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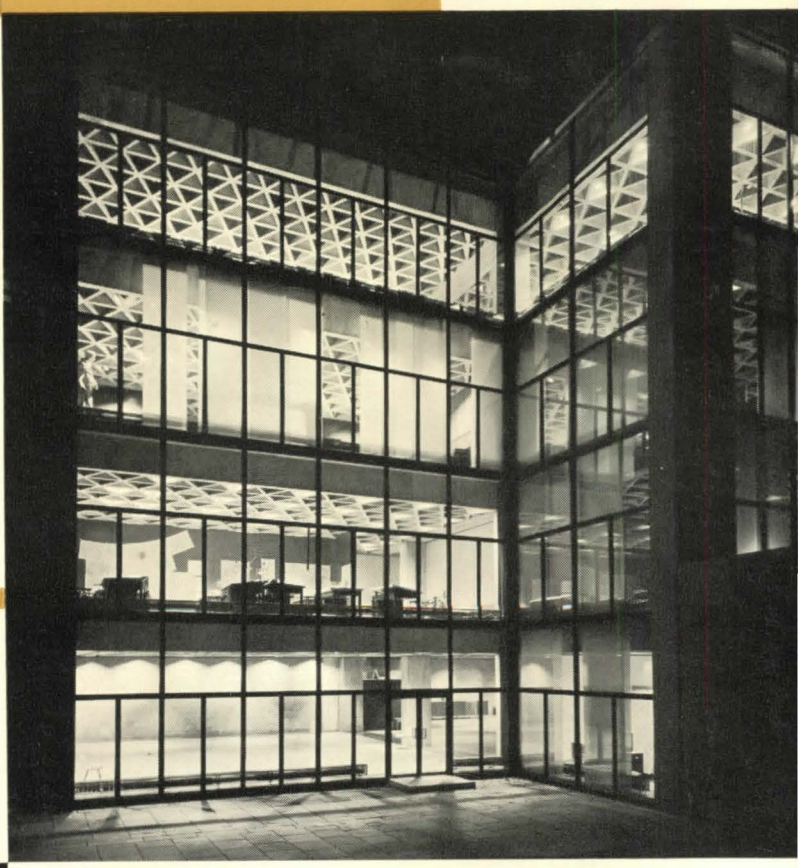

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5

may 1954

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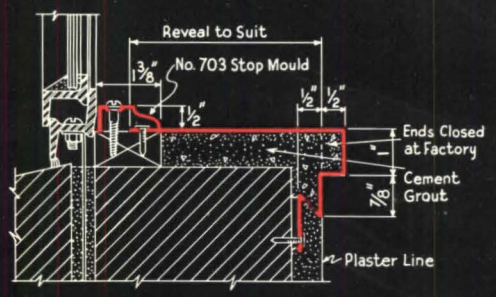
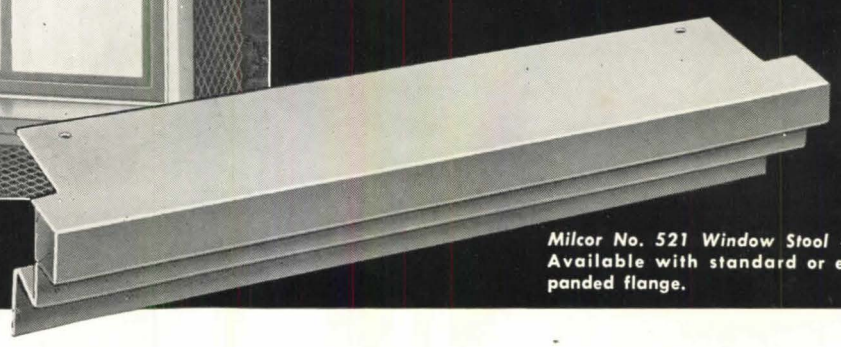
Milcor Window Stool No. 521 used with Window Trim No. 501, mitred and welded to form jambs and head, together with No. 703 stop mould for complete window trim.



Cross-section shows No. 521 installed where flat window stool is desired. Cement grouting is recommended for good construction.



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pa newsletter

May 1954

New York Chapter, AIA presented its Medal of Honor on March 30 to Harvey Wiley Corbett, 81-year-old New York architect "for his long and distinguished career in architecture and for his buildings which enhance the skyline of many cities." Award was made on occasion of 85th Anniversary Dinner of the Chapter.

Former AIA Tennessee Chapter has been split into four chapters—Memphis, Chattanooga, Middle Tennessee, and East Tennessee—all working together through newly founded Tennessee Society of Architects.

Outlook for building activity throughout nation is generally hopeful with present conditions better than anticipated last October. Estimate is according to reports of AIA Board members made at Directors' Meeting in March. Of new work coming into architectural offices, schools are leading in every region with commercial work strong in almost all parts of the country. All 12 regions reported activity by architects in development housing field.

As of January 1, Federal loans and grants have been approved for redevelopment of 52 slum areas in 32 cities which HHFA Administrator Cole estimates will result in construction outlay of almost $500-millions. Areas make up about one-third of 154 slum areas in or near actual development stage of local slum clearance and urban redevelopment programs. In millions of dollars, breakdown of outlay shows 271.3 for housing, 53.5 for commercial construction, 48.0 for industrial construction, 107.7 for public and semipublic construction, and 16.7 for site improvements.

The National Association of Registered Architects has been incorporated under Missouri law as nonprofit corporation with 21 Missouri architects as incorporators. First officers are Harold A. Casey, Springfield, President; Rex L. Becker, St. Louis, Secretary; and William R. Bovard, Kansas City, Treasurer. Purposes of Association include promotion of better understanding between registered architects, exchange of information, gathering and releasing of information on architects and their services, and study, co-operation with architectural registration boards, and recommendations concerning architectural registration laws. For membership, architect must be registered and in good standing in home state.

According to American Bankers Association's survey of 4700 bank reports, bank construction in 1954 (new buildings, expansion, and modernization programs) will total approximately $475-millions. Construction budgets reported by 1262 banks amounted to just under $160-millions, believed to cover about one-third of bank expansion programs actually being undertaken this year. Association reveals that substantial portion of new building will be in Midwest and that designs reported were 371 Traditional, 88 Colonial, and 566 Modern.

Distinguished French Architect Auguste Perret died in Paris in February at the age of 80. Famous for introducing use of concrete in private and religious structures, Perret's well-known designs include those for Église Raincy; Concert Hall, École Normale de Musique; and Théatre de Champs-Elysées. His last great work was in reconstruction of Le Havre where greatest war damage in France occurred.

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Turn page for WASHINGTON PERSPECTIVE

newsletter

Frederick Gutheim

Washington Perspective

The parts of the Eisenhower "dynamic and progressive program" which seem most likely to be enacted before Congress adjourns in this election year include most of those which have interested architects: a good part of the housing program and the health-hospital program. Along with these is an item of old business left over from the 82nd Congress, the lease-purchase bill to provide much-needed office-building space for Federal departments.

The main criticism that will be leveled against the Administration in this fall's elections will be against failure to meet the challenge of the expanding American economy. "The significant question," "The Washington Post" points out, "is not whether we shall have a slump this year, but whether government and business working together will be able to stimulate the tremendous new investment and consumption necessary to prevent a paralyzing depression a few years hence." What is the base line for national economic performance? For some years, many economists have been preoccupied with the problems of national growth. It was the main theme of the monumental Twentieth Century Foundation study, "America's Needs and Resources." It has furnished some of the most engaging topics of the President's Council of Economic Advisers. It was the burden of the criticisms of Harvard Prof. Alvin C. Hansen in his recent testimony before the Joint Committee on the Economic Report. By now this idea has gained terrific impact. Once the facts of population growth, family formation, urbanization, increasing standards of living are understood and accepted, their outcome in productivity must be acknowledged. This growth is translated into the fundamental demand for houses, schools, medical care facilities, industrial plants, distributive facilities, and goods of all sorts. As such it is the major factor in the demand for architectural services, as well as the growth of an architectural profession to provide them.

It is hard to recall a time when Congress needed more to show enlightened interest in the physical aspects of the capital. The casual butchery of the city's famous park system by a series of ill-conceived highway, bridge, and development measures is about to become a national scandal. In immediate prospect are measures which would turn the natural scenic beauties of Rock Creek Park into a heavy-duty expressway; desecrate Theodore Roosevelt Memorial Island in the Potomac River and further compromise the Potomac Park system; and violate other park lands in the name of cheap and immediate solutions to parking and traffic problems. The recommendation of the Fine Arts Commission, The National Park Service, The National Capital Planning Commission, and responsible professional organizations are flouted by highway engineers and city officials intent upon narrowly conceived solutions which Congress finds palatable, because they appear to be economical. The stage seems set for a repetition of the Dark Ages of the last century when the Mall was criss-crossed by railroad tracks and terminals—all in the name of Progress. Certainly no one in the present Administration has yet shown the enlightened interest or attained the authority of Herbert Hoover and Andrew Mellon in 1926, or of Sen. James McMillan in 1901. It has been unable to criticize even the incredibly misconceived redevelopment scheme for Southwest Washington offered by William Zeckendorf, with much beating of promotional drums. The plan has connection with neither reality nor redevelopment, and lacks any relationship to the rest of the city. Locally termed "the Big Z," it might better be called "the Big X."

In the Capitol, the recent remodeling work on the Senate and House chambers is now to be further altered by a Congress to which the idea of security gained a more immediate meaning after the recent shooting. Bullet-proof glass to separate the gallery visitors from the legislators is the most favored solution at the moment, but they can't stop there if any visitors are to hear what's being said on the floor. At the White House, tighter security measures also are being invoked. Presidential recreations of painting and pitch-putt games on the south lawn are being frowned upon, trips out of town are being restricted. More and more, the President is being cramped into the safe but boring routine imposed upon President Truman after the attempt on his life—featuring activities in the informal top-floor solarium of the White House, or at his fishing camp in the nearby Catoctin mountains.

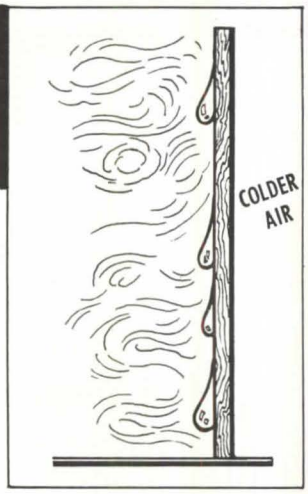
Other changes in the Federal City appear imminent. GSA Administrator Edward F. Mansure has predicted substantial government office-building activity here, as soon as the Senate passes the lease-purchase bill. This measure offers an installment plan device for buying new Federal buildings over lease periods up to 25 years. Although costing more, of course, the proposal gets around the capital-outlay difficulty. Mansure indicated the program would allow the replacement of present "temporary" office buildings in Washington parks erected during the last two wars. He has given no indication whether this would result in a central-area building program, or a revival of the so-called "dispersal" plan to develop outlying office-building centers conforming to civil defense recommendations. The essential objective here, certainly, should be to secure a net reduction in downtown employment and other densities—and a corresponding lightening of parking, traffic, bridge, and other central-area problems.

PROGRESSIVE ARCHITECTURE

May 1954

How to Stop CONDENSATION!

Prevent Damage to Wood, Plaster, Paint, etc.



Condensation forms when temperature of contacting air is reduced below dew-point by a cold surface.

Condensation forms when the capacity of an air space at a given temperature is too small for the amount of vapor present. →

As air grows colder, it can hold less vapor in suspension. The degree of saturation increases until a dew-point is reached, and condensation occurs. The surface of a material colder than contacting air it faces which continuously loses heat on the other side, continuously extracts heat by conduction from the air it faces. The denser and bulkier the material, the more heat it can extract before attaining room temperature, if it *ever* does.

The scientific construction of multiple layers of accordion aluminum, fiber, and air minimizes condensation formation on or within this type of insulation. The reason: The temperature of the air in the warm room and the adjacent sheet of aluminum is about the same. Because the aluminum sheet weighs only ¼ oz. per sq. ft.; has heat ray absorptivity and emissivity of only 3%; it extracts from the air by conduction only enough heat to attain and remain at room temperature.

Since the other sheets of aluminum and fiber retard heat flow by inner as well as outer convection, and conduction is low because of preponderant air spaces of low density, the sheet's other surface faces a space which is only a *little* colder than the aluminum itself. Because warmth flows to cold in radiation and conduction, the aluminum will *give off a slight* amount of *heat* to the colder space, thereby slightly *increasing* the vapor retaining capacity of that space. The succeeding reflective spaces and aluminum sheets behave similarly. Since each aluminum surface is slightly warmer than the air it faces on its cold side, there is no extraction of heat. *(The reverse is true.)*

Where multiple accordion aluminum is used, fortuitous vapor and water (like rain) which intrude into building spaces will, as the vapor pressure develops therein, gradually flow out as vapor through exterior walls and roofs because vapor flows from areas of greater to less density. Since the vapor cannot back up through the continuous, impervious aluminum, it will flow out because exterior walls and roofs have substantial permeability in comparison (with the aluminum), far greater than the required 5:1 ratio.

Of great importance is the use of a continuous metallic vapor barrier of zero water vapor permeability to retard the outward flow of vapor which originates inside the house. Infiltration under the flat stapled flanges of multiple accordion aluminum is slight.

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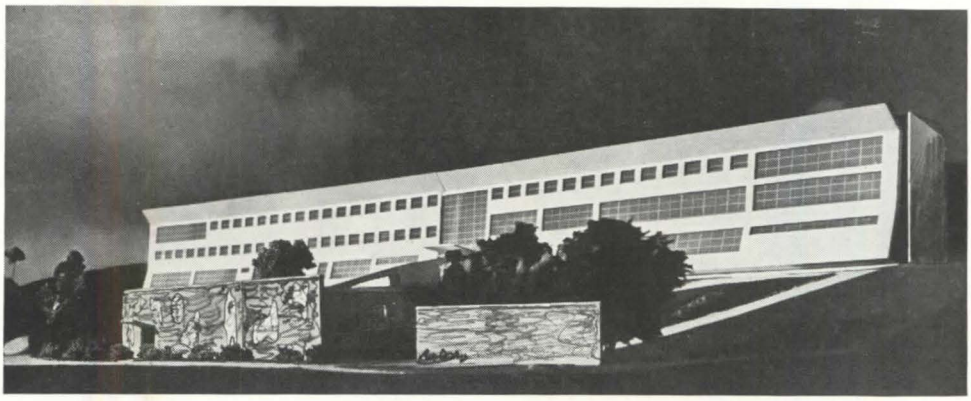
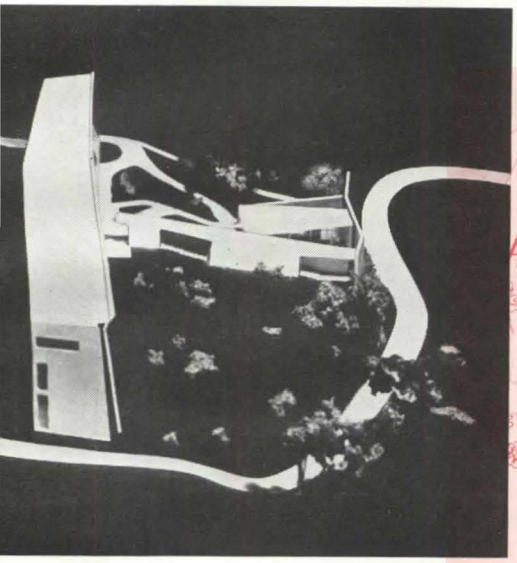
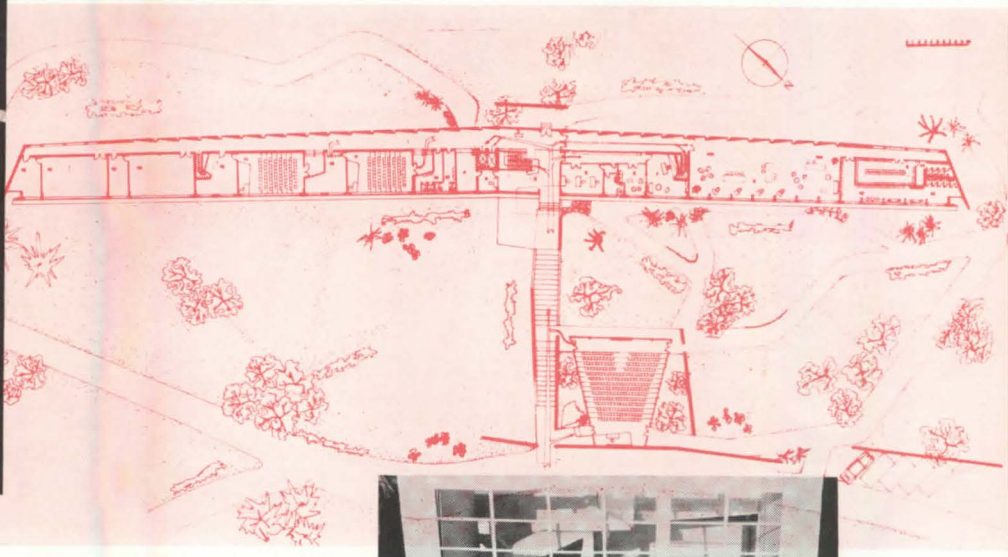
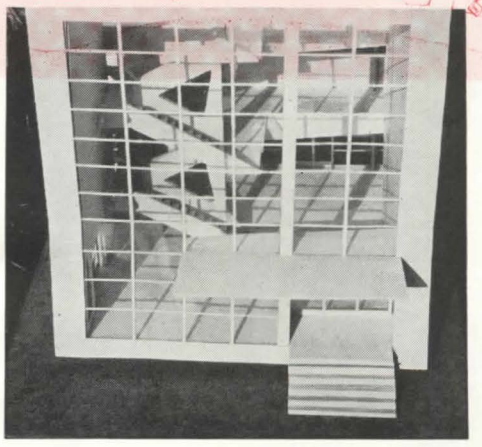






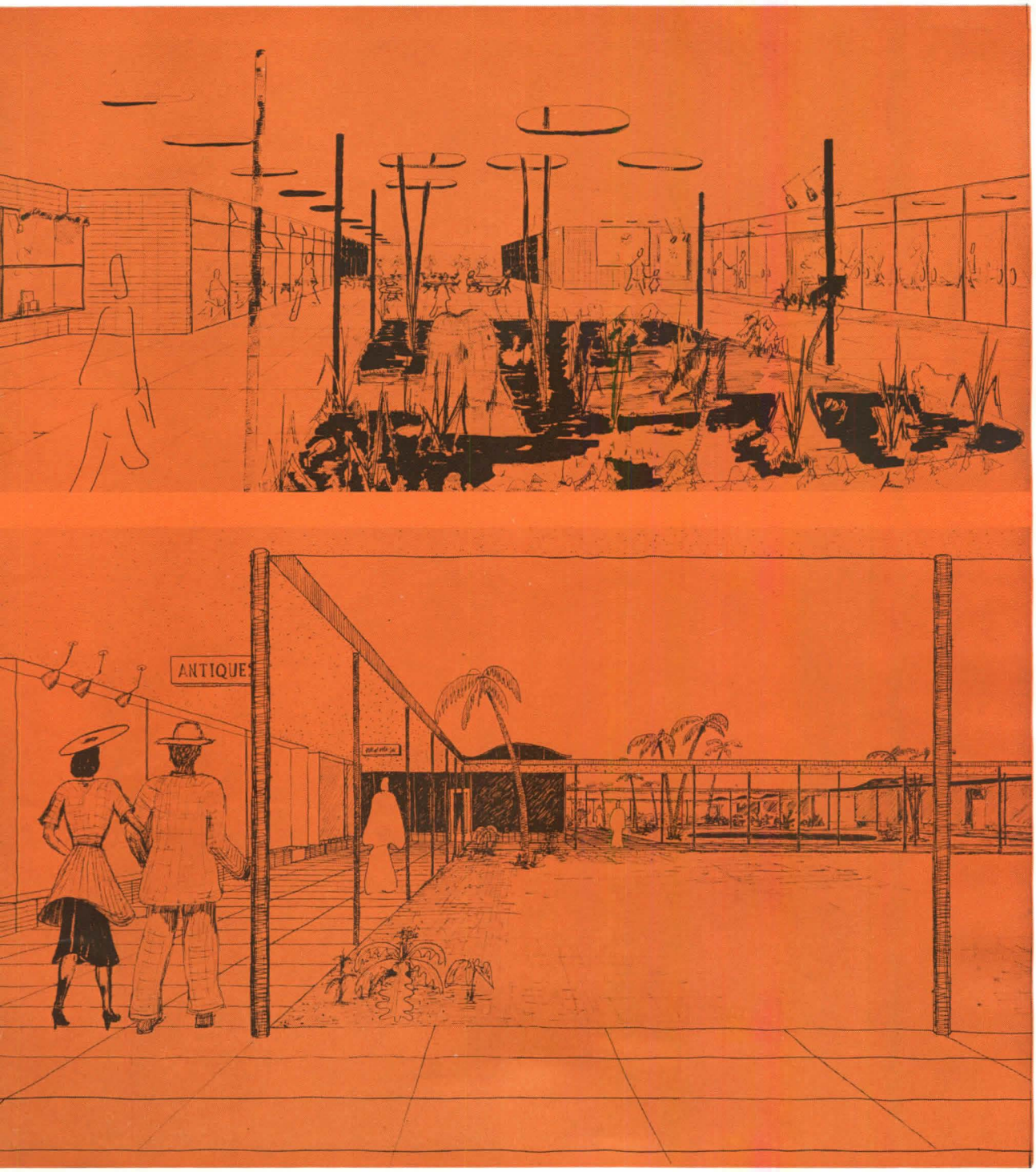


nuclear physics research building

When commissioned by the Italian colony of São Paulo, Brazil, to design for the new University City a Research Institute of Nuclear Physics to be donated by the colony during São Paulo's Fourth Centennial celebration this summer, Architect Gio Ponti of Milan, Italy, welcomed the opportunity to express the importance of the Italian tribute to Brazil and also to project his own architectural concept of "defining without closing."

The research laboratory and classroom building, shown here in model stage, is notable for its principal façade sloping outward at top and bottom, open at the ends and apparently suspended—thus avoiding a closing of the building mass. Ponti sought in this way to give lightness and movement to the wings of the structure. The "slimness" of the mass is further accentuated by tapering of the plan (*above*) by reducing the corridor widths at either end. The main stair (*detail above*) is self-supporting.

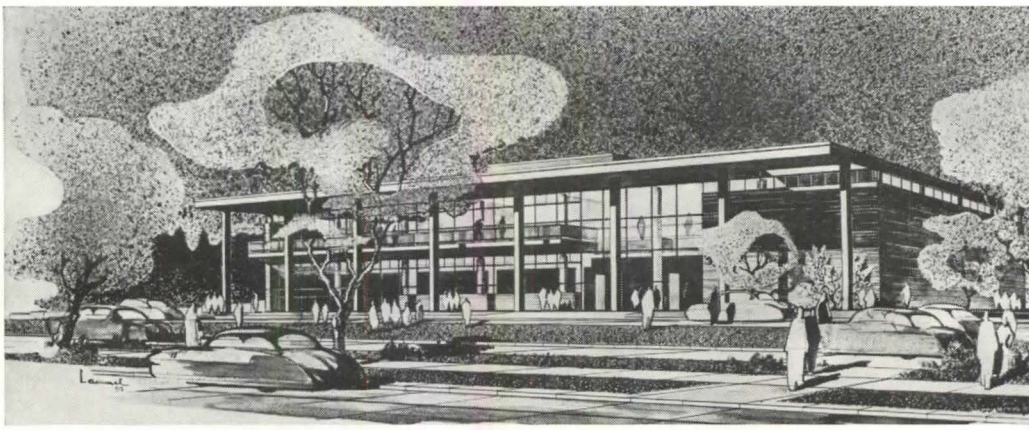
shopping center for both city and suburbs

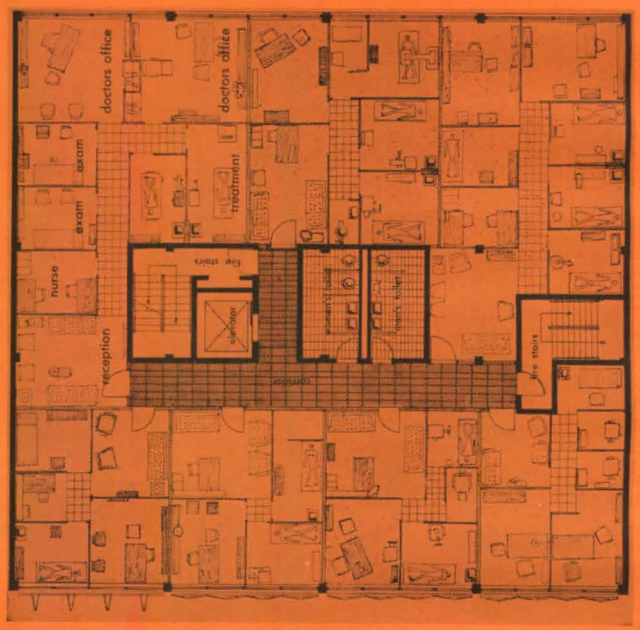


Reluctance to disturb the historic charm and 18th Century scale of old Charleston, South Carolina, by major commercial encroachment has led to the development of a large shopping center located two miles from the downtown center at a point convenient for city dwellers as well as the rapidly growing suburban population. Thus further congestion of city traffic in the narrow streets and lanes will be avoided, and the developers will take advantage of the economies of a larger and cheaper site.

The sketches (*above*) indicate the free, open planning and the unpretentious architecture proposed by Augustus E. Constantine, Charleston Architect, and I. E. Saporta, Atlanta Planning Consultant. The planners have provided for 140,000 sq ft of shopping area, plus a theater, restaurants, laundry pick-up station, post office, bank, ample parking area, playgrounds for children, and other amenities. The buildings are all fireproof.

student union building *Tall columns, two-story veranda, and spacious plan are the regional characteristics of this structure for North Carolina State College at Raleigh, designed by Wm. Henley Deitrick, Raleigh Architect, with Porter Butts, Madison, Wisconsin, as Consultant. Structure has concrete frame, exterior walls of glass and brick.*





professional building for physicians, surgeons, dentists

Nearing completion in Atlanta, Georgia, is the six-story Cyrus W. Strickler, Sr., Doctors Building (*above*) designed by Toombs & Company, Atlanta Architects. The offices will occupy a square tower rising above a ground-floor drug store and driveways giving access to parking area provided at rear for tenants and their patients. The elevator lobby also opens on this driveway.

The reinforced-concrete frame will be faced on the main front with vertical slabs of gray and pink marbles. As the building faces west, perforated aluminum shutters are provided for sun control and to lighten the air-conditioning load. Note the "bent" closed position of these shutters, devised by the architects to lend a baroque touch. Venetian blinds, acoustical ceilings, and fluorescent lighting also will be provided for the tenants.

Opinions of the Yale Art Gallery and Design Center exchanged among architectural notables attending the opening of the new building were so varied that P/A invited the discerning visitors to contribute their views this month—supplementing the P/A presentation of the Gallery, starting on page 88.

block of space

Dear Editor: The decision to treat the new Yale Fine Arts Building as a block of space, to be divided and redivided as needs require, is a splendid piece of architectural statesmanship. Granted the validity of the major decision, and it strikes me as unquestionable, any comments about detail in executing the concept become of very minor importance.

Where pedagogical methods are in flux, flexibility of space is a necessity, and Yale will now be able to shift partitions with every shift in direction and intensity of the architectural breeze. Unfortunately, I saw the building in a snow storm, but I saw enough to like it from the outside. I assume the blank wall is the result of traffic on the adjacent street. Anyone who has tried to teach to the tune of taxi horns will know what a top excuse the architect had for doing a fine plain wall. I like the way you get into the building and of course I was immediately intrigued with the "space frame" construction. How intrigued I would stay, were I Yale student or faculty member, I am not sure.

The discipline that Kahn enforces by minimizing interior color is a noble one, and based, I assume, on the honesty of materials in natural state, but I find it a little hard to be noble for so long, throughout the entire building. The relationship of museum and school of architecture is beautifully worked out and should be a healthy one for both.

To come back to the "space frame" which is exposed throughout, I was pleased with its acoustical properties, but question its light absorption and visual insistence. Incidentally, a high price seems to have been paid, spacewise, for the romanticism of a triangular stair plan within a round stair tower within a rectangular building. The interior classrooms seem excellent, and it is good to see the common-sense aspects of progressive education at last reaching the levels of higher learning, by osmosis, I suppose. The open office planning, where faculty sit behind filing cabinets, I would have none of. Both student and teacher are entitled to some privacy, I think, both from and with each other.

Yale now has a building worthy of its School of Architecture.

ROBERT W. MCLAUGHLIN, Director
School of Architecture
Princeton University
Princeton, N. J.

much impressed

Dear Editor: Your letter reached me some days ago. I was, as you say, present at the dedication ceremonies of the new Design Laboratory at Yale and was much impressed with the building as a whole. Unfortunately I arrived rather late in the evening and could not see, as I wished, the treatment of the exterior, which I understand is quite straightforward and satisfactory.

To me, the three-dimensional, ceiling-floor diaphragm is very successful and interesting in effect. I do think, however, that the lighting is as yet not satisfactorily solved. This gives the ceiling an unfortunate impression of weight and, consequently, diminishes the effect of the ceiling height. I also believe that there might be a more satisfactory solution for the lighting in the drafting rooms. The innumerable dropped wires are certainly not esthetic and might even be dangerous at times. However, the whole ceiling system has great possibilities.

Also, the standard-size partition units are extremely ingenious and their flexibility will certainly be more than appreciated by the Museum's people.

Another criticism I might make concerns the main staircase which, to me, appears to be cramped. Also the roughness of the material is not satisfying in this particular location.

On the whole, however, the building is exciting and, I am sure, will be extremely serviceable. Louis Kahn should be congratulated on the design and Yale University should be congratulated on having a good contemporary building for their art gallery.

LEOPOLD ARNAUD, Dean
School of Architecture
Columbia University
New York, N. Y.

bold decision

Dear Editor: A university by its very nature is dedicated to a tireless quest for knowledge and a constant exploration of new frontiers. Why this dedication should not extend to the art of architecture and find expression in the outward forms of the university's fabric it is difficult to say. Yet past performances of universities have made it natural for us to evince surprise when a great institution adds a modern building to its traditional fabric.

Yale is not unique in making such a bold decision to engage an architect who was bound to explore new methods of construction, new forms, and solutions in the same spirit that the scholars of the faculty tackle their own special problems. The work of Aalto, Anderson & Beckwith and Saarinen at M. I. T. and of Gropius at Harvard preceded Yale's decision. The problem, however, at Yale was made infinitely more difficult because of the closeness of the tie of the new structure to the existing buildings.

The gallery is an outstanding piece of architecture. This is not due solely to its architect's fine sense of structural innovation, the functional soundness of the solution, and its gentlemanly attitude towards its neighbors. These are all com-

(Continued on page 16)

(Continued from page 15)

mendable attributes but of themselves do not assure great architecture. Indeed the gallery achieves architectural distinction because here art is in control of the technologies of building. Whatever shortcomings might be pointed out are hardly sufficient to dim my enthusiasm for an outstanding creative effort.

The basic architectural concept of flexible space, so necessary and proper in such a building, gives character and quality when handled with such superb understanding of the indissoluble unity of space, lighting, structure, and function. The vigorous handling of the stair enclosure, the elevators, and service core lends subtlety and variety to the spaces defined. The ceiling is a superb unifier of space as well as an efficient machine. The somewhat arbitrary windowless street façade provides a foil for the dramatic entrance while simultaneously making it possible to blend the new with the old with a minimum of violence. Yet this ingenious solution of the entrance has compromised the basic concept of a wholly flexible interior space. Flexibility is seriously reduced by this concession and is further sacrificed on those floors where enclosed offices (whose partitions appear all too permanent) conceal the basic form of structure and of space. In contrast the flexible partitions of the gallery reveal rather than conceal the whole and yet provide the variety of experience so necessary to increase the visitors' enjoyment.

Weighed against such criticisms should be the sense of friendly fellowship with its older neighbors. Here will be found a creation in the true tradition of freedom and fearless intellectual exploration for which Yale stands.

G. HOLMES PERKINS, Dean
The School of Fine Arts
University of Pennsylvania
Philadelphia, Pa.

outstanding

Dear Editor: This is the outstanding academic building produced by the modern movement. Here is a building quiet and modest, composed in a background palette of anonymous materials, relieved by people, lighting, and imaginative architectural detail. It is a building whose atmosphere is as definite as it is fresh.

Fully mechanized, it is not mechanical. One of the highest functions of modern building design is to liberate technology, to enlarge its possible applications. When that is done, a high technology of itself does not destroy human values or human scale. The demonstration at Yale, however, argues that to allow men to make the most of their technology art must control and qualify.

Rarely is a building of such technical interest realized with such refinement. Here structure is so integral with architecture it has acquired the value of ornament. The building is not only great in itself but also it opens the door to an entire, new architectural development.

(Continued on page 22)

job costs—can they be controlled?

by Siegmund Spiegel*

Before actual work on a commission is begun, it is obvious that a dollar budget must have been prepared previously, which allotted certain sums of money to various items of production work. This budgeting of funds should be closely related to the Production Schedule for the job under consideration. Scheduling of Production was discussed in last month's article. By consulting the Production Schedule for the amount of time allowed for each phase of the work, as well as records of earlier jobs of a similar nature, it should be relatively simple to allot a dollar equivalent which may be spent for its execution. It is assumed that the Production Schedule will have already taken care of the detailed analysis and estimated time requirement for the work to be done, in five stages: programming and schematic drawings; preliminary drawings; working drawings; checking of shop drawings; supervision of construction.

(The working drawing phase should be broken down into separate component parts, such as: number of site or plot plans; number of plan sheets; number of elevation sheets; number of section and detail sheets; etc. Each sheet in such a breakdown should be weighed carefully for its time requirement. A careful analysis at that time will obviously show the extent of detailing required. While the job, of course, should be as completely detailed as the type of building warrants, an overelaboration through repetition of similar and obvious details will make the job costly to the architect without proving to be of additional benefit to the contractor.)

keeping of time

Practically all offices have a system by which each commission is assigned a Job Number. The system of numbering will vary from office to office. While some use consecutive numbers, others start with number 1 for the first job in each year, to which is added the year itself, e.g., job 154 = first job in 1954. A copy of the Job Number List is made available to all personnel. Each man in filling in his timecard will enter the number of hours worked daily on the project. While the timecard form, too, varies among offices, it should be so arranged as to enable the draftsman to enter a short description of his work (e.g., "First Floor Plan," "Exterior Wall Sections") and the name of the building if the project consists of more than one type or number. Before the working drawing stage is reached, all work should in addition be indicated as "Sketches," "Preliminary," etc. At the end of a pay period (which varies in different offices, but is generally weekly or bi-weekly) the timecards are collected, checked for accuracy and description of work done, and then are used as the basis for preparation of the period payroll summary sheet.

cost records

Bookkeeping systems will vary from office to office, and so will forms such as the Payroll Summary Sheet. However, experience has proven that a form which shows not only the columns required for determining the net amount to be paid the draftsman, but which also shows the job on which he worked, by number of hours as well as its dollar equivalent for each, and shows in addition the respective totals for all men as to number of hours and money spent for each job, is most useful. It fulfils the requirements of bookkeeping for tax purposes and automatically shows the architect the number of hours and amounts of money spent during each period for each individual job.

watching production costs as the job progresses

It has been found quite useful to prepare a chart roughly as follows: The job is broken down into component drawings and/or phases and budget figures for hours and money for each item are shown. As the job proceeds, entries from the timecards and the money value from the Payroll Summary are made. A column is provided for estimated percentage of completion. This percentage of completion figure read in conjunction with time and money spent will indicate at all stages whether the job is "on schedule" or whether more money is being spent than had been anticipated.

On first sight a procedure such as described may appear too excessive and time-consuming. In reality, it is easily accomplished and only a few minutes per week are required to keep it up-to-date. Whatever time may be spent on keeping the chart will prove invaluable to the office when budgets for future jobs are prepared. For the purpose of illustrating such a Job Account, a job has been assumed which consists of a number of small structures, each requiring only two to four drawings; if the job consists of one building, each final drawing is represented by a separate column.

Observing the chart alone will, of course, not help to keep production costs within their limits. It will, however, inform the architect where he stands and will thereby obviously guide him in taking steps to stay within his budget. On closer examination of the work, he may detect that the job turned out to be more costly than anticipated due to various factors, such as shifting of men too often from job to job, causing excessive waste motion; improper advance planning; improper correlation with engineers; also possibly incompetence on the part of the man working on the particular drawing.

* *Architect, Office Manager for Mayer & Whittlesey, Architects, New York, N. Y.*

JOB ACCOUNT—PRODUCTION STAGE

Job #:
From: 7/4/56
To: 8/7/56

Week Ending	Supervision & Correlation & Conferences Budget		Site Planning Budget			Building "A" Budget			Building "B" Budget			Building "C" Budget			Total Job Budget		
	Hrs.	$	Hrs.	$	% Comp.	Hrs.	$	% Comp.	Hrs.	$	% Comp.	Hrs.	$	% Comp.	Hrs.	$	Over-all % Completion
	200	800.	50	150.		200	600.		150	450.		200	600.		800	2600.	
7/10/56	20	80.	20	60.	40%	20	50.	11%	10	30.	5%	10	40.	10%	80	260.	8%
7/17/56	20	80.	30	90.	90%	80	250.	55%	40	120.	35%	80	220.	45%	250	760.	26%
7/24/56	30	120.	10	30.	100%	80	250.	90%	20	60.	50%	80	200.	80%	220	660.	54%
7/31/56	40	160.				25	75.	100%	70	210.	100%	40	120.	95%	175	565.	92%
8/ 7/56	40	160.										20	70.	100%	60	230.	100%
	150	**600.**	**60**	**180.**		**205**	**625.**		**140**	**420.**		**230**	**650.**		**785**	**2475.**	

While the draftsmen working on a project should be informed of *time* limits for their particular phase, it is recommended that the supervisory men on the job should be kept informed as to the *cost* as well, as it is their job to watch the production of each phase and keep the over-all job in mind.

principals', partners' and/or new practitioner's time

Principals or partners of firms often do not keep track of their time spent on specific projects, and rarely, if ever, do their names appear on the Payroll Summary sheet. More often than not, however, they will spend a considerable number of hours on a project. This will especially be true during the periods of planning, programming, design and preliminary drawings. In many instances they will be doing work which at other times may be done by senior salaried personnel. Since the principals or partners frequently use drawing accounts, the amounts drawn are obviously not recorded as job charges. Since, however, a principal or partner may be doing the work in lieu of a hired employe, he should record his time so spent in a diary. This procedure will help to determine the actual total time spent on a job when it is analyzed after its completion, and will in turn assist preparation for a budget of a job of similar nature when the principal or partner may have to engage outside help to do his part of this work. Some client contracts, however, do stipulate payment of principal's time at an agreed rate. This type of contract will obviously make time records essential.

The young practitioner who may be doing his first job, after having quoted his client a fee which seemed adequate then, may find that his total effort may have netted him a ridiculously low amount per hour of work. Although he may for a while do all work singlehandedly, it is advisable for him to keep a record of his time. Since he may at a later date engage draftsmen, he should be aware of time generally required in order to budget his costs in advance.

final job analysis and its value to the architect

After a job has been completed, it is suggested that a short final Job Analysis be prepared. (See example. A hypothetical Apartment House is assumed; figures shown are for illustration of points only, and are not in any way realistic.) This type of analysis has proved to be of extreme value in the past, not only to show at a glance how the job turned out, but primarily to act also as a gage for establishing a budget on jobs of a similar nature which may come to the office. For each new job, obviously, adjustments must be made due to their own peculiarities. An important item to watch when making a budget based on former job experiences is the "wage" item, as average wage in any office may vary greatly from time to time. Although practically all offices are run differently, it should be possible for any office to adapt to its own system the principles illustrated.

JOB ANALYSIS

Designed: 1955
Built: 1956 Job No. 255

A. GENERAL STATISTICS

1. Name of Job:
2. Type of Job:
3. Name of Client:
4. Number of Stories:
5. Area of Land:
6. Construction Cost:
7. Approximate Cubage:
8. Number of Rooms:
9. Number of Apartments:

B. PRODUCTION STATISTICS

	Hours	$
10. Total Drafting:	6,500	$18,000
+ Principal	200	
	6,700	

Item	Hours	$
a. Programming, etc.	600	$2,000
b. Preliminaries	1000	3,500
c. Finals		
Supervision & Correlation	800	3,000
Plot Plan	60	200
1st Floor Plan	200	600
Typical Floor Plan	300	1,000
Etc.	—	—
d. Shop Drawings	300	1,000
e. Supervision	800	2,500
	6500	$18,000

11. Number of Final Sheets: 25
12. Drafting Cost per Final Sheet: $720
13. Weighted Average Wage on Job: $115/week
14. Average Drafting Room Wage during Period of Job: $100/week
15. Fees Paid by Architect:

Mechanical Engineer	$ 6,000
Structural Engineer	4,000
Specification Writer	500
Specialist Consultant	500
Etc.	—
Total	$12,000

16. Blueprints paid by Architect: $500
17. Travel: $100
18. Total Direct Cost to Architect:

Total Drafting Salaries	$18,000
Fees	12,000
Blueprints	500
Travel	100
Miscellaneous Permit Fees	50
Long Distance Telephone	50
Miscellaneous	100
	$30,800

19. Total Cost to Architect:

Total Direct Cost	$30,800
Overhead on Salaries (65%)	11,700
	$42,500

20. Total Fees and Reimbursals Received: $50,000
Less Total Cost 42,500
Profit $ 7,500
21. Fee Received = % of Construction Cost
22. Fee (except consultants) = x Drafting Salaries

architect's one-man show

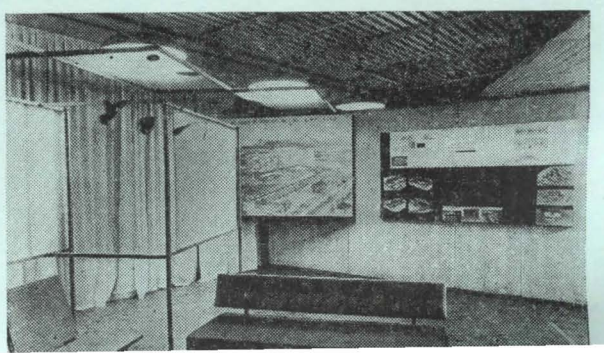
Why shouldn't an architect, like a painter or sculptor, bring his current work to the attention of the community, in a well-planned, dignified "exhibition"? Practitioners in some few cities have outlets where they may do this, either independently, or as part of a larger show, such as the Architectural League Gold Medal Exhibition in New York. In other towns it is more difficult, but not impossible. Last year, members of the staff of A. L. Aydelott & Associates in Memphis, Tennessee, used their own offices (in the building which was published in March 1952 P/A) as a gallery most successfully.

The entire affair was handled as any art exhibit would be. Carefully planned, the show was easy for the visitor to follow, especially with the well-printed catalog. A mounted explanation of the basic philosophy of the firm was clear but uncompromising: "This exhibit is an effort to present one approach toward the creation of a new visual pattern for architecture. Aside from the technique of structure, which is the science of providing shelter, architecture exists as an art, perhaps the "finest of the fine arts" as Emerson suggests. And on through a discussion of "form language" to a conclusion which pointed out that, ". . . an architect must be not only engineer, sociologist, philosopher—he must also contain the wellspring of intuitive qualities which bring forth buildings as works of art. It is on this basis that the buildings exhibited here might be considered as creative undertakings representing something of culture in the broad sense . . . ."

As an exhibit of unusual interest the show was reviewed in the "art" columns of the local papers. "This is a one-man exhibition, in a sense," said one critic, "yet it indicates the relationship of all modern art to the actual living of contemporary man. The Aydelott structures are definitely designed to fill the needs of 20th Century humanity. It is obvious that Mr. Aydelott gives his 20th Century man credit for an appreciation of abstract beauty, a knowledge of tradition, and a desire for both culture and comfort."

So the point of the show was gotten across to "art lovers" in the community. But how about the general public? Was it over their heads, or presented on too high a level to attract them? Apparently not. The regular news sections of the papers carried stories of the exhibit, as well as the art-review columns. The *Commercial Appeal*, for instance, ran a column of news under the head, AYDELOTT WILL SHOW ARCHITECTURAL WORK, with a four-column picture, a week ahead of the opening, and another story the day before the "preview" for invited guests. The exhibit ran for seven days, from 4:00 to 6:00 p.m., and then from 7:30 to 9:30 p.m. On one day a special invitation was issued to high school seniors and college students interested in architecture as a career.

The proof of the pudding? Nearly 600 people attended the reception, and between 100 and 150 came each day during the following week. Members of the Aydelott organization—B. I. Brown, Eldred M. Brunson, Chia Yi Jen, R. W. Sawyer, and Maurice Wood were the ones responsible for planning and carrying out the exhibit—made themselves available to answer questions, of which there were many. The show was, in the opinion of the office, "very successful in every respect."



Bernard Tomson

it's the law

What effect does a change of zone have upon a property owner who has filed plans for a structure whose "use" would be prohibited under the new law?

In an interesting case, *Kunz* v. *Hill, Jr., New York Law Journal,* January 6, 1954, pp. 13-14, the Court had before it for determination the following situation:

(a) On *August 4, 1953* the Town Board of Yorktown, New York, adopted a resolution recommending the rezoning of several areas, and then referred this resolution to the Planning Board.

(b) On *August 7, 1593* the Planning Board recommended the adoption of the zoning law revision to the Town Board.

(c) On *August 11, 1593* at a regular meeting of the Town Board, a resolution was passed providing for a public hearing on the matter.

(d) On *August 12, 1953* the plans and application in question were filed.

(e) On *August 13, 1953* the notice of public hearing was duly advertised.

(f) On *August 28, 1953* the public hearing was held, the revision passed and adopted.

This schedule indicates that *following* the Planning Board's action but *before* the adoption of the zoning change, the owner filed his application for a building permit, to allow him to erect a retail store or professional offices on a site, which was, under the Town Board's resolution, in an area to be rezoned from business to residential. The building inspector, aware of the proposed revision of the zoning law, did not pass upon petitioner's application. The Court was requested to direct the inspector to issue the permit to petitioner on the grounds that the erection of a business structure was still permissible at the time of the filing of the application for a building permit.

In denying the petition and dismissing the proceedings, the Court went on to answer these questions:

1. *What is the power of a building inspector with regard to the granting or denial of a building permit?*

"Ordinarily the issuance of a building permit is purely an administrative act, and the person charged with issuing the same must follow the literal provisions of the zoning ordinance. The granting or withholding of a building permit is not a matter of arbitrary discretion. If the applicant compiles with the valid requirements of the building zone ordinance or building code of the municipality, he is entitled to his permit as a matter of right."

2. *Will the Courts review the actions of the Building Inspector?*

"It is universally true that courts are zealous not to interfere with administrative discretion in denial of building permits, except for unreasonable arbitrary, discriminatory, or unlawful conduct on the part of the duly authorized administrative officer."

3. *Can a permit, once issued, be revoked?*

"It is well established, too, that building permits duly issued may, nevertheless, be specifically or in effect revoked by subsequent changes of law or ordinances. There are abundant authorities governing instances where a building permit has been issued but no work has been commenced, or has progressed to a substantial degree prior to the enactment of an amendatory ordinance prohibiting the use for which the permit was originally issued. In such cases, it has been held that no vested rights have been acquired."

4. *Suppose construction has already begun?*

"Similarly, there are authorities holding that a property owner may acquire vested rights by reason of having changed his position by performing substantial work, or by incurring expense and obligations in pursuance of the building permit, prior to the enactment of the amendatory ordinance prohibiting the use."

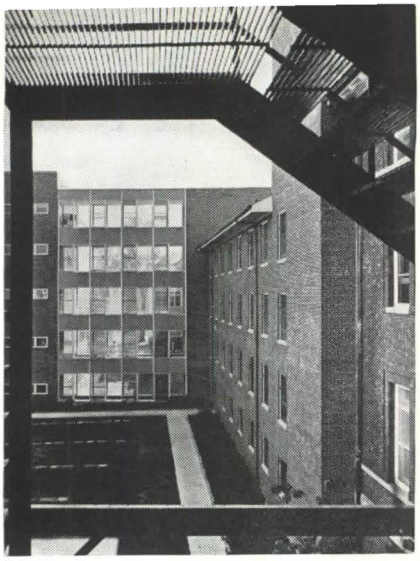
5. *Can a property owner acquire a "vested right" by commencing construction immediately after filing his application but prior to the issuance of a permit?*

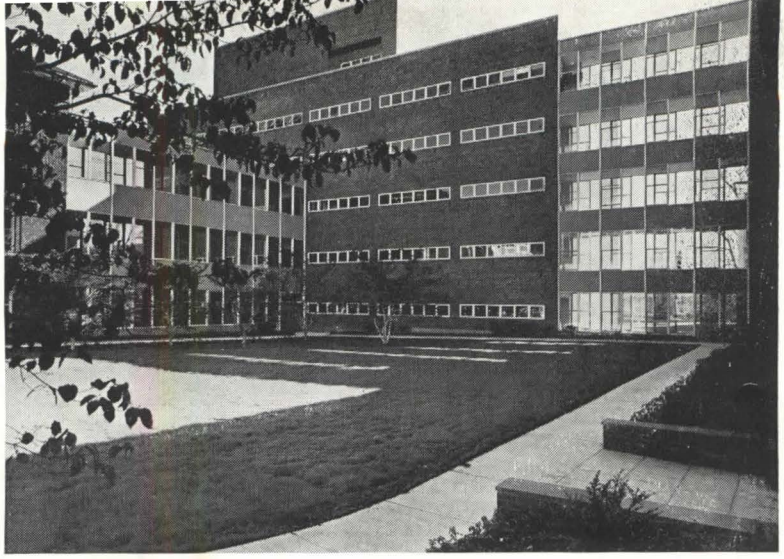
"It is apparent that the use to which petitioners seek to put their property is no longer permitted under the Building Zone Ordinance (of the Town of North Hempstead). Petitioners claim, however, that if the permit had been issued promptly, they would by this time have acquired a vested right which could not be taken away by legislative amendment of the ordinance. That may be, but the fact of the matter is that petitioners have not acquired any vested rights since no permit has been issued. Any obligations incurred by them or money spent without a permit cannot give rise to a vested right.

"The contractual obligations assumed by respondent after filing his application for a building permit and prior to the issuance thereof, were not such acts as to vest any rights which could not be defeated by the subsequent amendment of the local ordinance.

"Quite apart from the above collated authorities, each case must be analyzed and determined on its own peculiar facts and circumstances. Here there is entirely no foundation for any claim of bad faith, willful delay or hindrance by the town authorities. The machinery for modification of the zoning ordinance was already in operation at the time petitioner filed his application for a building permit on August 12, 1953. The undisputed facts and circumstances negatives any finding of a deliberate design or policy of delay by the municipal authorities to frustrate petitioner on his application. Petitioner could not, and did not, acquire any vested right to the building permit by winning the race in filing his application prior to the effective date of the amendment to the ordinance, but subsequent to the unequivocal acts on the part of the municipal authorities evidencing an intention to amend the zoning ordinance."

The lesson: To protect a "use" of unimproved land it is necessary to obtain a building permit and incur "expense and obligations" or perform "substantial work."

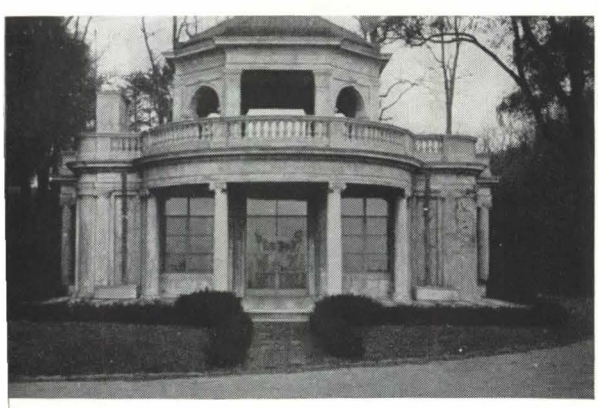




New Demands on Old Buildings

Throughout history, the obsolescent building has been a social and an economic problem. Each new building, designed for a specific purpose, becomes in its turn a liability, as human needs change. Some structures have been sufficiently important in a historic sense to be preserved—but even many of these have been altered during their useful years. When the Romans built the Colosseum (A.D. 70-82) it served their needs well. A century and a half later, however, it was functionally inadequate, though structurally sound, and a fourth tier was added. Its later history—a pilfering ground for Renaissance builders and a tourist attraction in our time—is not likely to be the fate of most contemporary apartments, schools, or office buildings.

What community does not have such structures as a civic and economic headache? Schools, ruggedly standing, outdated for modern teaching. Hospitals inadequate for present needs (as was the Stamford Hospital, Connecticut *(shown above),* until Skidmore, Owings & Merrill added a new Center Building in their redevelopment scheme). Stores which cannot be wished away, even though they are no longer good merchandising outlets. Houses unsuited to new needs (like the one in Glen Cove, Long Island *(below),* designed by McKim, Mead & White, recently altered by Slater & Chait, Architects, New York.



What can be done about the obsolete structure, other than leaving it (to become a slum, in most cases) or tearing it down (an economic waste, in many instances)? There is another answer—making the building once more useful, through remodeling or addition. Right now the United States is facing up to the problem very sharply, as many of the structures built during the first half of the Century—especially during the boom period of the '20s—become "obsolete" even though they are as sound as the day they were built. Architectural answers to conversion needs fall under two chief heads:

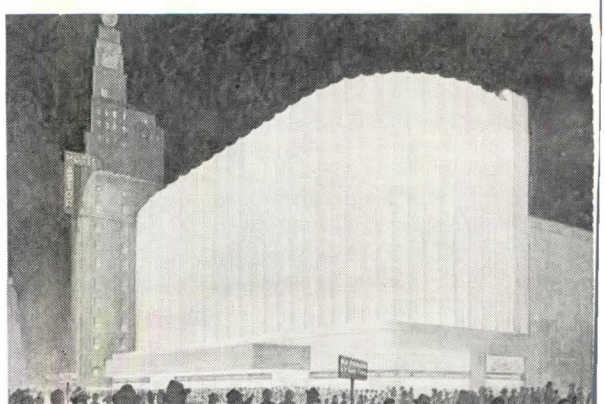
1. Remodeling, repairing, redecorating, or re-equipping of existing units. Space is still adequate, in these cases, but it must be replanned, refurnished—in short, "modernized."

2. Additions to, or expansion of buildings that have become outgrown because of added or increased requirements. The original building often needs extensive alteration, in addition to the added space. The problem in design integration is usually a difficult one.

In this issue, instances of both solutions are shown. There are store, bank, and display-room modernizations; and there is the "alteration" of an apartment house into an office building, which required stripping down to the steel skeleton. There are additions to a school, a house, and—in the form of a distinguished new building—to the Yale University Art Gallery.

Altogether, much new activity lies ahead for architects, builders, and the manufacturers of building products, in the conversion of obsolete buildings to new uses. Tax benefits due to changes in depreciation deductions, proposed by the House Ways and Means Committee (allowing 2/3 of the cost of construction to be depreciated in the first half of its "life") and proposed changes in the capital-gains tax which would make remodeling of houses more attractive, will foster modernization.

The Astor and Victoria Theaters occupy adjoining old buildings on New York's Times Square. To unify them—and provide an eyefilling display of changing light patterns—a corrugated, frosted-aluminum façade is to be wrapped around the whole blockfront! Douglas Leigh has planned "unique, animated lighting effects" for the 26,000-sq-ft-area. Ross Photos



St. Matthew's Episcopal Church (right) *was cut into two pieces, moved five miles, and reassembled—with additions and modifications—as the new St. Matthew's* (above). Photos: Julius Shulman

location	Pacific Palisades, California
architects	A. Quincy Jones & Frederick E. Emmons
structural engineer	Richard R. Bradshaw
general contractor	Wilson Brothers

remodeling and addition: community church on a new site

community church

client	Yale University
location	New Haven, Connecticut
associated architects	Douglas Orr-Louis I. Kahn
staff associates	H. D. Palmer, Lloyd Westbrook, Anne G. Tyng, Earl P. Carlin
structural engineer	Henry A. Pfisterer
mechanical engineers	Meyer, Strong & Jones
acoustical consultants	Bolt, Beranek & Newman
lighting consultants	Richard Kelly, Stanley McCandless
landscape consultant	Christopher Tunnard
general contractor	George B. H. Macomber Company

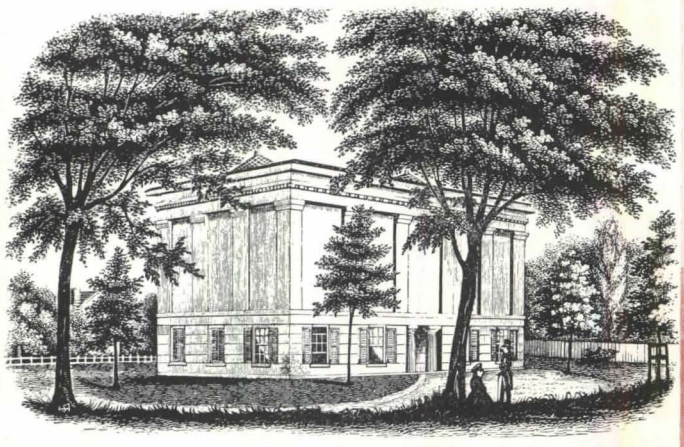
extension: university art gallery and design center

By George A. Sanderson

The new Yale University Art Gallery and Design Center is one of the most provocative structures of recent times a building about which no one seems to remain neutral. Practically doubling the existing facilities of the Division of the Arts, it houses Yale's Department of Architecture; the Print and Graphic Arts Departments; offices of the Director of the Art Gallery; and exhibit-gallery space.

Apart from its design inventiveness and refinement and its disarming basic space concept as an infinitely flexible, open-loft structure, it also appears to be a bold architectural statement by the University of a determination to return to design fundamentals: to architecture more in the spirit of the direct, original Colonial work there than in the sophisticated stylism of the Great Gothic Period on which Yale embarked in the 1920's.

Whether one *likes* the new building seems a rather obscure point, in the face of its remarkable dedication to honesty; its almost total integration; its disciplined order; and its uncompromising structural-design expression. In developing the extraordinary, 2′ 4″ deep, tetrahedral, ceiling-floor diaphragm, which harbors within its voids most of the wiring and air-distribution lines, the architects maximized the factor of flexibility. In addition, the need for any post-facto attachments was avoided; nothing needed concealment or furring in; and structure could stand proudly revealed, providing its own, inherent ornament as well as acoustical properties. While not a true, three-dimensional framing system (local codes required certain conventional methods), the "breathing ceiling" constitutes a significant transitional form between discontinuous and continuous structures that may well serve as an architectural milestone.



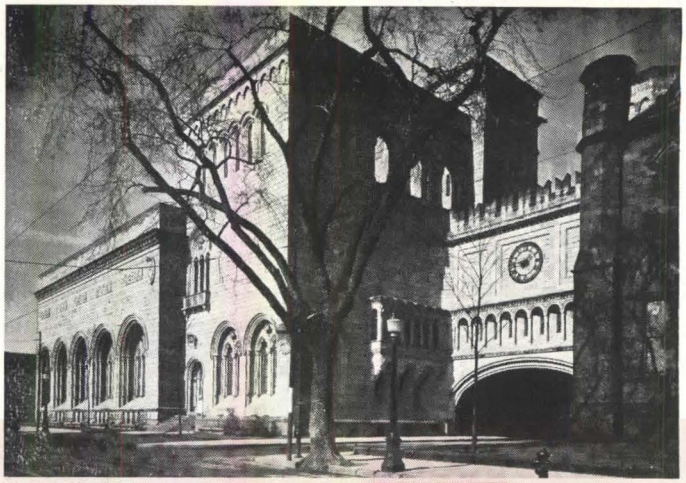
Yale's active interest in the fine arts dates from the purchase in 1831 of Col. John Trumbull's portraits, miniatures, and historical paintings of the Revolution. The Trumbull Gallery (above, left)*—first art gallery built by a university in the United States—was erected in 1832 and stood until 1901. Colonel Trumbull was the architect.*

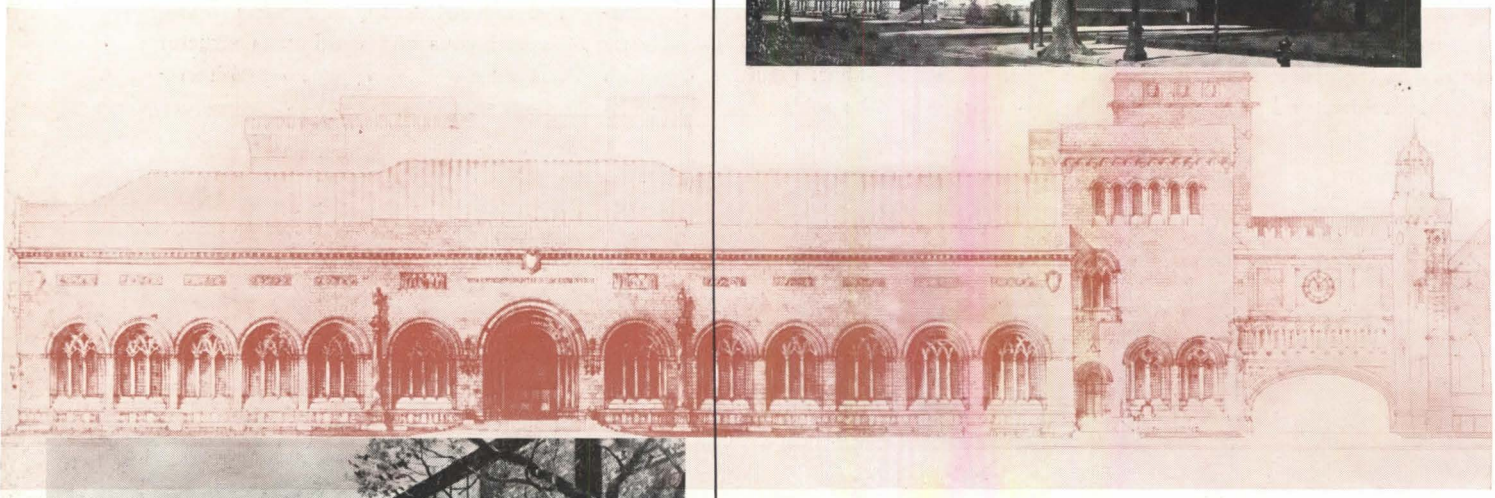
By 1864, Yale's interest in art had so increased that it was decided to erect a building for art study—Street Hall (above)*, donated by Augustus Russell Street. Peter B. Wight was architect of this building, which is still used by the Division of the Arts.*

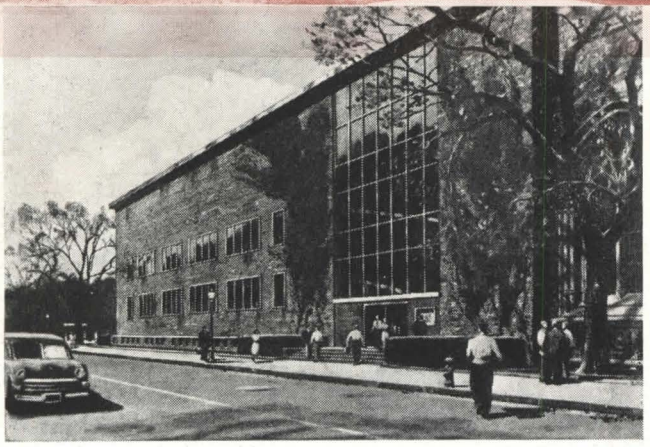
The new University Gallery and Design Center (left and acrosspage)*, the subject of our current study, is an extension of the Gallery of the Fine Arts* (overpage)*, opened in 1928.*

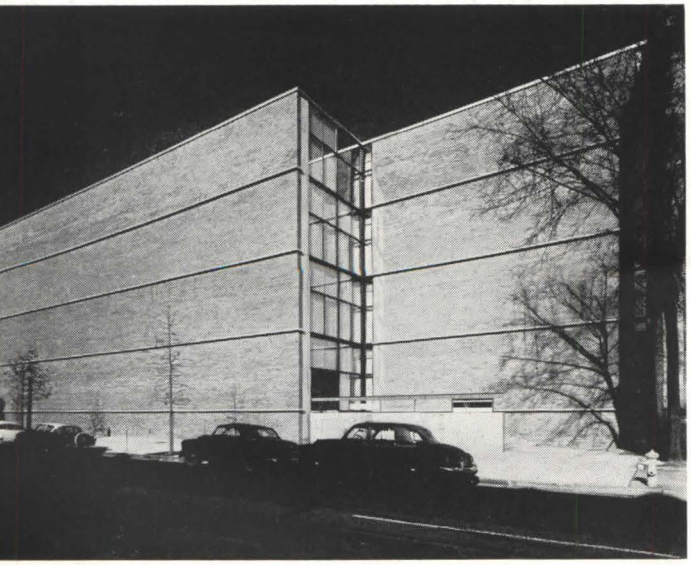
Photos: Lionel Freedman (except as noted)
Photo acrosspage: Norman Ives

art gallery and design center









Yale's Romanesque-Gothic-derivative Gallery of the Fine Arts (top) *is about two-fifths of the structure proposed by the architect, Egerton Swartwout. It was assumed that later additions would carry out the design formula of the initial unit occupying the frontage on Chapel Street* (above). *Much water (architectural and otherwise) has since gone over the dam: new materials have appeared; new structural systems have developed; new design concepts have arisen; and educational requirements have changed almost beyond belief. By no means least important, the cost of such monumental structures is now almost prohibitive.*

In the 1940's, Philip L. Goodwin developed his design for completing the building (center left), *offering a straightforward modern scheme that respected its predecessor in a few basic factors such as building height, but made a clean break with the old.*

When further developments brought changes of administration, and the basic thinking about the gallery addition also shifted (for example, such extensive new gallery space was no longer considered desirable); the budget was much tightened; and a totally new approach was launched. Nonetheless, Louis I. Kahn, associated with Douglas Orr in the design of the new Gallery and Design Center (bottom left *and* acrosspage), *gives emphatic credit to Philip Goodwin for his prior contribution. "He fought the battle for modern architecture at Yale," Kahn comments. "And he won!"*

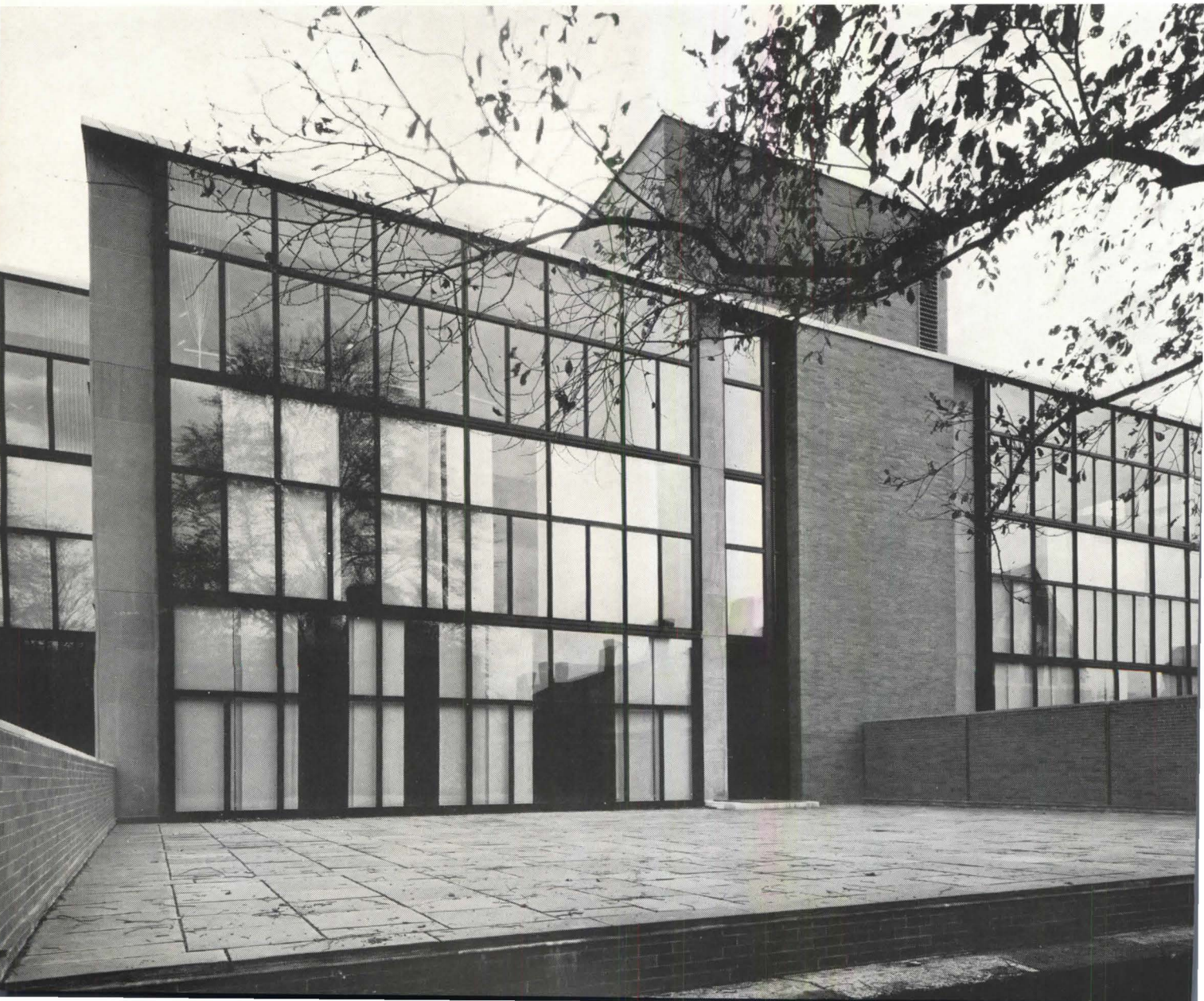
art gallery and design center

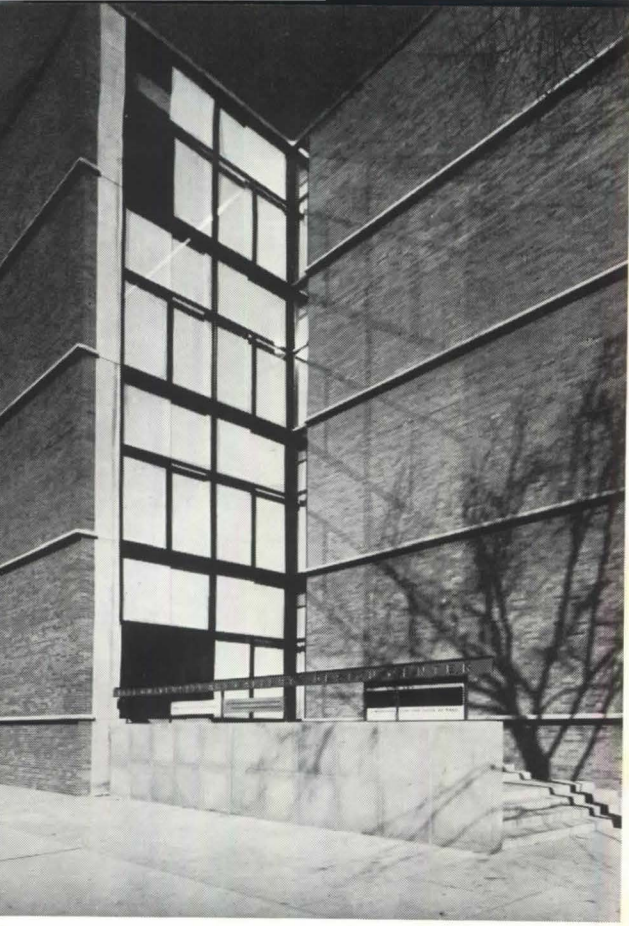
Initial considerations determined the nature of the space to be provided. Based on an idea advanced by George Howe, retiring Chairman of the Department of Architecture, it was decided that the structure should be exceptionally flexible —probably an open-loft structure, subdividable at will and subject to quick change.

The basic plan—or nonplan—developed to answer this criterion appears in white line at the top of the far column acrosspage: general, unsubdivided space on either side of a central area in which are located the various general-use services—elevator; stairway within its circular enclosure; secondary stairway; toilets, etc. The orderly reinforced-concrete frame and the deep "breathing ceiling" leave both floor and ceiling otherwise unimpeded.

Only missing link to make the concept workable was some form of easy-to-install, easy-to-remove partitioning. Such partitioning could be placed at any point where there would be both floor and ceiling bearing—anywhere, in other words, along the ribs of the ceiling frame. Three types of panels were developed, all 5 ft. wide. One is a full, floor-to-ceiling panel that, in series, can (and does) form complete room enclosures. A variation of this is one of greater depth, with an air space between the two surface layers that serves as a return air duct. The third—and most remarkable—is a so-called "pogo stick" panel, with synthetic-rubber-tipped feet and spring-mounted, similar projections at the top that make it possible to press a panel into place at any available point. These, used singly, or in groups, form display backgrounds, partial subdivisions within large exhibit areas, etc. The panels, like the basic concept of the building itself, were the brainchildren of George Howe.

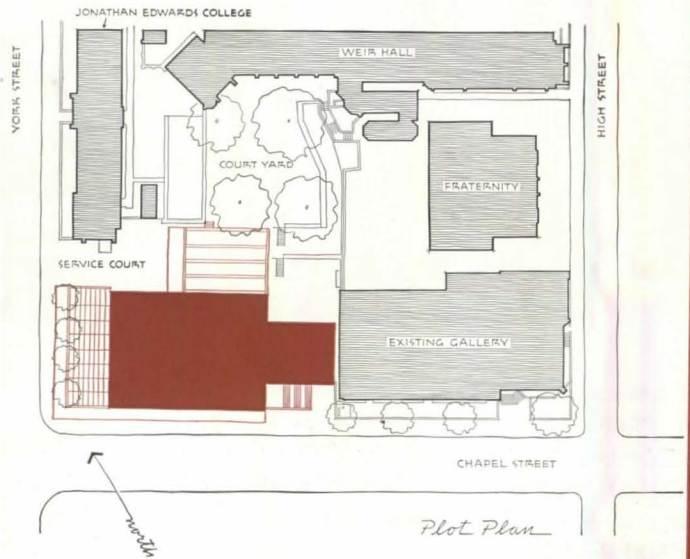
The floor plans show how the different lofts were partitioned initially. But they may be quite different next year—or next week! In reading these against the plot plan, notice on the north side how two levels come at grade—one adjoining a sunken terrace at the nominal first-floor level; the other on the second floor, leading out to a raised terrace facing the courtyard of Weir Hall (the former architectural school).



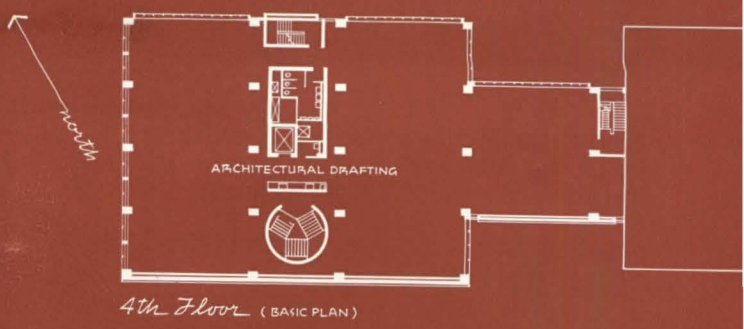


In a setback from the windowless south front, facing Chapel Street, is the east-facing main entrance area (above) *glazed for its full height. Projecting string-courses in the brick wall echo interior floor levels.*

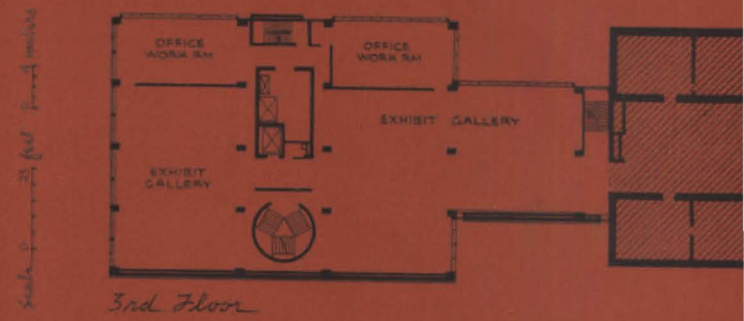
The north front (acrosspage), *largely of glass, opens across a terrace to landscaped Weir Hall court. Details of sash are shown on a subsequent page.*



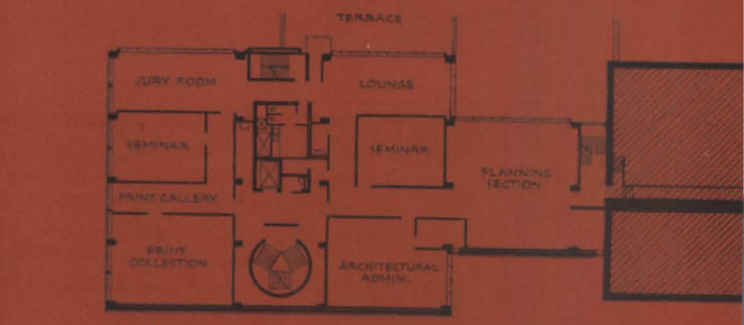
Plot Plan



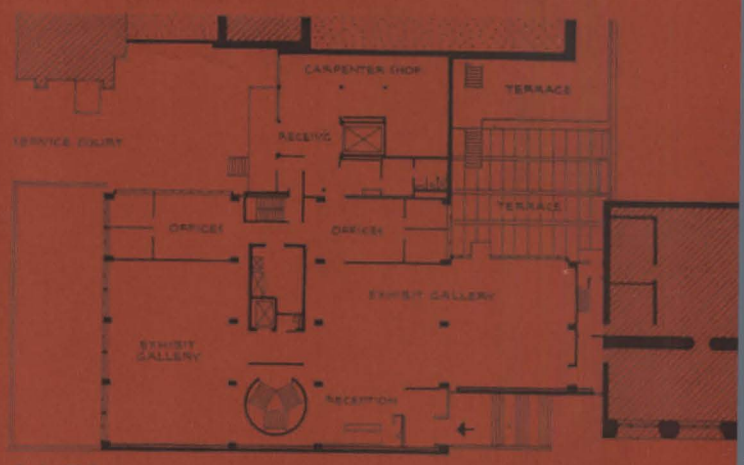
4th Floor (BASIC PLAN)



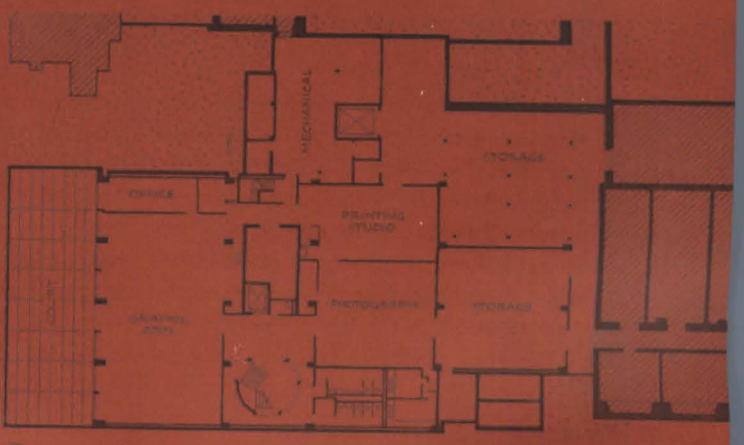
3rd Floor



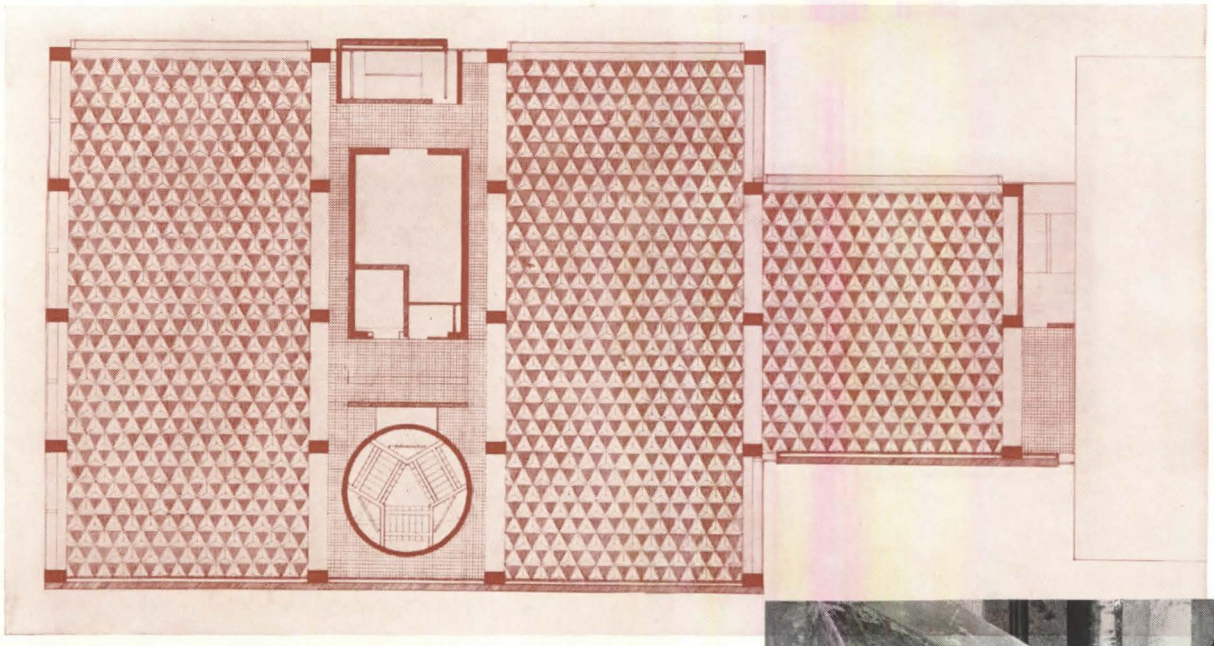
2nd Floor

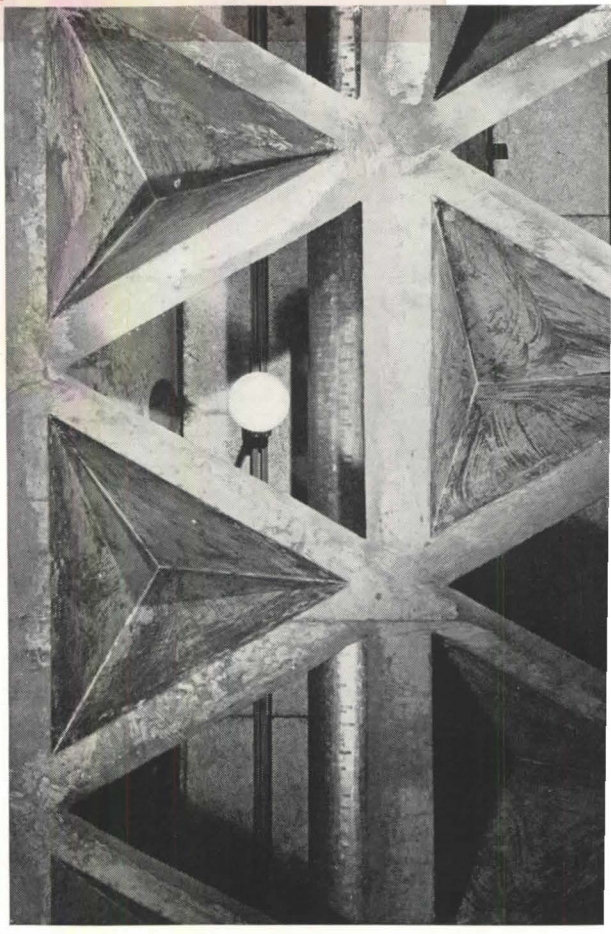


1st Floor



Basement



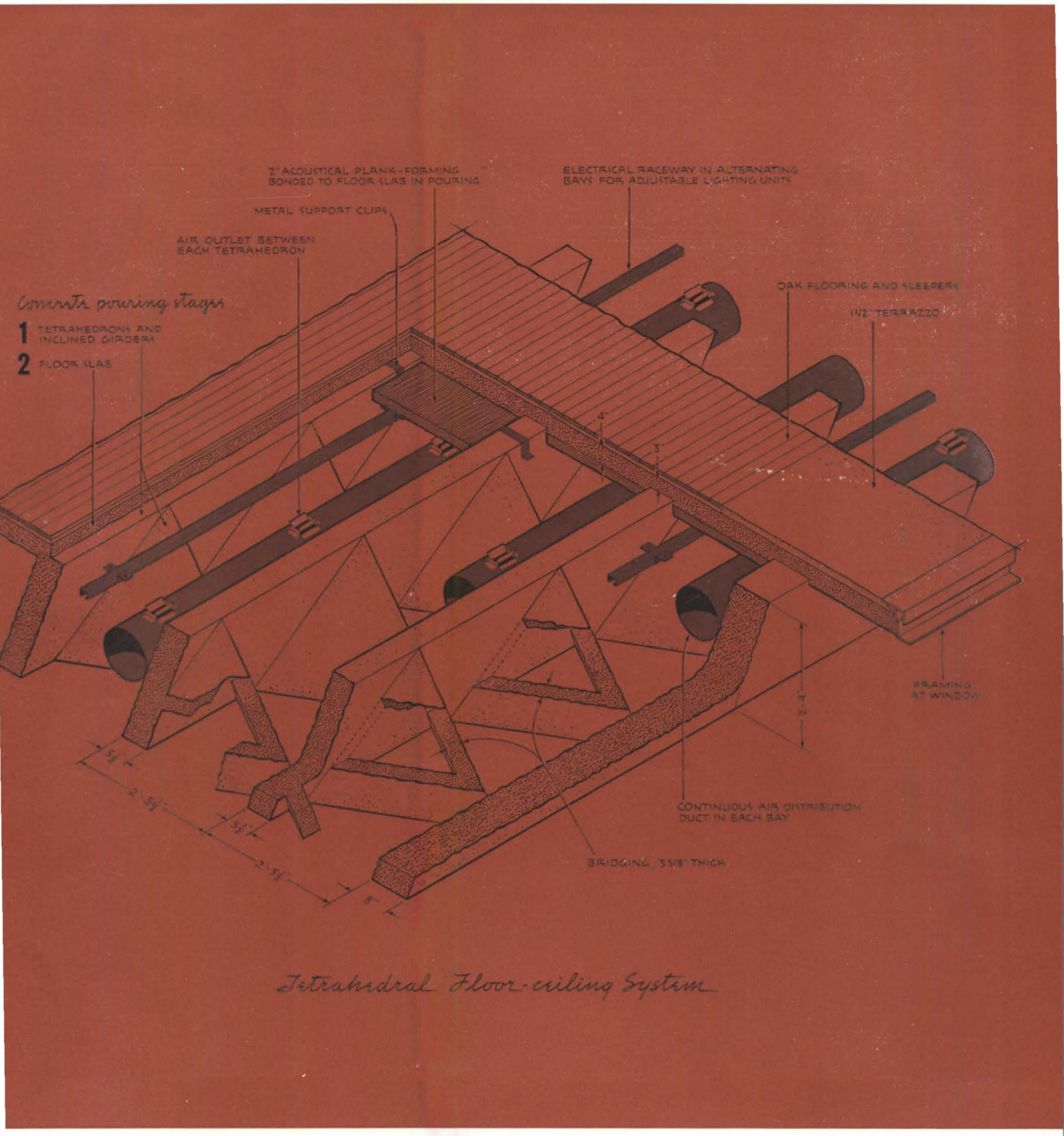


The air-distribution system within the tetrahedral ceiling allows almost complete flexibility in partition placement, since it is designed to deliver a small quantity of air to each *void. The outlets are small, louver openings (some 6,500 in all) that occur along the top of the round supply ducts that run through each row of voids. This arrangement makes use of the underside of the slab (integral acoustic forming) as an inverted air-splash pan. Each of the small outlets can handle up to 20 cfm and is equipped with a double-louvered damper and frame for individual control. The supply ducts receive air from plenums in the central core of the building.* Photo: Norman Ives

The hope was to develop for the floor construction a true space frame—a concept described by Henry A. Pfisterer, structural engineer, as "fastening a continuous plane element to the apices of open-base, hollow, equilateral tetrahedrons which were joined at the vertices of the base triangles in the lower plane."

However, the local building code required some sort of beam system. The modified system, in Pfisterer's words, "consists of concrete T-beams, with deep, inclined stems spanning 40 feet between centers of supporting girders, combined with triangular, inclined bridging elements arranged to simulate the original concept." For further data on this structure, see drawings and discussion that appeared in January 1953 P/A.

This three-dimensional system was not calculated as a true space frame. Nonetheless, it provides comparable hollow spaces and accessibility within the structure to contain air-distribution ducts and trolley duct for lighting units. The trolley duct is attached to the underside of the layer of acoustical material that was



Tetrahedral Floor-ceiling System

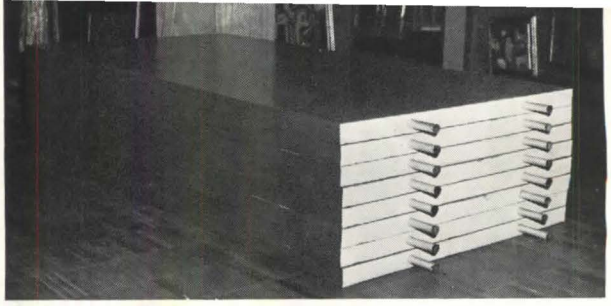
used as the form for, and became integral with, the surface floor slab. According to Richard Kelly, one of the lighting consultants, it was hoped (for maximum flexibility) to run trolley duct in *every* row of voids; but economy necessitated limiting this to every other row.

Two principal types of (interchangeable) lighting units were used:

1. A PAR-light fixture, with shielded housing and spread lens, for projector lamps. Advantages for gallery lighting include direction flexibility (for optimum angling); ease of attachment and maintenance; adjustable intensity (from 2,000 to 23,000 candlepower); and the spread lens that eliminates the hard, distracting edge of light or "scallop."

2. A soft, downlight reflector ellipse with silver-bowl lamps—for offices, classrooms, etc. These produce very soft edge shadows at work level; a crossing of rays (similar to that of the ordinary camera lens) makes it possible to eliminate bright light patches at edges of tetrahedrons; and they are highly efficient in the use of wattage.

art gallery and design center

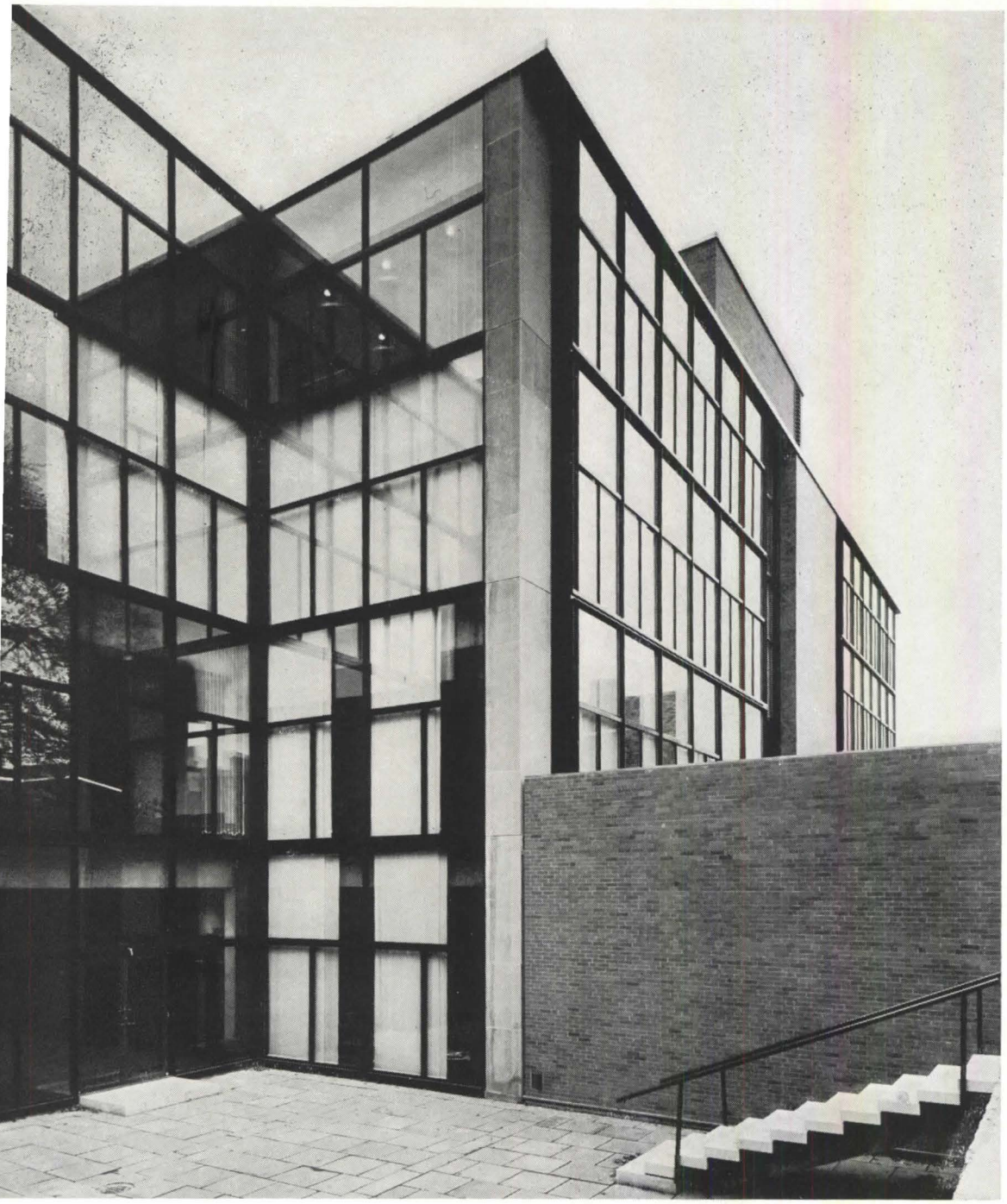


"Pogo stick" panels (right) *may be disposed in a number of ways to partition exhibit spaces* (below) *or any other partial subdivisions of the loft areas.*

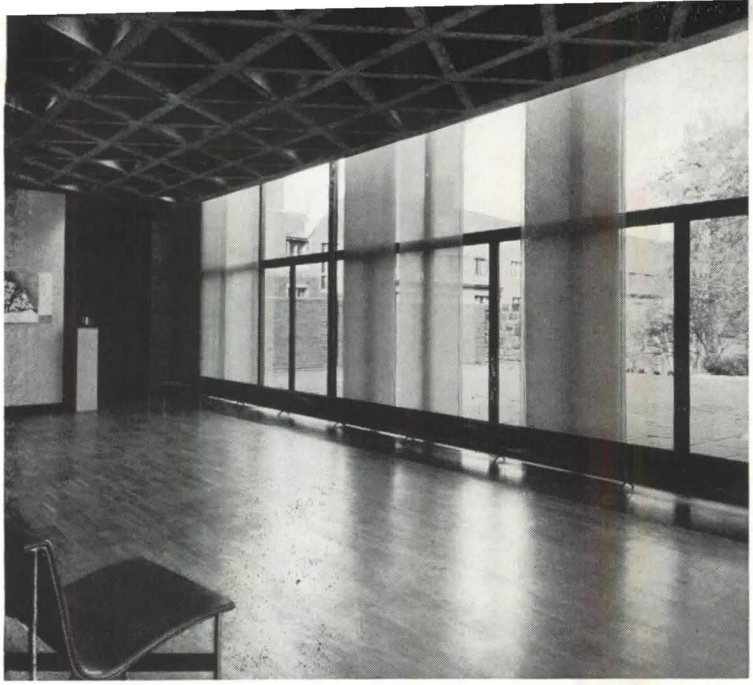
Panel photo: A. Burton Street

Other forms of subdivision are furniture and rows of storage units (left), *and full-height panels that form complete rooms* (below).

Placement of panels within space and arrangement of lights within the depth of the "diaphragm" can produce almost any mood—a dim, cathedral-like aura (right); *a huge space awaiting a new project* (below left), *or a daylighted gallery for student critiques* (below right).



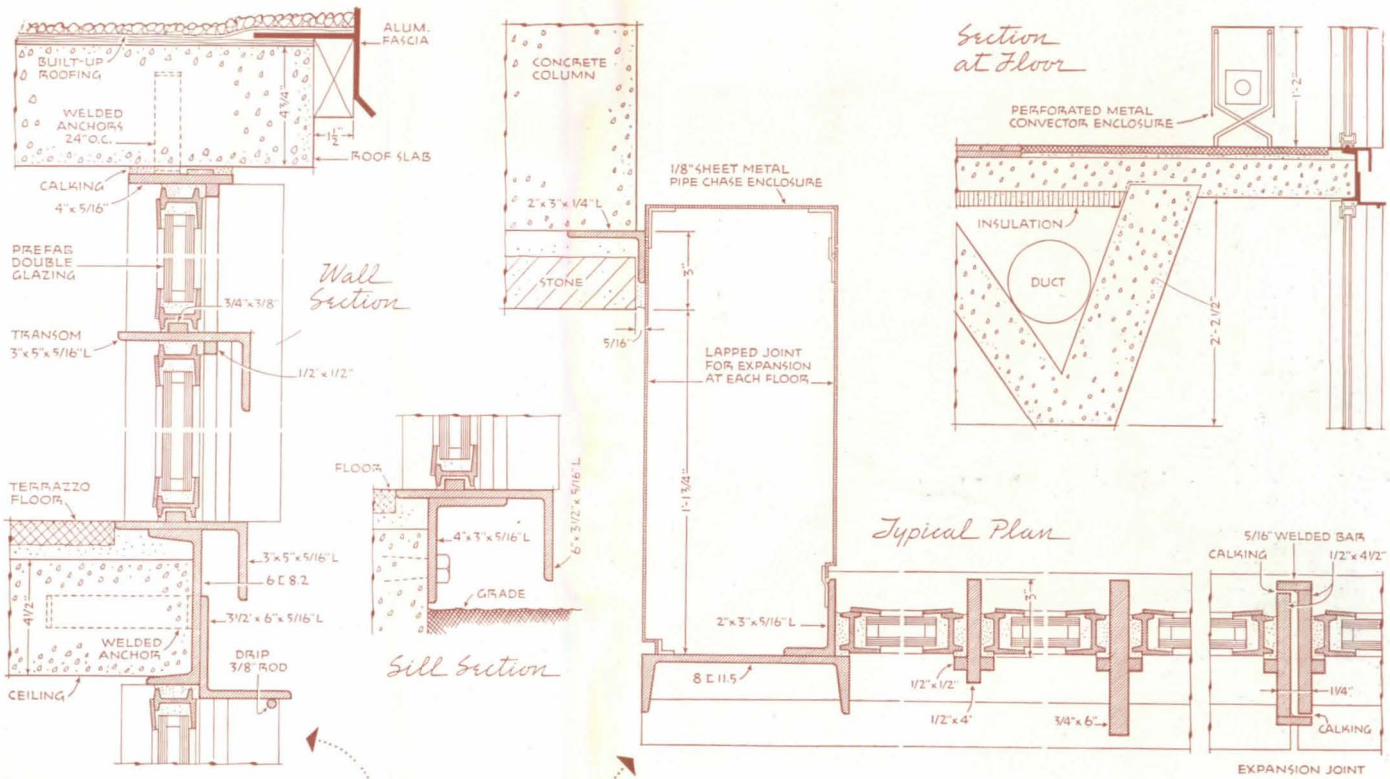
Once the structural order of concrete frame and "breathing ceiling," and flexible device of partitioning had been established, "expression of method" became a paramount design wish—to show how everything was put together and how each part works; even to exaggerate these; to have no extraneous parts; to have every element justify itself, and, so far as possible, be self-explanatory. Detail of window-wall areas documented on these two pages is an excellent instance. Sash members are all made up of standard steel sections, joined in such a way that each performs a useful function. For ARCHITECT'S DETAILS *of roof, pages 130-131.*

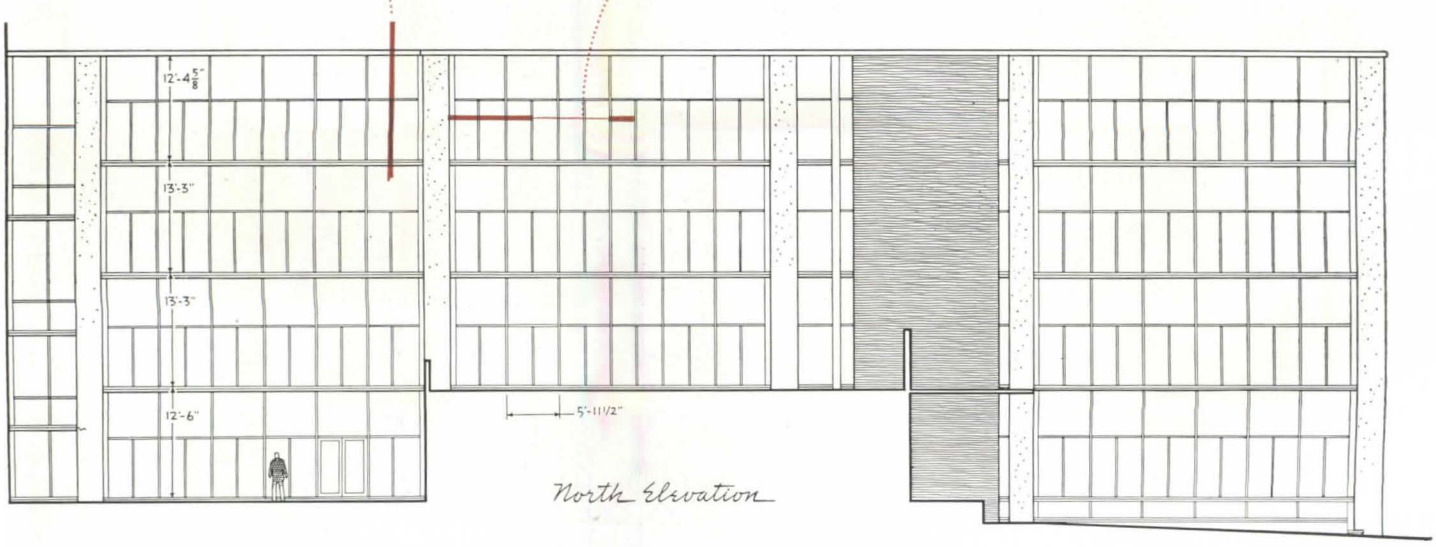


Along the north wall of the building (acrosspage top), *grade occurs at both first- and second-floor levels, due to the terrace embankment forming coutryard to the rear.*

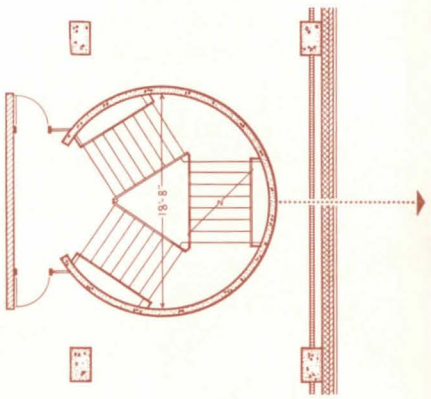
The Planning Section (acrosspage bottom) *on the second floor, looks across the sunken terrace (future sculpture court) to Weir Hall, the old architectural school at the rear of the property.*

Adjoining the upper, terrace level is a space (left), *currently destined for use as a lounge. The light-control panels, or window shades, are of glass-fiber fabric, hung from paired curtain tracks and adjusted horizontally by pull cords.*



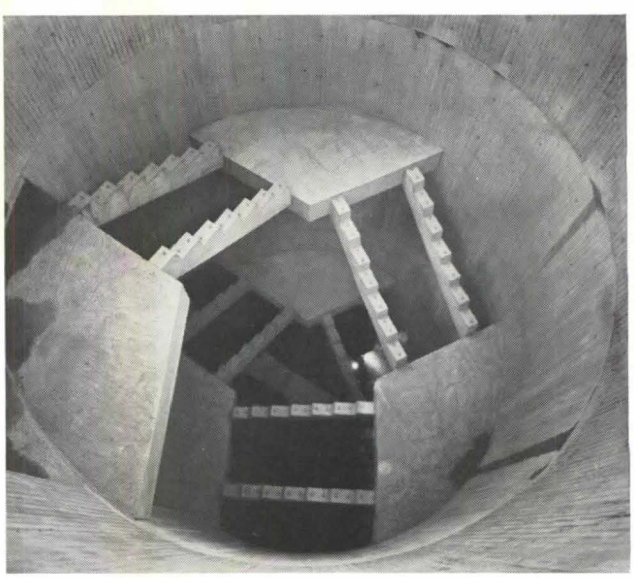


art gallery and design center



Everywhere, construction method is documented and revealed. In the detail looking toward the circular stair-enclosure (above) *note how marks of forming are left on concrete columns and girders; holes that received lugs in formwork for the stair silo remain—as decoration, as well as to show how it was built. Even return-air ductwork that occurs in the ceiling across this area is observable—through aluminum-mesh grills. Joints of erecting, far from being faired out of sight, are boldly exploited with "shadow joints." In the tetrahedral ceiling "lung," all elements are left exposed exactly as they set—unpainted and unadorned.*

The triangular stairway pattern within a circular enclosure is vivid instance of the exaggerated design expression, fairly shouting "here is staircase" and "here is enclosure." Handrails are rigid stainless steel (obviously and reassuringly strong), while the guard area is a mere crocheted mesh of stainless steel (psychological protection; all that is needed).



"The building is exciting and, I am sure, will be extremely serviceable. The architects should be congratulated on the design, and Yale University should be congratulated on having a good contemporary building for its art gallery." Leopold Arnaud

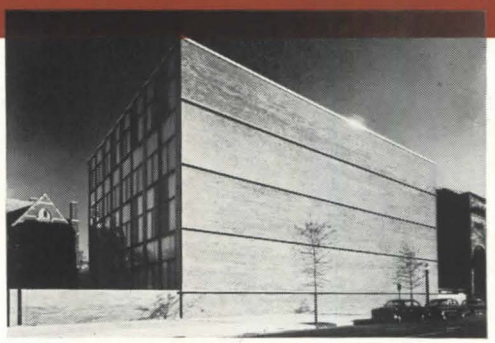
"It is the outstanding academic building produced by the modern movement. . . . Rarely is a building of such technical interest realized in such refinement. Here structure is so integral with architecture it has acquired the value of ornament." Frederick Gutheim

"The decision to treat the new Yale Art Gallery and Design Center as a block of space, to be divided and redivided as needs require, is a splendid piece of architectural statesmanship. Granted the validity of the major decision, and it strikes me as unquestionable, any comments about detail in executing the concept become of very minor importance." Robert W. McLaughlin

"The gallery is an outstanding piece of architecture. . . . It achieves architectural distinction because here art is in control of the technologies of building. Whatever shortcomings might be pointed out are hardly sufficient to dim my enthusiasm. . . ." G. Holmes Perkins

"It is encouraging to see a building that has the quality of monumental, bold design—which is very rare today. . . . It follows a trend toward a more sculptural expression in architecture which possibly started with Le Corbusier's apartments in Marseilles." José Luis Sert

*These opinions were excerpted from letters to the Editor (see VIEWS).



construction

Foundation, floors, walls, roof: reinfrced concrete—Alpha Portland Cement Company, Belgian steel. **Wall surfacing:** exterior brick—Stone Creek Brick Company; slate memorial tablet—S. H. Hamm & Son. **Floor surfacing:** oak; terrazzo; rest rooms and janitor's closets—American-Olean Tile Company. **Ceiling surfacing:** exposed concrete; expanded aluminum mesh in center core area—Penn Metal Company, Inc. **Roof surfacing:** tar and gravel—Allied Chemical & Dye Corporation, Barrett Division; terrace: bluestone. **Waterproofing and dampproofing:** pitch-conite. **Insulation:** wood-fiber-cement planks—Tectum Corporation. **Partitions:** cement block—Plasticrete Corporation; brick—Stone Creek Brick Company; plywood—United States Plywood Corporation; steel toilet partitions—The Sanymetal Products Company, Inc. **Windows:** frames—Sexauer & Lemke, Inc.; sash—Hope's Windows, Inc.; double-glazed glass—Pittsburgh Plate Glass Company; glass-fiber curtains—Owens-Corning Fiberglas Corporation. **Doors:** interior hollow metal—Williamsburg Steel Products Company; oak—United States Plywood Corporation; service doors—Cornell Iron Works, Inc.; passenger elevator doors—Art Metal Construction Company; bronze entrance door frames—Ellison Bronze Company; roof scuttles—Babcock-Davis Associates, Inc., The Bilco Company. **Hardware:** lock sets—Sargent and Company; door closers, hinges—The Oscar C. Rixson Company; curtain tracks—Kirsch Company. **Paint and stain:** exterior and interior—The Martin-Senour Company.

equipment

Furniture: library tables and chairs—Avard; library stacks—Remington Rand, Inc.; office furniture—Knoll Associates, Inc., The Herman Miller Furniture Company, Security Steel Equipment Corporation, The Globe-Wernicke Company; chairs—Laverne Originals, Konwiser, Inc.; museum cases—L. F. Dettenborn Woodworking Company. **Elevators:** passenger cabs—The W. S. Tyler Company; hoisting equipment—F. S. Payne Company; freight cabs—Otis Elevator Company. **Miscellaneous:** stainless-steel stair rail—Babcock-Davis Associates, Inc.; stainless-steel stair rail mesh—Korb-Pettit Wire Fabrics & Iron Works, Inc.; granite steps—John Swenson Granite Company. **Lighting fixtures:** circulation areas—Century Lighting, Inc.; exhibition and office areas—Edison Price Inc.; fluorescent fixtures in classroom area—Ruby-Philite Corporation; exit lights—Prescolite Manufacturing Corporation. **Electrical distribution:** service entrance switch, panelboards, multibreaker—General Electric Company, Trumbull Electric Department; duct system—Bulldog Electric Products Company; wire—Phelps Dodge Copper Products Corporation; conduit—General Electric Company; wiring devices—The Bryant Electric Company. **Plumbing and sanitation:** shower controls, water closets, slop sinks, lavatories—American Radiator & Standard Sanitary Corporation; toilet seats—C. F. Church Manufacturing Company; flush valves—Sloan Valve Company; floor drains—Josam Manufacturing Company; sump pump—Penberthy Injector Company. **Heating:** converters—National Pipe Bending Company; boiler at Yale Power House; condensate pump—The Nash Engineering Company; fin-pipe convectors—Vulcan Radiator Company; radiators—American Radiator & Standard Sanitary Corporation; heaters at entrances, coils, ventilators—The Trane Company; pneumatic controls—Minneapolis-Honeywell Regulator Company; convector covers—Oliver Whyte Company. **Air conditioning:** 25-ton absorption-type refrigerating unit—Servel, Inc.; lithium chloride refrigerant; specially-designed louvered outlets, registers—Tuttle & Bailey Inc.; blowers, cooling coils—The Trane Company; electromatic filters—American Air Filter Company, Inc.; pneumatic controls — Minneapolis-Honeywell Regulator Company; dehumidifier—Westinghouse Electric Corporation; pumps—Worthington Corporation.

remodeling: children's shop in a store for rent

location	Berkeley, California
architect	Henry Hill

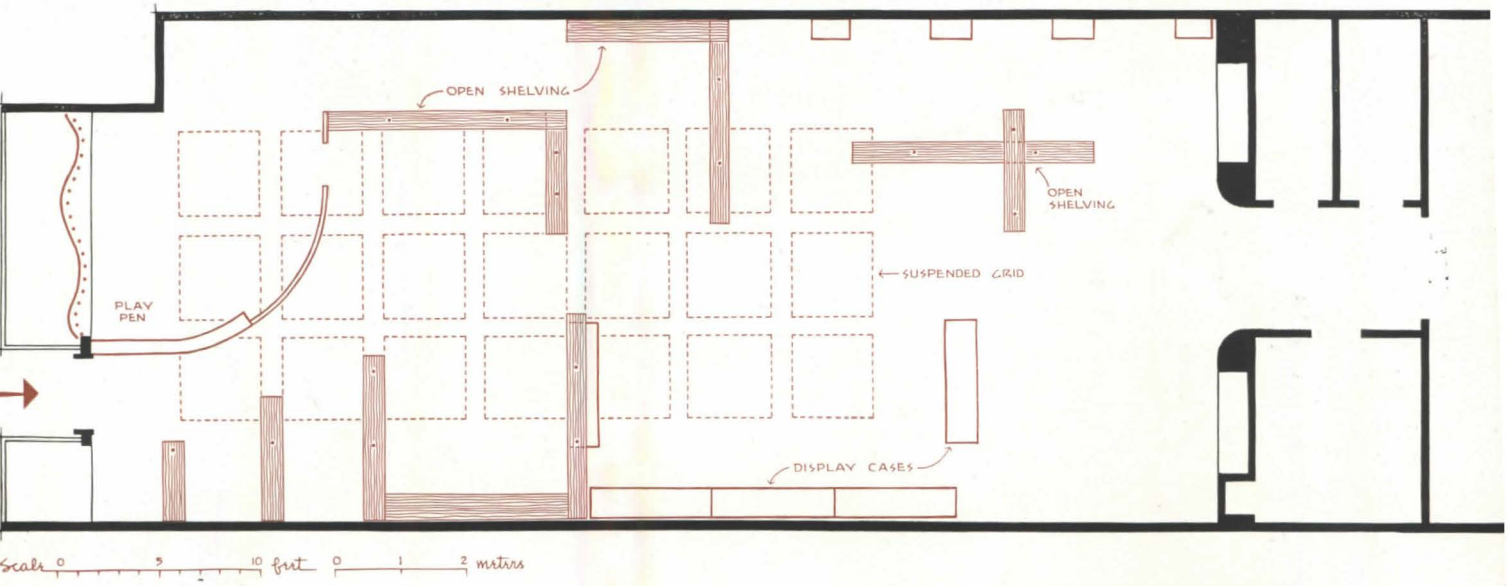
Sometimes new demands are made only on the insides of old buildings—like "The First 5 Years" children's shop near the University of California campus.

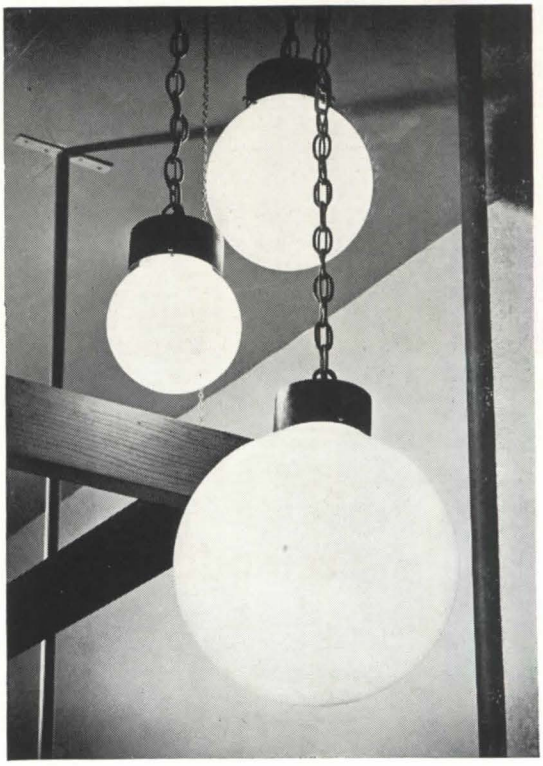
Two sisters who operated a little out-of-the-way children's clothing shop had saved $1000 to gamble on expansion in a new location, and they asked Architect Henry Hill to help them. Nothing was salvageable from the old shop, and they decided to do as much of the actual work on the new one, as possible. Stopping in evenings, the architect drew the plans a stage at a time, always with an eye on the budget. (On opening day, he and his associate, Karl von Hacht, helped hang the fixtures and lay out the stock.) The result is the charming, ingenious, and minimum-cost shop interior shown here.

Except for a few clothing racks, all shelves are hung at least four feet from the floor, by pipes or chains attached to the ceiling. This gives children an almost unlimited area in which to run, with no glass showcases to break or to smear with sticky hands. Adults must stay within the aisles, however, as they are defined four feet above the floor.

Wood frames were suspended (*see* SELECTED DETAIL) from ceiling hooks, installed by a contractor. (The rest of the work was done by the owners.) The frames give the appearance of a lowered ceiling and serve to display toys. Through the frames hang globular frosted lights, also suspended on chains of various lengths. These the architect helped to install a few hours before opening.

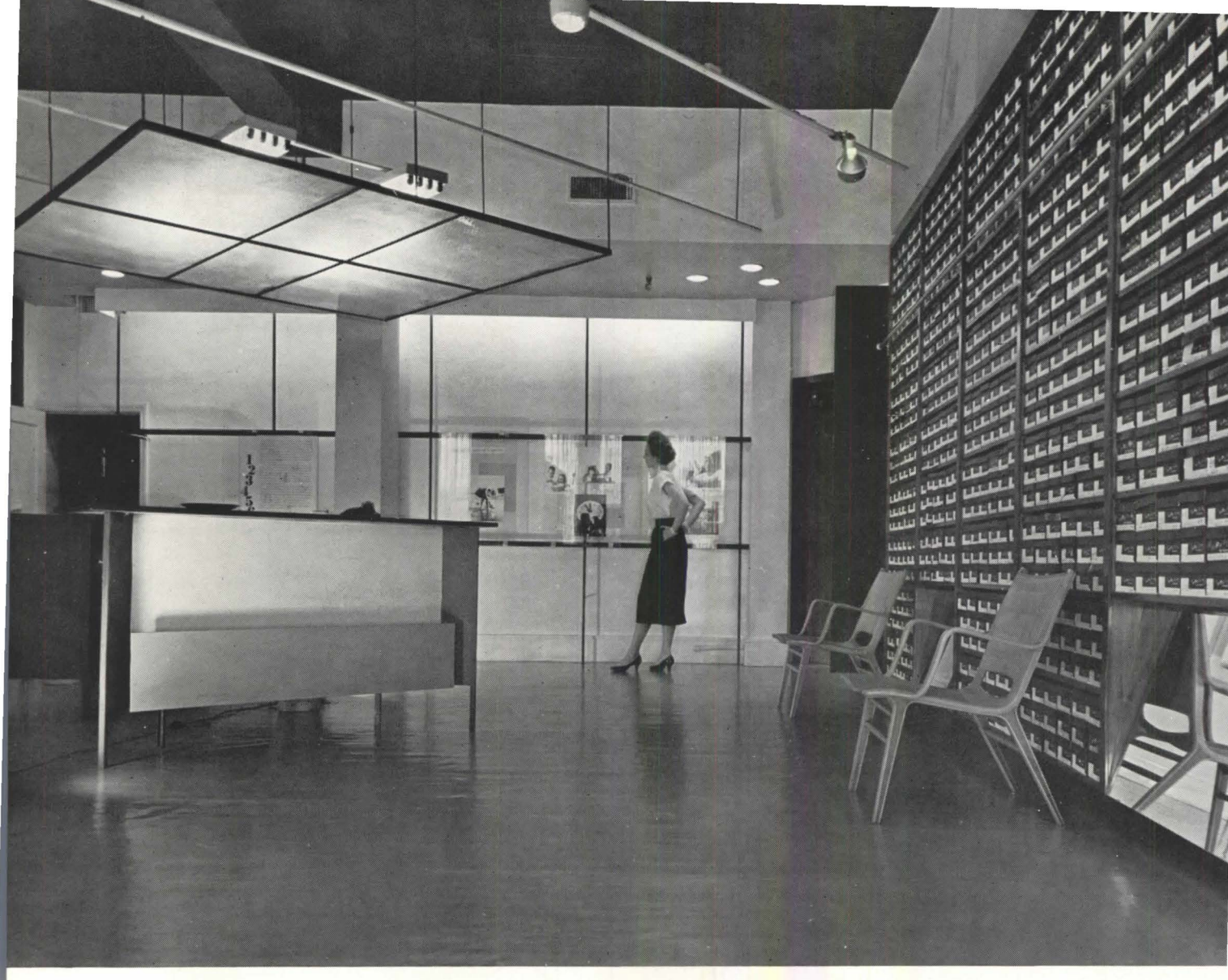
Business has been brisk, so the sisters will make other suggested improvements as soon as they get a breather.





Very small children can be put in the playpen (plan above) *while their mothers shop. Frames and simple clothing cases were made by owners and their family. Chains and lighting fixtures are brass-coated iron. Walls are painted copper color, gray, and gold.*

Linoleum (acrosspage) *came with the rented space and will be replaced in time.* Photos: Morley Baer



remodeling: shoe display room from rental space

A common demand on existing buildings comes from tenants of business rental space who wish to alter the premises into more appropriate, up-to-date settings for their businesses. An excellent example is the shoe display and salesroom shown here. The rented space consisted of two adjoining rooms with a masonry wall between. Removal of the wall gave the designers a spacious, squarish area within which to develop their scheme.

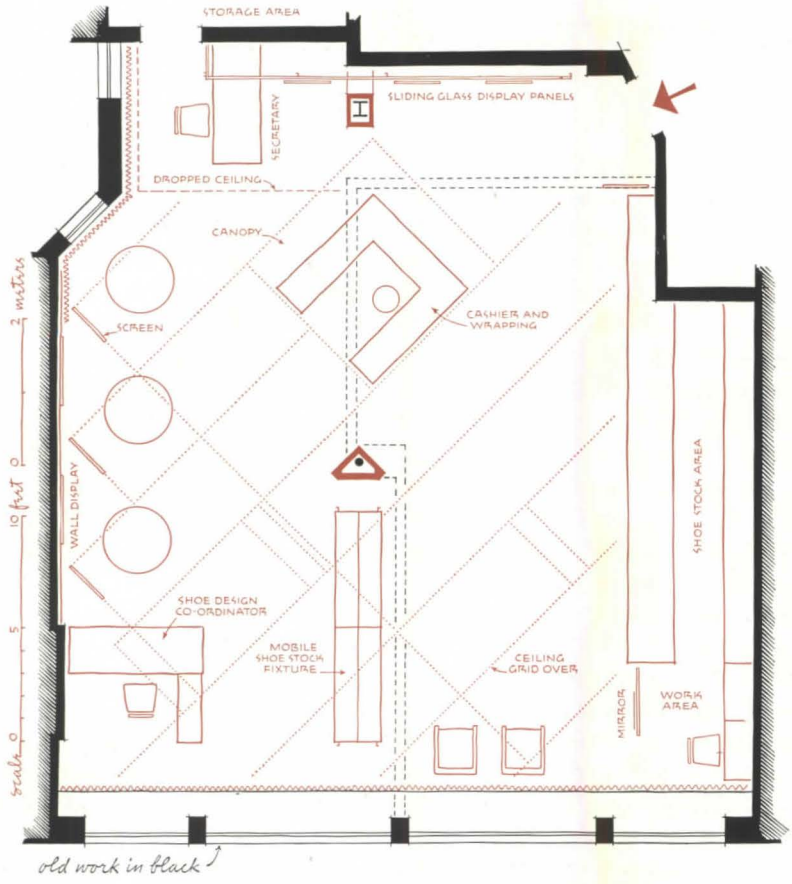
Most of the clientele is professional—actresses, models, dancers, etc.—and the custom of the 60-year-old firm is to allow customers to browse at will and serve themselves. Experienced clerks, who are chiefly busy with filling outside orders, are available when needed.

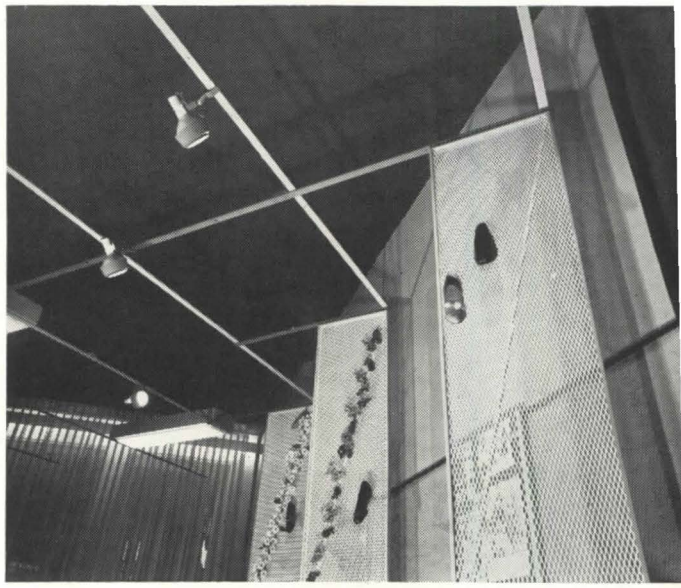
Two main areas are defined. The half nearest the entrance is the browsing area, bordered on one side by a wall of shoe-stock shelving, and on the other by the cashier's desk and mobile (wheel-mounted) stock cases that allow the space to be shaped in a variety of ways. Behind the open-stock shelving is a closed, reserve stock room.

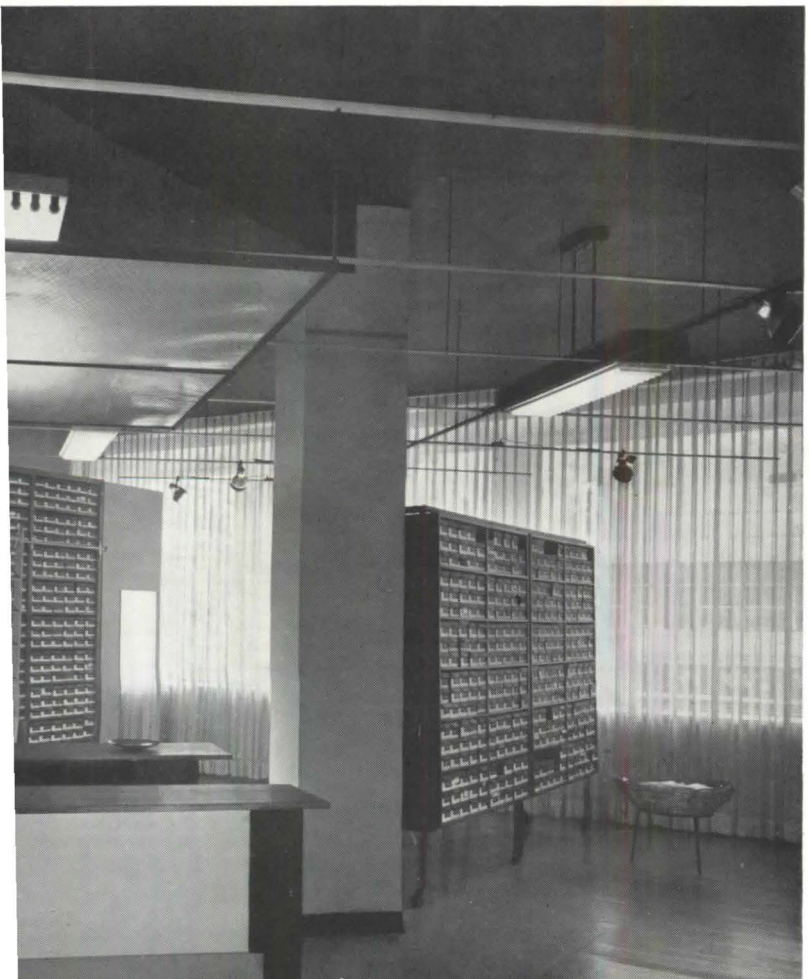
In the other half of the room, furthest from the entrance, the various shoe styles are displayed, on tables or hung from vertical panels of painted, metal lath. Along the rear wall of the room photographs tell the story of the Capezio shoe.

A ceiling grid of steel channels carries wiring and lighting units (both fluorescent tubes and spots); and from it are suspended the metal-lath display panels and the diamond-shaped, ice-blue translucent plastic panel above the cashier's desk (*see* SELECTED DETAILS).

location	New York, New York
designers	Romaldo Giurgola, Roniero Corbelletti, Joseph G. Merz
general contractor	Richter & Ratner Contracting Company







Beyond the cashier's desk and open-stock shelving (left) *are south windows curtained from wall to wall.*

Expanded metal-lath display panels (above) *are suspended from the ceiling grid of metal channels.* Photos: S. C. Valastro

total reconditioning: 430 Park Avenue

Photo: Adolph Study

One of the most unusual and certainly one of the most thorough modernization projects ever planned for a multistory, steel-framed building is now nearing completion at 430 Park Avenue, from 55th to 56th Streets, in New York. Once a luxurious apartment house (*left*)—many of the units contained 17 rooms and rented for as much as $12,000 per year—the original plans for this block-long structure, by Architects Warren & Wetmore, were approved about a year before the passage of New York's 1916 zoning ordinance governing setbacks. During the past year, this building was stripped of all enclosing masonry and windows, all interior partitions and fireplaces, and all mechanical and electrical services. To the exterior of the 18-story frame has been added an aluminum and heat-absorbing glass façade fronting on Park Avenue, and brick masonry with steel-sash windows on the remaining three sides.

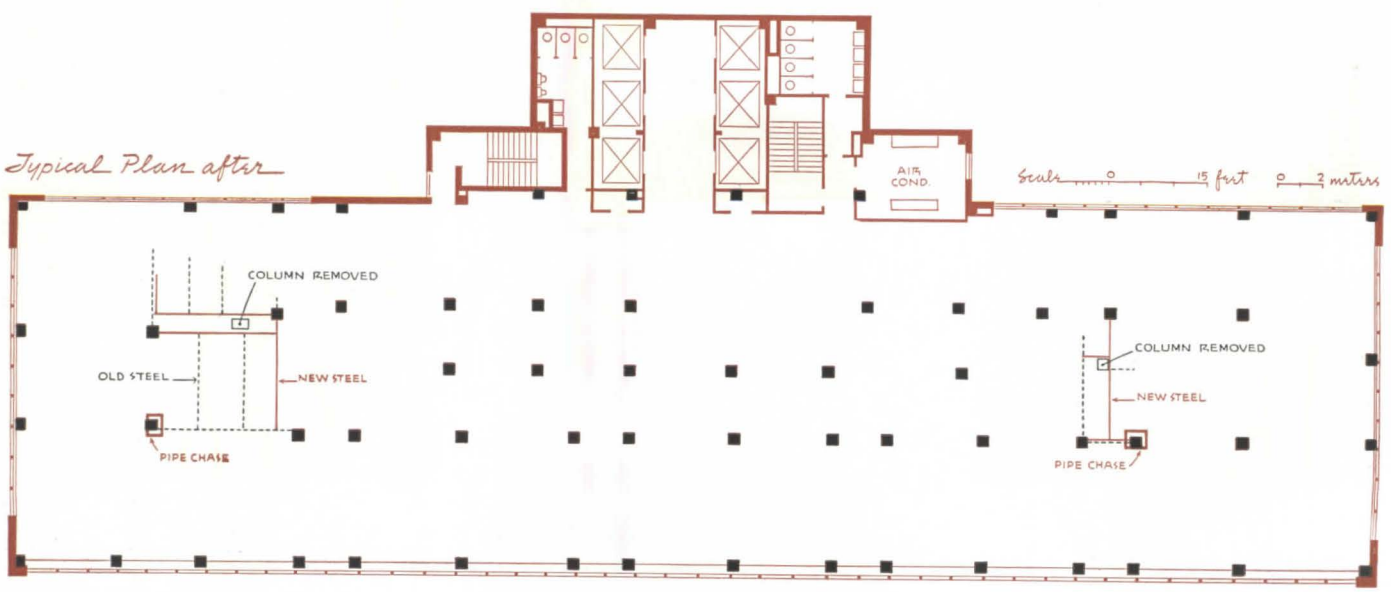
As most of the apartment buildings below 59th Street along Park Avenue are no longer considered economically feasible, that area has been assumed to be most logical for the extension of commercial buildings in the mid-town section of Manhattan. In a long-term lease with the William Waldorf Astor estate, owners of the property, it was agreed that the present apartment building would be demolished *except* for the steel frame, which would remain intact. Although the structural-steel sections are heavier than would be required by the present building code, the frame itself is in excellent condition. Also, it is higher, without setbacks, than would have been possible if an entirely new structure had been designed to meet existing zoning restrictions. Although the columns of the original structure did not follow a rigid pattern of square or rectangular bays, due to the peculiarities of apartment planning in Warren & Wetmore's day, the spacing was not considered unreasonable for commercial office-building layouts. (Note that the column irregularities required slightly different north and south elevations. Exterior vertical mullion intervals also vary slightly, though this is not apparent to the eye.) Actually, only two columns were deleted from the existing building and the problem caused by their removal was easily remedied by the addition of a few steel sections (*see typical floor plan after alteration, acrosspage*). The columns eliminated were formerly needed to help frame the elevator shafts. A new core that now occupies what were

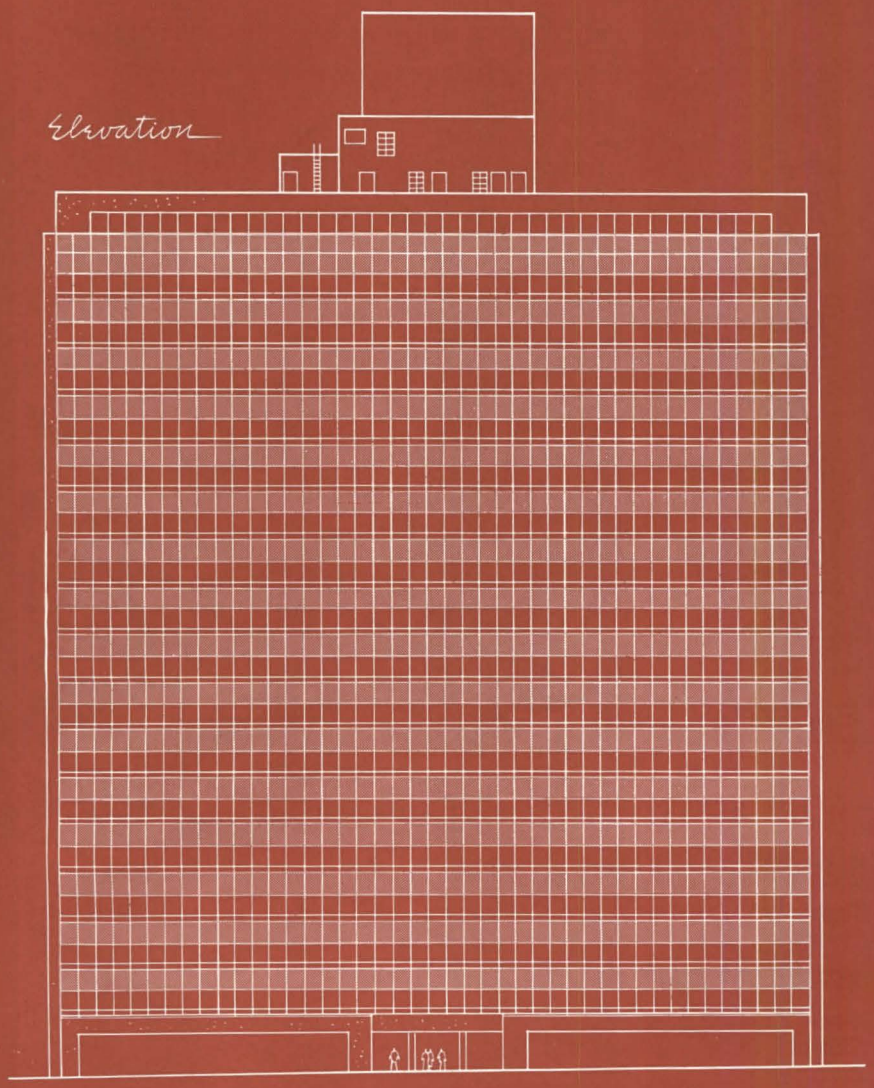
Typical Plan before

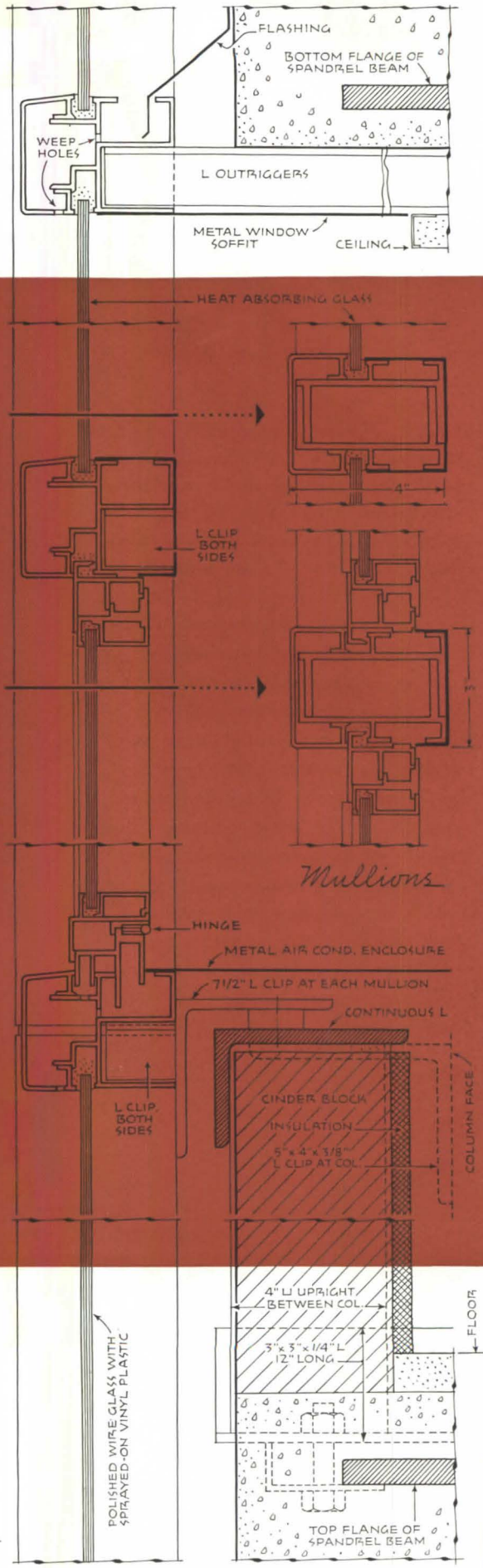
once courtyards at the rear of the building, contains the new washrooms, elevators, stairwells, and, on alternate floors, air-conditioning equipment. Twelve additional columns were required to frame this gained space (*shown in black, below*).

On the Park Avenue elevation, vertical, anodized-aluminum mullions occur at approximately 4′ 6″ intervals and extend (from the top of the marble at second-floor level) the full height of the building. Horizontal head, intermediate, and sill mullions are also of anodized aluminum (*see details*). On each floor, every other window has an operable vent while the remainder of the glazing remains fixed. At spandrels, the back of the polished-wire, fixed glass has been covered with a dark-green vinyl-plastic spray so that the 4″ cinder block walls and concrete fireproofing are hidden from view. Heat-absorbing glass will be installed on the Park Avenue elevation only and this single glazing will be used in conjunction with aluminum venetian blinds. Between the second-floor level and grade, an imported dark, gray-green marble has been applied.

All that remained of original apartment house after demolition were its framework (columns are shown in black, acrosspage), *concrete floor arches, and foundations. New work is shown* (in black, below).
Photo (above): courtesy of *Real Estate Forum*







Wall Section
3" SCALE

The finished floor-to-floor height is 12′ 2″ and the typical ceiling height, 9′ 3″, allows adequate space for the ductwork and conduit of the mechanical services. All ceilings will contain trofer-type fluorescent-lighting fixtures containing shielded-plastic louvers.

The architects and engineers considered that a split-type air-conditioning system would be most appropriate for office space with these proportions (approximately 56′ x 200′). Accordingly, they have specified a central system that will operate in conjunction with individual units located around the perimeter of the building. A specially designed cooling tower is located in what appears to be an added penthouse atop the structure. It has been set back approximately 57′ from the Park Avenue elevation and 75′ from the side street elevations. It is concealed behind a screen of asbestos-cement panels which were selected for their lightness, as they add a minimum of weight to the frame. After the water has been cooled it is piped to the basement for refrigeration. There a centrifugal-type electrically-driven compressor provides chilled water that is supplied to the various elements of the system. Air-conditioning equipment located on alternate floors answers the needs of the interior or general office areas; at the perimeter, individual units condition the air as required by the season. Manual controls on the individual units not only regulate the temperature but also the quantity of air for each office. For its heating requirements this air-conditioning system will make use of purchased steam.

Vertical transportation will be manned by specially trained and uniformed elevator operators and starters. Electronic, supervisory controls will provide 24-hour self-regulation to conform with changing traffic patterns so that the equivalent of express service to every floor will be enjoyed. Each of the six elevator cars will travel at a rate of 500 fpm and will have a capacity of 2500 lb. Five of the elevators will serve 18 floors, and the sixth will serve the basement as well as the upper stories.

Among the occupants of this building will be the Reinhold Publishing Corporation which has signed a 10-year lease for the third, fourth, and fifth floors; Coats & Clark, thread manufacturers; KLM Airlines; Grey Advertising Agency, Inc.; and, at grade level, a sales and display room for Jaguar Cars Ltd. is advertised as having been designed by Frank Lloyd Wright.

Among the many persons that share the credit for the development of this venture are the sponsors, Joseph Gerla & Charles S. Freeman, Gerard and Leonard Oestreicher, and Francis J. Kleban; the real estate broker, Peter Grimm of Wm. A. White & Sons; and the architects, Emery Roth & Sons, who made the architectural translation of the financiers' wishes.

Progress photo, looking southwest along Park Avenue, shows new office structure as it appeared about the middle of February. Building is expected to be ready for occupancy late this month.

Photo: Gottscho-Schleisner

addition and redecoration: new life for a small house

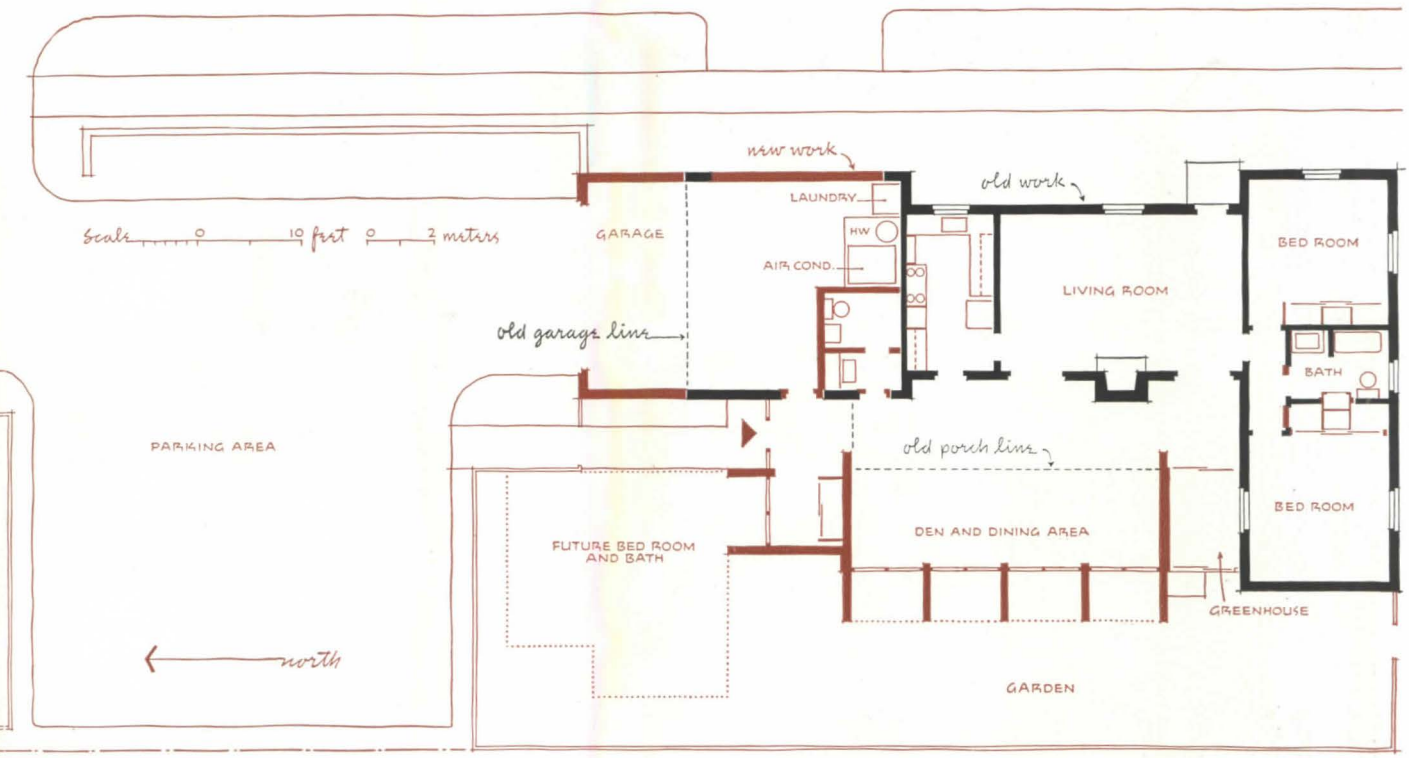
location	Dallas, Texas
architect	A. B. Swank
associate	E. G. Hamilton
general contractor	Porth & McCleskey

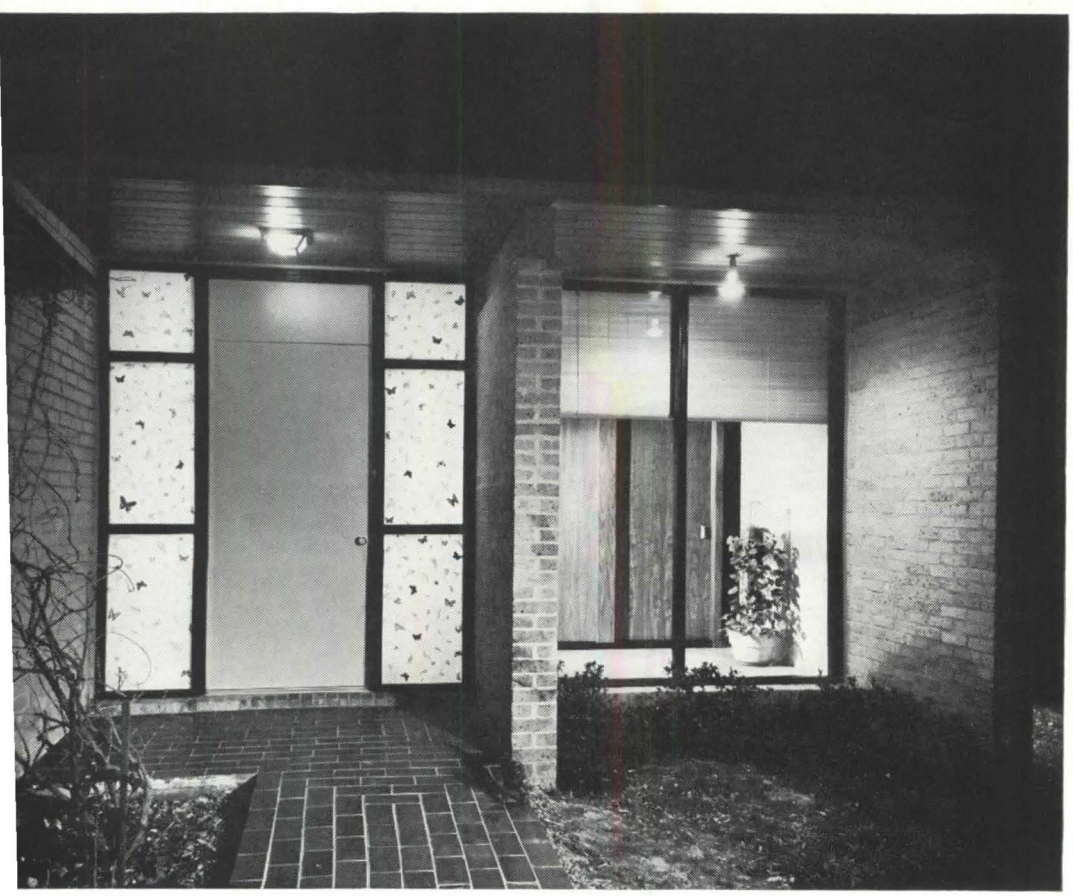
As our cities grow more crowded and home-building sites close to business areas become scarce and expensive, more and more existing houses are being remodeled, enlarged, and redecorated to bring them up to modern tastes and requirements. Indeed, the remodeled house is one of the most common examples of P/A's theme this month: *New Demands on Old Buildings.*

Common as it is, however, architects do not count it an important part of their practices financially, for very few of these jobs find their way to the architect's boards. Nevertheless, when an architect does remodel a house, it is often interesting and fun for everyone —client, architect, editor, and public. Here is one such job by A. B. Swank, in Dallas.

This house was too small to begin with, even for a family that needed only two bedrooms. The living room, which is much too near the street, served as a corridor between the bedrooms and the kitchen. Also, the main entrance opened abruptly into it from the nearby street. The garage opened directly onto the narrow street and created a real driving hazard. On the west side, the porch was rendered practically useless by the hot summer sun and the lack of privacy.

The architect first relieved the constriction at the center of the house by adding a large glassed-in dining room where the porch had been. This is shielded from the sun by wide overhangs and vertical fins. The garage was enlarged and given a new entrance on the lot, not the street, and parking space also was provided on the lot. Finally, for privacy, a wooden fence was built to enclose the back yard.


new work
old work
LAUNDRY
HW
AIR COND.
GARAGE
Scale 0 10 feet 0 2 meters
old garage line
LIVING ROOM
BED ROOM
BATH
BED ROOM
old porch line
PARKING AREA
FUTURE BED ROOM AND BATH
DEN AND DINING AREA
GREENHOUSE
north
GARDEN



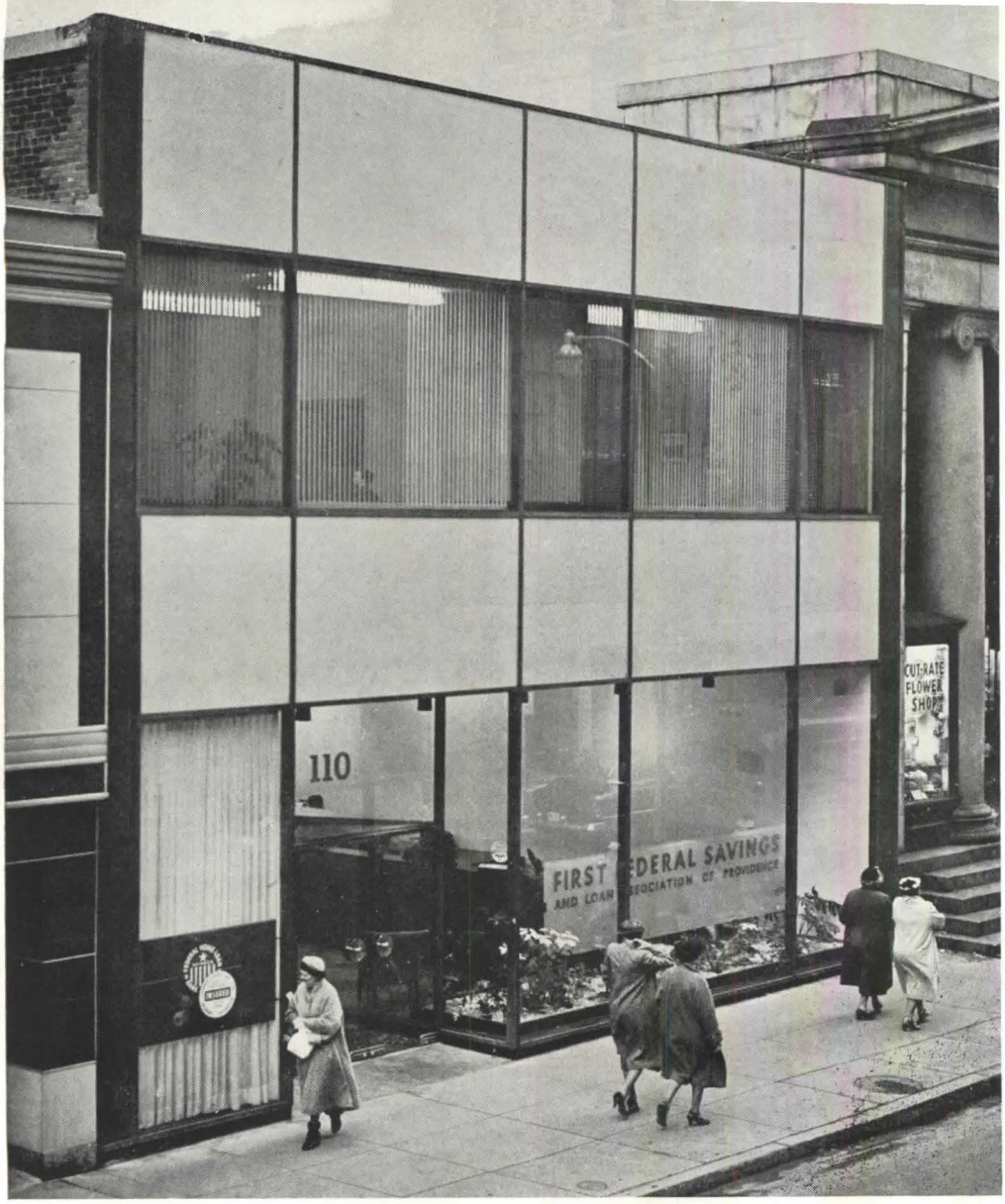
In addition to enlarging the house, the architect was also asked to redecorate throughout. Cork floor and well-designed furniture in new dining room (above *and* left) *give this addition the touch it deserves. Wood fence which encloses back yard can be seen through glass panels and brick fins.*

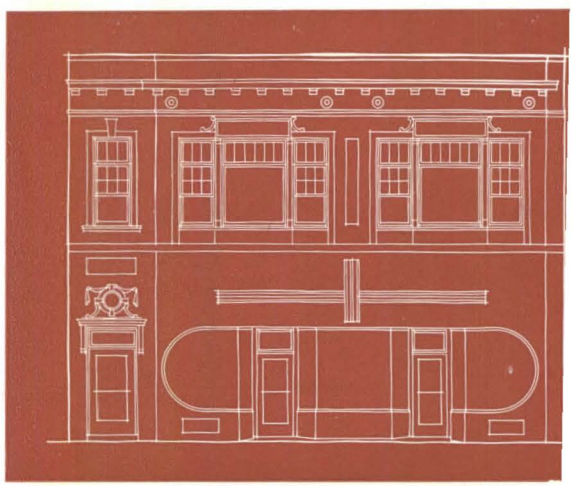
Photos: Ulric Meisel

Glass-covered entry (above) *from back yard is a greenhouse in winter, but is shaded by willow tree in summer.*

Kitchen (right) *was completely done over with new cabinets, equipment, linoleum, and lighting fixtures.*

Suspended lighting panel in living room (below) *was added, as well as wood paneling on wall next to kitchen. Louvered doors at the right side shut off street from this area; before, the living room was practically in the street. All furniture is new.*



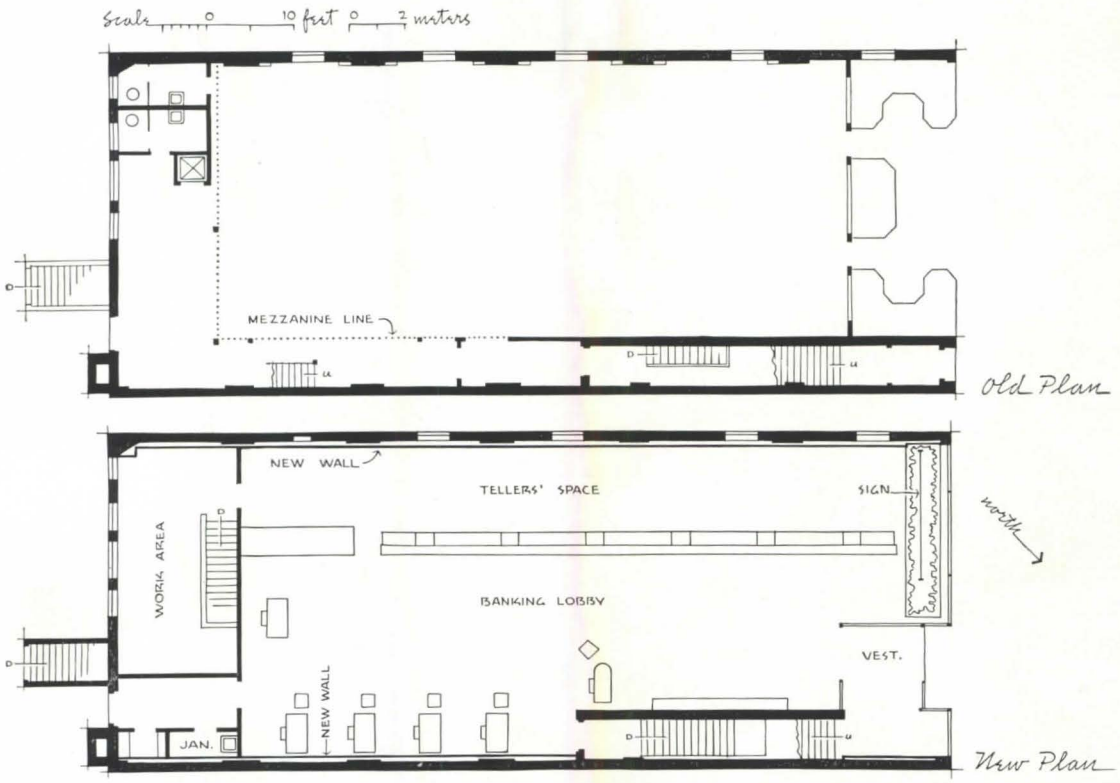


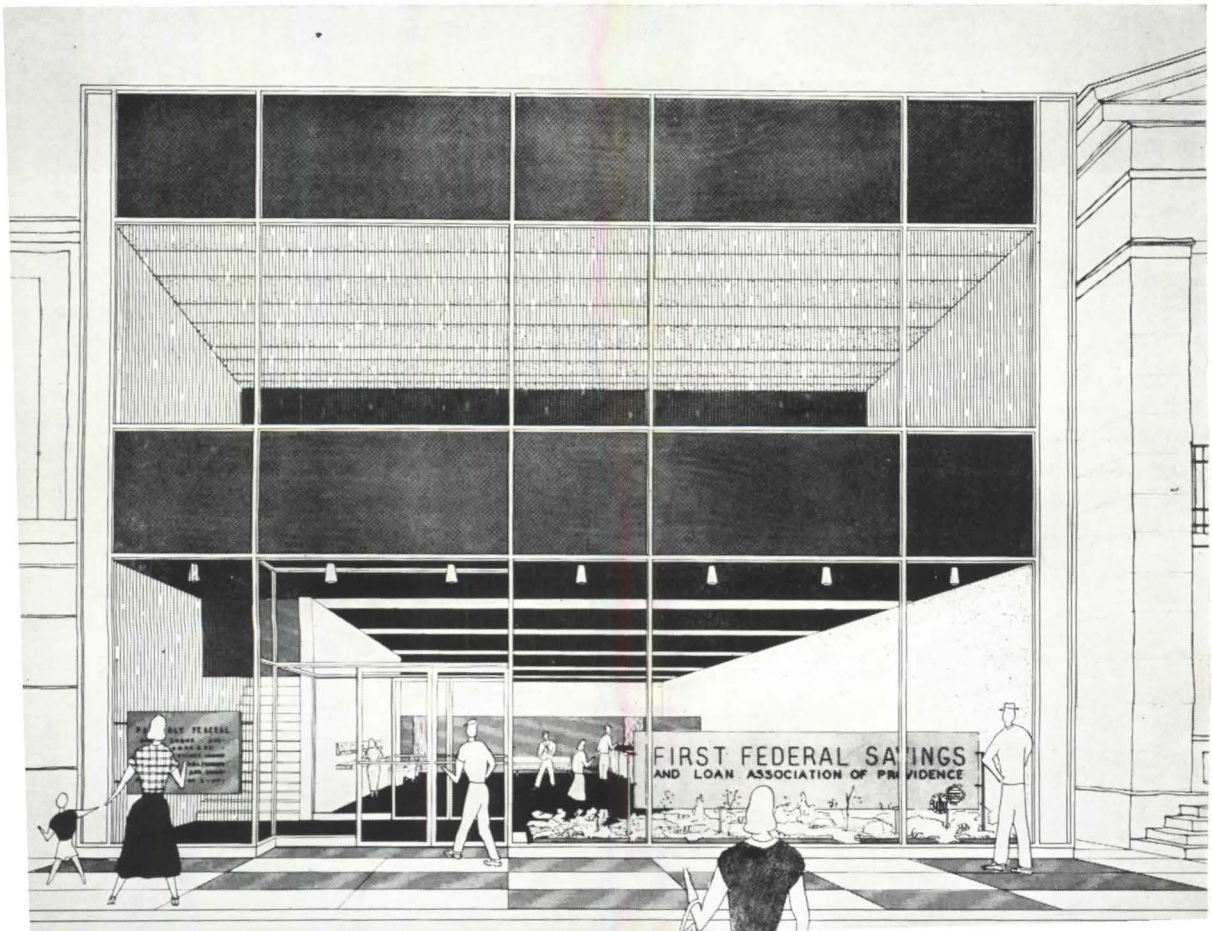
location	Providence, Rhode Island
architects	Cull & Robinson, Conrad E. Green
electrical engineer	John W. King
landscape architect	James D. Graham
general contractor	Frank W. Gustafson & Sons, Inc.

remodeling: financial institution from old shoe store

The first floor of this old building on Providence's cluttered Westminster Street was occupied for more than a decade by a shoe store, while the second floor was rented as office space. Last year, both floors were taken over by the First Federal Savings and Loan Association, and Architects Cull & Robinson and Conrad E. Green remodeled it for this firm.

Within a limited budget, it was not possible to do a complete remodeling job at once. The façade was replaced with transparent and opaque glass, (*bottom and acrosspage bottom*), and the entrance and display window were radically changed (*plans below*). A glass-



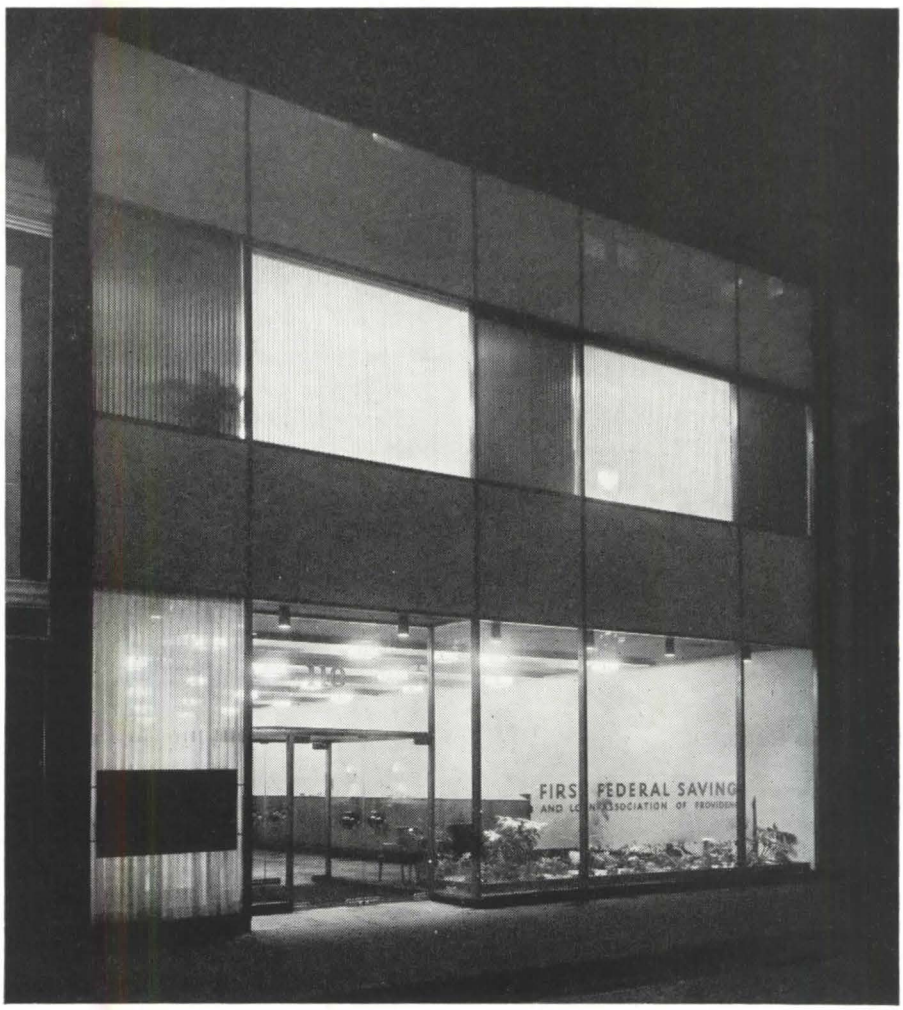


enclosed foyer (*acrosspage*) was used to temper blasts of outside air in summer or winter.

Since a bank does not sell merchandise, the display window contains only a frosted glass sign, which also serves as a baffle for the teller area inside. Plants also are used around the sign, to make the entrance more inviting.

The outstanding remnants from the former store are the ceiling lights, which the architects say make the interior a little "nervous," but since the rest of the building is so calm and restful, no great harm is done. Note how much quieter and more elegant the new façade is, compared with the Greek temple next door.

The basement was turned into a lounge, but nothing was done to the second floor, since it is still used for offices.



Large glass areas present no psychological obstacle to those entering building. No sunshades are required, as building faces north.

One result of the all-glass façade is a great amount of street reflection, which is evident in the daytime photograph.

Photos: Walter M. Arnold

alteration:

New York's Barbizon-Plaza Hotel has for years been known as a Central Park South hotel. Many of its rooms overlook Central Park, yet, until recently, its main entrance was on 58th Street, not on Central Park South (59th Street). Since the Barbizon-Plaza was completed, in 1930, 58th Street has become cramped, noisy, and unattractive; it was therefore decided to build another entrance to the hotel on Central Park South. This involved much more than putting a doorway where a wall had been, however, because the Barbizon Room —a 15-ft-high banquet room—occupied that end of the ground floor, and the hotel did not care to sacrifice any of its revenue for another entrance. As a result of clever engineering, the hotel got its new entrance on Central Park South without forfeiting any floor space in the Barbizon Room.

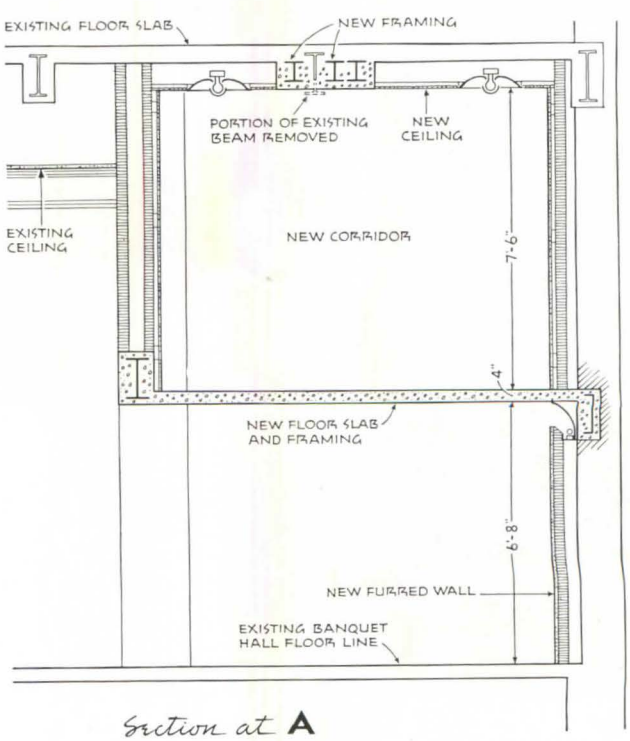
Architect Sydney Goldstone found that, if a four-in. concrete slab floor were poured 6′ 8″ from the Barbizon Room floor at the east end of the room, there would be enough head room beneath the slab for an alcove. But this would leave only a bare seven ft for the height of the corridor which would be an undesired minimum for its length.

However, by burning off the bottom flanges of the existing ceiling I-beams, along with several inches of web, and welding on steel plates of larger cross sections for bottom flanges (*acrosspage, top*), the architect insured that the beams would have the same strength while supplying the corridor an extra six to nine inches in height.

Bracing beams, running in the same direction as the corridor and joined to the cross beams, were reduced in depth and shallow sections added (*below*).

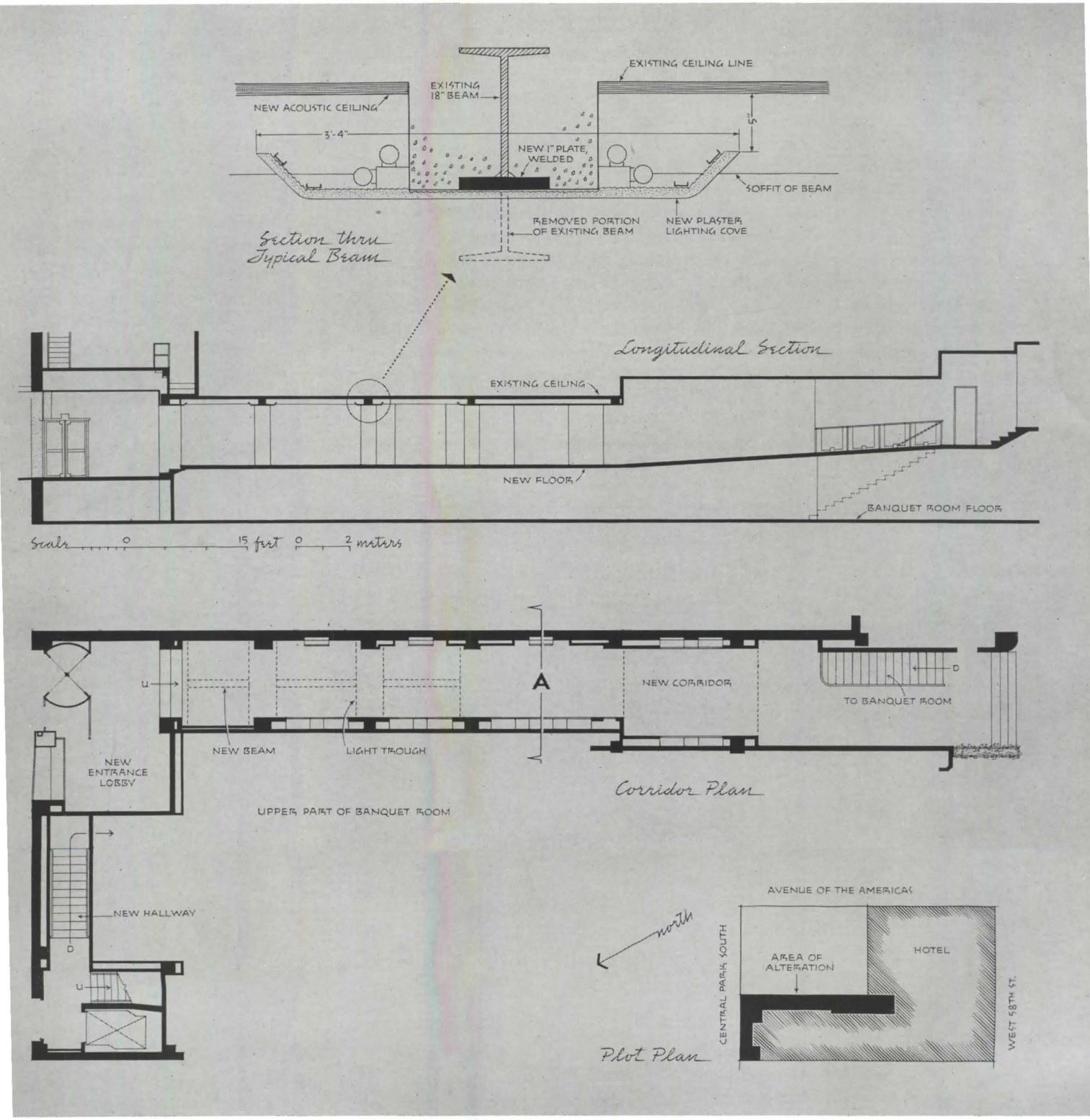
Finally, in order to bring the corridor level up to the lobby level, the floor slab was inclined slightly at the south end (*acrosspage, section*). Here the ceiling height is greater and no head-room problem was encountered.

The walls of the corridor have been faced with travertine marble, and a red carpet covers the floor slab.



Section at A

Barbizon-Plaza

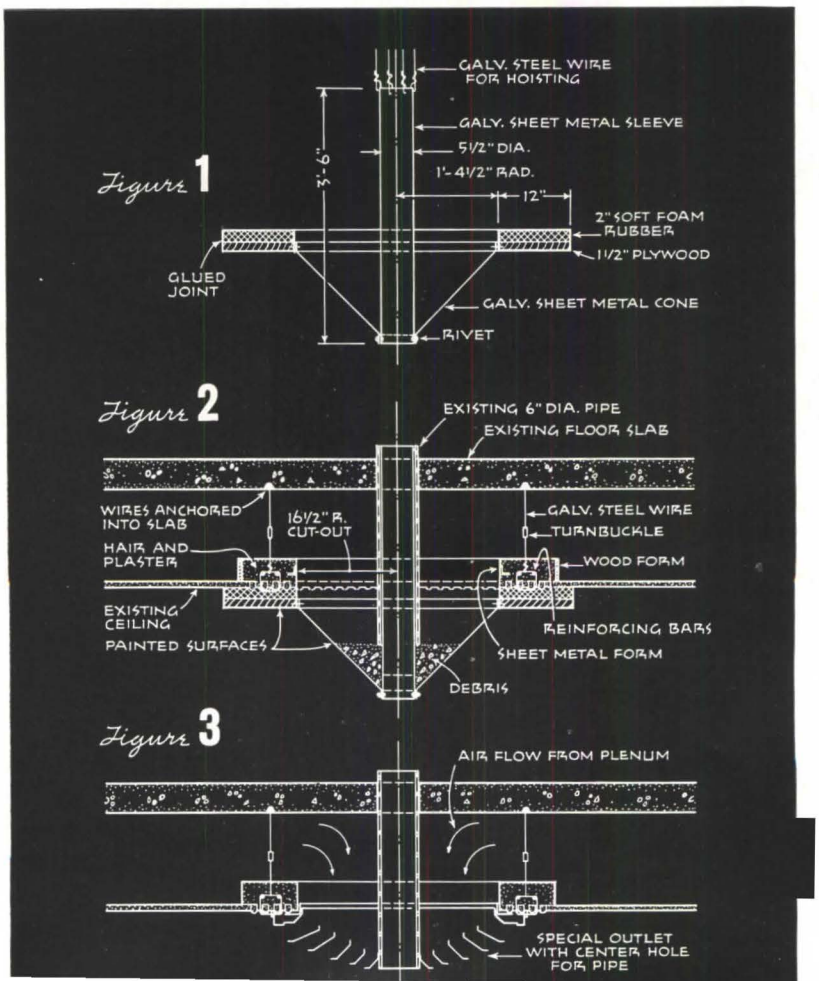


alteration: Waldorf-Astoria

In order to improve the air-conditioning system within the Waldorf-Astoria's Main Ball Room (New York City), it recently became necessary to install a circular diffusor with a 5′ diameter in the center of the 42′ high ceiling. The unusual problem which had to be overcome in installing the outlet was the hotel management's requirement that the use of the room could not be interrupted in any way. This limitation made it impossible to erect any scaffolding or to interfere with a 6″ pipe (extending down through the ceiling) through which decorations for various functions in the Ball Room are hoisted into position. Suspended to form a plenum below the ceiling slab, the room's highly decorated false ceiling includes open-plaster grillwork. Thus, a further problem presented itself: in providing space for the outlet, cutting had to be done in such a way that there would be no danger of the ceiling collapsing.

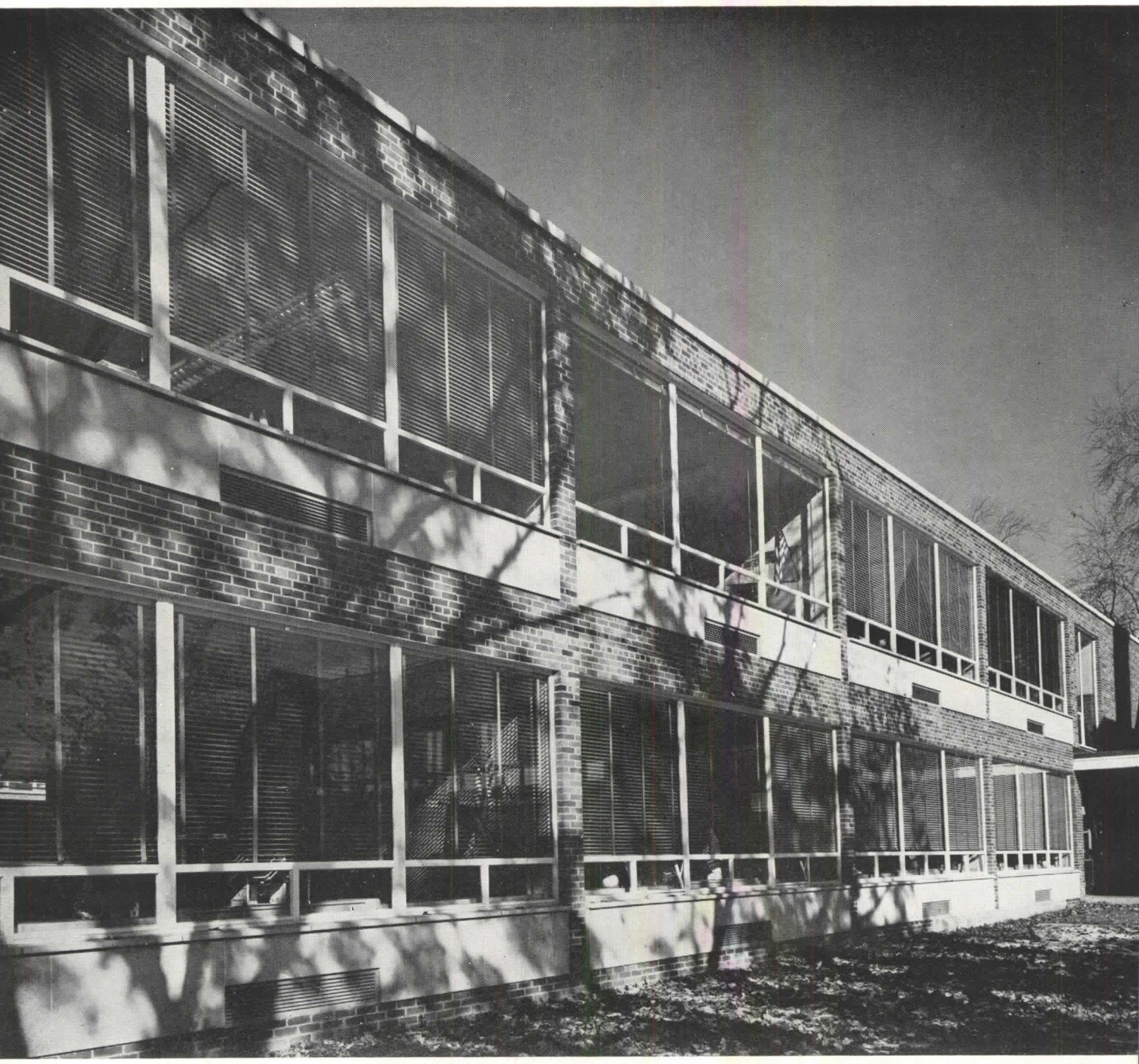
These specific installation problems were overcome by the use of a sheet-metal cone (*Figure 1*) devised by E. B. J. Roos, Associate of Seelye, Stevenson, Value & Knecht, New York Engineers. A sheet-metal sleeve to which this cone was attached was drawn up through the existing hoisting pipe so that a wooden ring, already fastened to the cone's edge and covered with a 2″ layer of foam rubber, rested firmly against the underside of the ceiling. For appearances' sake during alteration, both cone and ring were covered with a coat of gold paint.

At this stage two circular forms were placed directly over the foam rubber and two curved reinforcing bars, laid inside these forms, were wired to each piece of the ceiling's open plaster work (*Figure 2*). Plaster was then poured into the forms and forced down into the plaster grillwork. When the plaster had solidified and the forms were removed, a reinforced-plaster ring was thus left which would provide a strong support for the outside edge of the projected opening. The new opening was then cut in the ceiling to the inside diameter of both the plaster and wooden rings—the debris simply falling into the sheet-metal cone. After all cutting away had been completed, it was necessary only to lower the cone, hoist up the outlet, and secure the outlet to the reinforced plaster ring (*Figure 3*).



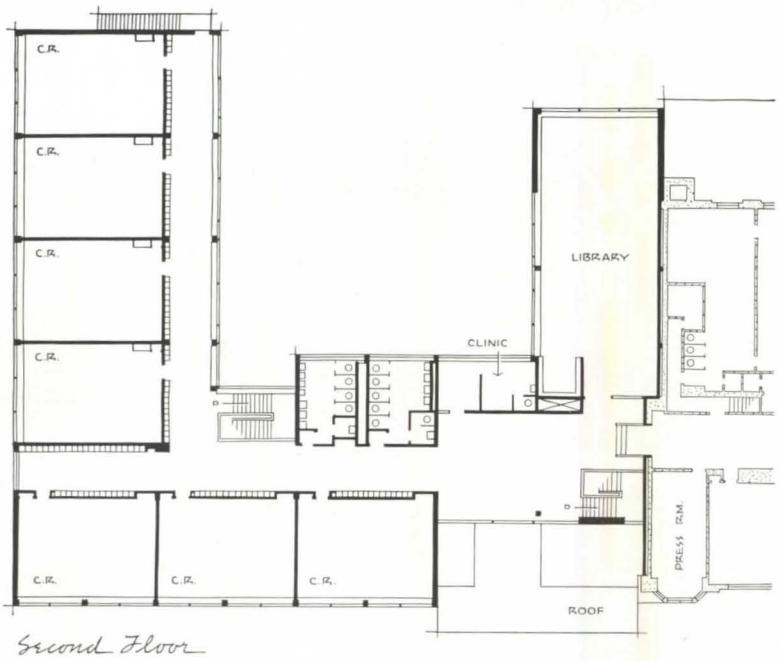
addition: elementary classrooms for a parochial school

location	Grosse Pointe Farms, Michigan
architects	Leinweber, Yamasaki & Hellmuth
engineers	H. E. Beyster & Associates
consulting engineer	H. L. Walton
general contractor	W. E. Wood Company

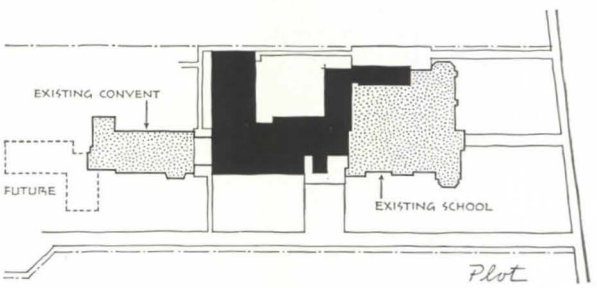


The problem here was that a greatly increased elementary-school population had outstripped the facilities of an existing parochial school. The site available for a new 14-classroom unit was a space between two existing buildings about 140′ x 180′ in area, bounded on the north by a private drive and on the south by a primary grades playground that the authorities wished to preserve. Not the least of the design difficulties was that the existing building, to which the new unit would be joined, was approximately Tudor Gothic, and an expressed wish was to have the new building "blend in" with the old.

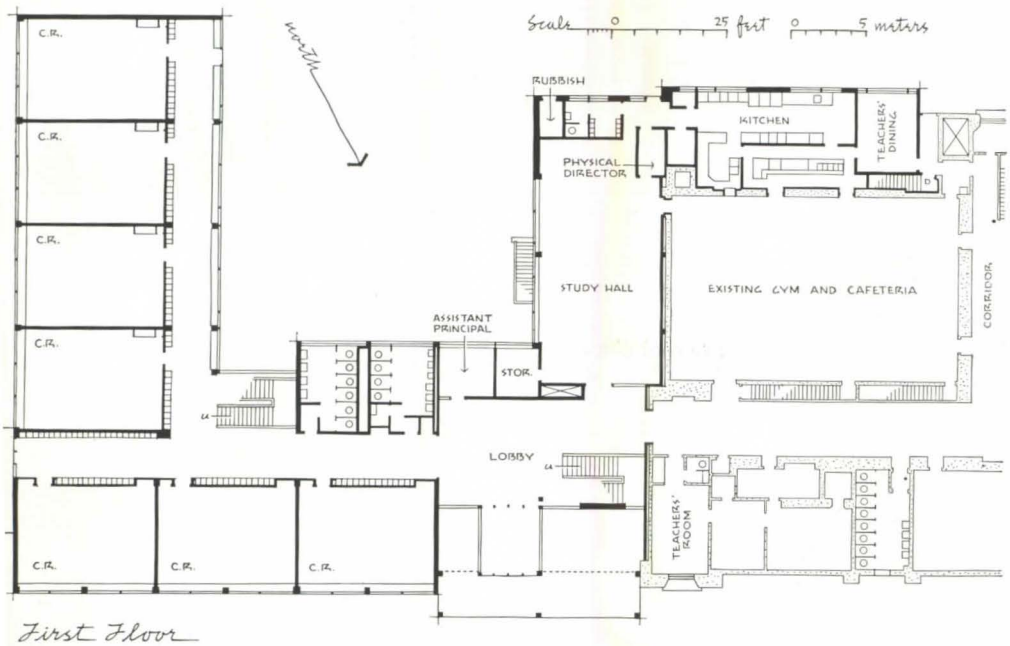
The solution is a two-story building, organized around the play-yard. On each floor of the north unit, in addition to a stair lobby, there are three classrooms, with windows lining their long, north walls. On the east side of the east wing (again, on each floor) are four more classrooms, aligned so that one of the shorter walls is the window wall. In the west wing, on the ground floor, are a study room, a new kitchen, and serving facilities for an existing gym-cafeteria in the old school building. Upstairs, above the study hall, is the new school library. Ingredients in "blending" the new with the old included use of matching face brick and limestone sills and panels.



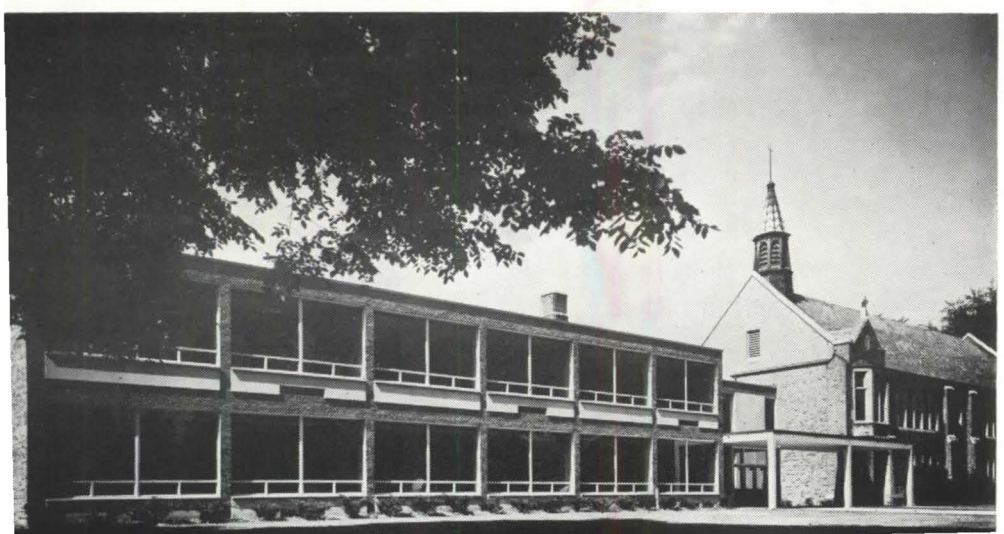
Second Floor

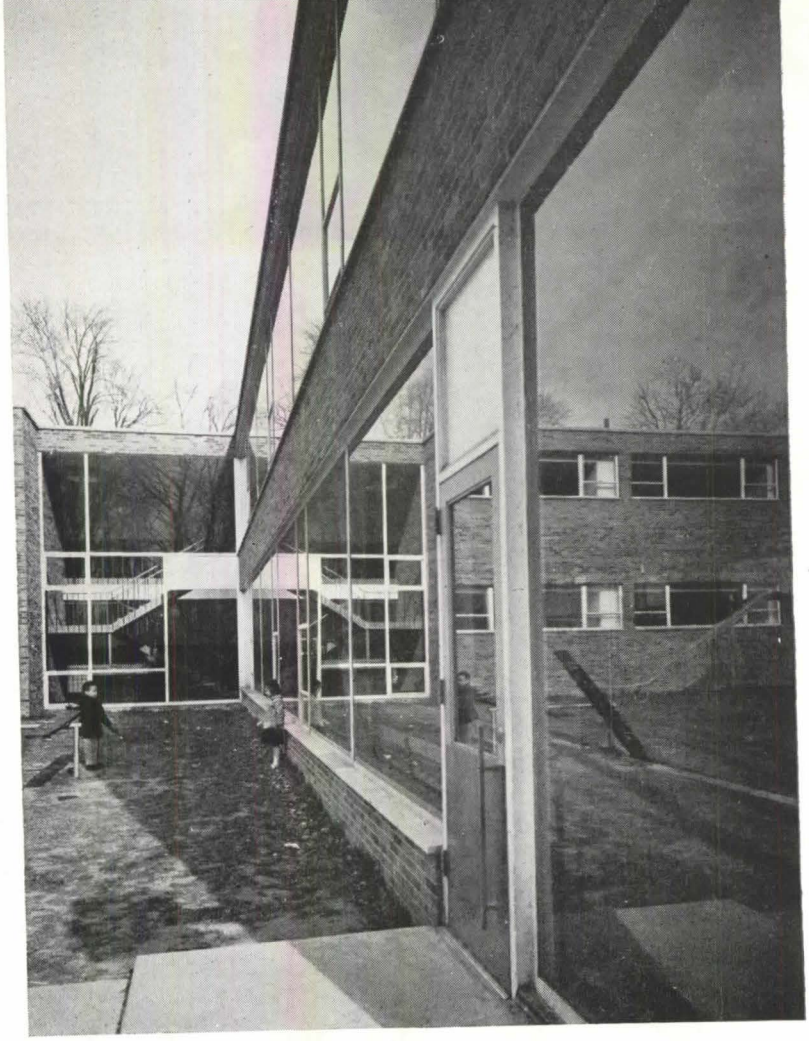


Plot



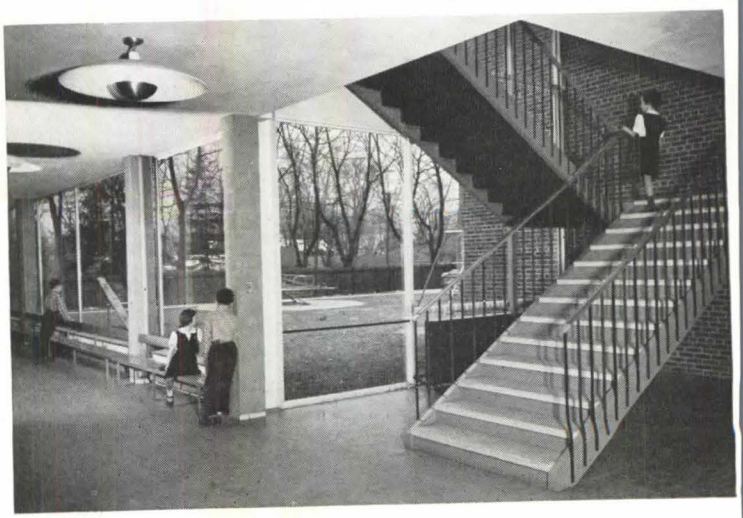
First Floor





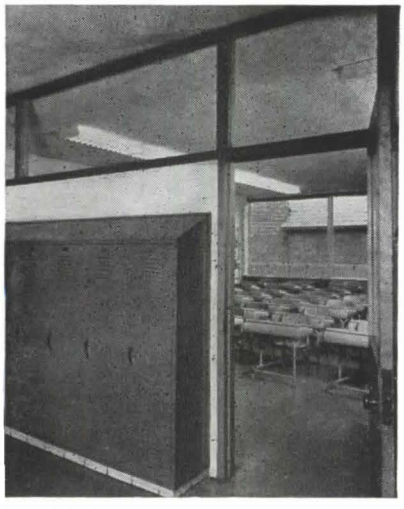
Window walls along the west face of the east wing (above *and* left) *light the corridors and—by means of clear panels above coat lockers—bring crosslighting* ***to each classroom.***

At the intersection of this corridor with the one serving the north unit is a freestanding staircase bordered by full-height glazing (left *and* below). *A similar staircase occurs in the lobby at the other end of the building.* Photos: Lens-Art



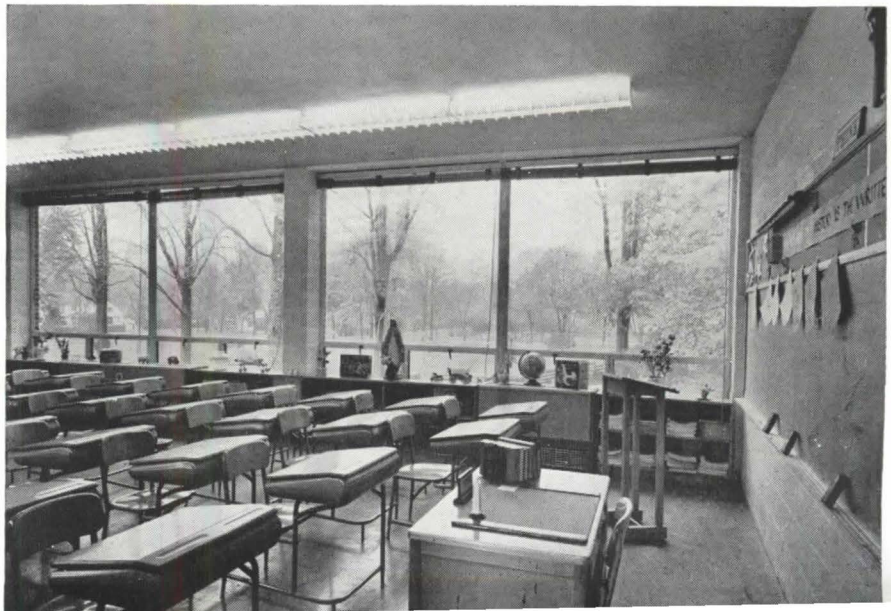
The building is framed of steel, with reinforced-concrete floor slabs over open-web steel joists. Exterior walls are of face brick over cinder block; limestone trim. The hollow-metal sash frames are painted white.

Floors throughout are surfaced with asphalt tile, and ceilings are finished with acoustical plaster. Surface-mounted fluorescent lights are the main source of artificial illumination, though dome lights occur in lobbies and corridors. Sunlight is controlled by venetian blinds. An oil-fired boiler serves a hot-water heating system employing both convectors and cast-iron tubular radiators. Direct radiation is supplemented with unit ventilators in classrooms and other major areas.



The library (above) *occupies the west wing of the second floor. Operable panels beneath the large areas of fixed glass on east and south walls provide natural ventilation.*

Typical classrooms (left *and* below) *have cinder block corridor and partition walls. In the corridors, clear panels of glass above lockers provide bilateral lighting.*



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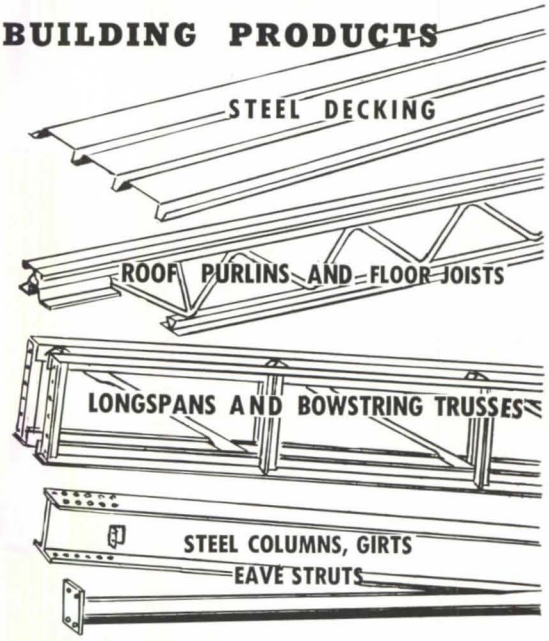

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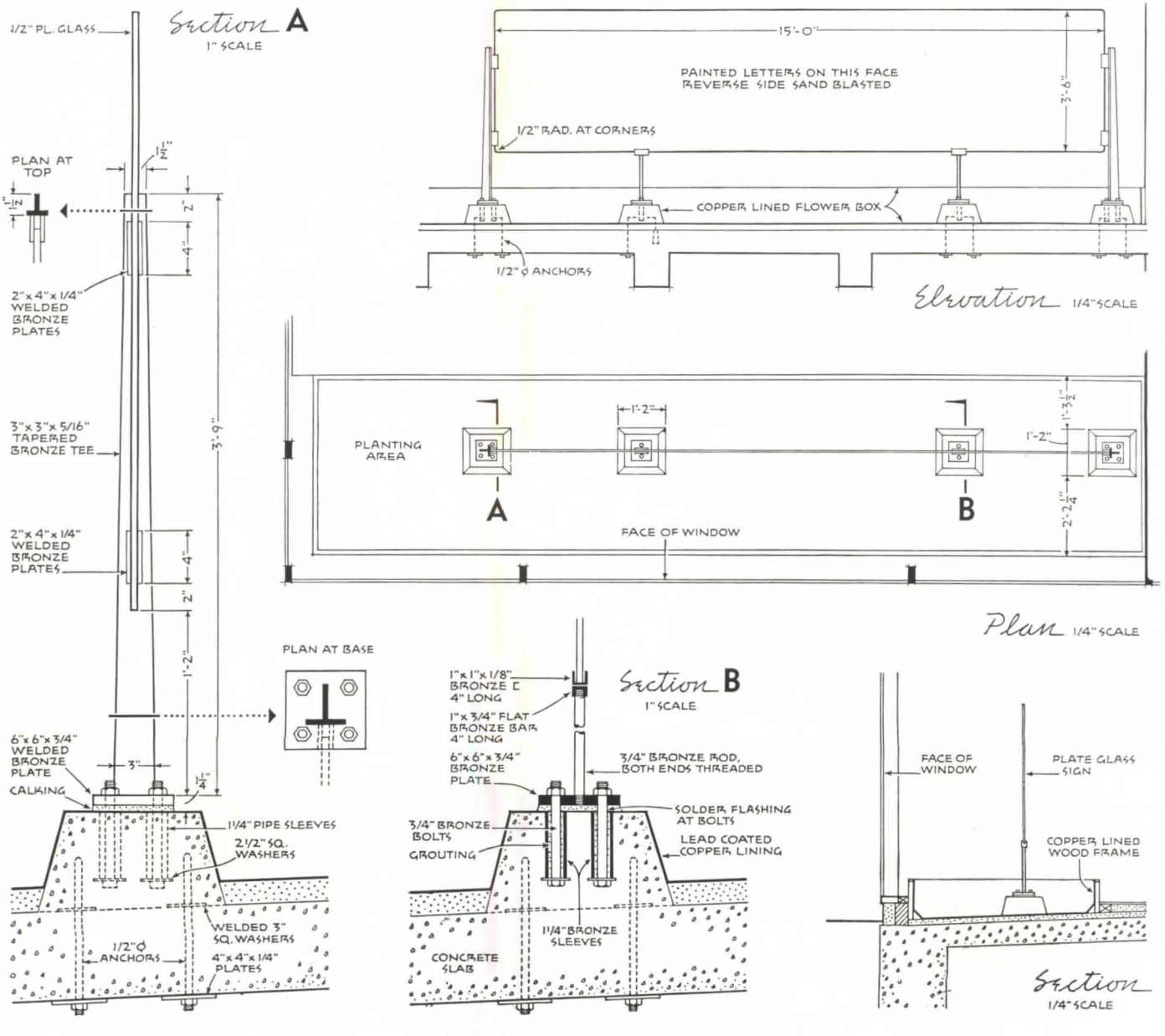
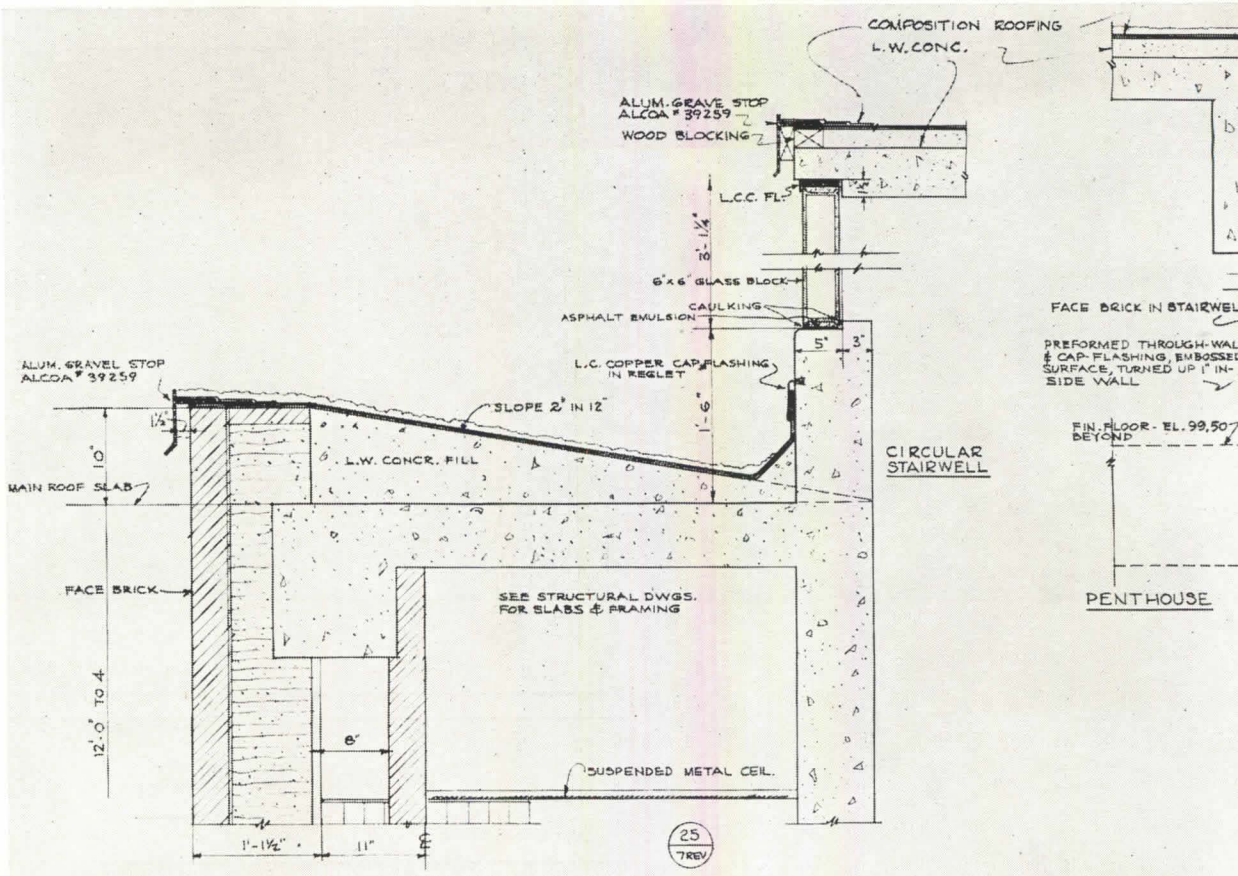


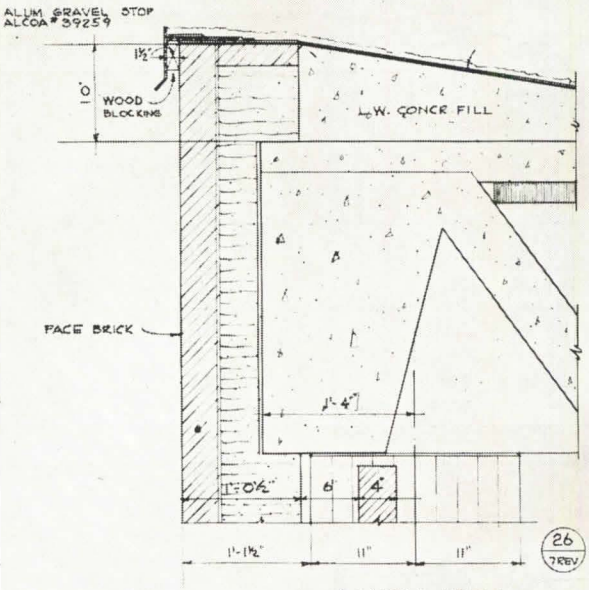
FIRST FEDERAL SAVINGS & LOAN ASSOCIATION OF PROVIDENCE, Providence, R. I.

Cull & Robinson and Conrad E. Green, Architects

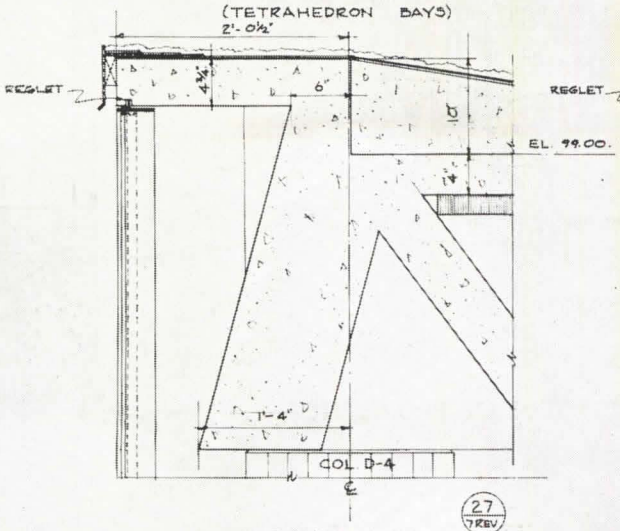
roof details: Yale Art Gallery and Design Center, New Haven, Conn.

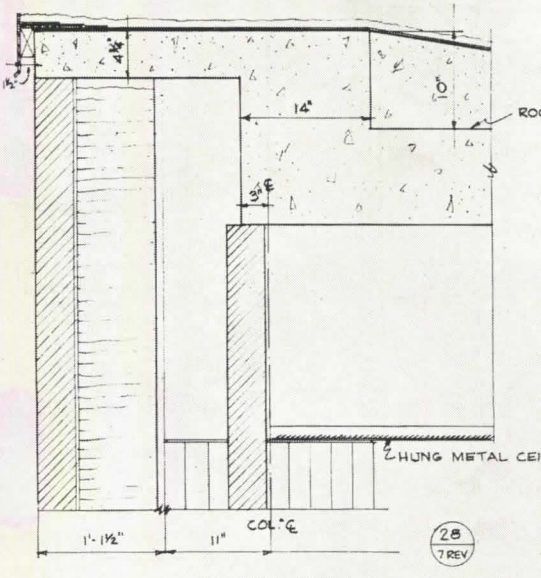


SOUTH WALL AT CORE

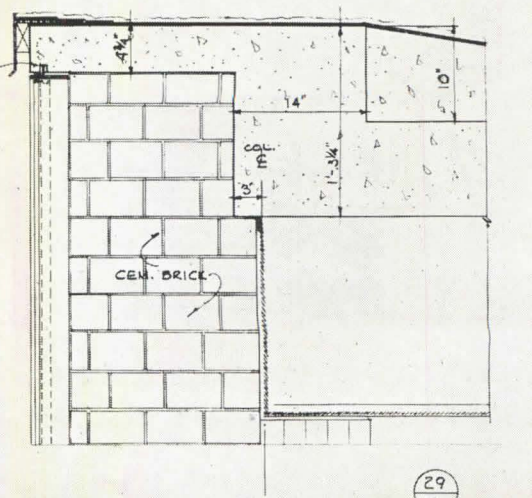


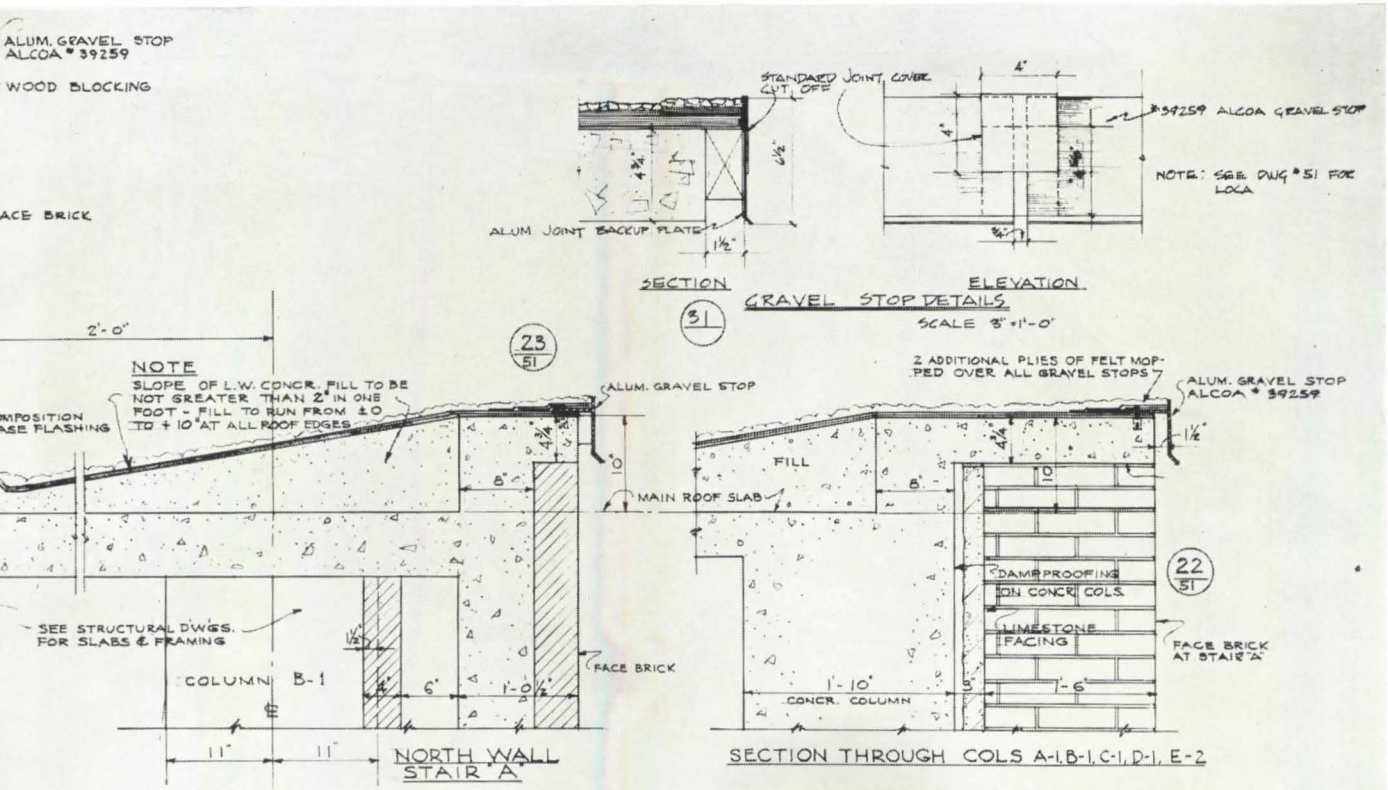
SOUTH WALL
(TETRAHEDRON BAYS)

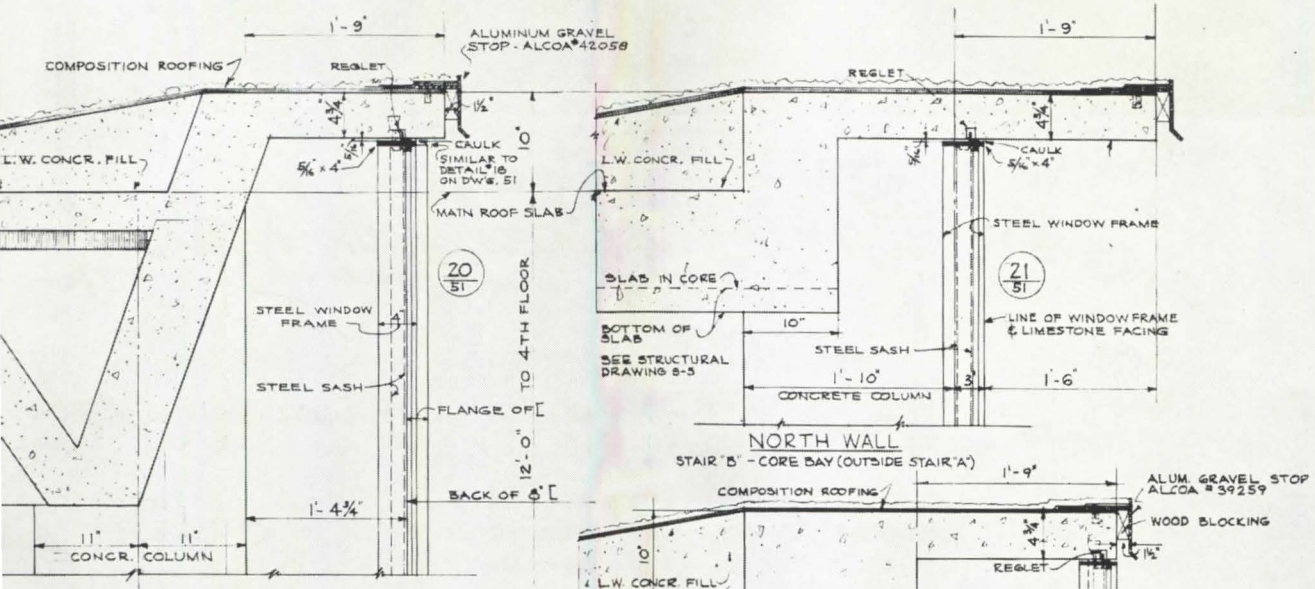


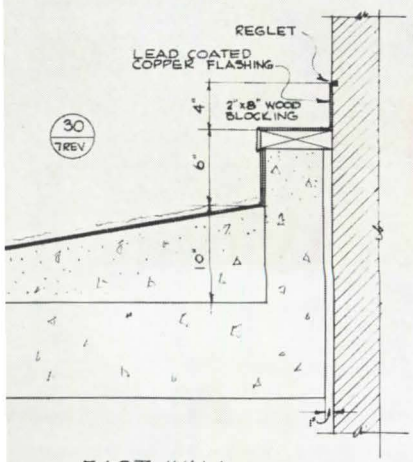


SOUTH WALL
STAIR "B"









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Home Savings & Loan Association, Dayton, Ohio; Architects—Geyer & Neuffer, Dayton; Formica Fixtures—Backus Brothers, Cincinnati

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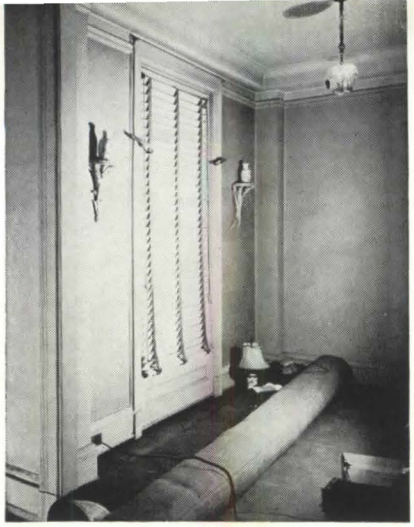


before alteration. *Area used as hallway between kitchen and living room.*

Page Beauchamp

remodeling

Interior design becomes all-important in a remodeling or alteration project. In most cases, the space to be worked with is already determined and the design problem is one of rearranging (physically or visually) to meet new requirements and new uses of the area. The nature of the alteration—and the degree of obsolescence of the building—will determine whether existing elements must be kept, perhaps masked or altered; or whether partitions and even walls can be removed, whether doors and windows can be relocated.

Examples of successful interiors as a result of alteration are many. There are many devices available to the designer, and a number of materials with which to work. Control of light, in itself, can influence the useability as well as the appearance of interior space. When color, in addition, is manipulated well, the range of design possibilities is widened. The use of room dividers not of ceiling height, replacing existing partitions, can do much to change the appearance of space, and its scale, to meet new needs. Suspended ceilings, or partially suspended "floating" ceiling areas can also create illusions of dimensions different from the actual ones. Irregular existing space can be cleaned up and straightened out by built-in units or by masking, semistructural screens of translucent materials. The problem is almost always an interesting one; carefully considered simplification of existing confusion seems to be the keynote of success.

after alteration. *Hallway becomes dining area. Kim Hoffman, Stephen Heidrick, Interior Designers.*

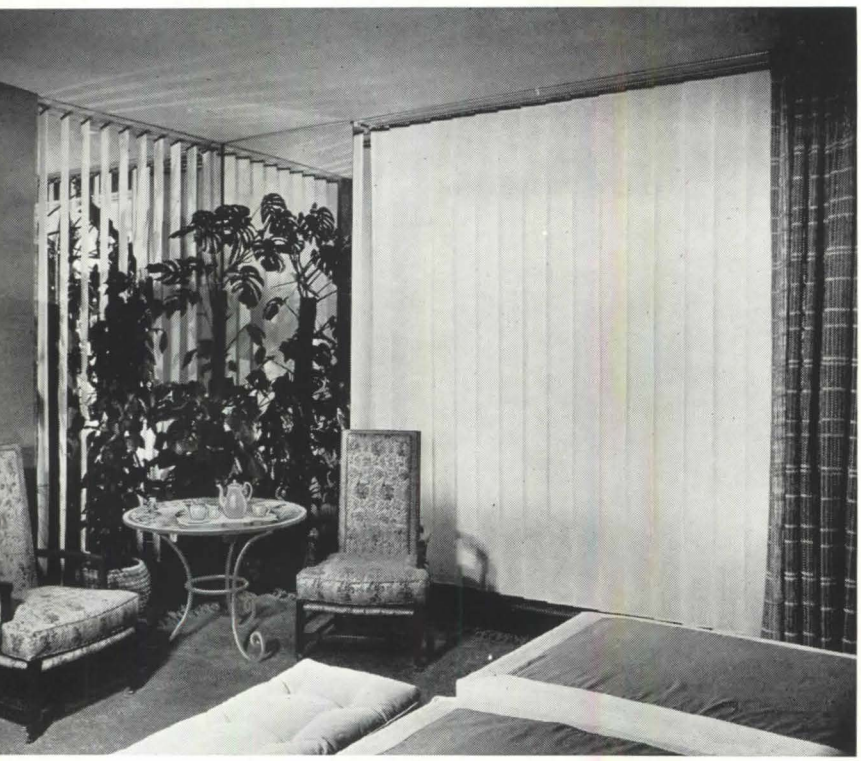
remodeling

The most important consideration in the remodeling of this apartment was to achieve as much open space as possible, with a flow from one room to the other. To accomplish this, a five-foot opening was cut through, where the window wall joined the partition between the living room and bedroom. On the bedroom side, the window wall was mirrored to dramatize the openness. Elaborate plantings in both rooms, on either side of the opening, increase the vista. Vertical fabric louvers and ceiling-to-floor draperies accentuate the height of the rooms and the same window treatment is carried from one end of the apartment to the other. In the bedroom, the cane-paneled screen forms a backdrop for the bed and conceals an unsightly, poorly placed window. Each room has a masterful combination of old and new furnishings and subtle and brilliant hues. Color has been a carefully considered element, because daytime light is strong and evening light is softly subdued, principally from the pin-point ceiling fixtures.

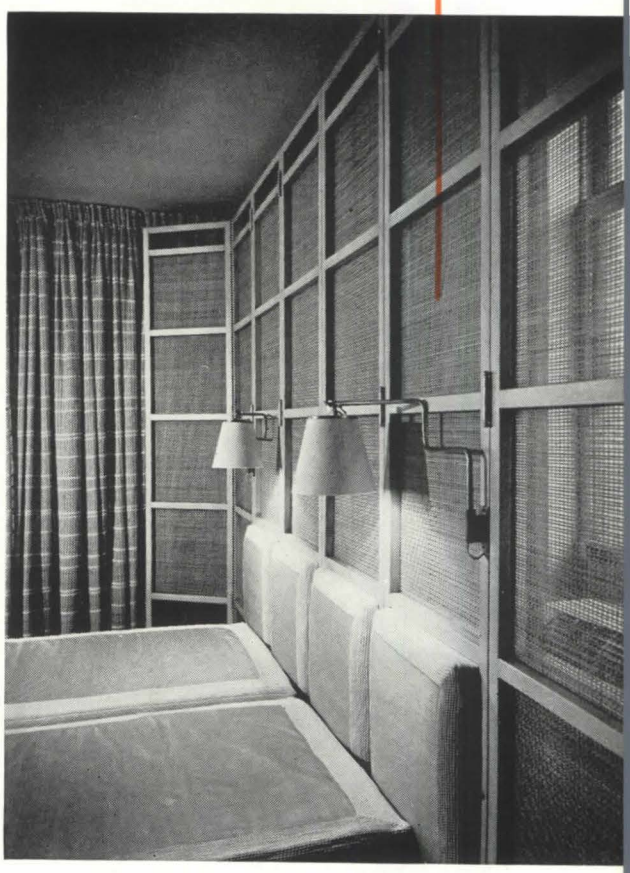
Photos: Gottscho-Schleisner

vertical fabric louvers

travertine

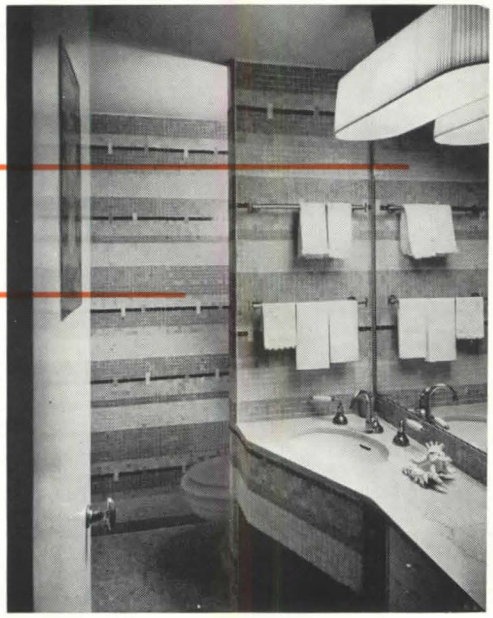


cane-paneled screen



mirror

mosaic tiles



data

cabinetwork

Cane-paneled Screen: designed by Harold Schwartz/ executed by Walter P. Sauer & Sons, 30-28 Star Ave., Long Island City, N. Y.

furnishings and fabrics

Sofas: #M896/ designed by Harold Schwartz/ Romweber Co., One Park Ave., New York, N. Y.

Chairs: M. Singer & Sons, 36 E. 19 St. New York, N. Y.

Marble Coffee Table: custom-designed by Harold Schwartz/ Italian imported black lacquer individual tables.

Curtains: Jack Lenor Larsen, 32 E. 22 St., New York, N. Y.

lighting

Pin-point Downlights: Century Lighting, Inc., 521 W. 43 St., New York, N. Y.

walls, ceiling, flooring

Walls: painted plaster; mosaic tile and travertine/ Cassavini Marble Co., North Bergen, N. J.

Ceiling: painted plaster.

Flooring: oak in herringbone pattern/ William J. Erbe & Sons, 323 E. 36 St., New York, N. Y.

location | apartment, New York, New York

interior designer | Harold Schwartz

remodeling

data

cabinetwork

Cabinets, Built-in Wardrobes, Desks, *Tables:* designed by Tom Lee, Ltd./ executed by Walter P. Sauer & Sons, 30-28 Star Ave., Long Island City, N. Y.

furnishings and fabrics

Sofa: #4907-A/ brass legs/ designed by Edward J. Wormley/ Dunbar Furniture Corporation of Indiana, Berne, Ind.

Ottomans: #5314/ upholstery, gunmetal leather/ Dunbar Furniture Corp.

Surfboard Table: #5220/ #14, dark finish/ Dunbar Furniture Corp.

Square Table: #4776/ 35½" square/ Dunbar Furniture Corp.

Desk Chairs: #4515 swivel/ Dunbar Furniture Corp.

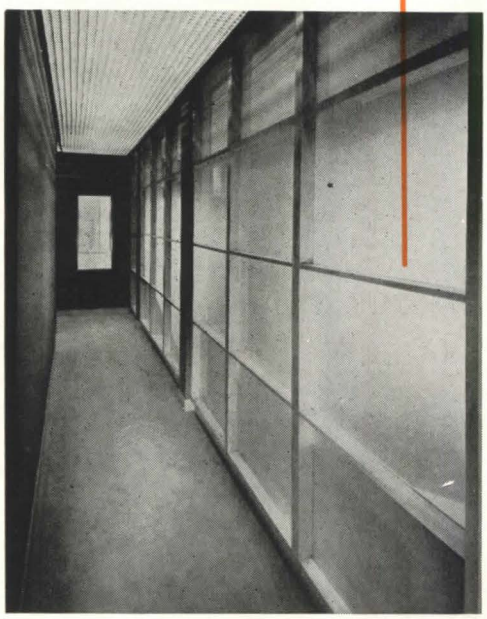
Pull-up Chairs: #4173/ Dunbar Furniture Corp.

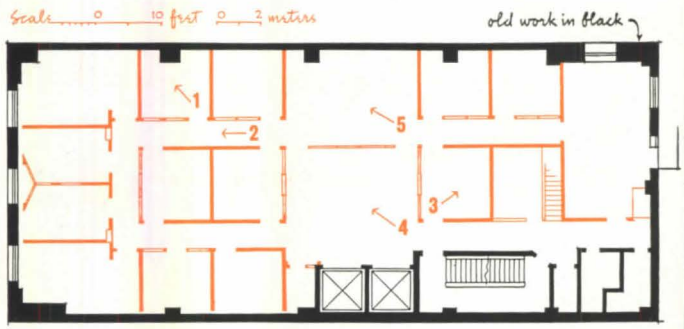
Chairs and Stools: (in showrooms) #901-A, #198ST/ JG Furniture Co., Inc., 102 Kane St., Brooklyn, N. Y.

1

opalescent panels

2

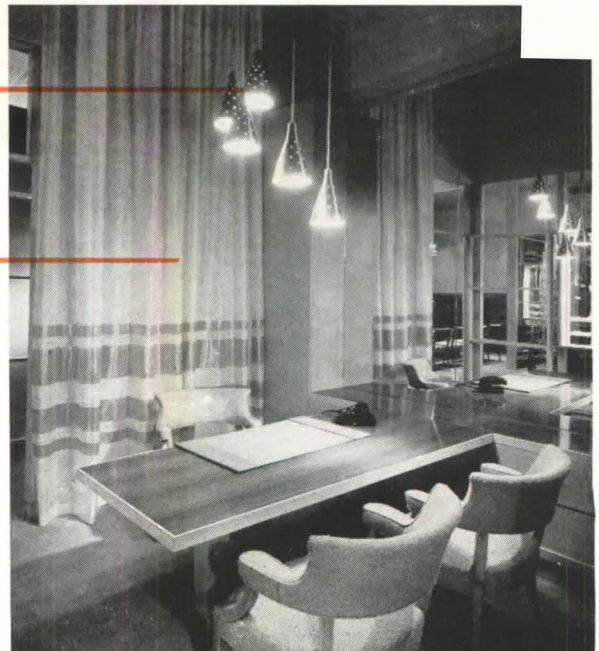




3

pierced-brass hanging fixture

silk casement curtains



Silk Casement Curtains: with "Lurex" colored yarns/ Haledon Silk Mills, Inc., 37 W. 39 St., New York, N. Y.

lighting

Crystal Chandelier: Greene Lighting Fixtures, Inc., 422 W. 42 St., New York, N. Y.

Pierced-Brass Hanging Fixtures: #1994/ *"Cathedral"*/ available in groupings of from two to fifteen reflectors/ Finland House, Finnish-American Trading Corp., Inc., 41 E. 50 St., New York, N. Y.

mural

Mirrored Panel: designed by Tom Lee, Ltd./ executed by Favrex Designs, 526 Burton Ave., Hasbrouck Heights, N. J.

walls, ceiling, flooring

Walls: painted plaster

Ceiling: "Fibreglas" acoustical ceiling/ Libbey-Owens-Ford Glass Co., 552-T Wayne Bldg., Toledo, Ohio.

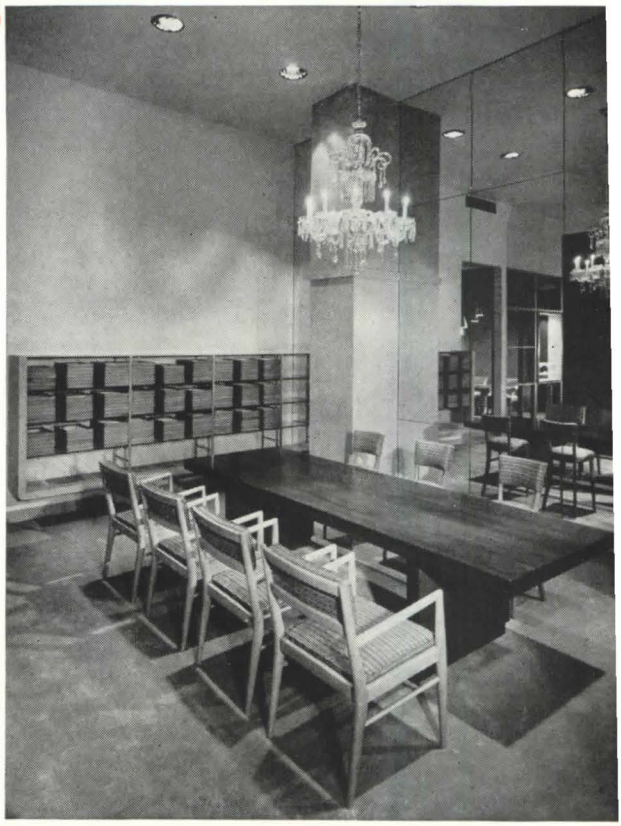
Flooring: concrete slab/ carpeting/ Belgian wool broadloom/ James Kislik, 10 W. 33 St., New York, N. Y.

location | D. Lisner Showroom, New York, New York

interior designer | Tom Lee, Ltd.

The designer has achieved an elegant setting as a showroom and office space for wholesale merchandising of inexpensive costume jewelry. Each room has a theme that determines accent color—gold, silver, diamond, ruby, sapphire, emerald, and topaz. The jewel tones appear in upholstery and curtains and in pale pastel tints on the walls. Curtains are from floor to ceiling, accentuating the 15-foot height. Carpeting throughout is the color of the Korina wood. The lobby has tones of beige, cafe-au-lait, and seal brown, accented with polished brown-black and a smoked mirror panel encrusted with pearls, coral branches, and strands of seaweed. The panel is the motif for the showroom because the firm originally dealt in pearls, and also serves as a divider between the lobby and a conference room. All desks, storage pieces, and wardrobes have been built in—all of Korina wood, all clean, and uncluttered. The cabinetwork has been so skillfully designed and executed that it becomes a succession of unbroken planes. *Photos: J. Alex Langley*

5



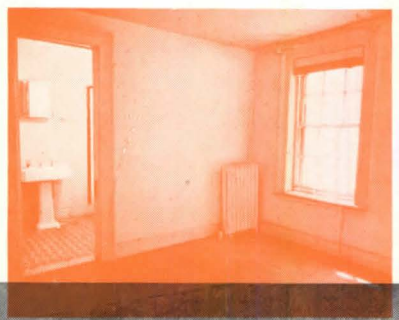
4

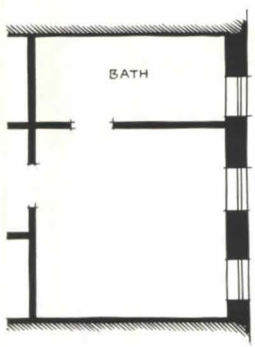
mirrored panel

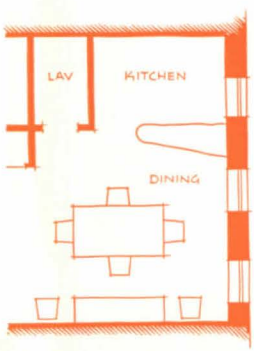
remodeling

location | apartment, New York, New York

interior designers | Kim Hoffman & Stephen Heidrich







Two apartments were merged as a duplex, to provide living quarters and office space. A bedroom and adjoining bath were converted into a dining room, kitchen, and lavatory. Plywood was used to cover uneven walls in poor condition, too expensive to restore. A counter separates the dining and kitchen areas.

data

cabinetwork

Display Cases: designed by Kim Hoffman & Stephen Heidrich/ executed by Danrigon Woodworking Co., 417 E. 93 St., New York, N. Y.

furnishings and fabrics

All Furniture: custom design/ by Kim Hoffman & Steve Heidrich.

walls, ceiling, flooring

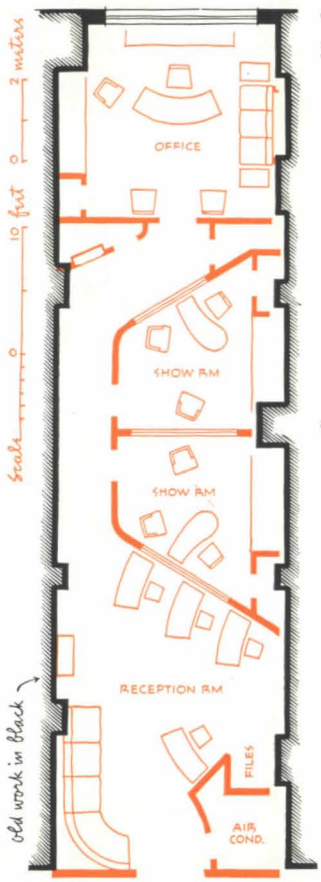
Walls: painted plaster/ corrugated frosted glass/ Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

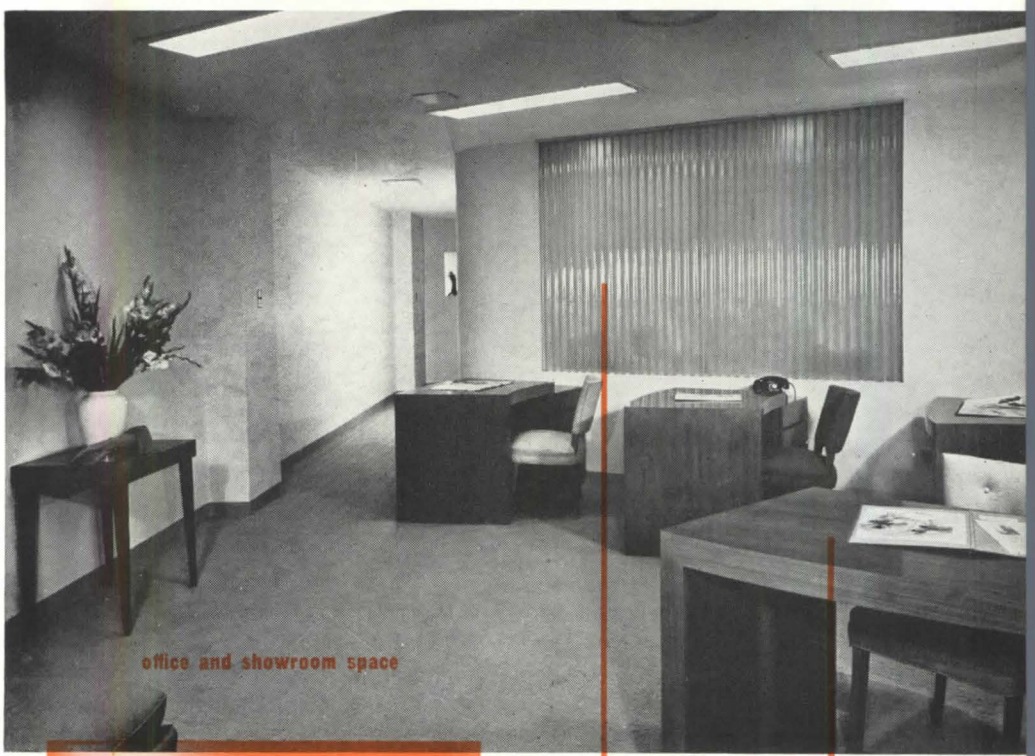
Ceiling: rough-troweled plaster.

Flooring: concrete: carpeting/ "Symphony" wool/ A. & M. Karagheusian, 295 Fifth Ave., New York, N. Y.

location	Hansen Glove Corporation, New York, New York
interior designers	Kim Hoffman & Stephen Heidrich

A difficult area to work with, 20 feet by 80 feet, this space was for reception room, two private showrooms, a private office, and space for salesmen. A curving wall with inset of corrugated construction glass, lightly tinted walls, and bright lighting expand the area visually.

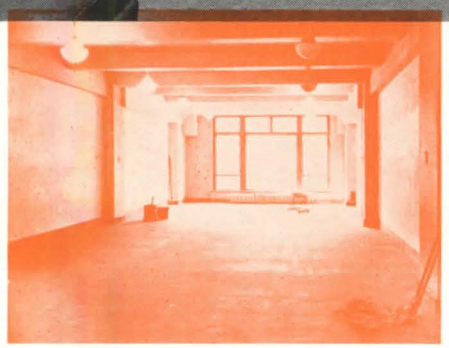




office and showroom space

corrugated-glass panel

custom-designed furniture



data

cabinetwork

Counter: designed by Kim Hoffman & Stephen Heidrich/ executed by Danrigon Woodworking Co., 417 E. 93 St., New York, N. Y.

equipment

All Kitchen Equipment: Crosley, Div. of Avco, 1329 Arlington, Cincinnati, Ohio.

furnishings and fabrics

Furniture: Vanleigh Furniture Co., Inc., 115 W. 40 St., New York, N. Y.

Curtains: cotton fabric, white ground, yellow-and-brown pattern, Copenhagen-blue accent/ J. H. Thorp, 250 Park Ave., New York, N. Y.

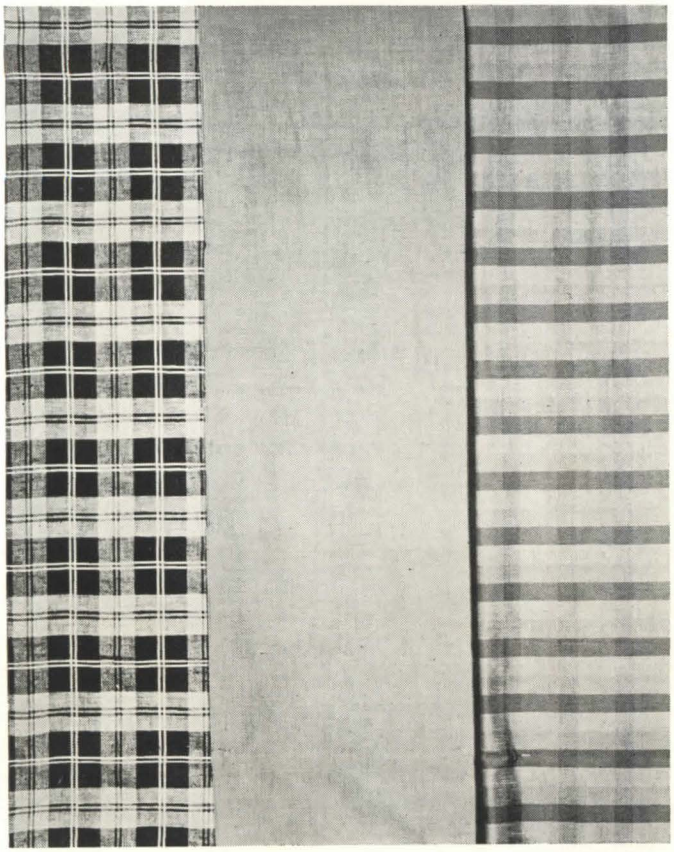
walls, ceiling, flooring

Walls: "Rippletone"/ Georgia-Pacific Plywood Co., 1302 Southern Finance Bldg., Augusta, Ga.

Ceiling: painted plaster.

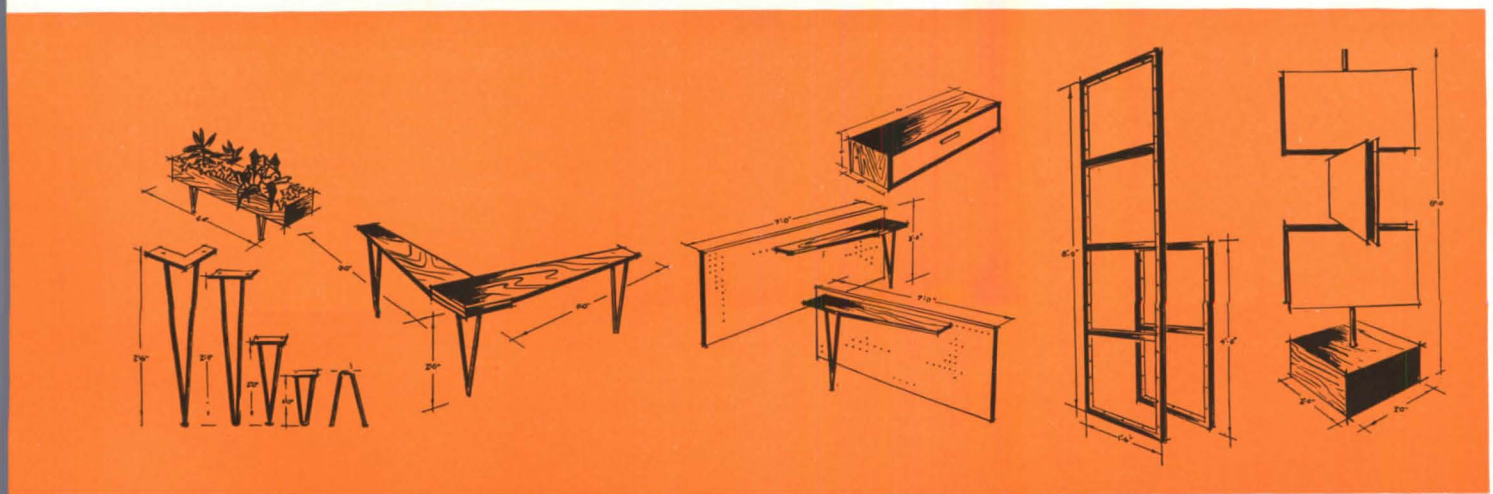
Flooring: rubber tile/ Congoleum-Nairn, Inc., 195 Belgrove Dr., Kearny, N. J.

p/a interior design products



Fabrics: #74321, "Corinth"/ 48" width/ black on gray/ 100% cotton/ **retail:** $7.50 a yd./ #74510, "Antwerp" plaid/ yarn-dyed white and black/ 50" width/ 61% linen, 32% cotton, 7% rayon/ **retail:** $3.40/ #73675, "Benares" cloth/ 25% Egyptian cotton, 75% Viscose rayon/ yarn-dyed/ **retail:** $7.15/ #74665, "Benares" check/ companion fabric/ **retail:** $7.90/ **Jofa, Inc., 45 E. 53 St., New York, N. Y.**

Display Fixtures: "Moduline" units/ 15 modules available/ four- or eight-foot frames act as supporting members, have drilled holes for easy assembly/ include literature-dispensing bar, illuminated header which may carry copy, flower boxes, wrought-iron legs, tabletop panels, mechanized revolving piece/ **Structural Display Company, Inc., 44-01 11th St., Long Island City, N. Y.**



by Carl Feiss

out of school

Again this column is being written in flight—at this moment out from the Tri-Cities Airport in northeastern Tennessee, westward toward Knoxville. It is a clear, cool day with the Cumberlands 'way to the north and the Great Smokies crisp, deep-blue and gray, out my window to the south. We are flying over Jefferson County, with the long tendrils of the lake subtended by the great Cherokee Dam just under us, to the right, and the twisted waters of the huge reservoir created by the Douglas Dam, on the left. Lakes and reservoirs have a coy habit of wrapping themselves snugly around a contour line. Each estuary, bay, shoal, inlet, arm, and island of these vast new waters seems to belong as contentedly there as if it had been created by the same forces that threw up the mountain peaks, instead of by a concrete cork in the neck of a narrow valley. It is a never-ending miracle to me that TVA is so vast and that it works. I've seen bits of it from the ground at many contact points, but it has to be viewed from the air, mile after mile across Tennessee and Alabama, to be really comprehended. Since I fly around a lot I always take an Esso road map along. That is how I am so glib about these things and where they are. It also makes both the trip and conversations with seat-mates more interesting.

I like what is happening in the TVA country—not only the physical things like the beautiful engineering, the prosperous farms, the great new industrial plants, the new recreation areas, and all the exciting rest of the show; but other even more substantive and important developments like the little art show in the basement of the Parthenon in Nashville. It is the work of art students and faculty at the University of Alabama. Very good and fresh! And you will have to go far to see anything more exciting than Schwiekher & Elting's new chapel and theater on the campus of Maryville College in Maryville, Tennessee. Beats their Fine Arts Center by a long shot, and that is no slouch of a building. Yankeeland had better look again to its fading cultural laurels.

The quotation which caps this month's

(Continued on page 162)

"This environment of ours is largely an artifact. In our technologically advanced state of affairs, it is a pile of often incoherent fabrications and constructions interfering with life processes and adulterating them."

Richard Neutra: *Survival through Design* (Oxford Press, 1954)

out of school

(Continued from page 161)

column from Richard Neutra's new book is all too true, except in those rare places where man's artifacts benefit the life processes and where there is evidence that through the application of sound physical planning our advancement of technology can also be directed towards the advancement of man.

Lower v. *Higher Education* (a continuation from the April column on "The Structure of Architectural Education").

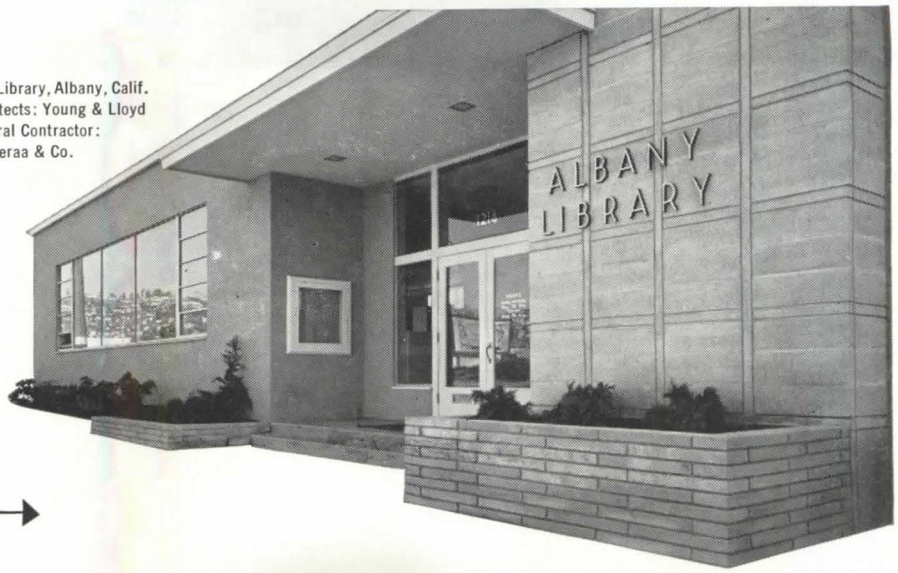
In discussing the subjects of April OUT OF SCHOOL with a friend, he referred to my statement that "the structure of architectural education can be no stronger than its lowest level," and then wondered why I started so far *up* the line, at the level of career counseling for high school student. While I tend to discount prenatal influence on the training of architects and planners, there may be something in it for the geneticist. Several sons of architects—and even grandsons— seem to have inherited their paternal and grand-paternal abilities. The Upjohns and Saarinens are good examples. (I know several others whose ability to imbibe large quantities of stimulating beverages has been inherited from their architectural forebears, but the transmittal of other necessary architectural talents and competencies seems to have failed.)

Obviously, however, I should not have omitted mention of the teaching of architecture in the primary and secondary schools. What I have been thinking about has been education for the profession rather than for the public. This is not to discount in any way the vital importance of architectural education of the citizenry at large. As professionals we are fully aware of our meager role (in the mind of the public). Public education is partly a public relations job for the profession, but there is also an academic side to it, not only in the lower schools but also in the colleges and universities in a wide variety of arts and sciences courses, engineering and other curricula, from history to urban sociology and public health, in which comprehensive architecture is or should be involved. There is no end to the subjects to be covered here in time. However, I am going to stick to professional education while we are talking about the *structure* of architectural education.

Certainly, if architecture were a subject taught in the primary and secondary schools, it should prove an important incubator for architects. But schoolmen of the architectural and related professions are more concerned with the weaknesses of public and private school education as demonstrated by the inability of college freshmen to read, write, concentrate, and cogitate. Despite all the differences in educational point of view between the various design schools, and despite the frictions, rivalries, and general lack of intercommunication among the schoolmen, when pinned down they all seem to agree that young architects should be able to read, write and think, whatever their design abilities. (I am not implying that

(Continued on page 164)

New Library, Albany, Calif.
Architects: Young & Lloyd
General Contractor:
C. Overaa & Co.



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out of school

(Continued from page 162)

I've pinned down all schoolmen, but it might be fun.)

The inadequacies of lower school education are so nationwide and college educators are so generally resigned to the situation that intellectual adolescence is accepted, often through the first two years of so-called "higher education." This means that what could have been taught —say algebra and geometry—in the 10th and 11th grades of high school have to be taught, or at least reviewed, during the first years of college. The "general education" courses and the "pre-architectural" year or years required by some colleges largely constitute make-up years in which all students are averaged before starting their "higher" education. This is one of the reasons for five- and six-year architectural curricula and is a surrender by the American college educator to the deficiencies of our lower educational systems. Maybe "surrender" is too strong a word. Maybe it is just an "adaptation," but whatever it is, it is a regrettable waste of time and a tragic misuse of the vital formative years of the young American. For this we can only blame ourselves as citizens. None of us takes seriously enough not only the poor school plants in our communities, but also the poor salaries of teachers, inadequate school budgets, bad leadership, overcrowded classes, overwork, poor teacher training, unsatisfactory teacher insurance and retirement systems, snooping and attacks on local educational systems, and the other thousand and one elements which make public school education so unrewarding that only the most dedicated or least competent are interested in teaching careers.

So here is a weak point in the structure of American architectural education that is common to all American education.

What should be done? We are talking here about a problem of such vast scale and with so many facets that it dwarfs the training of the comprehensive architect per se. However, the AIA Committee on Education and the Association of Collegiate Schools of Architecture might well

(Continued on page 166)

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Boston	Dallas	Indianapolis	Minneapolis	Philadelphia	St. Louis	(†sales office only)

out of school

(Continued from page 164)

get together and offer their joint backing and assistance to those national school organizations now directing their attention to American public-school education and its deficiencies. The American credo is that all of our children have a right to a sound education. I would hate to think, however, that it is the American credo that such education costs too much and therefore we must relegate the future of these children to a secondary place in the American Dream. If this is the case, the Dream then becomes nightmare.

•

The Science of Association. In the April column, I quoted de Tocqueville: "The science of association is the mother of sciences." Let me follow this up, because it is important in our understanding of the educational structure of our art and science of comprehensive architecture.

Architects have, as have the the other professions, organized for their general welfare, mutual education, and for social intercourse. The American Institute of Architects is now over 100 years old and is an institution well recognized as the parent organization of the American profession of architecture, as the Royal Institute of British Architects is for England, and as similar associations are in other countries. The allied professions of city planning, landscape architecture, engineering, interior design, and others are served in kind by professional associations representing common specialized interests.

Association within the profession of architecture and the allied arts and sciences is a highly developed but not always scientific activity. In all voluntary associations there is the tendency to form committees and subcommittees, and subcommittees of subcommittees, as new problems arise or old problems remain unsolved. There is also constant splintering of groups with special interests or opinions, prejudices, or sensitivities. Further, leadership in these voluntary associations is variable and fickle. The total result is difficult to assess, although the structure and the improvement of the pro-

fessions depend upon the existence of these societies, whatever their name, effectiveness, or responsibilities.

It is a concomitant of organizational character that voluntary professional societies are generally conservative in nature. These organizations are usually made up of the mass of practitioners, who will average their philosophies by election of officers who think as the mass does, and by voting on professional issues somewhere between the middle and the extreme right. It is for these reasons that we almost invariably find a reluctance of those who consider themselves radical, liberal, modern, or just individual and different, to participate actively in the affairs of their own professional groups. Often they form splinter groups of their own which, under the humorless influence of time, seem invariably to be reabsorbed by the parent body. Young men grow old, and the radicals of today are the conservatives of tomorrow.

There are four American voluntary associations which control the education of American architects, and two for the city planners—whether the professional educators, practitioners, and students know it—or whether they like it. For the architects there are: American Institute of Architects, Association of Collegiate Schools of Architecture, National Architectural Accrediting Board, and National Council of Architectural Registration Boards. For the City Planners there are: American Institute of Planners and American Society of Planning Officials. Since the predominant number of planning schools are within, or associated with schools of architecture, the four architectural associations cannot be discounted as important to planning as well.

Of the four architectural associations, the most direct and powerful educational influence is that of the National Council of Architectural Registration Boards. While the NCARB does not actually directly impose its influence on curricula or teaching methods, nor does it direct examination practices in the 48 states, the registration and licensing of architects is

(Continued on page 168)

(Continued from page 167)

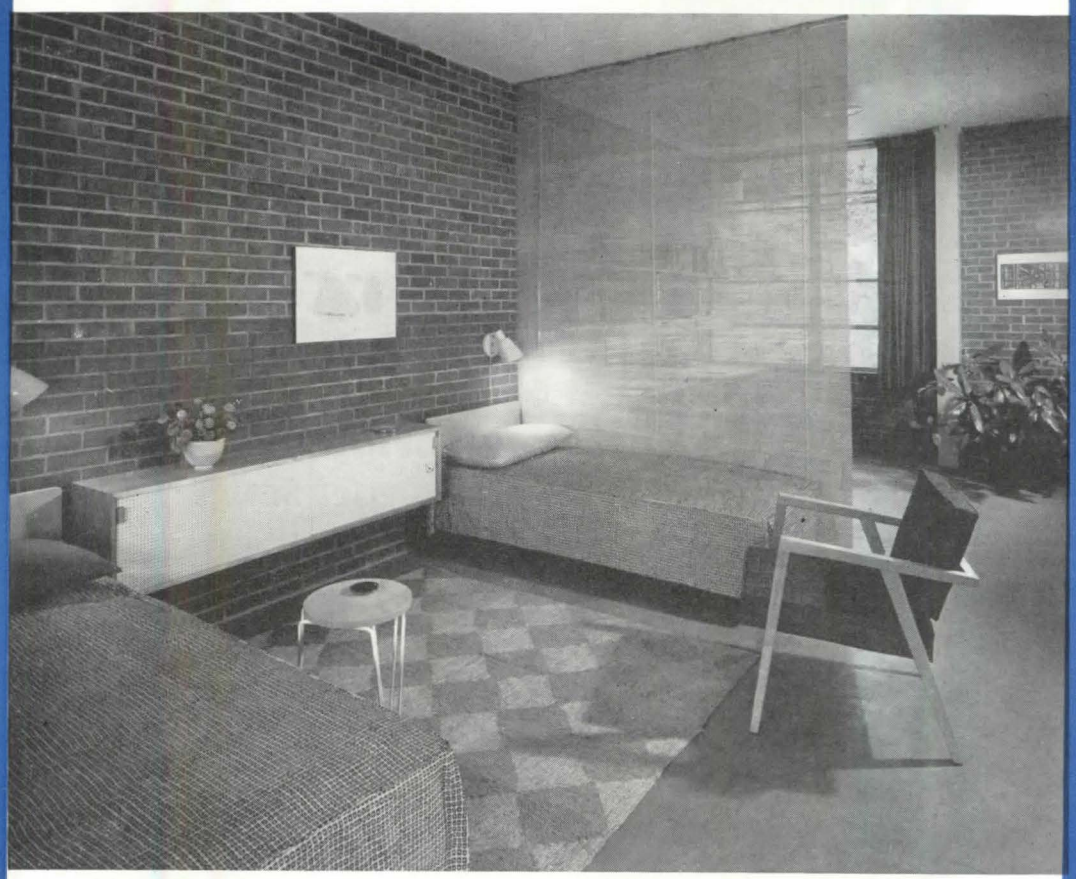
a major control point in the structure of professional education and is the obviously focal career point for professional practice. The staging of state examinations, the character of the examinations themselves, and the philosophy of licensing for professional standards and uniform practice is the heavy responsibility of the NCARB. Those educational systems which cannot train for examinations will obviously not succeed as schools. There is of course a never-ending debate on who controls what and whether education should be influenced by licensing requirements. We will enter this debate ourselves one of these days. But willy nilly, the student, whether from a so-called "contemporary" school or from some conservative or run-of-the-mill school (and there are several), must face up to the state examination, which, in his career, is more important than even the baccalaureate degree itself.

Since each of the 48 states has complete autonomy in deciding who, how, and what should be the controls of architectural registration, the NCARB as it gathers experience and strength in its special activity of advising the state registration boards will assume greater magnitude in the educational process. This is inevitable. In recognition of the importance of mutual understanding on matters of policy and intercommunication, there was held this January the first "four power" conference at the Octagon, AIA headquarters, in which these four educational organizations (the Committee on Education of the AIA representing the AIA), explored their present and future relationships. Probably no more important architectural education get-together has occurred in recent years. If the "four powers" can continue to meet in an amicable and constructive fashion, a unity of philosophy and action can do much to develop the science of association and promote the profession.

I have been distressed during my last three years as Chairman of the National Committee on Education of the AIA by the suspicious attitude taken by many schoolmen toward the Associations, which are theirs for the acting. Several schoolmen openly state that they do not care to be associated for fear of being controlled. I should think that it is obvious that a sound organization in a democracy is representative rather than dictatorial, that it cannot completely represent if those who who are afraid of being controlled do not join. No association is better than the membership it represents.

Further, it is clear to me as I have worked with the various educational organizations through the years, that the formulation of top philosophy and policy of education and practice is still a long way off. There is ample opportunity for great thinking and real leadership by my successors in the AIA and in the years to come in the other three educational associations. Certainly no one for a moment is satisfied with the small beginning of our

(Continued on page 170)



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out of school

(Continued from page 168)

group action or the lightweight of our accomplishment.

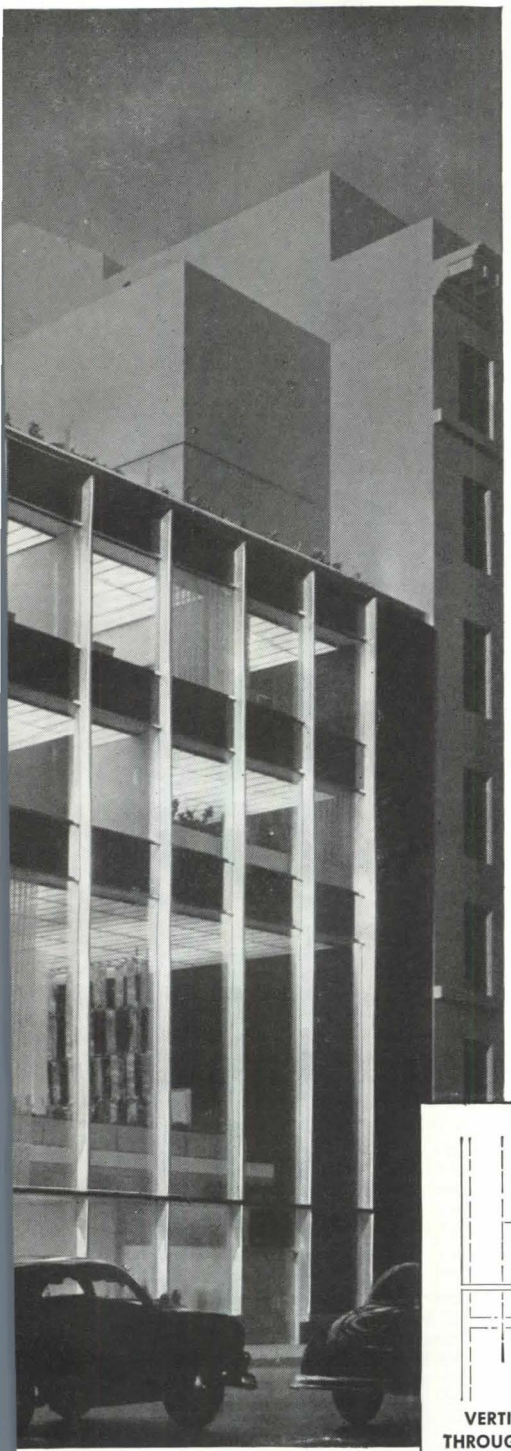
It is the last point, the lightweight of accomplishment, that we regret. That the history of association for the advancement of architectural and planning education is a short one and that it has not been very productive, should be an inducement for strengthening the activity and developing programs of mutual interest and in some part, of mutual assistance. After all, Architecture is the common goal.

During the remainder of the year I hope to present to you some more detailed information about these important associations mentioned here—how they are organized and what they do, so that everybody will have a clearer picture of the structure of American architectural and planning education than is available at present. As a footnote, I will ultimately call your attention to the results of the two significant surveys on professional education after they are published; that oft mentioned 1950 Survey of the Architectural Profession by the Commission for the Survey of Education and Registration financed by the Carnegie Foundation, directed by Dr. Edwin S. Burdell of the Cooper Union and sponsored by the AIA; and the about-to-be-published Survey of Planning Education, financed and published by the Alfred Bettman Foundation, directed by Prof. Frederick J. Adams, of M.I.T., and sponsored by the American Society of Planning Officials and the Committee on Education of the American Institute of Planners.

letter to the schoolmaster

Dear Mr. Feiss: Just to say that your article in OUT OF SCHOOL in February 1954 P/A, having to do with teachers of architecture and city planning in the collegiate schools and with much that is involved everywhere in the efforts toward "Renewing Our Cities," is really most interesting and wonderful to read. The book itself by Miles Colean, which I trust more and more people will send in for, will be

(Continued on page 174)



Architect's model, photographed by Ezra Stoller

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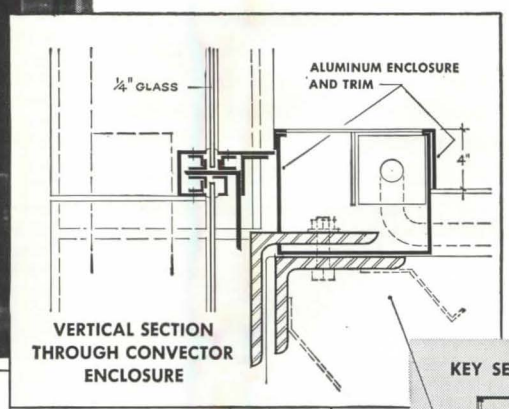
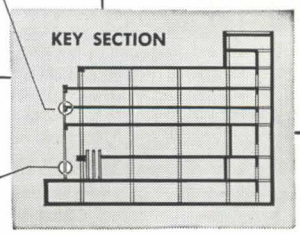
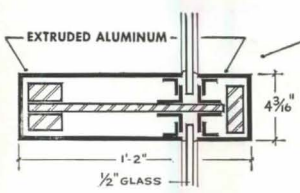


VERTICAL SECTION THROUGH CONVECTOR ENCLOSURE



KEY SECTION

HORIZONTAL SECTION THROUGH COLUMN MULLION



SEE "MR. PEEPERS", STARRING WALLY COX, NBC-TV

ALUMINUM

out of school

(Continued from page 170)

pretty engrossing, too, no doubt. But to get all of these things going a little better it takes lots of "guidance" on the part, again, of more and more people, to others. The Carson-Pirie-Scott Competition—for the Central Commercial District in Chicago should be interesting in this respect. Meanwhile will be looking forward to further paragraphs of OUT OF SCHOOL on the above.

PETER FRANTZ
Saginaw, Mich.

Dear Mr. Frantz: *Thank you for your pleasant note about the February article. It apparently struck a responsive chord with several readers so I will add "further paragraphs" on the subject as you suggest. There is a very full schedule of articles coming up for the rest of the year so keep your eyes peeled.* CARL FEISS

notices

meetings

THE THIRTY-NINTH ANNUAL CONFERENCE OF THE BUILDING OFFICIALS CONFERENCE OF AMERICA, INC., will be held at the Bellevue Stratford Hotel, Philadelphia, Pa., May 10-13, 1954. The Conference will cover technical discussions of interest to all segments of the construction industry and will include business sessions of the Conference and discussion of proposed changes in the BOCA Building Codes. There will be exhibits in conjunction with the Conference.

THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS will hold its 16th Annual Convention at the Netherland Plaza Hotel, Cincinnati, Ohio, May 12-15.

new offices, partnerships

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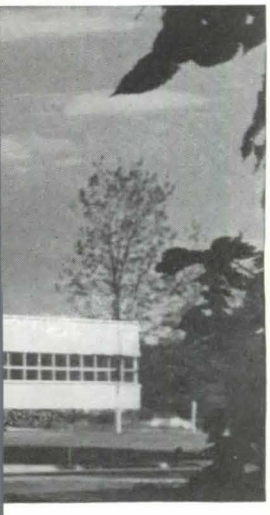

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reviews

(Continued from page 178)

count this contrasting development with excellent illustrations and concise and understandable text.

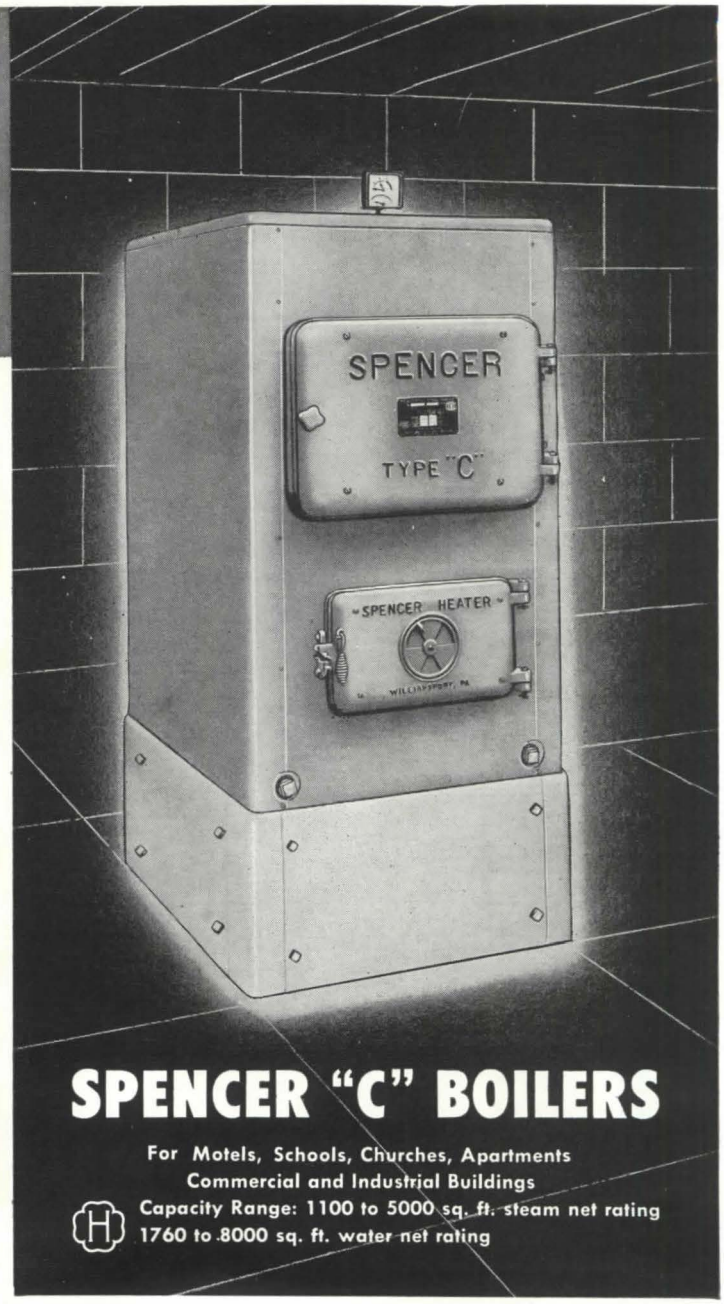
One has only to compare the plans of, say, *Chenonceau* in France with the Elizabethan *Longleat,* or Cerceau's *Charleval* with *Hardwick Hall,* and the difference, as it developed in the last quarter of the 16th Century, is evident. In France, design is all. Buildings are mere ornaments on the drawing, put there to accentuate air space, *les vues d'optique.* In England, the yeoman-turned-landed-gentleman expresses his pride in spacious shelter and decorative treatment of interior space. His façades are perforated by glazed bays that liberate the inhabitant from the damp darkness of the Norman Keep.

By the middle of the 17th Century, French Absolutism succeeded in subjugating the Church and silencing the people. François Mansart, Jean Hardouin Mansart, and Le Vau catered to a dream of omnipotence that expresses itself in building schemes of insane scope. "Forcer La Nature" applies to more than tapis vert and espalier; stone and stucco curve in baroque convulsions, and painter and sculptor—Bellange's incredibly sensuous "*Three Marys,*" for instance, or Lebrun's hypocritical "*Louis XIV Adoring The Risen Christ*"—supply variations to the architectural theme. The Leitmotif of the 17th Century; *Gesamtkunstwerk* (totality of art creation), is here achieved under the total impact of the monarchic personality.

In the England of Inigo Jones and Christopher Wren the impetus toward a renaissance of classical grandeur does not come from a deified prince but from the books of Palladio and Alberti. It is a two-dimensional, calculated architecture, unsupported by painting or sculpture. But where the French exhausted their imagination and their resources in a few stupendous structures, such as the additions to the *Louvre, Versailles,* and the *Grand Hotels;* the English contributed an astounding number of excellent, still serviceable public buildings, colleges and, above all, hospitals. The difference in communal concept is here signified by

(Continued on page 188)

Problems



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reviews

(Continued from page 188)

cately colored pages of *The Architectural Review* is largely wasted on noninsular barbarians.

With all the praise for two stimulating contributions to the understanding of architecture and history, goes one serious reproof. It had been hoped that the authors of this new encyclopedia, which we expect will not be simply a rewriting of foreign-language textbooks, would avoid the academic error of confining their material to monumental buildings. The modern student of architecture is passionately interested in ordinary houses, both as expressions of environmental and technological challenges and as expressions of indigenous symbols and traditions. It is puzzling that such important examples as French chatelets and the town houses of the South and the North, and the beautiful middle-class architecture of the Late Georgian and the Regency periods were left out. To know them better would have been a very important mission of these otherwise so-informative books on French and English Renaissance architecture.

SIBYL MOHOLY-NAGY

living with climate

Climate and Architecture. *Jeffrey Ellis Aronin. Reinhold Publishing Corp., 330 W. 42 St., New York 36, N. Y. 1953. 304 pp., illus., $12.50*

Here is an author who "does something about the weather"—a great deal, in fact, as an analysis of his book will show. It pertains to man's attempt to build and live in harmony with climate. Of course, from an historical viewpoint, man has been confronted through the ages with the problem of adapting his dwelling place to climatic conditions. One has only to think of the structures of the Eskimo, the American Indians, the Aztecs, or our own early Colonial settlers. Even the cavemen of prehistoric times undoubtedly sought out only those cozy retreats that were definitely not to windward. So the

(Continued on page 194)

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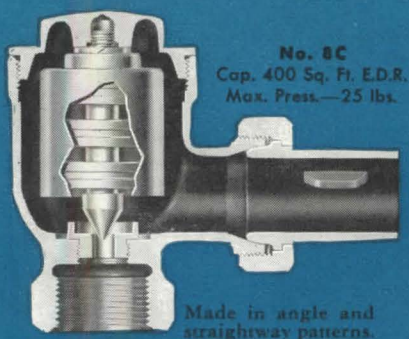

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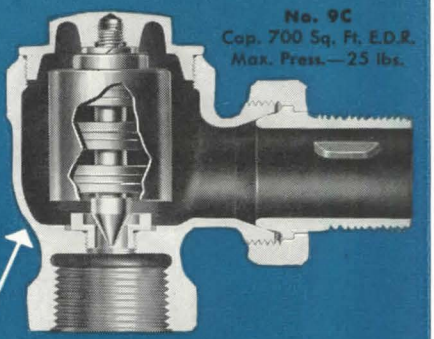

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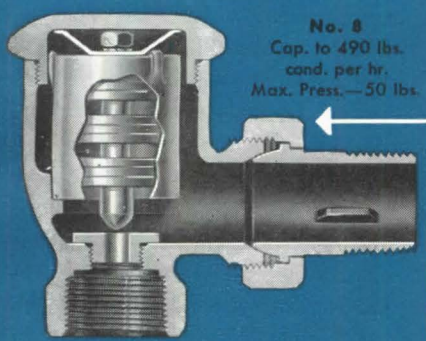

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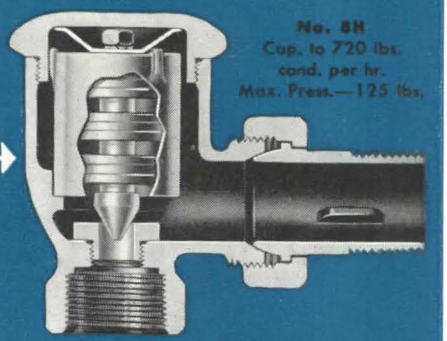

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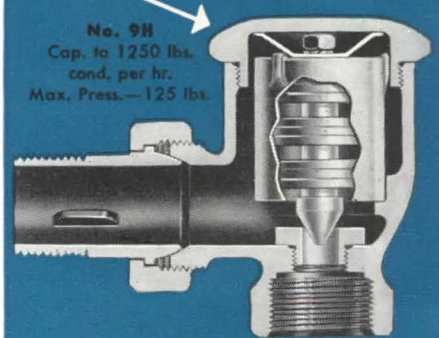

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reviews

(Continued from page 192)

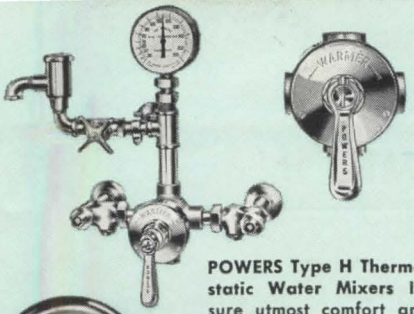
architect, in reality, had been a climatologist long before he acquired a knowledge of all the other professional activities so closely associated with his work, such as economics and engineering and sanitation. Yet, very seldom does one see mention made of this role of the architect or consider that he must be skilled in climatology, despite the fact that the design and orientation of buildings with respect to climate is an ancient—one might say, an instinctive—art.

It is because little training is at present given the student architect in this line and because he considers that the orientation of buildings with respect to climate is a "lost art that modern man does not know" that the author has felt compelled to make it his subject. He is deeply concerned about establishing the architect as a climatologist. He has dubbed this "new science" *airchitecture*. Whether this term will find common usage in the profession and though his viewpoints about a "lost art" may readily be disputed by some practioners, there is no denying that here is a new approach to an old problem and the first time, probably, that anyone has presented so thoroughly the many various ways that climate can influence building design. All of the elements are described minutely so after reading and studying the book, one can easily appreciate what limitations climate imposes.

This book, aside from its comprehensiveness, is unique for its scholarly aspect. Aronin began his climatological studies while at the University of Manitoba, after he had graduated from Hamilton College. His interest in the subject received its first impetus when, in 1946, he was engaged in research activities, under auspices of the Canadian Army which employed services of many of the world's leading scientists, explorers, engineers, and military experts to find the best solution to the problems of living in the severe cold and the climatic conditions of the Arctic. After that rewarding experience, Aronin pursued his investigations of the relationship of climate and architecture at McGill University, in Montreal, where

(Continued on page 196)

Above: POWERS **ACCRITEM** Temperature Regulator, is water or compressed air operated. Controls **FLOWRITE** diaphragm valve (right). Widely used for Water Heaters and Industrial Processes.



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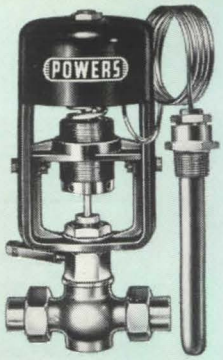
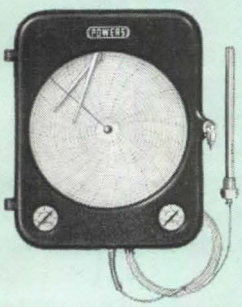


Powers No. 11 Self-Operating Regulator widely used for water storage heaters, heat exchangers, fuel oil preheaters and many industrial processes.

WATER Temperature CONTROL?



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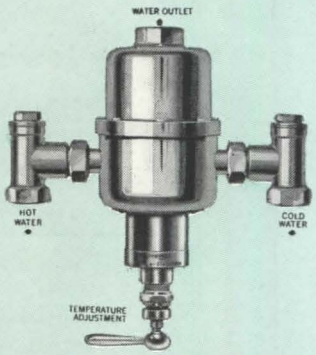

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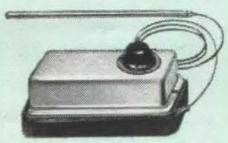

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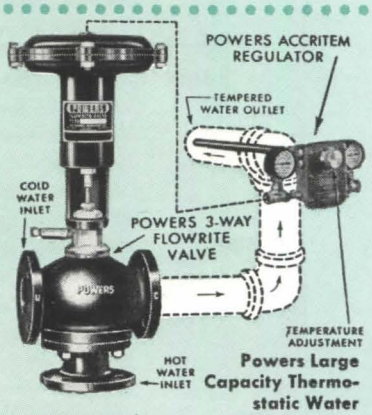

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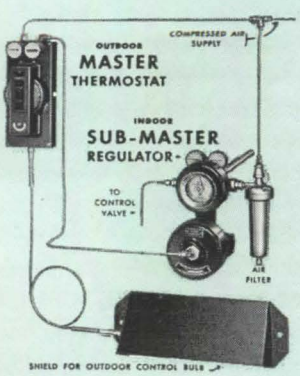

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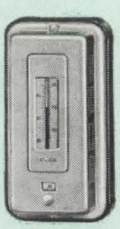


Powers Room Type Pneumatic Controls for Radiant Heating-Cooling Panels, Convectors and Unit Ventilators. Valves are packless. No more packing maintenance. No leakage.

(b61)

reviews

(Continued from page 194)

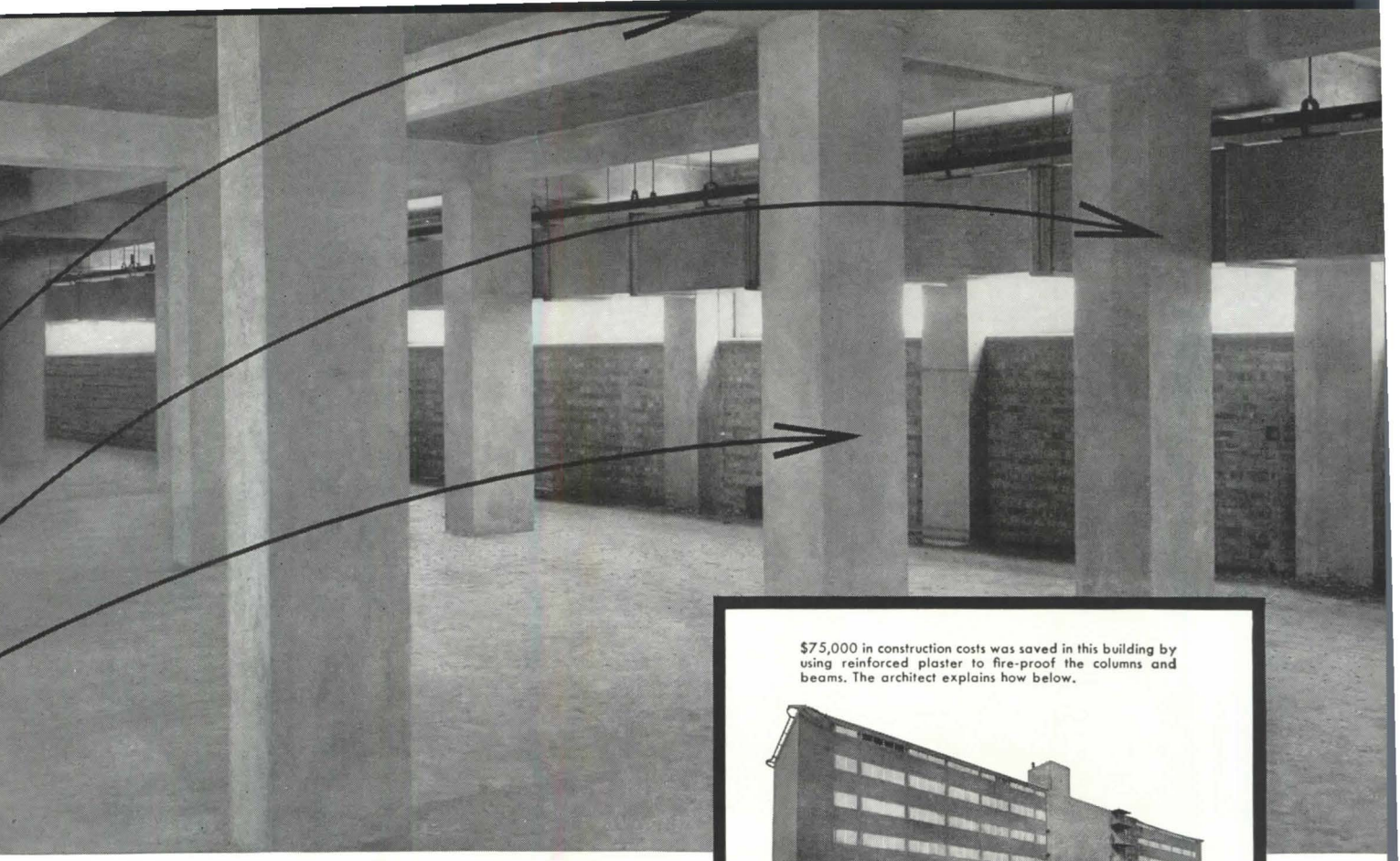
he received his Master's *degree*, preparing this work as his thesis.

In his introduction, Aronin sets forth his object: to acquaint architects, architectural students, engineers, city planners, builders, prospective home owners, and others—especially in North America—with the demands and phenomena of the large- and small-scale climate (known respectively as the *macroclimate* and the *microclimate*); and to inform them on application of this knowledge to the design and orientation of buildings and towns.

With that entirely worthy purpose in mind, he then describes the most significant historical efforts made by many peoples in many lands toward co-ordinating building and climatic environment. His research and observations in this direction are noteworthy, starting, as he does, with Vitruvius in the Third Century, showing how his genius influenced many thinkers of his day and of later years, particularly the great Andrea Palladio. Aronin is not unmindful of the inventiveness and the intuitive genius for orientation possessed by the inhabitants of every continent, citing many examples in North and South America and Europe. He pays special and deserved note to the progress in orientation by the peoples of the Far East, notably those of China and Japan, and quotes from such authorities on Oriental building and planning as Jiro Harada, Hideto Kishida, and D. G. Mirams. The author winds up his discourse on the background of orientation with a detailed account of investigations being made at the present time in the relationship of architecture and climate. He is firmly of the opinion that, in spite of the fine heritage that exists in the matter of orientation, it is unfortunate that planners and architects have not taken sufficient advantage of it and that the instinctive sense of orientation—which he considers to be "lost"—should be replaced with the type of scientific research and statistical data on climate that he presents in the succeeding chapters of the book.

Many, no doubt, will agree with his arguments and many may also wonder

(Continued on page 200)



Column and beams with reinforced plaster fire-proofing.
East Dentistry-Medicine-Pharmacy Building—University of Illinois, Chicago
Architects—Pace Associates
General Contractor—Sumner Sollitt Company
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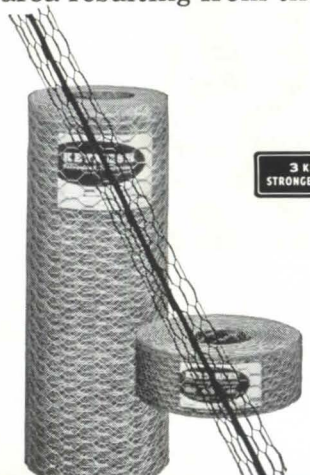
$75,000 in construction costs was saved in this building by using reinforced plaster to fire-proof the columns and beams. The architect explains how below.

Pace Associates tell why they specified LATH AND REINFORCED PLASTER FIRE-PROOFING

"Seven years ago when this building was in the preliminary design stage, we had faith in plaster fire-proofing, but only a few fire tests had been made. We knew that if we could find a simple plaster construction that would pass code ratings, we could produce this $7-million structure for about $75,000 less than we could with concrete fireproofing. This saving represents 31 cents per square foot of gross floor area resulting from the reduction of steel tonnage, piles, yardage of concrete and omission of forms. This rough plaster fireproofing, which is concealed behind finished walls and ceilings, cost about 70 cents per square foot,* or about 30 cents less than the cost of column and beam forms. Many fire tests of plaster coverings have been made in recent years and we are sure that plaster will have a long and active future in the protection of steel structures."

W. H. Binford, Pace Associates, Chicago
Planners–Architects–Consulting Engineers

**Job contracted Feb. 1952. Costs subject to change according to local conditions.*



3 KEYS TO STRONGER PLASTER
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Specify Keymesh for the finest, most economical reinforced plaster fireproofing . . . Architects and contractors everywhere are finding Keymesh the most economical reinforcement for all types of plastering. It's the heart of Keystone's 3 Keys to strong plaster—Keymesh, Keycorner and Keybead. These three products guard against cracking and make stronger corners, joints and junctures. Make your structures better at less cost—specify Keystone's 3 Keys. Write Keystone Steel and Wire Company for complete details.

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reviews

(Continued from page 196)

how this circumstance has come about. Or, as the author himself asks, "What is the situation today? Why have we momentarily lost sight of the importance of climate in architectrue?" Here is his answer: "Because of increased travel among the nations, people have borrowed one another's 'styles' without properly considering their function or climatic suitability in the position. There was little justification in rendering the form of a Roman bath into Pennsylvania Station, New York." Probably, many will agree with such a viewpoint and perhaps his further argument that "man cannot compete *against* the climate. He must go along *with* it" will bring about the renewal of interest in orientation which he so earnestly feels is needed.

In the following chapters of the book, dealing with the sun, temperature, wind, precipitation, and other climatic factors such as lightning and humidity, Aronin has assembled a tremendous amount of the latest and most important information from a variety of authentic sources. There are many charts and graphs and quite naturally he has included the results of his own investigations in the field. He discusses in full detail the physics of the influence of these factors (the sun, temperature, wind, etc.) upon architecture as well as pointing out their beneficial and harmful effects under given conditions. He tells how these climatic factors can be brought under control through the intelligent orientation of building and site and town planning. Although much of this material is of a technical and scientific nature and may be over the heads of the average lay reader, Aronin does provide down-to-earth practical information which should be heeded. In his chapter on the sun, for instance, he describes a great number of architectural shading devices, such as overhangs, balconies, louvers, sun breakers, and even offers a long list of trees and vine that will help provide shade while at the same time affording protection and beauty. He also gives practical advice and solutions to such problems as choosing a site for buildings,

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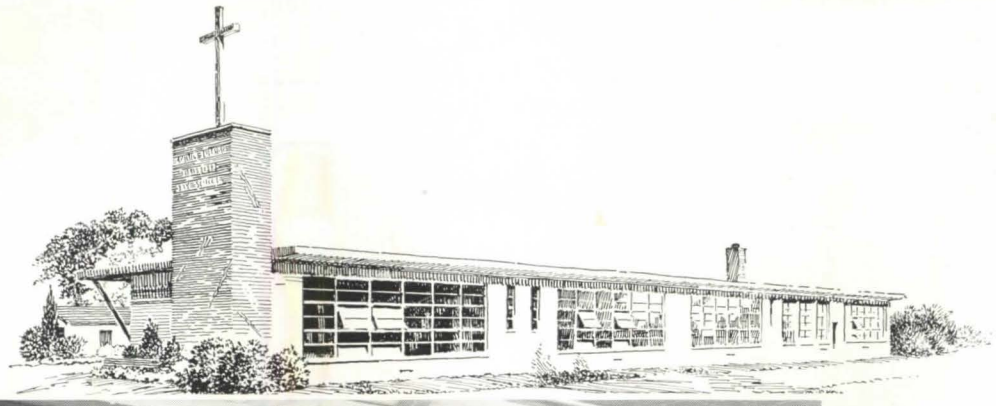
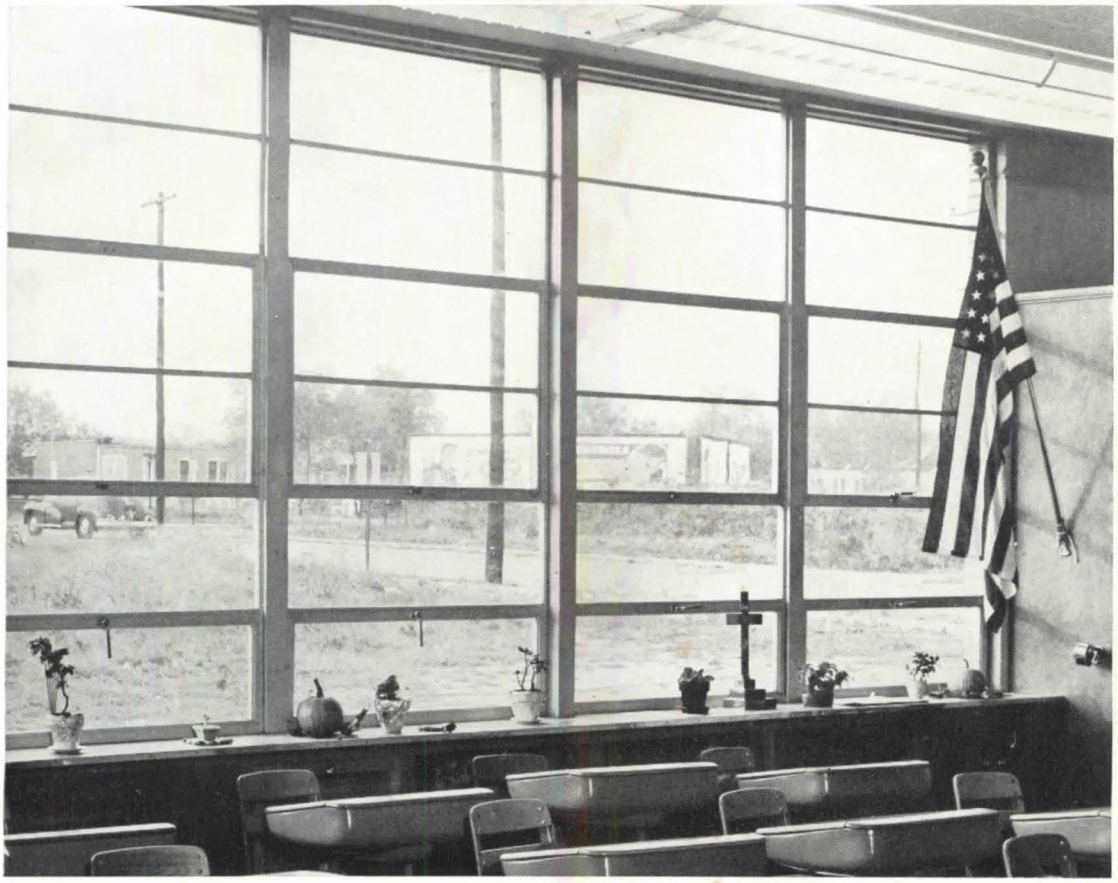




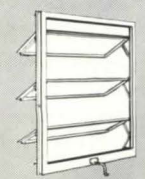
Martin Luther Christian Day School, Pennsauken, New Jersey, featuring Lupton Master Aluminum Windows.

Architect: William Dean Faint, Pennsauken, N. J.

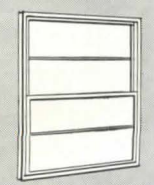
Contractor: Mark V. Kane, Merchantville, N.J.

LUPTON MASTER ALUMINUM PROJECTED WINDOW

LUPTON CASEMENT ALUMINUM OR STEEL



LUPTON ALUMINUM AWNING WINDOW



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Come Spring . . . and the Lupton Master Aluminum Window with open-out ventilators shields against rain and bad weather.

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reviews

(Continued from page 200)

how to avoid snow shoveling, how to keep a dry basement and a dry area around the house, and other matters the builder must face.

Like any objective work of this sort, *Climate and Architecture* will probably cause much discussion as to its really practical value in the broad realm of architecture, where so many factors are apt to overshadow the purely scientific and technical. However, it will be readily conceded that the author is quite justified in his hope that his book will be of interest not only to experts but also to students and the layman—the man now living in or proposing to build his own house. Whether it is used as a textbook or as a reference, this volume will be of great profit to anyone genuinely concerned with the relationship of climate and architecture. The author does not prescribe an out-and-out formula for the architect, since every situation is different. But he believes there are basic ingredients which can be integrated and varied to suit individual needs and tastes and he lists eight simple suggestions that are worthy of note for the professionals.

Aside from the text, with its charts and diagrams and tables, the more than 300 carefully selected illustrations augment admirably the various points the author stresses. These, along with the complete index and the exceedingly exhaustive bibliography, make this volume a standard work in the particular field. The book should "let us learn how to live with climate, not in opposition to it."

FRANK A. WRENSCH

furniture survey

Furniture for Modern Interiors. *Mario Dal Fabbro. Reinhold Publishing Corp., 330 W. 42 St., New York 36, N. Y., 1954. 207 pp., illus., $7.50*

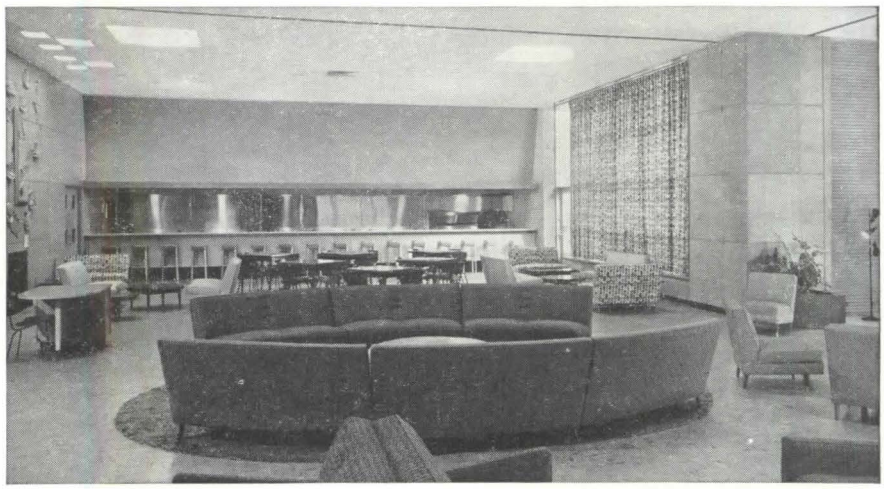
Material for this book was chosen on the basis of originality of design, innovation in technical solutions, apt application of new materials, adaptability of the design either to custom manufacture or to mass

(Continued on page 210)

watch these walls...

go into hiding!

By using "Modernfold" doors this student lounge can easily handle up to three separate activities at a time. Yet when the time comes to turn it back into an all-purpose area, room divisions literally disappear! Recessed pockets behind the wall panels hold the "Modernfold" doors completely hidden—but instantly available. Just another example of how architects are using "Modernfold" doors to achieve efficient—and attractive—use of space.



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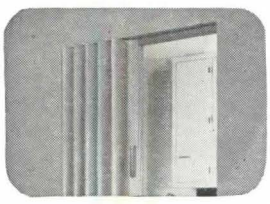

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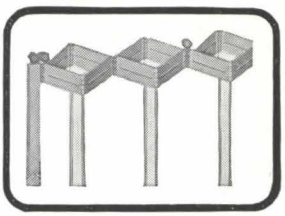

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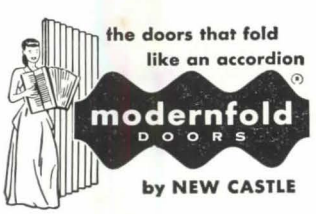

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City.....*County*.....*State*.....

reviews

(Continued from page 206)

production, and the significance of the piece in the evolution and direction of design in its country.

Examples were chosen from all over the world. They are presented first by photographs and pen-and-ink drawings of furniture groupings. PART II presents pieces individually by classifications, e.g., chairs, tables, etc. Captions explain why the furniture is important, design-wise, and drawings include measurements. Anyone interested in furniture or its design should have this record for enjoyment and reference. P. B.

collected examples

Commercial Buildings. *An* Architectural Record *Book. F. W. Dodge Corp., New York, N. Y., 1953. 416 pp., illus., $9.75*

This is a collection of examples of commercial buildings previously shown in The *Architectural Record*, which is published by the same company. Although the title might indicate that the whole field of commercial design is illustrated and discussed, only five building types are in evidence: office buildings, banks, transportation buildings, radio and TV buildings, and theaters. J.K.

notices

new associates

CHURCH, NEWBERRY & ROEHR, Architects, announce KURT P. SCHUETTE as an Associate at 619 Builders Exchange Bldg., Portland 4, Ore.

ROBERT Y. FLEMING, FRANK C. REPULT, JR., GERALD B. STRATTON have been made associates in the firm of THOMAS F. FAIRES & ASSOCIATES, Architects, 1027 Falls Bldg., Memphis, Tenn.

RICHARD WHITEMAN has been made an Associate in the firm of JYRING & JURENES, Architects-Engineers, 1932 Fifth Ave. East, Hibbing, Minn.