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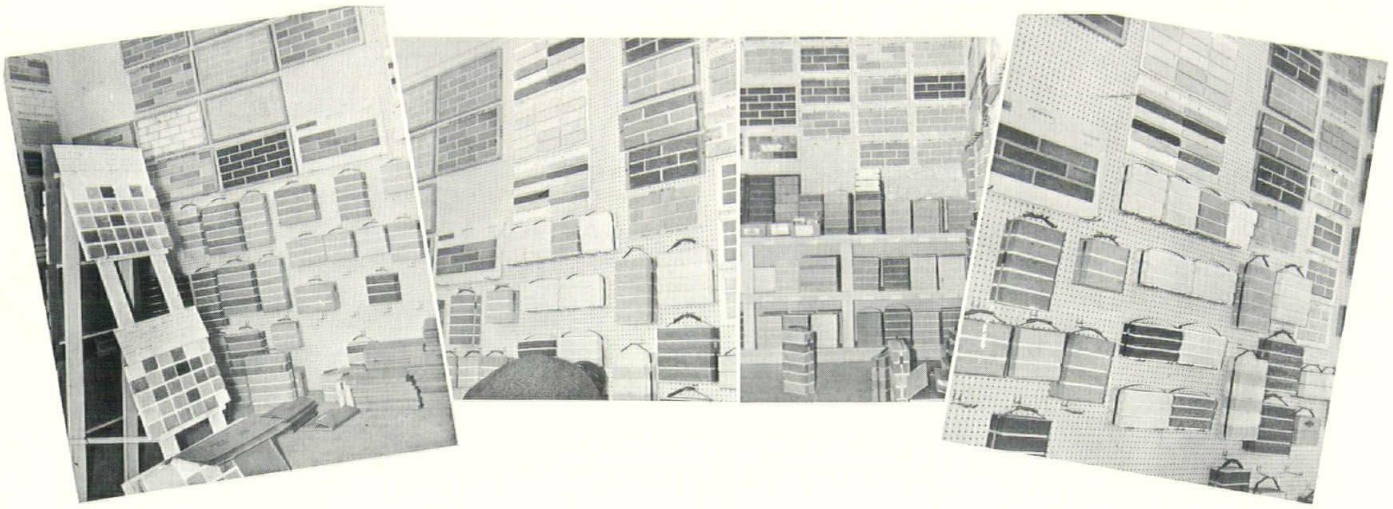

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COMING EVENTS

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•

July 8-31
Lyman Allyn Museum, New London: Contemporary sculpture and paintings.

•

July 10-31
Washington Art Association, Washington Depot: Marines with palette and camera.

•

July 10-August 31
Wadsworth Atheneum, Hartford: Exhibition of works of young Connecticut artists.

•

July 11-September 19
Larry Aldrich Museum, Ridgefield; Highlights of 1964-65 Art Season.

•

July 17-August 15
Brookfield Craft Center: Pre-Columbia Art.

•

July 18-August 17
Lyme Art Association, Old Lyme: 64th Annual Summer Exhibition (Oils).

•

July 24-August 15
Art Association Galleries, Essex: "Pops" Show.

•

July 24 & 31
Connecticut College, New London: American Dance Festival.

•

July 25-31
On The Green, Waterbury: Fifth Annual Waterbury Arts Festival.

•

August 3-20
Museum of Art, Science & Industry, Bridgeport: Exhibit of thirty-five paintings from the Abbott Laboratories fine art collection.

•

August 10-29
Museum of Art, Science & Industry, Bridgeport: Exhibition of paintings of Latin America, Canada and United States, from IBM collection.

CONNECTICUT ARCHITECT

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VOLUME 1, NUMBER 4 JULY - AUGUST, 1965

FRONT COVER: Educational plants geared to today's large-scale, diverse needs require coordinated planning.

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A MID-TERM VIEW

RALPH T. ROWLAND

President

Connecticut Society of Architects

With this issue *Connecticut Architect* enters the second half of its first year of publication. At the same time I find myself in the second half of my term as president of the Connecticut Society of Architects. It's too early for either the magazine or me to look back on any significant accomplishments but this does seem to be a good time to review some of our experiences to date.

Let's take the magazine first. The most important lesson the Editorial Committee has learned in the first six months of 1965 is that editing and publishing a magazine is a lot of WORK! Just about the time one issue goes to press, the deadline for the next one appears. Fortunately for us, our publishers manage to keep the book (and us) moving fast enough to get the material to the printers at the right time.

We've also learned rather quickly, I should add, that if we're going to put anything into print we'd better have a pretty thick skin. Enthusiastic as we were about our first issue, it was pleasant to hear from those who said "It's a great job," and "Keep up the good work." But, we were advised just as emphatically by others to "Drop dead!" Well, we haven't taken the latter advice, and we suspect that our magazine is not quite "great" yet. We realize it's pretty unlikely that we'll ever please everybody.

This is probably as it should be. Architects strive for perfection – or perhaps it is more accurate to say that each architect strives toward his own interpretation of perfection – and they are displeased when perfection is not realized. Just what the ideal should be for a magazine whose purpose is to present the work of Connecticut architects and to provide for an exchange of views among members of the building industry in Connecticut, we really don't know yet – but we're determined to find out. We're pretty sure, though, that "perfection" for a publication with these objectives will be based not only on good photography, graphic quality and careful presswork, but on candid commentary, defensible principles, and a strong respect for the opinions of its readers.

I'd like to give our readers, particularly the architects, some observations as a result of my first six months as president of the Society. First of all, I sincerely recommend to every architect, whether practicing or employed, that he became a member of an architectural society, that he become active in it, that he serve as a director when the opportunity presents itself, and that if possible he serve at least one term as its president. There is no better way, in my opinion, for an architect to know his own profession at its very best – and perhaps to learn about its worst.

Architect Complaints

Architects complain a lot about alleged faults in the profession and in the building industry. Most complaints are sooner or later directed to their society's president with the request that he or the society "do something." I think these complaints represent the greatest challenge to the president and directors of an architectural society. Many functions of a professional society are essentially routine, and others are fairly well-defined. A public-relations program, for example, can be planned in some detail – then requires only diligence and care for its accomplishment. But, when one architect complains that another has

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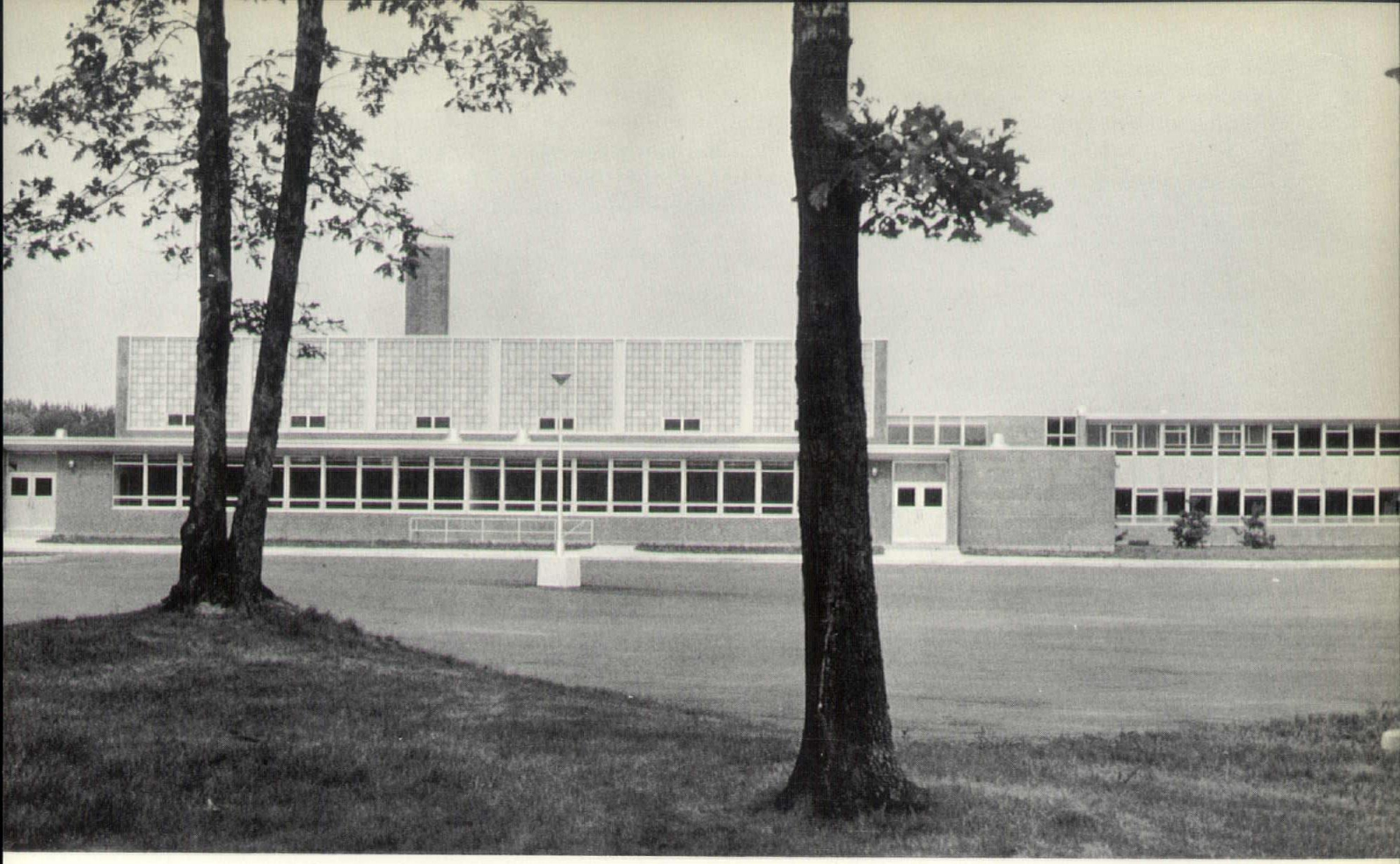

PLANNING EDUCATIONAL EFFICIENCY

Jonathan Law High School

Milford, Connecticut

JESSE JAMES HAMBLIN, ARCHITECT

John Zandonella, Inc., General Contractor

As construction of the Jonathan Law High School proceeded over a period of approximately twenty months, the results and benefits of the ten months of planning that went before became evident. Savings in time and in the costs of design, engineering and construction were realized from the planning module developed to meet the diverse requirements established by the town's educational staff and Board of Education.

The site selected by the town for its new high school consisted of thirty-four acres – the former Devon Park Area – of which about fourteen acres was pond and swamp land. The Board of Education established 1400 as the student population to be accommodated. The Board also specified the number of classrooms and other basic facilities required. The task

set for architect Jesse James Hamblin and his consultants was to determine the method of assembling these requirements to provide an efficient academic environment in a pleasing building, within a budgeted cost.

The project began with an extensive series of conferences between the architect and the heads of the various academic departments to determine their opinions on needed room size, building materials, and built-in facilities. These requirements were varied, to say the least. They ranged from liberal arts classrooms to woodworking shops, from library to cafeteria. Large scale layout plans were prepared showing the exact size of each room and each piece of equipment, as well as of circulation areas. Surprisingly, a number of teachers reduced their initial concepts of space requirements after studying these scaled layouts. These reduced areas involved no sacrifice of educational function. The result of this planning and design stage established the planning module which would serve the multiplicity of requirements for both educational and activity programs.

While this effort occupied the better part of ten months, it resulted in a reduction of nearly 30,000 square feet from the original estimated spatial requirements. With construction costs figured at $13 a square foot, savings of almost $400,000 are attributed to careful study and economical planning.

The heart of the school is the two-story academic section, shaped like a rectangular "donut" surrounding a landscaped court. This portion of the school contains liberal arts, physical science, business education, homemaking, and art classrooms, and the library. The shape reduces the distance between the elements and shortens the length of foundations and mechanical lines, with resulting construction economies.

Adjoining the academic section on the north is a wing containing the auditorium, gymnasium with locker facilities, health rooms, band and choral rooms, and kitchen and cafeteria. The roof line over the auditorium and gymnasium is continuous, giving a uniform appearance and serving to hold together these two differently shaped areas.

To the south of the academic section are two one-story wings. One contains all the administrative facilities for the school, including the guidance and health service rooms. In the other wing are located the manual arts facilities – woodworking and metal-working shops, drafting rooms and the power mechanics room.

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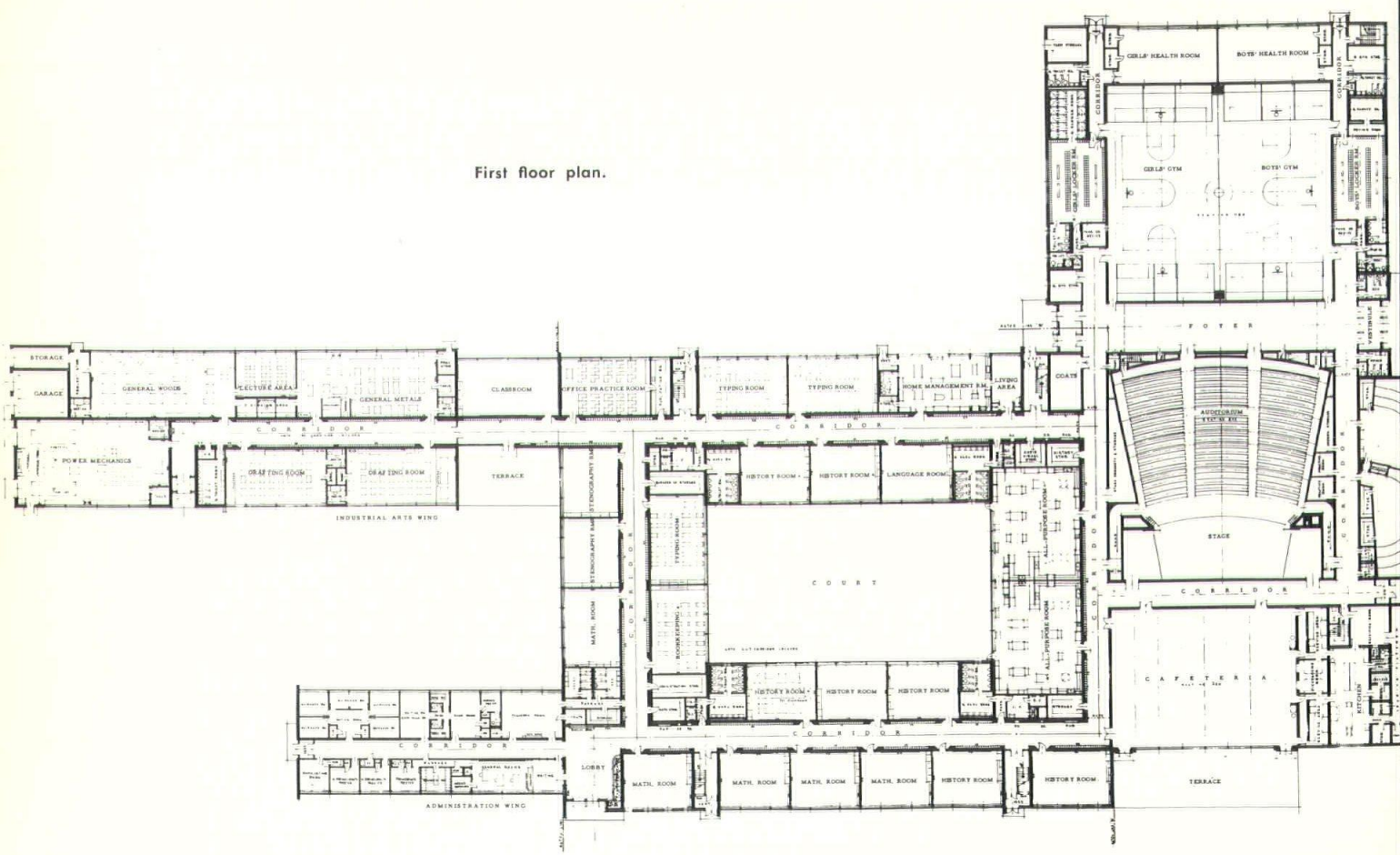
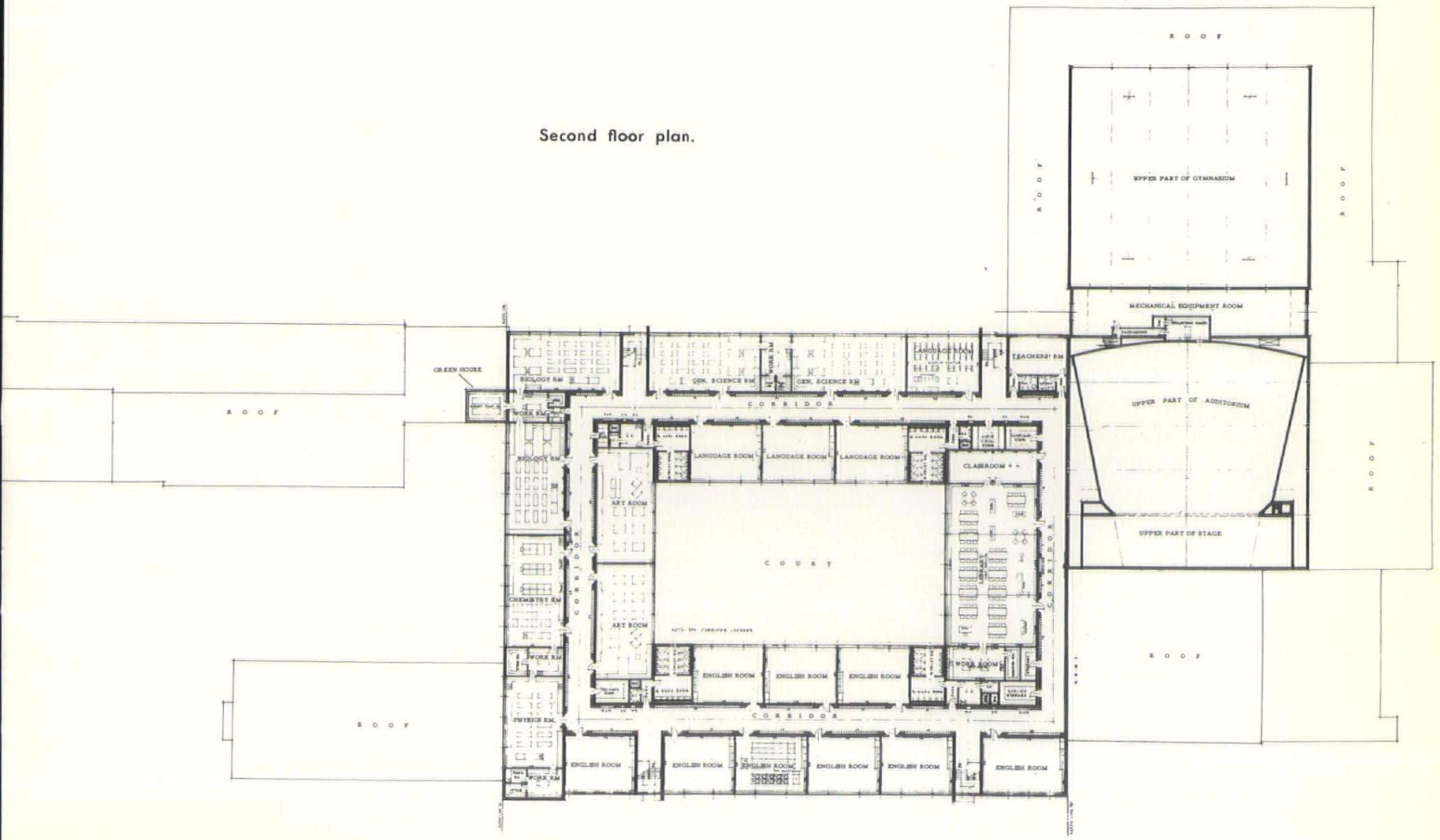
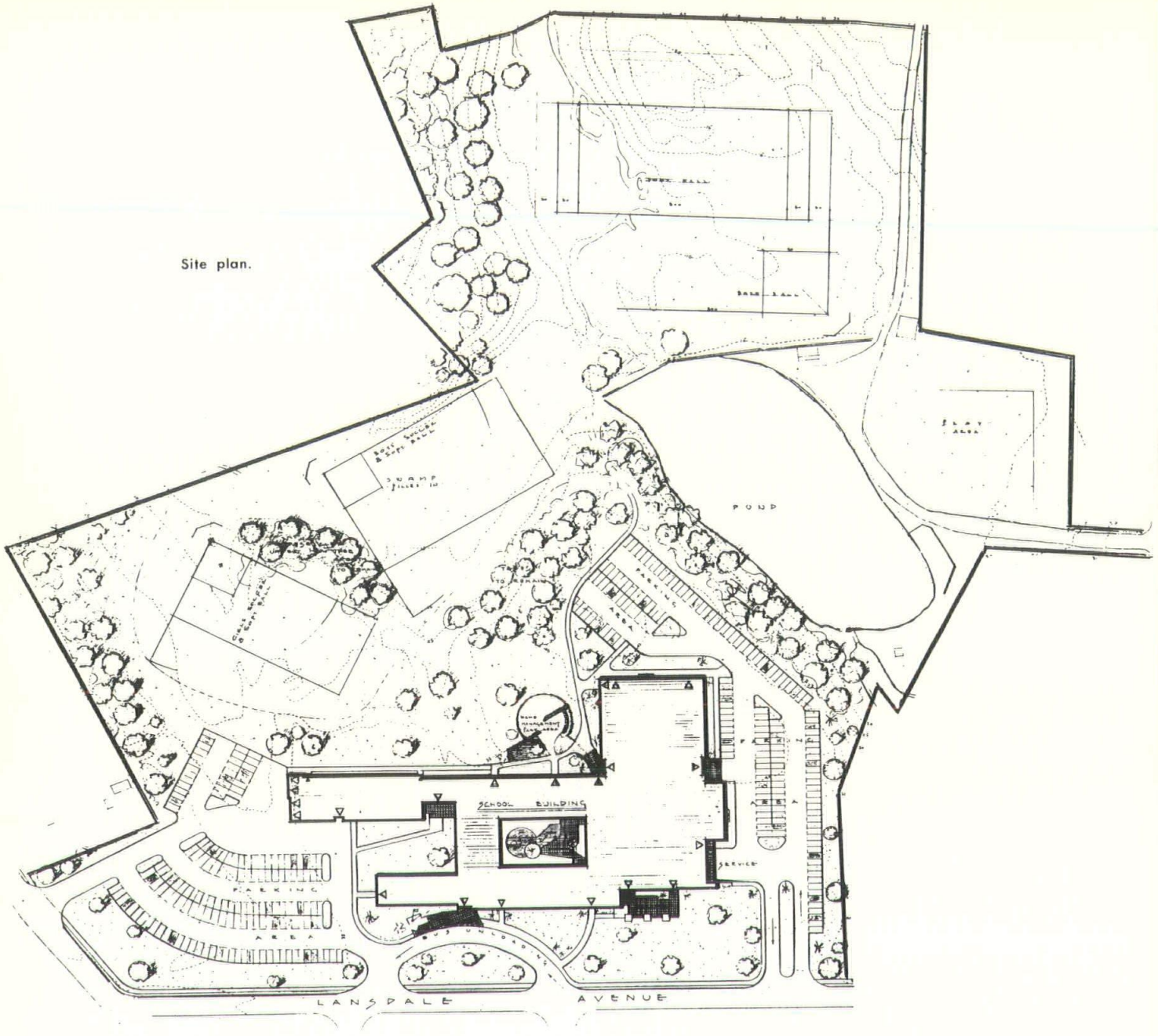
First floor plan.



Second floor plan.





Site plan.

Heat absorbing, glare reflecting glass was used in all exposures facing direct sunlight, helping to maintain pleasant temperatures on the warmest days. In the gymnasium, a softly tinted glass block "Thin Wall" panel provides natural lighting while preventing glare from direct sunlight.

The acoustical requirements received special attention, with the guidance of Louis Goodfriend and Associates, acoustical consultants. The auditorium walls and ceiling are splayed, and the plaster ceiling and fluted masonry block wall units give the necessary degree of "hardness" for good hearing. Strategically placed wood panels give sound absorption where required and supply visual warmth as well. In the classrooms, acoustical tile is used in the ceilings. An angled wall between the band and choral rooms eliminates excessive reverberation.

Concurrent with the building construction, major changes were made in the site. When the upper portion was leveled to accommodate the building and parking areas, the many fine old shade trees were retained to keep the park-like appearance and to provide a backdrop for the school. At the lower level, an extensive drainage system was installed to drain the swamp land which was then transformed into the varsity athletic field with grandstand seating for 1600 spectators. The small pond was filled to create an area for practice fields. The main pond, however, was retained and eight tennis courts were built just to the north. The total site development

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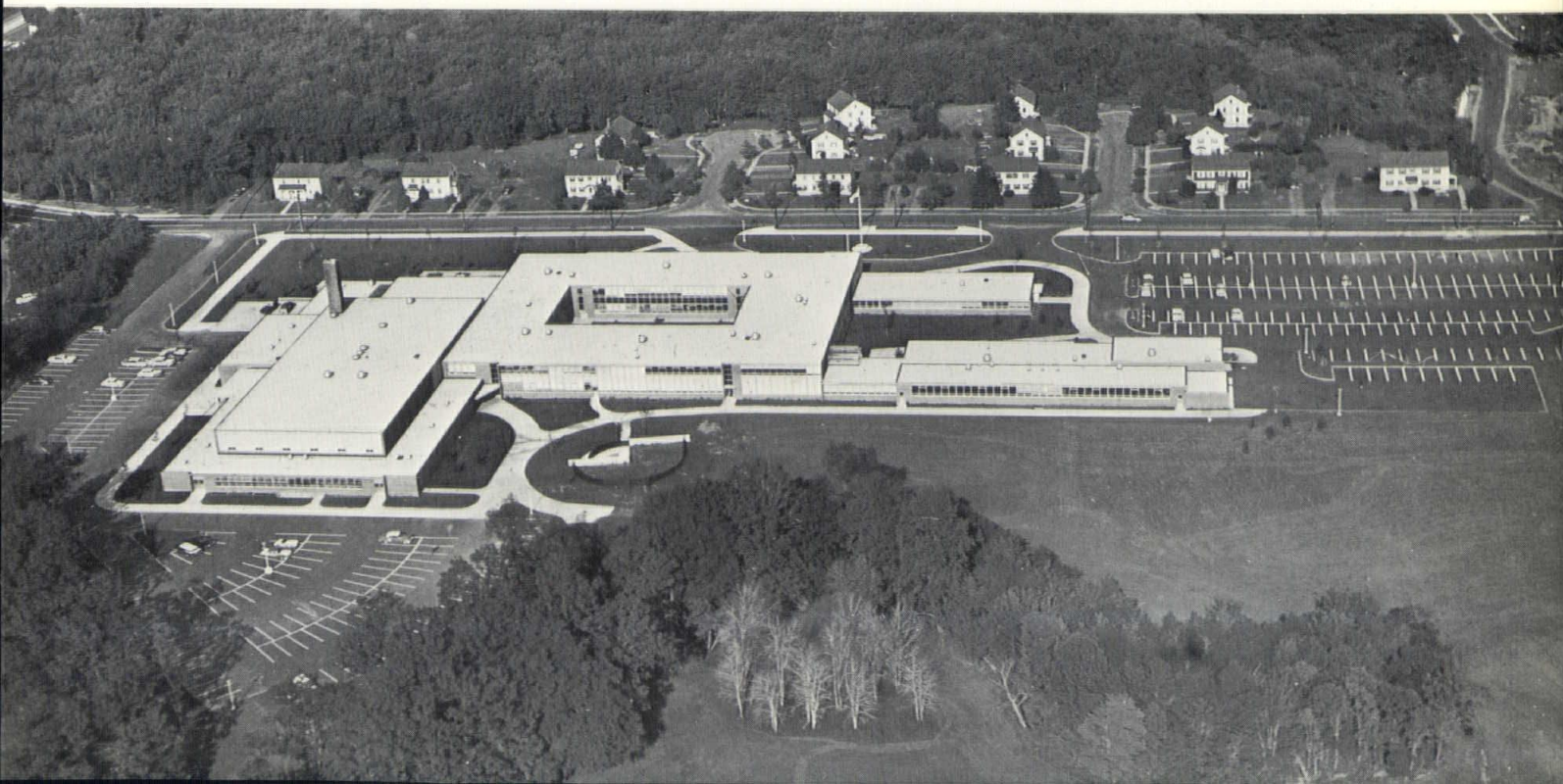


subcontracted to Kowalsky Brothers of Westport, has resulted in an imposing structure in a park-like atmosphere, enhancing the neighborhood.

Joseph Carlson served as consultant for structural engineering, and Harrigan and Hill Associates for plumbing, heating and ventilating. The general contractor, John Zandonella, Inc., of Bridgeport, completed construction of the school in June, 1961, leaving adequate time for installation of necessary equipment before the September opening.

Plumbing and heating contractor on the Jonathan Law High School was Paul S. Yoney, Inc., and the electrical work was by George J. Steinhardt, both of Bridgeport. The structural framework was erected by Connecticut Steel Company, New Haven. Millane Nurseries of Cromwell did the landscaping and planting of the grounds.

The school building has a floor area of 3.68 acres, with a total of 350 rooms. These facilities serve the community as a whole as well as the attending students. The 832 seat auditorium and the gymnasium with a capacity of 1184 persons are regularly used for cultural and athletic events. The tennis courts are also open to use by young and adults of the town for recreation. In fact, the basic factor of Mr. Hamblin's design could be stated as "maximum use."

JESSE JAMES HAMBLIN received his registration from the Architectural Examining Board in 1942 and established his own practice in Bridgeport in 1944. Prior to this, he had worked for many years as a free-lance architectural designer. He attended Connecticut Junior College (now University of Bridgeport) and obtained his architectural training in prominent architects' offices in Connecticut, including the Office of Charles Wellington Walker, FAIA. He is a member of the Connecticut Society of Architects, the American Institute of Architects, the Society of American Registered Architects, and the Church Architectural Guild of America. He holds a Certificate from the National Council of Architectural Registration Boards and is also licensed in the states of Florida, Pennsylvania and Rhode Island.

Opening day and the school is ready.

Tomorrow's Specification Writer

A Talk by
HAROLD J. ROSEN
before the
Connecticut Society of Architects

Harold J. Rosen, Chief Specifications Writer of Skidmore, Owings & Merrill, New York, and Contributing Editor to *Progressive Architecture*, told members of the Connecticut Society of Architects that it is time for re-examination of specification writing. Speaking to members of the Society at the Yankee Silversmith in Wallingford, he underscored the importance of new materials in designs and details.

"In the middle 1930's we had a radical upheaval in our curriculum at CCNY as a result of a survey by the engineering societies. The other day, as a part-time teacher at Pratt Institute, I received a report which questioned the present program and made suggestions for major changes. The report was made by a faculty-student committee.

"These unrelated events, thirty years apart have one thing in common: we should re-examine from time to time anything we do to find out whether it can stand improvement," he said.

He continued: "Architects are faced with the task of writing specifications for building projects. As undergraduates, most of you had no specific courses designed to teach you how to write specifications — and this situation still prevails.

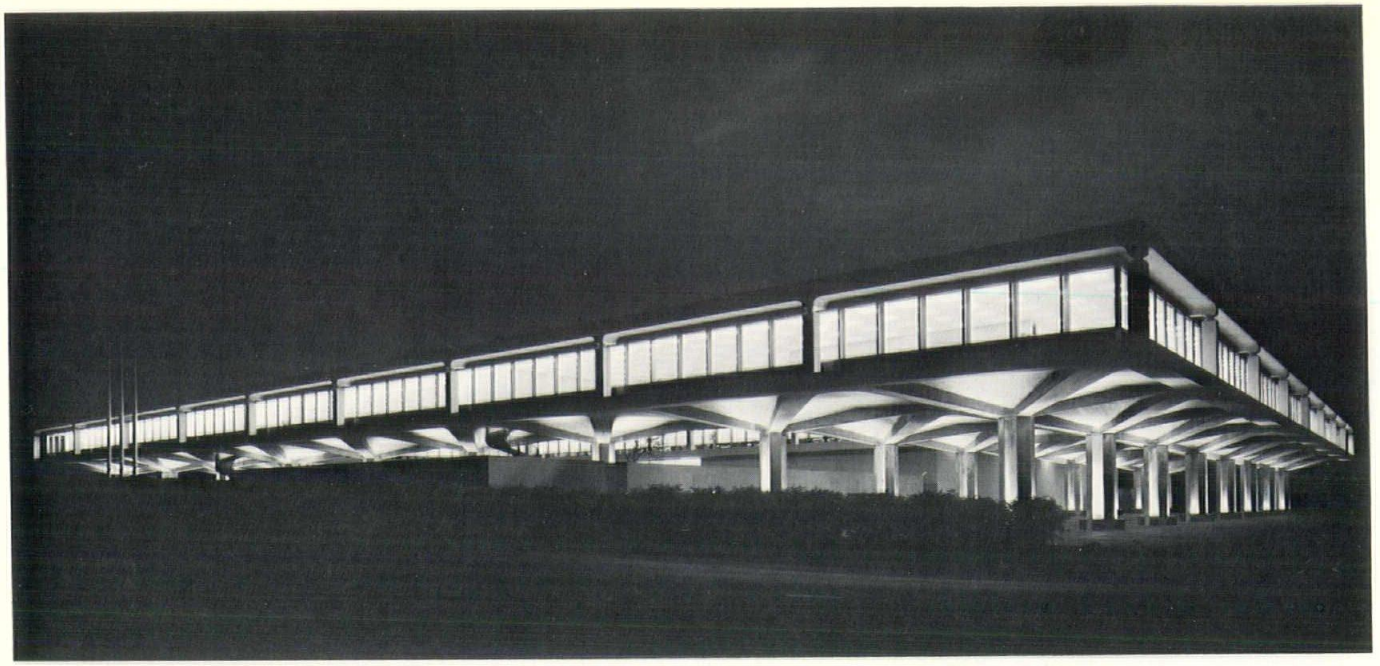
"Architects are commissioned by an owner to design a structure and develop two basic documents which can be utilized by the contractor — the working drawings and the specifications. One document is a graphic presentation. By means of lines, dots and symbols it illustrates the size, form, location and arrangement of the various elements. Actually, this conveys information better than words. The second document is the specifications. This consists of a description of the technical and legal requirements, and the quality of material, processes and workmanship required to complete a building.

"Here are two documents that should be complementary, each fulfilling its own function, each equally important. Yet, in many cases the courts have ruled that in the instance of conflict between these two documents, the specifications generally govern," he said.

Mr. Rosen went on to say that when the curriculum in schools of architecture is reviewed, courses of study that pertain to specifications — that is, the principles of specifications writing, the science of building materials and business law are either missing completely or they represent a small fraction of the credit hours required for a baccalaureate in architecture.

"Future professionals are handicapped by the failure of schools to provide them with the necessary fundamentals of the two basic elements which constitute our contract documents," he said.

"At a recent seminar on providing more time for teaching specifications in the colleges, Dean Sargeant of Syracuse said "As a professional, I have only to survey the more recent charges of alleged negligence, errors and omissions to recognize that improvement in professional education generally, as well as in that required for the specifications writer, is overdue. If I attempted to summarize the causes that have resulted in litigation involving the architect or engineer I would list them as follows:



Headquarters Building, Emhart Corporation, Bloomfield, Connecticut. Skidmore, Owings & Merrill, Architects/Engineers

failure to know or utilize basic scientific principles, poor judgment, lack of adequate quality control and improper instructions. Recognition by the design profession of the importance of the specifications as a key tool to correct these failures is essential.'"

Referring back to earlier centuries, Mr. Rosen stated that an individual could then be knowledgeable in many fields because the scope of knowledge was limited.

"With the pace at which the boundaries of human knowledge are being expanded, no one can be expected to be totally skilled in all phases of his own profession. Increasingly, the architect must rely on individuals within his organization who have specialized knowledge of each of the disciplines.

"'The increase in types of building materials bring problems which many of us are not prepared to cope with. The architect and his specification writer must have a better understanding of these new materials," he said.

"A two-volume "Handbook of Specifications" written by T. L. Donaldson, London, England, 1860, is interesting. He says in part: 'A revolution has been affected in various operations, that the professional man required a specification more in accordance with the improvements of the age and the actual state of construction at the present time. The general employment of concrete — the enlarged introduction of iron — the use of glass — the more skillful combinations of timber construction and scaffolding, and in fact all operations of the builder, deserve greater variety of description.'

"In Mr. Donaldson's time, apparently, vast changes were taking place in the materials of construction, and it was necessary to update specification writing at that time to include these new materials and methods of construction.

"He went on to say: 'Much of the fullness or general nature of the description of works, depends materially upon the character of the tradesmen employed. Where builders of high established character undertake a work, great minuteness of description may not be necessary; but the architect cannot be too elaborate or cautious, when having to do with a stranger or person of doubtful reputation, as sometimes happens in the case of open competition for public bodies.'

"Things have changed little since 1860," Mr. Rosen commented.

Mr. Rosen cited writings by Professor Daniel W. Meade in 1921 and a Holland and Parker text in 1926 to define the significance of specialized and accurate writing of specifications.

"As a matter of fact," he said, "there was really no need for special preparation to become a specification writer during early times because the materials used in construction were usually indigenous to the soil and compatible with each other. Manufacturers had little opportunity to tamper with them, and the timbers and native stones were pretty much 'or equal.'

"An architectural background was sufficient preparation for any individual to write specifications. Specification writers, as such, did not appear until the growth of larger architectural firms where one man may have been assigned to prepare specifications simply to expedite the work of an office. The

man assigned often did not have any special qualifications for the job.

"Earlier specification writers were concerned with designs that utilized natural materials such as wood or quarried stone, or man-made materials such as brick, concrete and steel. Very little background in chemical or physical sciences or properties of materials was necessary.

"During the early part of this century emphasis was on the relationship between drawings and specifications. Until World War II very little was available in textbooks on the science of building materials. Enough data had been amassed to cover existing problems.

"However, since this time a radical change has taken place in the materials of construction. The chemical industry has fashioned end products that are used in countless building materials. Vinyl floor and wall coverings, epoxy-based terrazzo flooring, sealants composed of neoprene, butyl rubbers and polysulphides; paints formulated with latex, acrylics, epoxies and urethanes; insulations compounded from urethanes and polystyrenes; roofing and flashing materials made from hypalon, polyvinyl chloride and polyisobutylene are but a few.

"In the field of metallurgy there are new steel alloys, new aluminum alloys, and an electrolytic process for finishes on aluminum alloys," he said.

(Please turn to page 27)

Beinecke Rare Book and Manuscript Library, Yale University, New Haven, Connecticut. Skidmore, Owings & Merrill, Architects/Engineers

COLONIAL VILLAGE

Suffield Civic Center
Suffield, Connecticut

KEITH SELLERS HEINE, ARCHITECT

John Romano Construction Company
General Contractor

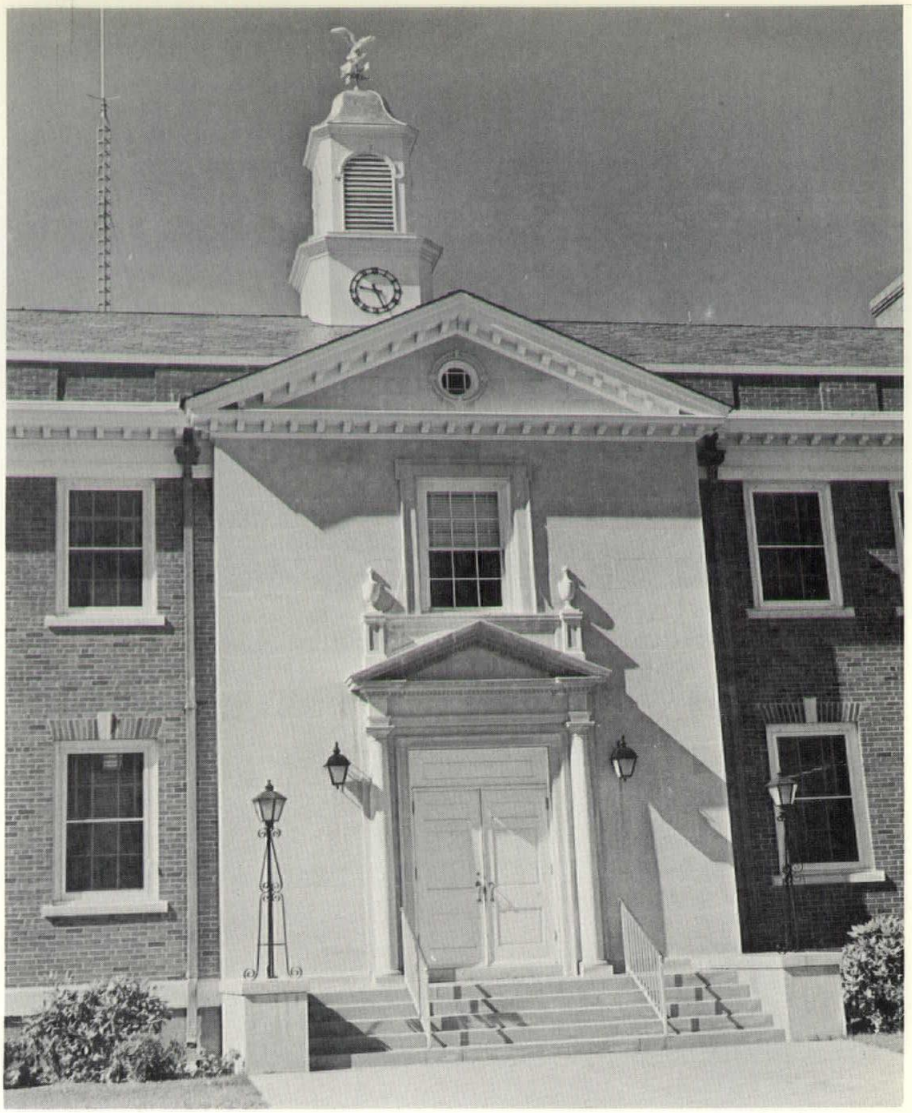
A hundred years ago a new town hall was built where the main road to the west meets Suffield's Main Street. It was a grand building, imposing, a little rococco, and it did a lot for the town's "Dodge City" type of Civil War vintage business section. This was a town hall that would last, and lend distinction to the town.

As the years went by, it seemed less elegant to succeeding generations. More important, it was costly to maintain and inefficient to use. The good citizens of Suffield decided in 1962 that it was time for something better for this town of rich farmlands and fine homes.

Unfortunately, the lot on which the town hall stood was too small, and there was no other land available around or near its location. The people wanted a civic center to contain their town hall, fire station and police station. They wanted to provide an attractive setting with room for future growth. A new location on Mountain Road about a thousand feet from the old town green was selected. They would create a new town green with the town hall as the focal point. This was done by placing the town hall on the highest portion of the four acre site, directly in the center of the property and about two hundred feet from the street.

Since Suffield traces its founding to 1670 and is one of the oldest towns in Connecticut, the town fathers agreed that the new civic center be designed in the strictest colonial tradition. This, they decided, would fit in best with the many old colonial homes so rich in historic value.

The site rises abruptly eight feet from the street, then slopes up two feet more in the first two hundred feet, and falls off rapidly ten feet at the rear. To take advantage of this, the town hall was located at the high point, and the front por-



Indiana limestone frames Town Hall entrance.

tion of land graded gradually to the street. Again, following the natural contour of the terrain, the police station was located on the ground floor of the town hall with its main entrance level with the parking area at the rear of the building.

The police station is complete in every respect. It has a waiting room with space for a desk sergeant, a private office for the chief, another private office for the policewoman, a dark room for quick development of films, a classroom and a regulation pistol range. It contains showers, toilet facilities and a locker room. A connecting garage has space for police vehicles.

The jail is of the most modern design with a detention room, two cells for men and one for women. Maximum security is provided by steel plate walls and ceiling and a six inch reinforced concrete floor. The cells have steel barred sliding doors and a steel security window.

The fire station is situated on the northeast corner of the property where it has convenient access to Mountain Road. It has a main garage for apparatus, a small dormitory for the two paid firemen, one of whom is the chief. Shower and locker rooms are sufficient to care for future expansion. There is a drill room which doubles as a classroom and meeting room for the fire commission, and is used for departmental social functions. The apparatus room walls are cinder concrete block with a Spectra-Glaze finish for easy cleaning. All other interior walls are painted plaster.

The town hall and the fire station are constructed of Boston Range variegated colonial red brick with slate roofs and white cornices and trim. The main entrance to the town hall features Indiana limestone. The building has all the

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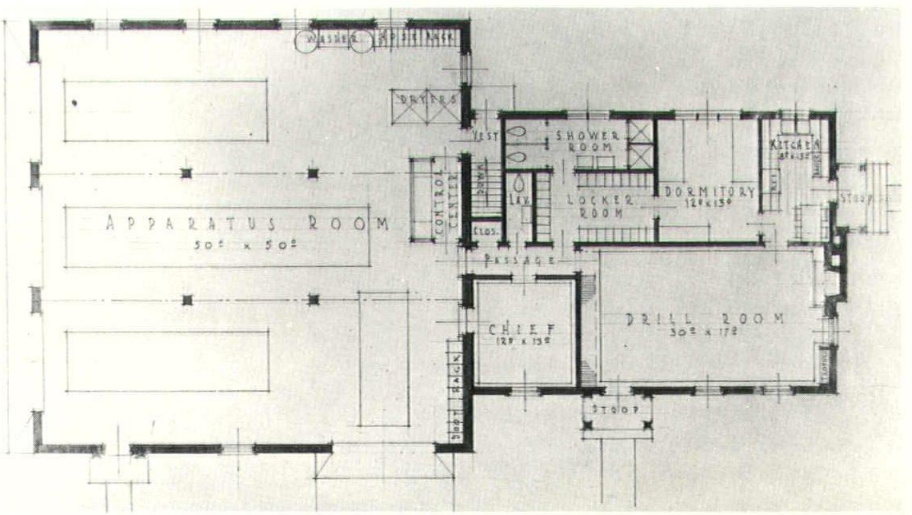
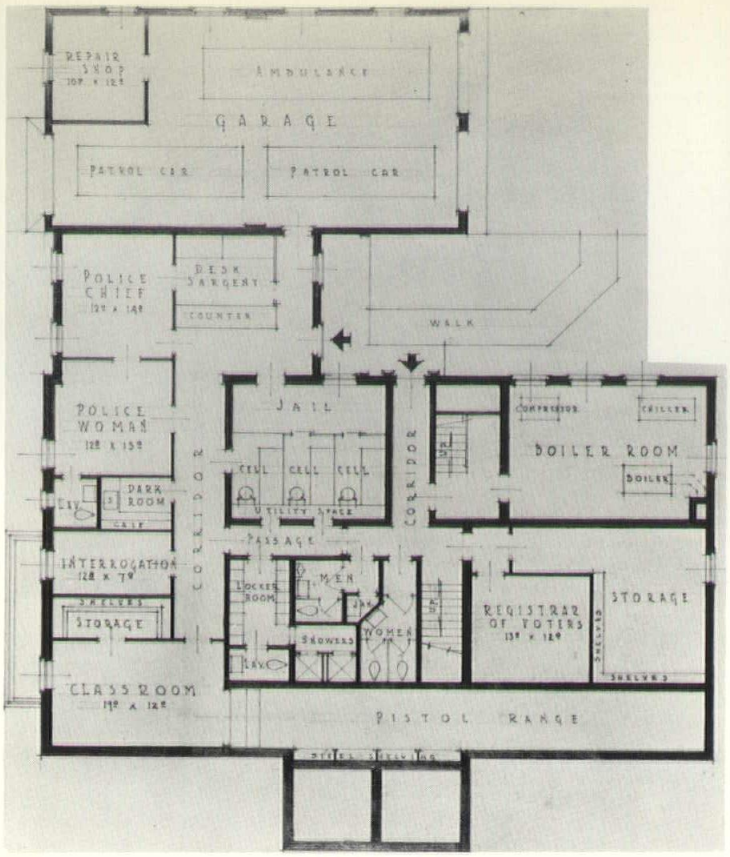
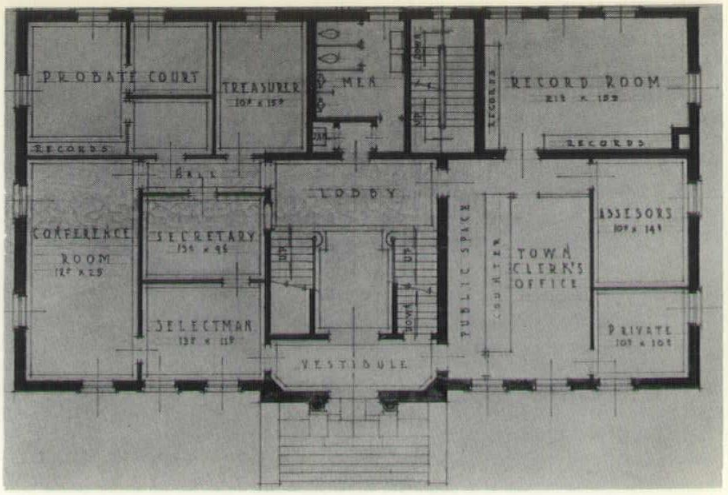
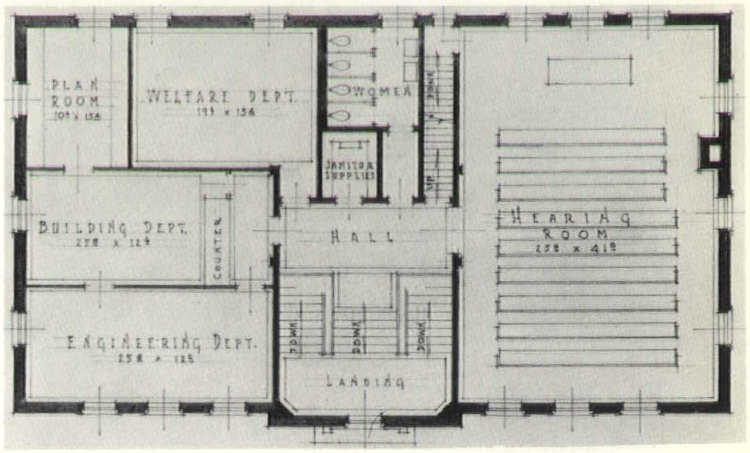
Suffield Town Hall.

Floor plan of Fire Station.



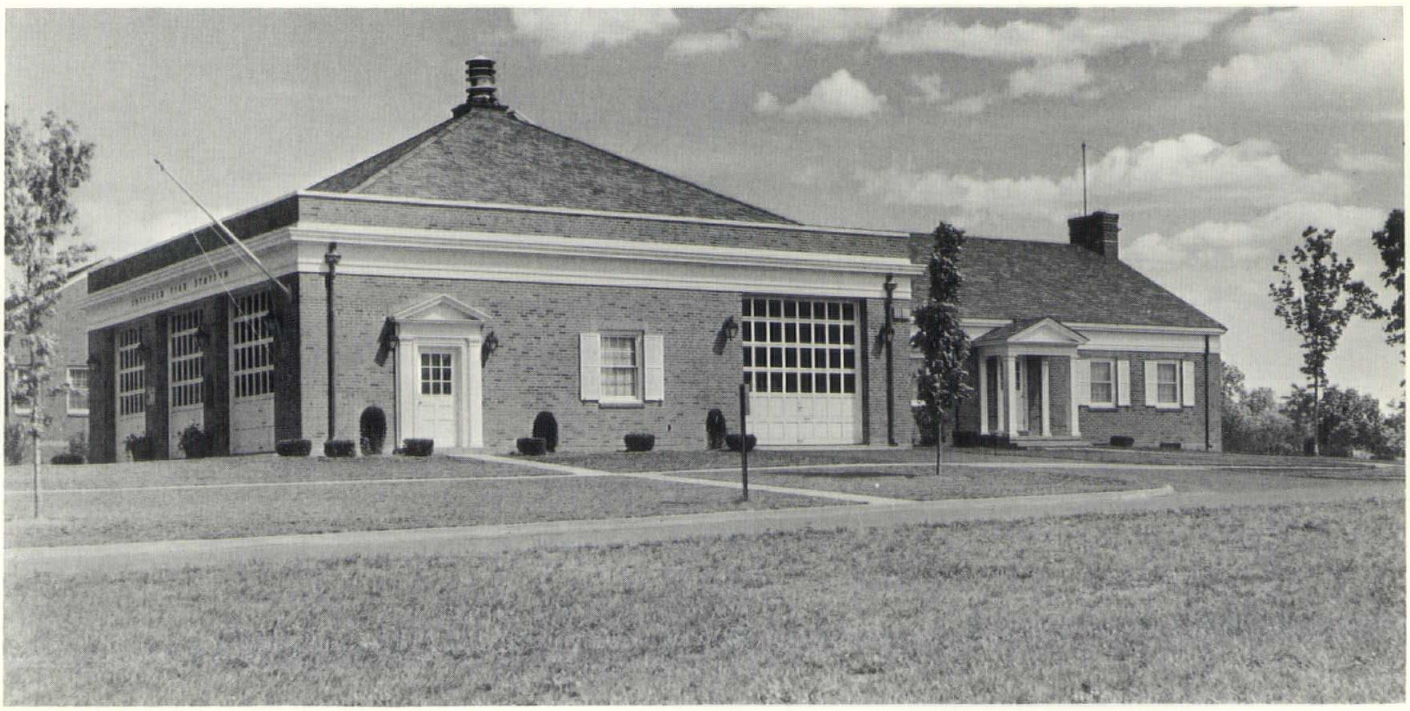


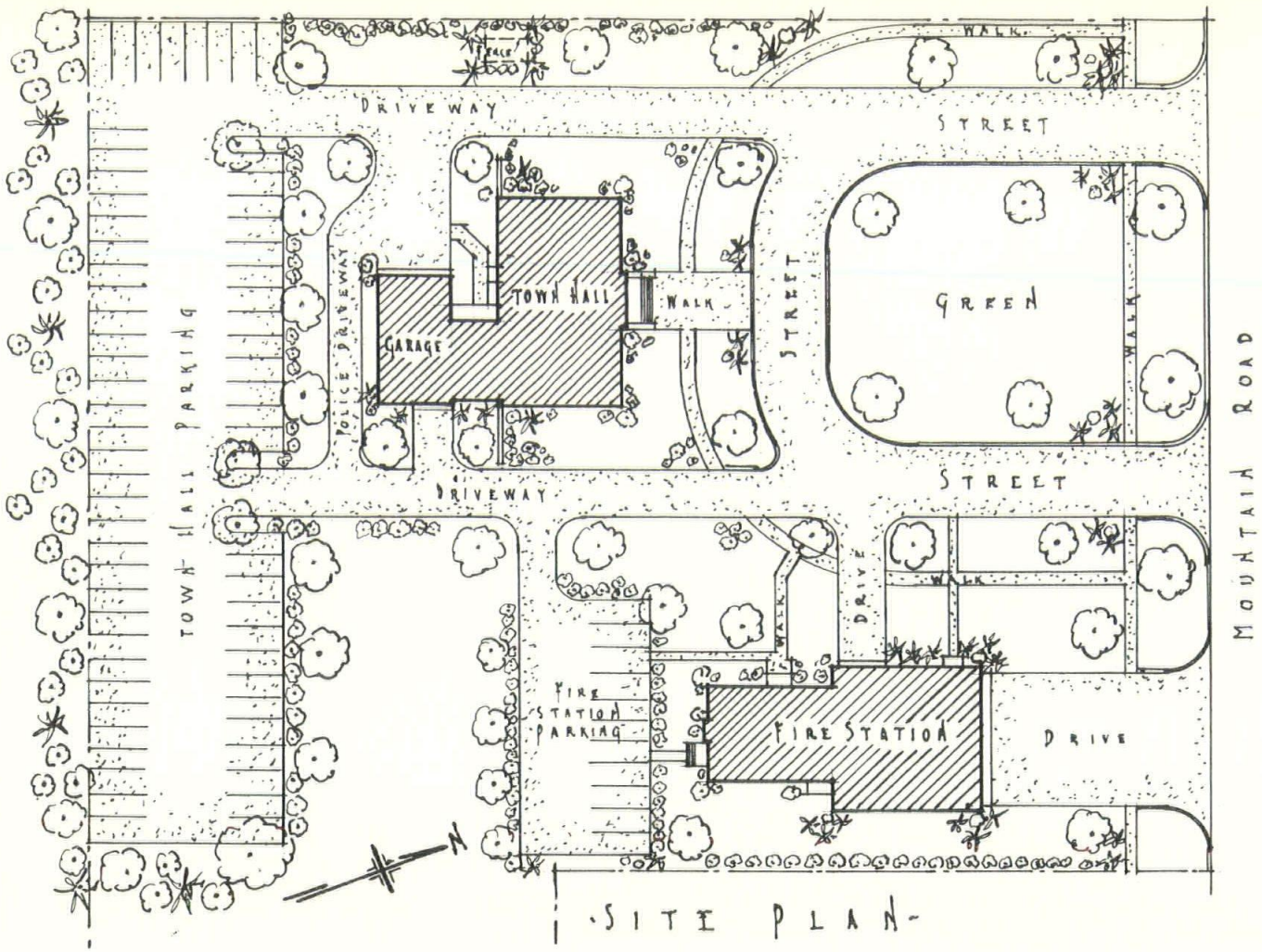




Town Hall floor plans. Ground floor, above; first floor, top right; and second floor, right.

Suffield Fire Station.





(Continued from page 17)

town offices and public facilities on the first floor. The second floor has a hearing room designed to seat 75 people, and ample office space for future expansion.

It contains a record room which appears to be an ordinary office. Actually, it is a vault used for storing all the official town records, including deeds, titles, mortgages and other vital data. It is furnished with special storage racks for land record volumes and storage cabinets for maps. Several flat-top tables are located in the room for convenient examination of records so none of this material will have to leave the room.

In accordance with the requirements of the state librarian's office, all walls, floor and ceiling and the vault door have a six-hour fire rating. Special fire windows have steel roller shutters that close automatically when actuated by a fusible link.

Underground electrical service serves the decorative outdoor lighting system which includes two sets of concealed spotlights to illuminate the front of the town hall at night. The offices are lighted with slimline troffers. An underfloor duct contains wiring for telephones, desk lighting and machines. Special colonial fixtures were designed for the lobby and outdoor overhead lighting.

The fire station has an emergency generator. Both buildings are heated with circulated hot water, although each has a separate boiler. The town hall is air conditioned by means of chilled water running through the same fan coil units which are used for heating.

Reinforced concrete foundations support wall bearing exterior walls and a structural steel inner frame. The walls are brick with cinder block backup. Both buildings use Dox Plank for the first floors, and the second floor of the town hall has steel joists.

The fire station has a basement area of 1,479 square feet, and a first floor area of 4,183 square feet. Cost per square foot was $18.16. The ground floor of the town hall has 4,810 square feet, and the first and

(Please turn to page 28)

DO SCHOOL BUILDINGS COST TOO MUCH?

By
Richard L. Howland

There has been a great deal of loose talk for several years about the "frills" in our public schools, of prices soaring out of reach, of "country club" school buildings, and other categorical indictments. Many well-intentioned citizens are convinced, perhaps by this constant iteration, that public moneys are being brazenly squandered on wastefully embellished "palaces" primarily designed as monuments to the officials and architects involved.

Nothing could be much further from the truth. There may be a very few cases that merit some of these criticisms. However, in the great majority of new schools in Connecticut the situation is much different. Almost all of our local school building committees and the architects they select are wholeheartedly devoted to getting the best value possible for the money available. The vast amounts of time expended in selfless service by volunteer committees, school administrators and architects would amaze most of the citizens who benefit thereby. And, for the most part, this effort is not in vain.

Table 1—Comparison of School Cost Increases to Other Increases, 1952 to 1962

	1952-53	*1962-63*	*Percent Increase*
Construction cost per square foot	$ 14.56	$ 15.13	3.0%
Construction cost per rated pupil	1225.73	1164.00	–5.1
Mean Salaries (Instructional staff)	4076.00	6757.00	65.8
Construction Cost, all U.S. buildings (Turner Index)	273.0	336.5	23.3

The Connecticut State Department of Education is at some pains to gather pertinent and useful information about the public schools of the state. Table 1, based on some of this information, compares school cost increases to other pertinent data.

These figures should be most impressive to honest critics of school costs. For example, during the ten-year period involved, costs of other types of construction have risen substantially, and instructional costs have increased impressively. However, the cost of Connecticut public school buildings has been held to an extremely small increase per unit of space and even to a reduction per unit of occupancy. One can be sure that this is no accident. On the contrary, it is a quite remarkable achievement on the part of those responsible: board members, administrators, building committees, and architects.

It should be useful to gain a bit of perspective about the relative importance of school building costs in the overall picture of education. The Connecticut State Department of Education's annual "Report on the Condition of the Public Schools" for the year 1962-63 listed the breakdown of funds spent on local public education.

Table 2—Expenditures for Connecticut Local Public Education in 1962 - 63

	Amount		*Percent Increase*
Capital Outlay			
Principal of Debts	$ 37,774,339		13.2%
Interest on Bonds and Long Term Notes	10,735,414		3.7
Sinking Fund Payments	15,072		.01
Other Debt Service	796,986		.28
Sub total		$ 49,321,810	17.2%
Current Expenses			
General Control	$ 5,779,910		2.0%
Instruction	176,623,565		61.7
Attendance and Health Services	2,767,954		1.0
Pupil Transportation Service	8,997,763		3.2
Operation of Plant	21,734,032		7.6
Maintenance of Plant	6,672,186		2.3
Fixed Charges	3,888,351		1.4
Food Services and Student Activities	1,363,658		0.5
Outgoing (Tuition, etc.)	8,665,202		3.1
Sub total		$237,036,581	82.8%
Total		$286,358,391	100.0%

As shown in Table 2, the total amount paid for school construction (principal of debts) in the year 1962-63 was but 13.2 percent of the total expenditure for education. The great bulk of educational costs is to be found in instruction and plant operation, which together account for nearly seventy percent of the total. It is significant also that debt service swallows nearly twice as much money as plant maintenance and that plant operation costs amount to nearly sixty percent of the construction costs for the year.

Therefore, those seeking economy in education can best bend their efforts toward those things which would make instruction more effective, reduce plant operation and maintenance costs, and reduce the expense of debt service.

Effective Buildings

Improvement in the effectiveness of school buildings means designing to promote the most learning by pupils per hour of instructional staff time. There are a number of means by which this may be accomplished, but they all require time to plan properly. And this in turn means that project planning must be commenced early enough so that the school administrator and staff, together with the architect, can devote sufficient time to work out all the necessary procedures, inter-relationships and details. Since many municipalities "put off" these things until the latest possible date, it is all too seldom that there is sufficient time to design an optimum solution of the individual problem.

The cost of operation and maintenance of school buildings is affected by both the procedures used and the design of the structure. Naturally, operating and maintenance procedures are not under the direct control of those concerned with the design of a school plant. However, the design of the plant has a very pronounced effect on what procedures are possible, as well as directly affecting the efficiency of operation in such matters as heating and ventilating, lighting, grounds keeping, and other details.

Higher quality materials will generally result in the greatest long-term economy through reduced maintenance and replacement. Here again, planning time is required for developing an optimum balance between initial investment for quality materials and long-range savings through lessened maintenance and replacement costs.

Esthetics aside, it should be clear that the selection of the architect to be involved in the design process is critical to success in achieving economy. However, we still find a few committees attempting to "shop around" for architectural services on the basis of professional fees. Only a questionable architectural firm would engage in fee cutting to secure a commission, and such a firm would be unlikely to provide anything but sub-standard services for a sub-standard fee.

To leave ethics aside, the magnitude of any such "savings" deserves scrutiny. Referring again to the listing of Connecticut school building costs, it is seen that the total amount paid for school construction (principal of debts) in 1962-63 was but 13.2 percent of the total expenditure. State records further indicate that architectural fees average about 5 percent of total school project costs. Thus, architectural fees in that year amounted to about $1,888,717 or 0.66 percent of total costs. In other words, if all architectural fees had been cut in half, the resulting savings would amount to less than a million dollars for the year or only a little more than three-tenths of one percent of the entire cost of public education!

Good Design

Any compromise with good functional design will usually compromise the effectiveness of the school for its primary purpose. Since this purpose is basically that of assisting in the educational process, reduced effectiveness of a school

building means reduced effectiveness of the instructional staff. And here at last we come face to face with the possibility of really serious waste. In effect, the fee-shopper – in the hope of saving perhaps a fraction of a percent of the total cost of education in his town – is willing to gamble with the effectiveness of more than sixty percent of that same total! Could there be a much poorer way to save money?

Local officials and citizens who are interested in reducing the cost of good education could often be more effective by seeking improved management of local fiscal affairs, a matter which is outside the scope of any usual school building committee or board of education.

When, for example, interest on bonds and long-term notes annually amounts to more than one-quarter of the principal involved, there is room for savings. Several means of improvement are available, including shorter bonding periods, improved bond sales techniques, and optimum of bond sales. Not the least, of course, is the achievement of an improved Moody rating in the bond market through sound fiscal management within the municipality. The differences in rating can mean corresponding differences in bond interest rates for a given issue.

These differences can be substantial. For example, each one-tenth of one percent difference in interest rate of $100,000 worth of ordinary municipal bonds is roughly equivalent to $1,000 during the usual twenty-year term. On a large bond issue, therefore, a few points improvement in rate due to good sales timing, plus a good Moody rating, can mean substantial savings to a town without compromising the quality or effectiveness of the school building itself.

Most school buildings are actually a rare bargain in today's market. In many cases, further long-term economies are possible. These are not to be gained by cheapening the fabric of the building, hurrying the planning process, or trying to hire a "cut rate" architect. The key to economy is better planning: better educational planning, better architectural planning, and better financial planning.

RICHARD L. HOWLAND is a graduate of Syracuse University and a registered architect in Connecticut and New York. He is architect of the School Construction Economy Service of the Department of Education of the State of Connecticut. A member of the second-prize winning team in the recent national School Fallout Shelter Design Competition (Region I), he is author of the "School Building Economy Series" booklets and the school building section of the Connecticut Fire Safety Code, and co-author of "Connecticut School Building Guide." He is second vice president of the Connecticut Society of Architects, president of the Hartford Society of Architects, and a member of the American Institute of Architects, the National Council on Schoolhouse Construction and the Northeast Council on Schoolhouse Construction.

Mid-Term View

(Continued from page 6)

violated the code of ethics, or that an unlicensed person is practicing architecture in Connecticut, or that a public official has failed to enforce the law with respect to building-design documents, the president knows that the ensuing investigation may possibly bring public discredit to someone – and that "someone" may be a fellow-architect.

Unethical practice is a subject which should, perhaps, never be discussed in public. Indeed, it is a subject which ideally should never need discussion at all. However, since unethical practice – or the allegation or suspicion of unethical practice – is unquestionably the greatest single source of friction and misunderstanding among architects, I think it's time the architectural profession and friends of the profession face up to the problem and resolve to eliminate it. The task before us is of such magnitude, and architects are so few in number, that all our energies should be directed toward building a new and better American environment. Our efforts should not be diluted by the criticism and chastisement of our colleagues.

It seems to me that most allegations or suspicions of unethical practice center about the means by which architectural commissions are obtained, or the means used by individual architects to promote their own interests. In some cases it is possible that a provision of the code of ethics has been honestly misinterpreted – and it is to be hoped that official interpretations will solve that part of the problem.

Code Established

The code of ethics to which all architects licensed in Connecticut must conform has been promulgated by the Architectural Examining Board and incorporated in the law. It provides, for example, that no architect shall "submit bids" for his services, nor shall he use "donations, contributions or other improper or questionable methods" to gain competitive advantage. The code also prohibits an architect from offering or providing any services before receiving a definite commitment from his client.

These are all sound rules, based on the experience of generations of architects and of the building public. They are designed not only to put the architect-client relationship on a businesslike and professional basis, but also to protect the public from inadequate service. Surely there can be little if any justification for the number of complaints of alleged infractions of these rules which are heard by the president and directors of the Society.

I call, therefore, upon every architect practicing in Connecticut to try to remove the cause of such complaints. I ask each architect to re-read the code of ethics, to request the Architectural Examining Board to interpret specifically any provision which is not clearly understandable, and to then conduct his own practice in such a manner that there can be no justifiable complaint from his colleagues or the public.

I urge other members of the building industry and building officials to read the architects' code of ethics and understand the rules by which an architect must conduct his practice. This will help architects to abide by the rules which have been written to help provide a better environment for all through adequate professional services – an aim certainly consistent with the basic objectives of the entire industry.

And, finally, I call upon the clients and potential clients of architects – who exert such tremendous effect upon architecture by providing the means and purpose for building – to appreciate the architect's professional responsibilities. Select your architect first, then negotiate his fee – not vice versa. Don't ask an architect to demean his talent by furnishing sketchy services based on inade-

quate information before he is hired. Even if this were not unethical, the value of such services would be questionable. If you are a public official, don't ask an architect for a political contribution in return for a professional commission. Not only would this cause the architect to violate his lawful code of ethics, but because his fee for public work would be in effect reduced, he might have to reduce the services he provides, thereby depriving the taxpayers of the full value for which they had paid.

Connecticut Architect and the Connecticut Society of Architects have made reasonable progress, I believe, in the first half of 1965. It seems reasonable to me to set two important goals for the second half of the year: For the magazine, the gradual improvement of its graphic quality and editorial content; for the Society, the cooperation of all its members and other Connecticut architects and friends of the profession to eliminate the real or imagined causes for complaints of alleged infractions of the architects' code of ethics. Both objectives may take more than six months to be realized, but they are well worth our sincere effort. The comments and suggestions of our readers on both subjects will be sincerely appreciated.

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Specification Writer

(Continued from page 15)

Mr. Rosen explained that the use of these new materials in designs and details means simply that specification writing needs people with strong backgrounds in chemistry, metallurgy and materials testing. This becomes increasingly important in the face of mounting construction costs, a problem which must be met not only with the use of new materials, but with new uses for old materials. The introduction of mechanical systems in building creates new problems, too.

"In 1957, Raymond Fisher of the Department of Architecture at Carnegie Institute of Technology, conducted a survey of accredited schools of architecture to determine the extent to which specification writing was being taught. Of 47 schools circularized, 38 responded. Twelve of these had regularly scheduled courses in specification writing. The remaining 26 taught specifications in conjunction with courses in working drawings, office practice, or materials and methods. The time devoted to the subject varied from one to three hours a week, and from one-half to two semesters.

"The following conclusions were drawn from the survey:

(a) In addition to needing more time in the curriculum in most cases, there seemed to be a need for a better text book.

(b) Adequate time was not available in the five year curriculum to provide for the teaching of specifications.

(c) There were insufficient subjects to be taught to justify a degree course in specifications."

Mr. Rosen reported that in 1963, in conjunction with *Progressive Architecture*, he sent a questionnaire to 75 schools of architecture in the United States, Canada and Mexico. The survey contained the following questions and answers:

"Is there a required course in architectural specifications in your curriculum?" Yes 27, No 34. Of those reporting "no", twelve indicated that it was taught as part of office practice, and five as part of working drawings.

"How many hours per week are devoted to the course? How many semesters?" The average specification writing course is given for two to three hours a week for one semester.

"Is a required course in building materials offered?" Two said "no", and 58 said "yes", and one replied that it was elective.

"Does the course in building materials cover the physical and chemical properties of concrete, steel, masonry, roofing, sealants, thermal insulation, paint, plastics, glass and acoustical materials?" While 40 schools replied that courses included all, ten said that sealants, paints, plastics and acoustical materials were not covered. There were complaints about the lack of a suitable textbook.

"Is a materials testing laboratory course offered?" 19 yes, 42 no.

"Do you believe that the field of specification writing is so complex that it warrants a curriculum of its own, including chemistry, metallurgy, properties of building materials, materials testing, business law and estimating?" 16 yes, 44 no, 1 maybe.

"From an analysis of the individual educators responding to the last question, it would appear that those who answered in the affirmative were for the most part practicing architects who are confronted with the problems and are therefore more aware of the shortcomings of the present curriculum," Mr. Rosen said.

"The 'specification writer,' for want of a better term, must be a materials engineer and have a comprehensive knowledge of the subject. He must be a civil engineer thoroughly familiar with engineering design and construction practice. He must be a lawyer conversant with legal requirements in the general conditions and contract forms. He must be an English major in order to attain the ability to use clear, correct and concise English, precisely written. He must be an estimator who can evaluate the costs of what he specifies.

"However, specification writing is only an instrument of communications. It is the transmission belt through which technical information is communicated to the ultimate users of the specifications.

"The late Professor Fisher's conclusion that there are insufficient subjects to justify a degree course in this subject is no longer valid. The two-year course being taught in Pasadena City College is wholly inadequate. The specification writer of tomorrow must be a member of the design team on equal status with other consultants to the design professions.

"Our educational institutions have been remiss in the proper training of students to prepare them for the practice of architecture, although they are not wholly responsible for the delinquency. Direction and guidance for these colleges is the responsibility of practicing architects and engineers. You are the ones who are faced with the lack of proficiency of people who represent themselves as specification writers. And, it is you, as it was the engineering societies I spoke of back in the 1930's, who demanded changes in college curricula, and it is you who must enlighten our colleges as to our needs and how we can overcome the problem," Mr. Rosen concluded.

Colonial Village

(Continued from page 20)

second floors 3,190 square feet each. Cost per square foot was $24.80.

The creation of a new town green with necessary approaches to all points required careful planning. The traffic flow in and out was arranged to avoid congestion by making the main driveways one way. Entering traffic uses the west drive, passing in front of the town hall, and exiting east. A secondary street, west of the town hall, provides access to the police station and the main parking area at the rear. The exit street passes east of the building. There is a private parking area at the rear of the fire house.

There were only four trees worth saving on the site, so new trees and shrubbery were planted to improve the appearance of the property. Landscaping was done by Atwater Nurseries of Agawam, Massachusetts.

John Romano Construction Company, Inc. of Suffield was general contractor. Electrical contracting was done by Collins Electric Company, Springfield; plumbing and heating by J. Lyon & Sons, Hartford. Ernest Peterson, Inc., Hartford, did the roofing; Shalen & Conover, West Hartford, ceramic and resilient tile; Topper & Griggs, Inc., Farmington, structural steel; and Waterbury Iron Works, miscellaneous iron work.

Interior finish features colonial details.

From its vantage point, the Suffield Civic Center provides a nucleus for the community's future growth. Several new buildings have been erected nearby which match the general style of the center. The architecture of the town hall and the fire station fits the Suffield countryside, and matches the wishes of the residents.

As one person expressed it: "Its clean, simple lines will never become ugly."

KEITH SELLERS HEINE received his architectural education in the Beaux Arts Institute of Design. A past vice president of the Connecticut Society of Architects and a past president of the Connecticut Chapter, A.I.A., he also served as a director of the New England Regional Council, A.I.A. He was an organizer and president of the Hartford Society of Architects. He holds a certificate of the National Council of Architectural Registration Boards, formerly served on the Hartford Board of Review and the Granby Zoning Board of Appeals, and was a director of the Hartford Chamber of Commerce. His office is at 83 Sunny Reach Drive, West Hartford.

NOTES . . . . .

New Firm

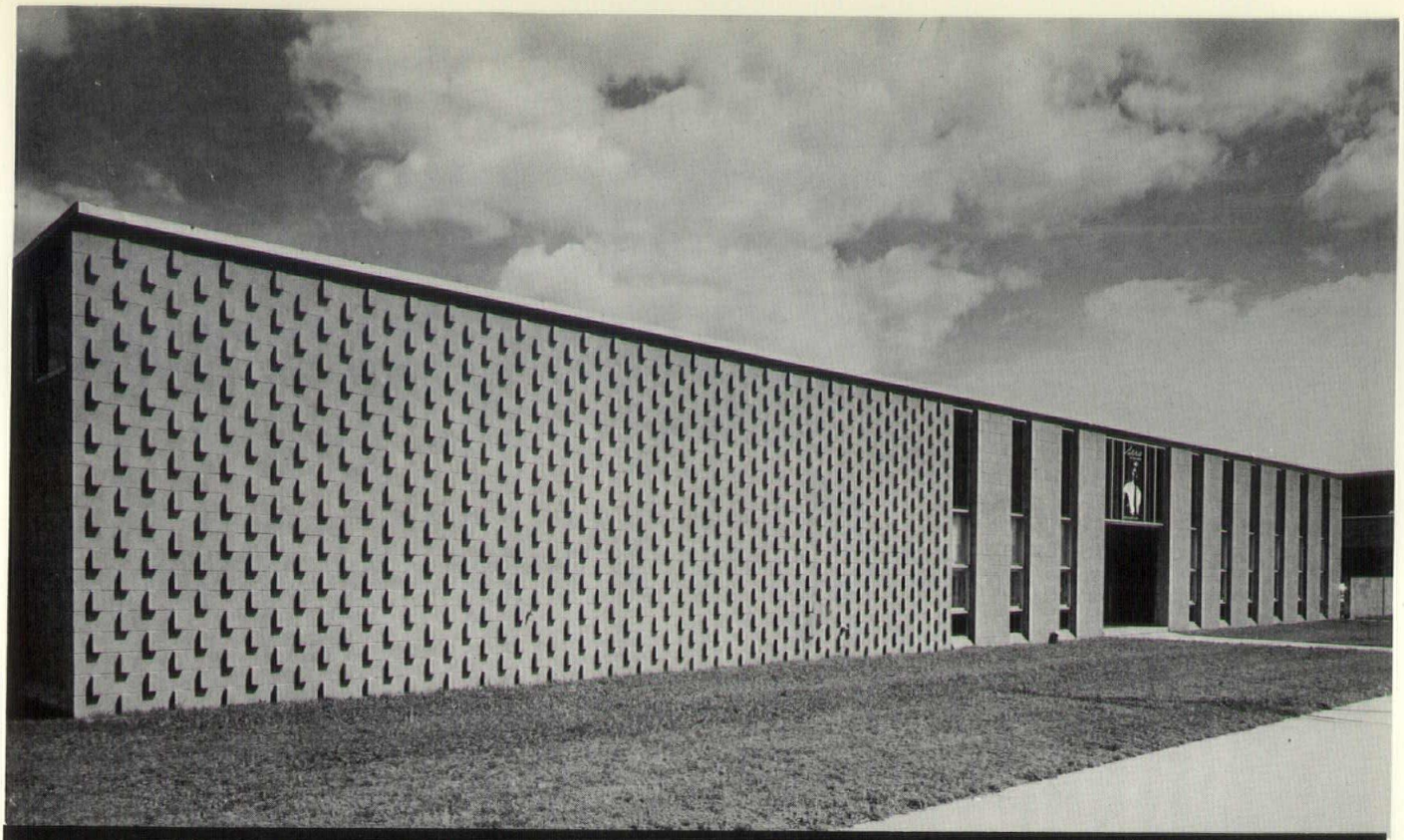
R. H. Chambers & Associates, land development engineers and surveyors, have opened an office in Cheshire.

Moore Appointed

Charles W. Moore is the new Chairman of the Department of Architecture at Yale University, succeeding Paul Rudolph. Formerly Chairman of the Department of Architecture at the University of California at Berkeley, he began his new duties July 1. Mr. Moore is expected to establish architectural offices in New Haven this summer.

Bassette Dies

Roy Donald Bassette, 82, of West Hartford, a retired architect, died May 18. A native of New Britain, he attended local schools and was graduated from the Architectual School of the University of Pennsylvania. The designer of many homes and buildings in Connecticut, he practiced his profession actively until 1954 and was a member of the Connecticut Society of Architects.



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• Residential (Homes, Apartments, Elderly Housing)	8,102 units
• Convalescent Homes	157,900 sq. ft.
• Motels	210,400 sq. ft.
• Restaurants	14,800 sq. ft.
• Offices	201,000 sq. ft.
• Stores	59,900 sq. ft.
• Supermarkets	69,500 sq. ft.
• Banks	24,200 sq. ft.
• Churches	154,200 sq. ft.
• Administration Buildings	14,900 sq. ft.
• Libraries	6,600 sq. ft.
• Schools	445,000 sq. ft.
• Dormitories	25,400 sq. ft.
• Machine Shop	800 sq. ft.
• Factories	124,500 sq. ft.
• Funeral Homes	13,400 sq. ft.
• Marina	3,200 sq. ft.
• Laboratory	1,500 sq. ft.
	1,527,200 sq. ft.