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THE PLAN IN RELATION TO THE BUILDING SITE

Prospective builders usually start with a good general idea of the number and character of rooms they require. The floor plan, or arrangement of the rooms — whether they are all to be on one floor or divided into several stories — depends largely on the building site.

The location of important rooms should be determined by the points of the compass. Light and shadow, warmth and air, have much to do with the comfort and cheer and wholesomeness of the living room, dining room, bedroom and kitchen.

As soon as the plan best suited to one’s ideals of living and the conditions of the building site is chosen, attention should be turned to the sizes of the rooms and sufficient wall space for furniture, piano, beds, etc. Nothing is quite as deceiving to the average man as his conception of size conveyed in feet and inches. Many an owner, visiting his home under construction, finds this or that room unexpectedly small. He can avoid such disappointment by measuring rooms and thus establishing in his mind a definite basis for comparison.

CHARACTER OF THE SOIL TO BUILD ON

Before starting to build, even before working drawings are made, it is advisable to have a survey of the site prepared, indicating besides the accurate outlines of the property the level of the ground in relation to the street or walk, the depth of the sewer and the nature of the soil. Such preliminary information will insure the builder against many unpleasant and costly surprises. The ground level naturally determines the depth of the foundation. In northern localities four feet below the finished level is the minimum for safety.

The basement level must be well above that of the sewer to permit proper drainage. Inquiries regarding the nature of the soil may be made of those who have built in the vicinity but thorough sub-soil investigation should be made. Where rocks and springs abound the soil should be carefully examined.

The best soil to build on is gravel. Sand is also good if confined on all sides and prevented from slipping away from under the foundation. The greatest care must be exercised with clay soils. Moisture causes such soils to ooze from under foundations and heave when they freeze. It is therefore important to drain away all moisture possible and to extend the footings well below the point where the clay could be affected by frost.

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COVER PICTURE

New Office Building of Associated General Contractors of New Hampshire and Vermont.
Photos by Bill Finney, Concord
NEW OFFICE BUILDING FOR THE ASSOCIATED
GENERAL CONTRACTORS OF
NEW HAMPSHIRE AND VERMONT

The new office building for the Associated General Contractors of New Hampshire and Vermont, designed by W. Brooke Fleck, A.I.A., of Hanover, has been completed and has been open for business since August 1, Rowland A. Oakes, executive secretary of the organization, announced.

Located on the F. E. Everett Turnpike near the New Hampshire Highway Hotel in Concord, the new office building is of colonial design and was planned with the cooperation of the New Hampshire and Vermont Chapters of the American Institute of Architects. Mr. Fleck, the architect, was chosen by lot, it was stated.

Containing more than 1,000 square feet, the new AGC building includes a general office, private office, plans room and a directors' room. The building was designed to allow for further expansion at a later date.

Officials of the AGC stated that the office building was erected to permit the association to render better service to architects, contractors, public and private awarding agencies, and the general public. A parking area has been provided in the rear of the building.

The Associated General Contractors assist awarding agencies by recommending changes in specifications which will keep construction costs at a minimum; private owners by maintaining a roster of qualified construction firms and rendering miscellaneous services.

Construction costs of the new office building have been kept to a minimum through voluntary contributions from members of the association who have donated either labor, materials, or money toward the project.
FLECK DESIGNED NEW OFFICE BUILDING IN CONCORD

W. Brooke Fleck, A.I.A., of Hanover, designed the new office building at Concord for the Associated General Contractors of New Hampshire and Vermont.

He received his architectural degree from the University of Pennsylvania and has worked with the U. S. Treasury Department and the Office of the Chief of Engineers in Washington, D.C. In Philadelphia he was with the offices of Heacock and Platt, Karcher and Smith and G. Edward Brumbaugh. In 1942 he went to Iceland for the George F. Fuller Construction Company as designing engineer. Later he was a member of the U. S. Army in Photo Intelligence at Leyte and Okinawa.

Before opening his office for the practice of architecture in 1956, he was with Alfred T. Granger Associates in Hanover. A member of Mr. Fleck's staff is Edward C. Lewis who was graduate from Franklin Technical Institute and has a background of varied architectural experience.

Jennison Engineering, Inc., of Burlington, Vt., serve as mechanical engineers and John Minnich of Etna serves as structural engineer.

Recent projects completed or under construction are: Headmaster's House, Cardigan Mountain School, Canaan; Baker Library Addition, Dartmouth College, Hanover; Brundage Lodge, Dartmouth Skiways, Holt's Ledge, Lyme; A.G.C. Office Building, Concord; Residence, Miss Clara Livingston, La Sardinera Dorado, Puerto Rico; Laura Smith Barnes, Elementary School, Lyme; Golfside Lanes of Hanover Inc., Hanover; American Legion Hall, Lyme; Valley Galley, for Putnam Drug Co., Pompanoosuc, Vt.

First Floor Plan

Basement Plan
The story of Paul H. Harvey, genial president of the Associated General Contractors of New Hampshire and Vermont, is typical of America itself. His is the Horatio Alger story of the young man who starts at the bottom of the ladder, and by dint of hard work, long hours, arduous night study, and sheer perseverance, reaches the top of the ladder in his chosen field.

Paul Harvey, president of Harvey Construction Company of Manchester, points with pride to more than a score commercial, school, church, institutional and industrial buildings which grace many New Hampshire communities. “Harvey-built” has become a mark of distinction in the construction industry.

Earlier this year, the Harvey Construction Company moved to its ultra-modern building at 1662 Elm Street in Manchester. The move to more spacious quarters testifies further to the remarkable growth of this progressive company which is playing such a dominant part in the New Hampshire construction field.

Paul Harvey started in business in 1939, specializing in better type homes in Manchester’s north end section. Prior to 1939, he was employed as general superintendent and project manager for one of New England’s largest contractors.

Following the completion of his schooling, he obtained a job as carpenter apprentice, then worked his way to project superintendent. Throughout this period, he burned the midnight oil studying advanced methods in construction and engineering.

Like millions of other Americans, Paul Harvey’s progress on the way up the ladder of success was interrupted by World War II. He suspended all activity at the outbreak of the war, and joined the Corps of Engineers, serving as an instructor in construction. During the latter part of the war, he served in the Pacific Theatre of Operations.

The firm resumed operations following the war. In 1949 it was incorporated, with Paul Harvey as president and treasurer. From building beautiful homes and small industrial buildings, the facilities were expanded to include major commercial, institutional and industrial construction.

Presently under construction by Harvey are a woman’s dormitory and library at the University of New Hampshire, the Beede Electrical Instrument Company of Penacook, Junior High School in Concord, and the Nursing Home, Rockingham County Farm, Brentwood, and the Home For the Aged, Dover.

Some of the major projects completed by Harvey are the Notre Dame Hospital in Manchester; the Smyth Road (Northeast) and Jewett Street (Southeast) schools in Manchester; Associated Grocers of New Hampshire, Inc., Pembroke Academy; Auditorium and Gymnasium, Dial Exchange Building, New England Telephone and Telegraph Company, Nashua; Blessed Sacrament School, Precious Blood Monastery, Tam O’Shanter, all of Manchester; St. Paul’s Church, Franklin; Pelegwasset National and Plymouth Guaranty Savings Banks, Plymouth; International Paper Company, Manchester; and several additions and alterations to existing buildings.

Paul Harvey lives in Manchester with his wife and one child. He is active in many civic and fraternal projects, is a member of Kiwanis International, and can always be counted upon to serve in any capacity in behalf of the Associated General Contractors.
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ASSOCIATED GENERAL CONTRACTORS SET HIGH STANDARDS

For more than 38 years The Associated General Contractors of America has been the nationwide organization through which the country’s leading general contractors could develop and maintain the standards of the general contracting profession at the levels which merited and secured public recognition for their skill, integrity, and responsibility.

The association membership now totals almost 6,900 and the AGC firms execute the major part of contract construction in America, as well as engage in extensive operations overseas. The association's members engage in all kinds of construction.

In the intervening years the AGC has steadily grown in size, in prestige and accomplishment. The association has carried out work which has been of benefit to its members, the entire industry and to the public. It has served to enhance the prestige of its members by adhering to sound objectives, principles and ideals set forth by the founders.

The principle of professional responsibility was set forth in the AGC Code of Ethical Conduct which was adopted in 1925, and when reviewed more than a decade later was found to have stood the test of time and was reaffirmed. It states in part:

Code of Ethical Conduct

"The Associated General Contractors of America realizes that the vital bearing of the construction industry upon the well-being, comfort and safety of the entire public injects into the contractor's function an element of professional responsibility founded upon honor and trust.

"This responsibility requires, among other things, that we seek to improve construction methods, management and service, to eliminate uneconomical and improper practices, and to build responsibility throughout the industry.

"It surely cannot mean less than the establishment of construction services (Continued on Next Page)
which will give to the investing public an assurance of skill and faithful performance.

Through the years the association’s program of working for objectives of benefit to its members, the industry and the public has grown in size and become more effective both locally and nationally.

Industry Plays Key Role

As the construction industry has continuously grown in size there has been a growing recognition of the key role which the industry plays in the growth and development of the nation and its communities.

Practically every form of civilized life requires some kind of construction for its growth and development. Each year construction adds more to the wealth of the United States and is the source of more income and wages than any other single production industry. Approximately one dollar in every seven created in products and services in the U. S. annually is generated through the construction industry.

America truly does progress through construction, and the general contractor is the key figure who has the centralized responsibility for the construction operations.

For these reasons the AGC has maintained a broad and comprehensive program leading toward the objectives of more efficient and economical construction operations so that the public continues to receive greater value for its investment in construction.

Three AGC Divisions

In order to give particular attention to the problems of different kinds of contractors, the AGC has a Building Contractors’ Division, a Highway Contractors Division, and a Heavy Construction and Railroad Contractors’ Division. At board meetings and conventions these divisions meet separately to discuss matters of particular interest to their groups.

Much of the association’s work is done through the 17 standing committees which cover all facets of the association’s program and the 9 joint cooperative com-

(Continued on Page 16)
(Continued from Page 15)

mittees which are maintained with the professional societies and other associations in the industry.


The AGC has joint cooperative committees with the following organizations: Associated Equipment Distributors, Construction Industry Manufacturers Association, American Institute of Architects, American Society for Engineering Education, American Society of Civil Engineers, American Association of State Highway Officials, National Association of State Aviation Officials, American Public Works Association and Surety Association of America.

Through the years hundreds of men who are leaders in the industry have given of their time, energy and intelligence to work for the association and the industry as officers, directors, members of the Advisory Board, or as chairmen or members of committees in the national association and chapters.

The cumulative effects of this work by these men have been accomplishments of incalculable benefit to the industry and to investors in construction.
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MANCHESTER NEW HAMPSHIRE
1950

PARKER H. RICE, President. An executive secretary was hired and a temporary office opened at Manchester Sand, Gravel & Cement Co., in Manchester, N. H. Suppliers in the construction industry were invited to join as Associate Members. Plans for a permanent office were made, and the groundwork was laid for AGC growth. Total membership 25.

1951

ROBERT A. FOSTER, President. Office and Plans Room formally opened at 3 Pleasant St., Concord, N. H. Vermont General Contractors joined the association to form the Associated General Contractors of New Hampshire and Vermont, Inc. Qualified specialty contractors were accepted as associate members. First joint AIA-AGC committee formed resulting in better cooperation between the two groups in adopting uniform bidding procedures. Governor Sherman Adams delivered the principal address at the first joint meeting of architects, engineers, and contractors held at Portsmouth, N. H., April 26, 1951.

1952

FRANK W. WHITCOMB, President. AGC Ladies Day was held for the first time. A committee on ethical practice was appointed. A joint apprenticeship committee for bricklayers started a related training program two evenings per week at the Manchester Technical Institute.

1953

JOHN JACOBSON, JR., President. Accident prevention became a principal activity of the association. The Carpenters’ Apprenticeship Program in Manchester was placed under the direction of a joint apprenticeship committee. President Jacobson left office to become Adjutant General of the State of New Hampshire.

(Continued on Page 20)
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HISTORY OF A.G.C.
IN NEW HAMPSHIRE AND VERMONT
(Continued from Page 18)

1954

E. DAVID SWETT, President. Trademark identification of AGC Contractors was started in the Yellow Pages of telephone directories in New Hampshire and Vermont. A special planning committee was appointed to work with the A.I.A. in developing a closer working relationship with the New Hampshire Industrial Development Commission.

1955

GUY E. MACMILLIN, President. First Certificates of Commendation for Outstanding Safety Performance were awarded to New Hampshire-Vermont AGC Contractors by the National Association. The local chapter placed third in a national competition for accident prevention.

1956

ARTHUR WHITCOMB, President. The New England Regional AGC conference was held at Mountain View House, Whitefield, N. H., in June. A building committee was appointed to investigate the possibility of erecting an office building for the association. One of the most successful meetings of the AGC was held at the Service Club, Portsmouth Air Force Base in October.

1957

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THROUGHOUT CENTRAL N. H.

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Harvey is fast becoming a mark of perfection. Beautiful structures, built by Harvey, grace many a community. Working together with Harvey are the best sub-contractors in New Hampshire.

**A partial list of Harvey Buildings . . .**

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New divided highway which will carry high speed traffic from Nashua to Concord via the F. E. Everett Turnpike. This view is seen just after leaving Manchester headed north.

NEW HAMPSHIRE AND VERMONT TO BENEFIT BY FEDERAL AID HIGHWAY ACT

The proposed Federal-Aid Highway Act will give substantial economic benefits to the States of New Hampshire and Vermont, not only in increased highway construction, but in construction of new industrial plants and similar facilities. On the interstate system alone, there will be spent in the two states approximately $68,000,000 for new highways in the next three years. New Hampshire and Vermont will have to provide only $8,000,000 of State funds to match $60,000,000 furnished by the Federal Government for reconstruction of this system.

The interstate system connects forty-two State capitals and about 90% of all cities over 50,000 population. This highway system is expected to carry 20% of the nation’s total traffic load when completed and will be built to handle traffic anticipated by 1975. Over 80% of the 41,000 miles of the interstate system will be four-lane highways or wider, and the balance of two-lane roads must have sufficient right-of-way so that additional lanes can be added at some future date.

We should plan the location of the new roads now and make every attempt to acquire land for right-of-way as early as possible so that excessive problems of land damage will be avoided. The Highway Departments should take the public into their confidence on the future location of highways, so that an orderly economic pattern of highways will develop consistent with investments in land by developers and industry.

Some of the secondary economic benefits of this new highway program are evident on Route 128, the circumferential highway around Boston, where cost of many plants started or completed exceeds $100,000,000, which is equivalent to more than 200 plants the size of Raytheon in the Hooksett, N. H. Industrial Park.

The highway construction industry has the capacity to handle this new program and materials will be available as the program unfolds. One bottle-neck expected is in engineering facilities. To overcome this bottle-neck, the Departments must immediately consider the increased use of aerial photographs and electronic computers.
A RELIABLE
NEW HAMPSHIRE CONCERN

• Specializing in New Hampshire Highway Construction.
• Employing New Hampshire People
• Purchasing Equipment and Material from Sources Within the State

WEAVER BROS.
CONSTRUCTION CO., Inc.
259 South Main St. Concord, N. H.

AIDING NEW HAMPSHIRE’S PROGRESS AND DEVELOPMENT

2 WAYS

1 - Building better roads to improve the growth of industry and recreation in New Hampshire.

2 - Employing New Hampshire citizens and purchasing equipment and materials from New Hampshire sources, contributing directly to New Hampshire’s economic wealth.

LANDERS & GRIFFIN, Inc.
800 ISLINGTON STREET PORTSMOUTH, N. H.
NEW HAMPSHIRE CHAPTER OBSERVES LADIES' DAY

Mr. and Mrs. Edmund R. Purves of Washington, D. C., were guests of New Hampshire Chapter, American Institute of Architects, at the Ladies' Day meeting of the chapter held Wednesday, August 21 at the Farragut Hotel, Rye Beach.

Mr. Purves, F. A. I. A., has served as executive director of the American Institute of Architects since 1949, and with Mrs. Purves has been vacationing in New England.

More than 50 members and guests enjoyed an old-fashioned clambake with all the fixings, and later participated in dancing and a social hour in the hotel's ballroom.

An executive meeting preceded the clambake, at which President John D. Betley presided. The next regular meeting of the chapter is scheduled for Thursday, November 21, at a place to be announced at a later date.

COMMUNITY DEVELOPMENT
Community Development, Preservation of Historic Buildings, Research, School Buildings, Hospitals and Health.

REGIONAL COUNCIL DELEGATES
John D. Betley (ex officio) 1 yr.
Mitchell P. Dirsa 1 yr.
Arnold Perreton 1 yr.
Alexander J. Majeski 2 yrs.
Norman P. Randlett 3 yrs.

MEMBER OF REGIONAL JUDICIARY COMMITTEE
Richard Koehler

MEMBER OF NATIONAL CHAPTER AFFAIRS COMMITTEE
Eugene F. Magenau

ELECTION OF CHAPTER A. I. A. COMMITTEES FOR 1957-1958

Joseph F. Lampron, Secretary of New Hampshire Chapter, A.I.A., announces the election of the following Chapter Committees for 1957-1958:

CHAPTER ACTIVITIES
Chapter Affairs, Membership, Centennial Observance, Education, Office Practice, Awards and Scholarship:

PUBLIC RELATIONS
Richard Koehler, Chairman, Alexander J. Majeski, Shepward Vogelgesang, Alexander R. James, Carl E. Peterson.

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PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
and NEW HAMPSHIRE ELECTRIC COMPANY
$15,889,400 LOAN FOR HOUSING PROJECT AT PORTSMOUTH AIR BASE

Largest single loan ever made in New England for a Housing Project

Construction of the 1,100 unit housing project at the Portsmouth Air Force Base, designed by Koehler and Isaak, Manchester architects, is already under way.

About a half ton of plans and specifications together with contracts filled the board room and overflowed into adjoining corridors of the National Shawmut Bank of Boston July 31 as the papers were being signed for a $15,889,400 loan for the construction of a 1,100 unit housing project at the Portsmouth Air Force Base.

The project will be of great economic value to New Hampshire, it was pointed out. It is estimated that the payrolls during the two years of construction will amount to $8,000,000 and will provide employment for from 1,000 to 1,200 persons.

The construction loan to the Davison Construction company of Manchester, N.H., successful bidder for this large project is being made by six banks, including the (Continued on Next Page)
Amoskeag National bank in Manchester, the National Shawmut and four New York banks.

Largest Loan

A representative of the National Shawmut bank which handled the transaction for the six banks, said that this is the largest single loan ever made in New England for a housing project.

It will take about two years to erect the 1,100 dwellings. There will be a few single family homes but most of them will be two and four-family residences, all for Air Force personnel.

Will Convert Loan

The construction loan will be converted into a 25-year FHA insured mortgage after the project has been finished. The six banks will continue as mortgagors, with the Air Force as mortgagor.

Besides National Shawmut and Amoskeag, the participating banks include the Guaranty Trust, Manufacturers Trusts, New York Trust and First National City banks, all of New York.

Among those present from New Hampshire for signing ceremonies were Marston Heard, president of the Amoskeag National bank; Robert C. Davison, Ralph A. Davison, William Davison and John Jacobson, Jr., all of the Davison firm; A Harold Kendall, Louis Fucci and Joseph White, all of the Manchester FHA office.

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THE BUILDING INDUSTRY
and
ALLIED TRADES

AMOSKEAG
NATIONAL BANK

MANCHESTER, N. H.

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION
THE NATIONAL headquarters building of The Associated General Contractors of America is approximately 25 per cent complete and construction is progressing about on schedule. Completion is scheduled for May 1, 1958.

The photograph on the right, taken late last month, shows the form work for the second floor, before the placing of the pans and reinforcing rods. Some 600 cubic yards of concrete has been poured.

The pouring for the third floor and the roof is to be completed in August. The erection of the stonework and the back-up brick is to begin this month.

A strike involving the drivers of ready-mix concrete trucks slowed up progress about three weeks, but good weather and a minimum of rain has allowed the general contractor, Joseph F. Nebel Co., AGC, Washington, D. C., to catch up approximately with the initially proposed progress schedule.

The plan for a national headquarters building was approved at the AGC convention in March and the contract was then awarded to Nebel on the low bid of $534,910.
ÆTNA CASUALTY AND SURETY COMPANY
Affiliated with Ætna Life Insurance Company
Hartford 15, Connecticut

NO JOB TOO BIG
NO JOB TOO SMALL
for Ætna Contract Bond Service
Cheaper Schools?

BY WILLIAM ROGER GREELEY, F.A.I.A.

Reproduced from AIA Journal of American Institute of Architects, July, 1957

The high cost of school buildings is receiving a lot of attention in the press and the impression has been created that people are distressed, if not actually financially crippled by this burden. It would seem that there is need of examining what appears paradoxical at first glance.

On the one hand we have the richest country in all history, provided with technological and mechanical assets far exceeding anything previously known on earth, supplemented by available manpower working the fewest hours per day and the fewest days per year ever recorded. Forests, quarries, kilns, mines, furnaces and hydro-electric mills provide a flood of building materials—wood, fibre, plastics, stone, ceramics, and metals—all that is required for building construction. Such is our affluence and potential productiveness.

On the other hand we are so obsessed with making and saving money, and yet so determined to have all the things that money will buy, that we have actually set up a system whereby we first grab everything that we want in the way of luxuries, and then put ourselves in a banker’s straight-jacket of mortgages and assessments and proceed to feel poor ever after.

We do the same in our processes of government. First we vote roads and dams and armies and school-houses and bonuses, and refuse to appropriate enough money to pay for them, but insist that the cost be charged to future tax-payers, chief of whom are our own children, and then put ourselves in a banker’s straight-jacket of mortgages and assessments and proceed to feel poor ever after.

We vote roads and dams and armies and school-houses and bonuses, and refuse to appropriate enough money to pay for them, but insist that the cost be charged to future tax-payers, chief of whom are our own children, and that our government pay us for loaning money to defray the costs of the facilities that we are providing for ourselves, but on condition that we, personally, are repaid in full later for every dollar that we have loaned.

Our fathers taught us this wonderful pass-the-buck-to-the-next-generation system, so we are still paying for the pyramids. Such is our opinion of ourselves.

But this is not quite fair to us. Our claim that we care only for the functional in our school buildings, and that we regard adornment of any kind as a mere frill falls to pieces when we find ourselves on a building committee. During several decades of architectural revolt and civic economy-worship, experience with actual committee members has revealed the fact that every one of them has his pet convictions in regard to the design of a school building. These include requirements for appropriate and worthy materials for the walls, trimmings, and stage curtains, and for the “style” of radiators, lighting fixtures, windows, auditorium seats, etc. Price is no longer the determining factor. There still lurk in the unconfessed recesses of the adult’s, especially the parent’s mind a desire to have for his children a building that will be beautiful as well as functional.

In passing let it be noted that there is no justification for excluding beauty from the purely functional requirements. A school is for education which involves not merely learning facts but the inculcation of taste in the arts, including architecture. A school is for citizenship preparation, which
involves pride in democracy and in its institutions, as witnessed in its buildings and monuments. If we possessed the cultural instincts of the peons of a wretchedly poor country like Mexico, our school buildings would blossom forth in beauty as appropriate testimony to our taste and our will to express it, as well as to our ability to afford the things about which we care.

Does it ever occur to us that if the Greeks had had our point of view when they built their temple to Athena they would have used common stone and rough cast for the walls, (functional—no waste) and no roof at all (a frill in a dry climate)?

And the Roman baths, from our point of view, should have been more like our army barracks, at a wonderful saving in cost!

Even in our day what a lack of common sense! Jefferson choosing a circular building for his University Library, instead of a simple rectangle! Harvard adorning its many buildings with the Colonial and Georgian elements of design! It has been hard for us to give up our yearning for elaboration of detail and for monumental impressiveness in our school buildings and we should never have been able to conquer our love of the noble and classical in architecture but for our fetish worship of the dollar.

Nevertheless it may be our great good fortune that the noble and honored traditions of the Fine Arts are in eclipse, for the emotional ties are broken, the cultural decks are cleared, and a new renaissance will in its own good time blossom forth and establish a manifest destiny for us as a cultured society—if we can make up our minds to afford it!

Meanwhile at the present the hunger for cheapness must be satisfied, and ways found to eliminate all unproductive items of cost.

Let us run our eye over the specifications to see what we can discover:

Under Section I, General Clauses, there is a performance bond costing 3/4 to 1% of the construction cost. This is to insure the town or city against failure of the contractor to complete his contract. This cost would be saved if the award of the building contract could be given to a competent and reliable contractor. It is one of the extras we pay for the privilege of giving every incompetent rascal in the building business the privilege of bidding on important public buildings, and laying ourselves open to lawsuit if the lowest bid is not accepted.

This is not all. There are similar bonds for fifteen or twenty subcontractors. These bonds are likewise poor business for the owner. Perhaps they total ½ of 1% of the contract price of the entire building.

Then there is heavy liability insurance on every-one employed and again on others legally using the premises. Amounts covering half a million for one accident are common and make litigation or the threat of litigation tempting if not lucrative.

Then there is the schedule of hourly wages required to be paid to mechanics working on the job. In Massachusetts the law states that this shall follow the rates prevailing at the time in the district. In practice the rates promulgated are the rates, often higher, established by the unions.

The state law in this way helps to eliminate from public work all of the hundreds of good builders and the thousands of carpenters and other mechanics available throughout the area. The unions themselves complete the boycott by striking any job where even a single non-union man is employed.

The matter of illegal boycotting of great numbers of citizens who are entitled to their share in public projects is much more serious than generally recognized. Aside from the fact that it is an outrage to our democratic principles, it adds immeasurably to the cost of the work. The difference in the rate per hour between union and non-union men is often important, although not by any means the principal reason for higher costs.

Fifty years ago it was prophesied that union insistence upon equal pay for all men in a given trade, instead of pay to each in proportion to his own productivity, would remove the incentive to do good work both as to quality and quantity, and would eventually result in leveling down the efficiency of the good workmen to the inefficiency of the poorer ones.

This is what has happened, and the men themselves don't know it, and resent the statement, because they have no idea of what workmanship and efficiency were fifty years ago. It is true, however, that if there is a bit of fussy work to be done, or work requiring exceptional skill, it is almost always some old man who is selected to do it or else some mechanic who was trained in England or northern Europe. Add to this falling off in skill and efficiency would be saved if the award of the building contract could be given to a competent and reliable contractor. It is one of the extras we pay for the privilege of giving every incompetent rascal in the building business the privilege of bidding on important public buildings, and laying ourselves open to lawsuit if the lowest bid is not accepted.

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Yet the worst is yet to come. The extra costs due to jurisdictional buck-passing are hardest to swallow. To illustrate, imagine a painter at work on a plaster wall painting over some little blobs of plaster carelessly left there by the plasterer. In the old days the painter would have flipped off the lumps with his putty knife before painting over that particular spot. Now the only way to do is for him to stop work, send for a plasterer to remove this defective work, and wait till it is dry before proceeding. The
union principle that one trade must not under any circumstances cooperate with another or give any consideration whatever to the owner’s right to expect the use of common sense is almost enough to discourage any attempt to build. A good case in point is that of two workmen in a cupola, who accidentally set it on fire and yelled to the fire station across the street for help, but were refused because the firemen were union men and the carpenters were not, and so the cupola went up in flames.

So, taking one consideration with another a constructor’s life is not a happy one. So much for labor’s generous contributions to the higher cost of schoolhouses.

To return to the specifications:

In Section III, IV and V, dealing with construction, law supports current practice in designing all structural members with a factor of safety of four, that is to say four times as strong as their bare capacity to stand the stresses put upon them. The reason for this is to cover defects in materials, and carelessness in putting them together at the shop or in construction at the site. This form of insurance against failure of the structure is wise, indeed necessary. The question arises, however, as to how much to encourage carelessness by over-insurance. It became customary in our largest city to leave out hundreds of rivets in building a skyscraper. The mechanics knew about the over-strength, but for us to trust their judgment in weakening the structure is unscientific and dangerous. It would be wiser to reconsider the engineering formula with a view to using a factor of safety of perhaps 2 1/2 instead of four.

In the lighting of our classrooms we are as extravagant as the commercial interests can persuade us to be and as negligent as gross carelessness permits.

In the first place we provide windows sufficient to light the rooms during all hours of the day-school sessions. Not satisfied with this, but yielding without careful check-up to the propaganda of the electrical industry, we install artificial lighting three times as bright as the eye specialists declare to be adequate. The result will be the least that we can justify as bright as the eye specialists declare to be adequate. Then what happens?

The sun goes under a cloud and on go the lights, not to be turned off again that day. The rooms are customarily flooded with both sunlight and artificial light, and the pupils are complaining. Their eyes are like owl’s eyes, and like all our eyes, are provided with automatic adjustment to different intensities, and perpetual over-illumination is exhausting.

All of this is done forgetting that in most classrooms little reading or other careful use of the eyes is required, and that there is no such thing as straining the eye by reading in semi-darkness any more than straining the ear listening to hushed sounds.

Another extravagance is a complete intercommunication system, replacing the errand-boy and errand-girl system, with its obvious educational and morale-building advantages.

Ventilation systems have been based upon theories of the 1880 period, since thoroughly exploded. We have pleased only the sheet-metal worker with our excesses in ducts and registers and electric fans. If, instead of a stream of steam-roasted air continuous and unvarying through the school day, the windows were opened for two minutes at the end of every class period, how much fresher the room would seem and how much less difficult it would be for the pupil to stay awake. Our classrooms are now thermostatically controlled (by teachers with chilly ankles) to eighty degrees to what to the pupils is a deadly heat. If we really want economy this is not it.

As for athletic exercise, we used to put on running shoes and a light jersey and tights and run a mile out doors, even in cold weather. Nowadays a magnificent gym is heated up to 60 or 70 degrees while most of the class watch a favored few play basketball.

To assume that indoor exercise is required in this climate is to go far. Weather invites outdoor programs during 75 to 80 per cent of school hours, and exercise in the open is invariably more stimulating than indoors. The mere gymnastic use of the muscles is a small requirement in an educational program. A little adaptability to weather and some resulting hardihood is of greater moment.

Children today flock from indoor school to indoor movies, and to be encouraged to spend more hours in the open air would be of inestimable value. To save a single gym floor by at least supplementary use of outdoors, is to save $100,000 and up. Why attempt to explore further in a brief exposition like this one? The problem that confronts us is to design our school buildings from the point of view of education, including its cultural aspects, and to economize on the items that do not contribute to such education.

The result will be the least that we can justify for the character of the building and the cost will be the lowest that the market permits for such a building.

When we have built the building that we need to satisfy our educational program and our own pride and self-respect, and have done it at the lowest cost obtainable, there is no real occasion for regret. It is better to pay the bill and enjoy the building.
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Aerial view of Nashua Interchange showing the F. E. Everett Turnpike going to the left to by-pass the city of Nashua.


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N. H. HOME SHOW TO RUN 4 DAYS
EXPECT OVER 40,000 TO ATTEND

Kick off night for the N. H. Home Show will be September 26th. The Home Show is staging a building industry premiere, for those in the building trades on the night of the 26th.

Over 125 display booths will be open, many with live exhibits, showing and demonstrating the latest in all types of building materials, paints, hardware, supplies and appliances. The exhibitors, all reliable progressive firms will have their booths well manned to give advice and service to the thousands attending.

The N. H. Home Builders Association, show sponsors, are giving a 5 room ranch-style home, plus a lot of land, with the house completely furnished. This is the grand prize valued at $15,000, or the winner can take $10,000 in cash.

In another space in this issue you will find an ad. clip it out, bring it to pay your admission to the Home Show.
ARE YOU A MEMBER?

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THIS IS TO CERTIFY THAT THE BEARER IS A FULLY QUALIFIED

Sidewalk Superintendent for 1957

by virtue of faithful and diligent observation of construction operations for

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plans and specifications prepared by...

Norman P. Randlett, A.I.A.

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Laconia, New Hampshire

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What are the time limits for bringing suit under the Miller Act Payment Bond law?

A. The current law reads as follows:

"Every person who has the right to sue under the Payment Bond may institute a separate action thereon in the United States District Court for any District in which the contract was to be performed and executed and not elsewhere, at any time after the expiration of ninety days after the day on which the last labor was performed or the last material was furnished, or supplied by him for which such claim is made, but such action must be commenced within one year after the date of final settlement of principal contract with the U. S.

Is the general contractor responsible for unpaid bills of his sub-trades even though he may have paid the sub-contractor for same?

A. Yes, under the Miller Act and generally under other applicable laws, the general contractor and his surety are financially responsible for paying suppliers of labor and materials going into a job, provided statutory requirements regarding notice, proof and filings are complied with. In cases in which the public or private owners make separate direct contracts with the various trades, then such trades and their sureties, if any, are responsible for commitments.

How may one obtain information as to the law on procedures for bringing claim under the various states?

A. The "Credit Manual of Commercial Law" published by the National Association of Credit Men, contains a valuable section entitled "Bonds on Public Works," by Edward H. Cashman. This publication gives a synopsis of the history of bonds on public work including the Miller Act under federal laws. In addition, the basic laws in every state are summarized.
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