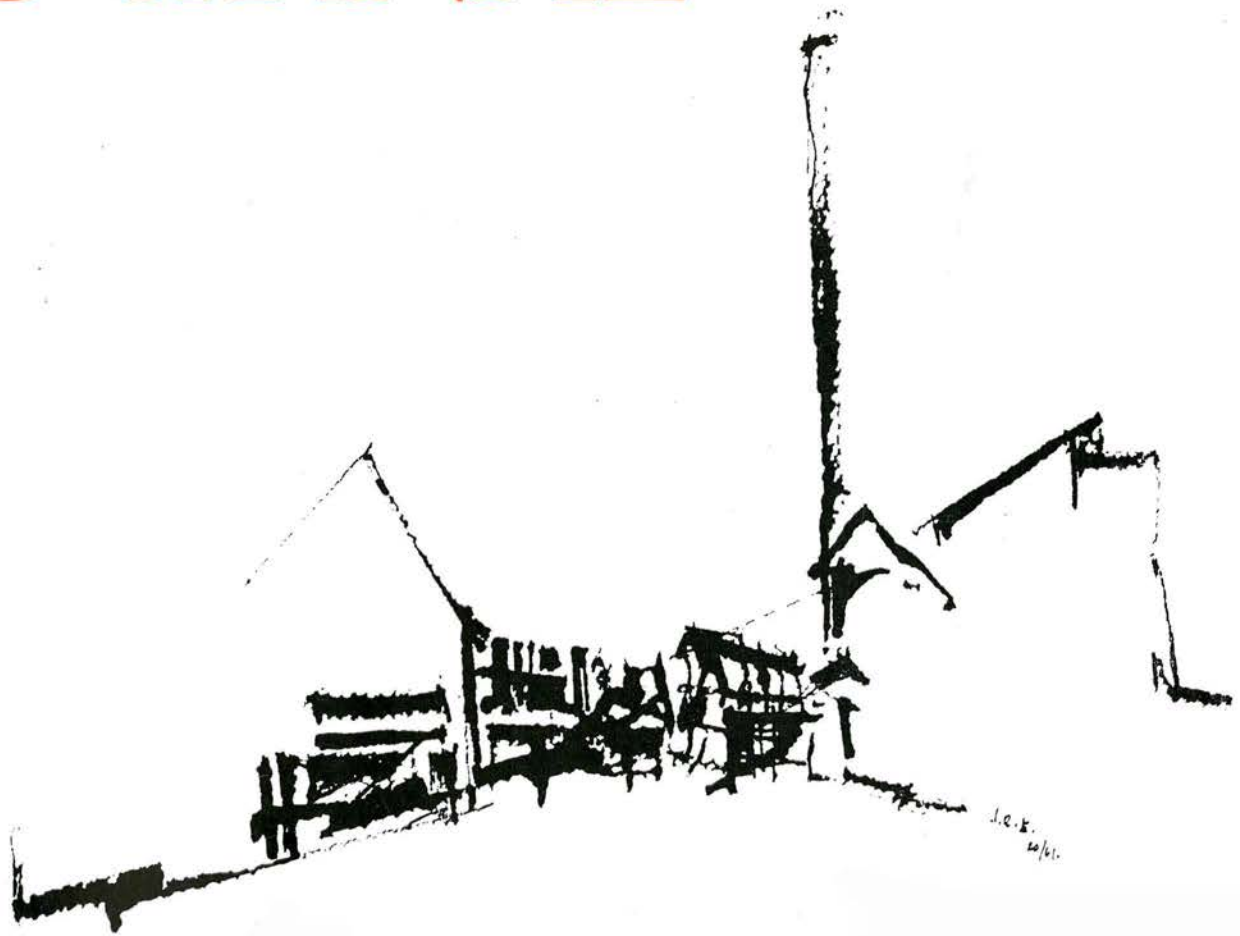


ROYAL
ARCHITECTURAL
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JOURNAL



MARCH 1962

ROYAL ARCHITECTURAL INSTITUTE OF CANADA
INSTITUT ROYAL D'ARCHITECTURE DU CANADA

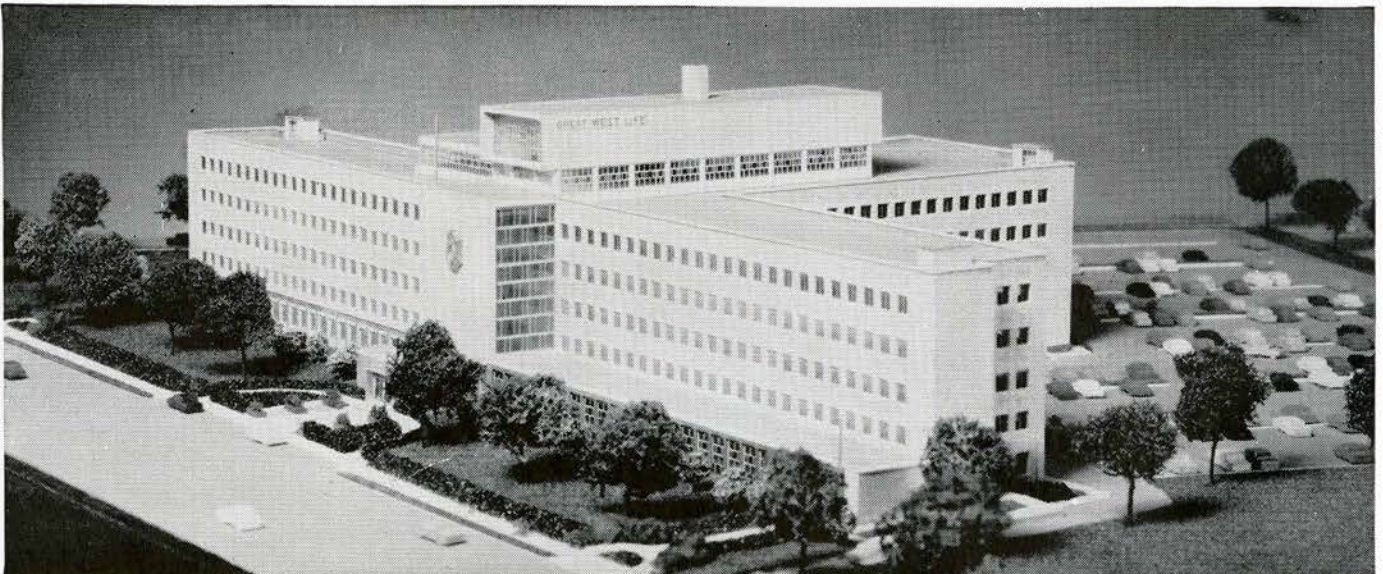
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NEW HEAD OFFICE BUILDING,
THE GREAT-WEST LIFE ASSURANCE COMPANY, WINNIPEG
Architect: Marani and Morris, Toronto
Associate Architect: Moody Moore, Winnipeg
Consulting Mechanical Engineer:
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Mechanical Contractor:
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All D.A.F. extruded aluminum flagpoles are carefully designed and manufactured to the strictest specifications to add extra beauty to any architectural project.

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THE NEW IMPROVED WILSON

The "Best in Sight"

The new Wilson Lumilux II commercial fluorescent fixture is the most efficient and aesthetic unit available today—anywhere. It is so acceptable photometrically and visually that it fits perfectly into the modern concept of low brightness with high levels of illumination.

The new Wilson Lumilux II is designed for lighting schools, offices and all other areas where emphasis is placed on atmosphere and maximum visual comfort as well as on high level, glare-free lighting at reasonable cost.

Wide Choice of Louvres

White Plastic: A general purpose louvre that harmonizes superbly with any interior design. Provides soft, glare-free illumination. Extremely high efficiency of 88.4%.

Green Plastic: Uses the new Chromatic Louvre System with eye-rest factor. Tinted sea-mist shielding eliminates glare and creates restful lighting. Efficiency of 84.4%.

Silver Plastic: For handsome, decorative use in industrial and commercial applications. Provides extremely soft, diffused light and maximum visual comfort. Efficiency of 64%.

Diffusing louvres are also available in other light-stabilized colors, at additional cost.

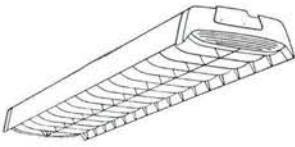


J. A. WILSON

280 LAKESHORE ROAD

Plants: Toronto, Ont., Medicine Hat, Alta. District offices: Montreal, Toronto, Winnipeg

OUTSTANDING FEATURES OF THE NEW lumilux II



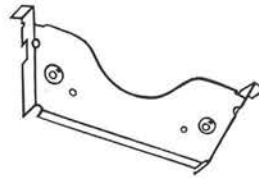
ONE-PIECE DIFFUSING LOUVRE

A 4 ft., one-piece Diffusing Louvre of injection-moulded, light-stabilized polystyrene for dimensional uniformity. Faultless continuous row lighting is assured by 1/4 inch overlap for a "no-light-leak" joint of the louvres.



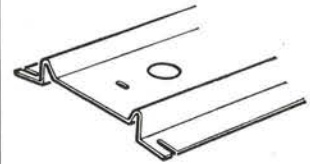
VERSATILITY IN HANGING

Complete versatility in hanging fixture is achieved by redesigning body to take a 2-piece Ice Tong Clamp. Ice Tong Clamp can be attached anywhere to fixture body and firmly engaged by manually tightening one wing nut.



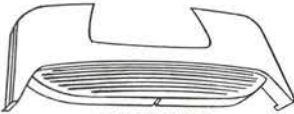
BODY ENDS RIGIDIZED

Body ends are rigidized by using End Support Brackets which also serve to accurately join fixtures. Lamp alignment and contact are maintained by a tab on Bracket end which locates and prevents lampholders from turning.



RIGID TIGHT JOINTS

Rigid tight joints and accurate fixture alignment in continuous row mounting are now simplified by use of a Joiner Plate.



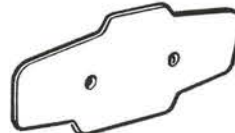
AESTHETIC PLASTIC END PLATE

Plastic End Plate promotes aesthetic appeal by providing over-all even fixture illumination at ends of individual or continuous fixture rows.



CEILING SPACER

Ceiling mounting of fixtures is simplified by use of ceiling Spacer, 1 1/2 inches deep to meet CSA requirements for air space between low density (cellulose) ceilings and fixture body... and 4 1/2 in. in diameter to cover 4-inch outlet box,



FIXTURE HARMONY

Fixture harmony with contemporary surroundings is achieved with a Metal End Trim of baked white enamel.



ADJUSTABLE LOUVRE BRACKETS

Perfectly level Diffusing Louvres are now possible as Louvre Support Brackets can be adjusted.

lumilux II

SIMPLIFIED Installation and Maintenance

- Lumilux II can be surface or pendant mounted, as individual fixtures or in continuous rows. Specially designed 2-piece Ice Tong Clamp makes for speed and economy in installation.
- Fixture, less Diffusing Louvre, may be used for lighting during the building completion. Diffusing Louvres are conveniently stored in separate cartons, clean and thoroughly destaticized for the finished installation.
- The Diffusing Louvre is easily and quickly installed, being securely held in position by rigid, die-cast support brackets... which allow the Louvre to hinge down from either side for relamping or removal.

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Agents: Eric Ackland & Associates Limited, Vancouver, Edmonton, Calgary

New lumilux II Catalogue

Provides full information on construction, methods of suspension, architectural specifications, photometric data, etc. Write for your free copy.





The Architect's Automobile

69% of all Peugeot sales are made to the professional men of Canada — architects, engineers, doctors, dentists, pharmacists and lawyers — university-trained men of sense and judgment. The architect is still an architect when he sets out to buy a car. He wants first of all utility with function and beauty. His trained eye is quick to appreciate the graceful design of Peugeot, but what truly gladdens his heart is the planned performance under the hood. He admires the low centre of gravity, the helical suspension springs for added comfort, the telescopic shock absor-

bers. He knows that the scientific weight distribution just has to give structural strength and road-holding qualities. He goes in a big way for the sports-car agility and performance.

The architect enthuses over the body styling of the Peugeot — everything in balance and perfect harmony. Because Peugeot was made right in the first place, it has stayed right. Made to size, it has stayed to size. "Fundamentally sound," is the architect's verdict.



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GEORGE HUNTER

REGINA, financial and legislative capital of the Province of Saskatchewan, lies midway between the head of navigation on the St. Lawrence Seaway and the Pacific coast. Centred thus in the main land mass of Canada this city of the plains has long served as a marketing, distributing and cultural focus for the agricultural communities of the middle prairies. Now the changing nature and tempo of the Canadian economy and Regina's favourable situation on transport and communication lines are steadily creating an enlarged role for the city compounded of agricultural, diversified industrial and legislative elements. A vigorous construction programme of more than \$100 million in recent years has added significantly to the commercial and cultural assets of this advancing community. Regina has another important asset in 190 of the world's finest elevators—by OTIS!



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Reinforced holes in beam sections will carry services.

Eliminate waste space

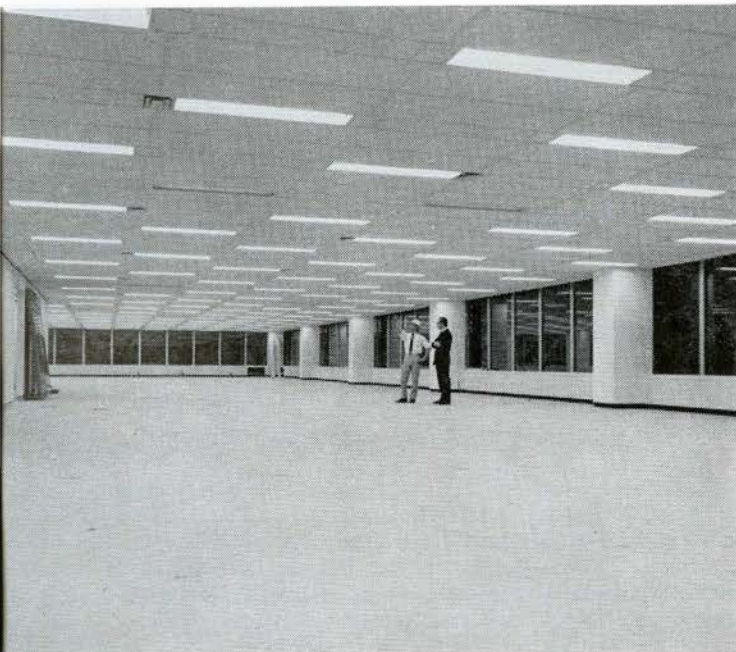
Waste space costs money to enclose and maintain. In multi-storied steel frame buildings, floor thicknesses including services are at a minimum. Air conditioning and other services go *through* the steel beams. The whole building is lower and lighter and less exterior surface material is required. These are some of the savings you get with steel—savings that must not be overlooked when framing prices are considered.



Air conditioning ducts go through the steel beams.



Steam and water pipes are carried through the steel.



Steel permits longer spans for a given beam dimension than is practical with other materials.



Haunched steel columns in this multi-storey hotel allow a greater rentable floor area.

... USE STEEL

If you are planning construction, consider carefully the merits of steel. Dominion Bridge has design engineers and fabricating facilities in most of the major cities. The extent of their experience and the quality of their performance have few equals in Canada.

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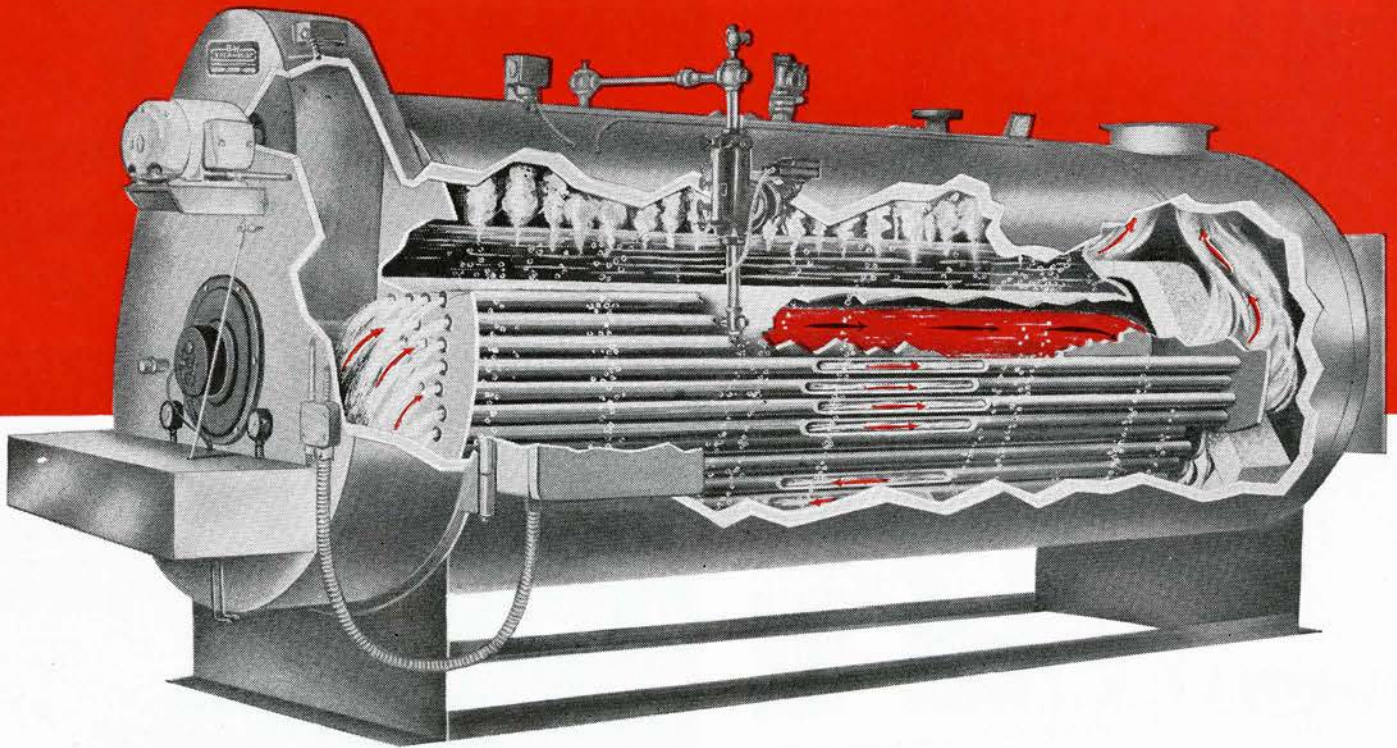
Structural Division

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FIFTEEN PLANTS COAST-TO-COAST

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AUTOMATIC PACKAGED BOILER



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The "STEAMBLOC" is a complete boiler plant incorporating necessary auxiliary equipment. The unit is mounted on a heavy steel base resulting in a simple compact boiler, which requires minimum installation space. No special foundation or excavation is necessary.

The "STEAMBLOC" is engineered with full five square feet of heating surface per rated boiler horsepower.

The "STEAMBLOC" is given a thorough working test before shipment. Efficiency is over 80% for normal operating conditions. The "STEAMBLOC" burner equipment is arranged for burning all grades of fuel oil up to Bunker 'C.' Combustion is efficient and complete causing no smoke nuisance.

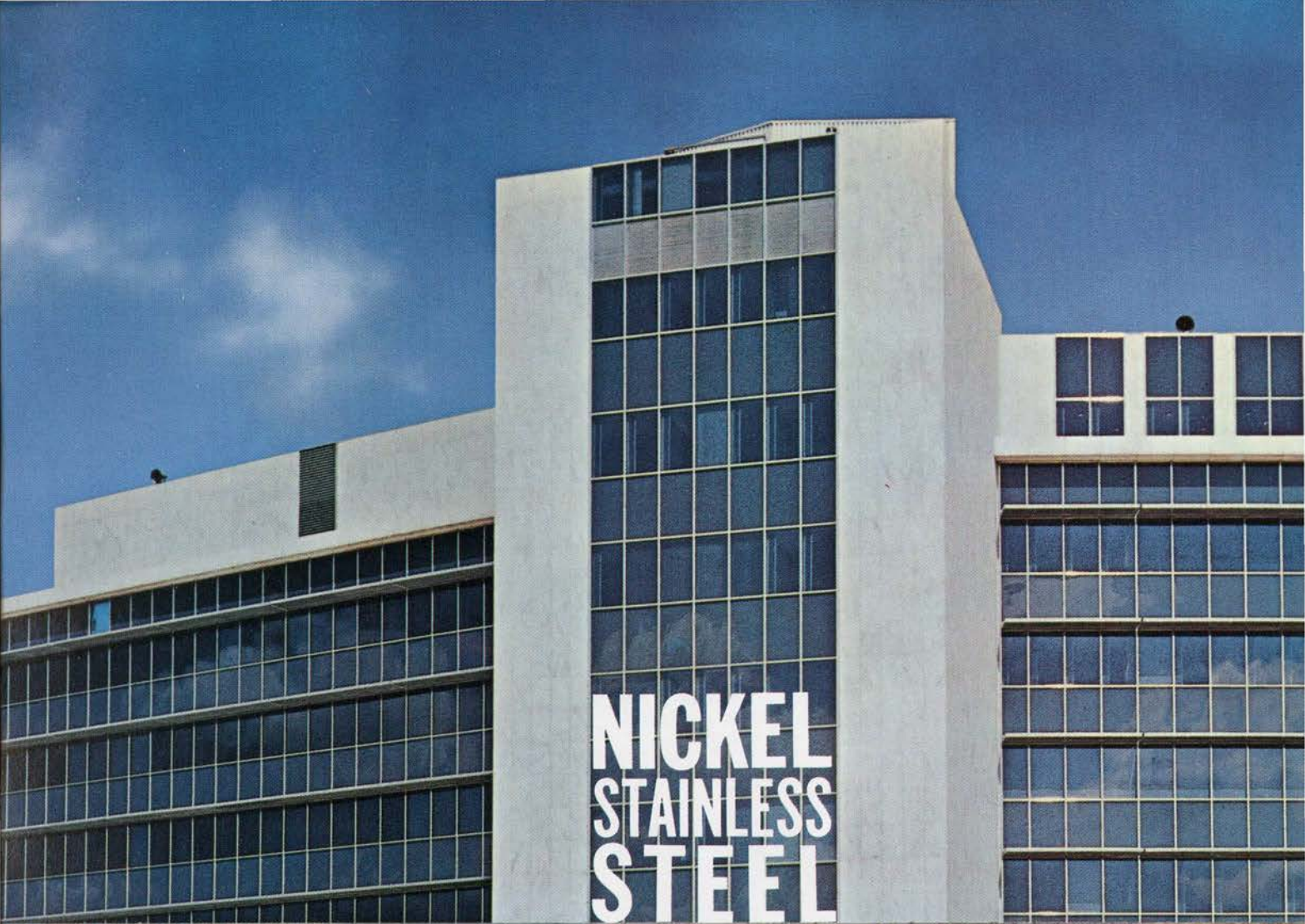
For information pertaining to "STEAMBLOC" 'phone or write the nearest B & W office or agent . . . there's a B & W Representative qualified to discuss boilers for heating or processing.

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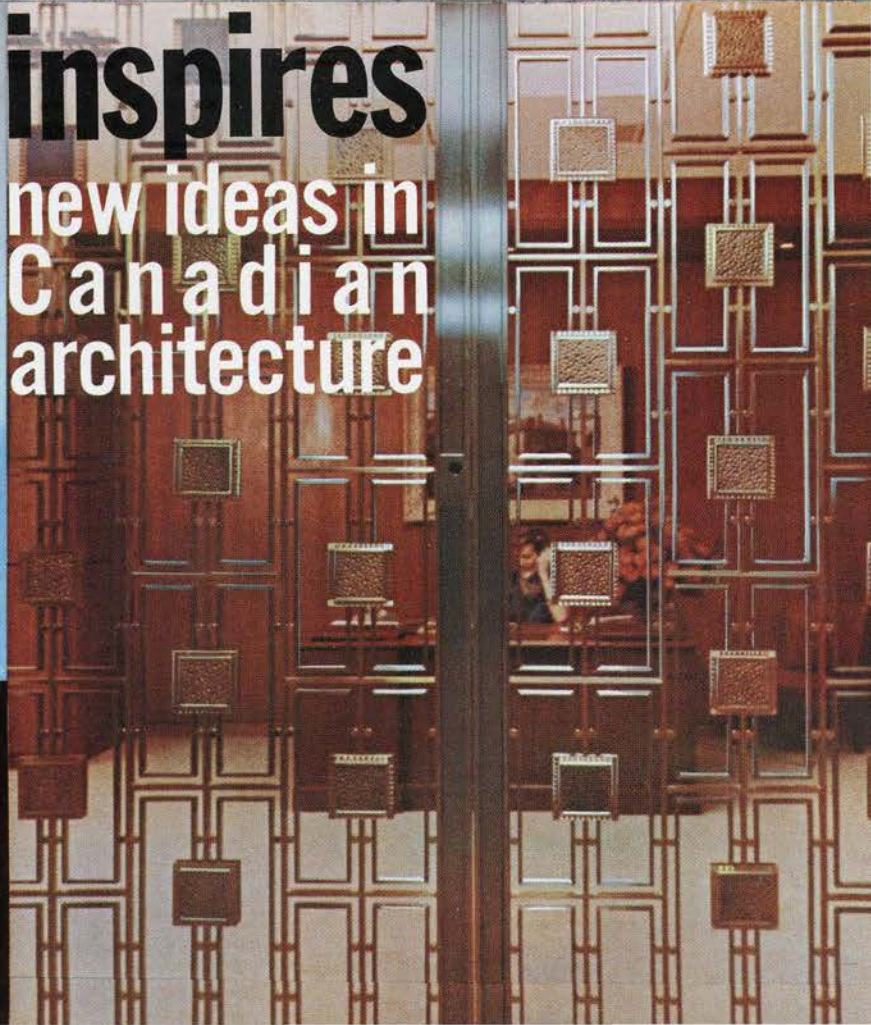


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MACKENZIE BUILDING, TORONTO
Architects: Shore & Moffat
Fabricator: Canadian Rogers Eastern Limited

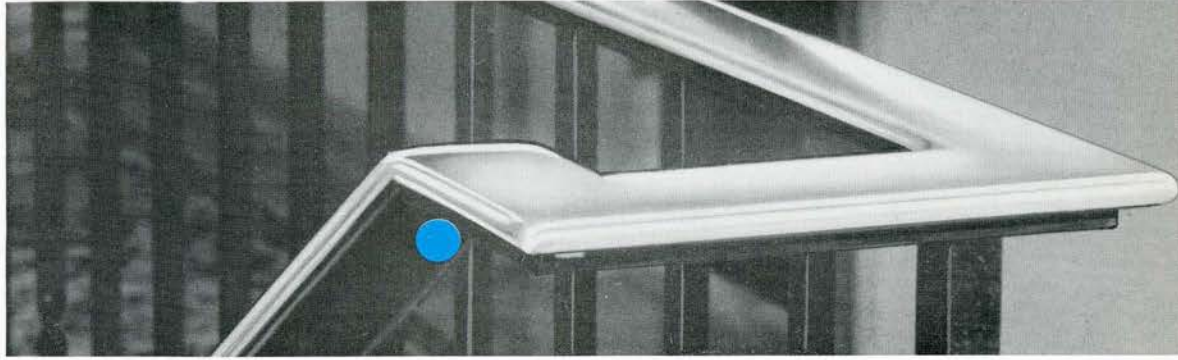
- **ELEVATOR LOBBY**
(Doors-Bucks-Transoms)
BANK OF MONTREAL HEAD OFFICE
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& Barott
Fabricator: Otis Elevator Company Limited

- **ESCALATOR**
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Architects: Shore & Moffat
Fabricators: Otis Elevator Company Limited
Gilbert Bros. Ltd.

- **LOBBY**
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Fabricator: Leon Glass Ltd.

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Look what striking architectural effects you can get with nickel stainless steel—outside or inside!

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Nickel helps give stainless steel its exceptional strength and durability, its resistance to corrosion . . . makes it easier to form and fabricate. As an architectural material, nickel stainless steel provides decided advantages over other materials for both interior and exterior applications. For further information about architectural uses of nickel stainless steel, write:

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- FRONT PAGE**
- **HAMILTON CITY HALL—HAMILTON (top)**
 Architect: Stanley M. Roscoe, City Architect
 Consulting Architects: Fleury, Arthur & Barclay
 Curtain Wall Fabricator: Canadian Pittsburgh
 Industries Limited
 General Contractor: Pigott Construction Co. Ltd.
 - **TORONTO-DOMINION BANK—MONTREAL (bottom left)**
 Architects: Ross, Fish, Duschenes & Barrett
 Curtain Wall Fabricator: Kawneer Company of
 Canada Ltd.
 Panel Fabricators: Dalite Corporation (Canada) Ltd.,
 and Avro Aircraft Ltd.
 General Contractor: Pigott Construction Co. Ltd.
 - **BANK OF MONTREAL EXTENSION—MONTREAL (bottom right)**
 Architects: Barott, Marshall, Merrett & Barott
 Fabricator: A. Faustin Co. Ltd.
 General Contractor: E. G. M. Cape Co. (1956) Ltd.

- BACK PAGE**
- **UNION CARBIDE BUILDING—TORONTO (top)**
 Architects: Shore & Moffat
 Curtain Wall Fabricator: Macotta Company of
 Canada Ltd.
 Panel Fabricator: Moffats Limited
 General Contractor: Anglin-Norcross (Ontario) Ltd.
 - **OAKRIDGE SENIOR PUBLIC SCHOOL—ST. CATHARINES (centre left)**
 Architects: Salter & Flemming
 Fabricator: Macotta Company of Canada Ltd.
 General Contractors: The Frank Lawrence
 Construction Co. Ltd. and
 Stewart-Hinan Corp. Ltd.

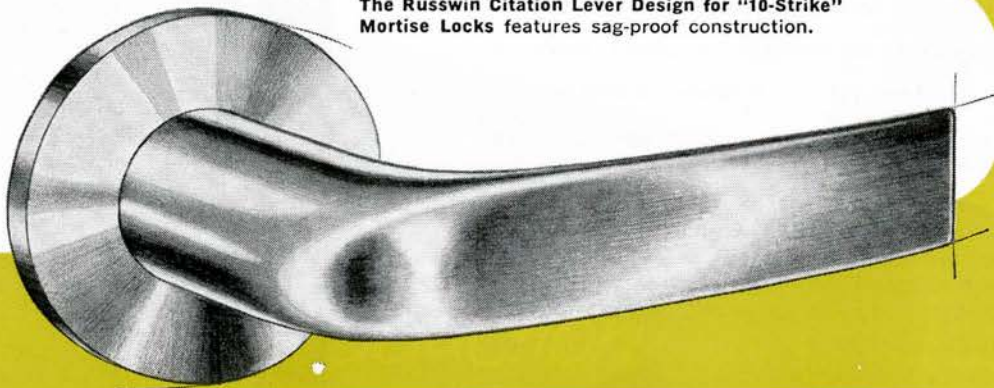
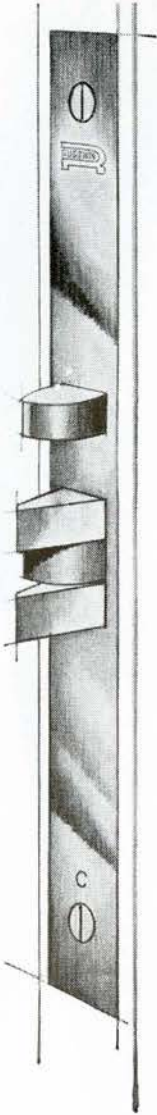


- **HOSPITAL—THOMPSON, MANITOBA (centre right)**
 Architects: Waisman, Ross and Associates
 Fabricator: Dominion Bronze & Iron Ltd.
 Panel Fabricator: Dalite Corporation (Canada) Ltd.
 General Contractor: Malcolm Construction Co. Ltd.
- **PRUDENTIAL BUILDING—TORONTO (bottom)**
 Architects: Page & Steele, and Peter Dickinson
 Fabricators: Toronto Cast Stone Co. Ltd.
 Rosco Metal & Roofing Products Ltd.
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...what it means in
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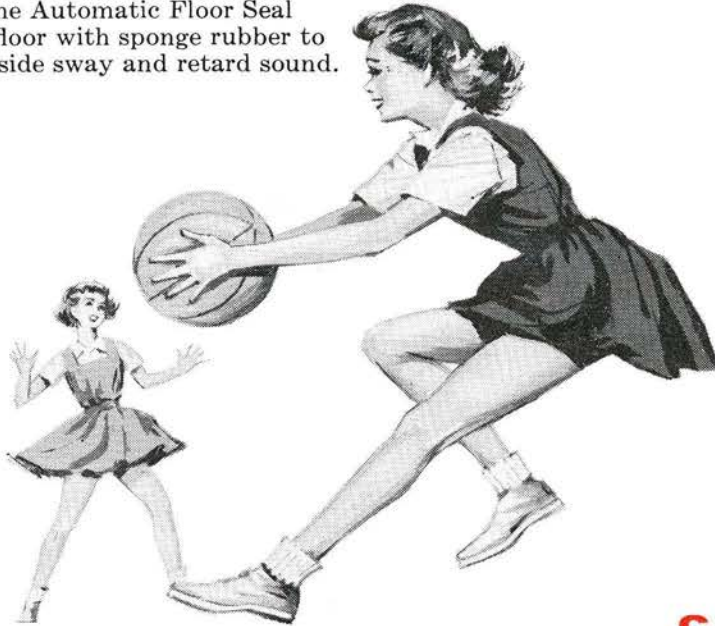
Certainly a wonderful asset—especially when the partition is built to withstand the punishment of active young people and designed to blend with the handsome appearance of modern schools.

For detailed specifications covering the Brunswick range of gymnasium equipment, write or contact the address shown below.

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B Structurally proven Brunswick hardboard honeycomb 'AeroCore' panelling (cells of resin-impregnated paper) provides maximum stability, extra sound insulation, and is warpage-free even under extreme conditions.

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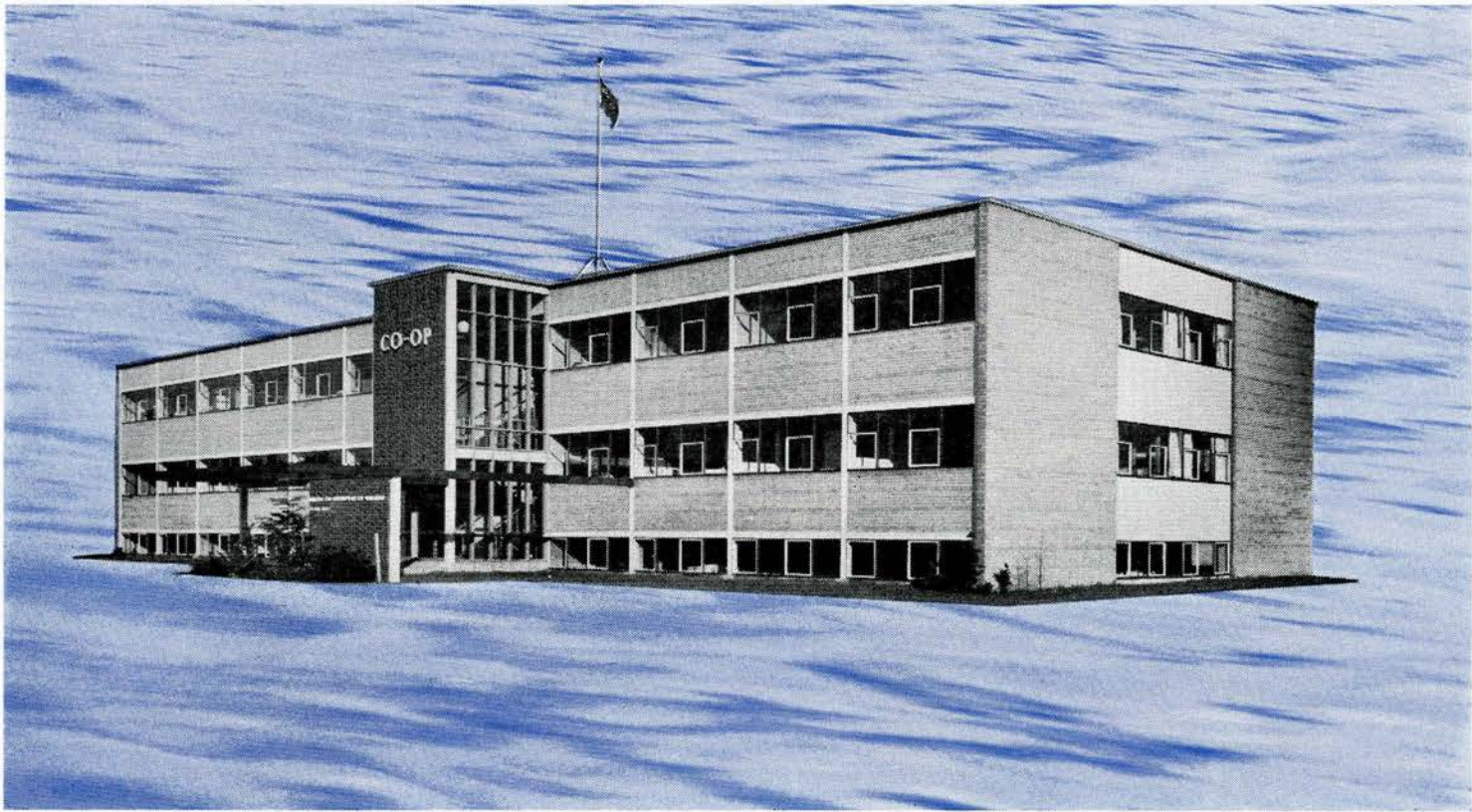
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 General contractors: **RICHARD & B. A. RYAN LIMITED**, Toronto

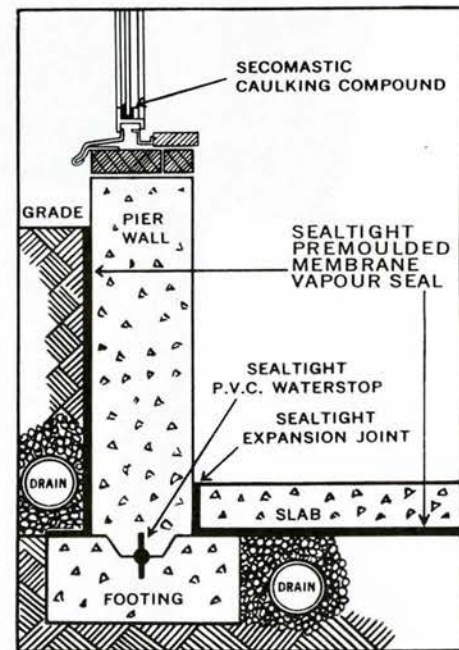
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Turnbull **TRAFLOMATIC** is not the name for a "gadget" or the limited pattern which elevator manufacturers commonly call "programming". Trafloomatic is much more than this. It is a self-adjusting electronic system which can sense changes in traffic and regulate itself to meet the individual requirements of any particular traffic demand or variation in these demands.

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It's *T.S.P. that makes **TRAFLOMATIC** stand out from other systems.

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FRANKI FACTS

CLIENT:
Government of Saskatchewan
Department of Public Works

LOCATION:
University of Saskatchewan
Saskatoon

ARCHITECT & ENGINEER:
Shore and Moffat, Toronto

CONTRACTORS:
Bird Construction Co. Ltd., Regina
W. C. Wells Construction Co. Ltd., Saskatoon

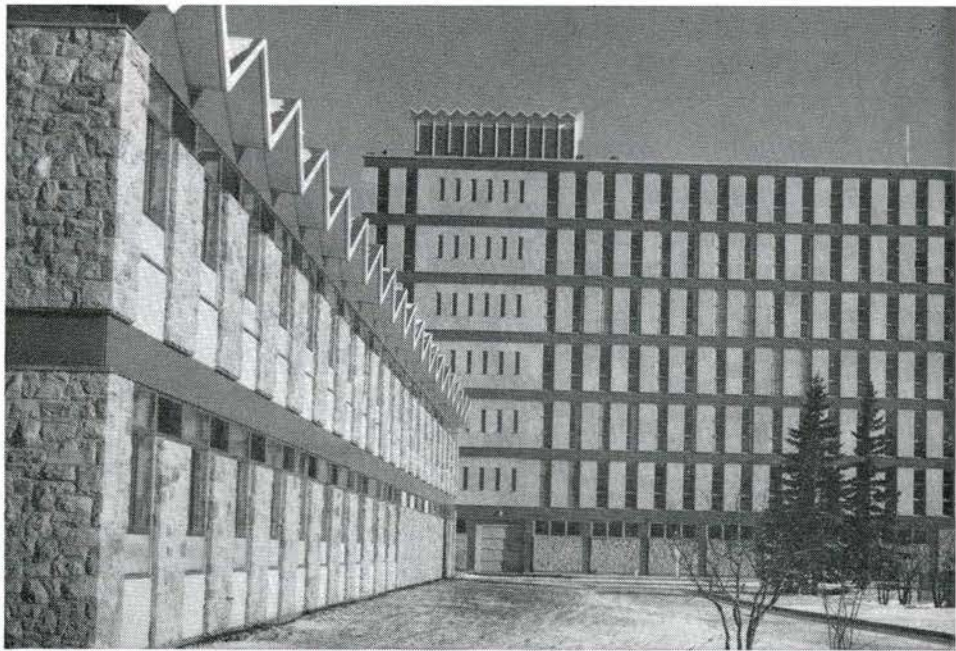
SOIL CONSULTANT:
B. B. Torchinsky and Associates, Saskatoon

TYPE OF STRUCTURE:
Arts Building, Classroom Wing and Theatre

NUMBER OF FRANKI UNITS:
302 Fully reinforced Displacement Caissons 20" and 16" diameter

WORKING LOAD:
125 Tons Maximum
75 Tons Minimum

DEPTH OF CAISSONS:
Average driven length 29' 6"
Average concreted length 26' 0"



Franki Displacement Caissons Solve High Water/Low Capacities Problem

Problem:

An integrated plan for the development of academic facilities at the University of Saskatchewan has been underway during the past few years. A key addition in this development is the new Arts Building comprising administrative offices, classrooms and a theatre.

As is common on this university campus, soil conditions are not suitable for conventional footing foundations. This particular site is underlain by horizontally stratified layers of silty clays and clayey silts containing soluble sulphate salts up to 1.2%. This overburden is in a generally soft condition with low dry densities decreasing with depth and corresponding low shear strengths.

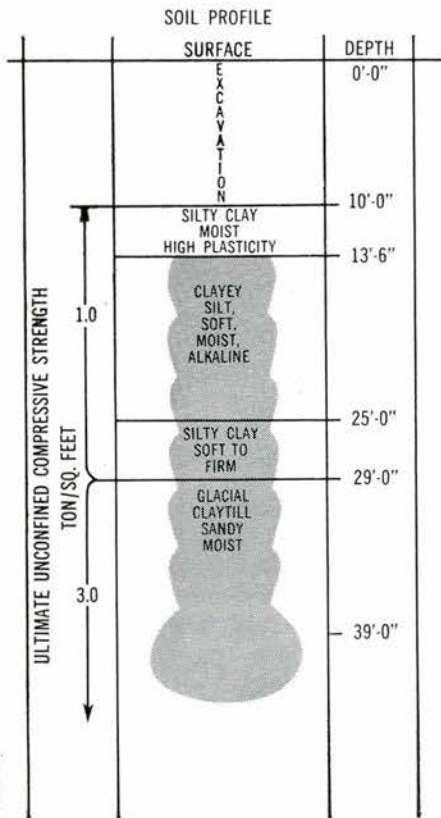
Settlement is a problem. A compressive index of 0.278 was recorded at a depth of 20 feet with a swelling pressure of 1 ton/sq. ft. Water seeped into the drill holes through numerous sand pockets, the water table being established 3' 6" below excavated grade.

Solution:

Below the upper layers exists a well-graded glacial till exhibiting low compressibility, no swelling pressures and increasing density with depth.

Franki Displacement Caissons were used to transmit the building loads to the glacial till layer, obviating the problems inherent in the overburden. The Franki bases were executed at a mean depth of 10 feet into the till, where the average moisture content is 13.3% and the average dry density is 118 lbs./cu. ft. The continuous use of a casing provided full safety from the intrusion of unstable water-bearing soils in the construction of each shaft. Alkali resistant cement was used in the concrete.

Two load tests indicated a gross settlement of 7/32 inches and a net settlement of 1/16 inches under a 250 ton test load.

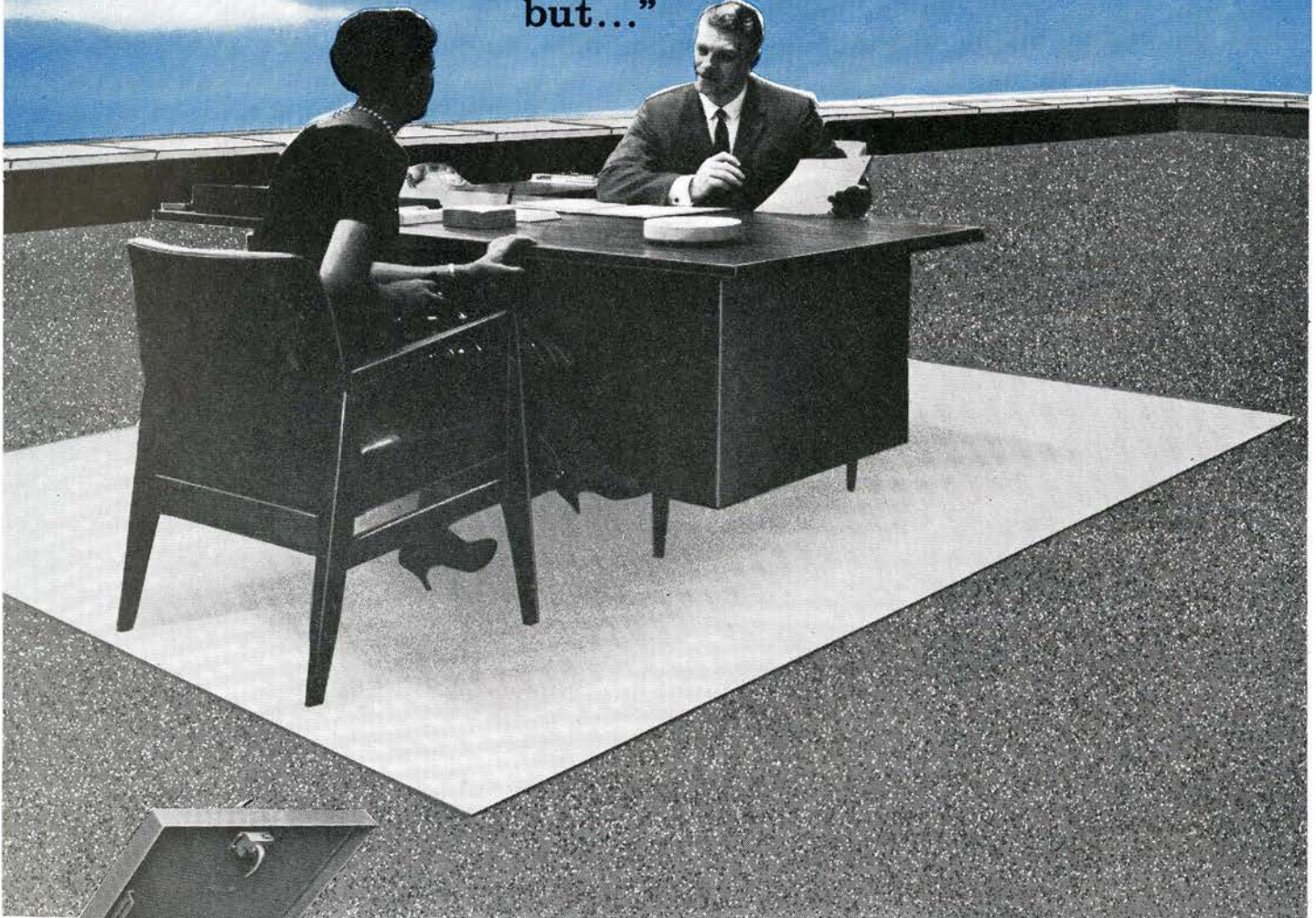


Literature - This series of job highlights, as well as other descriptive literature, will be sent to you upon request to Franki of Canada Ltd., 187 Graham Blvd., Montreal 16, P.Q.

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to work
on the roof,
but...”**



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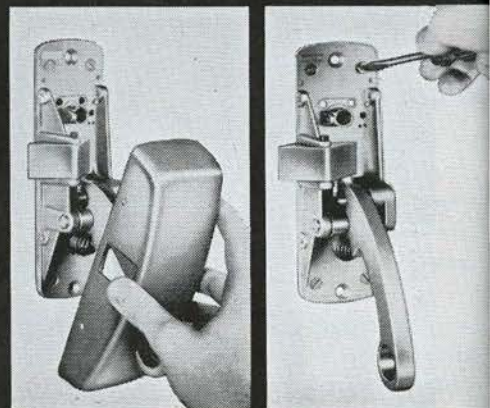
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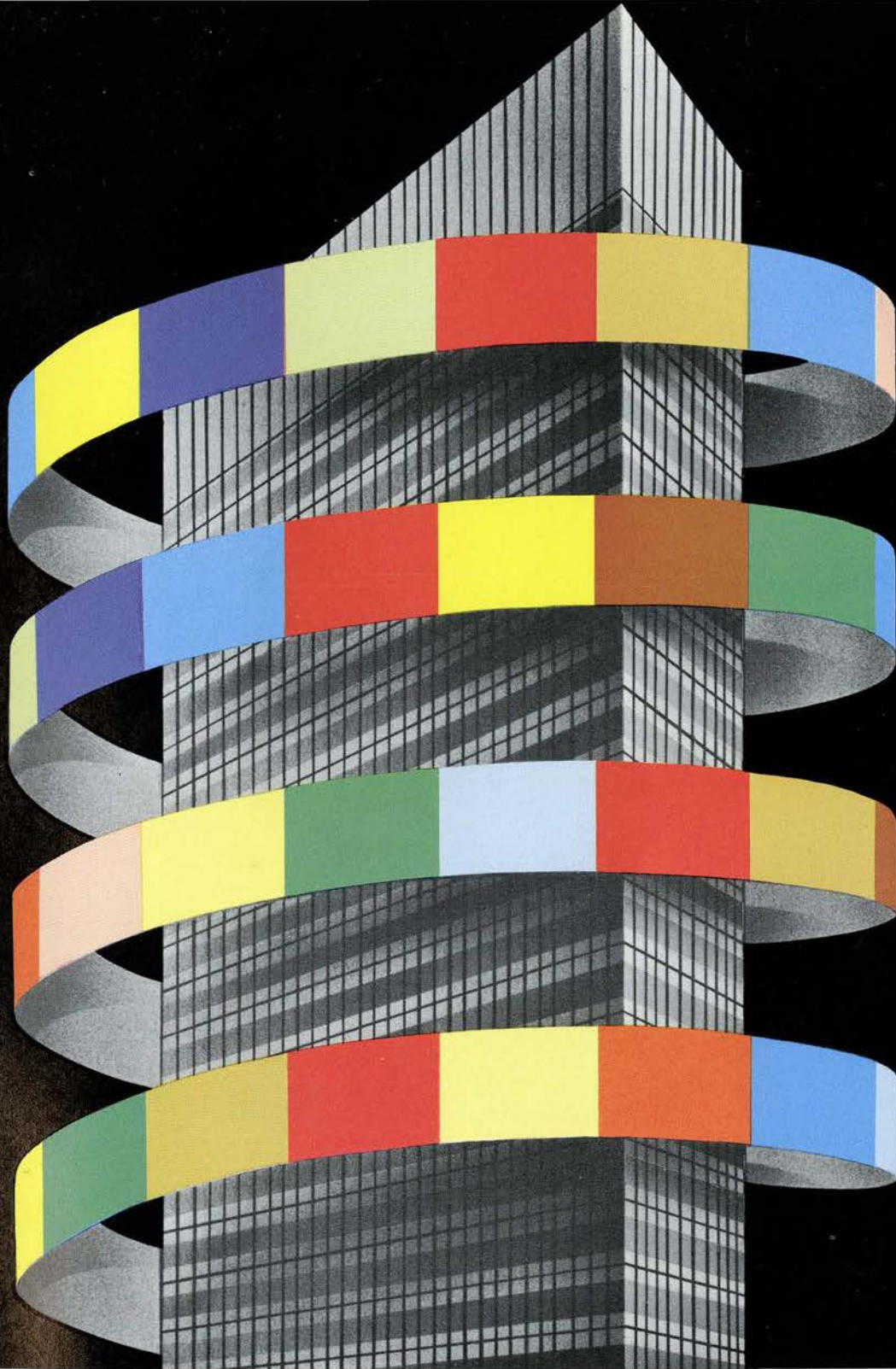


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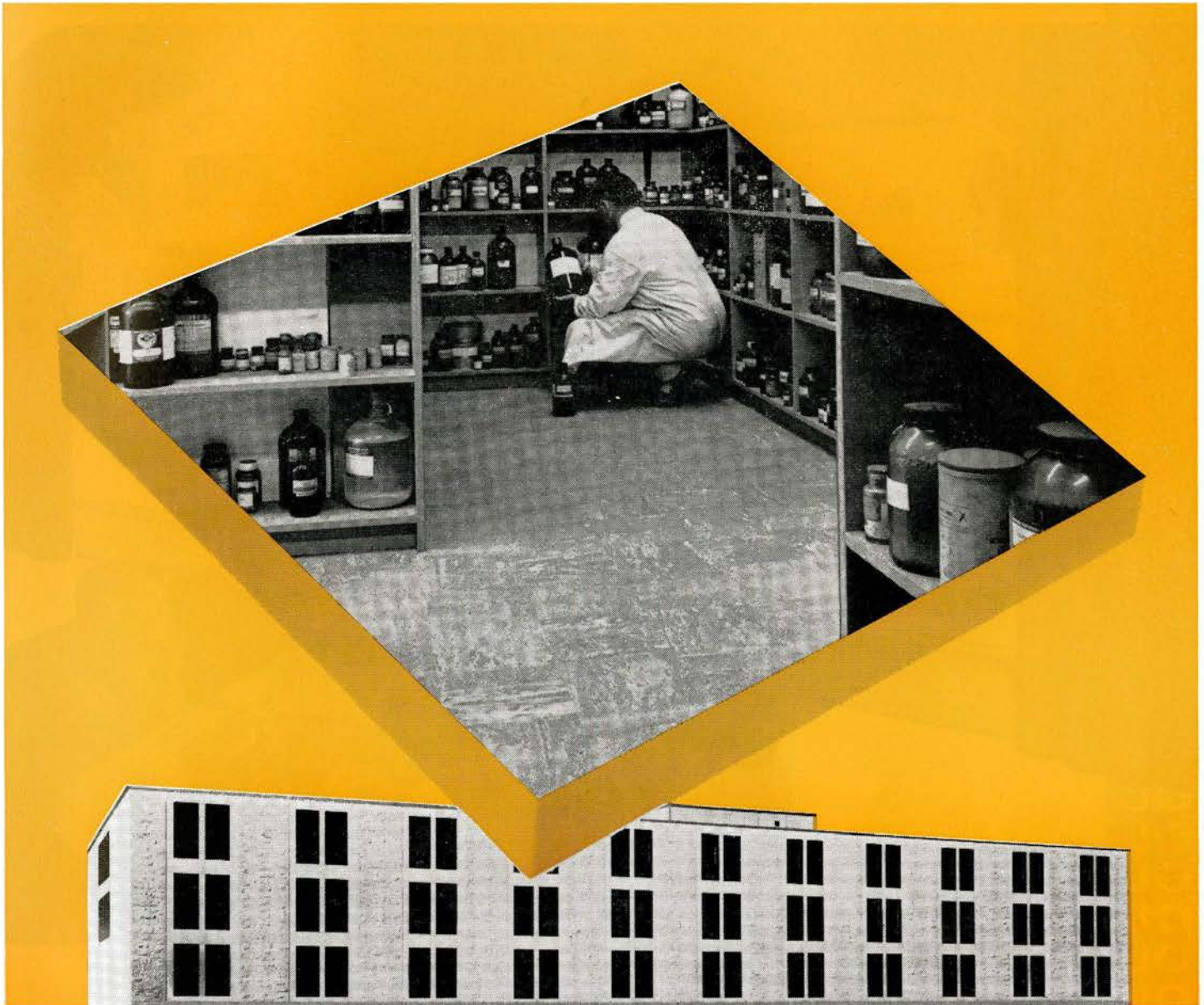
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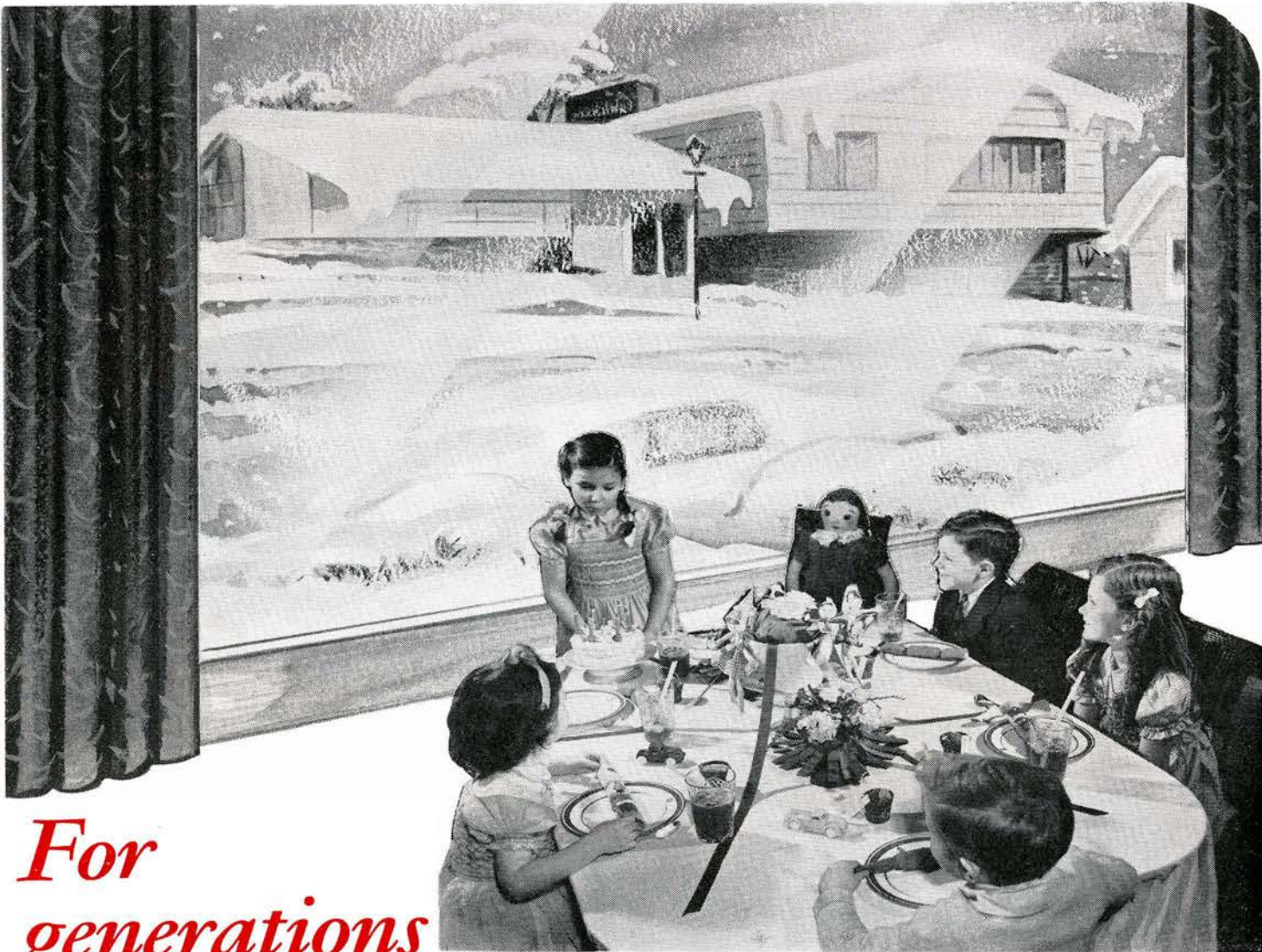
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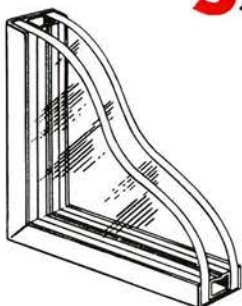
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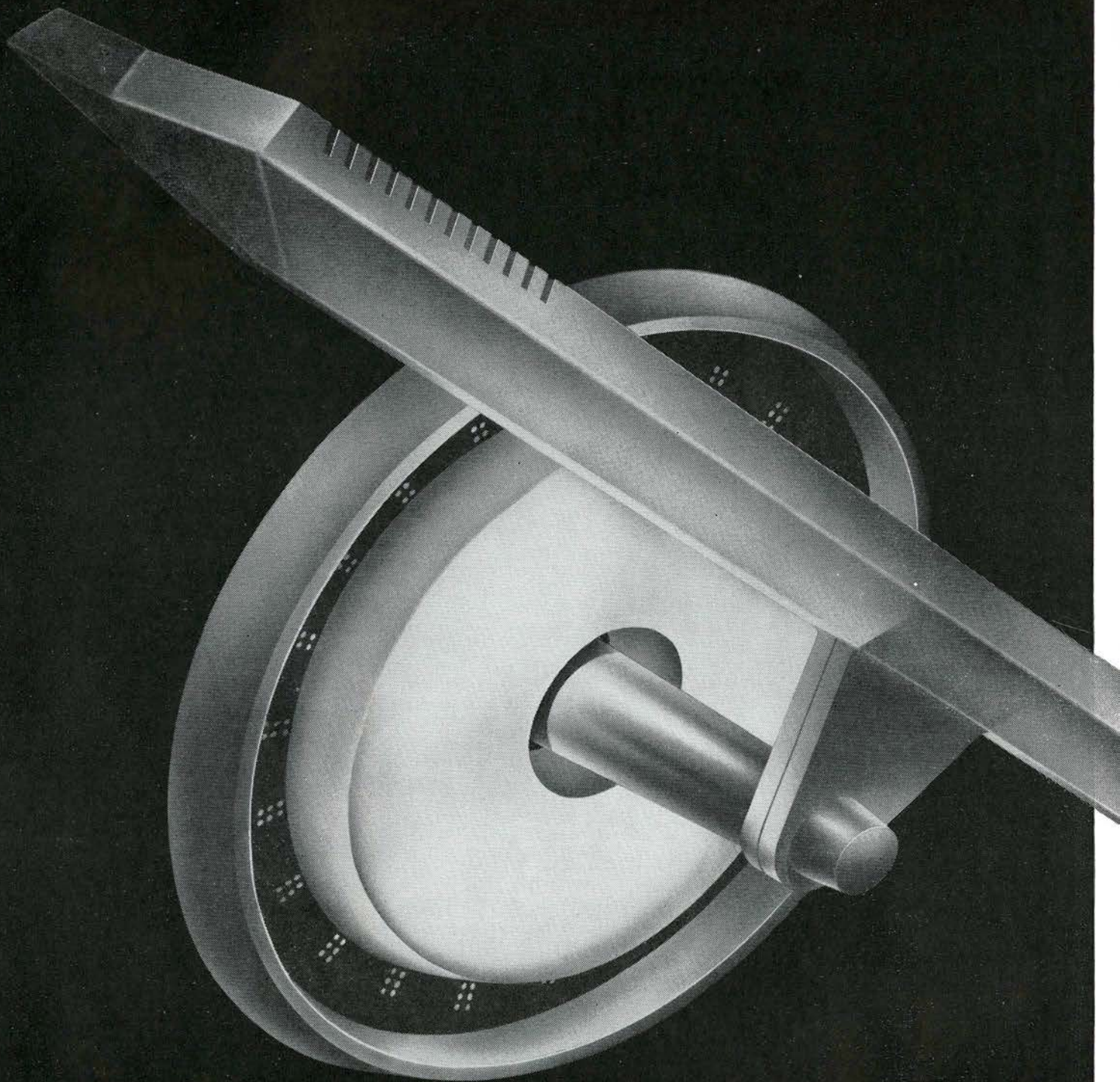
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COVER: "Saw Mill at Goose Lake, near Dorset," by James Evans, 4th year student at the School of Architecture, University of Toronto, executed at the School's 1961 annual sketch camp at Dorset, Ontario.

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“1867 and all that”

INTEREST IN THE HISTORIC BUILDINGS of Canada has waxed and waned over the years, but those that are left will come into sharp focus as we prepare for the Centenary Celebrations of 1967. In the older provinces, we have been too inclined to think of our treasures, our heritage of ancient buildings as belonging exclusively to the remote past, the period of hand craftsmen, yet unspoiled by mass production and the machine. It is only in comparatively recent years that any thought at all has been given to the Victorian contribution, and more rarely still, to the often anonymous work of this century.

Dr Giedion's book "Space, Time and Architecture" introduced, for the first time for many of us, the important achievements of the anonymous architects in St Louis and elsewhere, and the even more striking movement which was active in Chicago in the 70's and 80's of the last century. Even before the publication of Space, Time, exceedingly perceptive young architects and art historians in Ottawa drew public attention to the merits of the Daly Building with its Chicago windows and simple exposed skeleton frame. It comes as a distinct shock to many people that proportion and beauty could be expected, let alone found, in a purely utilitarian structure, and not a few older architects found it difficult to believe that the Roman magnificence of the railway station across the way had not a greater claim on our attention.

The 19th and 20th century architecture of all Canadian cities has generally followed world trends — we have had few rogue elephants who have deserted the herd, and left a mark for good or ill on architecture. Ottawa is an exception. For many years, we have heard from Dr Hubbard and others of the work of Francis Sullivan, an architect of this century with vision and conviction, and we are indebted to Mr Martin Birkhans for bringing Sullivan again to our attention by painstaking research done for his written thesis in the School of Architecture at the University of Toronto. Not the least interesting fact about Sullivan was the magnetic attraction that existed between himself and Frank Lloyd Wright, and it was doubtless due to Sullivan's admiration for the "master" that one of the first of Wright's designs came to be built in Banff, Alberta. Its loss by fire can be regarded, perhaps, as quite as great a calamity as the destruction of any of our better known historic buildings.

It is sincerely to be hoped that, where money is spent on buildings out of the one hundred million dollar fund which the federal government has set up for the Centenary Celebrations, too much stress will not be put on vintage 1867. Francis Sullivan should not be forgotten even though the presentation of our older historic buildings must loom larger in a general program. Architects who are interested should make themselves familiar with the terms of the federal grants for "Local Centennial Projects". So notable an opportunity for the preservation of our historic buildings will not likely occur again.

E. R. Arthur

“1867 et ses célébrations”

L'INTERET ENVERS les édifices historiques a varié sensiblement au cours des années au Canada mais les édifices qui nous restent vont occuper une place spéciale dans les préparatifs en vue de la célébration du Centenaire en 1967. Dans les vieilles provinces, nous avons trop souvent limité nos trésors, ou notre héritage, aux édifices de l'époque ancienne, ou à l'époque où les artisans n'avaient pas encore été gâtés par la production en série et la machine. C'est assez récemment que nous avons commencé à penser parfois à la richesse de l'ère victorienne et, plus rarement encore, aux oeuvres souvent anonymes du siècle actuel.

Plusieurs d'entre nous ont dû attendre le livre de Giedion, "Space, Time and Architecture", pour connaître les grandes réalisations d'architectes anonymes de St. Louis et d'ailleurs et même le grand mouvement qui existait à Chicago vers 1870 et 1880. Cependant, même avant la publication de ce livre, de jeunes architectes doués d'un sens d'appréciation exceptionnel et des critiques d'art d'Ottawa avaient attiré l'attention sur les qualités architecturales de l'Edifice Daly avec ses fenêtres de style Chicago et sa charpente simple et exposée. Beaucoup de personnes étaient renversées de trouver de si belles proportions et tant de beauté dans un immeuble purement utilitaire. Bon nombre aussi d'anciens architectes arrivaient difficilement à s'expliquer que la magnificence romaine de la gare de chemin de fer, de l'autre côté de la rue, n'attirait pas plus l'attention.

En dépit de quelques individualistes qui ont fait bande à part et laissé leur marque, bonne ou mauvaise, l'architecture des 19e et 20e a suivi les tendances modiales dans toutes les villes du Canada. Cependant, Ottawa a fait exception. Pendant plusieurs années, M. Hubbard et d'autres nous ont parlé des oeuvres de Francis Sullivan, architecte clairvoyant et convaincu de notre siècle. Plus récemment c'est M. Martin Birkhans qui, par de longues et méticuleuses recherches en vue de la préparation de sa thèse pour l'Ecole d'architecture de l'Université de Toronto, a fait revivre la mémoire de Sullivan. Un des traits intéressants de cet architecte est l'attrait magnétique qu'exerçait sur lui Frank Lloyd Wright et c'est sans doute à cause de l'admiration de Sullivan pour le "maître" qu'un des premiers plans de ce dernier a été réalisé à Banff (Alberta). L'incendie de ce monument a été une aussi grande calamité peut-être que la destruction de tout autre de nos édifices historiques les mieux connus.

Si une partie des cent millions de dollars affectés par le gouvernement fédéral aux fêtes du Centenaire doit être consacrée à des édifices, espérons qu'on ne s'attachera pas trop exclusivement aux oeuvres de 1867. Même si les anciens immeubles historiques doivent occuper une grande place dans le programme, il ne faudrait pas oublier Frank Sullivan. Les architectes intéressés devraient étudier de près les conditions des subventions rédérales aux "Projets locaux du Centenaire". Une autre occasion semblable d'assurer la conservation de nos édifices historiques ne se présentera pas de sitôt.

FRANCIS C. SULLIVAN, ARCHITECT

by Martin Birkhans



The written thesis of the fifth year is a requirement in the curriculum at Toronto, and is one of long standing. All are written on topics of the student's own choosing, and, consequently, many are extremely interesting. Not all involve research, and on that, and other accounts, Martin Birkhans' thesis on Francis Sullivan is outstanding. It was beautifully presented with a text of over four thousand words (considerably reduced for Journal purposes) and quite adequate photographs.

Quite a number of architects in these parts have been aware in a vague way of Francis Sullivan and his work. Dr. Hubbard at the National Gallery of Canada has been interested for many years, but he, along with all architects, will take pleasure in Mr Birkhans' research and the quite unexpected discoveries which he has made. Not the least of these is the P.O. at Stonewall, Manitoba which comes as something of a surprise to the architectural historians of that province.

I am happy to report that Mr Birkhans enthusiasm for his subject will lead him into further writing and exploration with the possibility of a book as his goal. Such a work should be widely acclaimed not only in Canada, but in a much wider field. E.R.A.



THE CAREER OF CANADIAN ARCHITECT Francis C. Sullivan was brief, unusual and certainly noteworthy. His private practice in Ottawa lasted from 1911 to 1916. He was first a pupil, later an associate, and eventually an employee of Frank Lloyd Wright. He openly proclaimed himself to be a modern architect and produced only work that uncompromisingly corresponded to this decree. The intent of this brief outline is not to claim for Sullivan any title of "Canada's first modern architect", or "first disciple of Wright", but rather to bring to attention the fact that during his Ottawa career, Francis C. Sullivan was conscientiously and consistently working in terms of modern architecture. In this, he preceded most of his professional colleagues by many years.

Sullivan's architectural training was both unorthodox and short. His first known occupation, that of wagon-driver, (1901), indicates a lack of any substantial schooling. Next he became a carpenter, and during this time diligently devoted every spare moment to the task of teaching himself drafting. After three years he was able to secure a position as draftsman for a local civil engineer. Two more years later (1906) he became an architect in the office of E. L. Horwood.

The exact time when Sullivan decided to follow Wright is not known. However, his one year stay in Horwood's office was culminated by the announcement of his departure for Chicago and Wright's Oak Park Studio.

After one year he was back in Ottawa, and following a brief period of unemployment, obtained a position as architect in the federal government's Department of Public Works. Three years later, in 1911, he started his own practice which unfortunately lasted for only five years.

Sullivan's failure to make his practice a lasting one is not surprising. His life was continuously engulfed in disappointments and troubles, many of which were caused by his own obstinate character.

In appearance he was of average height, and bore himself with confident sureness. His wardrobe was loud but immaculate. From the cap and brightly coloured checked shirts to the neatly pressed wide shoe laces, Mr Sullivan was immaculate and elegant. In the eyes of the public he was considered eccentric, and acquired the nicknames of "Spike" and "Crazy Irishman", though his friends called him Frank.

He was dubiously blessed with a glib, lacerating tongue which he found difficult to control, and which he used with devastating effect against anyone who crossed his path. Needless to say, his ideas about architecture completely differed from those of his eclectic colleagues, and he voiced these differences with conviction and force. Consequently, he was at best merely tolerated, and usually hated by his fellow architects.

Through characteristic lack of tact he also managed to alienate himself from members of the building industry. His unyielding desire to produce the best possible building did not allow for any consideration of the builder or tradesman. His site supervision was thorough and his standards extreme. On at least one occasion, the relationship between architect and worker deteriorated to the extent that blows were exchanged. Usually one Sullivan building was more than enough for any contractor.

Because of these, and undoubtedly many other reasons, his small number of friends became less, and his even smaller number of clients became non-existent. Thus in 1917, after a five-year practice that resulted in over twenty buildings (fourteen still exist), he closed his office and left the city. Although he returned three years later, his fortunes had not improved and circumstances forced architect F. C. Sullivan to become a clerk in the Civil Service. At least one architect recalls refusing him employment in spite of the fact that a position was vacant.

During these last disappointing years, alcohol had taken up a more and more important part in Sullivan's life and his appearance and bearing had suffered accordingly. The recently proud figure had become one of pity and hopelessness. This tragic ending forms the only known link with his famous namesake from Chicago.

About 1923 he left the city forever, and set out for Taliesin and the refuge and employ of his beloved master. He died there a few years later, long before the coming of old age.



WOOD SCREEN AT ENTRANCE OF SULLIVAN'S OWN HOUSE ON SOMERSET ST. EAST (1914)

Although presently in a deplorable condition, this small residence was once one of the most illustrative examples of Sullivan's work. All furniture, including beds, dressers, tables, shelves, chairs, etc., were designed by the architect. Some of these furnishings are still in evidence, but the original character of the interior has been lost. Sullivan occupied the house for only a short period of time as it was soon re-possessed by his creditors.

POST OFFICE, STONEWALL, MANITOBA, 1914
This building indicates Sullivan's development towards the simpler, less decorative approach to design that is characteristic of his later work. (Compare it to the residence at Bay and James Streets). Also it appears that on this particular project Sullivan was, for once, working with a sound budget. It is the only public building that was executed according to the drawings, without the usual detrimental substitutions of materials. This post office, together with another one at Shawville, Quebec, was commissioned by Sullivan's former employers, the Dept. of Public Works, and both buildings are still in constant use.

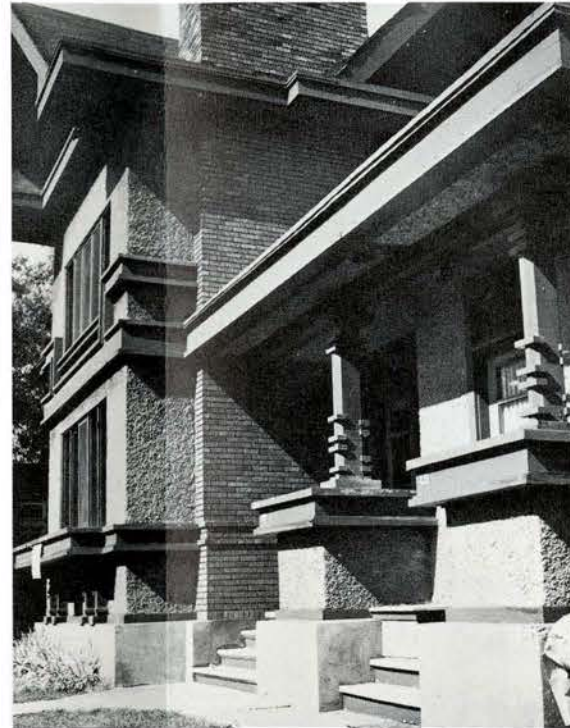


FRANCIS SULLIVAN ARCHITECT



HORTICULTURE BUILDING LANSDOWNE PARK, OTTAWA (1914)

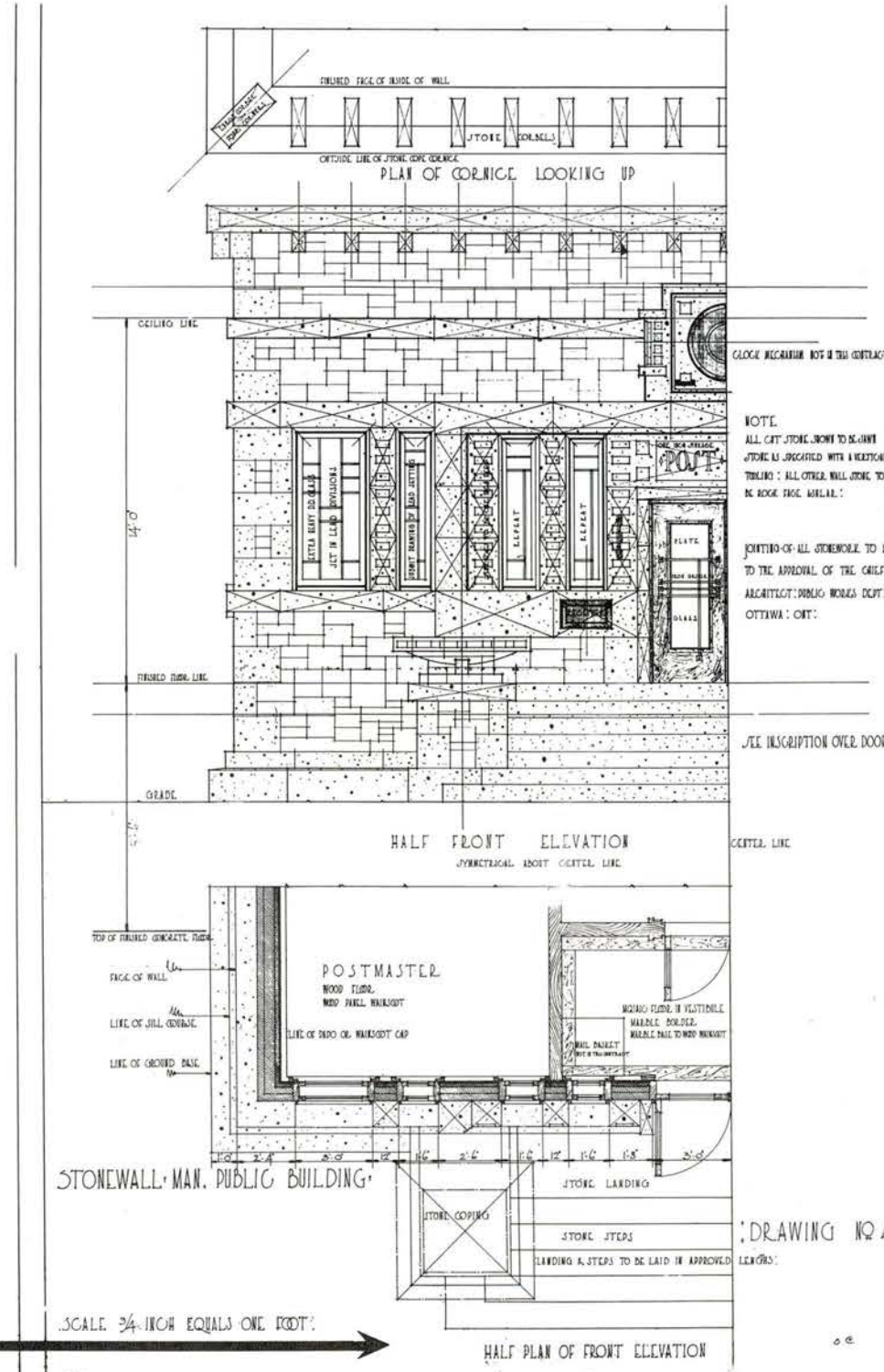
A good example of Sullivan's fondness for richness and decoration, executed in his most familiar materials: brick, stucco, and pre-cast stone.



THE RESIDENCE AT BAY AND JAMES STREETS

This represents one of Sullivan's early works (1911-12), and is actually an extensive renovation, rather than a completely new design. A dominant new entrance on one side, and a new wing (shown here) on the other, enclose an older building, and join each other by the heavy horizontal wood bands. The unifying effect is so complete that it is difficult to convince the present occupants of the older building's existence within. The decorative and somewhat complicated aspect of the exterior is characteristic of Sullivan's early work only, and gradually disappears. As is the case with the other residential buildings, the interior has been subdivided into numerous apartments and the original spatial qualities have been destroyed.

An example of the working drawings for the Stonewall post office shows two characteristics evident in all of Sullivan's work: well-considered detailing and excellent draftsmanship.



THE PUBLIC LIBRARY, PEMBROKE, ONT. (1911-12)
Represents another building by "associate architects" Wright and Sullivan. However, Wright's participation in the project was unofficial, and generally not known; consequently his name does not appear in any of the documents between the building committee, and the architect.

Superb detailing has more than offset the limitations imposed by an extremely small budget, and after fifty years of service, the building is still in excellent condition.

FRANCIS SULLIVAN ARCHITECT

PARK SHELTER, BANFF, ALBERTA (1913, demolished 1939)

This represents one of four commissions that Sullivan shared with Wright.¹ Although Wright justifiably acknowledges himself as designer,² the preparation of all working drawings and site supervision were carried out by Sullivan. This arrangement probably prevailed in the other three projects also.

1. The other Wright-Sullivan buildings are: Public Library at Pembroke, Ontario (Existing), Double house in Ottawa (unknown), Post office in Ottawa (presumed demolished), See also H. R. Hitchcock: *In the Nature of Materials*.
2. F. L. Wright: *A Testament*, P. 80.

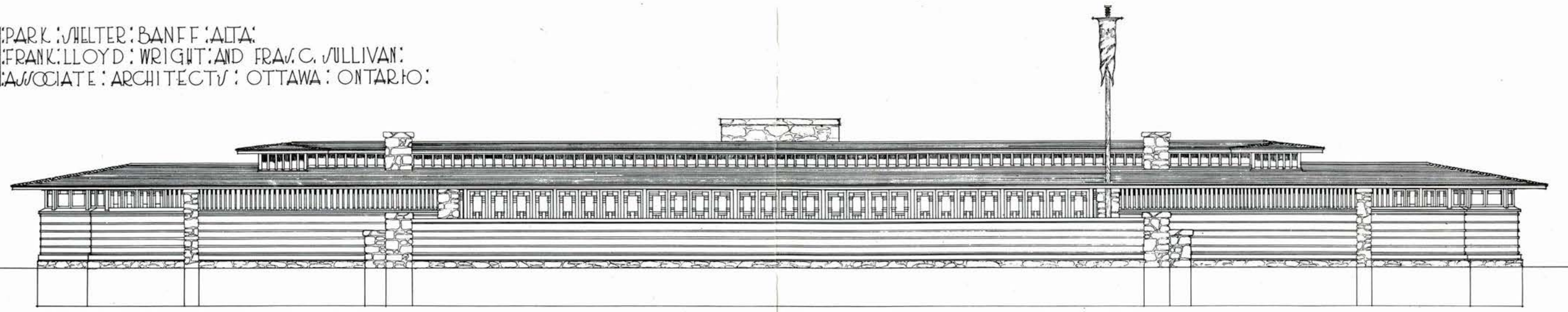
With unquestioned respect for both architects, one still finds the title block the most interesting part of the drawing.

THE GORMAN HOUSE

Once the summer residence of a well-known Ottawa family, was unfortunately demolished some three years ago. In spite of the regrettable manner in which the roof has been re-shingled, the building still can be judged as one of Sullivan's more important works.

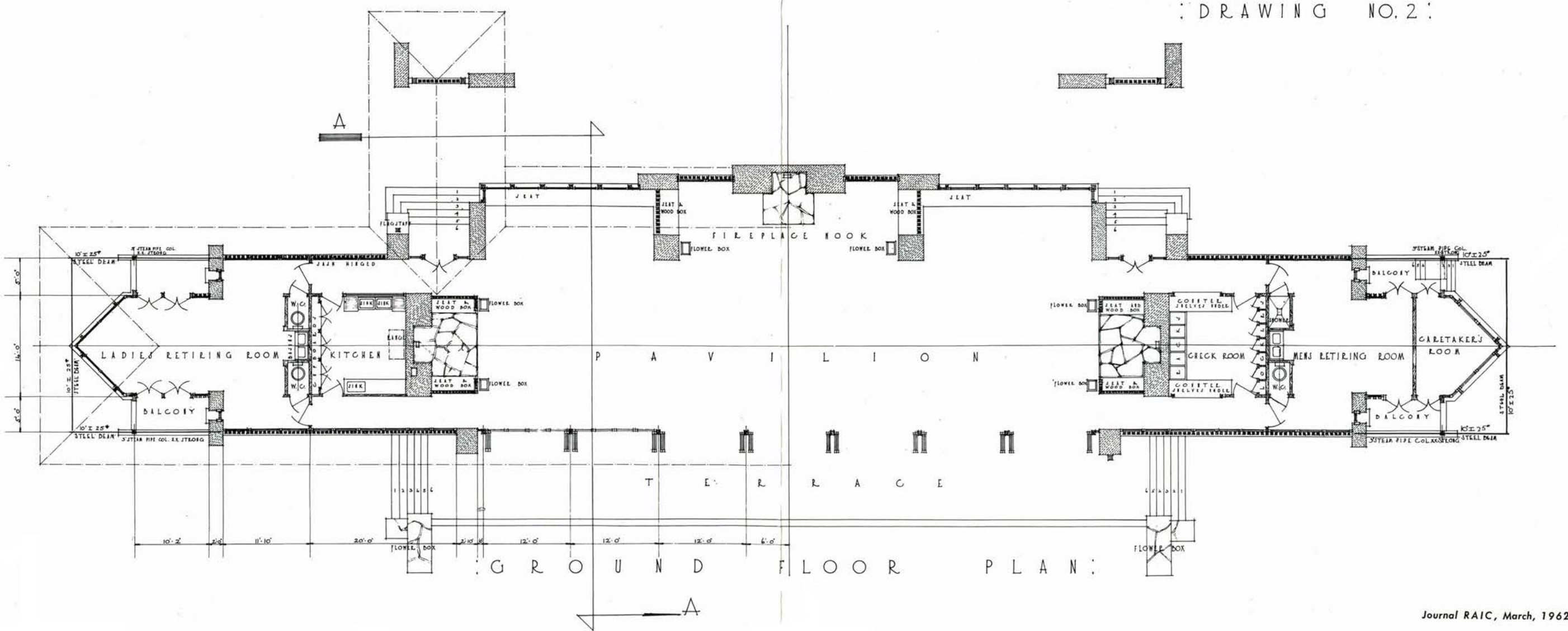


PARK SHELTER, BANFF, ALTA.
 FRANK LLOYD WRIGHT AND FRANCIS SULLIVAN
 ASSOCIATE ARCHITECTS, OTTAWA, ONTARIO.



FRONT ELEVATION

DRAWING NO. 2



GROUND FLOOR PLAN

CONCEPT ET REALITES ORGANIQUES:

A l'instar de l'enseignement en général, les écoles d'architecture s'interrogent sérieusement sur la valeur des structures de leur enseignement. Si les réformes anticipées demeurent encore assez confuses, certains professeurs par contre condamnent entièrement les systèmes en vigueur. Il est donc souhaitable de repenser l'enseignement en fonction de valeurs rationnelles et soutenues par des faits historiques, scientifiques, pédagogiques et autres de nature humaine.

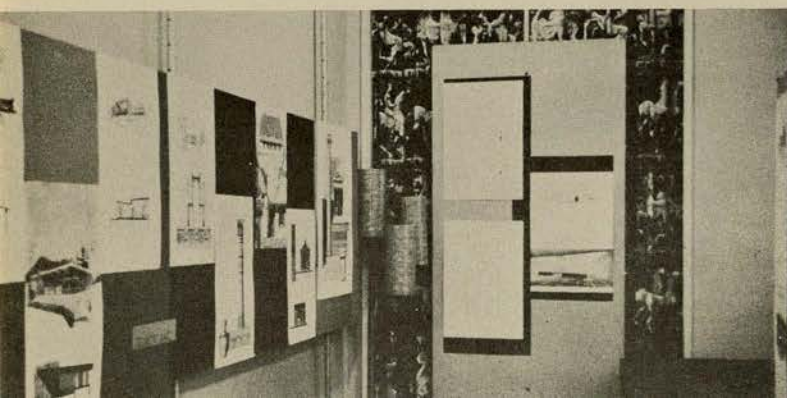
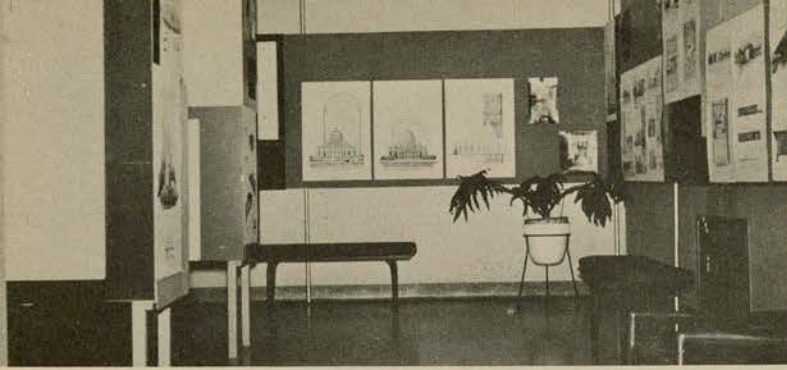
L'histoire relate des faits qui nous laissent en présence de déficiences à combler. C'est notre responsabilité. Des autorités constatent ainsi que l'architecture fut tour à tour, allégorique, symbolique, fonctionnelle et présentement fonctionnelle-technique. Ces attributs présentent tous des éléments désirables tout comme les F.L.W., les Le-Corbusier, les Mies Van Der Rohe, les Gropius, etc., présentent suivant leurs personnalités distinctes, des attributs particuliers désirables. L'enseignement se doit de dépasser ces attributs historiques et personnels; il doit les englober tous et chacun dans une synthèse vue cependant à l'intérieur de contingences sociales, économiques et techniques.

Parallèlement à cette synthèse que l'histoire par conséquence met en lumière, l'évolution de la pensée humaine favorise aussi la recherche d'un idéal qui lui assurera un équilibre sain en l'orientant à satisfaire cette synthèse globale qu'est "l'humanisme intégral." En marge de cette pensée, l'architecture doit tendre également vers cette synthèse qui favorisera un "fonctionnalisme intégral" où tout ce qui est matériel, appuie, complète et s'intègre dans un contexte spirituel bien défini et répondant psychologiquement à des fonctions bien précises.

La connaissance, fruit de la pensée, commence avec l'expérience. L'étudiant n'échappe pas à cette loi pas plus que le nouveau-né n'y échappe. Celui-ci se développe avec tous ses membres et facultés suivant une unité d'action et de pensée qui, même limitée au début, demeure intégrale, totale et adaptée à un rythme que l'expérience humaine peut soutenir aux divers temps d'épreuves de son évolution. Il doit en être ainsi dans l'enseignement en adoptant les moyens les plus naturels propres à l'homme, à la totalité de sa constitution et à ses plus saines aspirations.

L'étudiant doit donc prendre conscience sous forme embryonnaire au départ, de tous les éléments vitaux, matériels et spirituels, qui entrent en jeu dans la conception d'une oeuvre architecturale pour pouvoir en synthèse, les développer graduellement jusqu'à maturité. Cette structure pédagogique favorisera ainsi une formation établie sur des principes de base constamment mis en évidence et un développement intégral à la mesure de l'esprit et de son potentiel d'assimilation susceptible d'atteindre dans un minimum de temps, une maturité équilibrée.

Pierre Morency



"We shape our buildings and our buildings shape us" (Winston Churchill).

Nous le retrouvons ce mot et bien d'autres aussi ayant un même effet choc à une de nos expositions que nous tenons annuellement depuis 3 ans à l'Université de Montréal dans le cadre d'une "Semaine d'architecture."

Initiative de notre groupe d'étudiants, cette "Semaine d'architecture" a pour but de susciter l'attention des dirigeants de demain sur le rôle de notre métier si ignoré de ceux d'aujourd'hui, sachant que de l'élite dépend dans une large mesure l'épanouissement de notre art.

Outre l'exposition qui groupe des projets d'étudiants, des oeuvres de diplômés de notre école et des exemples fameux tirés de l'histoire, la "Semaine d'architecture" se compose aussi d'une conférence-forum, de projections de film et enfin d'une édition spéciale sur l'architecture du Quartier Latin (*journal bi-hebdomadaire de l'association générale des étudiants de l'Université de Montréal*).

Le thème que nous donnons à la "Semaine" donne matière à ces différentes manifestations. Ainsi, l'an dernier, le thème "Architecture, profession totale" qui de prime abord n'a pas été sans étonner bien des gens a fait le sujet d'un forum des plus animés et enrichissants. Ce même thème fut développé dans le Quartier Latin. On y exposait les rapports qui existent entre l'architecture et les autres disciplines montrant comment elle en est en quelque sorte le point commun.

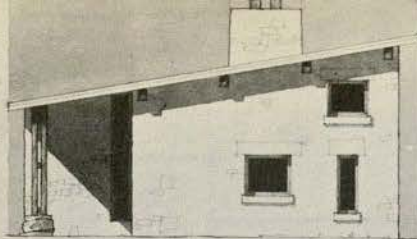
"I received a copy of a truly remarkable document, the student publication of the University of Montreal, "Le Quartier Latin" devoted to celebrating a campus event, La Semaine d'Architecture. The bold head-line on the front page was enough to make one sit up, Architecture profession totale, but to read through the whole issue left me breathless and almost speechless."

Allan Jarvis (The Montreal Star)

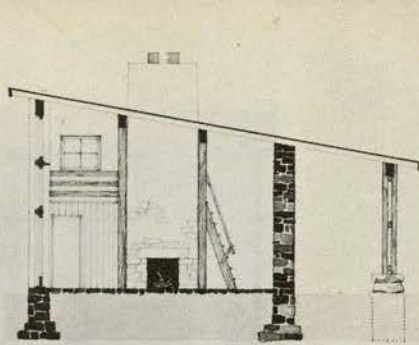
Sans pouvoir mesurer les résultats, le vif intérêt que porte le public étudiant à la "Semaine d'architecture" nous a convaincu que bien que nous soyons nous-mêmes toujours au stage de la formation, nous pouvions quelque chose dans l'initiation à l'architecture chez ceux qui nous entourent.

Dans ce Québec, où les transformations se manifestent sur tous les plans, il nous fait plaisir à nous aussi d'y apporter quelque chose, à notre façon.

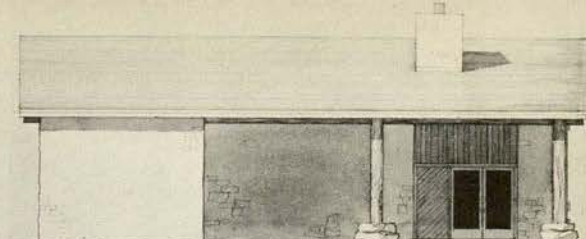
MARC DROUIN, Aviseur de l'A.E.A.M.



ELEVATION EST

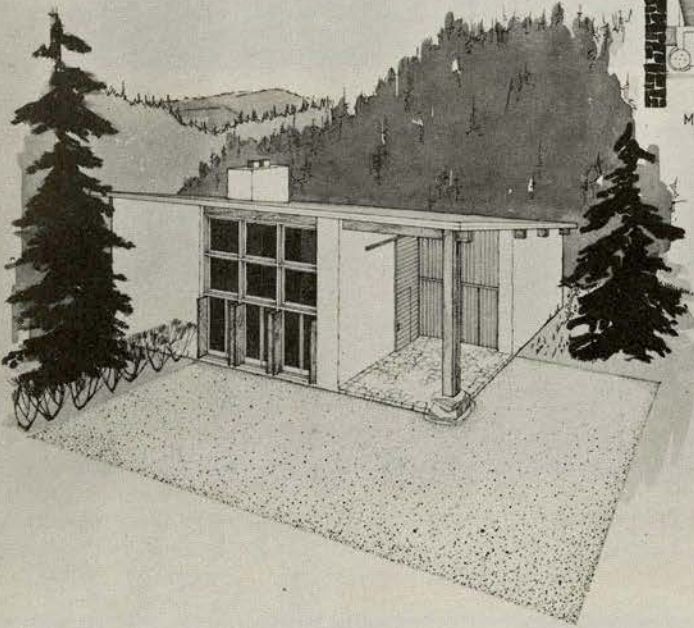


COUPE EN AA

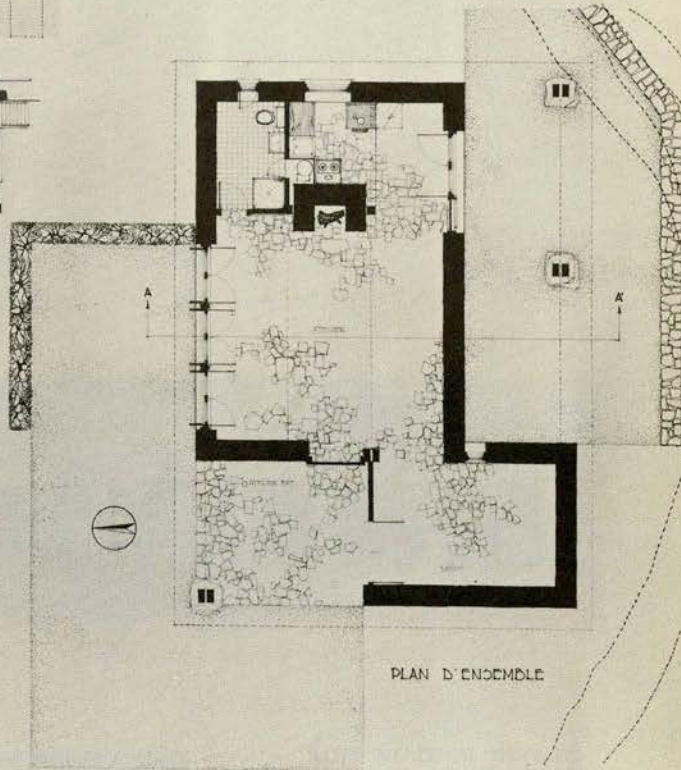


ELEVATION SUD

LE STUDIO D'UN SCULPTEUR
Echelle 1/4" = 1'-0"
HUGUES DESROSNIERS



MEZZANINE

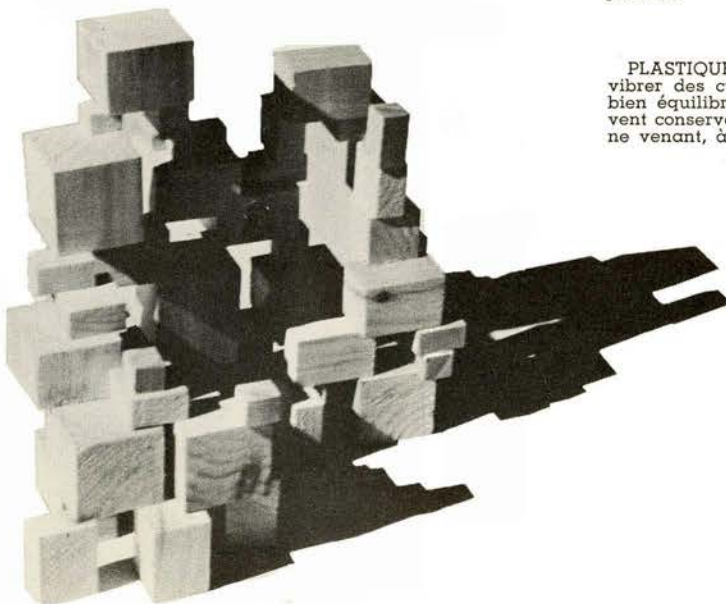


PLAN D'ENSEMBLE

LE STUDIO D'UN SCULPTEUR — Loin des tintamarres urbains, le sculpteur se réfugie en montagne dans un atelier qu'il a lui-même partiellement construit. Les Laurentides cachent au creux de leurs plis de ces paysages contrastés où les masses s'opposent à l'espace. Face à ce drame et sur un plateau, l'artiste a bâti sa maison avec les matériaux mêmes de son art: la pierre massive pour les murs et le foyer, le bois docile pour le toit et la menuiserie. Autour de ce studio éclairé du Nord, une cuisine-dinette surmontée d'une alcôve en mezzanine, pour le sommeil, fait pendant à l'entrepôt et au porche qui sert d'atelier extérieur couvert.

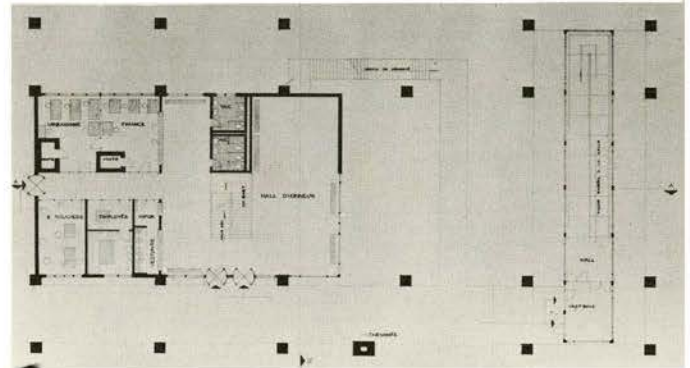
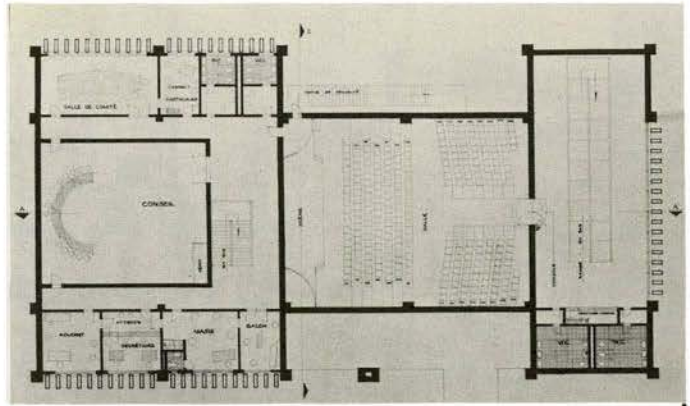
Côté montagne, une terrasse voisine le studio pour y travailler. Côté vallée, une terrasse de repos reçoit le soleil . . . et l'inspiration.

HUGUES DESROSNIERS, 1ère année.



PLASTIQUE DE VOLUMES — Un problème consistant à faire vibrer des cubes dans l'espace tout en conservant une masse bien équilibrée. Les cubes ont différentes dimensions mais doivent conserver chacun leur propre équilibre; l'emploi de la colle ne venant, à la fin, que fixer l'harmonie générale.

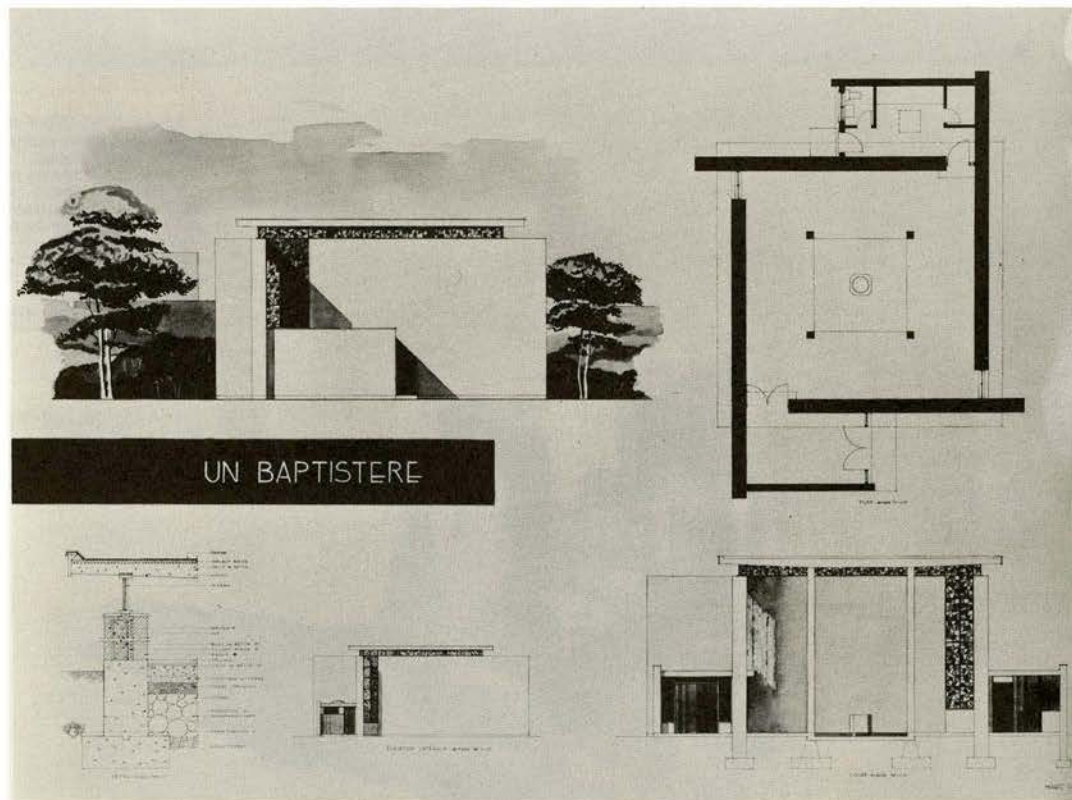
MICHEL LINCOURT, 1ère année.

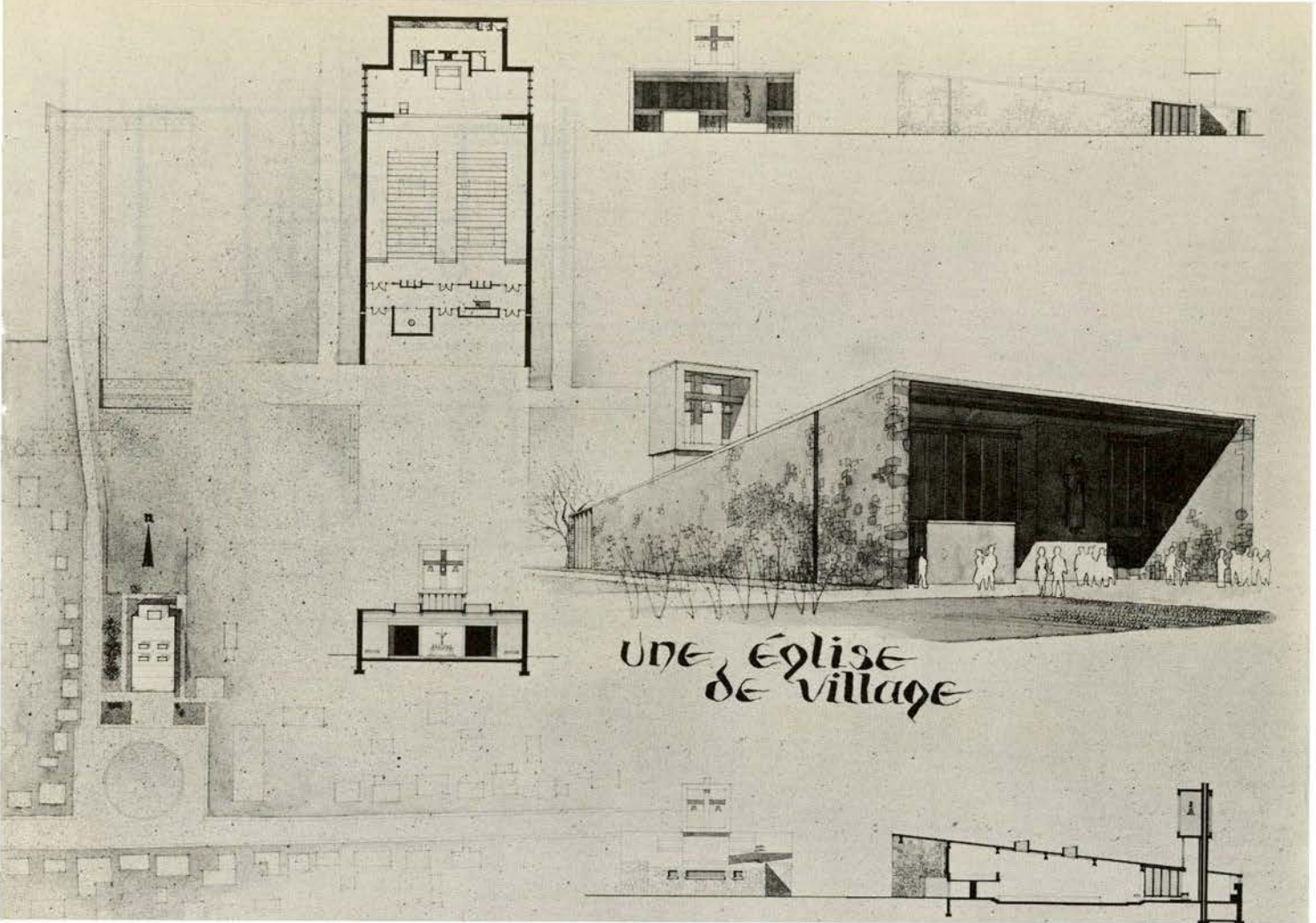


UN PETIT HOTEL DE VILLE — Le présent projet se situe dans une petite ville industrielle de province. On retrouve au programme tous les services connexes à un hôtel-de-ville y compris une salle de spectacles ayant un accès indépendant. Une volonté sculpturale ressort de l'ensemble et s'exprime par le dédoublement extérieur des gradins de l'amphithéâtre et par l'emploi rythmique du brise-soleil. On peut de même remarquer une approche vers le brutalisme exprimé par la robustesse de la structure apparente et le contraste violent des matériaux.
JEAN-PIERRE LAPOINTE,
 3ième année.

UN BAPTISTERE — Le Baptême, c'est l'entrée d'un nouveau chrétien dans l'Eglise. C'est pour celle-ci un moment de joie qui veut s'exprimer dans le lieu même où se prodigue ce premier sacrement.

On trouve ordinairement le baptistère intégré au temple, mais toujours dans un espace bien défini. Quelquefois même, il s'élève isolé et s'harmonisant avec le temple. Il doit alors s'en dégager des caractéristiques plastiques et architecturales de noblesse et de beauté, reflet de la grandeur du Baptême. Ce dernier type fut l'objet de cette étude.
MARC DROUIN, 2ième année.





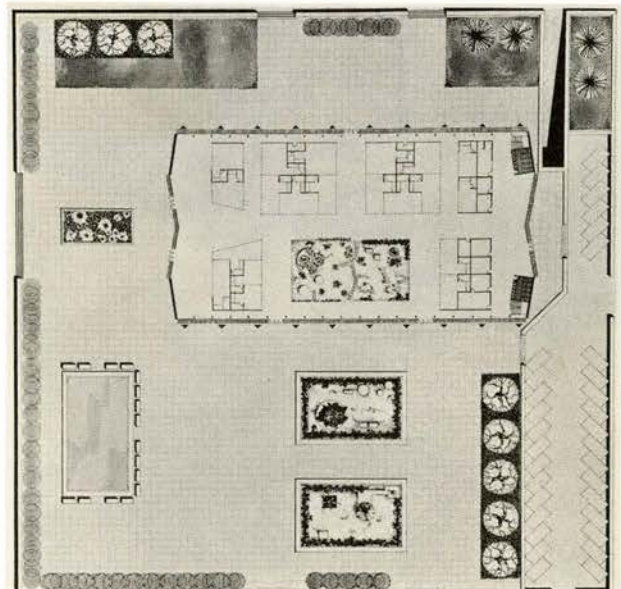
UNE EGLISE DE VILLAGE QUEBECOIS (400 places) — Notre paysannerie de Nouvelle-France plonge ses racines jusqu'au Moyen-Age des Gaules. Elle prend toutefois le visage du siècle d'aujourd'hui. Tradition et vie. Cette église a des murs en moellons dans le béton, des poutres, un toit et un beffroi en béton. Elle est pesante. La religion, c'est la terre.

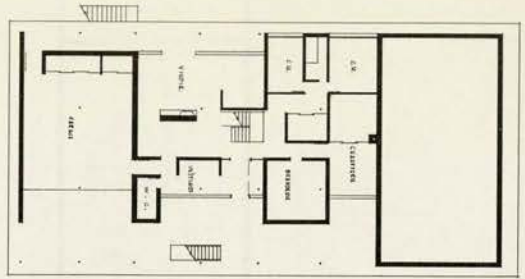
HUGUES DESROSIERS, 3^{ème} année.

UN MARCHÉ AUX FLEURS—A la suite du désir d'une fondation, la ville de Montréal projette la construction d'un marché aux fleurs dans un centre d'affaires. L'ensemble du projet se présentera comme une vaste promenade sur laquelle sera érigé le dit marché aux fleurs. L'exploitation de l'entreprise sera confiée au Jardin Botanique qui y louera une vingtaine de concessions aux détaillants intéressés.

La partie construite sera essentiellement constituée d'une structure à grande portée, largement éclairée, semblable à une immense serre sous laquelle prendront place l'exposition permanente au Jardin Botanique et les divers concessionnaires.

MARIE-LOUIS FORTIN, 3^{ème} année.

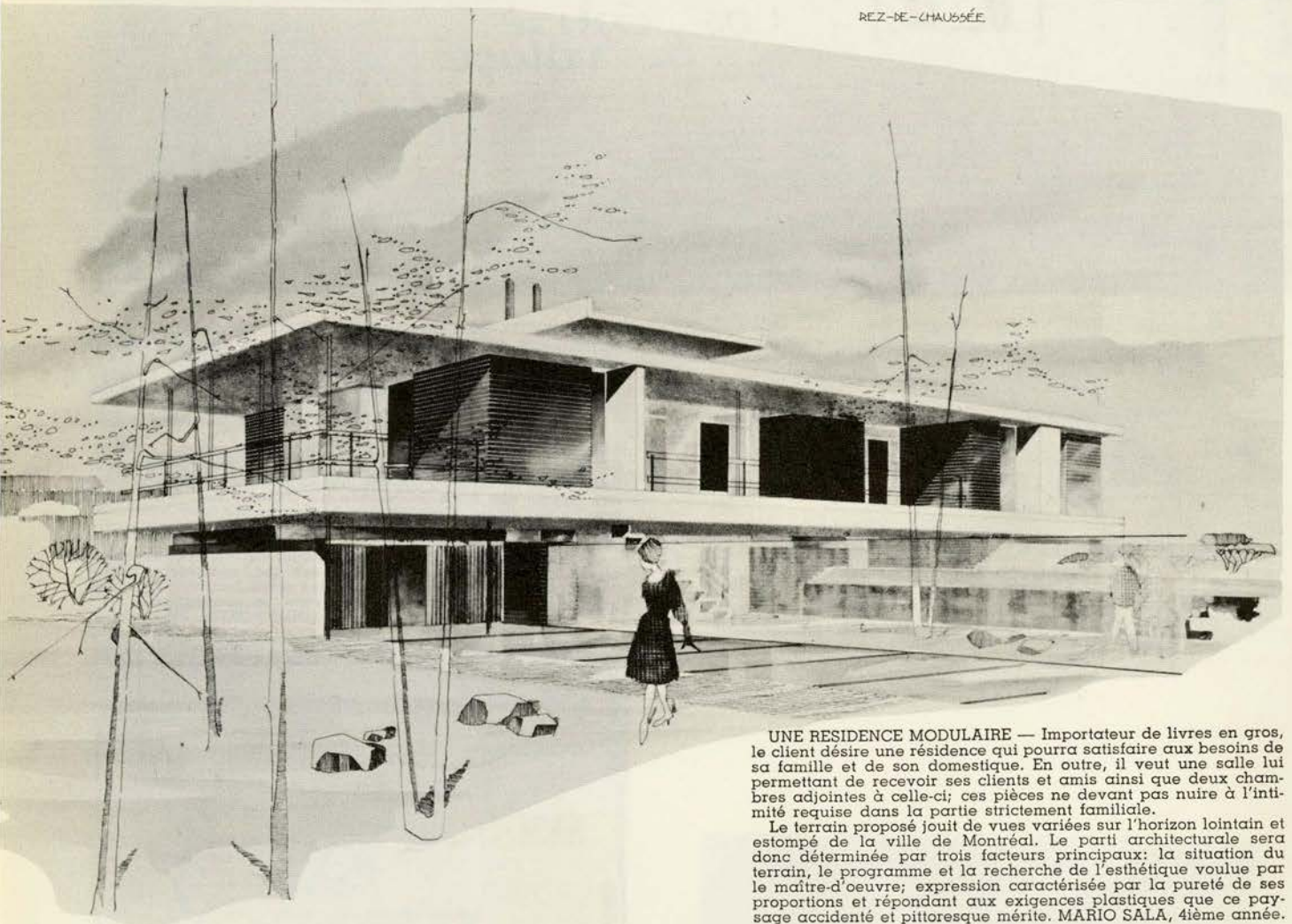




PLAN DU SOUS-SOL.



REZ-DE-CHAUSSEE.



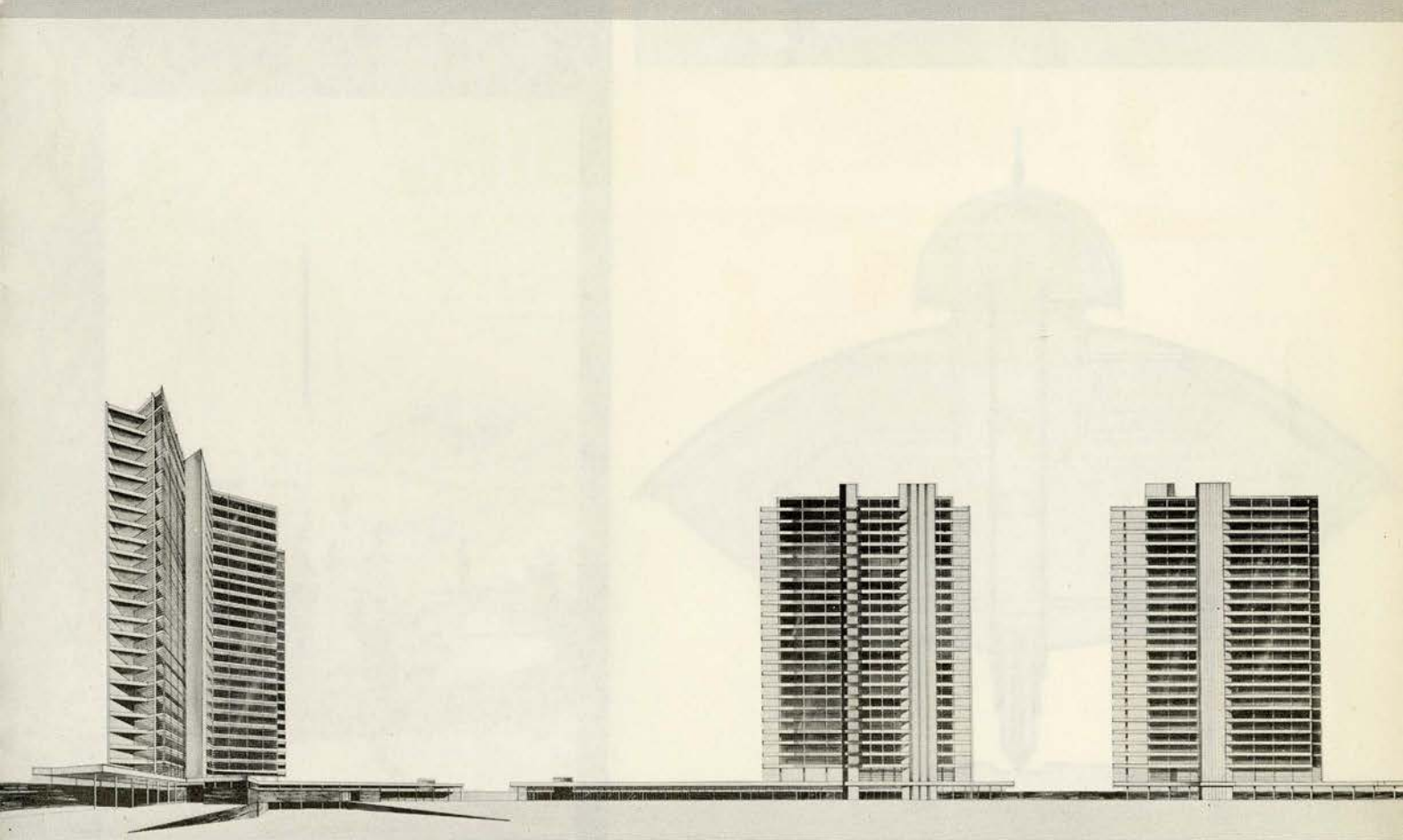
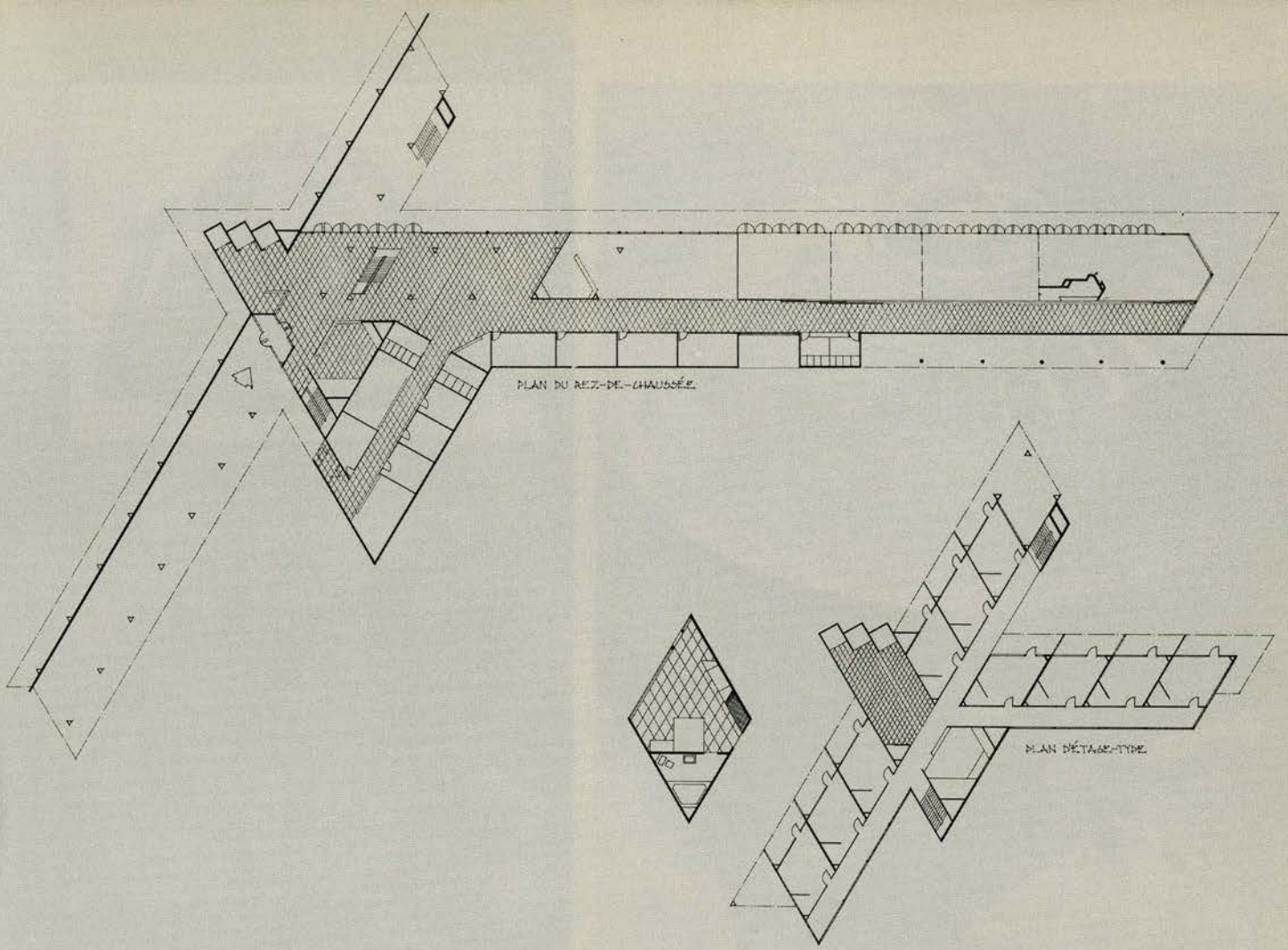
UNE RESIDENCE MODULAIRE — Importateur de livres en gros, le client désire une résidence qui pourra satisfaire aux besoins de sa famille et de son domestique. En outre, il veut une salle lui permettant de recevoir ses clients et amis ainsi que deux chambres adjointes à celle-ci; ces pièces ne devant pas nuire à l'intimité requise dans la partie strictement familiale.

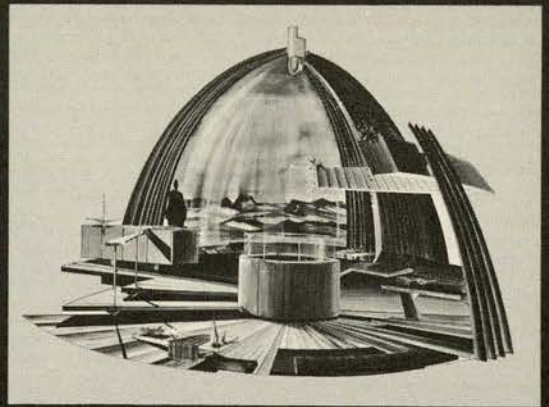
Le terrain proposé jouit de vues variées sur l'horizon lointain et estompé de la ville de Montréal. Le parti architectural sera donc déterminée par trois facteurs principaux: la situation du terrain, le programme et la recherche de l'esthétique voulue par le maître-d'oeuvre; expression caractérisée par la pureté de ses proportions et répondant aux exigences plastiques que ce paysage accidenté et pittoresque mérite. MARIO SALA, 4ième année.

UN HOTEL — Le tourisme connaît un essor de plus en plus grand dans la métropole et sa région grâce, plus particulièrement, à l'extension des facilités d'accès à la ville de Montréal. Il est certain que le pont de l'île des Soeurs aidera à la venue des visiteurs du Sud. C'est sur cette île que le présent hôtel est proposé.

Il comprend tous les services habituels: administration, services communs et d'hôtellerie, services publics, etc. Deux cents chambres doivent être prévues avec un maximum de vingt chambres par étage. Un stationnement pour deux cents voitures doit aussi être prévu.

Du côté esthétique, comme cet édifice sera en avant-plan de la silhouette de Montréal, sa ligne doit être particulièrement étudiée et soignée. HENRI BRILLON, 4ième année

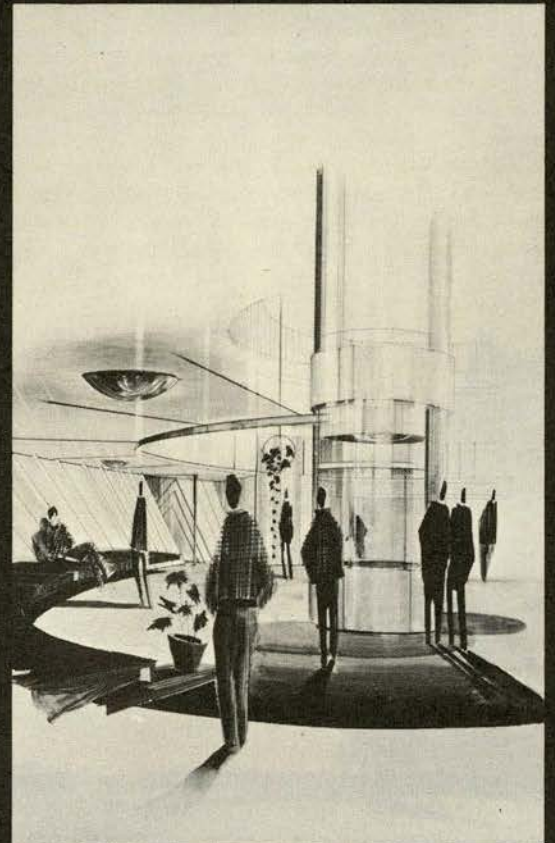
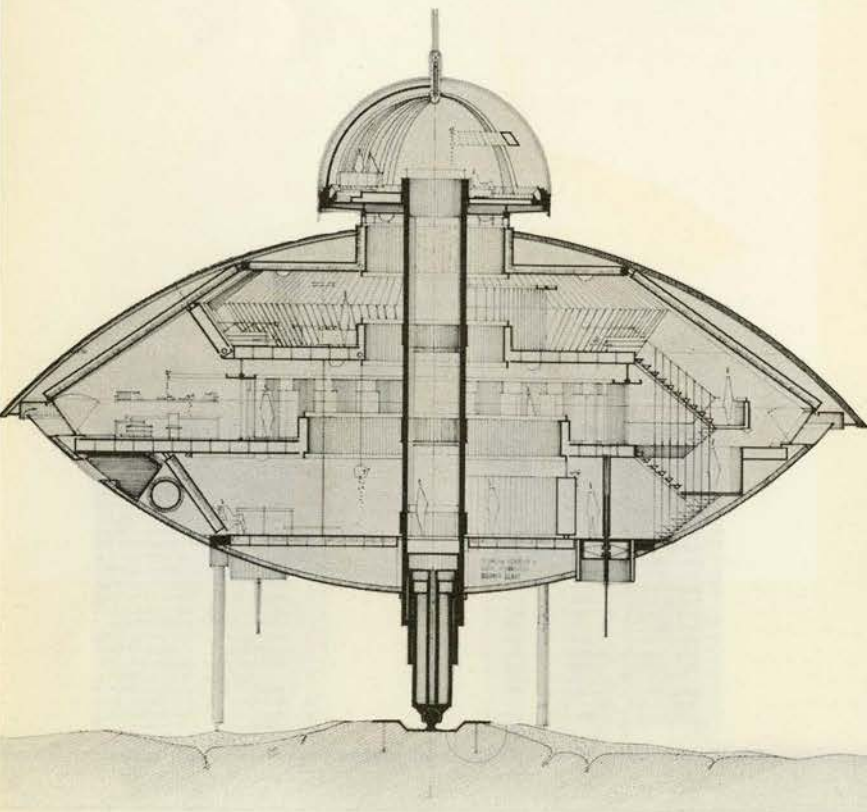




UN CENTRE DE RECHERCHES DANS L'ARCTIQUE

La présente étude comprend une cellule d'habitation pour environ vingt hommes, avec loisirs, services et pièces de repos, un centre de recherches pour étude météorologique, botanique, océanographique, etc. . . . une cellule de chauffage.

Les éléments ont été séparés par mesure de sécurité et d'économie, et soulevés du sol sur un point d'appui unique pour prévenir l'enneigement, faciliter la ventilation et obtenir un éclairage naturel. L'édifice est monté sur un pilier central ancré au roc et maintenu en équilibre par trois tiges d'aluminium munies de ressorts permettant



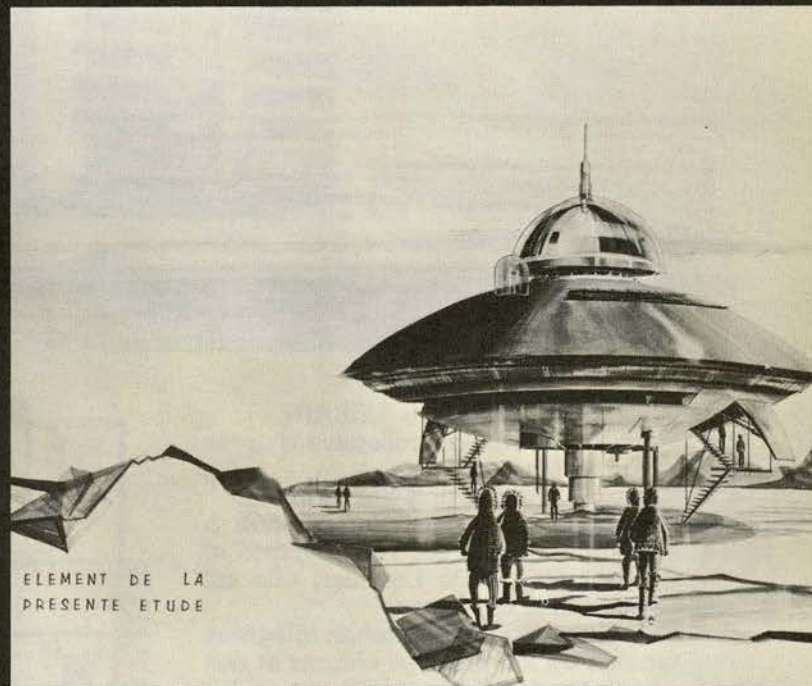
d'absorber l'impact des plus grands vents et de fournir ainsi une flexibilité nécessaire.

Dans le cas de la glace ou du gravier, le pilier repose sur une base flottante de pièces métalliques préfabriquées, d'un diamètre suffisamment grand pour répartir la charge au sol. L'eau nécessaire à l'alimentation des occupants est obtenue de trois façons: par des réservoirs ouverts en périphérie, captant la neige transportée par les vents (cette réserve à elle seule devrait être suffisante); par des réservoirs amovibles que les occupants pourront détacher et remplir; par une pompe permettant l'exploitation d'un lac intérieur pendant la période d'été. Les égouts sont traités d'une façon similaire: des réservoirs amovibles, sous le poids d'une certaine quantité d'eau qui congèlera d'elle-même (le réservoir n'étant pas isolé), tomberont et seront transportés par Weasel, dans une fosse éloignée du campement. Le chauffage se fait électriquement dans tous les édifices et s'alimente par dynamo. Chaque cellule emploie une dynamo d'urgence en cas d'arrêt, afin d'assurer le chauffage et l'éclairage des pièces d'importance. Trois sorties télescopiques assurent la circulation: deux ne servant qu'en cas d'urgence, l'autre d'emploi quotidien.

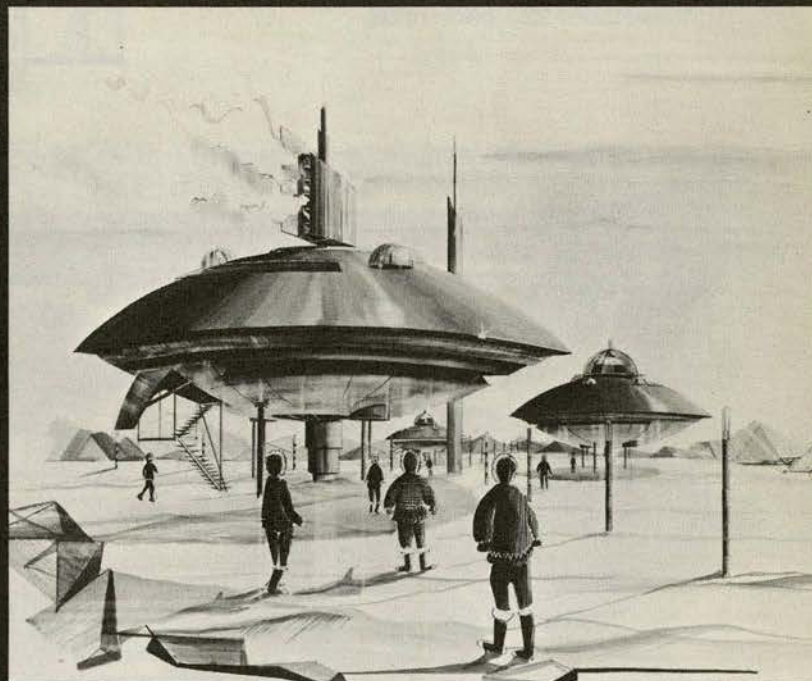
La cellule d'habitation se compose de quatre planchers. Un dôme d'observation avec une double paroi plastique de 24 pieds de diamètre est nervuré en trois parties. Afin de prévenir tout aveuglement par un soleil trop intense, cette pièce possède un second dôme opaque, mobile, permettant aux occupants de régler à leur guise l'éclairage. Le troisième plancher comprend les pièces de loisirs: chambre noire, discothèque, bibliothèque, cinéma. Le deuxième plancher constitue l'étage d'habitation. Il comprend vingt-deux cellules avec, chacune, un laboratoire permettant la recherche individuelle. Le premier plancher est affecté à tous les services: salle à dîner, cuisine, sorties télescopiques, réservoirs, dynamo d'urgence, etc. . . . Un ascenseur et deux escaliers de service forment la circulation verticale.

Les trois unités peuvent être réunies entre elles par un corridor, sous la neige, composé de parties flexibles, qui suivent les dénivellations du sol. Les unités sont recouvertes de fibre de verre et plastique de couleur orangée, de façon à faciliter leur localisation par avion.

Face à ce problème crucial que devient le Grand Nord, en tenant compte des moyens rudimentaires déjà employés, cette thèse n'a pas la prétention d'apporter "La" solution au problème. Elle ne veut que suggérer des idées pouvant permettre de diriger les recherches vers une nouvelle direction, afin d'assurer, dans un avenir rapproché, une habitation polaire permanente et adéquate dans un pays de silence et de vent.—HENRI BRILLON, 5^{ème} année.



PERSPECTIVE D'UNE CELLULE



PERSPECTIVE D'ENSEMBLE



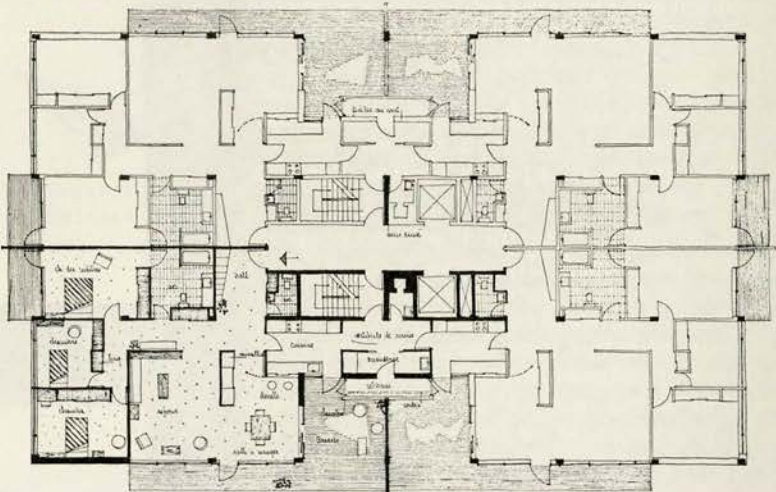
RENOVATION D'UN SECTEUR URBAIN

Ci-dessus, tour d'habitation collective d'après un dessin d'André Mercure.

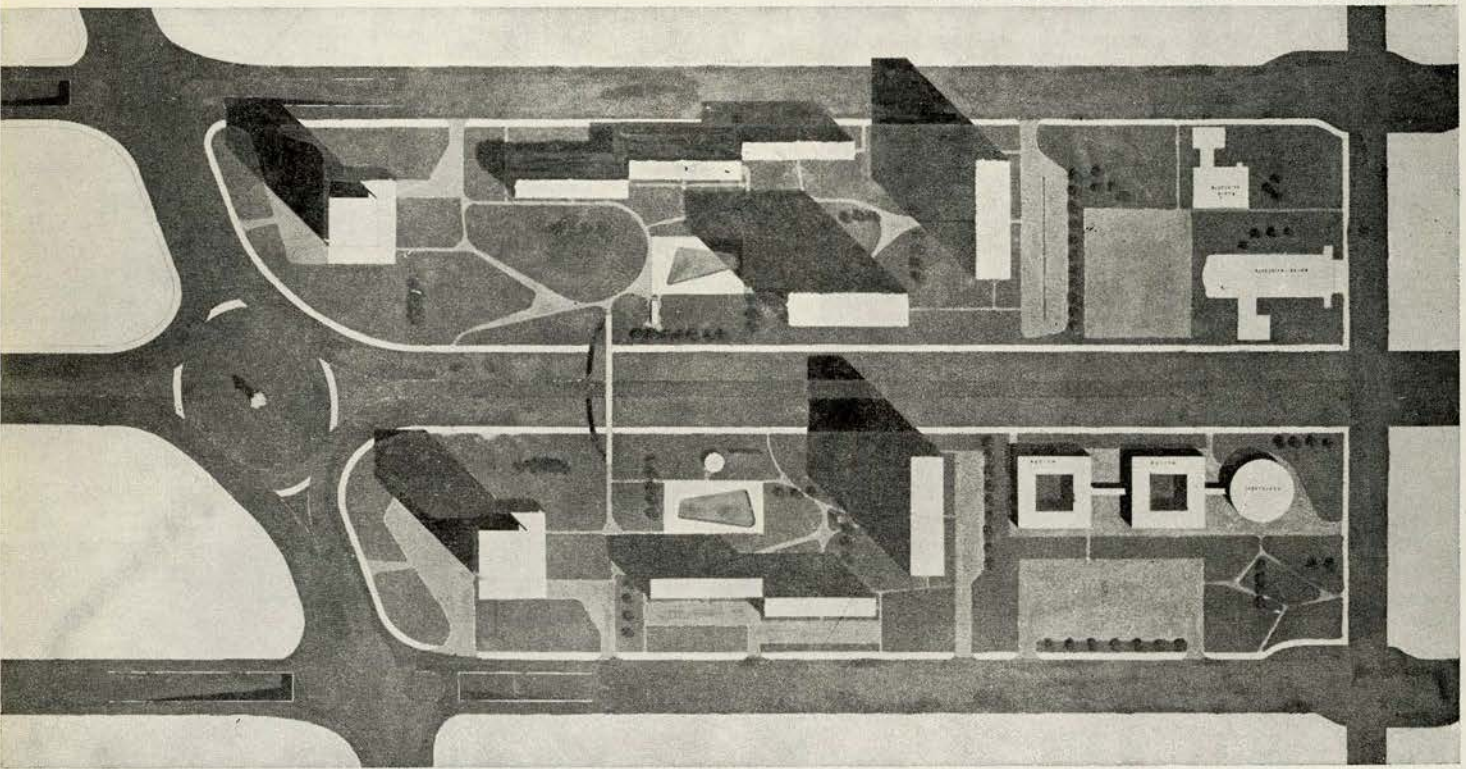
Ci-contre, plan d'étage d'une des tours.

Ci-dessous, étude d'un quadrilatère situé à Montréal et comprise entre les rues Ontario et Sherbrooke, Papineau et De Lorimier; elle est signée Gauthier, Guité et Mercure.

Elle comprend des tours d'habitation intégrées dans des terrains de jeu pour les enfants et des allées de promenade et de repos pour les adultes. Des stationnements pour 50% des appartements sont aussi prévus. Chaque immeuble-tour comprend 60 logements et doit abriter approximativement 220 personnes.



CLICHES - COURTOISIE: ARCHITECTURE - BATIMENT - CONSTRUCTION
 CLICHES - COURTOISIE: ARCHITECTURE - BATIMENT - CONSTRUCTION





UNE JOURNEE COMME LES AUTRES

En elle, point de soumission ni de complaisance: tête haute, elle avait la dignité d'un peuple insoumis. Son vêtement n'était pas de Paris, ni de New-York: espèce de manteau noir sans ligne précise si ce n'était de ce petit peu de fourrure aux manches et au col. Sa coiffure était toute simple et toute naturelle, sans artifice. Le regard droit, les mains bien appuyées, solidement, sur les genoux, elle se tenait là, face à moi, dans cet autobus Saint-Laurent, tour de Babel en mouvement sur la barrière raciale du Montréal cosmopolite.

Pourtant, elle était au supplice. A ses côtés, sa fille: teen-ager modèle, pantalons et vareuse à l'américaine, éblouie par une revue de modes dont elle parcourait, avec l'avidité des longues privations, les pages multicolores, cherchant partout prétexte à dépenses folles dans ce jardin des merveilles étatsuniennes, sans la dignité ni la réserve qui rendent les esclaves supérieurs à leurs maîtres. Sa surexcitation progressive offensait la longue patience du prolétariat insoumis dont elle était issue.

QUANT A LA MERE, ELLE EST ETRANGERE EN SA PROPRE VILLE

A l'avant de l'autobus, le chauffeur empêtré dans son bilinguisme officiel: "Saint-Joseph Boulevard, Mount-Royal" et la kyrielle des traductions bâtarde, qui nous rendent étrangères les choses que nous avions nommées pour en prendre possession.

Son regard se porte sur le carton que j'ai sous le bras: "Hi-Art No. 79". C'est cela, vraiment, un architecte canadien-français? Si j'allais déballer mes cartons et lui montrer ce que je fais? SE RECONNAITRAIT-ELLE? Ou n'allais-je pas plutôt la décourager en lui montrant un autre sous-produit de la civilisation des "tail fins", "T.V.

dinners", et "House & Homes".

Mais que diable! Si je n'ai trouvé, je cherche! N'ai-je pas là, dans ma serviette, "Le Devoir" et "Cité Libre"? . . . qui côtoient "Time" et "Progressive Architecture".

SUIS-JE VRAIMENT SI PAUVRE QUE NOUS N'AYONS MEME PAS LA PAUVRETE A PARTAGER?

"Shèrebrouque, Sherbrook" lance le chauffeur bilingue modèle, et je dois bousculer deux Hongrois, une Polonaise et trois Juifs pour me retrouver sur le trottoir. Je traverse le garage CHAMPLAIN avec son UNION JACK qui claque au vent. Au coin de Clarke, Félix qui me revient à l'intérieur:

*"C'était un Québécois
Qui voulait me célébrer.
Hélas! il avait oublié
De me regarder."*

La réclame des confitures Raymond et puis: Ecole d'Architecture de Montréal. Pourquoi pas MONTREAL SCHOOL OF AMERICAN DESIGN? En montant l'escalier, le frère Untel: "Ce ne sont pas les petites élites recroquevillées sur elles-mêmes qui feront évoluer le peuple canadien-français. CE SONT LES TRAVAILLEURS."

Une grande feuille de calque vierge qui m'attend. Félix qui chante encore:

*"J'ai six vieux lacs à déplacer,
Trois chutes neuves à mettre au lit,
Dix-huit savanes à nettoyer,
Une ville à faire avant la nuit!"*

Pas aussitôt installé à ma table de travail avec une ardeur de néophyte, que la porte s'ouvre. "Barcelo, es-tu pour l'indépendance?" Et nous courons au café parler du Canon d'Outremont et de la clôture de Mont-Royal, fuyant le travail, maladie contre laquelle sont immunisés Nord-Américains.

MICHEL BARCELO

Les Cahiers d'Architecture furent fondés dans le but de présenter aux étudiants de l'EAM un medium d'expression et de recherche ouvert à tous les aspects de notre Art. — Cette revue s'adresse surtout aux architectes et aux amis de l'Architecture.

En voici deux extraits significatifs. Le premier reflète assez les tourments intimes de l'étudiant—architecte canadien-français, le second est une réadaptation d'une lettre datée du 12 décembre, 1961 et adressée à deux ministres du cabinet provincial.

Pour nous, étudiants en architecture, le problème de l'action se situe de façon très particulière puisque l'art difficile que nous tenterons de pratiquer avec honnêteté, amour et conviction, dépasse de sa compréhension les limites d'une contrée ou d'une époque. Reflet de l'homme, il accompagne celui-ci dans le temps et l'espace.

Pourtant, c'est ici au Québec, au sein d'une association professionnelle locale, avec des gens de chez nous que nous livrons les combats de notre métier. Mais un regard interrogateur sur l'état actuel de notre future profession nous laisse perplexes et inquiets.

Nos architectes sont-ils compétents? Sont-ils surchargés de travail pour ne pas s'arrêter à soigner leurs oeuvres? Ou au contraire, sont-ils trop peu nombreux pour se livrer à une chaude émulation sur le plan purement architectural?

Serons-nous comme eux?

Mais la tristesse de nos bâtiments, la précarité de nos habitations n'est-elle imputable qu'aux seuls professionnels de l'architecture?

Il faudrait constater le peu de réceptivité intellectuelle du Québec contemporain. Le canadien-français, si sympathique en certaines qualités humanitaires, est-il assez cultivé pour appeler et désirer l'art comme une nourriture de l'esprit, comme une saine jouissance sensible? Et parmi ces arts l'architecture a-t-elle sa place?

Reflet de civilisation, témoignage concret d'un niveau culturel collectif, l'architecture surgit, magnifiquement pure et belle, en maints pays supposément moins développés que le nôtre, pays où nous envoyons des missionnaires convertir les "païens", mais où nous n'avons pas su voir en revanche la leçon d'humanisme vécu.

Sommes-nous capables, comme le Brésil, le Mexique, la Suède ou la Norvège, de produire de l'architecture comparable à la leur, en beauté plastique, en qualités pratiques?

Avant de prononcer le oui ingénu ou la négation cynique que nous avons parfois l'inavouable intention d'avancer, voyons quelles sont les conditions actuelles d'une architecture au Québec.

Laissons la parole à l'architecte Bland de l'Université McGill et résumons la chronique qu'il publiait il y a quelques années dans "l'Architecture d'aujourd'hui". A propos du canadien moyen, donc aussi du canadien-français, puisqu'il s'identifie souvent à sa contrepartie "canadian", M. Bland soulignait sa complète indifférence à toute question esthétique, ne détestant pas plus ce qui est laid qu'il n'aime ce qui est beau!

De même qu'il choisit une cravate charmée ou une voiture rutilante, son goût se porte sur l'accessoire à la mode plutôt que sur l'harmonie d'une forme ou la pureté d'un style; avec le minimum d'esprit critique, il opte pour ce qui semble solide, à l'épreuve du feu, et rentable.

Parcourons les quartiers neufs de nos villes, revoyons aussi nos villages enlaidis

par le désordre complet! Constatons la mainmise complète d'une évaluation essentiellement impersonnelle et commerciale.

Le bâtiment public, édifice d'affaires ou autres, en maints pays l'objet d'une étude poussée à cause de son caractère civique et monumental, est rarement chez nous autre chose qu'une masse quelconque où se manifestent laisser-aller et pauvreté d'esprit. Sécheresse, fausse pompe, faux luxe des plaques de marbre; manifestations de vacuité d'une société orientée vers le seul profit pécunier.

L'anémie a depuis longtemps gagné le domaine du sacré où l'artifice tient lieu de vérité dans le temple de Dieu, Vérité lui-même! Et vivent les tons pastels édulcorés, les soufflages "Dom Belloi", les céramiques gâteuses, le "style canadien contemporain"!

Comme elle nous manque cette belle vérité forte de nos monuments de Nouvelle-France!

Timidité de l'expression, impersonnalité, absence de recherche forment le manège de nos grandes et petites faiblesses. L'architecte a beau jeu, direz-vous, puisque tout reste à faire.

Justement, non! Car il demeure, comme l'écrivait M. Bland, son propre critique en l'absence d'une éducation populaire. La complaisance, le narcissisme et les petites lâchetés deviennent alors trop faciles pour que la nature humaine ne soit tentée d'y céder avec abandon!

Qui plus est, bien des domaines lui sont fermés grâce à notre prétendue vocation de vaincus, tandis que d'autres lui échappent parce que les lois n'entérinent pas sa compétence et son autorité en la matière. L'architecte canadien-français se voit généralement écarté, sur son sol natal, chez lui, des ouvertures faites dans le commerce des autres et l'industrie des autres!

Ce qui ne tombe pas aux mains des étrangers est chez nous l'affaire des entrepreneurs, spéculateurs et bricoleurs de toutes sortes. Or quelles connaissances possèdent-ils de la composition, des problèmes de fonctionnement, des besoins réels de notre société? Retournons voir Ahuntsic ou quelque autre banlieue, la réponse est là, outre-cuidante, choquante, désagréable, . . . mais inaperçue, ignorée.

Il faut dire aussi que restent de gros bourgeois dont le portefeuille bien garni assure aux architectes quelques réalisations du genre "résidence de médecin" ou "camp de chasse pour riche industriel".

Mais le domicile du petit salarié est aussi un très grand et très beau problème d'architecture, celui d'une majorité sociale en même temps que le plus mal solutionné! Pas vu, pas connu!

Heureusement que l'Eglise catholique soit si prospère, le gouvernement provincial

si paternel et les commissions scolaires si nombreuses.

Dans ce petit univers pas toujours doré, car il joue parfois au patronage politique, l'architecte va de projet en projet, tantôt complimenté par des gens qui ne savent rien de son métier, très souvent ignoré, inconnu du public. Il trime dur pour survivre aux dix premières années de sa vie professionnelle. Seul, l'oeil aux aguets, il cherche le petit contrat qui fera passer l'hiver, il surveille la coûteuse administration de son petit bureau, perd des heures à discuter avec des clients obstinés, méfiants, jaloux, et le soir, exténué, rédige ses devis.

Quand pourra-t-il se livrer à la recherche sans compromettre sa sécurité? Quand jouira-t-il du recueillement où seulement jaillit la pensée libre et plus profonde d'un homme dégagé des contingences.

Pour en arriver là, il lui faut s'épauler sur la mentalité publique, sur ses futurs clients, et ses confrères! Question d'éducation!

L'architecte peut-il souvent se dépasser dans les conditions actuelles? Nous songeons ici à l'émulation qu'engendrerait une compétition située non plus au niveau du gagne-pain, mais sur le plan beaucoup plus essentiel de la qualité artistique et technique des travaux d'architecte.

On verrait l'architecte restaurer sa profession, dont le prestige et la reconnaissance publique diminuent depuis qu'une foule de gens se réclament de la même compétence que lui. Au lieu de se cantonner dans la protestation et la chasse aux architectes étrangers pratiquant ici, il aurait enfin l'occasion de démontrer son savoir-faire.

A cette fin, nous réclamons comme urgente l'institution officielle des concours d'architecture par le gouvernement provincial, notre seul gouvernement canadien français capable de prendre la direction des réformes nécessaires à la survie et au rayonnement de la nation canadienne française.

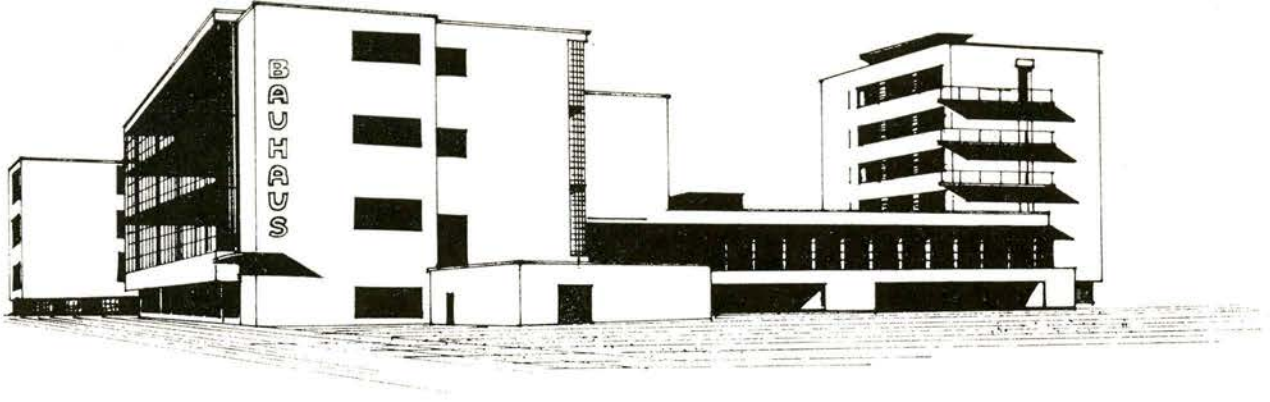
Ces concours d'architecture pourraient comprendre entre autres catégories, les édifices provinciaux qu'un budget suffisant aurait permis de construire par concours.

Puis les édifices privés dont les mieux réussis mériteraient à leurs auteurs un prix provincial d'encouragement à l'architecture.

Enfin, les habitations collectives ou individuelles dont l'état provincial encouragerait l'édification sur concours entre les architectes canadiens français.

Les étudiants en architecture, croient fermement qu'un sain climat d'émulation naîtrait de cette initiative, qu'il s'ensuivrait un intérêt accru chez le public, pour la chose architecturale et qu'une culture canadienne française aurait d'autant plus de chances de germer un jour.

L'Association des étudiants en Architecture
par: HUGHES B. DESROSIERS, 3^{ème} année.



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Walter Gropius

**The address of Dr Gropius
upon receiving the degree
of Doctor of Humane Letters
from Columbia University.**

TO RECEIVE AN HONORARY DEGREE from this great University is indeed a high honor. I welcome it as a token that my contribution to the cause of architecture and education is recognized; I accept it with my deeply felt thanks.

Tonight I should like to talk about the ambiguous position of the architect in his relation to society and about his double role as a citizen and a professional. I want to point out why he, armed to the teeth with technical intricacies, design theories, and philosophical arguments, so rarely succeeds in pulling his weight in the realm of public domain where decisions are made which vitally affect his interests. Since popular opinion holds him responsible for the condition our cities, towns, and our countryside have gotten into, I would like to examine where exactly he stands in this respect and which avenues of action are open to him to broaden his influence.

I would like to add also my reactions to certain "rumbles" in the architectural profession which have interested me as much as they have baffled me. Since architects possess in general a sensitive, built-in thermometer which registers the crises and doubts, enthusiasms and fancies of their contemporaries—we should listen to the notes of misgiving, warning or satisfaction emerging from their ranks.

All reports made lately by architects and educators on the state of architecture in the sixties were dominated by two words: confusion and chaos. It seems to them that the inherent tendencies of an architecture of the twentieth century, as they were born fifty years or so ago and appeared then as a deeply felt, indivisible entity to their initiators, have been exploded into so many fractions that it becomes difficult to draw them together to coherence again. Technical innovations, first greeted as delightful new means-to-an-end, were seized separately and set against each other as ends in themselves; personal methods of approach were hardened into hostile dogmas; a new awareness of our relationship to the past was distorted into a revivalist spirit; our financial affluence was mistaken for a free ticket into social irresponsibility and art-for-art's-sake mentality; our young people felt bewildered rather than inspired by the wealth of means at their disposal. They were either trying to head for safe corners with limited objectives or succumbing to a frivolous application of changing patterns of "styling" or "mood" architecture. In short, we are supposed to have lost direction, confidence, reverence; everything goes. When trying to take a stand, I would like first of all to extricate myself from the verbal jungle we have gotten ourselves into. What actually is chaos? One of Webster's definitions is: "A state of things in which chance is supreme."

Well, those of us who welcome "chaoticism" may take comfort from the fact that the ancient Greeks considered Chaos to be the oldest God of all times.

Personally I do not feel too fearful of this God, who returns periodically to stir up things on earth, because never in my life-span has the architectural mission looked any less dangerous, less difficult and chaotic to me than it does now. It is true, in the beginning of the struggle the battle lines were drawn more clearly, but the fight was essentially the same: the coming to terms of a romantically oriented, jealously individualized architectural profession with the realities of the twentieth century. It seems to me that the spectre of confusion is haunting mostly those who, for a short while, thought they had won all the battles and found all the answers; those who have come by their inheritance too easily, who have forgotten the great goals set at the beginning and now find their equilibrium upset by new developments in the social and technical field.

But let me examine the meaning of the word "chaos" more closely in all its aspects.

With our tremendously accelerated communication system, it has become quite easy today for people in all corners of the world to reiterate the most advanced ideas verbally while being actually unable to catch up with themselves in this respect emotionally. Therefore we see all around us an astonishing discrepancy between thought and action. Our verbal glibness often obscures the real obstacles in our path which cannot be sidestepped by brilliant and diverting oratory. It also creates too rosy an impression of the actual influence architects are permitted to take in the shaping of our larger living spaces. Whether a conscientious and dedicated architect of today resolves his personal design problem in this or that way is, unfortunately, less decisive for the general looks of our surroundings than we are fond of believing. His contribution is simply swallowed up in the featureless growth that covers the acres of our expanding cities. In the last 20 years the U. S. has seen the emergence of an unusual number of gifted architects, who have managed to spread interest and admiration among designers in other countries. But when the curious arrived at our shores to see the new creations for themselves they were overwhelmed by the increase in general ugliness that hit their eyes before they had even a chance to find the objects of their interest in the vast, amorphous display. It is here where chaos reigns supreme; it is the absence of organic coherence in the total picture which causes the disappointment, and not the dilemma between different individual approaches to design.

HAVING BEEN IN THE CROSS-CURRENTS of the architectural development for over half a century now, I find that an architect who wants to help mould the evolutionary forces of his time instead of letting himself be overcome by them, must distinguish between two sets of components which are apt to influence and direct his work. The first one consists of the human trends which gradually move a society towards new patterns of living; the second consists of the contemporary technical means and the individual choices of form expression which help these trends to take shape. It is imperative never to lose sight of the first while getting embroiled with the second because the architect is otherwise in danger of losing himself in the design of technical stunts or in personal mannerisms.

The potentialities of the new technical means fascinated my generation just as much as it does the architect of today, but at the beginning of our movement stood an idea, not an obsession with specific forms and techniques. The activities of life itself were under scrutiny. How to dwell, how to work, move, relax, how to create a life-giving environment for our changed society, this was what occupied our minds. Of course we went about the realization of such aims in very different ways, but I do not see why this diversity should by itself cause confusion, except to those who naively believe that there is always only one perfect answer to a problem. There are of course many technical and form approaches to the same task, and any one of them may be successful if they are well suited to the purpose of the building, to the temperament of the architect, and if they are used with discrimination in their given environment.

THE GREAT TECHNICAL INVENTIONS and social developments of the last hundred years, which set off such a stream of changes in our way of living and producing, gradually established new habits, new standards, new preferences, which have come to represent the unifying trends in today's general picture. Beginning with the discovery of the Bessemer steel and of Monier's reinforced concrete, which freed architecture of the supporting solid wall and presented it with virtually limitless possibilities for flexible planning, there has been a steady movement toward a less rigid, less encumbered style of living and building. The skeleton structures enabled us to introduce the large window opening and the marvel of the glass curtain wall—today misused and therefore discredited—which transformed the rigid, compartmental character of buildings into a transparent "fluid" one. This, in turn, gave birth to a totally new dynamic indoor-outdoor relationship which has enriched and stimulated architectural design beyond measure. Pressure for even more mobility and flexibility encouraged the evolution of industrial prefabrication methods which have, by now, taken over a large part of our building production, promising ever increasing precision and simplification of the building process for the future. The common characteristics which clearly emerged from all these innovations are:

*An increase in flexibility and mobility;
A new indoor-outdoor relationship;
A bolder and lighter, less earthbound architectural appearance.*

These are the constituent elements of today's architectural imagery and an architect can disregard them only at his peril. If related to a background of meaningful planning, they would reveal diversity, not chaos.

I cannot accept, therefore, the verdict of the critics that the architectural profession, as such, is to blame for the disjointed pattern of our cities and for the formless urban sprawl that creeps over our countryside. As we well know, the architect or planner has almost never received a mandate from the people to draw up the best possible framework for a desirable way of life. All he usually gets is an individual commission for a limited objective from a client who wants to make his bid for a place in the sun. It is the people as a whole who have stopped thinking of what would constitute a better frame of life for them and who have, instead, learned to sell themselves short to a system of rapid turnover and minor creature comforts. It

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is the lack of a distinct and compelling goal rather than bad intentions of individuals that so often ruins attempts of a more comprehensive character for general planning, and sacrifices them bit by bit to the conventional quick profit motive.

And this is, of course, where we all come in. In our role as citizens we all share in the general unwillingness to live up to our best potential, in the lack of dedication to our acknowledged principles, in our lack of discipline towards the lures of complacency and of material abundance.

JULIAN HUXLEY, the eminent biologist, warned recently that "sooner rather than later we must get away from a system based on artificially increasing the number of human wants and set about constructing one aimed at the qualitative satisfaction of real human needs, spiritual as well as material and physiological. This means abandoning the pernicious habit of evaluating every human project solely in terms of its utility . . ."

Our cunning sales psychology, in its unscrupulous misuse of our language, has brought about such a distortion of truth, such a dissolution of decency and morality, not to speak of its planned wastefulness, that it is high time for the citizen to take to the barricades against this massive onslaught against the unwary. Naturally, the all pervading sales mentality has also had its detrimental effect on the architecture of our time. Relentless advertising pressure for everchanging, sensational design has discouraged any tendency to create a visually integrated environment because it tacitly expects the designer to be different at all cost for competition's sake. The effect is disruptive and quite contrary to the desirable diversity of design which would result naturally from the work of different personalities who are aware of their obligations to environmental integration. Here again we see that the forces which cause confusion and chaos originate from the excessive infatuation with the rewards of salesmanship which dominates modern life and which can influence only in the role of human beings and democratic citizens, but hardly as professionals.

I was somewhat startled, therefore, by a sentence in the recent A.I.A. Report on the state of the profession: "The total environment produced by architecture in the next forty years can become greater than the Golden Age of Greece, surpass the glories of Rome, and outshine the magnificence of Renaissance. This is possible provided the architect assumes again his historic role as Masterbuilder." How does this vision compare to the realities of the situation at hand? Don't we need to remember that such highpoints in history came about only when the skill and artistic inspiration of the architect and the artist were carried into action by the clear and unquestioned authority of those who felt themselves to be the rightful representatives of a whole people? The Greek pinnacle was reached by the courage and foresight of the leader Pericles who pulled together all financial and artistic resources of the whole nation and its allies, including the military budget, to force the erection of the Parthenon. The Romans, spreading this Mediterranean heritage over the whole of the Roman empire, set in their buildings monuments to the centralized power of their leaders. The Renaissance, after giving birth to fierce

political rivalry, harnessed all secular and clerical powers, all craftsmen and artists, for the glorification of the competing principalities. Wherever we look in history we find that the rulers took no chances with the individual tastes and inclinations of the populace, but imposed strict patterns of behaviour as well as an hierarchy of religious, civic, and economic standards which dominated architectural and artistic expression. In Japan this even covered the proportionate size of all domestic architecture which was strictly regulated according to birth, rank, and occupation of the owner.

All these systems have produced magnificent results in one period or another, but they have no roots any more in our modern world. Even if some authoritative remnants are still around in the form of large corporations and institutions, this cannot conceal the fact that the architect and artist of the 20th century has to face a completely new client and patron: the average citizen or his representative, whose stature, opinion, and influence is uncertain and difficult to define compared to the authoritarian lord of the past. As we have seen, this citizen, as of now, is not at all in the habit of extending his vision beyond his immediate business concerns, because we have neglected to educate him for his role of cultural arbiter. He repays this neglect by running loose, only here and there restricted by social ambitions from recklessly following his commercial interests. Though he is quite aware of the restrictions the law puts on his building activities, he is almost totally unaware of his potentialities to contribute something positive, socially and culturally, to the actual development, change, and improvement of his environment. So far we are only trying to prevent him by zoning laws from committing the worst abuse, but I feel that unless we take the positive step of trying to mould him into the man of responsibility he must become, there will be little chance for the "masterbuilder" ever to assume his comprehensive historic role as creator of cities again.

OUR MODERN SOCIETY is still on trial where cultural integration is concerned. This certainly cannot be accomplished by handing out authoritative beauty formulas to an uncomprehending public, untrained to see, to perceive, to discriminate. A society such as ours, which has conferred equal privileges on everybody, will have to acknowledge its duty to activate the general responsiveness to spiritual and aesthetic values, to intensify the development of everybody's imaginative faculties. Only this can create the basis from which eventually the creative act of the artist can rise, not as an isolated phenomenon, ignored and rejected by the crowd, but firmly embedded in a network of public response and understanding. The only active influence which our society can take towards such a goal would be to see to it that our educational system for the next generation will develop in each child, from the beginning, a perceptive awareness which intensifies his sense of form. Seeing more, he will comprehend more of what he sees, and will learn to understand the positive and negative factors which influence the environment he finds himself in. Our present methods of education which put a premium on accumulation of knowledge, have rarely reached out to include a training in creative habits of observing, seeing and shaping our surroundings. The apathy we meet in the adult citizen, who entertains only vague notions of wishing to get away

from it all, can certainly be traced to this early failure of arousing his active interest in the improvement of his living area. Children should be introduced right from the start to the potentialities of their environment, to the physical and psychological laws that govern the visual world, and to the supreme enjoyment that comes from participating in the creative process of giving form to one's living space. Such experience, if continued in depth throughout the whole of the educational cycle, will never be forgotten and will prepare the adult to continue taking an informed interest in what happens around him. Recent research at the University of Chicago has shown that "the high I. Q. children seek out the safety and security of the 'known,' while the highly creative children seem to enjoy the risk and uncertainty of the 'unknown.'" We should strengthen this creative spirit, which is essentially one of nonconformist independent search. We must instill respect for it and create response to it on the broadest level, otherwise the common man stays below his potential and the uncommon man burns up his fireworks in isolation.

My concern with the problem of drawing out the potential artist and of providing him with a stimulating educational climate and a chance to acquire a perfect technique prompted me over forty years ago to create the Bauhaus School of Design. In opposition to the then prevailing trend of bringing up a student of design on the subjective recipes of his master, we tried to put him on a solid foundation by giving him objective principles of universal validity, derived from the laws of nature and the psychology of man. From this basis he was expected to develop his own individual design approach, independent of the personal one of his teacher. This novel method of education in design has been widely misunderstood and misinterpreted. The present generation is inclined to think of it as a rigid stylistic dogma of yesterday whose usefulness has come to an end, because its ideological and technical premises are now outdated. This view confuses a method of approach with the practical results obtained by it at a particular period of its application. The Bauhaus was not concerned with the formulation of timebound, stylistic concepts, and its technical methods were not ends in themselves. It wanted to show how a multitude of individuals, willing to work concertedly but without losing their identity, could evolve a kinship of expression in their response to the challenges of the day. It wanted to give a basic demonstration on how to maintain unity in diversity, and it did this with the materials, techniques and form concepts germane to its time. It is its method of approach that was revolutionary, and I have not found yet any new system of education for design which puts the Bauhaus idea out of course. In fact, the present disenchantment with the doubtful results obtained from simply imitating highly personal design methods of this or that master without adding to their substance, should give renewed emphasis to its principles.

IT WOULD BE MOST DESIRABLE if the initial work done by the Bauhaus were continued and expanded so that we would be able to draw on an ever increasing common fund of objective knowledge, teachable to all age groups, and furnishing the much needed vocabulary with which individuals are free to compose their personal design poetry. If the capacity to focus and crystallize the tendencies of a

period becomes dim, as it has in our time, the necessity of intensifying our efforts toward coherence becomes ever more important. There are some vital centres in this country where such work is pursued with dedication, but their influence is still limited, and it is hard to find creative architects and artists who want to take on teaching positions besides their other work because public opinion regards teaching as a mere backwater compared to the excitement and rewards of practical work. That the two must be combined if a healthy climate for the growing generation is to evolve remains an applauded theory rather than an actual accomplishment.

I REMEMBER AN EXPERIENCE I had myself years ago when, on the occasion of my 70th birthday, "Time" magazine commented on my career. After coming to this country, they said, I had been "content to teach only," as if this were, in itself, a minor occupation as compared to that of a practicing architect. Apart from the fact that the paper was misinformed—I had never given up my practice—it brought home to me again the realization that the profession of the teacher is looked upon in this country as a kind of refuge for those visionaries who cannot hold their own in the world of action and reality. Though admittedly there has been a shift in this view lately, it is still much too firmly established to become uprooted overnight. It remains a tremendous handicap for those who realize the importance of combining practice and teaching and want to make their contribution in both fields.

What, now, can be done by the individual practicing architect to promote a greater measure of cooperation between those groups who contribute to the development of our visible world? In spite of our partiality to "Togetherness" this fashionable trend has accomplished little in our field since it lacks a distinct purpose, a discipline, a working method of its own. All these must be found before we get more and more lost to each other.

I think we all agree that a relatedness of expression and a consolidation of trends cannot be consciously organized in a democracy, but springs from spontaneous group consciousness, from collective intuition which brings our pragmatic requests and our spiritual desires into interplay. I have tried, since a long time, therefore, to give more incentive to such a state of mind by developing a spirit of voluntary teamwork among groups of architects. But my idea has become almost suspect since so many of my colleagues are still wedded to the 19th century idea that individual genius can only work in splendid isolation. Just as our profession 50 years ago closed their eyes to the fact that the machine had irrefutably entered the building process, so now it is trying to cling to the conception of the architect as a self-sufficient, independent operator, who, with the help of a good staff and competent engineers, can solve any problem, and keep his artistic integrity intact. This, in my view, is an isolationist attitude which will be unable to stem the tide of uncontrolled disorder engulfing our living spaces. It runs counter to the concept of Total Architecture which is concerned with the whole of our environmental development and demands collaboration on the broadest basis. Our present casual way of solving problems of collaboration on large projects is simply to throw a few prominent architects together in the hope that five people will automatically

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produce more beauty than one. The result, as often as not, becomes an unrelated assemblage of individual architectural ideas, not an integrated whole of new and enriched value. It is obvious that we have to learn new and better ways of collaboration.

In my experience these call first of all for an unprejudiced state of mind and for the firm belief that common thought and action is a precondition for cultural growth. Starting on this basis, we must strive to acquire the methods, the vocabulary, the habits of collaboration with which most architects are unfamiliar. This is not easy to accomplish. It is one thing to condition an individual for cooperation by making him conform; it is another, altogether, to make him keep his identity within a group of equals while he is trying to find common ground with them. It is imperative, though, that we develop such a technique of collaboration to a high degree of refinement since it is our guaranty for the protection of the individual against becoming a mere number and, at the same time, for the development of related expression rather than of pretentious individualism.

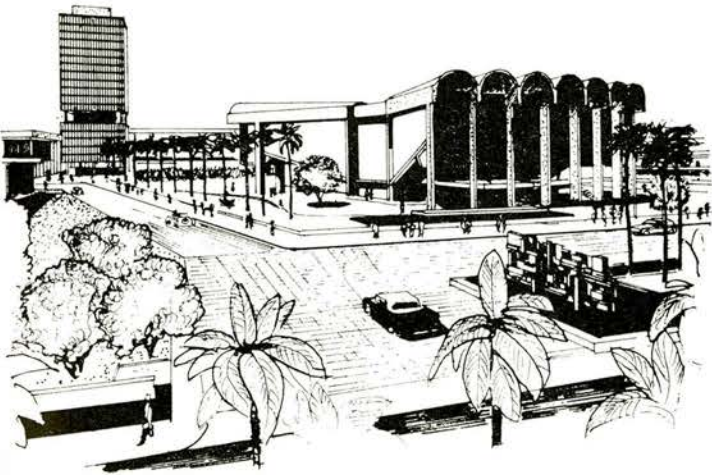
THERE CAN BE NO DOUBT, of course, that the creative spark originates always with the individual, but while he works in close cooperation with others and is exposed to their stimulating and challenging critique, his own work matures more rapidly and never loses touch with the broader aspects which unite a team in a common effort.

Communication from person to person is at an all time low today in spite of, or because of, our tremendous technical means of communication, and most individuals are driven into shallow superficiality in all their relations with other people, including their own friends. But just as the airplane is no substitute for our legs, so personal contact between people of like interests cannot be replaced by the vast output of professional literature and information service because individual interpretation and exchange is still essential for our functioning as human beings. Our overextended receptive faculties need a respite so that greater concentration and intensification can take place, and I feel that a well-balanced team can help achieve just that. As we cannot inform ourselves simultaneously in all directions, a member of a team benefits from the different interests and attitudes of the other members during their collaborative meetings. The technical, social, and economic

data, gathered individually and then presented to the others, reaches them already humanized by personal interpretation, and since all members of a team are apt to add their own different reactions, the new information is more easily seen in its proper perspective and its potential value. For the effectiveness of this kind of intimate teamwork, two preconditions are paramount: voluntariness, based on mutual respect and liking, and exercise of individual leadership and responsibility within the group. Without the first, collaboration is mere expediency; without the last it loses artistic integrity. To safeguard design-coherence and impact, the right of making final decisions must therefore be left to the one member who happens to be in charge of a specific job, even though he has previously received support and criticism from other members.

Such principles of teamwork are easier explained than carried into practice because we all still arrive on the scene with our old habits of trying to beat the other fellow to it. But I believe that a group of architects willing to give collaboration a chance will be rewarded by seeing their effectiveness strengthened and their influence on public opinion broadened. All teams so organized, I trust, will eventually act as ferments in our drive for cultural integration.

Considering the reservoir of rich talent and the wealth of technical and financial resources available today, it would seem that this generation holds all the aces in the age-old game of creating architectural form symbols for the ideas by which a society lives. Only a magic catalyst seems to be needed to combine these forces and free them from isolation. I personally see this catalyst in the power of education; education to raise the expectations and demands a people make on their own form of living, education to waken and sharpen their talent capacities for creation and for cooperation. Creativity of the makers needs the response of all the users. I am convinced that a surprising amount of individual whimsey, yes even aberration and downright ugliness, could be tolerated without causing serious harm if only the grand total design, the image a society should have of itself, would emerge clearly and unequivocally. What we admire in the achievements of city builders of the past is the fact that their work reveals so clearly the ultimate destination to which each individual feature was put as an organic part of the whole area. This was what made the city perform its functions well and gave the people a stimulating background for all their activities. How else can the marvel of the Piazza San Marco, this arch example of perfection, be explained? Not the work of a single master like the Piazza Saint Peter, we find, instead, that over a long period of growth a perfect balance was developed between the contributions of a number of architects using many different materials and methods. They achieved this miracle because they never violated the main purpose of the general plan, yet never forced uniformity of design. San Marco is an ideal illustration to my credo "unity in diversity", to the development of which, in our time, I can only hope to have made my personal contribution during a long life of search and discovery.



Left: *The University of Baghdad, 1961.*

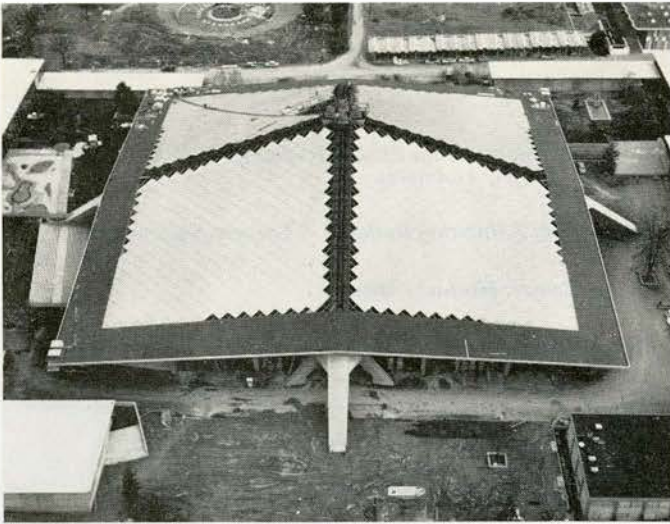
Assembly Preview

IN A PREVIOUS MAILING members will have received information and application material covering the several Post-Assembly Tours which have been arranged by the AIBC Host Committee. Considering the usual limitations of time and budget, it seems likely that most members will be attracted to the idea of a short trip to Seattle and the Century '21 Exposition. This tour therefore has been arranged to leave Vancouver on Sunday, June 3 and to return the following Tuesday, allowing about 48 hours in Seattle. For those interested in the Mexico trip and return direct to Eastern Canada, it will be possible to include a visit to Century '21 and thence to Mexico City, leaving Vancouver Tuesday evening June 5. For the many Easterners planning to attend the Annual Assembly, the following offers a glimpse of what may be seen at the 1962 Seattle World's Fair — Century '21 — April 21 to October 21, 1962.



In preparing this capsule view of the Exposition from the material generously supplied to the writer by Mr Paul Thiry, FAIA, of Seattle, Primary Architect for the Fair, it is difficult to avoid the superlatives liberally scattered throughout the publicity literature. For there is much about this event which is worthy of such adjectives. One of the noteworthy aspects of this undertaking — and it is indeed an enormous one — is that architects and architecture have had a truly significant role in the planning and execution of the Exposition. From the initial inception of the Exposition in 1957, which set up a Design Advisory Board including four prominent Seattle architects (which in turn named Paul Thiry as Primary Architect) to the later awarding of commissions to other architects, landscape architects and designers for major parts of the development, the best in architecture, landscape, planning and exhibit design seems to have been the lofty aim of the authorities responsible for organizing and financing the Fair.

Century '21 Exposition, Seattle



Above and Right: Coliseum 21. The "world of the space age" theme building built to house exhibits showing how man will work, live and play in the year 2,000.

Left: A view from the Federal Science Building of the Space Needle designed by John Graham & Co., Architects and Engineers.

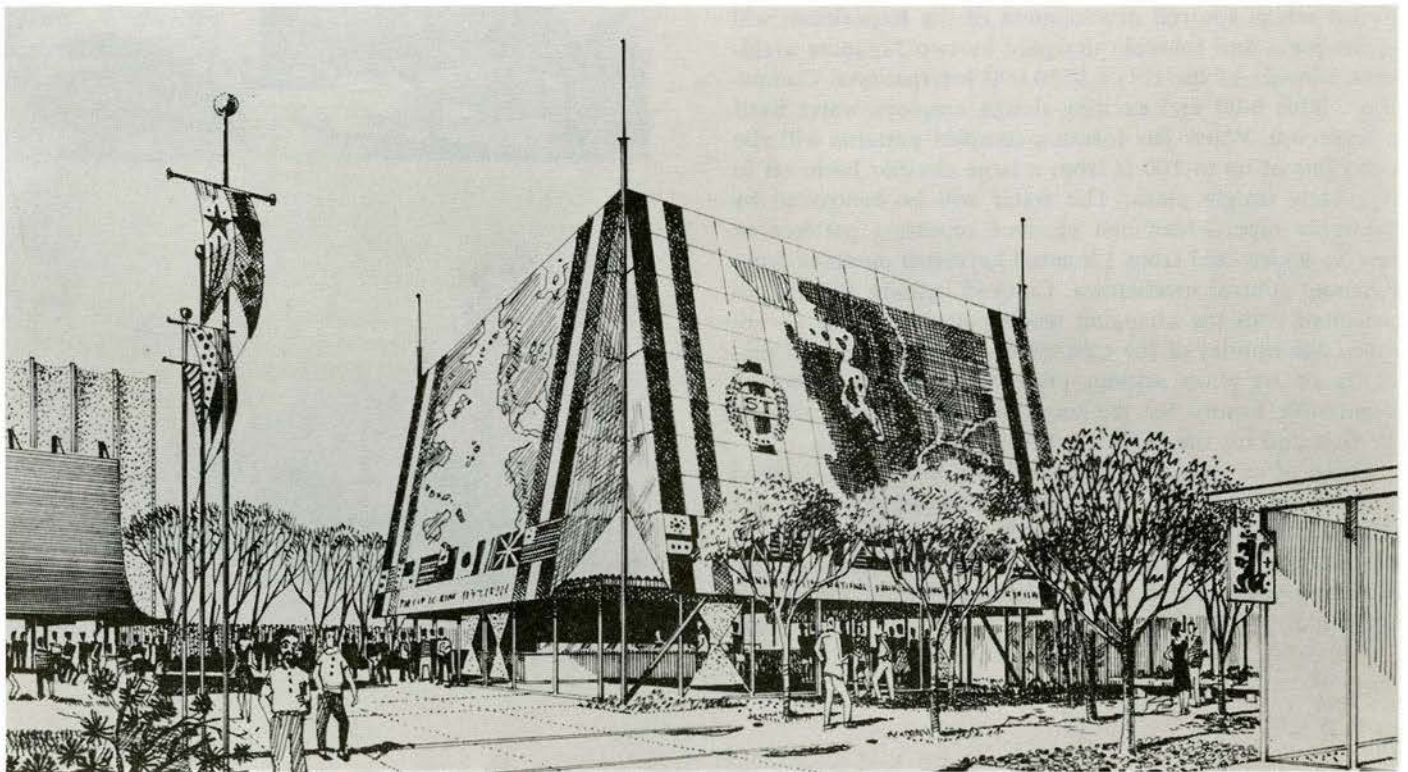


The visitor may be introduced to the Space-Age concept of the Fair via a mile-a-minute ride from downtown Seattle on the world's first high-speed mass transit monorail. He will be greeted on arrival at the Century '21 site with "a daring preview of the world of tomorrow". The theme of the Exposition is, of course, "Man on the Threshold of the Space Age", and it is clear that this idea permeates the architecture and the exhibits.

Any brief resume of points of architectural interest must include mention of at least two major structures at the Fair. One is the Space Needle, a 600 ft spire which effectively symbolises the theme of the Fair. It is an interesting and exciting structural accomplishment. The steel tripod structure of the tower is surmounted by a glass-enclosed restaur-

ant-cocktail lounge which rotates 360° each hour, and an observation deck (crowned by a flaming gas beacon) which are reached by high-speed elevators "space capsules" from the ground. This is certain to be one of the most talked-about structures of the year. The "World of Science" Coliseum Building, designed by Paul Thiry, is the other impressive structure of the Fair. The roof — 110 ft high at its peak — covers almost four acres with a clear interior span of about 360 ft. Its main structural elements consist of two triangular steel compression trusses 12 ft wide and 10 ft high, supported from four massive and strongly sculptural concrete tripod abutments. The hyperbolic paraboloid roof is formed by steel cables stretched between the compression trusses and the hollow prestressed concrete edge beam. This enormous

Below: Banking facility, Seattle — First National Bank





Assembly Preview

building will house the main theme exhibit "The World of Century '21", depicting how man will live in the Space Age.

Two other major building complexes are Yamasaki's United States Science Pavilion (on which he is associated with a firm of Seattle architects) which will stress the peacetime benefits of science for man, with a film by Charles Eames as one of the principal attractions; and the Seattle Centre buildings, including the Playhouse and Exhibition Hall by Kirk Wallace, McKinley & Associates; the Ice Arena, refurbished by Bassetti and Morse; and the Opera House, remodelled by Chiarelli & Priteca, where the "World of Art" will be presented in performances and exhibitions of various kinds. The latter buildings were existing on the site and have undergone extensive remodelling for the immediate use of the Exposition and will ultimately become, along with other major structures at the Fair, a permanent Civic Centre for Seattle. As in other Fairs, the numerous individual exhibitors have selected their own architects subject to design approval by Century '21 Exposition Inc, and the Primary Architect.

A final tour de force for Seattle Centre, the city initiated project which spurred development of the Exposition, will be the plaza and fountain designed by two Japanese architects, winners of the City's \$250,000 International Competition. This bold and exciting design employs water itself as sculpture. Water jets forming complex patterns will rise to heights of up to 100 ft from a large circular basin set in a severely simple plaza. The water will be controlled by electronic tape, which can produce repeating patterns or may be improvised from a manual keyboard operated from a remote control mechanism. Colored lighting will be coordinated with the changing water patterns. From all advance descriptions of the concept, this fountain, in the simplicity of its plaza setting, promises to be an object of remarkable beauty for the most important open space of the Fair and for the Civic Centre that will replace it.

Those of us on the West Coast have been well informed of the many attractions of this interesting and exciting event about to open on our doorstep; those of you planning to join us for the Annual Assembly should seriously consider extending your visit to include the Century '21 Exposition in Seattle.

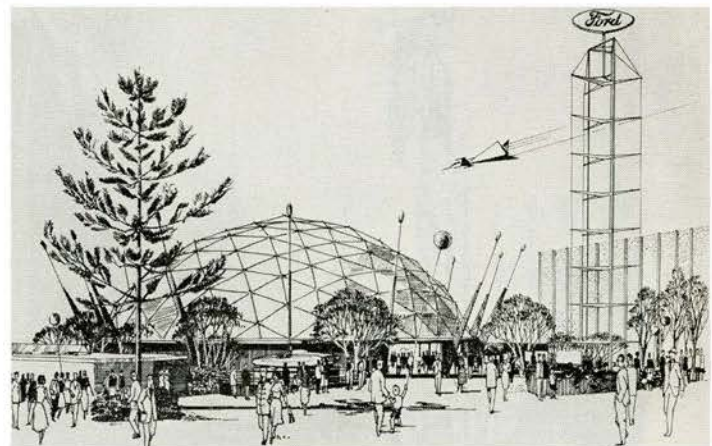
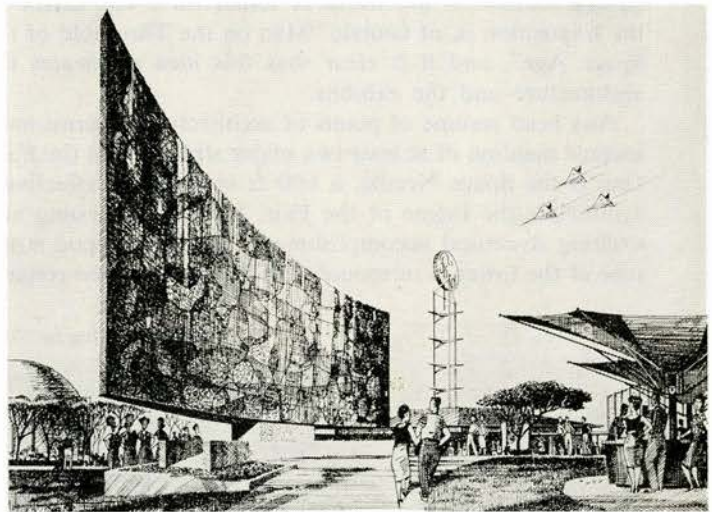
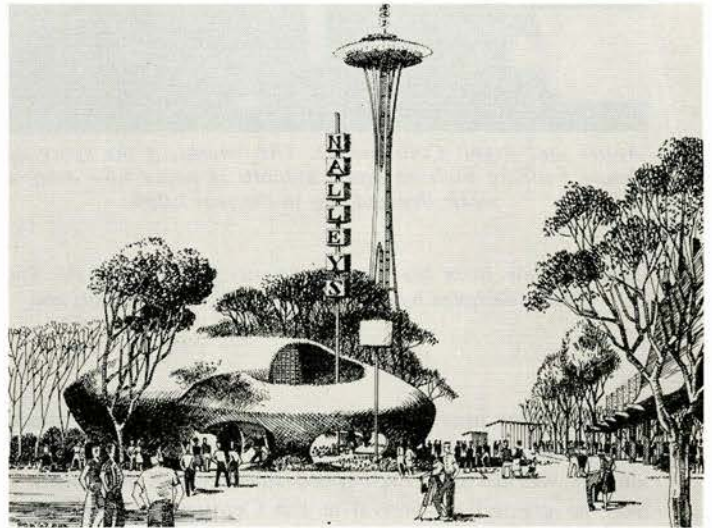
C. A. Tiers

Left: The International Exhibit Buildings, Walker and McGough, Architects.

Below Top: Exhibition Building — Theatre Nalleys, Inc.

Below Centre: Horiuchi Mosaic.

Below Bottom: Ford Motor Company Exhibition Building.



CANADIAN BUILDING DIGEST



DIVISION OF BUILDING RESEARCH • NATIONAL RESEARCH COUNCIL

CANADA

SOURCES OF INFORMATION ON BUILDING

by Eileen R. Carson

UDC 026:69

This issue of Canadian Building Digests, as may readily be seen, differs from those so far published. It is not intended to be read as a concise summary of the present state of building documentation, but rather as a guide to some of the main sources of printed information on building. The arrangement has been designed for convenience; the listing opposite will facilitate rapid use of the Digest as a reference list. The amount of printed information now being issued each year even on the restricted subject of building science is so extensive that even such a listing as this is an introduction only to the main aids in the field of building documentation.

It is hoped that this Digest will serve also to indicate something of the resources that are already available in the Library of the Division of Building Research, which operates as a branch of the main Library of the National Research Council, the national science library of Canada. The Division's Library is being developed to serve not only the specialized needs of the DBR staff but also the more general needs of the construction industry of Canada. Visitors are therefore cordially welcome. Those who by reason of distance are unable to visit the Library are encouraged to send their written inquiries to the Librarian and to arrange to obtain the monthly Accession Lists. The writer of this Digest is the Librarian to the Division.

R. F. Legget, Director

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1. The Abundance of Building Information

Since the beginning of the twentieth century literature on the art and science of building has mushroomed to such an extent that keeping up with it is extremely difficult. It is directed not only to the research officer, but also to the building industry in order to communicate solutions to some of its most trying problems.

The following figures on building information received by the DBR/NRC Library may give some idea of the mass of information available.

The Library receives:
over 1000 magazines and serials each month,
over 350 books each year, and
over 3500 individual reports and pamphlets each year.

2. Publication of Building Information

2.1 Magazines

The latest theories, practices and news about building products can be found in the wealth of magazines published today. Two good sources of those that are available on subscription are:

- Serials Held in the Building Research Library.
Available from the Division of Building Research, National Research Council, Montreal Road, Ottawa 2, Ontario.
- Directory of Canadian Scientific and Technical Periodicals (NRC 6104). Available free upon request from the National Research Council Library, Sussex Drive, Ottawa 2, Ontario.

Abstracting and indexing bulletins publish lists that aid the selection of magazines. The majority also list the magazines they review. Section 4 of this Digest discusses abstracting and indexing bulletins and their use.

The directory and special issues of Canadian trade periodicals such as Automatic Heating, Plumbing/Air Conditioning, Daily Commercial News, Engineering and Contract Record, National Builder, Roads and Engineering Construction are helpful for they publish such useful information as lists of federal, provincial and municipal officials, directories of consulting engineering firms, building products manufacturers and associations allied with the building industry.

2.2 Pamphlets

Much valuable material is published free of charge or at a nominal price by associations and government bodies. Section 2.4 provides the addresses of such organizations. Because many of the sources of worth-while free material do not keep mailing lists, their publications have to be requested after news of their availability has been published in building magazines. Accession lists or lists of recently received publications distributed by building research organizations are useful in tracking down this type of publication. Examples of such lists are:

- Recent Additions to the Building Research Library.
Published monthly by the Division of Building Research, National Research Council, Montreal Road, Ottawa 2, Ontario.
- Housing and Planning References.
Published bi-monthly by the Office of the Administrator Library, Housing and Home Finance Agency, Washington 25, D.C.
- National Housing Center Library Bulletin. Published ten times a year by the Library of the National Association of Home Builders, 1625 L Street, Washington 6, D.C.
- Royal Institute of British Architects. Library Bulletin.
Published quarterly by the RIBA, 66 Portland Place, London, W. 1, England. Subscription 10s. per annum.
- Recent Additions to the Library. Published twice a month by the National Research Council, Sussex Drive, Ottawa 2, Ontario.

The following are representative of the pamphlets issued by building associations and government bodies during 1961.

- American Institute of Steel Construction.
Standard specifications and loading tables for open web steel joists (Longspan or L-series).
- British Columbia Lumber Manufacturers Association.
Post and beam.
- British Constructional Steelwork Association.
Publication n. 14. The use of welding in steel building structures, rev. by G. Bernard Godfrey.
- Building Research Institute (Washington).
Preassembled building components.
- Cement and Concrete Association (London).
Concrete block walls, 3rd. ed., rev.
- Fire Protection Association.
Fire Protection Bulletin, n. 8. Fire protection for builders and structural engineers.
- Great Britain. D.S.I.R. Building Research Station.
Factory Building Studies n. 8. Colouring in factories, by H. L. Gloag.
- Great Britain. D.S.I.R. National Physical Laboratory.
Sound absorbing materials, by E. J. Evans and E. N. Bazley.

Highway Research Board. Special Report n. 60. Soil and foundation engineering in the Union of Soviet Socialist Republics.

Housing and Home Finance Agency. Urban Renewal Administration. Technical Guide n. 6. Residential property conservation standards.

Housing Centre (London). Two to five in high flats; an enquiry into play provision for children aged two to five years living in high flats.

Illinois University. Small Homes Council. Sixteenth annual short course in residential construction, January 18-19, 1961.

Illuminating Engineering Society (London). The I.E.S. code; recommendations for good interior lighting.

National Building Studies. Research Paper n. 32. The forces applied to the floor by the foot in walking, by F. C. Harper and others.

National Lumber Manufacturers Association. Technical Report n. 1. Comparative fire test on wood and steel joists.

National Research Council. Division of Building Research. Technical Paper n. 118 (NRC 6193). Building law in Canada; a study prepared for the Associate Committee on the National Building Code, by J. M. Robertson.

Ontario Fire Marshal. Hospital fire safety design standard.

Society of Plastics Engineers. Plastics for architects, artists and interior designers.

Stanford University School Planning Laboratory. Report n. 1. The relationship of initial cost and maintenance cost in elementary school buildings, by W. J. Zimmerman.

Texas Agricultural and Mechanical College. Architectural Research Group. Shelter for physical education; a study of the feasibility of the use of limited shelters for physical education.

U.S. Department of Agriculture Handbook n. 194. Snow avalanches; a handbook of forecasting and control measures.

U.S. Forest Products Laboratory Report n. 2202. The performance of wood in fire, by H. O. Fleischer.

U.S. National Bureau of Standards Handbook n. 74. Building code requirements for reinforced masonry.

2.3 *Manufacturers' Technical Literature*

Building products and equipment manufacturers issue a great deal of useful material in their literature. Two publications that contain technical information about building products manufactured in the United States are:

Architectural Catalog File.

Published yearly by Sweet's Catalog Service Division, 119 West 40 St., New York 18, N.Y. 1961 edition contained in twelve volumes. Subscription approximately \$150.

American Institute of Architects.

Building Products Register.

Published in 1959 by the American Institute of Architects, 1735 New York Avenue N.W., Washington 6, D.C. A second edition of the Register is now in preparation.

2.4 *Directories*

One of the problems of obtaining building information is finding the addresses of the organizations whose standards and publications are mentioned in the building literature. For information about organizations in the United States one might consult:

Building Research Institute. Building Science Directory.

Published by Building Research Institute, 2101 Constitution Ave., Washington, D.C. The Directory costs \$20 (U.S.). The subscription price for the quarterly supplements is \$5 (U.S.) yearly.

This directory contains individual data pages describing the research programs and publications of associations, colleges and universities, and public bodies engaged in building research in the United States.

For addresses of organizations in Canada one might consult:

Canadian Almanac.

Published yearly by the Copp Clark Publishing Co., Toronto. Cost \$11.

Often the names and addresses of manufacturers of particular building products are needed. Two sources of such information are:

Fraser's Canadian Trade Directory.

Published yearly by Fraser's Trade Directories Ltd., 6833 de L'Epee Ave., Montreal 15, Quebec. Subscription price \$12.50.

Canadian Trade Index.

Published yearly by the Canadian Manufacturers' Association, 67 Yonge St., Toronto 1, Ontario. Subscription price \$15.

2.5 Books

Excellent books have been published dealing with the building field, and although it is impossible to list them a guide to current ones is provided by the accession lists issued by various agencies. (These sources of information will be discussed in section 4 of this Digest.) Further guidance, however, is often needed in the selection of the few that one can afford, and it is a good idea to wait for book reviews in magazines that one has learned to trust.

Two valuable books, which Canadians may not have noted, were published by Her Majesty's Stationery Office, P.O. Box 569, London, S.E.1, England. They are:

Principles of Modern Building. Department of Scientific and Industrial Research, Building Research Station, London, 1960 and 1961. 2 volumes, 17s. 6d. each.

In these volumes the staff of the British Building Research Station have synthesized their accumulated experience in the fields of functional requirements of building. Part I of volume I deals with the principles of the functional performance of a building as a whole. Part II of volume I discusses their specific application to walls and other vertical elements. Volume II deals with their application to floors, roofs and other horizontal elements.

3. Arrangements of Building Information

How does an architect, engineer or contractor make the best use of available information? Are there short cuts to locating the answers to his questions? Manuals, codes, standards, specifications, pamphlets and manufacturers' catalogues arranged according to a good filing system are the main aids in solving this problem. The work may be done by a junior employee under the active supervision of a senior member who is responsible for maintaining the system.

During the past 30 years many systems have been developed for arranging building literature. Only the four recommended by major building organizations will be discussed in this Digest.

3.1 AIA/RAIC Standard Filing System

American Institute of Architects.

Standard filing system and alphabetical index. Available from the Royal Architectural Institute of Canada, 88 Metcalfe St., Ottawa. \$3.

The AIA standard filing system is probably the system most familiar to all Canadian architects, since it is recommended by the RAIC-

CCA committee for the preclassification of manufacturers' trade literature.

The classifications and their file number designations are arranged under 41 "Major Divisions," the titles of which conform, in general, to those usually included in a comprehensive construction and mechanical equipment specification.

3.2 American Institute of Architects.

The AIA filing system for architectural plates and articles.

Available from the Royal Architectural Institute of Canada, 88 Metcalfe St., Ottawa. \$1.

This system is to be used in conjunction with the AIA Standard Filing Manual, which is used for filing manufacturers' technical literature only. These two systems provide an adequate way of filing building literature so that it is readily available for use.

3.3 ABC or Abridged Building Classification

International Building Classification Committee.

ABC: abridged building classification for architects, builders, civil engineers. Published by the International Council for Building Research, Studies and Documentation, c/o Bouwcentrum, 700 Weena, Rotterdam, Holland. Approx. \$3.

The ABC is a shortened and specialized version of Universal Decimal Classification, which is used by many magazines and libraries in the building field for indexing purposes. The UDC, in turn, is based on the Dewey Decimal Classification widely used in public libraries in the United States and Canada. According to the Dewey Classification, all knowledge is divided into ten main groups.

A knowledge of the ABC is helpful since it gives the architect and engineer an insight into the principles of the UDC.

3.4 RIBA SfB/UDC Filing Manual

SfB/UDC Building Filing Manual.

Published by the Royal Institute of British Architects Information Service, 66 Portland Place, London, W. 1., England. 36s.

The SfB/UDC Building Filing Manual, published early in November 1961 by the Royal Institute of British Architects, may not be familiar to many Canadian architects. The SfB (Samarbetskommitten for Byggnadsfrågor) system, however, has been in use in Scandinavian countries for a number of years, and at the present time the British weekly newspapers "Architects Journal" and "Architect and Build-

ing News" are using the system to preclassify information articles and new products. The system uses a series of alphabetical and numerical symbols to denote functional elements, construction, and materials. The Manual presents the Sfb system and related schedules from the Universal Decimal Classification, and attempts to provide guidance for the filing and indexing needs of all building offices.

In Great Britain it is hoped that manufacturers will publish their information literature in the format of the International Standardization Organization's paper size A4 (approx. 21 cm x 30 cm) and that all this literature will be preclassified by the Sfb/UDC system.

Much of the Canadian trade literature is preclassified following the AIA/RAIC Standard Filing System. Canadian Building Abstracts issued by the Division of Building Research of the National Research Council of Canada are classified according to the ABC or Abridged Building Classification. These two systems might be adopted to meet the divergent needs of filing both manufacturers' literature and architectural and building practice literature in professional offices. Some architectural offices, however, might feel that the new Sfb/UDC Filing Manual provides a system that more adequately meets their needs.

4. Retrieval of Building Information

A short-cut to sources of information is provided by abstracts, indexes and bibliographies.

4.1 Abstracts

The original and still best bulletin of monthly building science abstracts is

Building Science Abstracts.

Published by Her Majesty's Stationery Office. Annual subscription £ 1.18s. Od. (approx. \$5.50) including Index and postage.

Articles are abstracted from the architectural and building periodical literature of the world.

Sample Entry:

Lighting UDC: 628.9:69.001.3

1462. The I.E.S. Code. Recommendations for good interior lighting, 1961: The Illuminating Engineering Society, London, 1961 (The Society), 60pp., 12s. 6d. In this completely new edition of the Code, the recommendations have been extended to cover wider aspects of lighting. Part I sets forth the basic theory . . . Part II covers some aspects of design . . . whilst Part III is the schedule for recommended values of illumination and limiting values of glare index for many occupations and buildings. A glossary and a bibliography are included.

A Canadian abstract bulletin which is published twice a year is:

Canadian Building Abstracts

Available from the Division of Building Research, National Research Council, Ottawa 2. No charge.

Articles from Canadian architectural, building and construction magazines are abstracted.

Sample Entry:

181 UDC 691.53

Reid, T., V. E. Vaughan, and M. R. Foran. MORTARS AND MOISTURE. Journal of the Canadian Ceramic Society, Vol. 29, 1960, p. 79-84. The performance of mortars for unit masonry depends on their porosity, volume changes with wetting and drying. . . . Characteristics required for satisfactory performance . . . are discussed.

An abstract bulletin that surveys a very specialized building field is

Hospital Abstracts

Published by Her Majesty's Stationery Office. Annual subscription £ 3.4s. Od. (approx. \$9) including Index and postage, P.O. Box 569, London, S.E.1, England,

Books, pamphlets and periodical articles from world literature on the whole field of hospitals and their administration, with the exception of strictly medical and related professional matters, are abstracted.

Sample Entry:

Safety Measures

1673. Blunat, D. Les dispositions antidéflagrantes dans les blocs opératoires. (Fire protection methods in operating suites). Annales de l'Institut Technique du Bâtiment et des Travaux Publics, Paris, 1960, Oct., vol. 30, no. 154, pp. 1096-1102.

Protection against explosions in operating theatres depends on two factors: Anti-static materials should be used. . . . The use of materials such as nylon . . . is prohibited. The flooring should have a uniform conductivity. . . . The suitability of several kinds of floor coverings . . . is considered.

Another service in the field of hospital literature is provided by a card service from

Hospital Planning Abstract Service

Published bi-monthly by the American Hospital Association, 840 North Lake Shore Drive, Chicago 11, Illinois. Annual subscription \$10.

North American books, pamphlets and periodical articles concerned with background trends, design and construction, financing, government programs, multi-hospital programs, needs, and planning guides are abstracted. The sample entry contains only about one-eighth of the abstract that appears on this particular card.

Sample Entry:

Design and Construction

Hospital building note 1: Buildings for the hospital service. Ministry of Health. 8p. Published by H.M.S.O., London. Available from York House, Kingsway, London, W.C. 2, England. Price 1s.6d.

This document, first of a series by the British Ministry of Health, was issued as a guide to regional hospital authorities, and others, including doctors, architects and engineers, on planning and preparing a hospital building program. Subsequent building notes will cover cost estimates and controls, design of departments and relationships among hospital departments.

The first step in planning. . . .

Heating and ventilating is another field covered by a specialized abstracting bulletin.

Heating and Ventilating Research Association.

Library Bulletin. Abstracts of recent technical literature.

Published by the Association, Old Bracknell Lane, Bracknell, Berks. England.

Sample Entry:

218 UDC 699.86:69.024.3

Investigations into the dampness of insulated flat roofs. B. H. Vos and F. J. Van Sante. *Gesundheits Ing.*, February 1961, 82, 2, 42-45 (in German)

In investigations into the dampness of insulated roofs, only those which were ventilated and had insulation above the main structure were found to be dry. The moisture content of the unventilated structures was found to be considerably higher than that recommended in the Dutch Standard V 1068. The authors recommend design to this standard and suggest. . . .

Fire Research Abstracts is the only specialized abstract publication in the Fire Research field. Other abstracting and indexing publications, however, such as Building Science Abstracts, Canadian Building Abstracts, Applied Science Abstracts, Engineering Index, (section 4.1) contain references to articles on fire research and fire protection. The abstracts in this publication are long and exhaustive. The following Sample Entry is only one-eighth the length of the published abstract.

Fire Research Abstracts and Reviews

Published three times a year by the Committee on Fire Research and the Fire Research Conference of the National Academy of Sciences, National Research Council, 2101 Constitution Avenue, Washington 25, D.C.

Sample Entry:

Ashton, L. A. and Smart, P. M. T. (Joint Fire Research Organization, Boreham Wood, England) "Sponsored Fire-Resistance Tests on Structural Elements", Report of Joint Fire Research Organization (Department of Scientific and Industrial Research and Fire Offices' Committee, London, England).

A compilation was made of the results of fire-resistance tests conducted in Great Britain on building elements of a proprietary nature or incorporating proprietary materials. The tests cover kinds of constructions available in the post-war years. Results of 81 specimens are included.

. . . an examination of results may be of value in indicating fire-resistance ratings. . . . Subject headings: Fire resistance, of building elements.

Many engineers have found that the Engineering Index Service is an invaluable aid in their work. Although this publication is called an index, it provides both abstracting and indexing services.

Engineering Index Service

Published by Engineering Index Inc.
United Engineering Center, 345 East 47th Street, New York 17, N.Y.

The Engineering Index Service is published both as a weekly card service and an annual bound volume. The cost of the bound volume is \$75. The card service is subdivided into 249 fields of interest. The subscription price to individual sections varies from \$12. to \$45. Over 1400 periodicals and society transactions in all languages are reviewed. Authoritative, informative, current and useful abstracts are published in this guide to the technological literature of the world.

Sample Entry:

CONCRETE CONSTRUCTION

Composite construction in precast and cast-in-place concrete, A. R. ANDERSON. *Civ Eng (NY)* v 30 n 3 Mar 1960 p 34-7. Composite concrete structures should combine economy and efficiency of mass-produced, high-strength elements with advantages of continuous monolithic structures hitherto cast in place at job site; test results show 7500 psi or more compressive strength in precast members; methods for column to footing, wall to column, beam to column and beam to slab jointings; welding of connecting ends of reinforcement and use of weldable steels; 12 figures show connecting methods.

4.2 Indexes

In addition to the Engineering Index which is discussed in section 4.1, Abstracts, a yearly index that has been found useful by architects in practice is

Architectural Index, compiled by E. J. Bell.

Published by the Architectural Index, 517 Bridgeway, Sausalito, California. Annual subscription \$5.

Periodicals indexed are Arts and Architecture (AA), Architectural Forum (AF), Architectural Record (AR), House and Home (HH), Interiors (INT), Progressive Architecture (PA) and the Journal of the American Institute of Architects (JAIA).

Sample Entries:

Government

City Hall; Toronto, Canada; Rewell, Parkin and Parkin; pl., m., p. 14-15; Dec 60; AR

City Hall; Toronto, Canada; Viljo Revel; m., pl., p. 20-22; Apr 60; AA

City Hall; Winnipeg, Canada; Green, Blankstein, Russell; m; p. 23, Nov 60; AA

Embassy Building; Oslo, Norway; Eero Saarinen; ph. pl.; p. 84-85, Apr 60; JAIA

Two indexing subscription services that have been found very useful are:

Art Index

Published by the H. W. Wilson Co., 950-972 University Avenue, New York, N.Y. Quarterly subscription is sold on a service basis which is based on the number of magazines indexed that are received by the subscriber.

The most important architectural periodicals in the world are indexed.

Sample Entry:

Library architecture

Bibliothèque de l'université de Giessen: H. Kohler, arch. il plans diags Arch d'aujourd'hui 31:96-9 Je 60

Library facilities: carrels and language laboratory in Barnard and Bennington colleges. il Progres Arch 41: 160-3 S '60

Rare building for rare books: Yale's new library designed by Skidmore, Owings and Merrill. il plans diags Arch Forum 113: 138-41 Nov 60.

Applied Science and Technology Index

Published by the H. W. Wilson Co., 950-972 University Avenue, New York, N.Y. Published monthly (except August). Subscription price \$24.

This is a cumulative subject index to periodicals in many fields including construction, engineering, and industrial and mechanical arts.

Sample Entry:

Auditoriums

Supporting structure for retractable roof of the Pittsburgh public auditorium. E. Cohen and H. R. Helvenston. il plans diags Am Concrete Inst J 58 (Proc): 185-202 Ag '61

Another source of information on articles that appear in the Canadian press is

Canadian Index to Periodicals and Documentary Films

Published by the Canadian Library Association, Room 510, 63 Sparks St., Ottawa 4.

This index, issued monthly, reviews articles in 71 Canadian magazines, at least 12 of which contain information useful in the building field.

Sample Entries:

Housing projects

Competition: CMHC Smyth Road. il plans Can Arch 6:46-54 S '61

Smyth Road competition. E. R. Arthur. il port plans Habitat 4:2-15 S-O '61

Housing projects, Municipal

Housing and social work. A. Smout. Can Wel 37: 228-33 S 15 '61

Housing project manager. P. Ringer. Can Wel 37: 234-7 S 15 '61

Two excellent but little-known aids to sources of building literature are distributed by the British Ministry of Works Library.

Great Britain. Ministry of Works Library.

Communication n. 18. Consolidated Building References to Articles in Periodicals.

Available from the Ministry Library, Lambeth Bridge House, London, S.E.1, England.

Items in this publication are arranged by the Universal Decimal Classification. Each volume contains a name index and an alphabetical key to classification. Yearly volume averages 246 foolscap pages.

Sample Entry:

69.024.5 Other Types of Roofs; Folded Plate

Suspended, Cantilever

69.024.5 Hanging roofs. A. HARRIS. Archt J. 1958, 128 (3328) (Dec. 11), 849-54. Illus. Structural analyses and examples of cable-suspended and continuous membrane roofs in which the tensile forces are supported by external rigid members. They are employed particularly for exhibition buildings, stadia and hangars where large clear-span areas are required. (P352/34)

Great Britain. Ministry of Works Library.

Communication n. 5. Consolidated Accessions List. Available from the Ministry Library, Lambeth Bridge House, London, S.E.1.

This publication is arranged according to the Universal Decimal Classification. Each volume contains an Author Index and an Alphabetical Key to Classification. Yearly volume averages 79 foolscap pages and contains references to books, bulletins and reports.

Sample Entry:

72.03 ARCHITECTURAL HISTORY. STYLES

72.032.7(45) Roman construction in Italy from Tiberius through the Flavians. M. E. BLAKE. Washington, 1959 (Carnegie Institution), xvii, 195 p. and 31 plates., 6 illus., \$8.25. Descriptions of building activity in Rome from A.D. 14 to 96, from contemporary documentary evidence. (403/35)

A valuable guide to world literature on fire is distributed yearly by the British Joint Fire Research Organization. A volume averages over 100 pages and includes name and subject indexes.

Great Britain. Department of Scientific and Industrial Research and Fire Offices' Committee. Joint Fire Research Organization

Library Bibliography n. 5. References to Scientific Literature on Fire. Available from the Fire Research Station, Boreham Wood, Herts., England.

4.3 Bibliographies

Bibliographies are helpful in giving an overall review of particular areas of the building industry. A surprising number are issued at regular intervals. Some of the organizations that issue such bibliographies are listed below followed by an example of a pertinent issue.

Cement and Concrete Association (London).
Library Bibliography n. 33 Hospitals

Council of Planning Librarians Exchange. Bibliography n. 17: Planned industrial districts

Great Britain. D.S.I.R. Building Research Station. Library Bibliography n. 183: Tower cranes

Great Britain. Agricultural Research Council Bibliography on Farm Buildings Research, Pt. 5: Buildings for the drying and storage of grain

Institution of Civil Engineers.
Bibliography on Prestressed Concrete

Royal Institute of British Architects Library (Bibliography). Theatres and Schools of Dramatic Art, 1955-1960

Bibliographies are also published in many building magazines. An excellent example was the bibliography on schools that appeared in the Library Notes section of the September 1961 issue of the American Institute of Architects Journal.

5. Digests of Building Information

A digest is a short summation or the compressed kernel of a body of information. Many building organizations and associations of the world issue this type of useful short publication. Each digest is generally concerned with one topic.

5.1 Building Research Station Digests

The first BRS digest was published in December 1948. The series continued for 135 digests when it was closed out with an index. The first digest in the second series followed in June 1960. The second series digests conform in size to the International Standardization Organization's A4 paper size (approx. 21 cm x 30 cm), which has been suggested as a uniform size for international building literature. The digests in the new series are classified by the Universal Decimal Classification and by the SfB Filing System. The annual subscription is 6s. 6d., including postage to Her Majesty's Stationery Office, P.O. Box 569, London, S. E. 1, England

Typical digests are:

1st series n. 88, May 1956. Sound insulation of dwellings.

n. 98, May 1957. Light cladding — part 1 — General principles of design.

n. 135, June 1960. The permanent supplementary artificial lighting of interiors.

2nd series n. 1, June 1960. Research and its users.

n. 8, March 1961. Built-up felt roofs.

n. 12, July 1961. Structural design in architecture.

5.2 Canadian Building Digests

The first digest in this monthly series appeared in January 1960. They are classified by the Universal Decimal Classification, and are available from the Publications Section, Division of Building Research, National Research Council, Ottawa, Canada.

Examples of Digests from DBR/NRC are:

CBD 1, January 1960. Humidity in Canadian buildings.

CBD 18, June 1961. The strength of small roofs.

CBD 25, January 1962. Window air leakage.

5.3 Notes on the Science of Building

The Australian Commonwealth Experimental Building Station publishes these notes, the first of which was published in August 1949. They are classified by the Universal Decimal Classification and are distributed by the Commonwealth Experimental Building Station, P.O. Box 30, Chatswood, New South Wales, Australia. Examples of this series are:

NSB n. 43, February 1957. Natural ventilation of buildings.

n. 53, June 1959. Some fire requirements of buildings.

n. 66, August 1961. Some fire aspects of the use of combustible wallboards.

5.4 South African National Building Research Institute Information Sheets

The first Information Sheet appeared in November 1948. Classified by the Universal Decimal Classification they tell practical men of developments in the building industry. Each gives the answers to two or more questions received as inquiries from outside bodies. Copies of the Information Sheets may be obtained from the National Building Research Institute, P.O. Box 395, Pretoria, South Africa. Examples:

n. 43, November 1955. The effect of dust on an artificial light installation. The use of finely crushed stone in concrete. Types of wood sheet piles. Fracture in prestressing wire of a prestressed concrete tank. Watertightness around roofing screws and washers.

n. 78, September 1961. Thermal comfort. Flood damaged buildings.

5.5 Institut Technique du Bâtiment et des Travaux Publics. Notes techniques et d'information.

These notes, first published in 1957, are available from the ISTB, 6 rue Paul Valery, Paris 16. Examples:

NT 22, février 1957. Essais de plasticité sur mortier.

NT 57, mars-avril 1961. Contrôle du béton frais.

NI 27, octobre 1957. Quelques problèmes d'acoustique.

NI 61, 1961. La photoélasticimétrie.

5.6 Structural Clay Products Institute.

Technical Notes on Brick and Tile Construction.

The first Technical Note on Brick and Tile Construction was published in January 1950. The notes were published monthly until January 1961 when a new series was begun on the same basis. They are distributed in Canada by the Brick and Tile Manufacturers Association of Canada, 4824 Yonge Street, Willowdale, Ontario. Examples:

Technical Notes, v. 7, n. 11, November 1956. Mortars for unit masonry. v. 11, n. 2 February 1960. High lift grouted reinforced brick masonry. n. 1, January 1961. Cold weather masonry construction.

5.7 Building Information Bulletin

This digest is published by the Building Research Bureau of New Zealand, 66 Murphy St., Wellington, New Zealand. It is classified by the Universal Decimal Classification. Some of the subjects treated are:

Bulletin n. 1 August 1959. New materials — a cautionary tale.

n. 5, December 1959. Fire hazard with slow combustion stove installation.

n. 7, February 1960. Clear finishes for external timberwork.

n. 26, September 1961. Floor coverings on concrete slabs.

5.8 Ministry of Works Advisory Leaflets

The British Ministry of Works Advisory Leaflets are designed as guides to good building and provide information about the results of research and the latest developments in building practice. Published by Her Majesty's Stationery Office, P.O. Box 569, London, S.E. 1, England, the leaflets cost 4d. each.

Examples:

Leaflet n. 35, 1953. Prestressed concrete.

n. 36, 1954. Metal scaffolding.

n. 51 and 52 1961. Watertight basements, parts 1 and 2.

6. DBR/NRC Library

The DBR/NRC Library was established in 1948 shortly after the formation of the Division. It is a branch of the National Research Council Library, which is the national science library of Canada.

6.1 Resources of the Library

The DBR/NRC Library has a stock of over 5000 books. Its pamphlet collection numbers over 60,000, and about 500 magazines are received regularly. The books, pamphlets and magazines are received from all over the world. As the Division is a member of the International Council for Building Research, Studies and Documentation (CIB), the abstracts published by member countries such as the Scandinavian Byggliteratur are included in the library's holdings.

6.2 Arrangement of its Collection

Four different methods are used for the arrangement of the four distinct types of literature housed in the Library. This does not cause any confusion, however, as each type of material is arranged according to the system best suited to its particular character. The books are shelved according to the Library of Congress Classification. The pamphlets are filed by the Universal Decimal Classification. The magazines are filed on shelves in alphabetical order according to their titles. The manufacturers' technical literature is filed in cabinets according to the AIA.

6.3 Special Features of its Collection

In addition to the literature already described, the library has a collection of films that are available for loan. A list of these films will be furnished on request.

6.4 Availability of its Collection

The Library of the Division of Building Research publishes a monthly list of recent additions and a yearly list of selected books, any of which may be borrowed for a stated period of time. Dictionaries, reference books, indexes and abstracts are not loaned. The only restriction on loans relates to the number of books that may be borrowed at one time: no more than six items may go to one individual at one time. Such borrowing is a good method of finding out whether the purchase of a certain book is a necessity. By far the greater part of the publications listed in the DBR Library's lists will provide information of a nature that is needed by Canadian architects, engineers

and contractors. One word of caution must be given about the possibility that a publication from these lists might prove a disappointment as far as the usefulness of its statement of practice under Canadian conditions is concerned. One should remember that the Library of the Division of Building Research is a branch of the National Research Council Library, which serves also as the National Science Library of Canada. For this reason many books illustrating practices and theories foreign to Canadian requirements are included in its collection of literature.

6.5 Services

The Library staff will be pleased to assist in supplying information about publications that are difficult to locate. A list is included at the end of this Digest of some of the books, pamphlet series, abstracts, bibliographies and magazines that the library receives from countries other than the United States, Great Britain, and Canada. This list is arranged by countries and has been included to indicate the nature of the collection that is housed in the Divisional library. If you wish further information about any of the items, inquiries should be sent to the Librarian, Division of Building Research, National Research Council, Ottawa 2.

Another service provided by the NRC library staff is that of photo-duplicating. This facility reproduces articles in magazines. Requests for the purchase of such copies will be handled by the DBR Library.

Visitors are always welcome in the DBR/NRC Library which has been developed to serve the building industry as well as the staff of the Division. The Library is open during normal working hours.

AUSTRALIA

Books

Houses, Interiors and Projects, by Harry Seidler.

Magazines

Architectural Science Review, Constructional Review

Pamphlets

C.S.I.R.O. Division of Building Research Technical Paper n. 9. Mechanical properties and dimensional changes in some perlite plasters, by J. J. Russell and others.

Abstracts

Abstracts prepared for the International Council for Building Research, Studies and Documentation.
Building information; a review of current literature on building for the designer, manufacturer and user.

AUSTRIA

Magazines

Der Aufbau
Wohnbauforschung in Oesterreich

BELGIUM

Magazines

L'Entrepreneur Général

Abstracts

CEDOC-Biblio

BRAZIL

Books

Associacao Brasileiro de Mecânica dos Solos.
Anais do II Congresso Brasileiro de Mecânica dos Solos, Volume I.

Magazines

Habitat

CZECHOSLOVAKIA

Books

Czechoslovakia, by Frantisek Rachlik

Magazines

Zpravy

Pamphlets

Bureau of Water Schemes, Construction Development and Management. Water conservation in Czechoslovakia, by Antonin Chlum.

DENMARK

Books

Byggebogen, edited by Poul Kjaergaard.
2 volumes.

Magazines

Arkitektur
Beton Teknik
Bygge Industrien

Pamphlets

Danish National Institute of Building Research Report 40. Water repellents for exterior brickwork, by H. Duhrkop and C. Falk (In Danish).

Abstracts

Byggliteratur (Abstracts prepared by the Scandinavian countries for the International Council on Building Research, Studies and Documentation)

FINLAND

Books

Foundation of Buildings and Soil Mechanics; Part 1; Geotechnics, by K. V. Helenelund (In Finnish)

Magazines

ARK; Arkkitehti Arkitecten

Pamphlets

State Institute for Technical Research Publication n. 64. On the bending of the over-reinforced concrete beams with rectangular cross section, by Lauri Mehto (In Finnish)

Abstracts

Byggliteratur

FRANCE

Books

Centre Scientifique et Technique du Bâtiment. R.E.E.F. 58; Recueil des Eléments Utiles à l'Établissement et à l'Exécution des Projets et Marchés des Bâtiments en France. 5 Volumes.

Magazines

Annales de l'Institut Technique du Bâtiment et des Travaux Publics
L'architecture aujourd'hui
Batir
Cahiers de la Centre Scientifique et Technique du Bâtiment

Pamphlets

Service National de la Protection Civic. Protection contre l'Incendie Serie A. Report on the relative studies of convection currents due to a large area fire (In French)

Abstracts

Abstracts are published in the magazines listed. Those published in CAHIERS are prepared for the International Council of Building Research, Studies and Documentation.

GERMANY

Books

The Fireplace, by Fritz R. Barran (In German)

Magazines

baukunst und werkform
DB; Deutsche Bauzeitung
DBZ; Deutsche Bauzeitschrift

Pamphlets

Bundesministerium fuer Wohnungsbau.
Building research in residential construction; excerpts from the research work of the last few years (in German)

Abstracts

Schrifttumkartei Bauwesen
Zement-Kalk-Gips-Kartei

HOLLAND

Books

Bouwcentrum. Houses (In Dutch)
1 looseleaf volume

Magazines

Bouw
Bouwt in Beton

Pamphlets

Hoofdcmissie voor de Normalisatie in Nederland NEN 3123. Building fire protection code; part 4; code for high apartment buildings (In Dutch)

Abstracts

Abstracts prepared by the Bouwcentrum for the International Council for Building Research, Studies and Documentation.

INDIA

Books

Shadows from India; an architectural album, by Roderick Cameron.

Magazines

Indian Builder
Journal of the National Buildings Organisation
PaintIndia

Pamphlets

National Buildings Organisation Technical Information series n. 15 Thermal movements and expansion joints in buildings.

Abstracts

N.B.O. Abstracts

INDONESIA

Magazines

Masalah Bangunan

Abstracts

Abstracts prepared for the International Council for Building Research, Studies and Documentation

ITALY

Books

Exhibitions and Displays, by Erberto Carboni

Magazines

Casabella
Domus
Geotecnica

Pamphlets

Ministero dei Lavori pubblici. Coordinated housing (In Italian)

ISRAEL

Books

Soil construction; its principles and application for housing, by S. Cytryn

Pamphlets

Institute of Technology Building Research Station Research Paper n. 8. Prestressed concrete composite floors; theoretical and experimental study, by S. Rosenhaupt and others.

JAPAN

Books

Building Techniques of Japan, edited by Kin-ichiro Fujita and others

Magazines

Gypsum and Lime
Japan Architect
Low Temperature Science

Pamphlets

Building Research Institute Report n. 31 Studies on the construction method of the incombustible residential houses.

JUGOSLAVIA

Magazines

Dokumentacija za Građevinarstvo i Arhitekturu
Contains technical articles, data sheets and abstracts

NORWAY

Books

NBI (Norwegian Building Research Institute)
Byggedetaljer

Magazines

BBL Informasjon
Nordisk Betong

Pamphlets

Norwegian Building Research Institute Report n. 26 Deflection characteristics of wood joist floors, by Henry Hansen. (In Norwegian)
This report appears in English as Translation n. 59 of the Division of Building Research of the National Research Council of Canada.

Abstracts

Byggliteratur

POLAND

Magazines

Archiwum Inzynierii Ladowej

Pamphlets

Institute of Building Technology Publication, series 1, Building Materials and their Applications, n. 3. Investigations in the thixotropy of clay suspensions and their applications in building (In Polish)

Abstracts

Polish Technical Abstracts

PORTUGAL

Pamphlets

National Laboratory of Civil Engineering Memoir n. 138. On the use of low-density polyethylene tubes in water pipes, by A. J. Fernandes (In Portuguese)

ROUMANIA

Magazines

Buletinul de Studii si Cercetari Stiintifice in Constructii, Materiale de Constructii, Arhitectura si Sistemizare

RUSSIA

Books

Building Materials and Spectroscopy, edited by K. V. Astakhov (In Russian)

Magazines

Arkhitektura SSSR
Beton i Zhelezo-Beton
Mekhanizatsiia Stroitel'stva
Stroitel'stvo i Arkhitektura Leningrada
Stroitel'stvo i Arkhitektura Moskv

Pamphlets

Akademiia Stroitel'stva i Arkhitektury SSSR.
Sbornik n. 9. Rational and economic construction (in Russian)

Abstracts

Referativnyi Zhurnal Stroitel'stvo i Arkhitektura

SOUTH AFRICA

Books

Concrete Technology; a South African Handbook, 2nd ed., by F. O. Fulton.

Magazines

Civil Engineer in South Africa
Construction in South Africa
South African Builder
South African Architectural Record

Pamphlets

National Building Research Institute Technical Report n. 7. Colour and the child; colour and its contribution to school and hostel buildings. The report describes research into the use of colour to provide a suitable pleasant environment for the children in South African schools.

SPAIN

Magazines

Cemento Hormigon
Informes de la Construccion
Revista de Obras Publicas

Pamphlets

Instituto Tecnico de la Construccion y del Cemento, n. 209. Architectural problems in prefabricated buildings, by S. Albinana Pifarre. (In Spanish)

SWEDEN

Books

Bygg; Handbok for Hus, Vag- och Vattenbyggnad, edited by Borge Algers. 3 volumes.

Magazines

Arkitektur; the Swedish Architectural Review
Byggmastaren; Journal of Swedish Building Cement & Betong

Pamphlets

Swedish State Committee for Building Research Report n. 62 Flat roofs; waterproofing layers and protective coverings, by Rune Hanson (In Swedish)

Abstracts

Byggliteratur

SWITZERLAND

Magazines

Werk

Pamphlets

Swiss Federal Snow and Avalanche Research Institute Report n. 10. Blasting as a means of avalanche protection, by Melchior Schild.

Abstracts

Bulletin Technique de la Suisse Romande

This is one of a series of publications being produced by the Division of Building Research of the National Research Council. It may be reproduced without amendment if credit acknowledgement is made. The Division has issued many publications describing the work carried out in the several fields of research for which it is responsible. A list of these publications and additional copies of this Building Digest can be obtained by writing to the Publications Section, Division of Building Research, National Research Council, Ottawa, Canada.

Recently we are experiencing an awareness toward art throughout Canada. More art galleries are appearing in our cities, community centres in smaller places show travelling exhibitions, art schools report enrolment of large numbers of students, the Canadian artist is gaining in world reputation, we featured art heavily in the Brussels Fair, *Canadian Art* is the finest art magazine on this continent and I could go on and on listing the advances made by our artists and fine craftsmen.

The point is: why am I writing about art to your architectural Journal? It is because I still, stubbornly and optimistically, consider Architecture as one of the Arts. Since most of our architecture (or should I say the practice of architecture as it is now) has nothing to do with art; it became (generally) a "shelter engineering profession", is the reason for this airing of my views. Sincerely hoping, that among your architect-readers is a number of honest architects, striving for improvement of this situation, I present these thoughts.

A building without art is a meal without spices.

Then, why is the Canadian architect reluctant to employ the specialized services of a professional artist and/or craftsman, as he is using the structural or electrical engineer? Firstly, he will argue the cost. But what is the price to be paid for acres of fine, imported Italian marble throughout a building or a "bathroom turned inside out" facade? Would a mural, offset by areas of plain, exposed brickwork be

more costly? Or, while casting structural concrete, forms prepared by a designer-craftsman could be used to produce honest beauty instead of covering a sloppy concrete job with a more expensive skin. Why not use these art-specialists right from the planning stage, to be able to estimate the cost of (because of his services) better building? Especially public buildings, which are usually examples of "utilitarian cold porridge", could gain life through usage of art. After all, these buildings contain and are built for people, not only machines.

This human attitude, or lack of consideration for the human element in the building, is the basic problem. We can (and do) discard all aesthetic values, consider the importance of "keeping the elements out", as the only need of any building. But this is not so. Every primitive tries to improve his abode by painting or carving it. If it is a community house, even more so. In our civilized society, doesn't the public deserve the same consideration of aesthetics? Could we not create more exciting architecture by the use of the work of our available and capable artists and craftsmen—by better and more honest usage of materials, which these people know how to handle without the pompous, pretentious gilding of the lily?

For example: most of the foyers, waiting rooms, lobbies, offices etc, are as interesting as a building suppliers sample room. Textures, colors, decorative dodads in abundance, but without life, rhyme, reason or value. Does not the waiting, bored public deserve something human, exciting, beautiful to

"A STUDY OF URBAN RENEWAL IN TRAIL BRITISH COLUMBIA" by H. Peter Oberlander and R. J. Cave. Publishers, Corporation of the City of Trail, B.C. 93 pages, \$2.00.

THIS report deals with a project for urban renewal in the city of Trail, BC. Trail is the first small city to take advantage of the assistance provided by the federal and provincial governments under the provisions of the National Housing Act. Its corporation appointed Prof. H. Peter Oberlander and Mr R. J. Cave of Vancouver consultants for the study, and the report was financed by CMHC. The consultants acknowledge the services of Michael Wheeler of the School of Social Work of the University of British Columbia and the invaluable contributions of

Messrs R. Brown, R. Furukawa, W. Goodser, J. Topliff and D. Bruniski, who constituted the research and field staff.

Trail is located in the mountainous terrain adjoining the banks of the Columbia River. In 1890 the Trail Creek Landing, as it was then called, became the terminal centre for steamers linking the gold and copper mining areas to the nearest railhead in the United States. In 1895-96 a small copper smelter was established and it was followed by a lead furnace in 1901. The Consolidated Mining and Smelting Company eventually became the world's largest lead, zinc and ore producer. This processing concentration was intensified with plant producing cadmium and zinc in 1928 and in 1930 a fertilizer plant was established which obtained sulphuric acid

LETTERS TO THE EDITOR

experience? Or can not our schools "educate" by exposure to aesthetics outside the classroom our future generations? Are aesthetics not desirable to touch young, impressive minds, enriching their lives by enjoying beauty? Even if we have to pay extra for artwork it would be only the cost of "spices". Could we not allocate a certain percentage of the total construction cost for art and craftwork to guarantee this human element in the public buildings?

Now I dare to accuse the architect of "Wrightism", his professional jealousy, another stumbling block in the problem. Either he wants to do everything himself, from the building itself to interiors and murals, even if he is not trained or capable of doing it, or he is afraid of (and therefore hates) the artist and his eventual criticism. But I believe that the better final result of this "give and take" co-operation is justifiable and desirable. Future generations will judge our times by the buildings left behind, just as we do. Besides, the self-satisfying feeling of a job well done is a premium to "the 6%".

Since I "gave" you a piece of my mind, I expect to "take" whatever you have to reply with. Arguments are welcome, but please, no excuses.

Bob Oldrich, Calgary.

BOOK REVIEWS

from smelter smoke. The town economy is still dependant upon mining and smelting associated with power obtained from the Kootenay River.

The town plan was established during the boom years of 1896-1910 by E. S. Topping and his partner, F. A. Heinz (who had built the first railway and erected the first copper smelter). It was basically grid iron in form and as both partners were speculating, they made immense profits during the 1896-1910 boom. In 1901 Trail was incorporated and it continued to grow rapidly between 1921 and 1931. Growth continued between 1941 and 1951 but after this period there was a decline in population.

The survey revealed that the city was over-zoned. The unrealistic land use pattern sterilized the current use, as it was reserved in anticipation of a change which would probably never occur. The survey indicated that the application of the grid iron plan to the mountainous topography had introduced problems, particularly the lack of private space. Trail is basically a residential town, although a commercial area has grown in the earliest area of settlement. The settlement expanded on both sides of a river valley. The difficulties in reaching built-up areas on the outskirts has however resulted in decline.

An age of building survey was undertaken which revealed that the downtown area had the greatest concentration of poor or very poor buildings. The central section of the eastern tract also had scattered groups of poor or very poor buildings. In all these areas blight was identified. It was apparent that the railway and the highway had generated much of the decline and its relocation was recommended. The consultants also felt that a pilot redevelopment project should be undertaken in a 1½ acre area, in accordance with the provisions of the economic rental housing of the NHA. Furthermore, the existing households should be accommodated on new residential land. As far as it goes, the report recommends a policy which would result in improvement and it is formulated in accordance with the present legal requirements and powers.

Yet the limitations which have been imposed upon the consultants are only too apparent. They needed an operative framework within which they could have produced not just an urban renewal study but an overall plan. Furthermore they encountered the type of residential decline which requires specific legislative provisions empowering local authorities to undertake programs of extensive residential rehabilitation rather than urban renewal, as has in fact been pioneered in Toronto, which could receive financial aid outside their own budget. At present local authorities are hamstrung, for their redevelopment projects are tailored to reap the maximum benefit from financial assistance at provincial or federal level. Consequently their efforts are being directed to those areas of obvious decline rather than over the whole community. Nor is it possible at the present time to undertake preventative measures for rehabilitating buildings which are now in a passable state, but in a process of decline.

The Trail report is a competent study but should indicate the necessity for

an expansion of our present legislation, which would enable various categories of planning to be undertaken. These should be encouraged by new provisions for financial aid.

M. Hugo-Brunt, MRAIC, Toronto

THE CONSULTING ENGINEER by C. Maxwell Stanley. Published by John Wiley & Sons Inc., New York and London. 258 pages. Price: \$5.95

MR STANLEY is a practicing consulting engineer of wide experience and his book is written from this point of view — from the inside looking out.

The subject matter is divided into two parts — the first dealing with relationships of the engineer to his clients and the public, while the second is devoted to the internal organization and operation of consulting practices. In these two areas, the book is excellent and presents a comprehensive study of the present state of the profession.

Mr Stanley's objectivity has one failing — while the book is excellent material for anyone making a study of the profession, the lack of examples, interesting experiences or amusing incidents make it a rather heavy matter for the casual reader. Those, however, wishing to pursue the subject in detail will find good information on current fee schedules, engineer-client contracts, selection of engineers in the first part and types of organization, office equipment and methods, accounting methods, etc., in the second half. The practices and problems described, while written concerning United States engineers are similar in most respects to their Canadian counterparts.

Donald Angus, Toronto

LANDSCAPE ARCHITECTURE by John Ormsbee Simonds. Published by F. W. Dodge Corporation. 244 pages. Price: \$12.75

DURING the recent past a number of books have appeared which, approaching architectural and industrial design by way of what are commonly referred to as "design fundamentals", concern themselves largely with the manipulation of form and space and with the response of the human being to environment, at the same time drawing their inspiration from present day situations and ideologies rather than from historical precept.

It was a particularly happy idea to apply this kind of study to a work on landscape design, since in this field the pressures of purely mechanical and

practical requirements are less instant than is generally the case in architectural problems, and many of the basic issues of environmental design can therefore be dealt with more directly.

Prof Simonds' book, which approaches its subject in this way, is divided into chapters dealing separately with design fundamentals, site analysis, the organization of space and a number of similar matters including a final chapter which makes some reference to regional planning. It is profusely illustrated with both excellent photographs and line drawings the latter particularly suggesting at first glance that the book would repay careful study; while much of the material is related very directly to the kind of thinking which must take place in connection with creative design on the drawing board.

Unfortunately, in some sections of the book the author becomes so deeply involved with his plea for a more adequate consideration of site and regional planning in North America that the fundamental issues of design are often obscured beneath arguments and generalizations which, in the main, could be taken for granted. Moreover, and this seems now to be characteristic of books concerned with design, the actual layout of the script and other material is at times so complex that the really important information is lost amongst the elaborate and unfamiliar form of presentation.

One should, of course, take account of the particular section of society at which the book itself is aimed. If it was intended to convert the relatively inexperienced it might well be acceptable in its present form, but one doubts whether the serious and well-informed student would easily find the patience, or for that matter the time, to sort out the useful and stimulating ideas which it undoubtedly contains.

All of us who are concerned with the practice and the teaching of the art of landscape architecture would welcome what is referred to on the dust cover as "... a definitive, authoritative source of ideas on site planning . . .", and perhaps at a later date Prof Simonds may be persuaded to provide us with a work of this nature. For the present one can only suggest that it should include at least some adequate reference to the development of picturesque theories in eighteenth century Europe; a subject which one would think could hardly be reasonably excluded from any serious work on Landscape Design.

*Denis G. Thornley, B.Arch, ARIBA,
Manchester University*

Leading Groups in Building Field Prefer Canadian Tendering Method to UK "Bills of Quantity" System

Concerned over the recent campaign to promote introduction of the British Bills of Quantity system of tendering in Canada in place of the present method of tendering, developed over the past 70 years to serve Canadian needs, the presidents of the four leading national organizations in the building construction field on 26 February, distributed a memorandum comparing the two systems and explaining why they feel the Bills of Quantity system to be out-moded and unnecessary in Canadian tendering practices.

The memorandum was prefaced by an open letter to owners and potential buyers of construction services, signed by Harland Steele (F), President, RAIC; H. R. Montgomery, President, Canadian Construction Association; J. H. Ross, President, Association of Consulting Engineers of Canada; and W. G. White, President, Canadian Institute of Quantity Surveyors.

The memorandum reads as follows:

The British Bills of Quantities system of tendering currently being promoted in Canada is considered by the design professions and the construction industry to be out-moded and unnecessary in Canadian tendering practices.

The principal argument cited for the use of the British system is that the provision of detailed bills of quantities to bidders reduces their estimating expenses, and that the resulting savings will more than compensate the owner for the fee charged to him by those preparing the bills of quantities and measuring the work during construction and on completion. The latter fee, is of course, in addition to the normal fees for architectural and engineering design and supervision.

It is also contended that the use of the British Bills of Quantities system will enable a faster commencement of construction operations.

It is reported, however, that the practical experience of both general and trade contractors in Canada indicates that their work in compiling tenders prepared under the British System is much more costly, involving very much more time and effort than is the case with the usual procedure followed in Canada and the USA. Additional staff is required by the successful contractors to check quantities on the completion of the project with the firm who prepared the bills. This, it is stated therefore, reflects an increase rather than a decrease in the contractors costs, which in turn increases the cost of the project to the owner.

Referring to the claim for a faster commencement of building, this may

well be an important factor in other parts of the Commonwealth where the architectural and engineering professions are not geared to produce detailed plans and specifications at the time of tendering. In such cases the designers' plans require the bills of quantities to fill in the missing details. A recent comment from the United Kingdom, where the Bills of quantities system with provisional quantities is followed, is of considerable interest in this regard. At the 69th Annual Meeting of Humphreys Ltd., London-based contractors, the Chairman of the Board stated:

"It is more than ever essential that the work is pre-planned to the last detail by the client and the architect. If this is not done, and it rarely is, an abundance of variations occur. These variations give rise to claims to recover the extra costs incurred in carrying out the work involved. Such claims result in long and protracted negotiations between architect, quantity surveyors and contractors, sometimes taking up to two years or even longer before they are settled . . . The cost in loss of interest on the money in dispute and the work of the staff in preparing the claims reaches a very high figure, and unless the methods of reaching a mutually agreeable solution are speeded up, this burden will continue to arise out of this present system of tendering."

It is suggested that if it is a matter of urgency that a project be commenced before contract tender documents and drawings are fully prepared, the normal procedure of engaging a contractor to execute the work on a cost plus fee basis is a much faster method than preparing a bill of quantities.

The "Guide to Bidding Procedure" approved by the RAIC and the CCA recommends for building construction projects:

"Ordinarily, requests for unit prices at the time of tendering should be limited to excavation, concrete, formwork and reinforcing steel necessary for adjusting underground foundations."

This policy is accepted as the one which best serves to facilitate swift and less complicated tendering. The fear is expressed that the introduction of the British Bills of Quantities system of tendering requires too many details and unit prices contrary to accepted Canadian practice.

In conclusion, it is considered that the introduction of such a vastly complicated system such as the British Bills of Quantities is a retrograde step and entirely alien to the tempo of construction operation in North America. Potential buyers of construction services are advised to weigh carefully any advertised advantages of cost and time

INSTITUTE NEWS

saving which have never been proven under the British Bills of Quantities system of tendering in Canada.

Your architect and consulting engineer in consultation with your experienced contractor and their respective professional Canadian quantity surveyor are the best people to advise you on cost savings and time-saving practices in the industry they are pledged to serve.

It is proposed that a further study of the application and suitability of a Canadian form of schedule of labor and materials, which would be beneficial to the industry as a whole, could be the outcome of further consultation between the signatories of this memorandum.

Art for Air Terminal Buildings

Nationally representative advisory committees will advise the Minister of Transport on works by Canadian sculptors, painters and muralists for three major new air terminal buildings under construction at Toronto, Winnipeg and Edmonton and due for completion in 1963.

The value of the commissions, based on a percentage of the costs of the building, will be approximately \$160,000 for Malton and about \$50,000 each for Winnipeg and Edmonton.

The advisory group for the Winnipeg terminal, for which the architects are Green, Blankstein and Russell, will be appointed in late March; and that for the Edmonton terminal, for which the architects are Rensaa and Minsos, in April.

The Malton advisory group, which held its first meeting February 23, is composed of Dr E. R. Arthur (F), Toronto; Dr Charles C. Comfort, Director of the National Gallery; Dr Thomas Howarth (F) Director of the School of Architecture, University of Toronto; John C. Parkin (F) of John B. Parkin Associates, consulting architects for the project; John A. Russell (F) Director of the School of Architecture, University of Manitoba; Dr Evan Turner, Director, Montreal Museum of Fine Arts; and William Withrow, Director, Toronto Art Gallery.

1962 RIBA Royal Gold Medallist

Her Majesty the Queen, on the recommendation of the Royal Institute of British Architects, has announced the award of the RIBA Royal Gold Medal for Architecture for 1962 to Prof Sven Markelius of Stockholm.

PROVINCIAL NEWS

Prof Henry Elder new Director of UBC School of Architecture.

The appointment of Professor Henry Elder, MBE, of Cornell University, Ithaca, New York, as Director of the School of Architecture at the University of British Columbia was announced today by President N. A. M. MacKenzie.



Prof. Elder, who is director of graduate studies in architecture at Cornell, succeeds Prof Frederic Lasserre, who was director of UBC school of architecture from 1946 to April, 1961, when he was killed in a climbing accident in the Lake District of England.

Prof Elder is a native of Salford, Lancashire, England, and was educated at the School of Architecture, Manchester University, the Manchester College of Technology and the Royal Technical College in Salford, England. He is a fellow of the Royal Institute of British Architects and the International Institute of Arts and Letters. From 1933 until 1955, when he went to the United States, he combined a teaching career with the practice of architecture. From 1933 to 1943 he was a partner in the firm of Roberts, Wood and Elder in Manchester and from 1950 to 1956 was senior partner in the London firm of Elder and De Pierro. From 1933 to 1950 he lectured at the Manchester University College of Technology, the Royal Technical College, Salford, and the Regional College of Art, Manchester. From 1950 to 1952 he was associated with the Architectural Association School of Architecture in London as head of the "final school" or the fourth and fifth year program. He was appointed vice-prin-

cipal of the Hammersmith School of Building and Arts and Crafts in 1954.

In 1955 Prof Elder went to Cornell as visiting critic in the College of Architecture. The following year he was appointed a professor of architecture and lectured on architectural design and the philosophy of architecture. In 1958 he was appointed professor in charge of graduate studies in architecture.

During World War II Prof Elder carried out research into the effectiveness of weapons and was a member of the 1945 British mission to Japan to examine the effects of the atomic bombs on Hiroshima and Nagasaki. For his work during the war he was awarded the MBE.

At Cornell Prof Elder was a member of the library board, chairman of faculty committees on the Festival of the Contemporary Arts and student affairs, a member of the faculty committee on international affairs, the Cornell fellowship committee and the board of the Cornell United Religious Work.

OBITUARY

Sadly I write this brief obituary of one of our fellow architects, George Fraser Cole who passed away at Amherst, NS, on January 10, 1962, at the comparatively early age of forty-nine years.

Mr Fraser was a valued member of our staff for many years, always a talented and willing worker, congenial and cooperative. In 1957 he opened his own office at Amherst. He was able to complete work on several schools and other important buildings from this office.

Our sympathy goes to his wife, their son, and to his aged mother.

Leslie R. Fairn, Wolfville, NS

Journal Committee for Alberta:

The Council of the Alberta Association of Architects at a recent meeting appointed the following to be members of the Association's Editorial Committee of the RAIC Journal: A. Bowers, Calgary, Chairman; S. Hodgson and H. Dunn, Edmonton, M. Evamy, Calgary and D. K. Bissell, Red Deer.

Lecture on Structural Failures

A lecture on "The Lessons to be Learned from Structural Failures" will be given by Dr Jacob Feld, New York consulting engineer, on April 19 at 7.30 p.m. in the Mechanical Engineering Building, University of Toronto. The meeting is under the sponsorship of the Toronto Joint Area Committee of the Engineering Institute of Canada, the American Society of Civil Engineers and the Institute of Civil Engineers.

REGISTRATIONS

Ontario Association of Architects

January 26, 1962

Cunningham, W. F., B.ARCH, University of Toronto, 106 Royal Avon Crescent, Islington, Ontario

Grant, Alastair G., B.ARCH, University of Toronto, 64 Oriole Gardens, Toronto 7, Ontario (*James A. Murray*)

Pencak, L., B.ARCH, University of Toronto, 33 Riverwood Parkway, Toronto 18, Ontario (*Gilleland & Janiss*)

Pennington, R. P. G., DIP.ARCH (MANC), ARIBA, Manchester University, 486 Rathburn Road, Islington, Ont (*Toronto Board of Education*)

Rolph, A. P., B.ARCH, University of Toronto, 467 Spadina Road, Toronto 10, Ontario (*Webb & Menkes*)

Thompson, R. F., B.ARCH, University of Toronto, 36 Lincombe Drive, RR No. 1, Thornhill, Ontario (*John Graham Company*).

March 2, 1962

Bona, John, S. B.Arch, 22 Grassmere Road, Toronto 9.

Casey, T. E., B.Arch, 33 Coulson Avenue, Toronto 7.

Harvor, Stig, B.Sc. B.Arch, 173 Daly Avenue, Ottawa 2.

Johnson, F. Geoffrey, B.Arch. c/o *Smith, Hinchman & Grylls*, 200 Canada Trust Building, Windsor.

Nova Scotia Association of Architects

January 2, 1962

Shadbolt, Douglas B.Arch, University of Oregon, Nova Scotia Technical College, School of Architecture, Spring Garden Road, Halifax (*Director, School of Architecture. N.S.T.C.*)

February 5, 1962

Hebert, Lucien Paul B.Arch, University of Manitoba, 311 Barrington St. Halifax, N.S. (*Webber, Harrington & Associates*).

Employment Wanted

Member of Royal Australian Institute of Architects, finishing a 2-year engagement with Department of Public Works in the Territory of Papua and New Guinea in December 1962, seeks position with architectural firm in Canada in 1963. Bruce Tomlinson, Box 25, Post Office Konedobu, Port Moresby, Territory of Papua and New Guinea.

NEXT ISSUE

British Columbia

The 1962

Pre-Assembly Issue

The Ontario Association

By the Roving Reporter

I HAVE NEVER ATTENDED A MEETING of the Progressive Conservative Party in Ontario, but I would think it would be not unlike an annual meeting of the OAA. It has all the qualities of orderliness, respect for the chair and an obvious attempt on the part of movers of resolutions to contribute something to the common good of the profession. Speakers, even in opposition on a matter, are invariably polite to one another, the tedious speakers of last year are back on the job, and those who provoke the wrath (never spoken of course, but indicated by frowns and head shaking) of half the assembly are treated with infinite patience.

This year followed the traditional pattern in the same room in the Royal York. It is not a pleasant room, and the mind at times wanders from the remarks of the member for Ottawa or Hamilton (knowing one will have many other opportunities) to the central mural of the Toronto Purchase. Not to be outdone by a neighboring hotel which made a general out of Lt Col Simcoe, the Royal York put deputy Surveyor-General Collins into a scarlet uniform and a cocked hat and surrounded him with a gaggle of generals much like Napoleon at Waterloo. The unhappy Indian stares forlornly by, ready to put his mark on the document that gave his tribe \$1700 in cash and goods for one third of the county of York.

A matter of more than ordinary interest to the meeting and to architects in Canada was that concerned with the post graduate training (as distinct from education) of the architect. A committee under the chairmanship of Mr Wilson Salter is giving thought to a proposal to extend the period prior to registration from two to three years. Much work has to be done before the proposal can be laid before the Regis-

tration Board, but, when asked by the President for a show of hands, the meeting was unanimous on the desirability of the 3-year period.

Mr Page asked the indulgence of the house on a topic that gave him increasing concern. He stated that, with the mature reflection of later years, he had come to the conclusion that architects did no service to the profession by accepting Christmas gifts from contractors. He was disarmingly frank in saying that he had not always thought so. As everyone knew, gifts of real munificence like Napoleon brandy or quart-size caviar in a Steuben glass jar laid on black velvet in a mahogany box (my interpretation, not Mr Page's), are viewed with proper suspicion and returned with a curt note to the donor. However, in Mr Page's view and many others, the whole system is an undignified one that should be discouraged. The Chairman pointed out that a new device has been worked out by the more reputable contractors. The architect is informed by the contractor (as in funeral notices) that he wishes the recipient a Merry Xmas and that he is sending a contribution to a worthy and deserving charity — probably the Hunters' and Anglers' Association. Even there, there is the suspicion of a favor that might well be the subject of discussion by the "Professional Guidance" committee.

Mr Prack, representing the Hamilton chapter, proposed the kind of resolution that will delight historians of the future when they write the history of the OAA. His motion directed Council "in consultation with the School of Architecture of the University of Toronto to devise and investigate . . . a form of assistance to the undergraduates and/or graduates in accordance with the responsibilities of a learned and successful profession". This motion, which we believe to be a landmark in the history of the Association, was passed unanimously.



Members of the Council hold their first meeting during the 72nd Convention and Annual Meeting of the OAA at the Royal York Hotel, Toronto. Left to right, Peter Tillman, London, treasurer; Frank Burcher, Hamilton; D'Arcy Helmer, Ottawa; Douglas E. Catto, Toronto, retiring president; Earle C. Morgan, Toronto, newly-elected president; Prof James A. Murray, University of Toronto school of architecture, vice-president; J. Stuart Cauley, Toronto; Louis N. Fabbro, Sudbury; Douglas C. Johnson, Windsor. Messrs Cauley, Fabbro and Johnson are newly-elected members of council. The continuing members, in addition to the newly-elected officers and the retiring president, are Messrs Burcher and Helmer.

The next motion from the Hamilton Chapter was less succinct and less likely to be a beacon in our development. It was proposed by Mr Wall, felt strongly about by Mr Steele and Mr Ferguson, and had to do with the appointment of a committee to examine the legislation under which we practise our profession and to seek amendments "to improve the present situation". An immense amount of time would have been saved if a proposal of Mr Prack's that "Mr Wall and Mr Ferguson both be on the committee" had been carried. However, he was reproved by the Chairman who didn't think him "exactly in order", and Mr Prack did not question his ruling. The motion was carried.

An unfortunate feature of the meeting arose from the fact that quite a few resolutions were proposed that bore only a vague resemblance to the printed copy in everyone's hands, and, not infrequently, members spoke at length for or against the obsolete resolutions before they were halted by the Chairman. This, coupled with the extraordinary ambiguity and verbosity of the preambles caused Dr Howarth and Mr Salter (with suprising heat) to comment on the need for editing by a Resolutions Committee prior to printing. For once, one found oneself in disagreement with the Chairman who, quite positively, took the view that editing would be ungentlemanly, if not indeed an infringement on the liberty of the subject. It is not unlikely he will review his ruling when he sees several new committees struggling to find a gleam of light in the cloud of generalities with which they will be faced between now and the next annual meeting. A motion that raised Mr Salter's ire was one calling for a "stepped up interest in building by-laws and regulations with the object of ensuring that these are progressive and based upon performance." Supported by an unholy alliance between Mr Harry Kohl and Mr Sterling Ferguson, the motion was lost — 35 to 24. It was one of the very few resolutions lost that day. A motion that received unanimous support was one proposal by Prof Raymore. As a result, the OAA is asked to organize a series of refresher courses "in the science and technology of their industry (sic), in professional practice, law, economics, specifications, together with the opportunity of broadening their knowledge of the way in which the building industry works and is regulated". Mr W. A. Watson welcomed the proposal, but indicated that for those living at a distance, Friday or Saturday courses would have more merit than night courses. He had learned that such courses are regularly held on these days by the Law Society

of Upper Canada and are very popular. He was also able to inform the meeting that he had "dug" deeply into the question of refreshers and found, rather to his dismay, that the term was used by undertakers in Ontario who require attendance at intervals not greater than five years.

A young man who has only to open his mouth to arouse the opposition of half the house is Mr Leman, whose courageous stand on something or other we praised last year. On a motion of his to set up a committee of research "for the explicit purpose of determining how new social conditions and matters and techniques of teaching will affect the planning and design of schools," the customary opposition rose to a man. It all seemed very simple, but other school committees exist and fought (one wonders why) for their continuance; Mr Murray and Mr Ian MacLennan were "confused" and Mr Macrae felt the Department of Education had the situation well in hand. In the end Mr Leman found himself supported by such stalwarts as Mr John C. Parkin (F) and Mr Shore (F) and the motion was carried.

Emboldened by his success with this motion, Mr Leman introduced another recommending that the OAA sponsor an annual conference like the Banff Session in Alberta. It may be true that he lost sight of this pearl in an oyster of "not withstanding the generality of the foregoing", but it came as a surprise to the Roving Reporter and many others that the Chairman ruled the motion out of order. The grounds that the resolution was previously dealt with in Resolution 4 was disputed with his customary delicacy of phrase by Mr Crinion, which drew from the Chairman the question of whether the meeting would challenge his ruling. It did not, and we shall not hear for another year about an Ontario Banff in the bush of Northern Ontario. Just as a matter of curiosity, what did Resolution No. 4 say about Banff — we haven't been able to find it.

Mr Harry Kohl shares with Mr Leman the distinction of barely making a motion before the heavens open and a deluge of argument descends on his unprotected head. More so perhaps in the RAIC than the OAA, but, in this meeting, he provided not a little good national abuse and an emphatic chorus of no's. That he was innocent of any attempt to confuse the members may be gathered from his motion. "I make motion that the Chapter accept the Policy of Priority and direct Action. This is not to create a committee to make a study, but by way of a motion, if I am in order, from that body to the Council to express the de-

sire that certain items be acted upon immediately as a result of an active and intense study of items". Mr Kohl later received the well merited congratulations of his friends, but the motion was lost.

This Reporter was quite confused when it came to the matter of fees. Mr Smale spoke as the only member of the committee present, and Mr Fliess followed immediately with a similar claim. As the engineers' fees rise, the static conditions of the architects' fee does seem to present an anomalous situation calling for action. Did one hear that the committee has sat for three years without a final report? At this point the business meeting of the

Something Old, Something New . . .

Architectural Conventions have much in common with society weddings.

Apart from the essential business to be done, there are all manner of pleasurable diversions for the invited guests. Foremost, of course, is the curiosity and entertainment there is in meeting one's contemporaries and covertly assessing the ravages of time and fortune. At the same time there is comfort in the vague feeling that by one's presence one is making a contribution to an important tribal ritual.

The exhibitors' cocktail party was held on Thursday evening and like the pre wedding 'stag' party, effectively built up the tempo for more august things to come. Inhibitions (if they exist among architects) were submerged, friends and protagonists united and the supplier and architect provided with an opportunity for frank expressions of opinion (normally only taken advantage of toward the latter stages of the evening).

All our old friends were back — the flowing bar and groaning buffet, the strolling gypsy fiddlers (presumably non-union) the lack of chairs — the admirable cigarette girl, and in the background for the professionally curious, like the display of wedding gifts, the exhibitors' booths laid out with great care for our inspection and presided over by our host's amiable representatives. (Worthy of special mention were, I think, the Canadian Rogers Eastern booth and the Alcola display).

On Friday morning the bans were read and the members divided, according to choice or whimsy, to deliberate under the guidance of 'group leaders' on a plethora of subjects ranging from Architectural Education to Formalism in Design. From the conclusions, (or lack of conclusions) submitted to the Annual Meeting it was apparent that

72nd annual general meeting of the OAA adjourned, but one would be remiss if one did not express the pleasure of the members in the excellence of the arrangements, and our happiness in seeing the President in such very good form and health. Formal letters of thanks, however sincere, may not be as convincing as the word of an ordinary member who spoke with many of his colleagues in the Exhibitors' Room. This Reporter did just that, and the unanimous opinion seems to have been that a tour of the show was never so rewarding, and that the annual exhibition of materials has become a "refresher" and a surprise that is now an invaluable part of the professional life of the architect in Ontario. *E.R.A.*

though this procedure appears to work well in keeping the members instructively diverted, it is not a source of profound conclusion.

The Annual General Meeting was divided into two parts; the first was held on Friday afternoon and the second on Saturday morning. This arrangement works and appears to be a definite improvement over previous years.

The deliberations of the General Meeting, from the presentation of the annual reports and election of members, to the consideration of motions from the Chapters and the floor were carried on under the firm and patient hand of the retiring President, Douglas Catto.

We note with pleasure the ratification by the meeting of the election to honorary membership of two architects upon their retirement from active practice who have made a distinguished contribution not only to architecture in Ontario, but also to the profession — James Govan and Peter James O'Gorman.

On Saturday evening amid suitable pomp and circumstance, Earle C. Morgan was installed as President, and to the accompaniment of Johnny Lindon's orchestra, the 72nd Annual Convention passed into history.

Something Old

Professor Anthony Adamson, introduced with humour and at length by Professor Murray at luncheon on Friday, conducted the members and their ladies on a delightful tour through the musty attics and across the displaced verandahs (a sinister appendage of Portugese Colonial origin) of Loyalist Upper Canada and into the more intimate nooks and crannies, not to mention plumbing arrangements of the Family Compact and their friends. Colonial, Georgian, neo-classical, neo-

Gothic, Greek revival and Regency houses and the succeeding stratas of colonists who produced them in defiance of their surroundings, all had a place on the tour.

A good start in the after-dinner department and an excellent prelude to the centennial celebrations gathering momentum on the horizon.

Something New

Louis Kahn, the speaker at the Dinner on Friday evening, is an educator and prophet. His subject "Law and Rule in Architecture" is a thesis that only a brave man would attempt. When so much of the production of architecture is an instinctive personal and often intangible expression on the one hand and a rigid disciplined mechanical process (bound by square foot cost, by-law and precedent) on the other, the architect has a tendency to professional schizophrenia which only a trained alienist, such as Mr Kahn, could begin to rationalize.

It is comforting to know that a man like Louis Kahn is in a position where he can inspire students of architecture with what they deserve — ideas, not statistics. It is understandable why he is described as the spiritual leader of the Philadelphia School.

Something Borrowed

On Saturday Dr Brock Chisholm addressed the general luncheon and was introduced by an example of his obstretrical efficiency—David Molesworth. He spoke on his celebrated topic, the need for man's awareness of his social inter-dependancy in the telescoped world of to-day; the vital importance that he understand the fact that the luxury of nationalism is no longer possible, and that he accept the conclusion that social responsibility is the only alternative to world suicide.

Dr Chisholm is a distinguished Canadian and a warm personality. It is hoped that the obvious analogy that exists between the world situation and the situation within the profession was not lost on his audience.

And Something Blue

The evaluation and recording of the deliberations and resolutions produced by the record number (401) of members attending, concerning the vital questions which face the Association in 1962 has been reported elsewhere.

The spectacle on the one hand of earnest members of the Association writhing under the Laocoonic coils of resolution upon resolution, whose inevitable end appears to be in the fertilization of yet another committee; and on the other the succession of polished speakers who appear to use the occasion as an opportunity to show their wares, was a bit depressing.

To that forgotten figure, "the mother

of the bride" or more properly "the Convention Committee", whose hard and often discouraging work over a period of many months was responsible for the success of the Convention,

The Annual Report of the President, Mr. Catto

YOU WILL HAVE SEEN from the Annual Reports which we have just received and considered, that while the year has been a busy one for Chapters and Committees, it has also been productive of reasonably concrete results as far as the Association is concerned.

With any Association such as ours, which operates in the Provincial field but which also has to consider the National field, it is not always possible to reach objectives with the speed which some Members may consider desirable. Very often some matters must be referred to all Provincial Associations and then be finally implemented through National channels, which in our case, is the RAIC, before tangible results are achieved. As instances of this type, I would cite the new Client and Architect Agreement form which was printed at the end of 1960 after some two years of work and consultation; also, a code governing the Conduct of Competitions which is in process of preparation for publication. The draft of this code was approved by Council and the Registration Board last April, but it is not yet approved by all Provincial Associations. In the Provincial field it has been possible to complete the draft of a joint OAA - OGCA document during the past year and it should be published early this year.

The Committees of the Association cover a wide range of activities and are completely supplemented by representatives to various outside organizations at the Provincial level and by the Chapters at the Municipal level, but I feel that more support of the Chapters is required from the membership at large. We have a total membership of 988 but of these only 510 are members of Chapters, although there are in addition some 88 Associate Members of Chapters. From these figures, one can readily see that a more active interest by individual members is to be desired if the best results are to be obtained at local levels.

Attendance at the Annual Meeting is most important but the constant all-year support of every member is required if the Association is to be enabled to carry out all its aims and reach its objectives.

Yesterday the results of the Registration Board elections were announced. Mr Eric W. Haldenby of Toronto was re-elected as Chairman, and Mr William A. Watson of Belleville re-elected

a great debt of thanks is due. May they rejoice in the knowledge that the union was properly consummated and we feel sure will be suitably blessed in the year to come.

J. G. Wasteneys

ted as Vice-Chairman. In addition to these, the Board is composed of Dr Eric R. Arthur of Toronto, Mr Logan V. Gallaher of Kingston, Mr Wilson A. Salter of St. Catharines with Mr John D. Miller as Secretary.

Despite the report of the Registration Board which is included in the Annual Reports, I am sure that the membership at large does not realize the full extent of the work and the great amount of time devoted to the Association by these dedicated members, or the heavy work-load assumed by their Committee of Examiners under the able chairmanship of Professor W. G. Raymore.

During the year, we have, as you will see from the Registration Board Report, lost twelve members through death, and to these, I regret to advise you, must be added the names of Mr Lindsay A. Wardell of Toronto, who died on the 13th January, 1962, and Mr Thomas E. Muirhead of Ottawa, who died on the 6th October, 1961.

Council during the past year, has had a rather heavy programme and a number of semi-formal sessions have been required during the evenings preceding the regular monthly Friday meetings, in order to permit of all matters on the agenda being dealt with. This has entailed considerable additional time on the part of Council members from outside of Toronto. I would like to express my appreciation of their loyalty and support throughout the year, and especially of the willing and capable manner in which Mr Earle Morgan took over my duties in addition to his own during my enforced absence due to illness. He has been, and I am sure he will continue to be, a tower of strength on Council.

You already know the results of elections to office on Council, as announced yesterday, but I would like to read to you the complete list of Council members for the coming year: President Earle C. Morgan and Vice-President Prof James A. Murray of Toronto and Treasurer Peter Tillman of London. Continuing members: Mr Frank Burcher of Hamilton, Mr D'Arcy Helmer of Ottawa, Mr D. E. Catto, Past President. In addition to the above, we are pleased, as a result of the recent elections, to welcome the following new members to Council: Mr J. Stuart Cauley, Toronto, Mr Louis N. Fabbro of Sudbury, Mr Douglas C.

Johnson of Windsor. These new members have all had experience in local affairs and will I am sure add to the effectiveness of Council.

In addition to Council, I would remind you that we are very fortunate in having with us, Mr John D. Miller, our Secretary, and Mr S. C. Cosby our Assistant Secretary, without whose experience the deliberations of Council and the operation of the Association would be very difficult.

It is with regret that Council accepts the fact that the sound advice of the retiring members will not be heard at Council meetings this year, as we are losing the following members, who have completed their elected terms:

Mr James W. Strutt, Ottawa, our able and efficient past-president who has been of great assistance and has always been willing to undertake additional tasks.

Mr Lynden Y. McIntosh of Fort William—also a past-president who is now retiring from Council after six successive years of constant effort to promote the interests of the Association.

Mr William J. Carter, our Treasurer of last year, who, in spite of all difficulties has managed to produce a very satisfactory financial report and has been most helpful in Council deliberations.

I wish to thank these members on behalf of Council and the Association. We will miss them, but are assured of their continued interest and support.

On a number of recent occasions, members of organizations similar to our Association have remarked that we are most fortunate in having our own headquarters which are available for so many uses by all members and which are also a source of additional revenue. As you will see from the financial statement, the building is now almost paid for and should become completely ours during the coming year. As a result of the changed financial conditions, the Association may be able to extend its activities in other spheres during the coming years. The Association certainly owes a great deal to the older members who had the courage and foresight to embark upon what, at that time, appeared to be a very venture-some project.

One very important Committee which has not submitted a written report is the Convention Committee. I presume that they consider a visual demonstration of their efficiency and accomplishment is more effective. This Committee, under its able Chairman, Mr James Craig, and Vice-Chairman, Mr Geoffrey Armstrong, has, as you will see from your programme, a membership of 13. Despite this handicap but with the assistance of the Ladies' Committee, Mr John Miller, Mr Stan Cosby and our hard-working secretarial staff,

they have once again placed at your disposal all the necessities of a successful Convention.

A unique feature of our Convention is the annual display which opened last night in the Canadian Room and which includes not only exhibitions by outstanding companies but also by the School of Architecture—University of Toronto, and the School of Architectural Technology—Ryerson Institute. These displays presented, under one roof, with highly qualified personnel in attendance, provide an unequalled opportunity for all members to obtain information over a wide range of subjects. The Association is most grateful to our exhibitors for their continued support and their effective assistance in making our Convention a success.

Thank you for the opportunity of serving you in 1961, and I hope that 1962 will be a year of even greater progress. *Douglas E. Cato, President*

New Brunswick Annual Meeting

The Annual Meeting of the Architects' Association of New Brunswick took place February 16-17 at Moncton.

Neil M. Stewart (F), Fredericton, was elected President; W. W. Alward (F) Saint John, Vice-President; J. R. Myles, Saint John, Secretary-Treasurer; and H. Claire Mott (F), Saint John, Registrar. Elected to Council were G. J. Gaudet and H. P. Jacques Roy of Moncton, John R. W. Disher, Alfred Chatwin and R. F. West, Saint John; and D. W. Jonsson, Fredericton. Mr Stewart and Mr Myles were named representatives to RAIC Council.

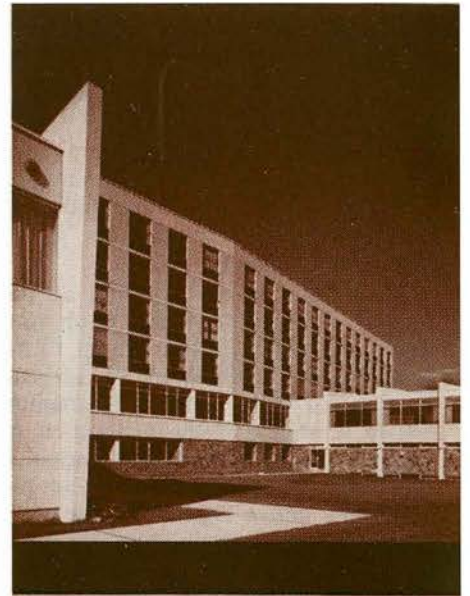
Reports presented indicated the Association had had an active and successful year. The Registrar reported an active membership of 27, with two honorary members and four student associates.

The President RAIC, Mr. Harland Steele (F) of Toronto, attended and addressed the members.

The annual report of the President, Mr Stewart, follows:

Most of the activities of the Association will be reported by the chairman of the various committees, so to avoid duplication I shall make my report in very general terms.

The temporary expedient by which we obtained a council of six members at the last annual meeting has resulted in a good working number attending each of the council meetings. Including the Past President and the Secretary, most meetings have been attended by from five to seven and even on the occasions when two or three were unable to attend, the number present was sufficient to carry out the business of the



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meeting. As the by-law change to allow six elected members of Council has been authorized we should not in future years have difficulty in getting a quorum of the Council together.

The experiment of holding meetings at Sussex at regular monthly intervals has proved popular as it divides the travelling time about equally between the three centres and the meetings have been free from telephone interruptions.

The Honorary Secretary-Treasurer, Mr J. R. Myles, and myself, have represented Association on the Council of the RAIC for the past year and attended the meetings held at Quebec in May, 1961, and recently a special Council meeting held in Montreal, January 27th.

The RAIC is still in financial difficulties and without doubt will approach the Associations for an increase in the annual subscription within the next year. I should like to take this opportunity to appeal to our membership to give full support to the work of the Institute. With the exception of Ontario and Quebec, the Provincial Associations are too small in numbers to exert any great influence in political circles or to carry out any program of work in the public or professional interest excepting on a very local scale. The seven smaller associations should be the strongest supporters of the central organization. In Ontario there appears to be a natural tendency to rely on the OAA to the neglect of the RAIC, as is shown by a reported registration of some four hundred at the recent annual meeting of the OAA, more than double the usual attendance at RAIC Assemblies.

The RAIC has accomplished a great deal for its members during the past few years. To mention only one instance which could not have been accomplished by any one Association,

most if not all of the Dominion Government departments have accepted a new scale of fees and conditions for public work which in the case of a project with a contract value of a quarter million will add \$3,750.00 to the architect's fee and reduce his costs of supervision by not less than \$3,000.00, a total of \$6,750.00.

This is a very tangible benefit and I think there should be no complaint if the Institute asks for an additional twenty dollars a year for carrying on its work.

It has always been my contention that the members subscriptions should be sufficient to cover all the fixed and administration costs of the Institute, leaving the whole of the revenue derived from outside sources, such as the publication of the *Journal*, to be used for special purposes. To do this with the budget at the present level — that is at approximately \$75,000 — would require an annual subscription of \$30.00 from each of the approximately 2,500 members.

The revenue from the *Journal*, sale of standard documents, bond interest and sundry receipts is estimated at \$22,300.00 in the 1962 budget. Practically all of this is budgetted for administration costs. The important fields of Architectural Education and Public Relations have between them an allowance of \$150.00 in the 1962 budget, and to make a balanced budget nothing is included for loan repayment or contingencies so that in all probability it will be necessary again to draw from the reserve to cover a deficit.

For a number of years the *Journal* produced a very large revenue, the greater part of which was put into a reserve for the purpose of acquiring a permanent headquarters building. The central office of the Institute has been built up to an efficient organization ca-



The 1962-63 Council for the Architectural Association of New Brunswick. From left to right, standing: H. P. J. Roy, J. R. W. Disher, J. R. Myles, Secretary-Treasurer, A. Chatwin, D. W. Jonsson, G. Gaudet, R. F. West. Seated: N. M. Stewart, President, H. Steele, President, RAIC, W. W. Alward, Vice-President.



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pable of making a very substantial contribution to the profession. This has naturally increased the fixed cost of administration. The base of management of the affairs of the Institute has been broadened to include all of the Associations, and our own Association took a prominent part in this re-organization. This has also resulted in higher costs for travelling.

When the *Journal* revenues declined we were left rather in the position of owning a fine car with no money to buy gas. I feel very strongly that this Association, having taken a strong position as regards the re-organization which has resulted in administration costs which are disproportionate to the revenue received from members' subscriptions, should now indicate its continued support of the Institute.

I intend therefore to introduce the following resolution to this annual meeting of the AANB:

"Resolved that this Association will accept an increase, not exceeding Twenty Dollars per member in the annual subscription paid to the RAIC at such time as this increase is accepted by a majority of the component Associations"

In conclusion I should like to express my thanks to the elected members of the Council for their active support during my year of office and to the ex-officiated members, Mr Wallace Alward, the immediate Past President; Mr J. R. Myles, the Honorary Secretary Treasurer, and also to Mr H. C. Mott, registrar and chairman of the examination board.

It is most encouraging that the Moncton architects, most of whom are comparatively new members, have taken a very active part in the affairs of the Association and have accepted responsibilities with goodwill and competence.

Neil M. Stewart

Nova Scotia Annual Meeting

The annual meeting of the Nova Scotia Association of Architects was held at the Nova Scotian Hotel, Halifax, on February 8th and 9th. The regular business meeting was held on the afternoon of February 8th and the following morning. Charles A. E. Fowler (F) was elected president for 1962-63. Other officers were T. W. Bauld, Asa Avramovitch, J. J. Napier, D. A. Webber, M. H. F. Harrington and F. C. Ford. Mr Ford was elected Honorary Secretary.

During the Friday afternoon session a panel composed of Charles A. Vaughn, former mayor of Halifax; Bob Grant, Development Officer for the City of Halifax; Douglas Shadbolt, Director of the School of Architecture at Nova Scotia Technical College. Asa Avramovitch, with C. A. E. Fowler as chairman, discussed "Civic Authority and Esthetic Control". This subject has special significance in the Halifax area in view of the vast redevelopment now being undertaken by the civic authorities. Many views were expressed both by the panel members and by architects from the floor. Two summary recommendations were expressed at the close of the discussion: that the city require a development permit, to be obtained at the preliminary design stage of any proposed project, and that an aesthetic advisory (guidance) committee of citizens with aesthetic qualifications be formed to assist the civic authority in processing development permits.

An informal dance and buffet was held on Friday evening at the close of the two day meeting.

New members admitted to the Nova Scotia Association of Architects were Douglas Shadbolt, Director of the new School of Architecture and Lucien Paul Hebert, a graduate of University of Manitoba.

Lester J. Page



Mr Harland Steele (F), President RAIC, visited Halifax in February, and was guest of honor at a reception for members of the Nova Scotia Association and their wives at the home of Mr C. A. E. Fowler, newly elected president of the NSAA, and Mrs Fowler. Left to Right, James MacDonalld, Mrs Carl Ford, Mrs Fowler, Mr Steele and Mr Fowler. (Photo by Slaunwhite)



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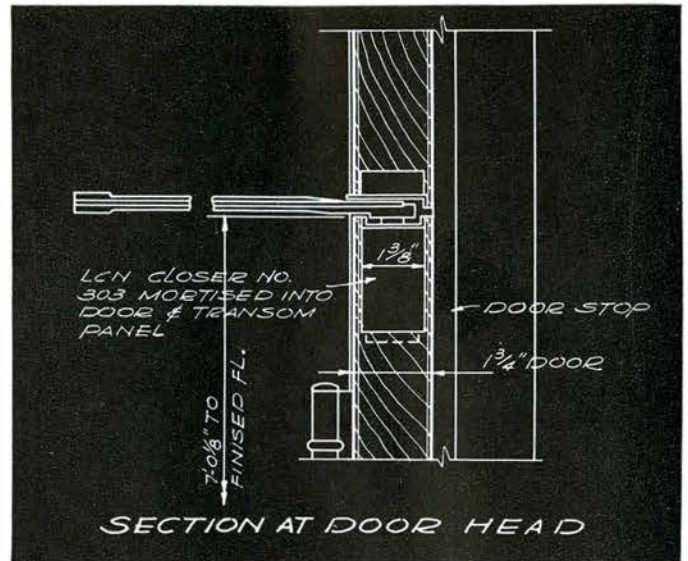
Galvafruid zinc rich paint. W. R. Meadows of Canada Ltd., 96 Vine Ave., Toronto 9, Ontario.

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(Continued on Page 84)

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(Continued from Page 82)

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NEW LITERATURE

A six-page folder describing how the community of Hopedale, Illinois, has tackled the high cost of hospital, nursing home and residence for the elderly on one site. For copies write to The Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio.

Information, photographs and drawings of Simpson Redwood Siding and Paneling catalog (A.I.A. No. 19-D-2) Now available from Simpson Timber Company, 2042 Washington Building Seattle 1, Washington.

Easy-reference catalogue of commercial (Aluminum) and residential (steel) registers, grilles and diffusers for air conditioning and warm air installations. Lloyd Register & Grille Co., Ltd., 30 Six Point Road, Toronto 18, Ontario.

Design Manual AA2. Anthes Allspans open web floor and roof framing members. Anthes Steel Products Limited, 3430 Dundas Street W., Toronto 9.

File folder on Styrospan, rigid insulation material. Dow Chemical of Canada Limited, Sarnia, Ontario.

Asbestolux Catalogue (French). Cape Asbestos (Canada) Ltd., 200 Bloor St. E., Toronto.

Comfort conditioning brochure issued by Acme Industries, Inc., 600 North Mechanic Street, Jackson, Mich.

Brochures on fiber glass reinforced translucent panels. Graham Products Limited, Inglewood, Ontario.

Non-Freeze Hydrant catalogue from Wade in Canada Plumbing Specialties Limited, 922 Roselawn Avenue, Toronto 19, Ont.

A 12 page condensed catalogue of Sound Systems Equipment available in English or French language from Philips Appliances Ltd., 116 Vanderhoof Ave., Toronto 17, Ontario.

Several studies into the usage of masonry wall reinforcing in stacked bond, glass block and cavity walls. Available from Dur-O-wal Cedar Rapids, Iowa.

A 12-page booklet, "Geocoustic . . . To Hear and Be Heard in a Room", The publication deals with the effectiveness of Geocoustic — the cellular glass acoustical unit which employs the "patch" technique — in a variety of applications ranging from class rooms to swimming pools. Obtainable from the Pittsburgh Corning Corporation, One Gateway Center, Pittsburgh 22, Pennsylvania, by requesting Booklet GC-5.

Wade Actimatic Hydrafilter Grease Interceptor Catalogue. Wade in Canada Plumbing Specialties Limited, 922 Roselawn Ave., Toronto, Ontario.

1961 edition of "Automatic" Sprinkler Hydraulic Data, available by writing to "Automatic" Sprinkler Company of Canada Ltd., Dept. PR, 7000 Jeanne Mance Street, Montreal 15, Quebec.

Catalogue of Fire alarm systems. The standard Electric Time Company of Canada Limited, Pointe Claire, P.Q.

The characteristics and advantages of precast cellular concrete blocks. "Siporex" Bulletin (Vol. 4, No. 2). Under the following headings: "Insulation", "Lightweight", "Fireproofing", "Workability" and "Structural Strength". In addition, the Bulletin lists suggested mortar mixes for both exterior and interior use. Copies may be obtained from Siporex Limited, 3285 Cavendish Blvd., Montreal, Que.

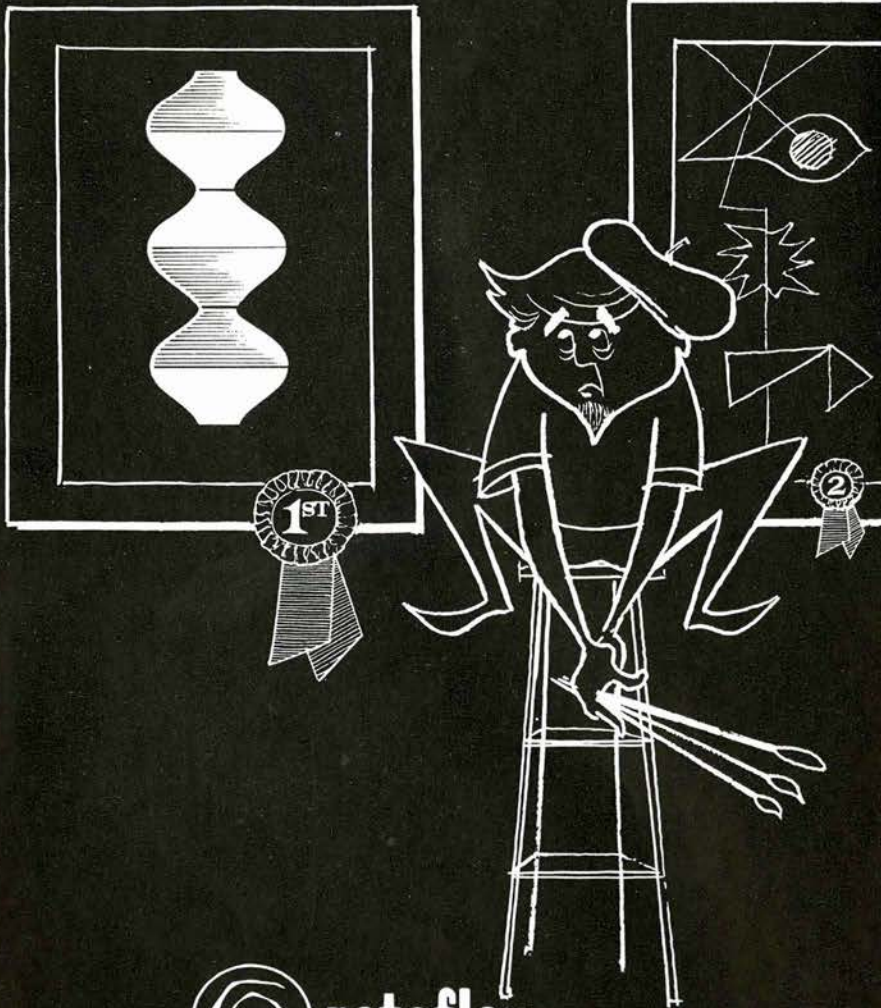
"Designs for 1962" a 24-page illustrated booklet containing details of fluorescent and incandescent fixtures for commercial and industrial use, grouped by categories. Available from Day-Brite Lighting, Inc., 6260 North Broadway, St. Louis 15, Missouri.

Catalog No. 40. A full range of chimney fittings and accessories together with specifications of each item. Selkirk Metal Products Ltd., 625 Wall Street, Winnipeg 10, Man.

"The control of Draft in Gas-Fired Equipment." A 32-page brochure covering the function, production, and control of draft, as applied to gas-fired furnaces, boilers, and incinerators for commercial, industrial, and institutional use. Field Control Division, Mendota, Illinois.

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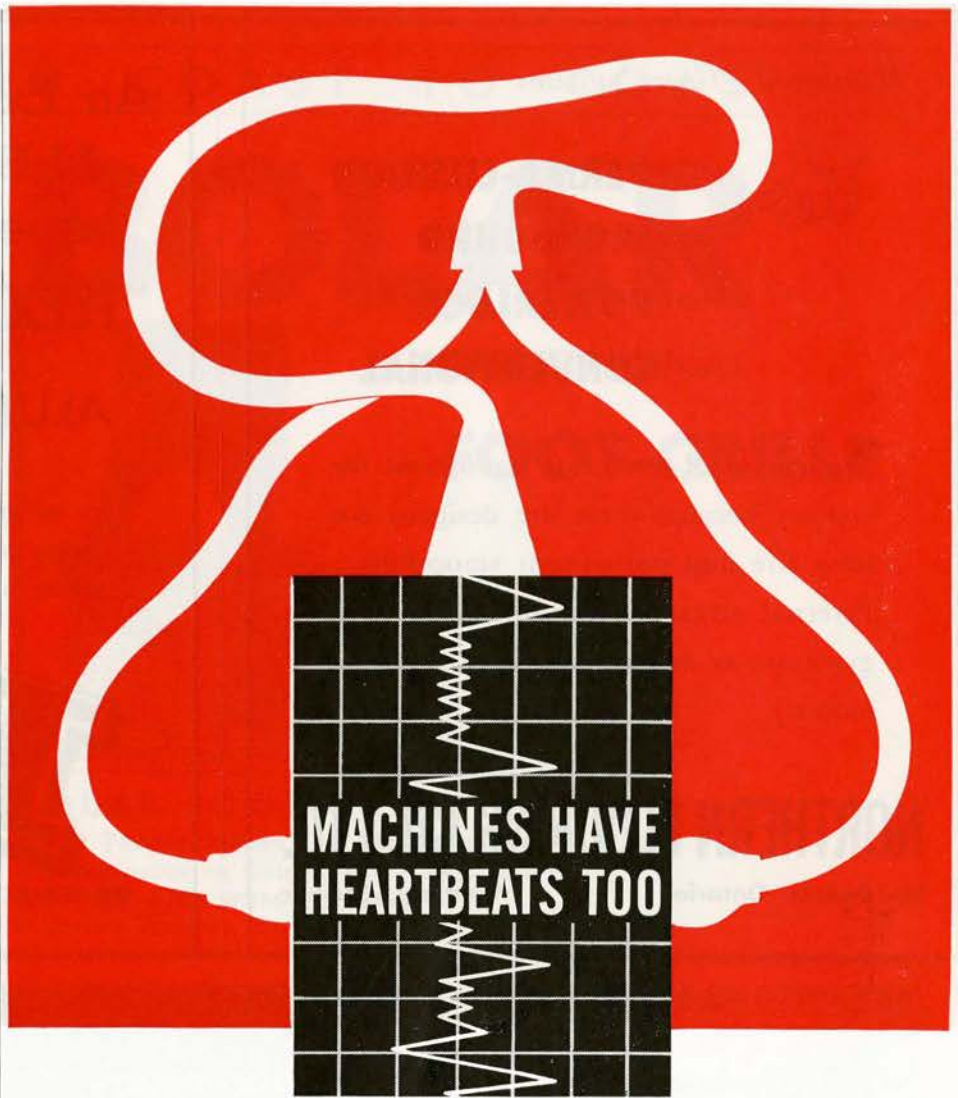
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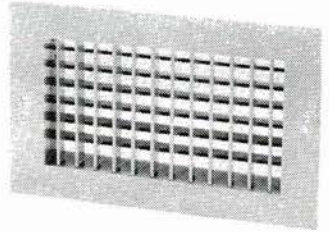
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COMING EVENTS

April 19 - 7:30 p.m.

Lecture "Structural Failures"
by Dr. Jacob Feld, of New York.
Mechanical Engineering Building
University of Toronto.

April 25 - 27, 1962

1962 Conference of
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National Research Council, Ottawa.
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April 29 - May 5, 1962

24th Annual Convention of the
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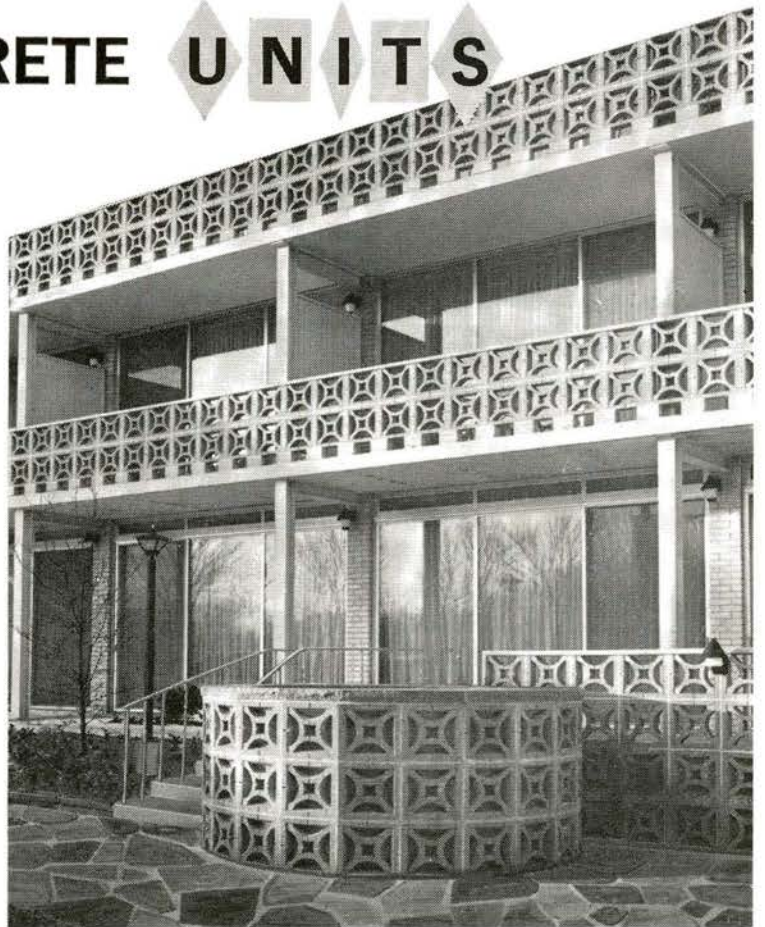
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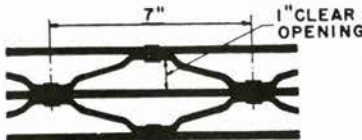
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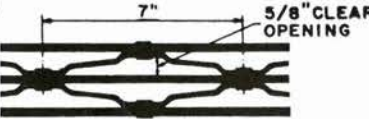
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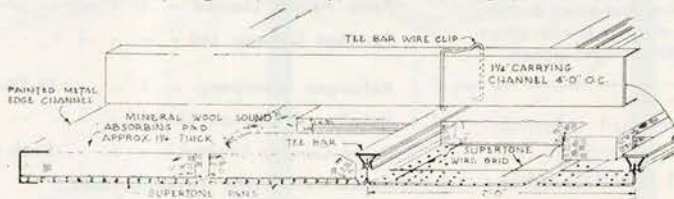
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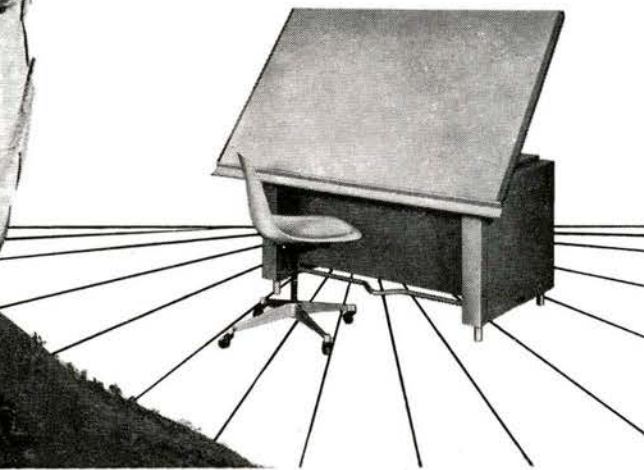


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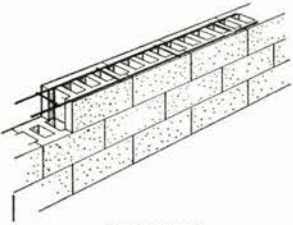
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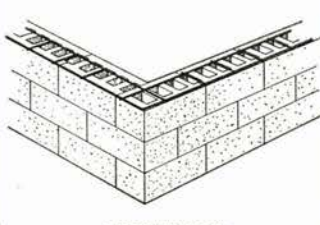
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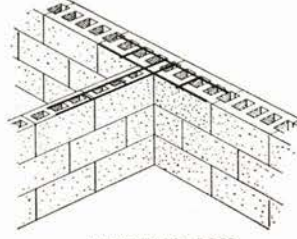
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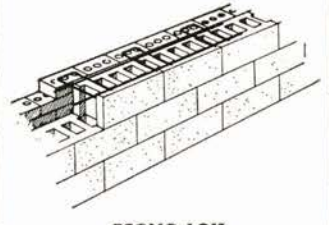
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MAXIMUM STRENGTH — Tension test No. 17819, conducted by Columbia University on a competitive masonry wire reinforcement found that BLOK-LOK Reinforcement was far superior. BLOK-LOK Reinforcement was tested for tensile strength by the Robert W. Hunt Co., physical Laboratories Division, and their report No. 15430A on lock pull-out and breaking tests finds BLOK-LOK to exceed minimum requirements in every category.

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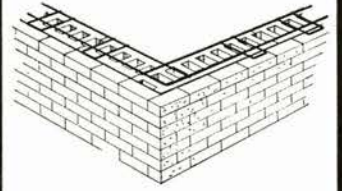
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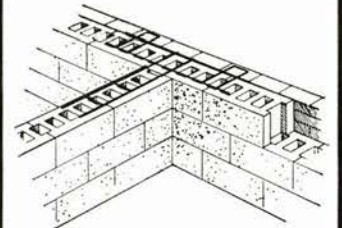
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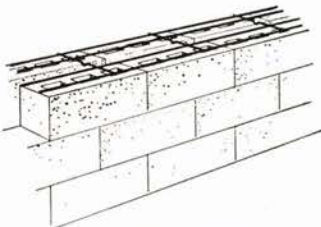
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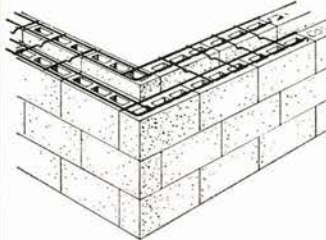
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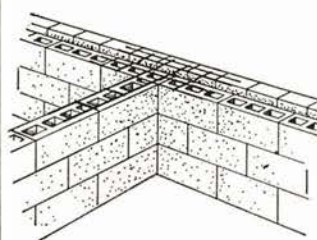
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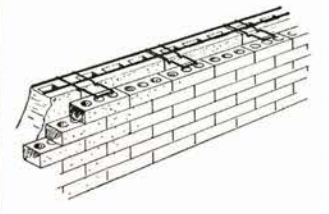
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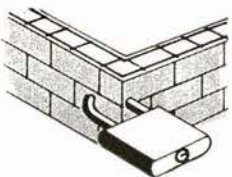
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A Product of
MASTER BUILDERS®

*Masterplate, registered trade mark of The Master Builders Company, Ltd., for its specially prepared, metallic aggregate for producing "iron-armoured" concrete floors.

FOR 15 TO 20% ADDITIONAL COST, YOU CAN HAVE A CONCRETE FLOOR THAT LASTS 4 TIMES LONGER THAN THE BEST HIGH STRENGTH TOPPING AND 8 TIMES LONGER THAN THE BEST CURED OR CHEMICALLY HARDENED FLOOR. The MASTERPLATE floor pays off in many ways. Minimum maintenance and repair. Longest useful life. Fewer work interruptions. Lowest cost per square foot. Here is how The Master Builders Company, Ltd. can help you obtain the correct concrete floor for your requirements.

PLAIN CONCRETE FLOORS ARE FINE FOR LIGHT SERVICE BUT . . . the surface is composed of hard, brittle stone which fractures under wheel abrasion and impact. Even the best plain concrete floor pits, ruts and crumbles to dust under heavy point loads, abrasion and constant pounding by materials handling equipment.

A TOUGH, MALLEABLE MASTERPLATE SURFACE LICKS THE PROBLEM. The solution lies in covering the brittle stone at the surface with tough, malleable iron. Not just any iron, but specially treated and size-graded. Absolutely clean, rust-free, oil-free and water-absorbent. This is Master Builders MASTERPLATE.

MASTERPLATE IS FOR NEW OR OLD FLOORS.

MASTERPLATE is mixed dry with portland cement at the job site. The mixture is dusted over the surface of freshly floated concrete, floated into the surface and trowelled to the desired finish. Because it contains Master Builders' water-reducing, cement-dispersing agents, it is possible to incorporate one pound or more of MASTERPLATE per square foot, making an iron-armoured surface of 1/8" thickness. This assures a thick malleable surface of high compressive strength—the two basic qualities for long floor life.

THE MASTERPLATE FLOOR PROVIDES 5 MAJOR ADVANTAGES.

- 1. Wear-resistant.** A MASTERPLATE floor will wear 8 times longer than the best plain concrete floor. By a wide margin it will outwear high strength topping, chemical surface treatments and lower-cost metallic aggregates which are not refined to the quality necessary for optimum performance.
- 2. Non-dusting.** When a MASTERPLATE surface is properly cured it is non-dusting.
- 3. Easy to clean—**withstands oil. MASTERPLATE produces an extremely dense surface, making it almost impossible for dirt, oil and grease to penetrate or soften the surface. Spillage is easily removed.
- 4. Slip-resistant (when desired).** By swirl finishing the surface, the iron particles are set on edge and a slip-resistant finish is obtained. These ridges of "reinforced concrete" are far more durable than ridges of plain concrete.
- 5. Economical.** The long life, low initial cost and negligible maintenance cost of a MASTERPLATE floor provides the most economical concrete floor obtainable. Anything that costs less initially will cost far more later. Example: saving 5¢ per square foot for a 50,000 sq. ft. floor amounts to \$2,500. Resurfacing will cost a minimum \$50,000.

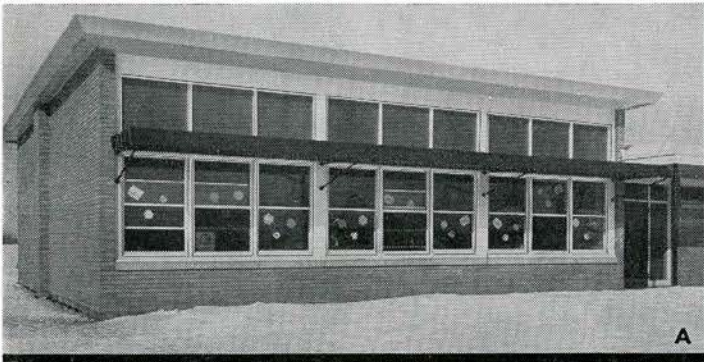
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- 2. Take advantage of over 50 years' industrial flooring experience in the successful use of MASTERPLATE.**
- 3. Benefit from on-the-job service—**Your local Master Builders field man will work with your contractor or maintenance people to help assure successful results.

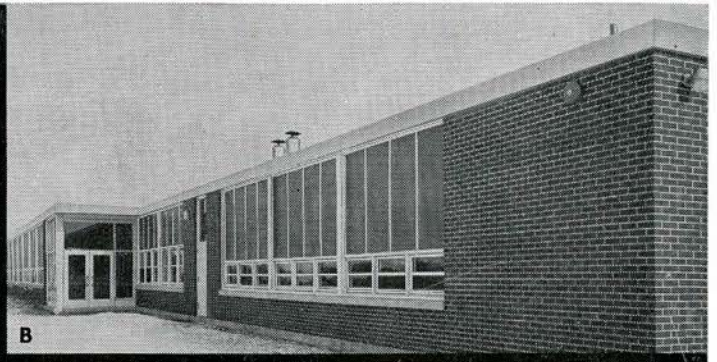
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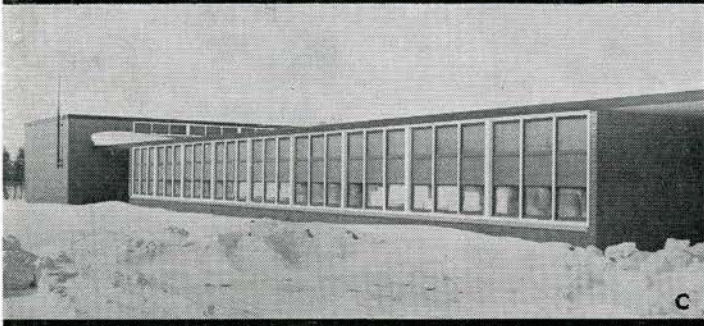
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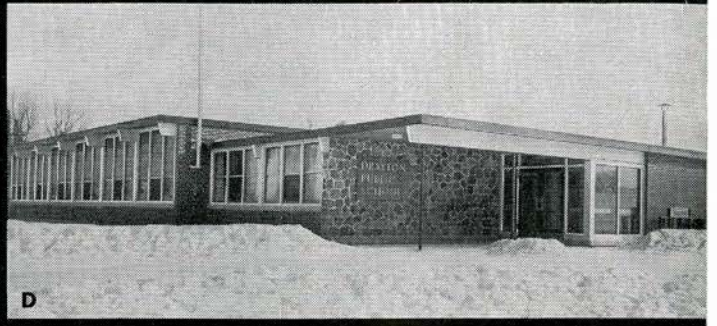
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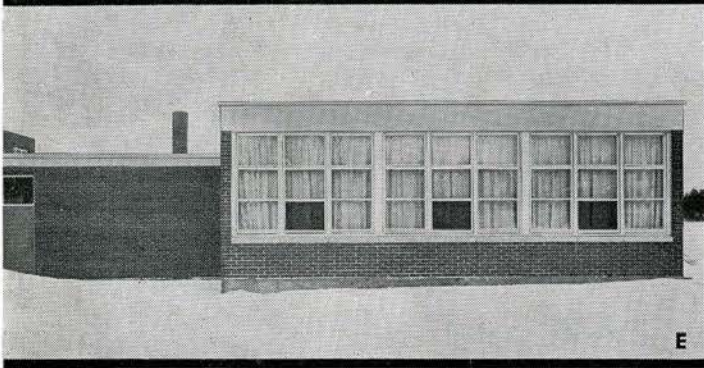
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