has been an innovator, a liberator, who's been unafraid to try something foreign to tradition.

...Peter Cooper who rolled the first wrought-iron I-beams six years before the outbreak of the Civil War.

...William LeBaron Jenny who in 1883 gave the construction industry one of its biggest boosts by transferring dead weight from the walls of a building to a framework of iron. And in the same structure, above the sixth floor, he made a further innovation by using Bessemer steel beams.

...the engineer who nearly a hundred years ago replaced cast iron with steel in fabricating the main arch members for a bridge spanning the Rhine River in Holland.

...the engineers who were the first to design steel into an American bridge—the famous Eads Bridge crossing the Mississippi at St. Louis, a bridge which at a venerable 90 years of age is still carrying more traffic than its designers ever dreamed.

...our contemporary engineers who designed a new neighbor for the Eads span—the Poplar Street Bridge, a slim-lined orthotropic structure embodying the construction industry's most current bridge-building techniques.

...the designer of the Jefferson Memorial Arch now rising along St. Louis' river front which, when completed, will be the nation's tallest monument.

How much to be envied is St. Louis which can soon boast of having a pair of bridges which represent both the earliest and latest in steel designs and a dazzling memorial arch: three notable examples of how architects and engineers—over a period of nearly a century—have proved that when tested by imagination and innovation, steel is always as new as it was to the Assyrians of antiquity whose steel weapons and tools helped to build their civilization at Nineveh.

Let me show you what innovation on a grand scale has produced back in Pittsburgh. It is, of course, the IBM Building due to be opened in a few weeks. The principals involved in this structure are scattered across the country: the architect is located in New Orleans; the structural engineer has his offices in Seattle; the steel fabricator and erector is in Pittsburgh; the owner and the general contractor are in New York; and the major tenant has its regional headquarters in Chicago. But dispersed as they are geographically, they were close together in their thinking.

Long before there was an architect's drawing, every principal had expressed what he hoped the building would do, what function he wanted it to perform. The sum of all these functional requirements dictated the design—a return, in theory at least, to one of man's earliest construction techniques—the load-bearing wall.

But the design went much further and featured many innovations. Aside from the wall, for instance, the only other load-bearing element in the structure was to be the central service core. There would be no interior columns. And the load-bearing walls would be diamond-shaped, grid trusses, uniform in pattern from top to bottom and sheathed in stainless steel.

The uniformity in the grid system was achieved through yet another innovation—the use of four steels of varying strength levels. USS "T-1" steels were used for the most highly stressed areas; A441 with its strength level of 50,000 psi was applied to the next highest stressed members and A36 was used for the principal remaining members.

A7 was also used in a number of miscellaneous applications.

To dramatize the fact that one building contained a variety of structural steels—the first, incidentally, to use rolled shapes of "T-1" steels—we color coded the grid to show where each was used. Red, "T-1." White, (Continued on Page 38)
Steel... (Continued from Page 37)

A36. And blue, A441.

Most folks who watched the steel erection got our message and a pretty good sidewalk seminar on civil engineering. There were two notable exceptions, though: the Pittsburgh taxi driver who, remembering dimly something about the building's unusual "inside-out" design, extolled it to a passenger in his cab as "the only upside-down building in the world;" and the surprised visitor who, gaping in awe at the red, white and blue grid, was heard to gasp, "My Lord, they've used second-hand steel!"

An equally dramatic innovation concerns the late architect, Eero Saarinen, and his use of A242. We call this grade Cor-Ten at U. S. Steel where, as you may know, our metallurgists developed it in the 1930's.

One day a few years ago, the great Saarinen and his colleagues came to visit our people in Pittsburgh. He had just been commissioned by the John Deere Co., a fabricator of farm machinery, to design a new general office building in Moline, Illinois. Now, you'll recall that Mr. Saarinen had a great knack for relating his architecture to a client's work or service—the bird-in-flight he represented in the TWA Terminal at New York's Idlewild, for example. He was in search of a steel, he told us, that would convey unmistakably a visual story, not only about the building it was to be used in, but about the people and function which the structure was to house.

We showed him everything we had—samples, photographs, data sheets on the entire family of structural steels. We took him and his associates to our Monroeville Research Center, and there they talked more and saw more. Later, at our corrosion test racks, Saarinen spotted what he wanted—bare Cor-Ten, exposed to the atmosphere for years and sporting its famed warm, russet-colored patina or oxide. This was the steel that would help the architect state his case for a manufacturer of steel farm machinery. He would liberate the properties in Cor-Ten which gave it both color and texture, and he would use Cor-Ten in a major building as no one before him had used it—bare. He would allow its color to mimic the rural geography of Illinois while permitting the strength of his design to master the landscape.

So far, I've tried to show you how the various research and development programs throughout our industry have led to concepts which improve, not only our end product, but your own performance, as well. I've also suggested that these new concepts and theories are valid only when you accept them...innovate with them...put them to work on the job.

Now, there's a final responsibility which, together, we must share: the necessity for developing a better communications network linking us—a two-way hot line which we can use in keeping intelligence flowing between us. Actions indeed speak louder than words, gentlemen, but words are often the only tools which serve to define and interpret the action.

A meeting such as this is part of that necessary communication—interpretation—between us. The fact that you are here tells us that you welcome a chance to learn anything that will help you resolve problems of design or aesthetics or that will help you make your engineering job the best one possible. Perhaps some of you attended the Specification Educational Lecture Series last winter or spring.

It's a toss-up as to who learned more from the SELS lectures—the engineers, consultants and architects who attended or the sponsor—the AISC. City after city where lectures were given—and there were about 50 of the series altogether—the "Standing Room Only" sign had to be posted. Everywhere, we found the same anticipation we note here—inquiring minds eager to discover something new.

But it's not being left entirely to official bodies, such as the AISC, to talk up the vitality and versatility of steel in construction. In Seattle, for example, a group of steel men known as the Steel Advisory Committee is out preaching steel's gospel to local architects and engineers. Comprising sales and engineering personnel from mills, fabricators and service centers, the group is divided into two-man teams, a salesman and an engineer. Each team makes its calls in the name of the Advisory Committee: no one represents his own company. And their job is to promote what's new in construction concepts involving steel and to offer technical assistance.

(Continued on Page 39)
The group's been operating for less than a year, but already there are significant signs that its evangelism is winning converts. Not only are the teams being warmly received by Seattle's cadre of architects and engineers, but team help and advice are being actively sought as well.

And that's the other side of the coin. That hot line we need has a two-way connection, remember, and we want you to share your knowledge with us. Let us know how you've been able to incorporate steel into design. And if you hit a snag, let us know that too. Maybe your problem is one of those AISC is already working on—or should be.

Or maybe your problem originates with the codes or specifications. There are still too many senile codes on the books, and nothing stifles creativity and innovation more than a regulation that hangs tenaciously to life when its death knell should have sounded long ago. It will be through your persistent efforts that local building codes and specifications are updated and kept current.

Cooperate as closely as you can with those who must write the regulations. They work tirelessly to do a job that's never finished, and their efforts are only as good as the information they have to use. Both the new specification and the manual may help them lighten their task. I'm sure we could all name a number of regulations which are prejudiced unfairly against some material or technique. New York City codes, for example, did not include A36 until last year. When the restrictions were lifted, Mayor Wagner calculated the savings possible in planned city construction in 1962 and said, in effect, that the use of A36 steel would save the taxpayers of New York about a million dollars a year.

So, be on sentry duty against code and specification prejudice. Steel—no material for that matter—can engage in a sit-in demonstration in its own behalf, but we can. And we must ferret out those regulations that are unrealistic . . . the ones that have been influenced unduly by labor unions or political pressures . . . or the ones which feed at a slush fund trough. These are the wastrels that should be swept aside.

And finally, help us to tie our communications network into the academic community. Help us take our story to the college campus where young minds, quick to grasp ideas and to question them, will have a chance to learn early what steel's all about. The University of Minnesota, for example, offers several fine courses in the use of steel in structural design, but too many engineering and architectural schools have omitted such courses in their programs. An increasing number of schools seem to feel that students need only be exposed to theory: that design is the responsibility of the company which hires the graduate.

But, is a medical student turned loose to practice medicine after learning only his theory? No. He's an intern first.

An agricultural student is taught more than theory. He actually practices animal husbandry and veterinary services, as well.

I remember so well a young engineer whose remarks a few years ago upheld the validity of this need for adequate college preparation in design. The young man—not long from the ivy halls—was one of 15 winners receiving awards in our steel bridge design competition, a contest open both to professional and design engineers and to college engineering students.

The young designer had come to the rostrum to accept his prize and he paused a moment to tell us his reaction to the competition. His project, he said, gave him a freedom to experiment he'd never had either in the classroom or in his actual work. And he realized that his efforts to design with steel in that particular competition were limited primarily by his lack of academic training in steel design and by his own imagination to use it.

That kind of remark leaves no doubt in my mind that a course in steel design has a sound and logical right to be in the college curriculum. And I hope that one day the academic community will also hold this conviction.

Gentlemen, it's a safe bet that anyone entering the architectural or engineering profession has a desire to do something for mankind in the creation of building . . . a bridge . . . a monument. And, why shouldn't he? He's as much an historian of a people as the journalist. For there's no better way to record and chronicle man's progress and his tastes than in the architectural arts. He should always

(Continued on Page 41)
dent for 1963, was elected to a three year term as Director of the FAA and Frank E. McLane was elected to serve as Alternate for the same period.

FAA Nominations .

This year the FAA Nominating Committee placed in nomination two men for each office of the Association. All members of the FAA were notified by letter, under date of October 15th, selections made by the Committee.

Committee Chairman is Barnard W. Hartman, Jr. (Florida North West Chapter). Members are Arthur Lee Campbell (North Florida Area); Frank Folsom Smith, Jr. (Central Florida Area); and Earl M. Starnes (South Florida Area).

Nominations are as follows: PRESIDENT, Roy M. Pooley, Jr. (Jacksonville Chapter) and Forrest R. Coxen (Florida North Central Chapter). SECRETARY, Jefferson N. Powell (Palm Beach Chapter) and H. Leslie Walker (Florida Central Chapter). TREASURER, James Deen (Florida South Chapter) and Robert E. Hansen (Broward County Chapter). 3RD VICE PRESIDENT, SOUTH FLORIDA AREA; C. Robert Abele (Florida South Chapter) and Hillard T. Smith, Jr. (Palm Beach Chapter).

For REGIONAL JUDICIARY COMMITTEE the three-year member nominated is Donald Jack West (Florida Central Chapter) and the one year alternate is William Stewart Morrison (Florida North West Chapter).

Informational Meeting .

Approximately one hundred and fifty members of the architectural profession from Dade, Broward and Palm Beaches; were guests of the Libbey-Owens-Ford Glass Company at an informational meeting held at the Coral Gables Country Club, October 29th.

Speaker of the evening was Producers’ Council President, A. M. Young. His address titled TIME AND ARCHITECTURE was well received and will appear in the December issue of this publication.

Florida South Elects .

At the October meeting of The Florida South Chapter Officers and Directors were elected for the year 1964. They are: President, James E. Ferguson; Vice President, Francis E. Telesca; Secretary, Charles S. Broward and Treasurer, O. K. Houston.

Elected as Chapter Directors were Alf O. Barth, Robert J. Boerema and William E. Tschumy.

Earl M. Starnes, Chapter President for 1963, was elected to fill the term of FAA Board member for a three year period and C. Robert Abele was elected as FAA Alternate Director.

Caribbean Conference .

The Caribbean Conference, sponsored annually by the Center of Latin American Studies of the University of Florida, will concentrate its efforts this year on Mexico.

Carlos Contreras, S.A.M., F.A.I.A., will deliver an illustrated talk on The Architecture of Mexico on December 4th at 8:15 p.m. and on December 6th at 1:00 p.m. a Seminar on Caribbean Architecture will be conducted by Martin Dominquez.

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The thesis program for the Fall Tri­mester is A Center for Latin Amer­ican Studies for the University of Flor­ida Campus. The jury for the project is Carlos Contreras, S.A.M., F.A.I.A.; Martin Dominquez and Director of the Florida Region, A.I.A., Robert H. Levison.

Scheduled exhibits throughout the Conference include, in part, The Work of Martin Dominquez, 4,000 Years of Mexican Architecture, Mexican Exhibit, Books about Mexico, and Publications about Latin America.

All architects are invited to attend the sessions at the University.

**Guest Speakers . . .**

On October 18th the Florida North West Chapter had the two top rank­ing officials of Florida’s architectural profession as guest speakers.

Robert H. Levison, Director of the Florida Region of the American Insti­tute of Architects (Florida Central Chapter); and Roy M. Pooley, Jr., the President of the Florida Associa­tion of Architects (Jacksonville Chap­ter); both addressed the Chapter members on various matters of impor­tance to the National and State Or­ganizations.

**Book Review ...**  
(Continued from Page 31)

sources; the relative economics of vari­ous light sources including a compar­i­son between tungsten and fluores­cent lighting; the way light may be con­trolled by diffusers, louvres, and optical devices; methods of lighting; lighting equipment design; installa­tion, maintenance, and economics; the importance of bearing lighting in mind when designing structures; and the effect upon lighting design of the requirements of acoustics, heating, ventilation, air conditioning, fire pro­tection, electrical distribution, and partiti­oning.

The final section of “Lighting in Architectural Design” covers methods used in America and in England for determining the values of illumina­tion from daylight; an explanation of the lumen method of lighting calcu­lation, with examples; and methods of designing to combat glare from light sources. Mention is also made of the “Designed Appearance Method” of lighting design, used to calculate brightness relationships.

More than 380 photographs and drawings illustrate the book, clarifying the principles discussed and giving examples of good and bad practice.

Derek Phillips is an architect and lighting consultant. Although he prac­tices in England—where he is an Associate of the Royal Institute of British Architects—Mr. Phillips has spent several years in the U. S. doing research on the environmental aspects of lighting at M.I.T.

**Steel...**  
(Continued from Page 39)

speak out boldly in what he builds, even though what he has to say about style may differ from what his neigh­bor says. The Greek has stood next to the Roman; the Rococo next to the Gothic . . . the American Federal next to the Georgian. And this is how it must be. For every style was a contemporary statement in its own day, the creation of an innovator who borrowed something from the past, added an interpretation of his own and developed something new. An innovator who put freedom in design.  

Note:—Mr. Paddock makes refer­ence to the MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. Available from 101 Park Avenue, New York 17, New York.

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NOVEMBER, 1963
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TEAMMATES FOR PROGRESS

By H. SAMUEL KRUSE, F.A.I.A.

In 1954 the Florida Association of Architects employed Roger W. Sherman as editor-publisher. He was charged by the Association to expand its Bulletin into a monthly publication which would serve the Association as a multi-purpose tool for accomplishing the many phases of Association activity.

The transformation wrought by Roger was remarkable. Not only was the Bulletin's format, quality and scope changed but also its name, which has henceforth been called The Florida Architect. From its very first issue it became the Association's principal public relations tool, as well as its intra-professional organ, and its most valuable property.

Such revolutionary progress did not happen automatically. Much energy was expanded to overcome obstacles and to debate issues and reconcile them. There were differences of opinion about what policies to follow and what action to take to implement policies. There was discord, but as the years passed a close working relationship developed between the Editor and the Florida Association of Architects' Publications Committee and The Florida Architect grew in prestige and strength.

When Roger W. Sherman died in June, he knocked a hard fast ball to the Florida Association of Architects which the Association's Staff and the Publications Committee had to field. Although the Committee felt very much like a rookie playing in the Series, for The Florida Architect is big league now, the formerly established editor-committee relationship had prepared the Publications Committee for fielding fast balls. With the knowledgeable support of the Association's Staff the Committee was confident that it could play the game until a qualified successor to the Editor could be found.

It was during this period since January 1963, when our Editor became very ill, while the Publications Committee was evaluating and re-evaluating what The Florida Architect was, is and can be, that the Committee became aware of some teammates with whom the Committee had had little previous recourse and, possibly, had not consciously regarded them as teammates at all! These newly discovered teammates are The Florida Architect's fine, loyal advertisers; many of whom have grown with The Florida Architect from its very first issue.

The interlocking interests in any endeavor cannot be more inextricable than that of a publication and its advertisers. When these interlocking interests transcend purely commercial considerations, this interdependence becomes a relationship of the most enjoyable kind. It is common knowledge that firms with products and services to sell do not patronize with advertisements publications which are not read by those to whom they wish to appeal. It is also generally accepted that a publication will not be read unless it contains material of interest and value to its subscribers and that a publication will not long survive without advertiser support.

Reader interest is as important to the advertiser as it is to the editor or the reader. However, since The Florida Architect utilizes its advertisements as part of the Florida Association of Architects' program for self-education on product information for its architect subscribers, the involvement of editor, publisher and advertiser in the creative effort to produce a better publication of more mutual value becomes an enjoyable and exhilarating experience.

The Publications Committee believes that the members of the Florida Association of Architects are the primary reason why The Florida Architect has grown to its present stature.
Listed here are firms which have helped this Official Journal of the FAA grow during the past year. All services, materials and products which they make or sell are of a quality to merit specification. They seek your approval.

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- As the Official Journal of the Florida Association of Architects — which is a Region of the American Institute of Architects — The Florida Architect is a professional magazine, in the strictest sense of the term. It was developed to serve the overall interests of the architectural profession in Florida. In doing so it also serves the building industry of this state of which the profession is a part.
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Reality or Fantasy?...

(Continued from Page 19)

feet of rentable area and provide space for 76,800 people.

The lower elevators, not having so far to travel, could serve more area. To keep ten cars in each bank and get the maximum use of this elevator capacity, the building would expand to 16.8 million square feet of usable area and accommodate a population of 134,000. Of course, an alternative would be to reduce the number of these low-rise cars, but with maximum development the proportion of land and other basic costs come down—an excellent reason for refusing to cut corners down when dealing with unrealities.

The disturbing factor in every tall building is the large amount of floor area the elevator installation eliminates. The 400 cars would take up 14,560,000 square feet compared with 16.8 million square feet of rentable space in the entire building; and adding one million square feet for stairs and other non profit essentials only 52 per cent of the gross area would be income-producing. At an estimated square-foot production cost of $100 a rental rate of $20 a square foot is indicated for successful operation. All this boils down to the inconvenient fact that a mile-high building would not be economically feasible with present elevator systems.

Both Otis and Westinghouse, being always resourceful, have suggested five-story elevator cabs, reducing the number of shafts in proportion. Such elevators would serve five floors at one time, both loading and unloading. The space saving would increase the efficiency of the building to 84 per cent and reduce the probable rental rate to $12.

The trouble with this happy arrangement is that a five-story elevator would require five first floors. To reach the floor you want to get to, you would have to select the right first floor. Getting 100,000 people to the right starting floor, regardless of rush hours, would again present something of a problem.

Escalators? Perhaps, but that solution would take more time, adding as much as three or four minutes in getting to one’s office. Outside ramps to be used by autos, taxis, or perhaps even street cars? Well why not? While one is dreaming there is no need to balk at details. Even the possible cost of something over $1,000,000,000 is nothing to stumble over. So much for a project that may tickle the imagination, but exists only in the realm of fancy.”

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It Is Well To Know...

(Continued from Page 7)

need not be assessed.
B. Do not inquire before July 10 as to whether renewal fees have been received. Renewal fees cannot be deposited before July 1 of each year, since such fees are applicable to the fiscal year which begins July 1.
C. Be sure that checks issued in payment of such fees will be honored by your bank when presented for payment.
D. Keep the Board office advised of your current address so that duplicate clerical effort need not be expended in forwarding renewal notices to you.
If we can remember the above points, your Board office can better serve you and at the same time eliminate duplication of work at a time when the office is very busy with the handling of the work attendant to the June written examinations and the several end of fiscal year reports to the State of Florida, which must be expeditiously prepared.

Teammates for Progress...

(Continued from Page 43)

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NOVEMBER, 1963

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