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RAPHAEL S. SORIANO — Guest speaker at the Utah Chapter A.I.A. Convention Banquet outlines his philosophy of Architecture.

In architecture, among the points of consideration one focuses itself quite brightly. . . . How to arrive at the most useful solution for a particular performance. . . . The most successful architecture for an architect.

What is a useful architecture? A useful architecture is a performing architecture which serves well its occupants from the unified point of view of his total sense experiences. I do not mean the detached usefulness of particular parts — I mean a unified concept achieved through the use of significant relationships — the most natural relationships of every day's activities.

Is this performance achieved by interpreting within the design all of the wishes of the occupant? Wishes which might include not only daily living requirements and color and textural likes and dislikes, but also many obscure "feelings" about high and low, straight and curved, warm and cold? etc., etc., etc. . . . Is this performance achieved by interpreting within the design the architect's own "feelings" about high and low, straight and curved, warm and cold? etc. . . . By which route will the problem be solved most simply, directly and with the least waste — by arbitrary, subjective thinking or by cognate, objective, reasoning?

In arbitrary thinking there will be involved preconceived notions, personal whims, isolated tricks, a series of unrelated parts perhaps sometimes cleverly executed and quite charming texturally or full of color but unrelated parts cannot be recognized as a concept. They can be only momentary appeal — as a feather dropped from a bird's wing is texturally, colorfully and structurally appealing but unable to perform alone. In objective reasoning there will be involved constant evaluation and integration of the relations of the constructive elements for performance. The smallest semblance of a personal "feeling," trick or whim inflicted upon the work can destroy the natural concept. From point of analytical observation we find that progress in architecture has come from the architect using his knowledge and sensitivity in relating the newest materials of technological advancement into the simplest possible terms for top performance.

The question will probably be asked as to what is the sensitivity of the Architect if it is not a "feeling" — sensitivity comes from knowledge — knowing when to remain behind the series of evaluations rather than putting oneself ahead of them. By this is meant, in evaluating the relationships of any architectural solution, each decision, each material in comparison to another at once gives the architect its own intrinsic value. When one violates these natural intrinsic values by imposing upon them personal values then "feeling" is involved not "sensitivity."

In summing up, we find that the attitude of the client, his or her sensitivity and objectivity is equally important for a successful end result. Many times the client comes forth with an idea of great value. These ideas when on the plane of objective requirements should be taken seriously as a challenge of integration into the whole. In this case the clients have helped to contribute as much to the performance of the project as the architect. This is the way it should be. This is the way to architecture.

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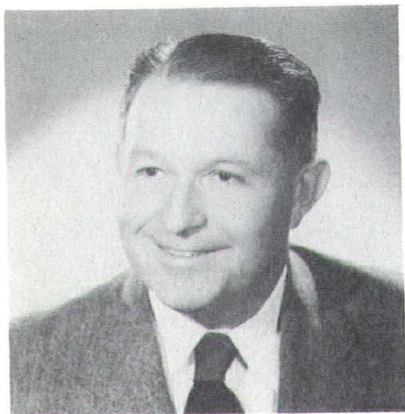
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EDITORIAL

City Planning is possible only when the need is clearly recognized! This concept is axiomatic for it takes a state of chaos to stir the public conscience into action. It is, more over, difficult for those charged with the responsibility for executing the planning together with those charged with the means of support, to grasp the largeness of such an endeavor.

Some indication of the depth, scope and steps required (as an orientation measure) will become apparent through a close perusal of Mr. Contini's "Renewal Downtown U.S.A."

We recognize the difficulties inherent in the "Bold Plan," but we stand firm in our conviction that a meaningful architecture is inexorably bound up with reaching a solution to the problems of Metropolitan planning. We have a planning group, they need our support, our understanding and our effort if they are to succeed.



AN HONOR TO HIS PROFESSION

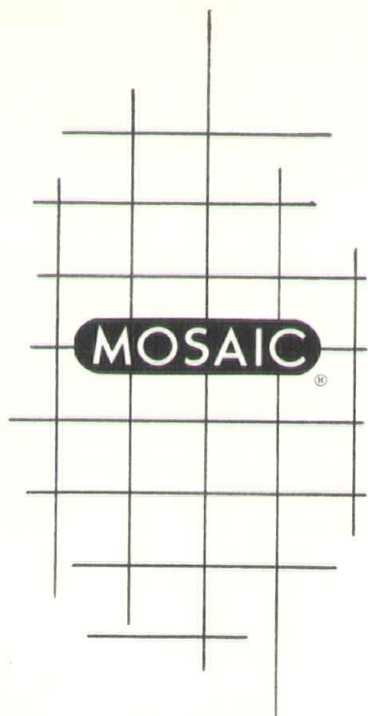
One of the great honors which the American Institute of Archi-

tects may bestow upon a distinguished member is that of advancement to Fellowship. A Fellowship may be granted to a member architect who has notably contributed to the advancement of the profession of architecture through his achievements in design, the science of construction, literature, educational service, service to the Institute, or public service.

This year at the Centennial Convention in Washington, D. C., Fred L. Markham, Architect, will be advanced to Fellowship in the Institute for his achievement in design and his service to the Institute.

Born July 3, 1901 at Spanish Fork, Utah, Fred L. Markham graduated from Brigham Young University in 1923. Following graduation he taught school for four years before matriculating to the Massachusetts Institute of Technology where he studied architecture during the period 1927 to 1930.

During the years that followed Mr. Markham distinguished himself as an architect of great integrity and ability. Many fine buildings are credited to his scholarly and sensitive design, among the best would be included his Scera Theater and Community Center at Orem, Utah; several institutional buildings on the campus of the Brigham Young University of which the Home Living Center is the most distinguished;



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Chad Barrick

DISTRICT MANAGER

THE RENEWAL OF DOWNTOWN U.S.A. by EDGARDO CONTINI,

Partner, Victor Gruen & Assoc.

We have been concerned for many years about the "recovery" of downtown: about remedies, improvements, return to health. . . . It is only in much more recent times, however, that talk — and action — has begun about downtown "renewal." The difference is not just a matter of semantics, but one of attitude. As long as we dealt with downtown as a sick patient to be returned—perhaps a little bit aged and somewhat battered—to its former self, we were fighting a losing battle because times and ways of living have changed for good, and those of our institutions that fail to reflect creatively and aggressively such change will perish.

Now, with "renewal," we mean a new life. Not so much through destruction and reconstruction as much as through re-appraisal and imaginative readjustment.

We know that throughout the country, from the small village of the Midwest to Manhattan, from Miami to Albuquerque, the urban core of the community is undergoing a critical crisis. Its common symptoms are obvious and well known; but they bear review and appraisal because their significance is not always well understood, and the proposed remedies are often short-sighted and wasteful.

The symptoms are, first and foremost: traffic congestion, and, following in self-activating sequence, parking shortage, downgrading of retail facilities, downgrading of surrounding environ-

ment, deterioration of rental levels with consequent physical obsolescence of real estate assets, deterioration of taxable structure, increase of maintenance and civil services costs. Inextricably interwoven with these are equally significant symptoms of social nature: vice, delinquency, crime; and of aesthetic nature: cheap remodeling, vulgar signs, unrelieved ugliness.

It is no wonder that such should have been the pattern of downgrading. Our cities as we know them were born, for the most part, during the nineteenth century; they were planned—often without much imagination, but planned nevertheless—for an age that relied for movement and activity on horse and buggy, public transportation, and, to the largest degree, on pedestrian mobility; they grew, but downtown, once its skeleton was formed, ceased to respond and adjust to new challenges.

The electric motor came, the gasoline engine came, mass production gave each of us unlimited mobility; we entirely changed our habit of living (and we created **new** homes to reflect such change), but downtown stood still. It cluttered itself with trolley tracks and wires; then got rid of them, only to be choked with fumes; and it scrambled together cars, buses, and pedestrians in spaces that were designed for neither.

The car introduced itself modestly enough—just a gadget, a mere convenience. . . . But it eventually blackmailed the city with more and more demands: traffic regulations, one way streets, narrow sidewalks, signals; and, progressively, we gave in.

And now the automobile is procreating itself at a higher birth

rate than man himself. And its space demands for birth (our factories), for association with man (sales rooms and agencies), for shelter (garages and parking lots), for health and care (repair shops, wash racks), for sustenance (gasoline stations), and for burial (wrecking dumps) are tremendous; and they have changed our habits, our cityscape, and the entire scale of civic environment. Specifically, its infiltration has hopelessly clogged and paralyzed the life and vitality of our urban cores.

To the question, "What to do about it?", varied answers have been given. Frank Lloyd Wright, when asked what should be done about the problems of one of our largest cities, simply stated: "Destroy it." Others have painted the sidewalks green and promoted dollar days. Between such extremes of unrealistic arrogance and inadequate timidity, there is, fortunately, a constructive middle ground of realism, vision and understanding within which a pattern for renewal can be formulated. Toward this goal, two points must be stated and understood and accepted.

First: the healthy downtown must be a nucleus of compact layout, intense activity, efficient land utilization, minimum distances, maximum concentration of self-complementing functions.

Second: A pedestrian can move comfortably in 20 square feet; a car needs about 600 to move about, 200 to stand still—and a car more often than not carries less than two people.

The inability to understand and resolve the axiomatic incompatibility of these two premises has been perhaps the greatest factor contributing to the deterioration



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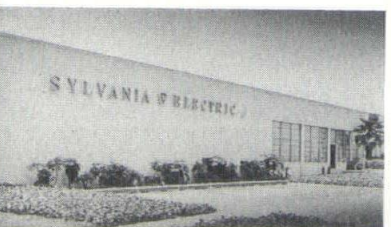
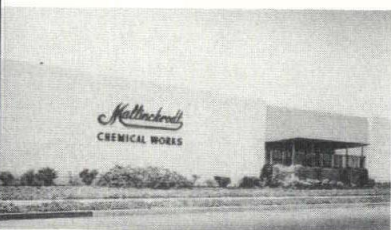
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2. Existing Conditions
Fort Worth, Texas



Gordon Sommers, Photography

3.
Master Plan - Fort Worth, Texas. Victor Gruen and
Associates - Architects.

of downtown; and it is my conviction that we will no more be able to return order and efficiency and function to our downtowns without chasing the prepossessing automobiles out of them than our grandfathers would have succeeded in keeping their parlors presentable if they had left their horses free to roam through them at will.

A number of measures have been taken, especially during the last two decades. In an attempt to remedy the decline of downtown's vitality. Most of the measures dealt with traffic — and rightly so — as the most obvious angle of attack. But, generally, the results were not what was hoped for. At most, success was met in retarding the trend, but nowhere the trend was fully reversed just through traffic remedy.

There are, of course, two reasons why this should be the case. In the first place, traffic is more a symptom than a disease. It reflects an entirely new pattern of living; and, as a high fever, it indicates a deep-seated reaction of the urban framework to such changed pattern. You may lower the fever by aspirin and reduce congestion by one-way streets and synchronized signalization — but neither will cure the disease, which must be understood and attacked more comprehensively.

In the second place, remedial traffic measures have the habit of creating as many new problems as they solve existing ones. Expressways are cut—at no mean cost—through the frame of the city to connect the suburbs with downtown so now one can reach downtown fast enough. . . to find no place for parking. Then, vacant lots, sprinkled here and there in

the middle of downtown, are expensively converted into multi-deck parking structures . . . and we discover that the new traffic volumes that expressways and parking have encouraged cannot be handled by the network of local streets, and movement slows down to a standstill. Anyone who has tried once to go cross-town in the neighborhood of 34th Street in Manhattan, by cab, around nine a.m., will never do it again—he will **walk** next time and, thus, perhaps become the symbol of a new era!

When the local road network becomes clogged, public transportation gets caught, too; and its traffic-relieving efficiency is lost; its books will go into the red; pretty soon, one more line will be dropped, and the space where one bus was crawling now will have to make room for twenty cars! Incidentally, nothing could be more characteristic of the absolute lack of understanding of the nature and dimensions of the problem of downtown wellbeing than the battle cry of some twenty years ago: "Away with the street car tracks." Clumsy as it was, the street car, with its high passenger load per square foot displaced, was consistent with the dimensions and needs of downtown. The individual automobile is not; and we would have done far less harm to the business of downtown in the long run if we had left the street car tracks in and kept the cars out.

Now, the cars are in; and we tend to look forward toward more freeways, more parking structures, more one-way streets, more scramble, more gimmicks. If now we give in to the cars once more, and tear down buildings to widen the network of local streets (not a very economical operation at

that), we will succeed in killing the patient once and for all.

If the remedies of the past failed, obviously a more comprehensive approach must be used. The fundamentals of such approach are the following:

—We cannot just attempt to cure symptoms, but must get at the core of the problems and provide for a complete readjustment of downtown to the facts and realities of the automobile age.

—We must not attack problems one at a time, but rather formulate a long range comprehensive program, encompassing all the problems and capable of progressive implementation by stages.

—We should not limit our thinking to the narrow term of "downtown." Downtown is, in all cases, an organ of the community as a whole, whose well- or ill-being it will reflect. Thus, the renewal of downtown is related to the total growth pattern of the region.

—We must not think of "saving" downtown. This is a defeatist term. We must dedicate our effort to the returning of downtown to the vigor, dominance, prestige and splendor to which it is entitled by historical heritage and by geographical location. We must think big, because in this country timidity will never succeed.

Yet, to think big is not enough; lest we invest in glorious mausoleums with no vitality, we must also think with a purpose.

It seems to us—after attempting to understand the essence of the historical vitality of the urban core and after learning, through

the planning of regional shopping centers which offer the opportunity to start thinking and planning from scratch, how to cope with the relationship between man and his car—it seems to us that the plan for renewal must set for itself the following basic goals:

1. Provide an even flow of traffic to and from downtown and its tributary area.
2. Separate vehicular traffic from pedestrian movements, and provide for adequate vehicle storage.
3. Encourage the most productive use of the land.
4. Re-integrate commercial with civic and cultural activities.

The first goal is easily understandable, and the general highway and freeway improvement programs that our largest cities have under construction or in the planning stage will effectively assist in accomplishing the task. The only danger that exists is that the program of highway improvement be developed per se, without proper relationship to the other aspects of urban renewal.

The second goal is one that will be more difficult to accomplish. There is substantial resistance on the part of the merchants or developers against relinquishing the ancient privilege of having cars stop at the front door; even if in actuality most of the customers or visitors will have to be contented with parking four blocks away and walk the distance on crowded sidewalks and through hazardous intersections. The paradox is that in the most successful of our suburban shopping centers this separation of automobile traffic, pedestrian traffic and service traffic has been accomplished

quite successfully without compromise. The automobile brings the customer to the center but, so to say, stops at the threshold. Within the environment of such suburban centers, the customer is a pedestrian, in a space scaled to his dimensions, landscaped, pleasantly filled with amenities and freed from congestion, noise and fumes; and the service traffic, either by means of underground truck tunnels or by means of sheltered service areas is segregated from sight and interference. There is no reason why the lessons learned in the suburban centers cannot be incorporated in the renewal of downtown.

The third point will probably be the most difficult to accomplish because it demands the establishment of a most delicate balance between public initiative and private enterprise. Insofar as the purpose of renewal is not demolition and reconstruction but rather re-integration and concentration of activity, and insofar as it should not be the responsibility of the city or other public bodies (other than for the development of civic centers) to undertake the development initiative, it becomes necessary that the privileges and powers granted to public bodies through the broadened use of the right of eminent domain be properly counter-balanced by a proper system of checks; thus, maximum encouragement will be established for private enterprise to undertake major redevelopment projects within or around the downtown area, within the framework of a pre-established master plan offering a maximum of insurance and confidence; at the same time, the growth of irresponsible speculative activity will be discouraged. A tremendous amount of experience at the planning, legislative, and

political level will have to be acquired to develop a successful technique of implementation of renewal plans.

The fourth point is self-evident: no urban core can relinquish its function of civic and cultural responsibility; yet it is only when such centralized civic representation is properly related to the commercial vitality of the city's center that stability and unsubsidized well-being will be accomplished and maintained.

We recently have had the opportunity to apply the principles outlined above in the development of the master plan for the renewal of a middle-sized, mid-western American community: Fort Worth, Texas. While it would be very difficult for me to describe the pattern of the proposed plan without the assistance of graphic material and without taking too great a share of your time, it might be of interest that I outline briefly the analytical approach that was followed by our firm in the concept development of the Fort Worth plan.

On the one hand, we analyzed in detail all of Fort Worth's existing conditions — age, value and usefulness of building block by block; utility installations, operation of public transportation; pattern of business volumes; and trends of change of character of different areas of downtown.

On the other hand, toward the development of an ultimate solution, rather than project from the existing conditions and try to remedy and improve, we took an entirely different outlook: we analyzed the entire region of which Fort Worth and Dallas are the focus. We assumed that Fort Worth as a community will exer-

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cise the will necessary to attract one-half of the trade potential of the region, to which it is entitled by its geographical location. We projected present trends of growth of the region into the foreseeable future (1970) and, on this basis, estimated the anticipated downtown area requirements for retail business, office buildings, hotels, civic and recreational, and other related downtown facilities. Assuming that, as part of the renewal program, an effective, comprehensive and profitable system of transportation would be instituted and operated, we estimated that reasonably about 40% of the people heading downtown from the suburbs would use means of public transportation rather than private automobiles. (It is generally the case that the larger the city's metropolitan core, the larger is the percentage of its visitors relying on public transportation. Present figures for downtown Los Angeles indicate that approximately 50% of its visitors now come by public transportation; in Manhattan, the percentage is of course substantially higher). Thus we were able to arrive at an estimate of the total number of private vehicles that will have to visit downtown daily, if its activity at the anticipated level is to be maintained. The staggering figure was in the order of 150,000 cars per day, which corresponds to peak hourly loads, within the downtown area, of approximately 30,000 cars. A rapid analysis of the corresponding space requirements indicated that the area presently dedicated to public roads (about 5 million square feet) will have to be trebled to accommodate the anticipated needs.

Thus, three basic alternates were left to choose from:

(A) Accept lower capacities and

corresponding lower total volumes, thus relinquishing part of the trade potential of the downtown area to either competitive Dallas or other suburbs or satellite communities, or

- (B) Widen the street network of the downtown area (with tremendous amount of destruction), thus exploding the compactness of the downtown area to a point where it will entirely lose its effectiveness as an urban nucleus, or
- (C) Provide for a highway network that would rapidly convey private vehicles from the suburbs to downtown, provide adequate parking facilities for such vehicles in the fringe of the downtown area, and prohibit these vehicles from entering the downtown core entirely.

The last was, in essence, the solution selected, and among its most significant results were the following:

- 1. The whole program can be implemented with out destroying any multi-story or otherwise valuable real estate in the downtown core.
- 2. It will be possible to increase the compactness of the downtown area (through closing of alleys, narrowing of streets, and restitution to a productive use of lots presently dedicated to random parking) to the point where the entire anticipated need of downtown Fort Worth for 1970 can be easily accommodated within the present day boundaries of downtown. The remarkable consequence of such compactness will make it possible to reach

ARCHITECTURAL DESIGN OF THE SCHOOL

Condensed from remarks at the Fourth Seminar, 20 October 1956 of the Western Mountain States Regional Convention in Salt Lake City, Utah.

By Philip Will, Jr., F.A.I.A.

As moderator, John Lyon Reid, has said, my subject is design. In fact, to refine it further, we deal with **artistry** in the design of school buildings. Perhaps you could subtitle these remarks "How to Act like an Architect."

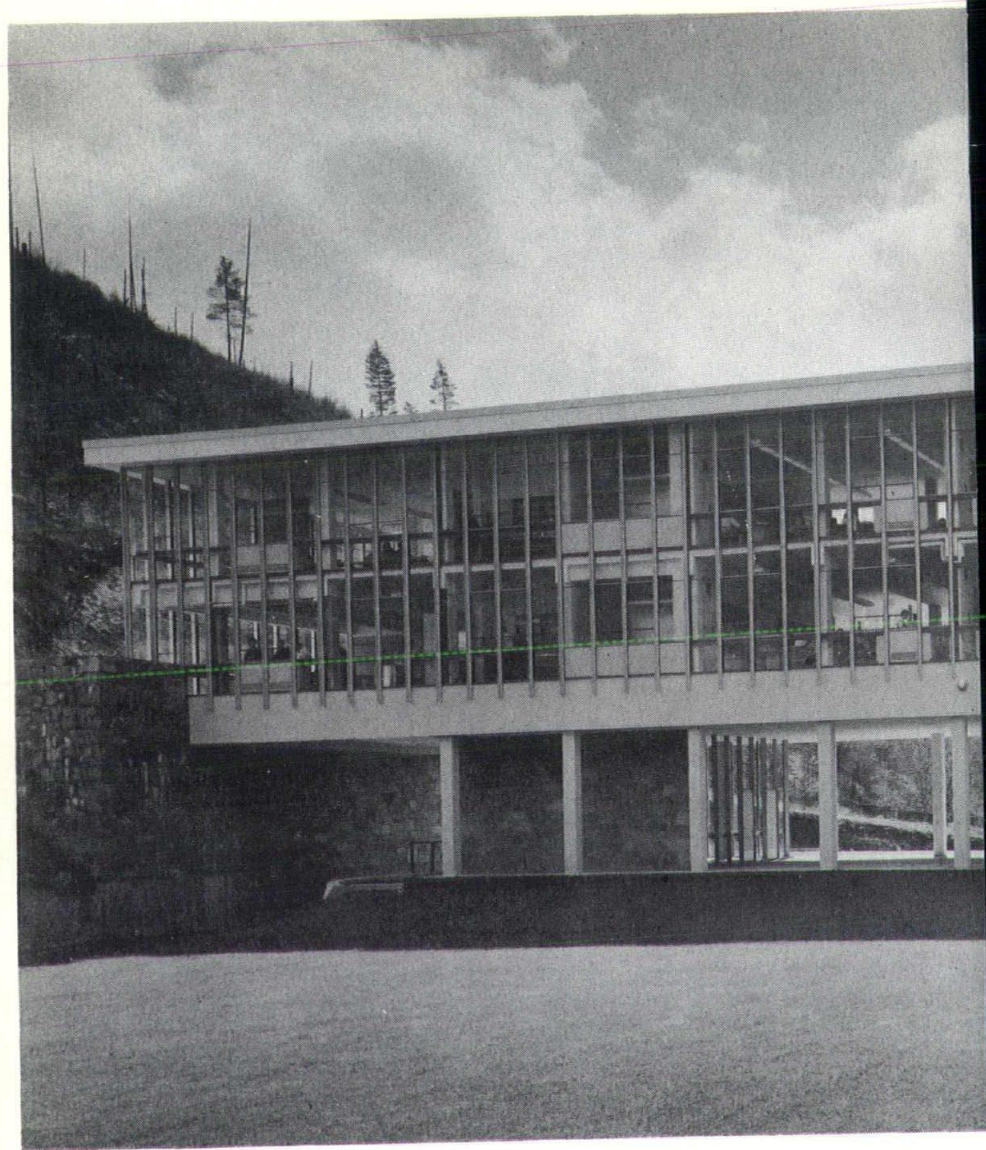
During the course of the discussion, I will touch on money and on cost and financing. There will be a few words on the subject of the life of school buildings—why they live or die. There will be quite a few words about the basic elements of design with which we deal as architects—the physical stimuli of environment such as space and form, light and color, texture and accoustics, omitting only smell and taste. There will then be some slides. Finally, there will be discussion limited only by the sheer exhaustion of the audience.

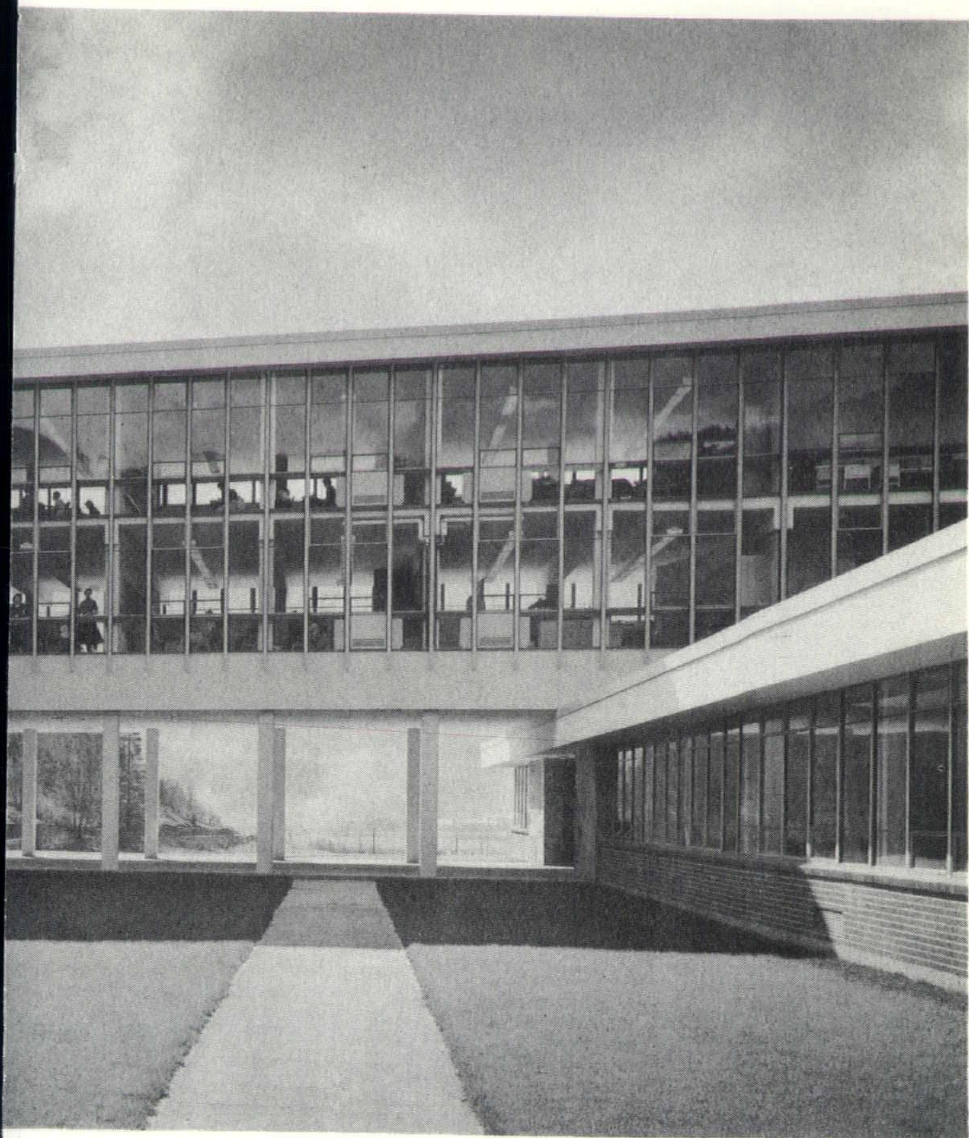
Perhaps the first question I should answer is why your speaker is qualified to be here discussing this subject with you. My first qualification is that I am willing to do so; second, that we have an excellent public relations counsel; third, that Perkins & Will has done quite a few schools, although in the partnership I am probably the least qualified to discuss them. (Perhaps it is easier to speak more freely when unfettered by detailed knowledge of the subject.) Fourth, it should be confessed that your speaker is most impractical. He believes, in fact, in a great many other things which in the eyes of many are of no importance and are quite impractical. In fact, it

should be confessed that in our office the word "practical" is considered almost a swear word. Perhaps we regard "practical" as synonymous with the short-lived and the expedient. My fifth qualification is that I am no Messiah. I shall simply leave it up to you to save your own souls. Sixthly, I like to think that I have a firm grasp of the obvious, as you will shortly discover. Seventh, and lastly, I do own a camera and have taken a few kodrachrome slides.

First, let's spend a few minutes on the subject of money—and costs. Let's dispose of this subject early. It's a loathsome one to the artistic mind—but cannot be ignored. Have any of you been thanked by a client for saving them money? We haven't. Our great successes in economy at the expense of quality have come home to haunt us. Far from being thanked for these successes, we have been blamed. We have been told in effect—"Gentlemen: You are architects. Why don't you act the part." As a result, we have made it a policy not to build cheap buildings. Few clients can afford them. In the long run, cheap buildings are much too expensive; nor do they win friends for their architectural fathers. In the chill blast of cheapness, the tender buds of imagination wither and die. In any event, the realistic cost range open to us in building is not great and makes very little difference in the ultimate cost to the taxpayer. The educational program and the current value of the building dollar will largely determine what must be spent on a particular building at a particular time in a particular place.

To say that we cannot afford good buildings is simply not true. In this country it has been proven over and over again that we can





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have anything we want if we just want it badly enough. It is obvious to all that this country has never had it so good. What a sad commentary on our moral values it is that we short change our school children while gladly going into debt for television, horse racing, whiskey, cigarettes, etc., etc., etc. It's too old a story to belabor; but I do get a little bit red-headed when this country has expressed its willingness to spend in the next few years \$30 to \$50 billion on roads but quibbles about a few millions for schools. We are quite prepared to spend enormous sums to speed our automobiles in jittery movement but little to educate the driver of that automobile. (At this point, my I hasten to say that I personally oppose any broad scale Federal aid for school building. I would like to continue in the future as we have in the past making our schools our own local and highly personal responsibility. Our school system is the greatest remaining fortress of the democratic method. I can conceive of nothing more destructive of that personal sense of initiative and responsibility than the federalization of public education.)

Just how important is the cost of the physical plant in relation to the total cost of education? You can do your own mathematics to fit your own circumstances; but let me start you off. In most communities the cost of physical plant is represented by an amortized bond issue. Typically, let's say that such a bond issue is amortized over a 20-year period at 3% interest. This means that for every dollar you borrow, about $31\frac{1}{2}\%$ must be paid in interest. Thus, if you are investing \$1,000 per child in school, the actual cost to the taxpayer on a 20-year 3% bond issue is \$1,315. Inasmuch as the build-

ing, with reasonable maintenance, will not fall down at the end of 20 years and, in fact, will probably last at least 40 and frequently longer, we can find an annual cost per child by dividing the \$1,315 by the 40-year life. This produces an annual cost of \$32.87. From here on you will have to make your own calculations. In most cases you will find that the cost of physical plant equals between 7% and 15% of the total expenditures of a school system. Thus, it follows that to increase or decrease the building cost will not significantly affect the total cost of education. In fact, a cheap building may well increase the cost by reason of shortened life and higher maintenance. And let's not forget that one must frequently pay a teacher more to teach in a poor building than in one which is attractive and properly equipped to fit her job.

Just a few more words on bond interest rates. You will notice that in the example given above vis. 3% at 20 years, the interest amounts to almost $\frac{1}{4}$ of what the taxpayer is paying for his building. In many communities with a poor credit rating, 4% is not uncommon and the interest now approaches $\frac{1}{3}$ of the taxpayer's investment. When the amortization period is lengthened the amount of interest increases still further. It becomes fair to ask "What possible economies can an architect make in the design of a building which can be as important as even small shifts in the interest rate or amortization period"? How trivial an item becomes the architect's fee!

Perhaps we should ask ourselves why interest rates vary from time to time and from community to community. Part of the answer relates to the overall economy of the country and is largely outside of our control. Part of the

answer, however, can be influenced by the community itself. Within the general framework of the economy, the interest rate on a particular issue of bonds is a reflection of the credit of the community. Simply stated, a well rounded community balanced in industry, commercial and residential development and providing a good life for its citizens is rewarded with the delightful bonus of a low rate of interest on bonds. This suggests the basic point of attack—**planning**. If I wanted to help the schools in my community, I would seek a place on the Plan Commission. Here is the perfect example of the biblical quotation—"For to everyone who has shall be given, and he shall have abundance; but from him who does not have, even that which he seems to have shall be taken away." We also see here the formation of a circle. Good schools help to create a healthy community which helps win low interest costs which helps build better schools which helps build a better community which helps win low interest costs, ad infinitum. The converse is equally true.

At the risk of raising conservative eyebrows, I will further hazard the statement that a major factor in reducing the relative importance of physical plant cost is **inflation**. Historically, inflation is built into our economy. Schools built for today's dollars will be paid off with tomorrow's inflated dollars. Meanwhile, the cost of reaching, salaries, books and supplies continue up, thus constantly taking a bigger slice of the educational dollar.

We promised to talk about the life of school buildings. Why do they live and why do they die? We all know that with reasonable maintenance most any kind of

structure can be made to last indefinitely. Except as a building may be dangerous or inflammable, therefore, we cannot blame **structure** for short life. Possibly we can attribute death to lack of **flexibility**. In the opinion of your speaker this is an overrated cause. I would observe that few school administrators use the flexibility which exists in their plants or which is possible with the application of any degree of imagination. We have seen many old plants which have been updated and made quite useful with a very reasonable expenditure of funds. I have heard of a case, for example, where a library was transformed into a multi-purpose room. It was a very poor library. The ceiling was too high, the character wrong. I imagine the architect who did that then took the kindergarten and made it into a library and then added a new, properly scaled kindergarten. The shifting of bricks and mortar is not difficult if the need is real and the imagination is exercised. Therefore, we can rarely blame the early demise of a structurally sound building on lack of flexibility.

I would like to suggest to you that the two main causes of death in school buildings are: First, poor **site** and second, **ugliness**. The reasons a bad site destroys the building it cradles are obvious. It may be inadequate in size and the acquisition of addition land impossible or unduly costly. The planners have failed and the location is such that it no longer serves the community properly. Although you are justified in saying that the world is full of ugly buildings that flaunt the eye, I would still say that many, many school buildings in this country are torn down for the very simple reason that they are cordially hated. School board

and the administrators ask the architect to rationalize for them the destruction of the ugly building. Usually the architect is happy to cooperate. Love, however, is a positive emotion. People will go to enormous lengths, remodeling and adding, etc., to preserve buildings they respect and enjoy. If my theory is correct, **what greater economy can there be than to build beautifully?**

An educator friend of mine has given me the following definition—"Learning is the progressive modification of behavior, traceable to the interaction of the total individual and his total environment." My friend, being an educator, must use this kind of professionally esoteric language or lose his pedagogical union card. A layman by the name of Winston Churchill put the architectural application in English when he said, "We shape our buildings and they shape us." This is the real reason for architecture. We fail our professional responsibility to society if we do less than our best. How important this becomes when we realize that **by law** in this country we incarcerate two classes of citizens, **criminals and children**. Sometimes the structures to house these two classes are difficult to distinguish. For these young citizens how can we do less than build for them work places of growth and joy?

And now to design and the tools in our tool box—space, form, light, color and texture. Without being profound, it is perhaps worthwhile at least to burnish a few of the highlights of these fundamentals of architecture. Let us remind ourselves of the obvious, for as Mr. Justice Holmes once said "We need more education in the obvious and less exploration

of the obscure." Possibly you will accuse me of simply generalizing my own prejudices but such as they are, they are my own and I love them. For the contrary-minded, the floor will be open afterwards.

Was it not Mr. Dudok who spoke of architecture as "this beautiful game of space." It is well to remind ourselves of this before we begin to assemble together those little cells that we call classrooms. Let us remember that shaping this space is more than a technical problem in geometry, it is a problem in aesthetics, the expression of a conscious art. Oddly enough, in modern practice, this is more difficult than it was a generation or two ago. Yesterday all parts of a building were actually detailed and custom built. Today we are catalog architects. We pick and we assemble. It is a brave soul that departs from stock. Yet in critical proportion, an inch more or an inch less is as important today as it ever was. Furthermore, in the order of importance, your speaker places form and space above light. This is worth mentioning because of the many tortured buildings we have seen designed primarily as daylight catchers. We warp and twist roofs and add a myriad of controls and devices to admit and control daylight and sun. Perhaps we forget the kind of shape that this approach generates and fail to ask ourselves whether this shape is a pleasant place in which to work and live. Is it related to the occupants? How big are these occupants and is it proper to design identical classrooms for 6 year olds and 13 year olds? We do this and yet we know that the 1st grader is a very different type of person with a different personality from the 7th

grader. We forget for whom we are building.

In education we say that one of our objectives is to realize and develop the capacities of each individual child. Yet in actuality we forget the individual and express only groups en masse. It becomes our problem to respect both the individual and the group. Our shaping of space must encourage the forming and socializing of groups of different kinds and different sizes for different purposes. We must remember that in a building there is movement and that proper space experience is demanded in the corridor, the auditorium and the playroom as well as the classroom. Can we form our space with respect to the group yet remember the needs of the individual?

We may also think of space as being either static or dynamic. It happens that I am personally not an admirer of the Finger Plan in schools. It expresses the static. It expresses confinement as in cell blocks. Every space that you see is identical with the next with the view confined and restricted. Nothing opens the building, nor the spirit, nor the mind. Such plan solutions are the victim of that old tyranny—the tyranny of the T square. Perhaps such mechanical aids are in fact not aids at all but an impediment to creative thought.

There is a technique which is most useful in exploring a plan. As most of you probably use it, please forgive the introduction of so elementary an idea. I recall it to you primarily because sometimes under the pressure of practice we forget the obvious approaches. The technique, of course, is to walk through a plan in your imagination. Feel the shape, the textures, the light, the

sound. Ask yourselves what is happening here. What is the effect on you? Are you confined? Is it open? Do you feel the relationship of one classroom to the next? Do you feel that you are one of 30 youngsters in the 5th grade but at the same time a part of a larger school community? How many endless corridors would never have passed the drawing board had their designers used simple technique.

Almost any client can tell us what he wants in the classroom in the way of square feet, general shape and arrangement, chalkboard, storage units, etc. Any draftsman can draw up an "acceptable" classroom. Given the requirements, I also believe that almost anyone can do an "adequate" auditorium, gymnasium, cafeteria, or library. These are all important but do not make the difference between a mediocre and a good school. The spaces that make the difference are those that apparently many of us do not know how to design. These are the neglected spaces: **the interstices**: the spaces in between. These spaces include the corridors, the lobbies, the stairs, those veins and arteries which carry life through the building. These spaces are important in elementary schools and even more important in secondary schools where platoons of youngsters move from class to class. How important the corridor becomes after a tense mathematics examination. Before you go to the next class you have a few moments of release from pressure, but where and in what kind of an environment? We believe that these spaces can do more to shape the development of children than the classrooms themselves. The idea that corridors must be kept to a minimum and

serve merely as circulation is educationally insane and does not recognize the way in which children actually learn. It is a tested fact that the rate of learning is actually increased if the free time between classroom periods is generous. It seems to be a period of absorption, understanding and growth. Those schools which set the change period so brief that the youngsters must take off lickety-split for the next class have saved a minute and lost the hour.

We all know that light for comfortable seeing is a necessity but this is not the final achievement that should be sought by the designer. Light has an emotional as well as physical impact. Perhaps it will help you to visualize the potentials if you imagine that you are designing in light for people who can neither hear nor feel but react to their environment solely through the eyes. You will think pretty hard about light in all its aspects of quantity, color, source and distribution. It has been said that the ideal teaching space is shadowless. This I deny. How can we sense form without shadow? How can there be interest, excitement and vitality without highlight? What can be more deadly than to be suspended in a space subjected to the pressures of an even shadowless flux of light? We need highlight, we need shadow. We need sparkle as well as the absence of glare. We can, in fact, think of light as an actual force. Too much of this force produces tension which in its extreme form is akin to fear. When you wish to relax at home I am sure that none of you turn on all the lights in the living room. On the contrary, the small warm pool of light which seems to cradle you and your book induces the kind of relaxed concentration that

you seek. We also know that we are generally more comfortable in the warm end of the color spectrum than the cool. This is why we like to get a little sun in classrooms or at least bounce a bit of it through the corridor. We know that we are repelled by darkness to the point of fear. Perhaps by understanding the extremes we can design the appropriate mediums.

A few years ago no classroom was modern if it was not "coordinated." A theoretical structure of thought was concocted which led to the design of rooms in which all light was evenly distributed, all contrasts within the visual field were within a 10-1 ratio, and the task to the surround ratio could not exceed 3-1. All color was softly pastel and all chalkboards had to be green. Gentlemen—as far as your speaker is concerned, this adds up to a lot of mashed potatoes. What can be more deadly to the mind and spirit of the occupant of such a room than no peaks and no valleys, no highlights, no shadows, no color, no vitality? No merchant could sell anything were he to design his store on such a theory. No customer is excited or even receptive in such an environment. Let us abandon such pallid stuff and recognize that the eye is a marvelous instrument which is not nearly as tender as some have suggested. Let us agree that we can bring into the classroom much of the excitement and aliveness that exists in both nature and the man made world of the outside. Let us think of the psychological response of people—and not just any people but specific individuals or specific groups. Are we designing for 6 year olds or 14 year olds? We know that at certain ages little boys like their colors

bright and fluorescent. Later, he would not be seen dead in anything but gray and soft pastels. Should we not recognize these responses in our design? And let us not worry about the maintenance man. It is our observation that children respect beauty. Rocks through windows and crayon on the walls are frequently a valid criticism of the architecture.

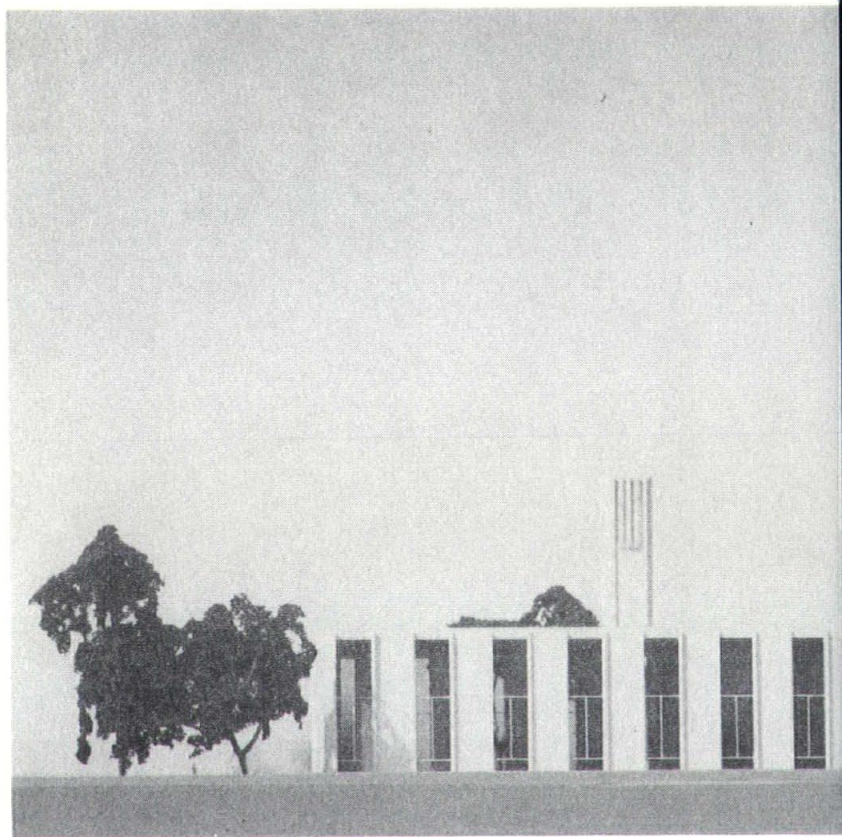
A word about texture. Let's use the same technique suggested for designing in light. Imagine that your client is blind. Much of his aesthetic enjoyment of the building must come from his sense of touch. Think, therefore, of texture as something that is felt. Here, for example, are a series of words which may imply to you certain kinds of texture—harsh, hard, sandy, slippery, cold, icy. You may see them, but visually you feel the tactile quality. Here is another list—soft, rippled, warm. Which would you rather pet—a kitten or a fish? A while ago, attending a meeting of this kind in Omaha, I walked through a new museum. I was watching the wall when suddenly I had the startling sensation that something was massaging the soles of my feet. I looked down at the floor to discover a paving of rough, rounded tile almost like worn cobblestone. What a wonderful feeling for "museum feet." It was a reminder that the floor under us is the one texture in architecture with which we must always be in contact.

Acoustics is a much underrated design tool and has more to do with design than just creating a condition for good hearing. Again let us imagine that you are designing for one who is blind and whose response to environment comes through his ears. From your own experience you can recall the space sense you get from a tile bathroom, an open field, or the

large waiting room of a major railroad terminal. What a pallet of design lies open to the architect. We have another and most flexible medium with which to support educational needs. We can help generate relaxation, we can help create excitement, we can create conditions of privacy. As an example, how would you design a school lobby or vestibule. Suppose that this is the space through which youngsters first enter the school from the play fields. They are excited and noisy and you wish to quiet them down. Extra absorption here can have the same effect as the words of a teacher—"Children, quiet now we are in school." In classrooms, we want the quiet and yet without so much absorption that voices cannot be projected. In general, I suspect that the typical modern classroom is over absorbant. For the scenes of our exciting gladiatorial combats, perhaps a little extra noise will help develop school spirit. In the cafeteria, where we are trying to develop good social manners and customs, we have yet another problem.

This is the end of my remarks. Obviously, there is much that we need to know about the tools of our own profession. Perhaps it is even more important that we learn a great deal more about people. It is fair to say that as architects most of us are "flying by the seat of our pants." I don't think we know nearly enough about the human animal and how it reacts to the stimuli we have been discussing. Let us accept our own deficiencies as a challenge. Meanwhile doing the professional best that it is within our power to conceive.

And now if you are not completely exhausted we will have a few slides.





5.
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any point within the downtown core from the nearest of the parking structures in less than three minutes walking time; and this walking can occur under sheltered sidewalks, in a park-like area, uncluttered by noise and confusion.

This is the plan for Forth Worth. It answers the goals set forth before, and it answers them in terms of Fort Worth reality—of its physical characteristics, its youth, its being Texas—and, mainly, its being spurred by Dallas.

As an approach, it evoked immediate response, perhaps because the time was ripe; perhaps because it was the first to "go the whole way"; perhaps because of a combination of both. No better compliment could perhaps have been paid to it than the appearance in the daily newspaper of one large northwestern city, a few weeks after publication of the Fort Worth plan, of a strikingly similar plan embodying the minimum adjustments necessary to fit it, lock, stock and barrel, to the pattern of that city's downtown. The only major improvements that we were able to detect was a by-line at the bottom saying "copyright by....". Unfortunately, the author had missed a rather important point: though the goals for renewal are common denominators to all planning efforts, the solution must reflect in each case the individuality and peculiarities, physical and emotional, of the community for which the plan is developed.

At this point, then, we might want to look around ourselves, at our own city, for an evaluation of its peculiarities and of their significance in terms of urban renewal.

If the problem of downtown renewal is a laborious and complex one for any American community, it is doubly so for Los Angeles. A set of interlocking circumstances are responsible:

1. The commercial competition of the surrounding communities is not in the nature of suburban shopping centers: it is the competition of other downtowns. It took place early, effectively, and from all sides. And insofar as we did nothing to prevent the growth of the satellite communities into the enormous undifferentiated shapeless, single mass of Greater Los Angeles, we must now consider downtown, **in fact**, as extending from Pasadena to Santa Monica, encompassing Hollywood, stretching along most of Wilshire Boulevard, through the Miracle Mile and Beverly Hills. This extremely expanded area is, uniquely, "Downtown Los Angeles" in the sense that throughout this area the classical functions of downtown are being served: office and professional buildings, hotels, department stores have been and are being developed anywhere in it. For better or for worse, this is a fact; and no thinking plan for the renewal of the historical downtown of Los Angeles can ignore it.
2. The growth of Los Angeles has been on the "single family" pattern. The consequence: predominantly diluted densities and multiplied distances.
3. The combination of factors 1 and 2 has had incredible effect on traffic. There are more cars here per person, and more miles traveled per car than

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Top Picture: Visual break-down of RUSSWIN lock mechanism.

Center: Ray S. Robinson (left) explains lock mechanism to client.

Bottom: Client assembles hardware and checks "specs" written for him by ARCHITECTURAL PRODUCTS DIVISION.

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and the Student Union Building at the University of Utah.

Mr. Markham's greatest contribution to design is found in his institutional buildings. They reflect a keen understanding of the problem of function and building as a tool for education. His solutions are straight to the point and easily understood by everyone; yet have a strong monumentality which endears them to the community which claims them. His genius for creating this feeling of monumental pride with simple materials coupled with his sensitive grasp of line and form secure his position among the leaders of the profession of architecture.

While carrying on an active practice, he has given abundantly

of his time in civic and professional activities. He served as President of the Utah Chapter in 1941 and 1942. He was elected to membership on the Executive Committee of the National Council of Architectural Registration Boards in 1949, (a position he still holds) and served as President of the NCARB from 1954 to 1956. He was a member of the National Urban Planning Committee 1952 and 1953; a member of the National Educational Committee from 1954 to 1956; and a member of the Commission for the Survey of Education and Registration from 1949 to 1954.

In Civic work, Mr. Markham has guided the planning and zoning development in Provo and Utah County since 1930. At present he is Chairman of the Utah County Planning Commission.



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probably in any other community, and traffic remains problem number one for Los Angeles as a whole, and for downtown in particular. Toward its renewal, it must accept, again as a **fact**, a pattern of living and a scale of growth that cannot any longer be changed, and that are, in scope, unique.

4. The combination of factors 1, 2 and 3 had has (as I am sure most of the audience has had occasions to notice) a deleterious effect on our public transportation system. There are too many places to go to, from too-many places, by too few people. Public transportation has found itself enmeshed in a pattern of self-activating regression. Yet the well-being of downtown, as a concentrated center of commercial and civic activity, and the economic health of public transportation are mutually linked.
5. The progressive deterioration of the residential districts surrounding the historical downtown has altered and limited in volume and range the retail business normally gravitating to downtown; and no downtown can flourish without lively, varied, and profitable business activity.
6. Greater Los Angeles is made up of independent, independently governed communities. This is not a unique condition, but it becomes critical when the reality of "oneness", the **fact** that, regardless of gerrymandering, this is **one** city, does not become an accepted common planning denominator. It is even more acute when the pace of growth is

as rapid and uncontrollable as it has been here since the war. If we begin to think not in terms of remedial emergency, but with the long range in view, Los Angeles should, in our thoughts, span from Santa Barbara to San Bernardino.

7. Finally, the makeup of the population of Los Angeles—for the greatest majority of recent arrivals to the west, its emotional allegiances oriented "back home"—tends to limit its interest to the immediate surroundings of its relocation (usually suburban) and cares little about the community as a whole. The difficulties that Los Angeles has encountered in developing and maintaining a full range of cultural activities give witness to this attitude. It is, however, only through the active support and participation of its people that the renewal of our communities can be successful.

For all of these reasons, the problem of Los Angeles is difficult indeed. Yet, by virtue of geographical location, historical significance, and relationship to the freeway system downtown Los Angeles is still endowed with a "potential" for renewal. The trend of total deterioration of some of its surrounding districts, if properly guided into a renewed pattern of residential and commercial vitality, can significantly hasten and nourish the efforts toward revitalization of the downtown area itself.

At the same time, the renewal of downtown is inescapably tied in with the renewal of Greater Los Angeles as a whole; with the transition from a pattern of uncontrolled mushrooming and emergency zoning, to a pattern of or-

derly growth along the guides of a long range land use plan; and with the reappraisal and transformation of much of its paper-thin, string-long strip developments of the present day into a region-wide system of well integrated neighborhoods, with defined and properly related areas for residential, industrial, commercial and recreational activities.

I hope I will not disappoint anyone by not presenting, right here, right now, such a plan for the renewal of Los Angeles, such a solution for all of its problems (and, specifically, for the problems of its public transportation system!).

The fact is that this plan must, in a sense, originate with you, gentlemen. The first and foremost prerequisite of a successful plan for renewal is the will of the community to see it developed and implemented. Otherwise, the plan will be no more than lines of paper and colors on maps.

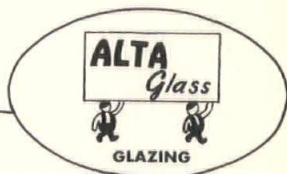
But, given your will—in spite of physical and emotional difficulties—a plan to bring order to the growth of the colossus, and, with it, well-being and stability to its downtown core, can be created.

It must solve traffic and parking problems and be fully alert to the potential for total renovation of obsolete districts; it must be regional in scope. And it must be bold and daring and consistent, because only as such will it muster the support of the community and rise above the level of local conflicts and narrow interests.

Toward such a plan for a greater Los Angeles, gentlemen, the next move is yours.

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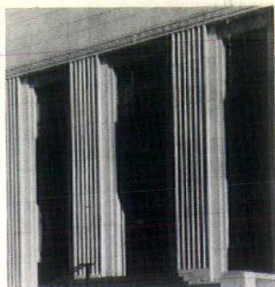
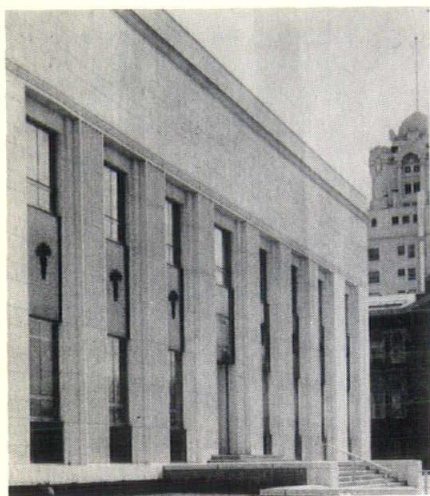
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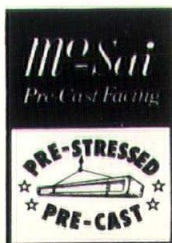
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