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ILLUSTRATIONS

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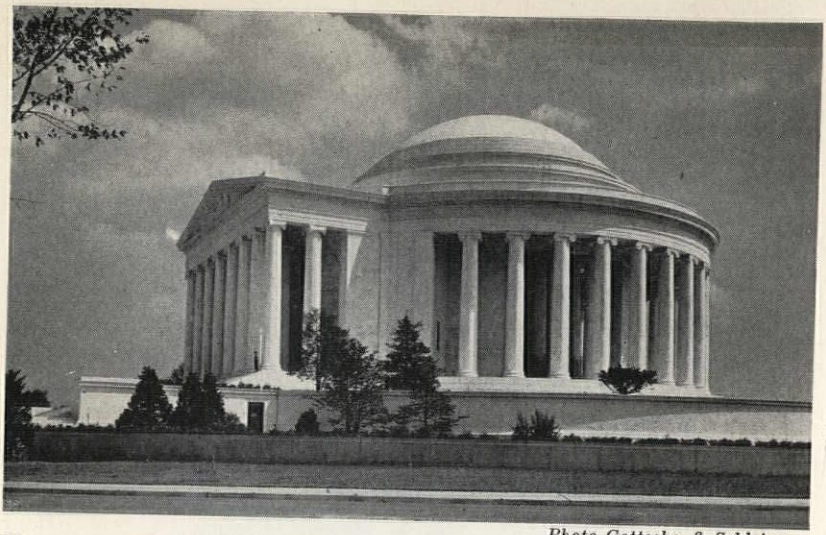

Photo Gottscho & Schleisner

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Gentlemen, Your Journal

IT is a tradition in the publication of new contributions in the field of letters to offer first an apology. Whether the custom sprang from an ebullience of fancied good manners, or from a more widely spread inferiority complex we do not know. What we do know is that a careful self-examination reveals no inclination to apologize for inaugurating this No. 1, Vol. I of the JOURNAL.

Our profession in America is abundantly served by magazines devoted more or less fully to the exposition of new techniques, new materials; to the presentation of such contemporary work as appeals to the various editors' tastes; to case histories of broad problems of design. The JOURNAL has no desire whatever to attempt to elbow its way into these paths of professional service, even if its modest size and equipment did not make such an attempt quixotic.

What the JOURNAL does earnestly hope to do is pick up, as with a microphone, the Voice of the profession, and amplify it to audibility. There is evidence that the architect himself would like to hear this Voice, as well as to help give it words. There is also hope that the public would not turn a deaf ear to the concerted voice of that body of men society has trained to plan and correlate its work of construction.

In a world harassed by economic depression and the greatest of wars, it is conceivable that the practice of architecture has undergone a change greater than the adaptability of the individual practitioner. Perhaps this practice has whirled past us and become something we no longer understand. It has been said that engineers were better prepared than architects, both in organization and in mental equipment and attitude, to undertake the unusual type, scale and tempo of the war projects. And to all such indictments one hears repeated and re-echoed merely the call to "assert our leadership."

It would seem that as individuals we have been too much occupied with the day's routine, with job

seeking, with meeting payrolls, to ask ourselves where we are going. Are we fitting ourselves for the tasks of tomorrow? Is the architectural student being trained for a 1945 practice rather than for a 1925 practice? Is the day of the individual practitioner fading into a tomorrow of group practice? How rapidly are prefabrication and dimensional coordination moving into the picture and is our drafting procedure adaptable to their changes? Has the profession been so depleted by demands of the armed services and by defections to other activities as to leave it inadequate for the stupendous job of post-War reconstruction? How rapidly and effectually can the young architects now in service be re-established at their drawing-boards? What is being done to prepare for this?

These and a score of equally insistent problems face the profession of architecture. Free and open discussion may help to solve them; without it they are not likely to solve themselves.

Here, then, in the JOURNAL'S pages, is a broadcasting system operating on the wavelength of the Voice of the profession. If the architects of America have anything to say about where they are going, and why, and how, here is their chance to speak. The profession itself must assume responsibility for its own destiny.—H.H.S.

Post-War Construction and the Government

WITH the idea of developing a basis for Federal legislation to facilitate post-War construction, the House Committee on Public Buildings and Grounds has been holding intermittent hearings. During the last month or two the committee has heard Gen. Fleming of FWA, Eric Johnston of U. S. Chamber of Commerce, H. E. Foreman of Associated General Contractors, and other leaders in various fields.

On the invitation of Chairman Lanham, The Institute was invited to express its views at the Jan. 12 hearing, together with the American Society of Civil Engineers and the National Association of Housing Officials. The Institute's Wash-

ington Representative, in making a formal statement, of which the following is a major part, ventured the belief that it expressed the general feeling of The A.I.A. Board of Directors as representing the attitude of the architectural profession.

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D. K. Este Fisher, Jr.:—

As representing one of the great planning professions, The American Institute of Architects is very deeply interested in all activities related to construction in the post-War period, and its officers and members have been taking an active part in discussions and activities in connection with it in cooperation with the many other interested elements of the construction industry and with those in the related fields of real estate, finance, and the like. The Institute as a body, and its members and affiliates as individuals, are anxious to be as helpful as possible to assure that preparations for an orderly readjustment of life after the war are carried forward with vigor, and *at once*. With the substantial completion of the war construction program almost all civilian architects are at liberty to devote their principal efforts to this end.

Architects are by nature "rugged individualists." The majority of them are engaged, singly or in partnerships, in the independent practice of their profession. That practice demands of them not only the artistic abilities usually associated in the public mind with the design of beautiful buildings, but also the high degree of technical knowledge necessary to administer the engineering details of present-day construction and to select and use an elaborate variety of materials. Qualified architects have the business experience necessary to deal on an equal footing with clients of every degree, and the judicial temperament necessary to act as arbiter in the many differences of opinion and rights which arise in connection with every construction project.

It is therefore not unnatural that architects, in general, look with alarm at any suggestion of paternalism in government. Although they have, in the "Depression," "Defense" and war periods, carried on an immense volume of Government-sponsored and Government-financed construction, they have been shocked at the wastefulness which has been apparent in many instances, impatient of the "red tape" involved in bureaucratic operations and resentful of

the competition with their practice which they have met in the Federal design bureaus, already numerous and not, apparently, decreasing in size. They are much more inclined to be sympathetic with the present trend of thought which is urging that private enterprise take upon itself the principal burden of providing the work which will give employment to returning soldiers and sailors and to reoriented industrial workers. Architects look with suspicion on legislation which might suggest that, in the end, huge Federal funds will be provided for local construction projects, under Federal direction and control. They are unalterably opposed to thinking which would contemplate with equanimity another colossal "WPA" (even a great "PWA") after the war.

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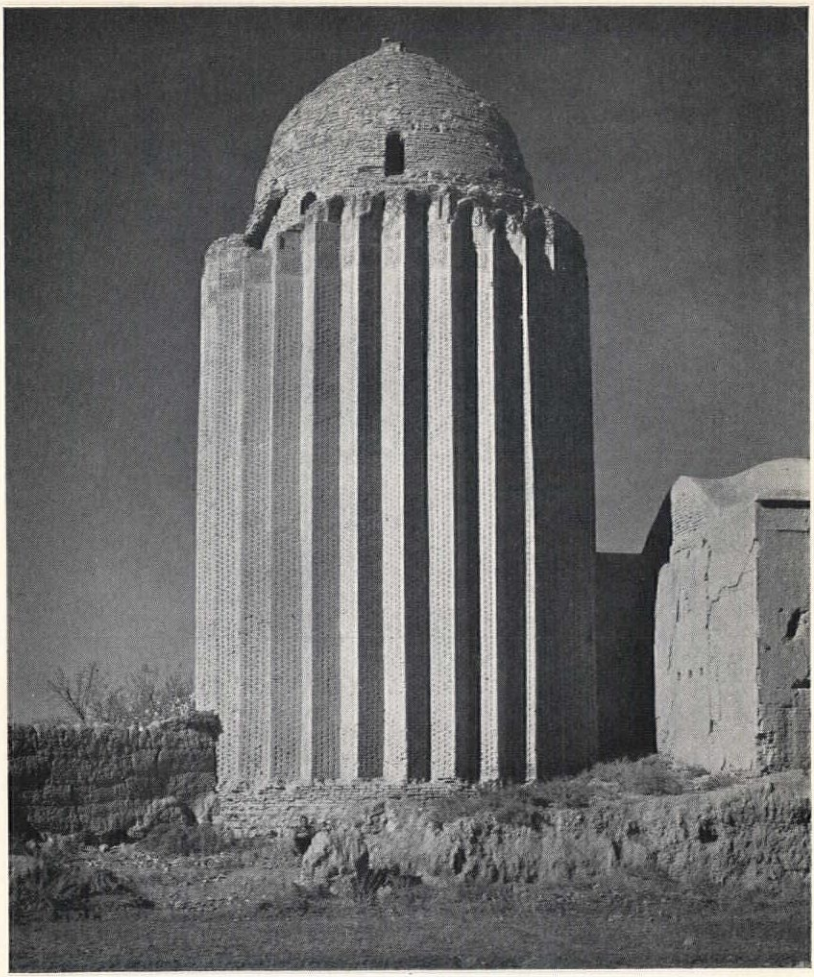
On the other hand, the architects realize only too well that Federal activities of this nature in the past decade have developed an attitude throughout the country of "let's wait and see what Congress will do." They hope and urge that Congress declare at once, and *unequivocally*, what its policy is going to be. They hope that that policy will include the following:—

1. That Congress will declare as its *principal* policy that private enterprise and local government will be looked to for the main efforts to furnish employment after the war.
2. That Congress will declare its intention to keep Federal hands off of private and local post-War planning, except for the minimum amount of stimulation and advice necessary for immediate overall coordination of activities.
3. That Congress will specifically declare that it has *no present intention* of appropriating funds, whether by grant or by loan, for the construction of *local* public works of any kind, nor for Federal public works *other* than those of the traditional kinds customarily provided before 1933; that it will *only* contemplate such expenditures in the future if it is forced to do so by private enterprise and local governments *failing to do their manifest duties.*
4. That Congress will urge upon private enterprise, and *particularly upon local governments,* the *immediate and extreme urgency* of proceeding now, not next month, with the carrying out of those *preliminary steps* which are necessary to let contracts for construction quickly when an armistice is signed, and to prevent the delays and disap-



TOMB TOWER, BOSTAM, IRAN
EARLY 14TH CENTURY

Photograph by Arthur Upham Pope,
Architectural Survey of the Iranian Institute

COLUMN BASE OF THE PALACE PORCH
CHAHIL SUTUN, IRAN

Photograph by Architectural Survey of the Iranian Institute

pointments which occurred in 1933-34, with which we all are bitterly familiar. These preliminary steps include site acquisition (or option), financing arrangements, and preparations of *actual* drawings and specifications:—what nowadays is called "blueprinting," —not just "planning" in nebulous, written form.

5. That Congress will investigate the desirability of establishing an authoritative, disinterested, overall agency whose duty it would be to correlate and appraise the relative value of any proposed expenditures for construction by any Federal department or agency or bureau, and whose duty it would be, in the field of local public works and planning, to carry on a service of technical research and of advice to states and other local governments in planning techniques, such as was formerly an important function performed by the National Resources Planning Board.

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Because they are trained to plan in the physical sense architects are, perhaps, more conscious than other persons of the existing, very dangerous inertia which *so far* has prevented any real accomplishment in the preparation of the preliminary steps mentioned above. No doubt a general concentration on the war effort accounts for some of this inertia, particularly among industrial and other private organizations. It is thought, however, that particularly among local governments and among those civic organizations and leaders who might influence local governments, *much more to be blamed* is an unhappy, subservient expectancy that Uncle Sam will tell them what to do, and, in the end, *will pay the bill.*

It is believed that in most instances local governments are in better relative financial condition than the Federal Government; that this mendicant attitude is not justified by the facts, but only by recent history; that a long step toward overcoming local inertia would be a definite statement by Congress that Uncle Sam is *not going to pay the bill* and that local governments must get on with their own affairs, or bear the blame for calamity in their own communities if they do not.

The planning work which the architects and engineers do is one of the first essentials for assuring that the construction industry will continue in a healthy condition and will be able to play its full part in

reconstruction. The construction industry is the second largest industry (after agriculture) in the country. Its normal activities provide approximately 10 per cent of the gross national product. We cannot afford to allow it to be incapacitated by uncertainty and inaction. It is entitled to know what future policy to expect of the Federal Government, as determined by the Congress.

Musings on the Morrow

By Charles D. Maginnis, F.A.I.A.

THINGS ARE disturbing the leisure of the professional mind. The architect is not happy. For long his days have been an anxiety and a dreariness. But it is the terrors of the night that weigh so heavily on his spirit. Then it is that his familiar world takes on the formidable shape of his apprehensions. Swarms of disembodied engineers move across his dreams, bearing awful implication of his submergence in the impending scheme of things. A universal and monstrous perversity, against which he is impotent, is obviously at work to tear him from his honored place. The sombre prophecies of the critics are in process of fulfillment and the end approaches for the great profession. With dawn comes sanity again and the sense that the world is still with him in all its ancient circumstance. There is reassurance in the sun and the green trees and the gracious and enduring things that the Lord fashioned for his delight, and life beckons to high adventure.

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Change, after all, is in itself no fearful thing, but a genial principle to which Art has always made its accommodations. Only as we looked behind us were we used to note the quiet current of its influence. Now with a startling suddenness we find ourselves drawn into drama for which history has no parallel. It is a fateful time. Architecture feels the challenge in it, direct and inescapable. Already a philosophy submissive to its influ-

ences has taken on authority and is slowly coming to public judgment. The merits of it are almost beyond the limits of profitable controversy. Its more temperate expositions have met a large acceptability but, even at its most provoking, its conquests are not to be denied, nor the significance that the professional schools have come totally under its dominion. The conservatives, unmoved by the lightnings, resist its invalidation of the academic concept, believing it portends the virtual capitulation of architecture to engineering.

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Once, at a convention of our presumptive rivals, the president in his address invested his profession so liberally with prerogatives that, when my turn came, I was left only to apologize for a wasted career. Defensively I submitted as the difference between an engineer and an architect that, while both must keep their feet on the ground, the architect has to keep his head in the stars. I could think of no better vindication. The metaphor was crude enough, but it held a reasonable postulate. Without the element of imagination architecture can have no intellectual validity and no convincing profession. For long we have been exercised at the intrusion of the engineer upon our privileges. Yet we give him as fair a right to protest our encroachment upon him if we elect to emasculate architecture to the mere terms of science. Only upon this premise, I believe, need we be troubled about the engineer. In this country, as in England, government gave him preference in the war program. It carried to him as a consequence problems which were without doubt the legitimate interest of our profession. We did not conceal our feelings of chagrin, but we could have kept our dignity had we perceived that, in the circumstances of the moment, we were not stultified by the choice, which was merely the operation of the idea that engineering is part of the military tradition and architecture isn't. In spite of which the engineer is a benevolent soul and can always be counted on the side of peace.

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Another professional torment is that the architect has failed to catch the rhythm of the new world and is obviously out of step. Very likely. But it is too early for hysterics in the face of the larger phenomenon that the wisdom of man is lagging far behind his inven-

tions. The exciting triumphs of the new technology may indeed presage some supreme and corresponding felicity for the race, but philosophers are by no means agreed about it. What is clear only is that humanity is committed to a world of mysterious forces that are driving it at appalling speed. Whither it will lead us in its uncharted course no man knows. In the world that is passing the thoughtful found great foolishness. The new one may be wiser. With what vision we have we must compose our life to its dynamic energies. It is a time for faith and not for panic.

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Critics of the household complain that the architectural mind has been obstinately closed to the signs of the new day, and cry aloud for a more alert and sophisticated profession. Admittedly the architect has been inadequately scientific. I have known only one of whom it could be said that, locked in his drafting-room, he could make the complete working drawings and specifications of a building to the smallest detail of mechanical and structural engineering. But these cloistered faculties, impressive as they were, are not enough for ministry to the exacting patronage that is to be wooed in the coming years. The architect must now be equipped to discuss the intricacies of finance with bankers and to discourse on reasonably even terms with industrialists and social economists and all the challenging intelligences of the new order. The thought that so many talents can comfortably reside under one hat makes me so abashed at the comprehension of my own ignorance that I feel in conscience moved to a public confession of it. Mine seems to have been a path of primroses for, as I look back, I cannot remember when I was made to blush in the presence of my client. Clearly I might have carried about with me through all those years a diversity of knowledge that would have only lain neglected in a dusty attic of my mind. Are we training too encyclopedically for the individual, forgetting that the architect in action usually works with a competent team? The sweep of his interests is so large that in theory there is almost no limit to the endowment of the architect, but room should be left in his poor brain for the play of his personal genius. Richardson and Burnham and Goodhue did not come to eminence by an accumulation of realistic aptitudes but by their brilliant faculty of creation. This felicitous

gift earned them a leadership in their generation that could be sustained quite as confidently against the demanding temper of tomorrow. This is the high principle without which, whatever the day, there never can be great architecture nor great architects.

Factory and Community

By Percival Goodman and Paul Goodman

Part of a more comprehensive article, "Architecture in Wartime," in *The New Republic,* Dec. 20, 1943. Reprinted by permission of that weekly and the authors

THE TREND worth the most serious analysis is that every permanent new community planned or built—and this comes to many hundred thousand units—is in the American garden-city, green-belt pattern of Radburn; this trend is the continuation of the much publicized Greenbelt, Maryland, Greendale, Ohio, etc., of the New Deal period, and has now become the established official orthodoxy, backed by labor demand. In our opinion such a trend is historically reactionary and morally and technically ruinous. It involved *as a program* the planning of the industrial and personal-domestic-cultural life separately from each other; and thereby it *fixes* American culture in its disheartening superficiality. It expands enormously the already far overgrown system of in-between services, that are neither consumption nor production — transportation, extended city services, etc.— so that more and more time and wealth are allotted to what gives no satisfaction in itself . . .

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When the garden-city idea was proposed fifty years ago by Ebenezer Howard, it was a reasonable reform. The coal-powered factories were dangerous, noisome and ugly, and marked with the ill repute of child labor and sweated labor. It was necessary to quarantine them physically and morally in order to preserve any decency of life. Even so, in the original city (Letchworth), planning *apart* from the supporting industries was not even

thought of, and the distances are walking distances. But the Radburn type (after Parker and Unwin) often does not even indicate how many miles away the factories are located.

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The new garden cities are laid out at a time when the factories, powered by electricity and converting their wastes, are often the handsomest buildings in the vicinity. (The best thing about Willow Run is Albert Kahn's beautiful facade.) What was once a reform has now become a meaningless orthodoxy. And if we look more deeply into the meaning of it, is it far-fetched to state that the quarantine is not so much to keep the industrial life from the home life as to keep personal and home considerations from the industry? As if the men were merely units in production, to be sterilized from human concerns by a long trip before the day's work; and this in the interest of an efficiency that will prove to be less efficient in the end; less inventive, less flexible; more busy about distribution and less about satisfaction . . .

What are the alternatives? The old, company-town method was to start the small houses across the street from the plant and to extend them in endless row on row. Surely the garden city is better than this. Another alternative is to surround the plant with an urban concentration, 400 families to the acre. This at least has the advantage that everybody can walk to work. But a third alternative is to disperse the plant itself. Let us now consider the plant.

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The converse of separately planning the living community is separately planning the industrial center, the sole relation between the community and the industry being the highway, parking lots and entrances. This is not a theory but a common practice. A factory is regarded as a technical problem; but even as a technical solution the separated plan is absurd. (Let us omit as "utopian" any conception of the factory as culturally integrated.) The practice is almost as if the architects had ceased to regard the labor force as essential to production. Let us give an actual example: There is a plant, not the biggest in the world, where the mean distance from the parking lot to the machine is more than half a mile of walking, and where the parking and disgorging of a shift of autos

take more than an hour, to which must be added the drive home. During some of this time the machinery stops dead. Can a technician regard this with equanimity?

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The war has accelerated the increase in size of individual plants. A single shed at Willow Run covers an area two-thirds of a mile long by a quarter of a mile wide. The Glenn Martin plant at Middle River, Maryland, occupies more than 80 acres. It is not unusual for a plant to employ (in three shifts) 30,000 men. When there is a problem of even internal circulation within the plant, consider what this must mean in the layout of a community of family houses. On any layout whatever it is impossible for all to be within walking distance. If many are to be able to walk, then the dwellings must begin at the huge plant and stretch out in endless rows without open space or community form. Or all must commute a great distance from satellite garden cities.

It is possible for most of the largest plants to be dispersed into units a fourth, a sixth, a tenth of the size without loss of even mechanical efficiency. The form of a great plant is an empty shed, housing assemblages and sub-assemblages. (The shaping and heat-treatment of the parts themselves is done either nearby or at a different plant altogether.) In general, though not always, where there are six assembly-lines under one shed, there could be one under each of six sheds. There is not necessarily a loss of efficiency, provided that the stockpiles of parts and the sub-assemblies are analyzed with this aim in view. The cost of construction of the smaller buildings might be slightly higher; but in the post-War world few such huge plants are going to run on their present schedules, and the smaller units would be cheaper to maintain and more flexible to convert . . .

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The haste and shortages of the emergency justify this giantism during wartime, in those cases where it works in the short run. In the long run, and all things considered, it is always inefficient. The principle must rather be to analyze the production into such units of manufacture, assembly and sub-assembly as permits livable communities in the same vicinity. In the best case there should be little transportation of either man or materials, but it is always more con-

venient to transport materials, in the form of small parts and small sub-assemblages, than to transport men.

Given this principle, two community layouts present themselves, the one adequate, the other good. The adequate layout is to regard the factory-communities as satellites of a culture center, the people living near their work. The good layout is to regard the community, its living, work and culture, as integrated entirely, interpenetrating in space, correlated in function and meaning and combining factory and farm. But such an idea is far ahead of the psychological and social condition of industry at the present time; it is *not* ahead of the technology.

Closely relevant to the question of the dispersal or concentration of industrial plant is the well-known wartime experience of England, where instead of rebuilding bombed plants in new vulnerable centers, as much of the manufacture as possible has been dispersed to small shops. But this is not simply a wartime maneuver, for it is founded on what is perhaps the most important industrial fact that has emerged in decades: the mass production of small machine tools powered by electricity. When this emerging fact, which is the converse of the assembly line, comes to be generally recognized and analyzed, the whole proportion of industry will be revolutionized; the increase in the scale of production will be not at the expense of, but by the encouragement of, small and almost domestic units. Then the good layout, the integration of the factory, the community and the electrified farm will be much nearer realization.

"If you put black dots on the map of any large urban area to indicate the sites of recent construction, you will be drawing a circle around the city. You will have a diagram of an explosion that has literally ripped our communities at the seams and cast large segments of the population to the outskirts. It is hardly accurate to describe the process as 'decentralization.' Rather, it has been a process of disorganization and haphazard disintegration.—Hugh Potter.

Let's Stop Tinkering with Building Codes

By Walter R. MacCornack, F.A.I.A.

For the last twenty-five years, counting the actual cost outlay and adding the time of the men involved in code studies, several million dollars have undoubtedly been expended in the process of minor alterations to building codes, with no worth-while results. It is now time to discuss basic principles of code writing and to stop tinkering with the status quo. This is one of the items being advanced by the Committee on Post-War Reconstruction which the architects can undertake. If they successfully promote this new approach to building code legislation, they will have gained a place of high esteem in the public mind.

In a book called "Architectural Jurisprudence," published in 1827 by Mr. James Elmes, M.R.I.A., Architect, and dedicated to the Lord High Chancellor of Great Britain, we find these words:

"Jurisprudence, or the exact discernment of what is just and unjust, is a branch of human wisdom closely allied to moral philosophy; and is therefore necessary to be studied by everyone whose views are directed beyond the mechanical pursuits of life . . .

"An architect should study the science of Jurisprudence, so far as to enable him to judge of the legality of his proceedings, to prevent his employer from being involved in law-suits through his means; and to extricate him the shortest way when so involved, by a cessation or alteration of the offensive operations, if the cause be connected with his pursuits."

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Far too little is known of Architectural Jurisprudence by the architectural profession. The laws which largely engage the attention of the profession are those relating to contracts and to the protection of the architect. We have neglected the broader field of law which relates to the safety, health, and morals of the public, and, in consequence thereof, chaos exists in the laws relating to buildings and the planning of cities. These are sorely in need of review and revision.

Further on in Mr. Elmes' book he speaks of an order issued by

Hadrian directing that a digest of the civil laws be made. He used these words:

"These laws became in time very numerous, and in many instances contradictory of each other. To remedy these defects, Hadrian commanded, in the year of our Lord 132, and the 15th of his reign, Salvius Julianus, an eminent jurisconsult, to digest the whole into one code, under proper heads, and empowered the praetors to add, diminish or alter, as exigencies might require. This he termed the perpetual edict."

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This is a clear statement of the condition of building codes of America today. They are the most chaotic, contradictory, and restrictive laws on the statute books, and are a millstone about the necks of the consumers, as well as a hindrance to the architects, engineers, and contractors who attempt to build under them.

We enact building laws to protect the many from the acts of the few. The "due process" clause of the Fourteenth Amendment of the Constitution of the United States guarantees that neither a man's life, liberty, nor his property can be taken without due process of law. This has been construed by able lawyers to mean that excessive laws which tend to place an unnecessary burden on the construction of buildings are unconstitutional. Reasonable minimum requirements to protect the safety, health, and morals of the public must be the basis of the law.

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The building codes in the cities, towns, and states of America, as every architect knows, vary widely in regulations for the same types of construction and equipment. They have become detailed specifications for construction, and have been made permanent by writing them into the laws of the states and of the municipalities.

Experience over the past twenty-five years has shown that it is extremely difficult to amend a code, and practically impossible to rewrite it, for the simple reason that the opponents of the changes suggested, anticipating some harm to their particular field of activity, are able to use some political pressure to have the bills buried in committees. There are building codes now in force which have gone practically unamended for over a quarter of a cetury.

In the State of Ohio, some years

ago, the architects attempted to secure a revision of the school building section of the code, having determined for themselves by careful investigation that the code was adding at least 20 per cent to the cost of school construction. Only after a painstaking effort, involving considerable work in the preparation of drawings and specifications for two buildings—one designed under the present code and the other designed in accordance with the architects' recommendations—were they able to convince the legislature that some changes should be made. Even with all this evidence, it was not possible to bring about a revision of the entire code.

After the great disasters, such as the Iroquois Theatre fire in Chicago, the Collingwood School fire in Cleveland, and other like catastrophes, there is always a rush of bills in the legislatures, adding to the restrictions. Oftentimes, these bills and amendments are fostered by selfish interests.

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Until we arrive at some sort of national standard for code writing, we shall continue in this chaotic condition.

Recently I had occasion to examine two hundred codes in the six New England States. The result of this study was appalling. There was no unity with respect to the regulations for steel, concrete, or timber construction, or for the heating, ventilating, electric wiring, plumbing and other sections having to do with the safety, health and morals of the occupants of buildings. The allowable stress on steel, for example, has been increased from time to time and is quite likely to go higher, yet in some codes the old 16,000-lb. rule is still in effect. This sort of thing is costly to the building public. It would seem impossible to conceive a more chaotic condition if a deliberate attempt had been made to bring it about.

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There should be a basic principle in code writing. It is the purpose of this article to outline that procedure and to urge the architectural profession to take upon itself the responsibility of forwarding this movement.

The theory, upon which the new approach being recommended is made, is based on the fact that the restrictions for steel, concrete, and timber construction, electric wiring, plumbing, heating, ventilating, and other elements entering into

code requirements, are the same the country over. A study should be made by disinterested technical groups to develop fundamental principles having to do with restrictions in buildings to provide for the health and safety required under the police power. It is further suggested that the machinery for writing regulations and enforcing the law be simplified. It is not suggested that the code be a national code, but that the principles be nation-wide in application, state by state, and city by city.

There are commercial buildings in our communities in which thousands of people congregate for the purchase of goods. Sooner or later there will be a catastrophe in one of these buildings which will cost the lives of thousands—not hundreds—of people. We have failed to fully appreciate that building laws are for the public benefit, and that the only way to prevent the recurrence of disasters is to revise the building codes and insist upon honest and intelligent enforcement.

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Following the disastrous Cocoanut Grove fire in Boston in November 1942, the Boston Society of Architects and the Massachusetts State Association of Architects requested the Governor to appoint a commission to study the building code situation in the State and to make recommendations to the Governor for action. Governor Saltonstall appointed a commission of three extremely well qualified men. The chairman is William Roger Greeley, President of the Boston Society of Architects. In the Cocoanut Grove case, it was not only the code that was at fault, but enforcement as well.

The report of the Governor's commission was brief and to the point. I should like to quote the first page of this report, which I believe is a classic with respect to the building code situation:

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"Two months after the Grove tragedy, the Committee met in a popular restaurant, where an almost perpendicular stairway plainly marked 'Exit' led down to a door hinged to swing in, yet barred heavily so as not to swing at all. Here the Committee discussed the people's interest in their own safety.

"Sitting later in the office of an inspector of buildings on the fourth floor of a very dangerous building, the Committee was shown one of the means of escape, a half-inch unknotted rope, improperly fastened,

so that a person using it would be dropped to the sidewalk. In this room the Committee discussed the present system of inspection.

"As a climax, the Committee on its way out of the State House was blocked by a locked door marked 'Exit,' and decided to close its report with the customary words, 'God save the Commonwealth of Massachusetts.' "

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Sitting with the Governor's Committee was a committee of architects and engineers who framed the law presented to the Legislature. The theory of that law is as follows: It would set up a State Commissioner of Public Safety, appointed by the Governor, and a State Board of Standards and Appeals, also appointed by the Governor, whose duty it would be to prepare the detailed regulations for the construction of buildings, and these would be imposed alike on every community in the State, including the City of Boston.

The advantage of this plan is twofold: first, it simplifies the entire code system by creating one code for the entire State; and, second, by providing for public hearings before the Board of Standards and Appeals, it makes it possible to change the code within thirty days. This, of course, permits the use of new materials when presented and approved after proper scientific tests have been submitted. Enforcement would remain with the local cities and towns, with the State Commissioner of Public Safety charged with the responsibility of checking up on this from time to time. It was recommended that all of the members of the Board of Standards and Appeals, and all of the enforcement officers, be placed under Civil Service, after having been subjected to rigid examinations to prove their fitness for the jobs.

There seems to be no logical reason for an objection to this principle of code writing. Furthermore, there is nothing in the law which would prevent any municipality from adding to the regulations if it chooses to do so. It is doubtful if many changes would be made, however, since error would have to be proven in the case of the existing regulations, to convince the public, as represented by the architects and engineers who design the buildings, that the changes were necessary.

It is suggested that we ask the engineers and others interested in

the building industry to cooperate in this movement. The reduction in building costs, partly by changes in the building code and in other fields of endeavor, will stimulate building, and no element in the building industry will be the loser thereby. The building public will benefit, and the by-product of any action in the public benefit will be to the best interests of all individuals and groups. Once more an appeal is made to the members of The American Institute of Architects to get back of this program and see it through.

The Place of the Architect

By William N. Taylor

In the October *Octagon* there appeared an address by the Hon. Secretary of the R.I.B.A., under the title: "The Activities of the R.I.B.A. During the War and the Place of the Architect in the Post-War World." Mr. Waterhouse's searching self-questioning recalls another address, by Col. Taylor, now printed below. It was delivered in May 1940, on the occasion of our Convention in Louisville. Was this a voice crying in the wilderness?

THE architects are asking themselves whether or not society is, at the present time, according them the position to which they are entitled.

What is the position to which the architect thinks he is entitled? It is fair to say that there are differences of opinion on this subject, but on the whole the profession believes it should be given the position of leadership in all building operations. And when we say leadership in building operations, we mean that the architect be the first person consulted in the contemplation of construction, and be the professional element that guides and coordinates the entire operation.

If one judges the matter by volume of money spent on buildings, it is not incorrect to state that, in the majority of cases, society does not entrust the major role to the professional architect; it calls upon the architect only for a limited number of these operations, or for participation in a very minor part of them.

Why is this? Are we incompetent to give society what it considers essential to its building activities? Or is it that society does not understand what we can do?

Society has at all times, and will at all times, entrust the leading role in its building to those persons whom it believes will answer most closely the economic and social needs. And if society does not turn to the architect it is because it does not think the architect can supply its requirements.

What are society's requirements, and what does society think the architect can contribute?

Society thinks of the architect exactly what the architect thinks of himself. The architect has described himself many times. He is described in the licensing laws of most states; he is described by The A.I.A.; he is described by numerous writers of books; and the public believes that the architect can give just what he says he can give.

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Now what does he say he can give?

Architecture was defined, about the year 1902, by R. Phene Spiers, F.S.A., F.R.I.B.A., President of The Architectural Association, Corresponding Member of The Institute of France, master of the Architectural School, Royal Academy of London, as follows:

"Architecture is the art of building in such a way as to accord with principles determined, not merely by the needs the edifice is intended to serve, but by high consideration of beauty and harmony. It cannot be defined as the art of building simply, or even of building well. The end of building as such is convenience, use, irrespective of appearance; on the other hand, the end of architecture as an art is to so arrange the plan, masses and enrichment of a structure as to impart to it interest, beauty, grandeur, unity, power . . . In all works of architecture, properly so-called, these elements must exist."

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He quotes Vitruvius in laying down three qualities indispensable to a fine building: stability, utility, beauty; and then goes on to say:

"From an architect's point of view, the last is the principal though not the sole element; and, accordingly, the theory of architecture is occupied for the most part with esthetic considerations, or the principle of beauty in designing."

This is an exact and clear de-

scription of architecture as I was taught it, and I believe it to be, today, a clear description of what the architect thinks is his function.

In our contemporary discussion of architecture we have insisted that all building is not architecture, but that architecture is confined to those buildings which communicate an esthetic emotion; and that the chief aim of the architect is to achieve this emotional quality.

We all recognize the value of emotion in a building, but is the power to create emotion in a structure a sufficiently concrete quality, and sufficiently satisfying, to offer to the public as a claim to be entrusted with leadership?

That is exactly the question the public asks itself.

The power to create a work of art is a personal gift; it cannot be taught; it cannot be the common possession of all who hold an architect's license. It is rare and, furthermore, it is disputable. It can hardly be recognized, except by the cultivated and sensitive person. To isolate that quality, and to expect society to understand its value, is chimeric.

In fact, this fine quality has been given to buildings by countless unknown designers—men of varied origin and training—and yet we claim it is the possession today of the profession called architecture. Buildings have been designed and built by men described as priests, engineers, contractors, builders, surveyors, masons, carpenters, painters, sculptors, jewelers and others; and every one of these vocations has contributed buildings of emotional value—not only that, but *plans* of interest.

On what basis, then, should society make its choice?

Society has always chosen to entrust its building to the profession —or trade—which most nearly fits its social and economic needs; and although society recognizes the importance of the esthetic quality, it is undoubtedly fearful on this score and fears to take a chance. Other considerations appear to society to be more tangible.

If society does not, in the majority of cases, call in the architect, it may possibly be that the profession does not meet society's needs.

Many of today's building operations are very large; the amount of mechanical equipment is great and is often a major element of cost. Complicated processes, both human and mechanical, take place in these buildings. Large investments are

involved in many cases; serious financial, administrative and technical problems must be solved before the decision to build.

All these elements are what are described as mere building. But they are of the greatest importance to the owner, particularly in the early stages of his building decisions. All owners search for a person capable of helping with these problems, and in most cases it is the engineer, the real estate manager, the builder, to whom they turn. And the architect is considered competent only to put a skin on the structure.

Sir Gilbert Scott, one of the leaders of our profession, made to the public the monstrous statement that "architecture, as distinguished from building, is the decoration of construction."

To become fitted for leadership in building, we must change and enlarge the boundaries of our profession. We must enlarge our picture of ourselves. We must interest ourselves in building economics. We must teach architecture, not only as design towards beauty, but as the study of the economics of structure.

We, the architects, have done a curious thing. We desire to be consulted on every phase of building, yet we have insisted on the fine-art element in our protestation of faith; we have openly declared we are not mere builders; we have refused to be engineers; we have declared it unprofessional to take part in contracting or the financing of buildings; all to such an extent that society believes us, and calls upon us only when ostentation is involved.

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What then for the architect?

Never before has there been such need for a highly ethical and well trained professional man, capable of correlating the many complicated interests involved in a building operation. More than at any other time is the public searching anxiously for the person or profession to whom may be entrusted their building problems.

But the public requires many things of this man. The client wants assistance in developing his program. A good program is extremely difficult to prepare. It should be the complete expression of the functions the building is to perform—humanly, materially and financially. In its quality lies the basis for success or failure of the building.

The client needs expert assist-

ance in all the questions entering into the selection of a site. He wants an unbiased expert to assist him in the complex dealings in real estate and appraisals. He expects his consultant to understand all the mechanics of building money, and to give help in the setting up of a financial program.

The architect should be able to analyze all the human and mechanical processes which take place in buildings, and know when and whom to consult among the specialists. He should coordinate all these matters in his design, and he should make accurate and dependable estimates to complete a picture of the whole financial cycle of the operation.

He should design and build to his estimate and, if he is born with a gift, he will endow his building with a fine and beautiful emotion.

This is a big picture. It is probably too big for an individual, however gifted. The architect of the future will be the leader of an organization of competent specialists, offering expert assistance in every phase of building—utilitarian and economic, as well as esthetic.

Architects believe, and we can point to past successes to prove it, that the training we undergo, being broad and on a more nearly universal plane than that of the specialized technician, fits us for leadership in such a group. In our society of organized groups, we should think of ourselves and train ourselves, not to be the architects of 1900, but to be the leaders in all the multiple considerations that end in structures.

When society finds that the architect is the man to whom to turn for the most help in the solution of its building problems, the architect will be the master of building.

"If manufacture of building products is permitted to replenish inventories, and civilian construction resumed as soon as possible before the end of the War, the volume of construction during the twelve months after the final armistice might reach a level of almost nine billion dollars, or about 70 per cent greater than the average for the three pre-War years 1938-40."—Market Analysis Committee of The Producers' Council.

Dimensional or Modular Coordination

By Frederick Heath, Jr.

CHAIRMAN, SUBCOMMITTEE ON MODULAR PRODUCTS, THE PRODUCERS' COUNCIL POST-WAR TECHNICAL COMMITTEE

TIME was when a workman was known by his chips. After the war that may hold for sculptors and woodcarvers, but the producers of modern building materials have taken steps to eliminate the need for such artisans. Chips at the building site may have been unavoidable in the past. They usually originated in lack of dimensional coordination between the products that were assembled to form the structure. Many things had to be cut to fit. This has always involved an unknown increment of waste of both materials and labor which has been a hidden burden of building cost.

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Many architects have become conscious of this waste. They have tried to minimize it by adjusting the dimensions of their buildings, particularly the locations of windows and doors, so that stock sizes of building materials will fit. To do this in masonry necessitates selecting the brick or other masonry unit and predetermining the mortar joint thickness. Thus is derived the units of measure for planning course heights and brick spacing along the wall.

Then comes the problem of juggling these masonry dimensions with the stock sizes of sash, window and door frames. In making his wall sections, the architect usually lets a particular course determine the position for the head of his windows. If he is using a sill cast on the job, its height can be adjusted to take up any discrepancies between the standard window height and the nearest masonry coursing line. If he is using a pre-cast or stock sill of fixed height, then the masonry dimensions must be adjusted to work out for the window, plus sill dimension. This can seldom be done without humoring the mortar joints; that is, stretching or tightening them between the sill and the head. The resulting change in joint thickness is so slight that it can seldom be detected from the street.

If the elevation has windows that are of varying heights, then the problem becomes more difficult. Where the adjustment is made at

the sill, the possible variations in sill height may detract from good appearance. If a uniform sill dimension is maintained, then the humored coursing that satisfies one window height may not be suitable for another different height window in the same story. The usual result is confusion. If the coursing is kept uniformly level, as it should be, the only solution is to split brick courses at some of the sills.

The problem of spacing masonry units along the wall is complicated by the fact that there are fewer mortar joints in which to make adjustments. It is pure coincidence when a stock window or door width equals the spacing of masonry units. This does not bring up too serious a problem unless the architect desires to maintain all vertical masonry joints plumb, as he may in Flemish bond or when working out other patterns in the brickwork. It may be possible to line up one jamb of a window or door at a vertical joint only to find that the masonry units must be cut at the opposite jamb. As a result, the architect will usually abandon the effort and limit his horizontal spacing of brick to the narrow masonry dimensions such as piers between windows, pilasters and the like.

To assist in spacing masonry units both vertically and horizontally, the architect will frequently use brick coursing and spacing tables, or brick scales to facilitate the layout. Such scales and tables have long been available from brick manufacturers and their trade associations.

The problem is seldom the relatively simple one of juggling brick with stock window or door sizes. There are usually several sizes of masonry units that must be combined, such as brick facing with tile or block back-up, and possibly glazed brick or tile for the inside finish of the wall. This means that these different sized units must be spaced to fit with each other as well as with the windows and doors. Coursing must be planned for a suitable accommodation of masonry bond such as brick headers. Because of variations which occur in brick coursing due to different thicknesses of mortar joints, back-up units must be available in a varying series of heights. Units designed to match three or more brick courses are sometimes available in as many as three or four different stock or special heights.

The spacing of back-up masonry

units *along* the wall is less important because it does not have to work out at regular intervals to accommodate a masonry bond. Lengths of back-up units are usually uniform. It is found, however, that to come out right at corners and jambs some cutting is required.

This grows into a complex problem when the masonry with its windows and doors must fit into columns, beams or floors of skeleton type steel or concrete construction. Further complications are flues, ducts, chases for pipes or conduits, convector-type wall radiators, electrical panel boxes, coal chutes, or what have you. Seldom can an architect avoid some cutting and fitting of present stock materials, no matter how hard he tries to gain efficient assembly by careful planning.

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Then he may be confronted with changing conditions as the job progresses, which upset his painstaking effort. For instance, the owner may select a brick somewhat different from the one the architect had in mind. Perhaps it must be laid up in a ⅜-inch joint to look right, whereas the architect had planned for a brick in a ½-inch joint. The type of window selected may not be available and some other must be substituted. New materials may be substituted to effect saving in cost. An architect knows that hopeless feeling of confusion or frustration that results when such changes occur. He may redesign or redimension his drawings to accommodate the new product. Most frequently, however, the headache is passed along to the contractor, and his mechanics must cut and fit on the job as best they can.

It is little wonder that the present conflict in the dimensions of stock building materials is referred to as a chaotic condition. To bring order out of this chaos is an ambitious undertaking. Only in the past few years has a serious attempt been made to do so. Several different investigators have visualized some form of modular planning as the key to coordinated dimensions for building products. Exhaustive studies in this field were made by the late Albert Farwell Bemis, whose work is now carried on through Modular Service Association, a non-profit organization supported by his family and other interested groups. The American Standards Association verified the need for a project in this field. Sectional Committee A62, on the Co-

ordination of Dimensions of Building Materials and Equipment, was set up in 1939 under the sponsorship of The American Institute of Architects and The Producers' Council. Mr. M. W. Adams and the staff of Modular Service Association have functioned as a secretarial and technical service for effective execution of studies on this project. The work has progressed with the assistance of a number of study committees representing various branches of building products manufacture, as well as one composed of architects on building layout.

The first official release from this committee is titled "Proposed American Standard Basis for the Coordination of Building Materials and Equipment—A62.1." This lays the groundwork for harmonious interfitting of building parts. It precedes a series of application standards which will govern the sizes of various products, such as masonry units, windows, doors and other structural parts or equipment. The chairman of ASA Committee A62, architect Max W. Foley of New York, refers to this as one of the most fundamental programs ever proposed for the construction industry.

A second document has been released by the committee, "Proposed American Standard basis for the Coordination of Masonry—A62.2." This conforms to and supplements the Proposed American Standard Basis—A62.1. It gets right at the heart of the problem which has been set forth in the first part of this article. Instead of uniform size masonry units laid in joints of variable thickness, we now find masonry units compensated in size for appropriate joint thicknesses. For instance, the coursing of brickwork becomes standardized at three courses to eight inches, and the spacing along the wall works out in even multiples of four inches. Glazed brick which are adapted to ¼-inch mortar joints are made 7¾ inches long. Smooth brick, normally used for facing, are laid up in a ⅜-inch joint. These brick are made 7⅝ inches long. Rough-textured and common brick that require ½-inch mortar joints are made 7½ inches long. In each case the brick length plus the joint thickness adds up to a constant 8 inches, which has universal application in the layout of buildings through the 4-inch bonding increment. The width and thickness of brick or other masonry units are similarly compensated for mortar joint thickness. This makes for in-

terchangeability and an improved quality of well bonded masonry.

To bring about a comprehensive interfitting of parts, the proposed standards illustrate the modular basis for coordination, and define the various words, terms and phrases that are involved in this new standardization technique. You will find here some new terms, such as "dimensional increment," "standard module," and "standard grid." They may appear strange at first, only because they are new. As you become familiar with their meaning and experience the advantage of planning under this carefully thought out program, you will recognize that it is a major step toward simplification and elimination of waste. You will find in it many ways of simplifying your own drafting procedure and reducing the cost of preparing working drawings. The committee is now preparing a Dimensional Coordination Guide, soon to be released for your use.

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The pause in the production of many building products caused by the war affords the needed opportunity to shift to the coordinated basis. This program is definitely a part of the post-War planning of many producers of building products. The 4-inch module used as the basis for coordination necessitates only minor dimensional changes for most products. Some may continue without change. For instance, glass blocks have been designed from their start in dimensions such as 7¾ inches and 11¾ inches, which permit laying in ¼-inch mortar joints. They can be laid out in multiples of 8 inches or 12 inches. Fractional inches are avoided in modular design, so that the checking of dimensions becomes a relatively simple matter, practically free from chance of error.

Manufacturers of other types of masonry units have recently fallen in line to accomplish coordination. At regional meetings of brick and tile manufacturers, held throughout the country under the auspices of Structural Clay Products Institute, the sentiment was ten to one in favor of this change. This has crystallized into an advertising campaign whereby Structural Clay Products Institute, is offering its booklet, "The ABC of Modular Masonry," to advance understanding and use of this basis for dimensional coordination. The National Concrete Masonry Association has officially adopted modular dimensions and will promulgate their use.

Many parts and complex fabrication make the problems more involved for window and door manufacturers, but study committees of both wood and metal groups have been set up and progress is being made. Producers of other forms of building materials and equipment have shown interest in the project, and other study committees have been set up looking toward development of application standards in conformity to this basis.

Included in the platform for post-War construction of The Producers' Council is a plank on dimensional coordination which reads:

"The design of post-War construction on the modular or dimensional coordination basis should be encouraged. Each line of manufacturing should develop standard coordinated sizes of its building products suitable for adoption as American standards under the provision of project A62 of the American Standards Association."

This is part of a broad program advanced by The Council to expedite technical advancement, to facilitate reconversion to peacetime economy, to encourage expansion of construction activity, to provide adequate financing facilities and to promote protective measures for the public.

Thus, there is hope that wasteful chips at the building site may be avoidable in the future. This depends upon use of A62 standards, with close cooperation and understanding between architects and building material producers. Architects are encouraged to do their part, particularly in post-War buildings now being designed.

"We are on the eve of accomplishing one of the most fundamental programs ever proposed for the construction industry—the coordination of dimensions of building materials and equipment."—Max W. Foley, of Voorhees, Walker, Foley & Smith.

"And the house, when it was in building, was built of stone made ready before it was brought thither: so that there was neither hammer nor axe nor any tool or iron heard in the house, while it was in building."—The Bible, I Kings: chapter 6, verse 7.

Post-War Planning for New York City

By Robert Moses

Excerpts by permission from an article in *The American City*, December, 1943

WE FACE the greatest problem of economic readjustment in our entire history. We must prepare to fight mass unemployment and its grizzly corollaries. Numerous agencies — public and private, global, national and local — burn midnight oil and smoke interminably over it. The President recently announced a proposal to give every man in the armed services a bonus of six months' pay and other benefits on discharge. This separation pay may be desirable, but it is only a palliative.

Public works are recognized as one necessary element in the solution. Washington, our states and cities have talked about, or actually embarked on, programs; but with a few notable exceptions these programs are tentative, vague, grandiose, cautious, inadequate or silly.

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The City of New York has a realistic program of public work for post-War construction. Money has been provided in our capital budget for design. Executives, engineers, architects and draftsmen are actually making contract drawings and specifications. Adequate safeguards have been provided to insure a coordinated program of useful and necessary works. By the middle of 1944, projects having a total estimated construction cost of over $700,000,000 will be completely designed and ready for advertising.

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In this article I speak primarily as head of the Department of Parks, but also as a member of the City Planning Commission — to whom park, parkway, arterial, and housing and related projects are referred—and as head of the State park system and Triborough Bridge Authority.

Let me state briefly the philosophy of the New York City Park Department as to post-War expansion. We do not believe in revolution. The city is not going to be torn up and rebuilt on a decentralized satellite or other academic

theory. Therefore, we do not have to wait for the painting of the new, big, over-all picture constantly referred to by revolutionary planners. We believe that the older, run-down sections of the city will be rebuilt. We believe that there will be a much slower development of outlying open lands within the city and its suburbs, that subway extensions will be limited, and that efforts will be directed to making what we have inherited more livable and attractive — as against abandoning it, letting trade and population drift away, and continuing a trend toward suburban dormitory living and commuting. We believe in limited objectives—that is, in reclaiming, rounding out, expanding and developing what we have; in seeing to it that recreation is provided for in arterial, housing, school, sanitation and other construction, and not regarded as an afterthought. Finally, we believe in adding new small parks and playgrounds in neglected sections.

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We anticipate greatly increased interest in and demand for public recreation after the war. This demand will come from many sources, including the men now in the armed services who have become accustomed to strenuous exercises and outdoor life. People now working in war industries and otherwise associated with war work, who have very little leisure time, will require more recreation. The city park system must provide for their needs . . .

We are today employing on this and other post-War work design most of the city's technical staffs and many able private consultants. Arrangements were made with the General Contractors' Association and large corporations vitally interested in the program, to study it and break it down to determine the number of man-hours involved and material and equipment required. In computing the man-hours no attempt was made to go back of actual construction on the ground. In other words, the figure given does not include man-hours in the mines, factories, etc., to produce the materials involved. The program as presently conceived will require over 200,000,000 man-hours of labor, which will make a sizable dent in New York City's unemployment problem.

The jobs will require 400,000 tons of structural steel; 275,000 tons of reinforcing bars; 9,000,000 barrels of cement; 100,000,000

board feet of lumber; 6,000,000 cubic yards of crushed stone; 3,000,000 cubic yards of sand, 200,000,000 bricks; and tremendous quantities of other miscellaneous items such as go into major construction work. The production and transportation of this material will create employment not in New York City alone, but all over the country.

The scope of the program and its objectives may not be broad enough to satisfy academic planners. It will be too broad for the Citizens Budget Commission and for some other voluble associations of taxpayers. We believe, however, that it will appeal to the average citizen who wants the city improved, wants men employed at useful work rather than at leaf-raking after the war, and is willing to pay the bill if the work is intelligently laid out and honestly executed.

Phantasmagoria

ADVERTISING copy writers, Sunday supplement artists, and the long-whiskered prophets of the science-made-easy school have handed the people of America a magnificent Easter Egg—one of those sugar-decorated shells in which they can peer at a pasteboard fairyland. Inside is pictured the dreamworld of tomorrow — glass and plastic houses, superspeed elevated highways, skies full of aircraft. With eye glued to the glass, many regard this Futurama as close enough to grasp.

"It is quite possible that the cities of the future will look like the World's Fair concept of 1939. Automobiles of the future *may* look like torpedo-shaped projectiles. Aircraft of the future *may* look like Buck Rogers' space ships.

"But—

"Those of us who survive the present war with an expectation of seeing for ourselves the events and the changes of the next ten or a dozen years had better back away from the peephole and take a look at the things that lie between us and the Promised Land. It may not be quite so near as it seems."

—S. PAUL JOHNSTON in *Technology Review.*

Post-War Materials and Techniques of Construction

By Theodore Irving Coe

TECHNICAL SECRETARY, A.I.A.

THE SUBJECT of materials and techniques of construction for post-War construction has afforded a fertile field for imaginative crystal gazing and uninhibited prophecies. These, while providing a most intriguing picture of comfortable and effortless living under new and heretofore undreamed of conditions, too often failed to take into account the principles and practices on which technical developments must depend if they are to meet the practical requirements of acceptable performance in service, durability and economy of maintenance. They must also insure a market of potential purchasers sufficient to encourage their production and distribution in competition with other products for essentially similar uses.

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It is most fortunate that, while research and the testing laboratory have contributed materially in the development of new products, they also discourage the too rapid exploitation of materials and construction techniques which lack the test of time under service conditions.

"There is many a slip 'twixt the cup and the lip," and it is equally true that many proposed materials and techniques which appear to offer desirable possibilities fail to meet the requirements necessary for acceptable performance under service conditions; or they may require a long period of development before their distribution and use can be recommended by a producer desirous of maintaining a reputation for the quality and durability of his products. The test tubes of industry are often years ahead of the ultimate availability of new or improved materials and techniques of construction.

Competition provides the incentive to make these developments available at the earliest practicable

moment, but it is most important for the welfare of the construction industry, and especially those who produce and specify the materials of construction, that every effort be made to determine the reliability of a product or technique of construction before it is made available for general use. As we consider the materials and techniques available for post-War construction, it is well to keep in mind that from year to year new and improved products have always come to us. The recent dim-out of normal procedures has shut off construction for customary civilian needs, but the tremendously increased pace of production to meet war requirements has, without doubt, maintained the pre-War progress. And the necessity of finding substitutes and alternatives for critical materials, particularly metals, has achieved results which will be reflected in post-War construction. The new products and techniques developed for war needs will be welcomed in post-War construction where they demonstrate their reliability for peace-time service. This demands durability and low maintenance costs, which have little or no relation to the products of war production.

While construction during the war emergency has reached an all-time high, much of it represents structures for unusually large industrial operations, distinctly military establishments, and more or less temporary war housing. In the post-War period most of this type of work will give way to construction to meet normal civilian needs, which will include public buildings and utilities. Many advances, however, have been developed in the planning of industrial structures, large hangars, etc., and these techniques will of course be applied to similar post-War construction.

Improved illumination has been an essential factor in planning for large-scale and increased industrial activity, and we may expect to find improved lighting techniques applied to post-War construction with, perhaps, an increased trend toward illumination without a visible source of supply.

The development of ultra-violet, infra-red, and other rays opens new vistas in the field of therapy, germ destruction and radiation, for use not only in hospitals but in portions of other buildings.

New principles applied to the use of wood for long-span supports, in truss, arch and laminated beam form, have paved the way to an

expanded use of these techniques for post-War construction.

Improved treatment to render lumber more resistant to fire, rot, and insects have further expanded the usefulness of one of our very few renewable resources.

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The continuing development of glues and resins will play an important part in improving the production of laminated wall boards and elements of construction, for both interior and exterior use, which is of particular interest in relation to the development of certain types of prefabricated construction.

New techniques for the prestressing of concrete are applicable to many types of cement structures, tanks, etc., and new technological developments increase the usefulness and efficiency of reinforced concrete construction.

The techniques of mass production and advances in industrial methods and processes, developed to speed the output for war, will find a place in the manufacture of many products for the construction and equipment of post-War buildings.

If all that has been said and written concerning the place of plastics in post-War construction could be believed, it would be reasonable to anticipate a house not only constructed of this decorative and versatile material, but completely furnished with it as well.

Rapid developments have been made in the variety of plastic materials and in their adaptation to an increasing number of products and uses. Many of these adaptations and uses refer to items of equipment and elements of decoration, such as hardware, lighting fixtures, electrical and radio equipment, and plumbing-fixture accessories, as well as many products formerly made of metal.

The increased use of plastics in plane construction will no doubt provide a proving ground for their more extended use in the field of construction.

Research will continue to add qualities and characteristics to plastics which will expand their usefulness as they prove their ability to serve as elements of building construction, finish and equipment.

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Research in the field of glass products has made rapid progress in developing new and improved products. It is but a comparatively few years since glass for buildings

was confined to a limited variety of window and door glazings and mirrors. We now have not only these products in an almost unlimited variety, but glass has taken on added decorative and utilitarian properties which adapt it to insulation against sound, heat and cold; the avoidance of fogging and maintenance of clear vision in temperature extremes; and the absorbing of the sun's heat. Then too, in block form, glass serves the dual purpose of a structural enclosure which transmits natural or artificial light.

Glass fibers provide many forms of textiles, from tape for electrical equipment and tires to hangings for interior finish and decoration, and their characteristics of high tensile strength and fire resistance suggest the possibilities of new structural uses.

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Electricity has already played a leading role in adding to the convenience and comfort of living, but improvements and advances in step with War-time developments in the application of electronics promise many useful post-War developments not heretofore possible.

The techniques of providing comfortable temperature conditions within buildings throughout the year have profited from the intensive study of many types of heating and air conditioning equipment arising from the necessity of conserving critical metals. Simplification and increased efficiency have resulted in many cases, and the more careful planning of heating and air conditioning installations, in the light of War-time experience, will be of advantage in post-War construction.

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Heating is no longer dependent upon the installation of unsightly radiators, and winter and summer comfort may be provided by combination units which provide any desired degree of winter or summer temperature and its automatic control.

Radiant heating, supplied by steam or hot-water piping concealed in the floor or ceiling construction, is an accomplished fact and suggests the development of radiant heat from concealed electrical sources.

Electrically activated air filters free incoming air not only from dust and dirt, but promise relief to those who sufler from pollen infection.

An improved type of metal screen

competes with the awning and the Venetian blind in keeping out the sun's rays while defending against insects.

Post-War materials and techniques of construction will reflect not only the developments and advances resulting from the production for war, but also from the continuing effort of the producing industry to advance the variety and quality of its products.

Many developments and advances will not be immediately available for post-War construction, as certain branches of industry must be reconverted to peacetime production, and there may not have been sufficient time for the research and tests which responsible and conservative producers deem necessary before a new product is made available for general use.

In this connection we should keep in mind certain pictured prophecies of the post-War automobile, which illustrated a more or less egg-shaped and streamlined body surmounted by a transparent conservatory, the whole to be formed of new plastic materials of unprecedented lightness and strength and propelled at new higher speeds by a motor which operated on little more than air. As contrasted with this intriguing possibility, responsible automotive authorities hastened to announce that the first automobiles to flow from the revitalized post-War assembly lines would be, generally speaking, a good model 1942 car, while the British promise nothing better than 1939.

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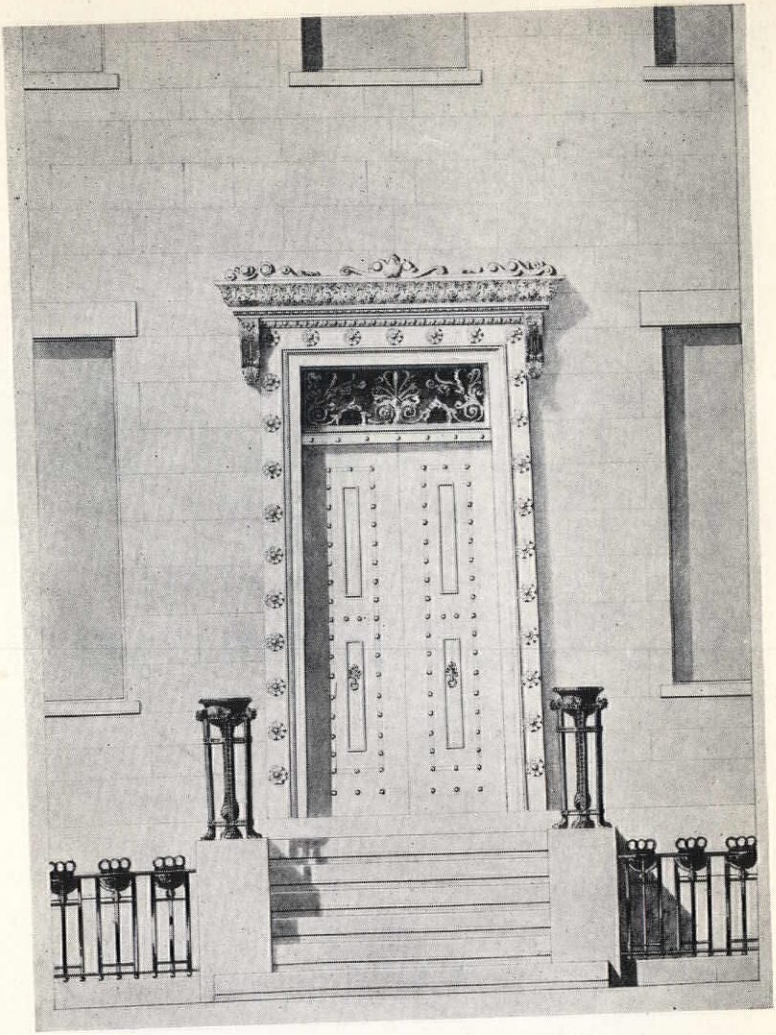
"To what use will public and industrial services put many of the things they have learned under war pressure? Development and research in radio in the War is perhaps a thousand times that of the last war, after which broadcasting came into being.

"All that is needed to start a few new industries is to know what service as yet unborn, what facility yet unknown, would be useful in the American home, in industry, in transportation or in the amusement field. That is the $64 question engineers are not equipped to answer."—WALTER EVANS, vice-president of Westinghouse.



DESIGN FOR A CITY HOUSE DOORWAY
ALEXANDER JACKSON DAVIS, ARCHITECT

From a drawing in the Metropolitan Museum's exhibition of the Greek Revival in America. Davis practiced in New York from 1829 to 1878; the drawing dates from about 1838

Do you know this building?

VERMONT'S STATE HOUSE,
MONTPELIER, 1832-56
AMMI B. YOUNG, ARCHITECT

Architects Read and Write

These particular pages of the magazine are set aside for letters from readers—discursive, argumentative, corrective, vituperative. Herein they may be able to give criticism—and to take it.

As to Resale of Community-Assembled Land

In the November issue of *The Octagon,* you published Mr. Hugh Potter's statement before the Conference Committee on Urban Problems at the United States Chamber of Commerce. Mr. Potter, as an experienced real estate developer, has fully realized the problem that lies before communities in the United States if they wish to redevelop along rational lines. He states: "The key to private rebuilding of old city areas must be sought in a process that can equitably assemble this land and reestablish its value in conformity with the use to which the land is best adapted." Most people who have studied the problem of urban land will agree with this statement.

By and large, the assembly of land will cost our communities decidedly more than its value for residential use. One of the principal reasons for this is the fact that it has been chopped up into little ownerships in the past, in a process of speculative land inflation. If then, once it is assembled, it is reappraised on the basis of productive use, there will be a loss to someone and that someone is likely to be the local community or the Federal Government.

Under these circumstances, we may ask ourselves whether the proposal in the Wagner Bill (S-1163, 78th Congress) to permit a community to *sell* such land, is tenable.

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I do not feel that it is. For all the taxpayers of a community to pay a premium to assemble land so that good improvements may replace development which has been a drag on the community, and which was caused in a large measure by sliver subdivision, may be wise if properly safeguarded. But to do this and then sell the assembled land to operative builders, allowing them to subdivide and resell it, would create the present condition over again. Within a comparatimely limited time when the urban pattern requires change, the com-

munity would find itself just where it is today and would again have to pay through the nose.

If land is sold to developers at an appraised valuation that is less than cost to the community, they will receive a direct monetary subsidy. Here are the makings of one of the biggest rackets that has ever been foisted on this country.

Even assuming restrictions with respect to sale and resale price of land, the distribution of ownership among thousands of small owners would nullify the entire effort of urban redevelopment; since it would again freeze a pattern on the land that can only be changed at enormous expense to the community. The only thing that can justify a community in taking a monetary licking that it will now have to assume, is a benefit to the community as a whole; namely, the ability to control its future; and this can be assured only if there is a prohibition against the sale of land and an insistence on leaseholds.

The provision in the Wagner Bill for the permissive sale of land assembled by communities should be actively opposed by the Committee on Post-War Reconstruction and The Institute as a body; the enactment of the bill in its present form, would be a national calamity.
—EUGENE H. KLABER, F.A.I.A.

Bossom, from a Column

WHEN ALFRED CHARLES BOSSOM lived in this country he was hard to overlook.

His collars were zebra-striped, his press agent beat a big rub-a-dub-dub. The Sunday supplements spread themselves when he said coal ought to be shipped by wire; although really he was only suggesting that electricity be made at the mine.

Back in England now—he was a British subject for all his twenty-five years here—he still sparks and the press is still easy. Now he wants no permanent new homes. He tells England's Town and Country Planning Association that post-War housing will be out-dated decades before its bricks crumble. Quickie bungalows seem to be his idea.

Bossom came here forty years ago. He was only twenty-two, but shortly he flabbergasted patriots by getting a contract to restore Fort Ticonderoga. Later he became supervising architect to a raft of companies.

When he went home he went into politics, made the House of Commons; and then made the newspapers, with a scheme to bring the sea to land-locked Central Europe. A highway ten miles wide would do it, he said.

He has the knobby face cartoonists love, and is wrapped up in his profession. Once he insisted that his main recreation was the investigation of economic projects. His daily grind was about that. But such single devotion has been nicely rewarded. In addition to fees, he has decorations from seven nations. Only Finland among the Baltic states failed to give. But that goes to show he can be overlooked.—DELOS W. LOVELACE in the *Detroit News*.

Honors

FREDERICK LAW OLMSTED, Honorary Member of the A.I.A., has been elected a member of the American Academy of Arts and Sciences. Membership in the Academy is restricted to not more than fifty, and only members of the National Institute of Arts and Letters are eligible.

WILLIAM G. KAELBER, F.A.I.A., of Rochester, N. Y., has been awarded the honorary degree, Master of Humane Letters, by the University of Rochester.

Highlights of the Technical Press

The American City, Dec. Parks, Parkways, Express Arteries and Related Plans for New York City After the War, by Robert Moses; 6 pp., text and illusts. (See excerpts in this issue of the JOURNAL, p. 33.)

The Architectural Forum, Dec. Dodge Chicago Plant, Division of Chrysler Corporation; Albert Kahn Associated Architects and Engineers, Inc.; 10 pp., text and illusts.

Marin City, California; Carl F. Grommé, architect; Francis E.

Lloyd and Harvey Parke Clark, associates; 8 pp., text and illusts.

Prefabrication: Radio Structures; designed by Paul Lester Wiener, José Luis Sert and Paul Schulz; 6 pp., text and illusts.

The American Engineer, Dec. Planning Public Works: Portland's (Ore.) Post-War Program; by Robert Moses; 4 pp., mostly text.

Architect and Engineer, Nov. Navy Blimp Hangar at Santa Ana; designed by the Navy's Bureau of Yards and Docks; 3 pp., text and illusts.

The Architectural Record, Dec. Railroad Stations: Montreal; Burlington, Ia.; Meriden, Conn.; Austin, Minn.; text by Douglas Haskell; 24 pp., text, illusts. and detail dwgs.

Civil Engineering, Jan. Expressways to Serve Willow Run Bomber Plant, by Harry C. Coons, Deputy Commissioner — Chief Engineer, Michigan State Highway Dept.; 5 pp., text and illusts., incl. cover.

Illinois Society of Architects: *Monthly Bulletin,* Dec.-Jan. Post-War Heating, Ventilating, Cooling, by Samuel R. Lewis, consulting mechanical engineer; 2 pp.

Journal of the American Society of Architectural Historians, July. Preliminary Steps Towards "The New History of Architecture," by John Coolidge; 9 pp., text only.

Landscape Architecture (quarterly), Oct. Metropolitan Parks for Detroit: A Large-Scale, Long-Term Plan to meet Recreation Needs, by Gordon Van Schaack; 6 pp., text and illusts.

Magazine of Art., Dec. The Greek Revival in America; captions by Talbot Hamlin on illustrations from a current exhibition at The Metropolitan Museum of Art, New York City; 5 pp., text and illusts., incl. cover.

New Pencil Points, Dec. Museum and Library, Cranbrook Academy of Art, Bloomfield Hills, Mich.; Eliel Saarinen, architect; 15 pp., text, photos and detail dwgs.

Detroit Planning Studies, by J. Davidson Stephens; introduction by Eliel Saarinen; 14 pp., text and illusts.

Design and Practice of Radiant Heating, by Philip Hallock; 3 pp., text, illusts. and charts.

A Message to Architects

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