# RAIC JOURNAL

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## ROYAL ARCHITECTURAL INSTITUTE OF CANADA



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**EDITORIAL AND ADVERTISING OFFICES, 57 QUEEN STREET WEST, TORONTO 1**

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THE VIEWPOINT that suggests that the standard of traditional and modern design is low in Canada, and asks the reason why, is deliberately provocative, but rather too sweeping a generalization. Gothic is dying hard. As we wrote, we had no intention of making a pun, but 'hard' it is though, perhaps, no harder than the average of Gothic buildings that have appeared "out of time and place" since 1800. Strangely enough, the modern imitative Gothic, however cold and archaeological, is less disturbing than modern Georgian. It may be that its very remoteness – its foreignness in Canada – protects it from the spontaneous visual analysis of detail and proportions which we give to Georgian. Georgian, after all, is the vernacular architecture of the Maritimes and Ontario and not a little of it was absorbed in the 19th century architecture of French Canada. It is, to some extent in our blood, and consequently when we see it poorly done, we are, immediately, shocked. We have been shocked quite often in the last few years – especially in Toronto. Why it is bad is laid at the door of the schools of architecture. Quite unjustly, we think.

We firmly believe that the modern student has a deeper appreciation of Gothic and Georgian architecture than the students of a previous generation. It does not follow that he can design in either style. A modern musician may have a profound knowledge of 18th century music – he may have written the definitive work on the period. If he is a sincere musician, it would never occur to him to compose in the manner of the period. Similarly, an authority on the literature of Elizabethan England would hesitate to write a play in the manner of Shakespeare. In architecture, it is quite possible to know the 18th century thoroughly, and still make a botch of an entasis. The whole class would fail if asked to contrast an ogee with a cyma reversa. Most of the Georgian architecture we have seen since the war looks as though it had been done by reluctant, unhappy draftsmen, forced to take part in a tug of war in which 19th century romanticism and the employer pulled against youth and the new spirit of enquiry and architectural truth. It has been an unequal conflict of minds that could end only in a sterile compromise.

If we take the view that the schools are without blame for the decay in traditional architecture, we can offer little defence to the charge that the standard of design in contemporary architecture is low. There, the proposer of the motion really has us at his mercy. It would be so much easier if we knew something of him and his tastes and habits. We see him a rather small man and a bachelor in a rather cute Regency apartment. He is therefore more interested in the revival of the "cult of the extinct" than in modern design which he threw in only to make us mad. However, we shall take him up on the latter. We believe the standard of modern design to be high on the average throughout Canada and that, if architecture be our mood, we should get more out of a day in two or three Canadian cities than we would out of New York.

Like people elsewhere, we are caught in the vogue for window wall in which the architect plays only a tertiary role, but we are more disturbed by sloppy design in another field. We refer to those buildings where the fenestration is arranged in a uniform and geometric grid which is itself surrounded by a rectangular frame of reinforced concrete. What worries us is that having achieved such an exact geometric pattern, the architect, junior draftsman or mechanical engineer (we don't know which) throws discipline to the winds when he comes to the roof. Without design or control, ventilators, and flues vie with each other in mass, height and width. As a friend said the other day "all hell breaks loose on the roof". Several of our best architects are guilty of this architectural solecism, but common as it is in office buildings and apartment houses, it is not so serious that we would damn all modern architecture for it. Architecture, itself, was never in so healthy a state, and we see it growing in stature and in public acceptance.

# Limitations of Science

BY CECIL S. BURGESS

SCIENCE DEALS WITH KNOWLEDGE. The scientist works with the facts of physical nature which include material things both animate and inanimate and also with forces such as gravitation, magnetism and others. These things we can know and understand. Many of them we do not yet fully know, perhaps can never fully know; but the search continues, knowledge ever widens. This search has become one of the great interests in life. Its success helps to improve our physical conditions so that we can with greater ease and pleasure pursue that interest itself. By its means we produce more and better food and may live in better conditions of light, air, warmth and shelter from the elements. But there is another and vastly more important sphere of life in which we must deal with the unknown and the unknowable. For we must learn how to behave ourselves. Science cannot tell us this. We must obtain from elsewhere the ideas that will guide our conduct. Science can help a lot by providing ways and means to carry out these ideas; but the ideas themselves science cannot provide. They are not knowledge. They may be called instinct, speculation, imagination, inspiration, conviction, revelation or some other name. These having determined our direction, we try to adhere to it with the help of the light that knowledge can throw upon it. When we hold a very high respect for our opinion we call it a conviction, when a conviction is very strong we call it a belief and we think of a strong belief as the "truth". To "truth" in this sense science is a stranger with which it does not deal. Yet it is truth in this sense that guides us all individually and society as a whole, in our daily conduct. We seek for satisfactions and, whatever we do, our conduct is conditioned by hopes on one side and by fears on the other. Our actions arise from our emotions and our emotions are conditioned by moods—moods of hopefulness or of fearfulness, of cheerfulness or of depression, of courage or timidity. Moods are subject to the environment in which we live—to the effect of that environment upon our physical senses, sight, hearing and the rest. When our artificial environment leaves us in uncertain mood we must resort to nature, the mother of all moods, the great comfortress. That sounds in musical composition create moods is obvious. Music is the exponent of mood. But all sounds, even isolated sounds, exercise great power over mood. When "the car rattles o'er the stony street" that does not interrupt the mood of gaiety – "on with the dance". But when "a deep sound strikes like a rising knell", oh then, "cheeks turn pale that but an hour ago blushed at the praise of their own loveliness". A mood of irritation may rouse emotion to immediate and unconsidered action with unforeseen consequences. We do well to sleep off the irritation and to apply thought to action. The arts appeal to the senses, they create moods, from these moods our emotions are roused and these give rise to our actions and direct our conduct. The arts create our artificial environment. Colours and shapes affect the mood just as sounds do. Red excites, green soothes. Straight lines are steadying, curves are moving.

A mood influences the emotions that arise whilst that mood is dominant. Emotions lead to actions. Actions are the elements of behaviour and of conduct. A work of art, such as a musical air or composition, a poem, a picture or a building, is compounded of many elements with various kinds of appeal – physical intellectual, emotional. Its value is enhanced by each of these. It is still its emotional appeal that makes it a work of art. The fine arts do not provide a code of conduct. The emotions that they arouse create desires which may lead either to good or bad consequences. Before they lead to action they must be scrutinised by reason to distinguish the merely desired from the truly desirable. In this way, we are guided to better ideas of behaviour and thus raise the level of our social culture. We set up laws which, somewhat crudely, confirm the standard thus arrived at. We must still continue to raise that standard. The discovery of truer satisfactions is the fine art of living – the most important element of culture. The way we walk, the way we talk, every gesture or expression of feeling, all are influenced by deep convictions as to our duty and destiny. They are *us*.

What has all this to do with architecture? What share has architecture taken in promoting ideals of life and conduct? Let us look at one of its earliest accomplishments, the Greek Temple. The ancient Greeks called themselves the Hellenes. They were far from being a consolidated nation. Their cities quarelled with one another like cats and dogs. In spite of the way they were widely scattered, in little independent colonies around the shores of the Mediterranean and the Black Sea, one bond and one bond only united them. This was their common religion. At their religious festivals wherever these were held, they were all Hellenes. They all had the same gods. This was an emotional, not a rational bond. Their conception of the immortals was a work of imagination, not of reason. To us, these gods appear rather disreputable judged by the tales of their on-goings as related by Homer and others. It is evident that even away back in Homer's time the elemental gods had become creatures of a vast fairyland whom mortals could play with, weaving them into fairy stories, grave or gay, sometimes ribald. It may well surprise us that a people with keenest intellects that the world has known should yet believe in the transcendency of the world of imagination, a world above that of reason. They did believe in this deeply and sincerely although not in the tales which were its by-products. These Hellenes were by no means models of good behaviour or settled ideas. They were deeply intoxicated by their unique freedom of action and of thought. It was each man's business to share and to contribute to the counsels of civic government and it was equally his privilege and duty to do for himself the

thinking, speculating and believing on which his conduct must be based. Unchecked individualism becomes anarchy. The various independent city states always tottered on the brink of anarchy. The minds of the people never settled into any routine of belief or creed. This lack of consensus of belief led to much immorality. The crowds gathered at their athletic sports to applaud the victors in feats beyond the common ability. So, too, at dramatic festivals, they met to consider moral questions beyond the capacity of the ordinary citizen to thresh out. On the stage these were illuminatingly demonstrated by masterminds who could penetrate the heart and conscience and who called the gods themselves to the bar of reason and humanity, yet with the consciousness that beyond even their vision lay the mystery of the unknown and the unknowable. Their philosophers were equally open-minded and aware of the limitations of reason and the background of the unknown. It was this always acknowledged transcendence that was the mainstay during their brief period of brilliance.

They made many greater and smaller settlements around the sea coasts. None of these could feel itself truly settled until there stood a solid temple in its midst. This must be of masonry and might well be the only building of permanence in the settlement. To whatsoever deity it might be dedicated it was still a tribute to the unknown godhood. In early days these temples were of ponderous and even clumsy appearance. Through generations the same simple rectangular form adorned with some pillars was adhered to, but with steady development of refinement and beauty until it achieved the splendour of the temple at Ephesus with its forest of Ionic columns and the incomparable Parthenon at Athens. Such buildings dominated every city of Hellas, standing in its midst as a reminder of the high qualities of the race and recalling the citizens to moral duties above the pleasures, follies and even the intellectual occupations of their daily life. Simple, severe, calm and serene it sat as a perpetual call to higher duty—to duty as envisaged by Wordsworth, "Stern lawgiver, yet thou dost wear the godhood's most benignant grace, nor know we anything so fair as is the smile upon thy face." This was not the expression of their lighter daily feelings but of their deepest convictions and aspirations. R. L. Stevenson points out in speaking of a medieval cathedral "Tis the preacher itself". So it is with all great or small religious buildings when designed in simple sincerity.

This is the function of the fine arts—to recall us to the finer aims of life, not in the matter of the highest efforts only but in everyday things, to heighten our self-respect and the respect of one another. This affects every matter of daily life – how we walk and talk, how we greet and treat the people we meet, how we make and handle the things around us: it justifies us when we decide from time to time that we should have a new coat. A satisfaction is infused into life and life is made better by the appeal to the senses which is made by the harmony of appearance, that is to say the beauty, that can be given to things of human creation. The passing fashions of the day are perpetual experiments in aesthetic effects trying out the effect upon the eyes of varied forms and combinations of colour. However much we may scoff at these on account of their persistent extravagances and perhaps the alleged side aims they may have, they are yet assured experiments with the service that experiments may give.

It has been considered essential in architecture at all periods that the ideal which inspired the work should be carried out with the greatest care in the handling, in order that the work might fully satisfy the eye – the work must be beautiful. The highest degree of skill should be devoted to the expression of the higher ideals. This incentive to fine craftsmanship when applied to the sculpture and painting became recognised as direct expression of spirit and to get the special name of 'fine art'. All working together made a fine art of architecture itself. Thus treated, the humbler forms of building, with beauty as an element, is still a 'Fine Art!' Fine craftsmanship may eventually be carried on by the workman's pride in the skill of his hands. In much late Gothic work this becomes an end in itself and, especially in France it runs into almost incredible ingenuity and virtuosity. But when we compare the general effect of such work with that of the earlier, simpler less expert work we realize that something finer has been lost or has sunk into less importance. The larger purpose and the clever execution do not necessarily conflict. The minor should serve the major consideration. The desire of the craftsman to do each little thing with grace and beauty is at the very root of all art. Applied to the everyday actions of life it is good behaviour, good conduct, the recognition of good-will and of duty, the art of good life.

The function of science in architecture is to serve the physical rather than the spiritual quality of life. Through better scientific knowledge we can, as suggested above, make shelter more efficient and secure, temper climate for better health, gain more unobstructed space for work or play, bring in more daylight for the benefit of our eyesight, shut out disturbing sounds, safeguard ourselves from fire, create a surrounding of colour suitable to temperament or to occasions of rest or animation. These are all physical matters and, of themselves, do not incline us to any line of conduct, either good or bad. They may serve to encourage mere sensuality and foster a generation of healthy brutes. On the other hand, they may powerfully reinforce those ideals of better humanity which derive from a totally different source. Insofar as an architect is serving only the physical needs of his clients he is not personally contributing to art in its finer sense. The actual work may, nevertheless, be a work of fine art for it embodies and displays much more than the architect has personally contributed. The building owners dictate their requirements and their purposes in regard to those requirements. These may involve many fine ideals which become embodied in and become part of the building. The society in which a building is erected also makes demands which become part of the building. These in turn are adjusted and take final form through the media of the knowledge and craftsmanship available. Through all these processes something of the finer aspirations of the time come to be embodied in the work. Thus both the greater and the lesser of the buildings of any age have always expressed more of the spirit and cultural level of those who have produced them than merely those of the men who laid out the plans. In many minor works the designer was merely following a well established routine and employing the fine traditional craftsmanship at his hand. Yet these works are full of the expression of humanity and are a delight to the eye.

On the other hand, the sensitive architect, or the general association of architects, may make a valuable contribution to their generation by their own ability to clarify and to embody the ideals of their time. The greater buildings do not necessarily present the only or the best opportunities for this.

This, of course, raises the question as to the qualities and defects of our present social ideals. How do they compare with those of other times? We almost take for granted that they are far better; but yet we must admit that we are inferior in some respects and in any case that we are far from perfection. Our city streets do not resemble the New Jerusalem, the condition of the world is not quite like the Kingdom of Heaven. We are becoming more and more impregnated with rational and humanitarian ideals. We seek for the betterment not merely of the few but also are deeply interested in the health and welfare of the poorest and of the severely incapacitated.

We even look at the whole wide world and have dreams of extending our ideals to it all. This is no mean vision, never before opened out. In promoting this ideal we naturally look first to material benefits, food, shelter, warmth and all healthy living conditions, cleanliness, sanitation and the curing and prevention of disease. Without our scientific advances such an ideal is unthinkable. It has arisen because of the possibilities that these advances have created. But, as has been pointed out, the adoption of all these creature benefits, this "high standard of living" may be quite consistent with a merely sensual and materialistic life – a very low "standard of life". Our social ideals aim at something better than this, they aim at a life of world-wide good-will. This is something outside the sphere of scientific knowledge–outside the world of metres, litres, seconds or light-years, not belonging to time, matter or physical energy but to another sphere of energy equally indestructible, equally all-pervading. Science cannot deal with it. We can understand it only through the medium of imagination. We can and must accept this as a guide to conduct. If, by experience, we find it leading us into what is unreasonable or creative of hardship we can again refer back to the same ever-flowing source. It is our high court of equity. It belongs to the region of desires and passions.

From time to time, in past ages, men have arisen who have taught that only by curbing and suppressing our passions and desires can we become wise and virtuous – that we must give up cakes and ale. The result of such teaching, which is asceticism, can only be the impoverishment of personality and of life. Not the repression of life's desires but the direction and control of these same passions and desires to serve good ends is surely the truer ideal which in this age we are setting before us. The idea of the rightness of having a healthy appetite is not new, but the idea of encouraging and directing all sorts of healthy appetites has never met with such general acceptance as at the present day and over so wide an area. We cannot attain or approximate this ideal by catering, however scientifically to merely material needs. It requires the operation of that higher faculty of imagination which alone possesses the power to deal with the goodness and happiness of life, with initiative, courage, fair-dealing, sympathy. We cannot propagate these in a world of ugliness. In a beautiful environment we feel the encouragement to all these qualities; for beauty harmonises life, it cheers the spirit and prepares us to face life and to meet our fellows with confidence and good-will. In this we are dealing with imponderable matters that do not lend themselves to algebraic equations. "The characteristic of physical science is, that it ignores all judgments of value: for example, aesthetic or moral judgments. It is purely matter of fact."

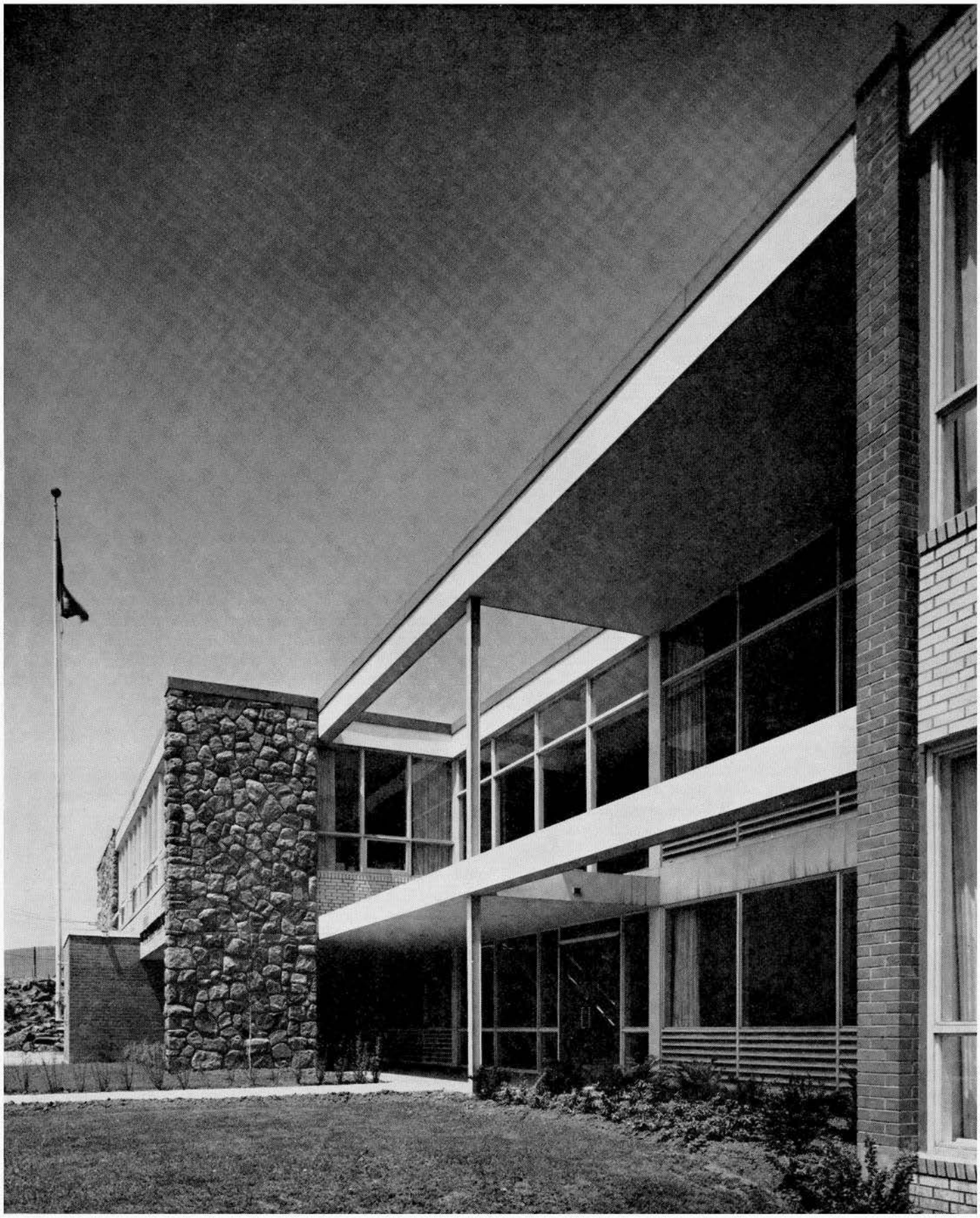
The imagination is a shaping power that aids us to adjust material things to the desires. It makes use of acquired knowledge which, without its stimulation remains inert. It is itself stirred by passion and desire; but these can take no overt form and shape without imagination and, in order to serve good ends, it must come under the control of reason. Imagination suggests all adventure and all research, directs all design, operates upon us every day in our least actions, shaping these to satisfy our own senses and those of others. It is more constantly influential in the smaller matters of everyday life than in the greater works of art which gradually grow up out of the social soil that is required to nourish them. Imagination is a natural mental gift that we all possess as surely as we have our five senses. It can be trained and strengthened. How is this training to be done? It is obviously stirred by all active work, especially by working amongst those who are themselves accomplishing interesting and useful work. Contact with such work and taking part in it is the natural stimulant of this power of seeing what can be done. Every bright child, that is to say every normal child, is keen to see things being done and to help in doing. More mature knowledge is needed to discriminate what is best to do, the best way to do, and the best way to finish. This includes the best appearance and the finest art. To acquire this finest art, attention must be paid to the finest examples, not only to those within the present vision and the present time, but to all such as are inscribed on the broad pages of history and through all the world. These should be surveyed not as mere knowledge but with lively appreciation of their quality and with that zest for doing, that spur to create which we name Imagination.

Architecture is necessarily the environment of so much of our social life that its influence must be great upon our daily happiness and upon the grace and goodness of our lives. This is even more true of our little everyday architecture than of the greater works that serve the greater occasions and which can never attain greatness unless they grow from the ground of everyday thought embodied in everyday work.

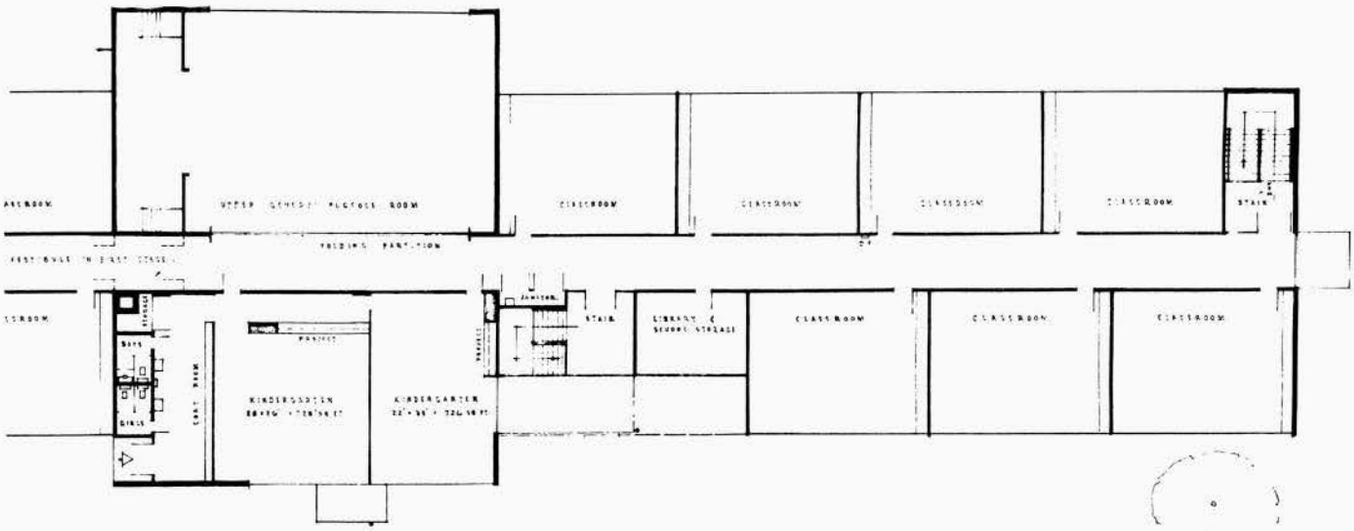
# Kipling Grove Public School
# Etobicoke, Ontario

*Architects, Cox & King*

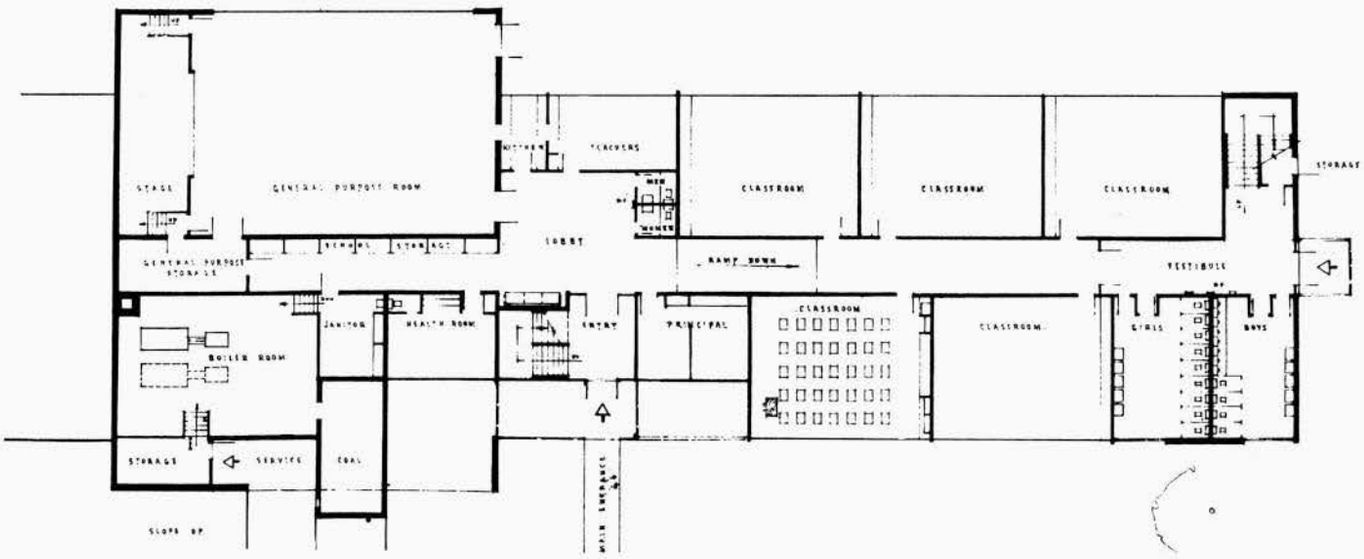
Main entrance



MAX FLEET



Upper floor plan



Lower floor plan

Upper level entrance to kindergarten

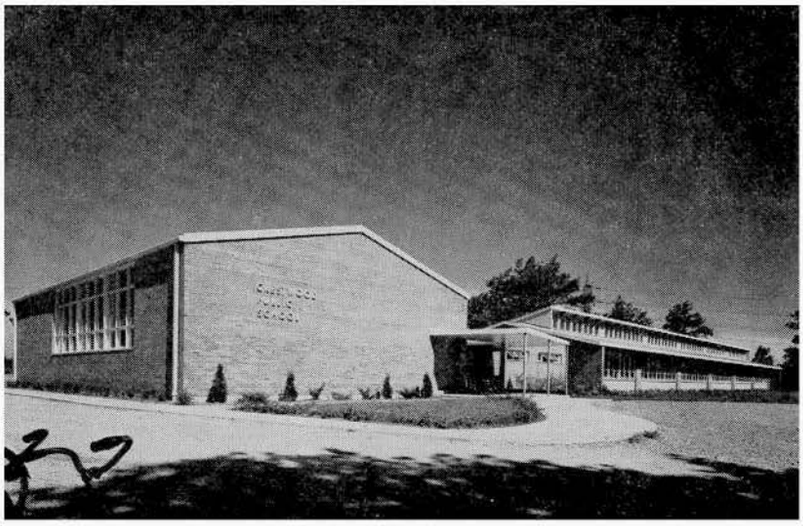
MAX FLEET

# Crestwood Public School
# Etobicoke, Ontario

*Architect, E. C. S. Cox*

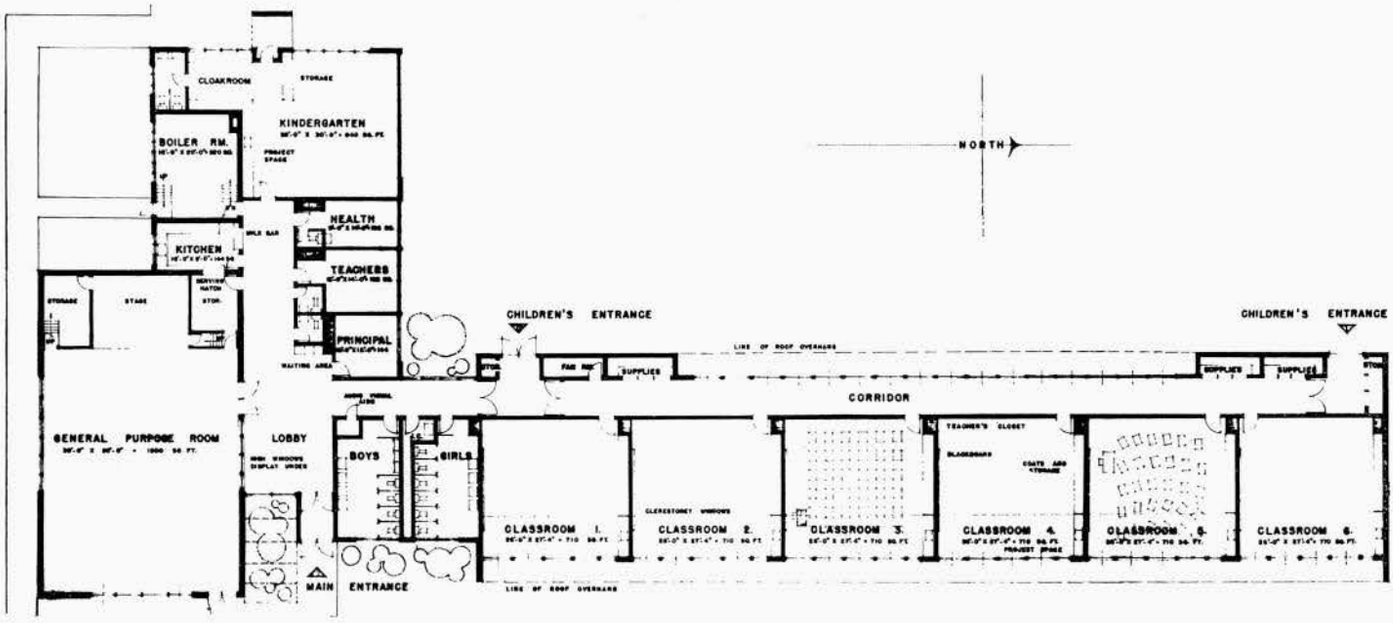
HUGH ROBERTSON–PANDA

Typical classroom on single-loaded corridor



HUGH ROBERTSON–PANDA

Exterior view of general purpose room and single-loaded classroom wing



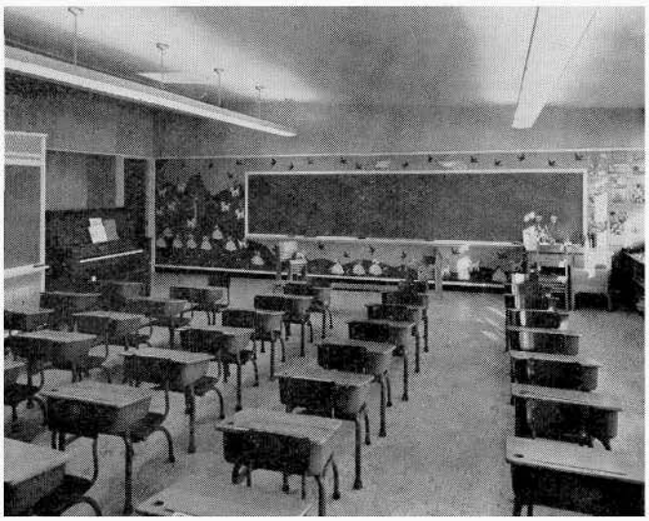
# Westcot Elementary School
# West Vancouver, British Columbia

*Architects, Duncan McNab and Associates*

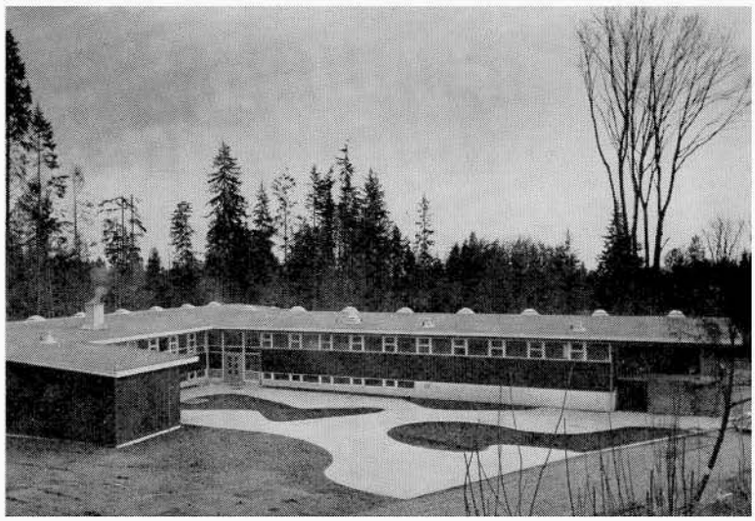
*General Contractor, Pearson Construction*

*The building is of two-storey construction, the first storey of steel and concrete block and the upper floor frame construction. The lower floor provides covered play space.*

*The aim of the School Board and the architects was to provide a school with a domestic quality rather than an institutional appearance to harmonize with the residential aspects of the district. A pitched roof was used and natural illumination was increased by the use of plastic skydomes. The exterior is of vertical, stained cedar siding.*

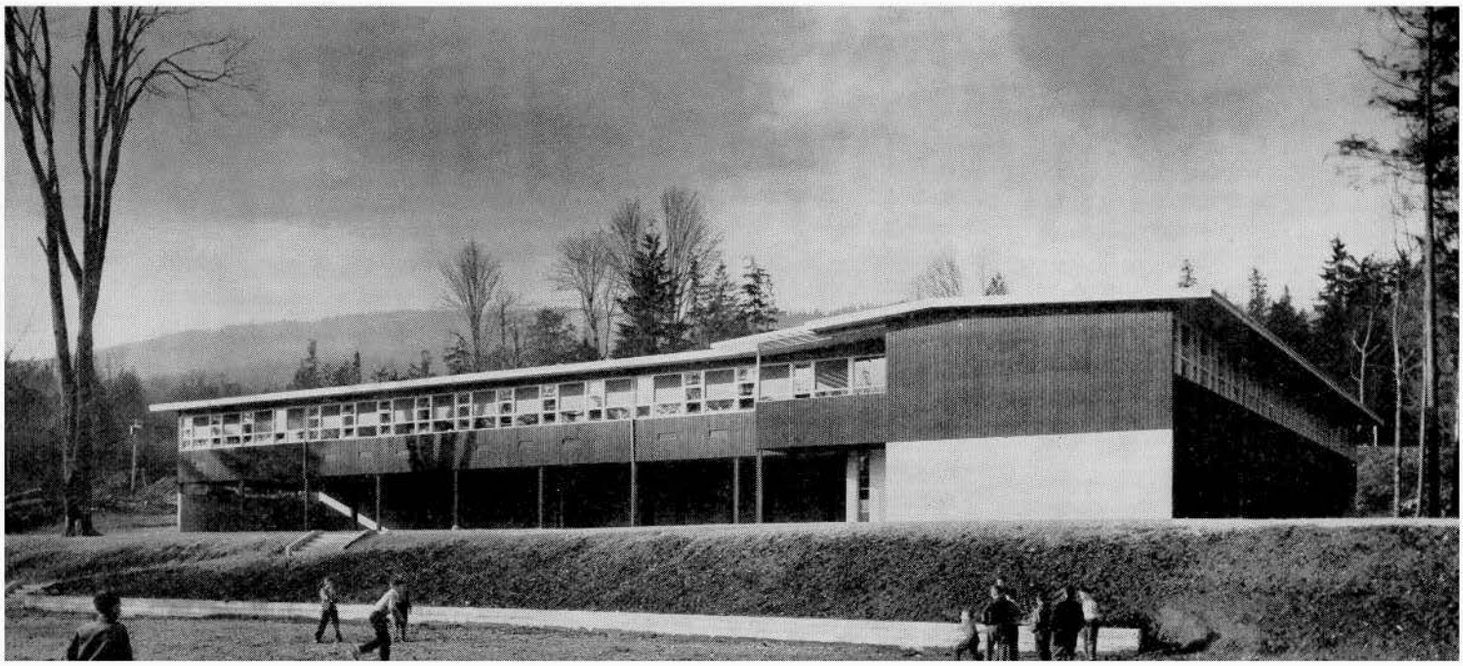


Typical classroom



View of main classroom floor
showing typical fenestration and sky domes

Exterior view showing covered play space below and classrooms above



# Kenton Drive Public School
# North York, Ontario

*Architects, Pentland & Baker*

*Structural Engineers, Wallace, Carruthers & Associates Ltd.*
*Mechanical Engineers, Leah, Kobayashi & Associates*
*General Contractor, Cullen Construction Co. Ltd.*

HUGH ROBERTSON–PANDA

The lobby

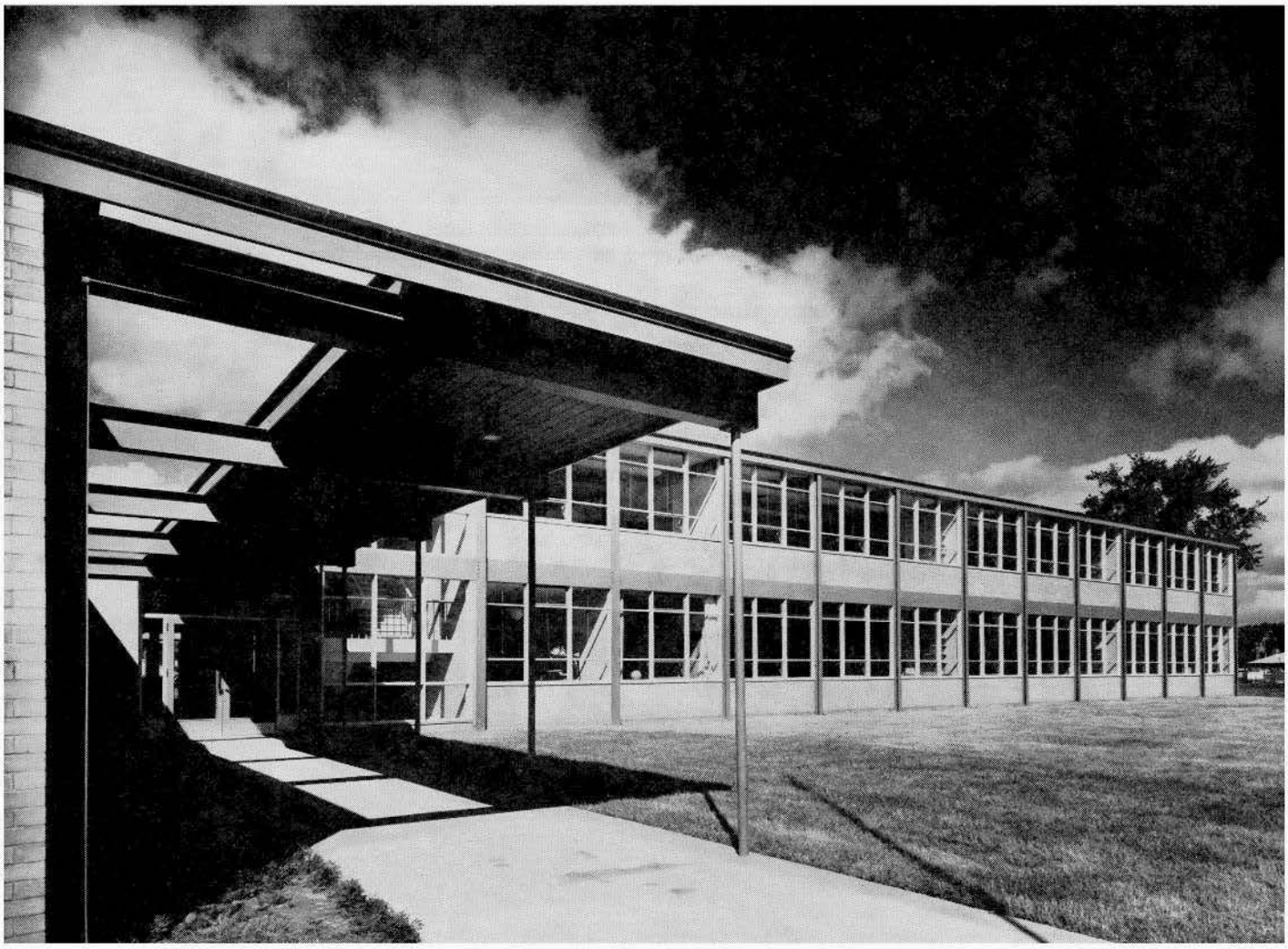
*Kenton Drive Public School, completed in the summer of 1956, is one of many schools recently designed to serve the ever increasing needs of North York Township. Located on a quiet corner in the fast developing Finch Avenue and Bathurst Street area, the school will form the hub of community and educational activities for a large group.*

*Accommodation at the present stage includes: eleven standard classrooms, kindergarten, playroom-auditorium, library, teachers' room, principal's office, health room, kitchen, boiler room, chair storage, outside storage, stationery storage, sports storage, janitors' rooms.*

*The kindergarten is entirely separate from the rest of the school having its own entrance, washrooms and outside play area; yet it is next to the main entrance and adjacent to the playroom auditorium. This permits, for evening activities, the use of these two rooms in conjunction with the kitchen as a complete unit, the rest of the school being closed to the public. All the necessary storage rooms and janitors' services have also been planned with this in mind. Even the heating system has been zoned to cover the use of the playroom at times when the rest of the school is unoccupied. The sports storage is easily accessible from the playroom or outside.*

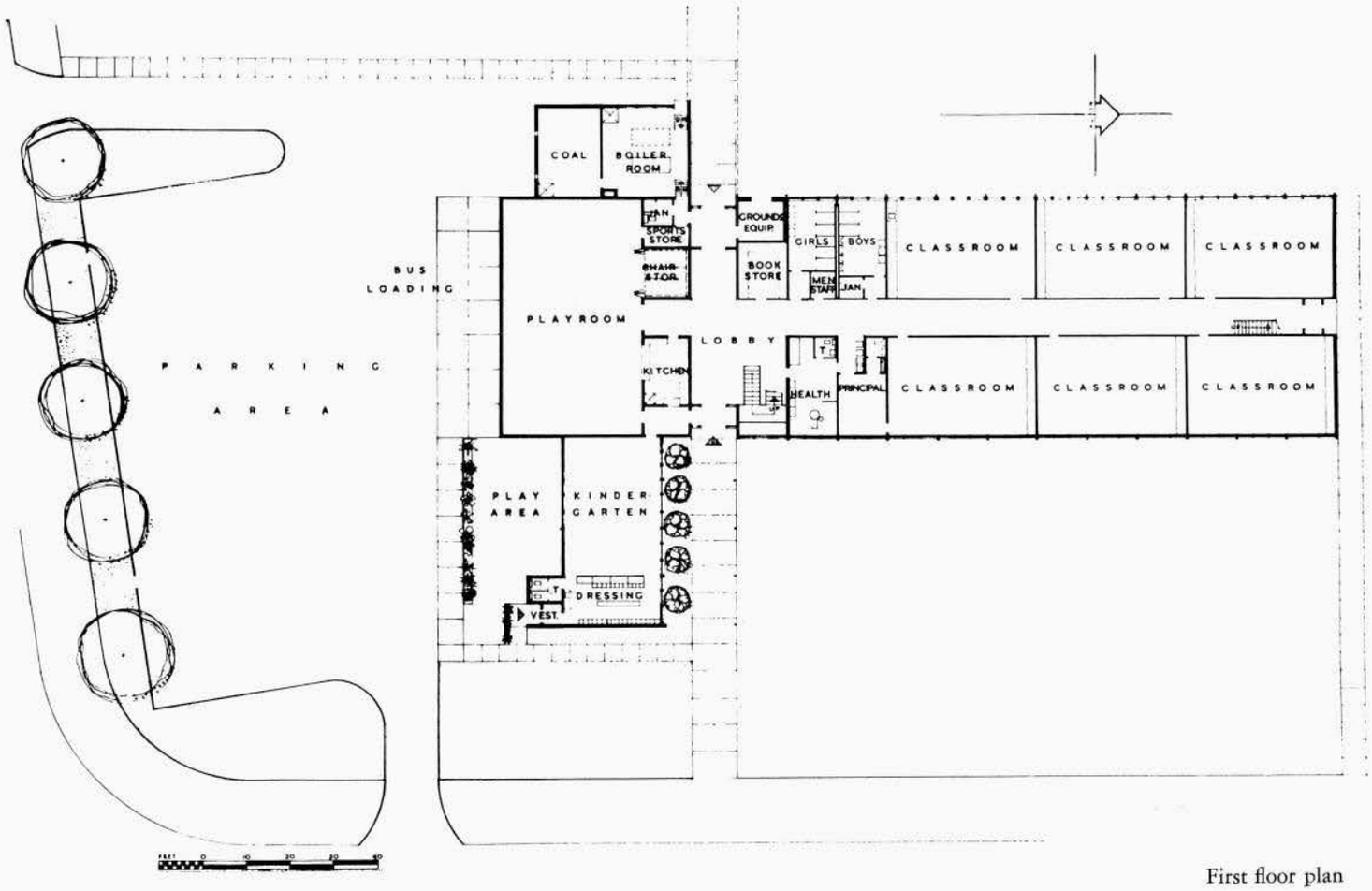
*The classroom wing is two storeys and a further addition of classrooms is envisaged in a parallel wing with a connecting corridor to the west vestibule. The boiler room would then be located in the centre of the completed scheme and still allow easy and direct access for fuel deliveries and service. Provision has been made for a second boiler to handle this addition and no services in the existing building need be altered at all. At the same time, the location of these future classrooms ensures that the narrowest part of the site is used for building leaving the maximum area possible free as a playing field.*

*The health room and principal's office are well located*



HUGH ROBERTSON–PANDA

Canopy to main entrance and classroom wing




First floor plan

*near the main entrance and have a common waiting space. The generous sized library is at the head of the main stair as is the teachers' room which has a small built-in kitchenette.*

*All washrooms are centrally placed for simple plumbing arrangements and are equally handy to a children's entrance and the play-room.*

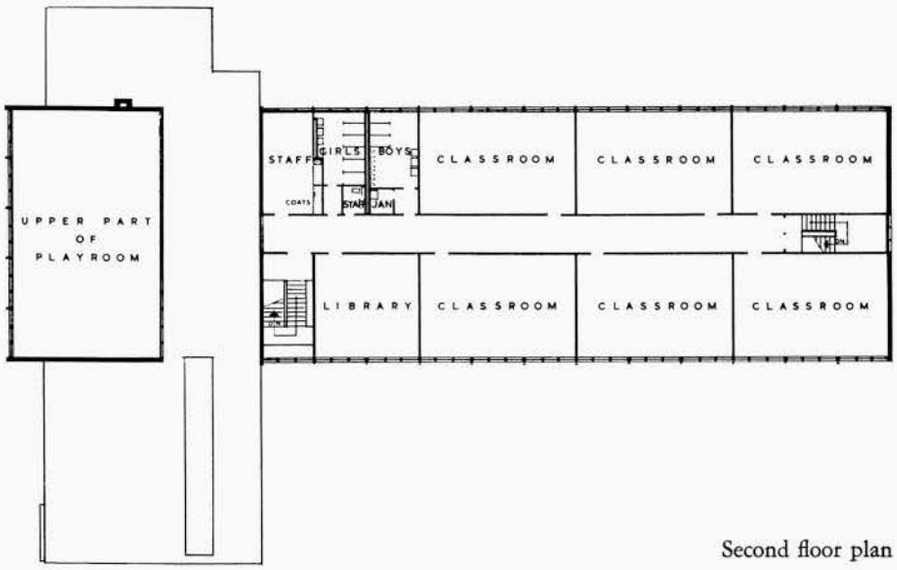
*Exposed steel framing painted a blue grey and buff brick masonry make up the structure and main finishes both outside and inside the building except where painted block has been used in the classrooms. Asphalt tile floors in gay colours are general throughout with terrazzo in corridors, halls and washrooms. 'Granwood', a hard wearing yet resilient flooring material, is used in the playroom. All windows are wood with metal opening sash ventilating at low and high levels. Acoustic tile ceilings are used throughout. Lighting in all classrooms is fluorescent, three continuous rows of fixtures plus blackboard lighting.*

*Heating is by hot water from a coal fired boiler through continuous finvectors. Almost all the piping runs above the floor level immediately below the fin and is concealed by a continuous metal cover which is removable for easy servicing and yet gives a flush neat appearance in the room. Mechanical ventilation is limited to an exhaust system through the classroom wardrobes.*

*The building as a whole registers a crisp, clean and efficient appearance. Colours inside are bright and attractive, light pastels for all wall surfaces, blue grey for structure and metal cabinets and high lighted with touches of Swedish red on door frames and stair balusters.*

*Gross area of building* ..... *20,250 sq ft.*
*Classroom area* ..... *9,215 sq. ft.*
*Kindergarten area* ..... *1,020 sq. ft.*
*Total instructional area* ..... *10,235 sq. ft.*
*51% of gross area*

*As an addition would be devoted entirely to classrooms, the ratio of instructional to non-instructional area will be considerably increased in the completed scheme.*



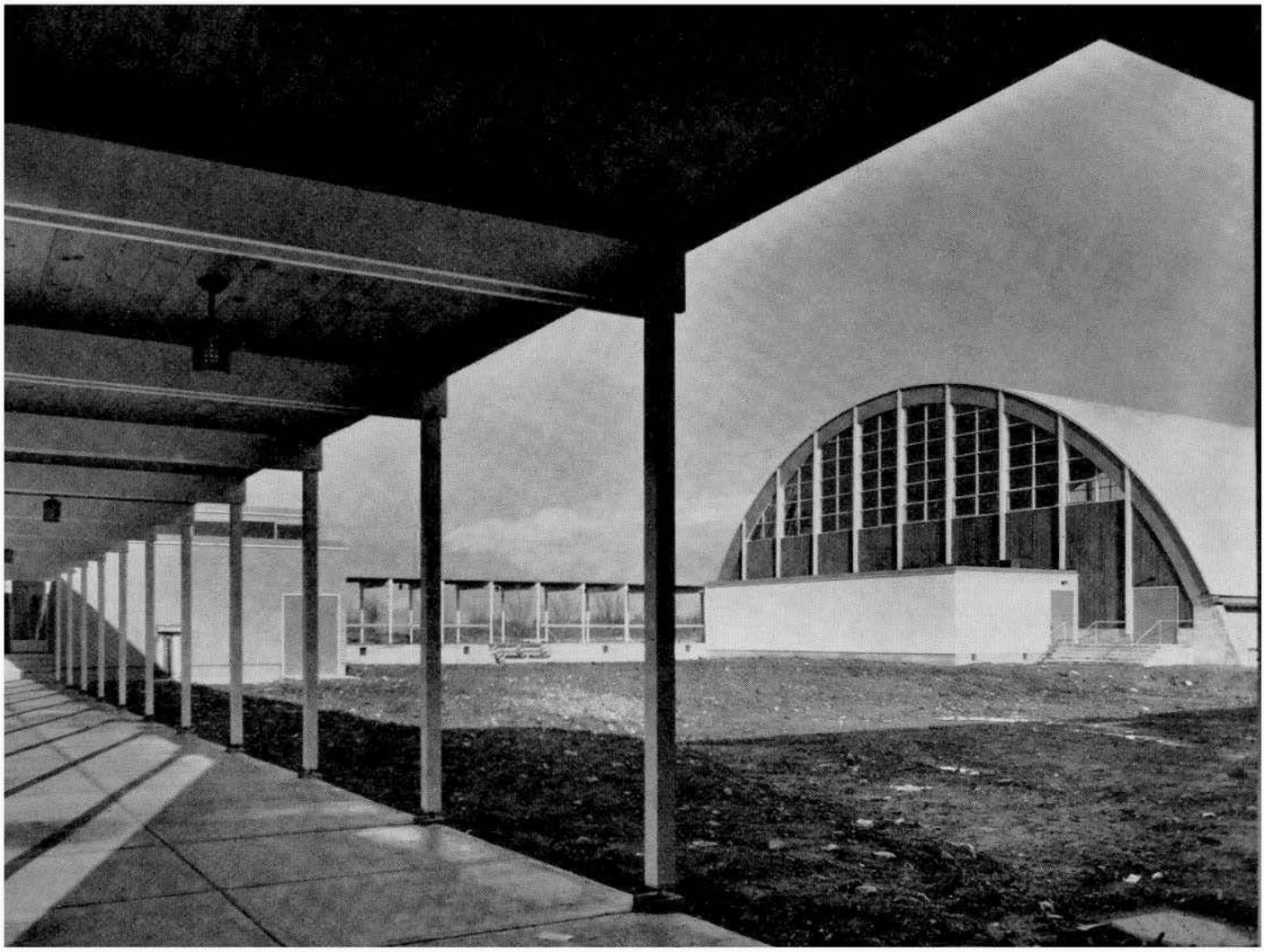

Second floor plan

# University Hill Jr. Sr. High School
# Vancouver, British Columbia

*Architects, Thompson, Berwick & Pratt*

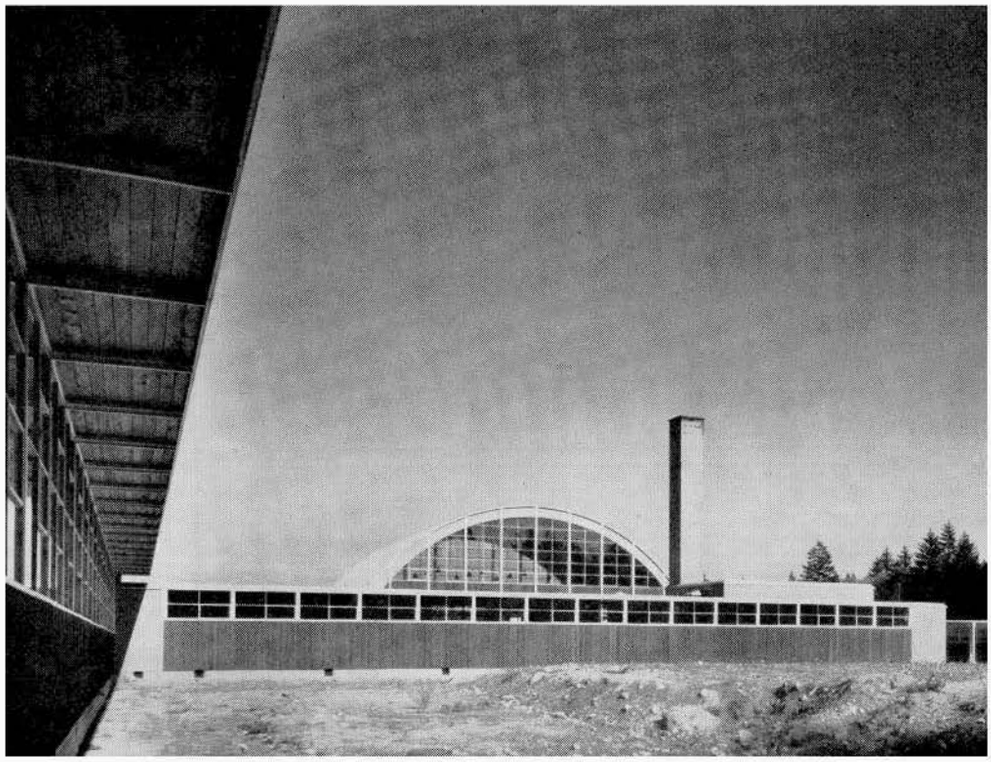
*Wood frame construction; classroom roof decking is supported on steel bar joists; the roof to the auditorium-gymnasium is supported on elliptical shaped glue-laminated beams.*

Exterior corridor and auditorium showing different types of wood framing



Classroom wing corridor

Service wing and rear of auditorium



# Building New Schools in Switzerland

BY HANS MARTI, Architect, Zurich

During the last four years, we have witnessed a definite step forward towards a new style of architecture in the building of new schools in Switzerland. The progress is all the more remarkable since during a long number of years most architects had been following conventional schemes and had felt no need to study each project as a new problem. The last word seemed to have been written about the ideal class room, and there was no more to be said. Definite formulas, and even legally prescribed measures, fixed the dimensions, and it was an absolute rule that all class rooms must catch the morning sun, and therefore must offer a broadside of windows to the south-east. Two ranges of windows and airing across the room were considered as inadmissible. From one end of the country to the other, school houses looked very much like each other, all presenting the same long, rectangular façade on the south-east side, with a flight of adjoining class rooms. All doors opened on long corridors with staircases and special rooms along the northern wall. Only in the designing and the placing of the school gymnasium and the singing or music room was the architect allowed a very limited amount of freedom.

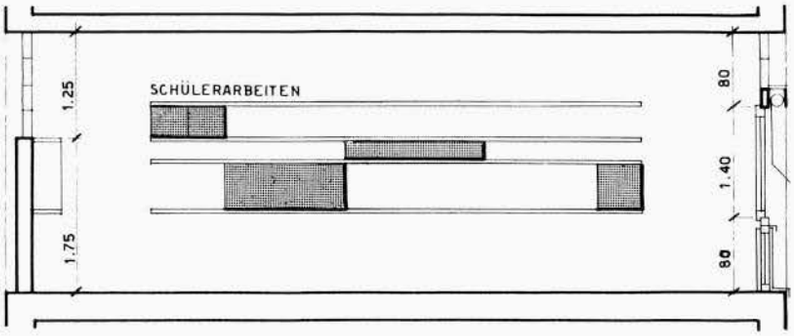
The end of this standardized type came when class rooms with windows on two sides and airing right across the room were admitted, when there were no longer only two or three long rows of desks in a rectangular room of a standard width of 6½ meters, or about 20 feet. Now even square rooms or rooms with sides of 24 feet by 29 are tolerated. These dimensions make it possible to arrange the desks much more freely. You may have, for instance, four rows of desks instead of only three, or you may arrange them freely in groups, in a circle, or in the form of a horse-shoe. Progressively minded teachers had long been asking for a little bit of freedom along these lines to break the monotony of the old class room with every eye of every pupil at every moment fixed on the teacher. Now it is possible to form free study groups or independent working groups for designing, modelling, plastic work, or wood work, etc. Some of these modern methods of teaching were simply excluded under the old standard arrangement, where class rooms were too narrow and where parts of the room at a certain distance from the window did not get enough light.

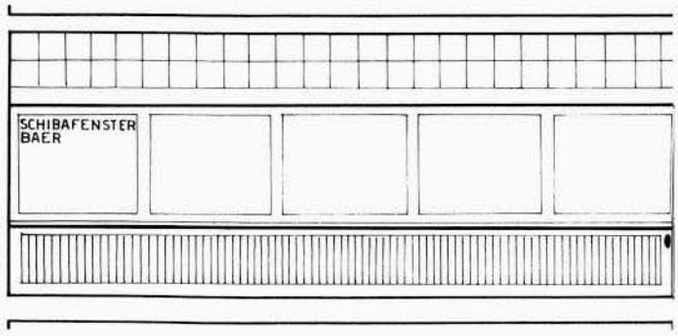
The modern class room with two rows of windows, and with cross airing, makes the school building free from the uniform south-east orientation, and the different parts of a group of school buildings can better be grouped to suit local needs and possibilities. Formerly it was often difficult to fit in play grounds and green spaces on account of that tyrannical south-east front-line of the main building. This has now been overcome.

The class rooms which get light from two opposite sides need not, of course, be lined up in series along corridors. This is, however, a difficulty which was unknown under the old system, since both the ground plan and the height of the building are now subject to different factors from one building or one room to another. Three storied and higher school buildings will be exceptions under the new plan, if all class rooms are to be equally good and similar in execution. In the majority of cases school buildings will have only two stories. Every set of two class rooms has a common landing with wardrobe, water-closets, etc., and a common central staircase. Members of school boards at first found the new system rather wasteful and expensive. They think the two-storey building "eats" too much land. But careful studies made at Zurich and Berne have furnished sufficient proof that the two-storey school house requires only about 3% more land than a three-storey one. It is not the class rooms, but the spacious recreation grounds, play fields, and open air sports, flower beds, school gardens, etc. which in the majority of cases take up the bulk of the available space. As regards building costs, the two-storey building seems to work out cheaper than the three or more storey house, since the construction will, on the whole, be much lighter.

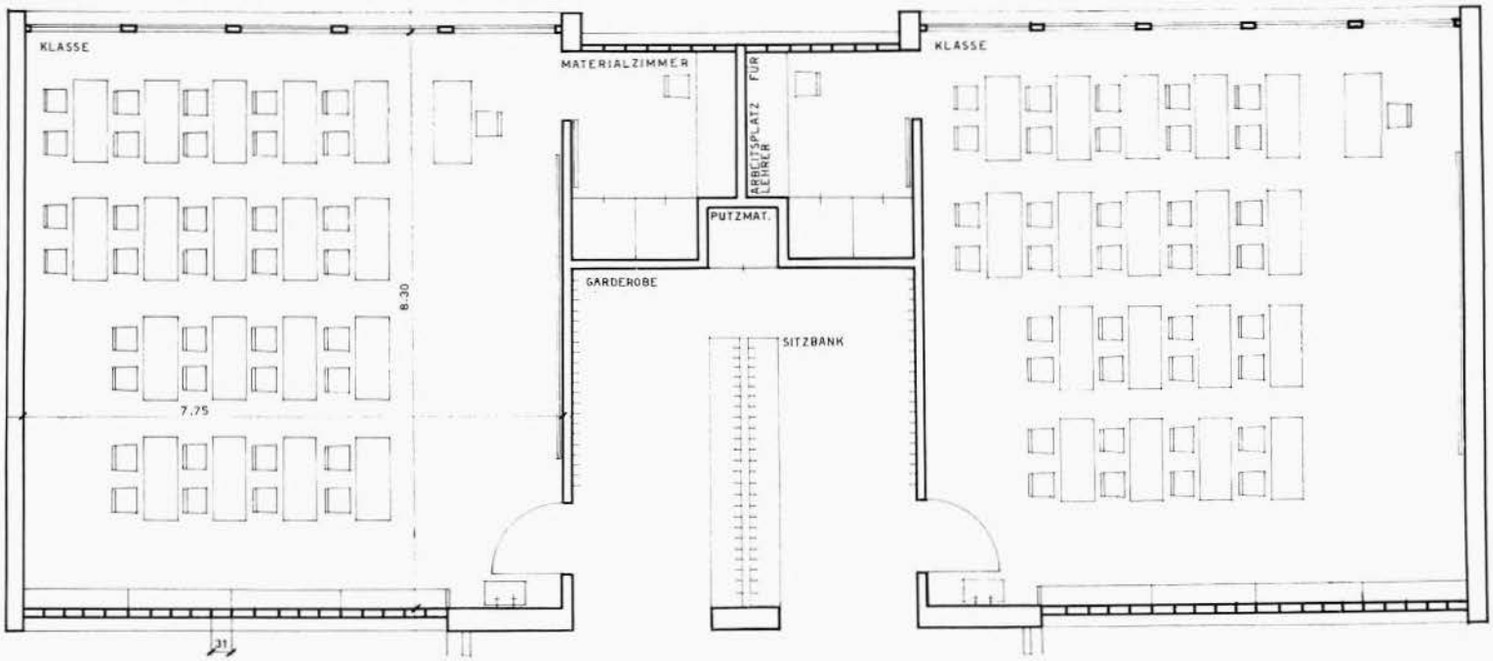
Also in its outward appearance the new school house looks lighter than the old one did. Architects have realized that they are building in the first place for children. There ought to be an atmosphere of cheerfulness about a modern school house. This cheerful note will find adequate expression through the architectural design, bright and cheerful colors and good form. For the present there are still too many people obsessed by the idea that a school building, as a work of collaboration of the whole community, should be a monumental expression of the public spirit of the municipality.

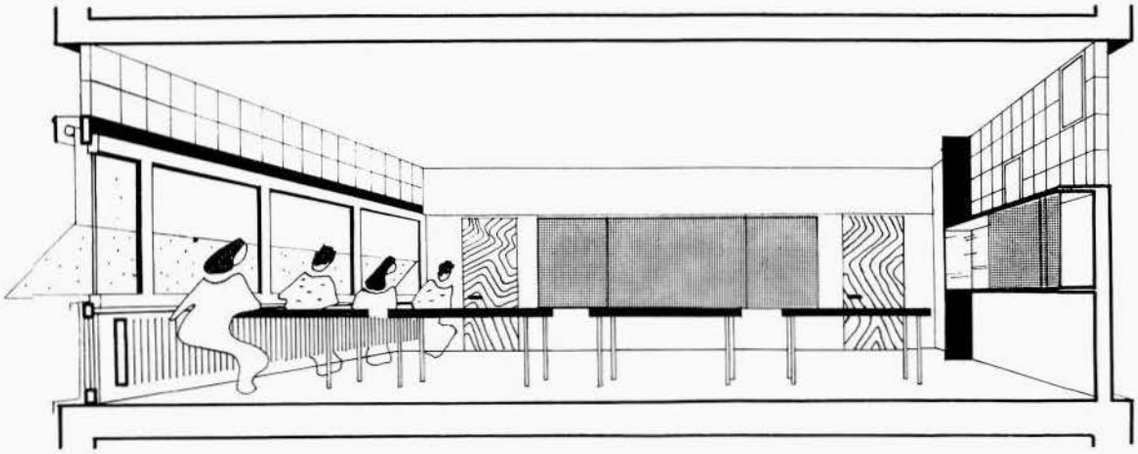
The new style here described is still very young. Experiences are not yet numerous enough to allow us to draw conclusions and to pronounce judgment. We must still wait for the testimonies of teachers and heads of schools. Their opinions have not yet been heard. The architects, however, are practically unanimous in their support of the new style, which it has taken them the best part of thirty years to evolve and finally to realize. They hope that they will be allowed to go on along the line they have so far only been able to trace. They know that setbacks are possible, and they are quite prepared to face critics, hoping they will not be frustrated but rather encouraged in their efforts to build better school houses.

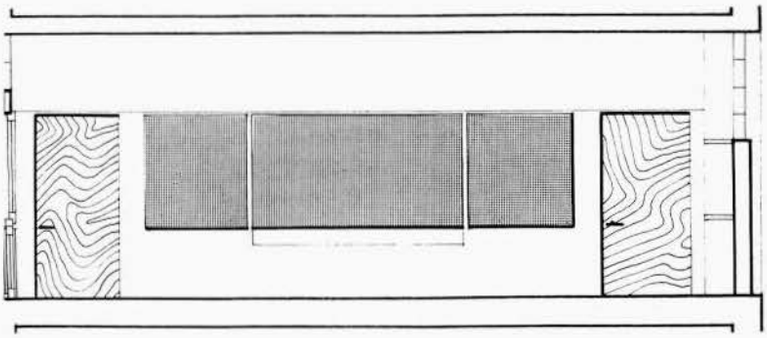


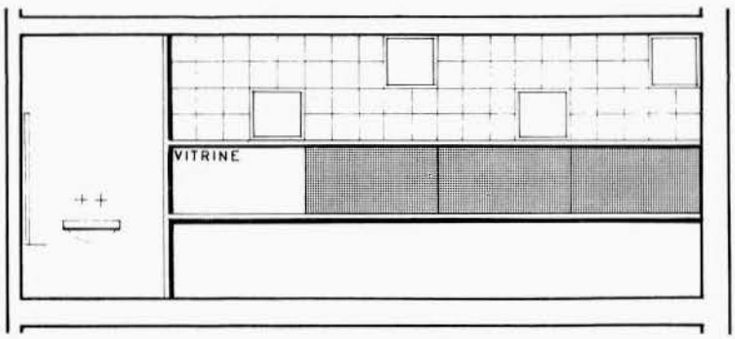



*Typical Classroom Unit*
*from the office of Thomas Schmid, Architect, Zurich*

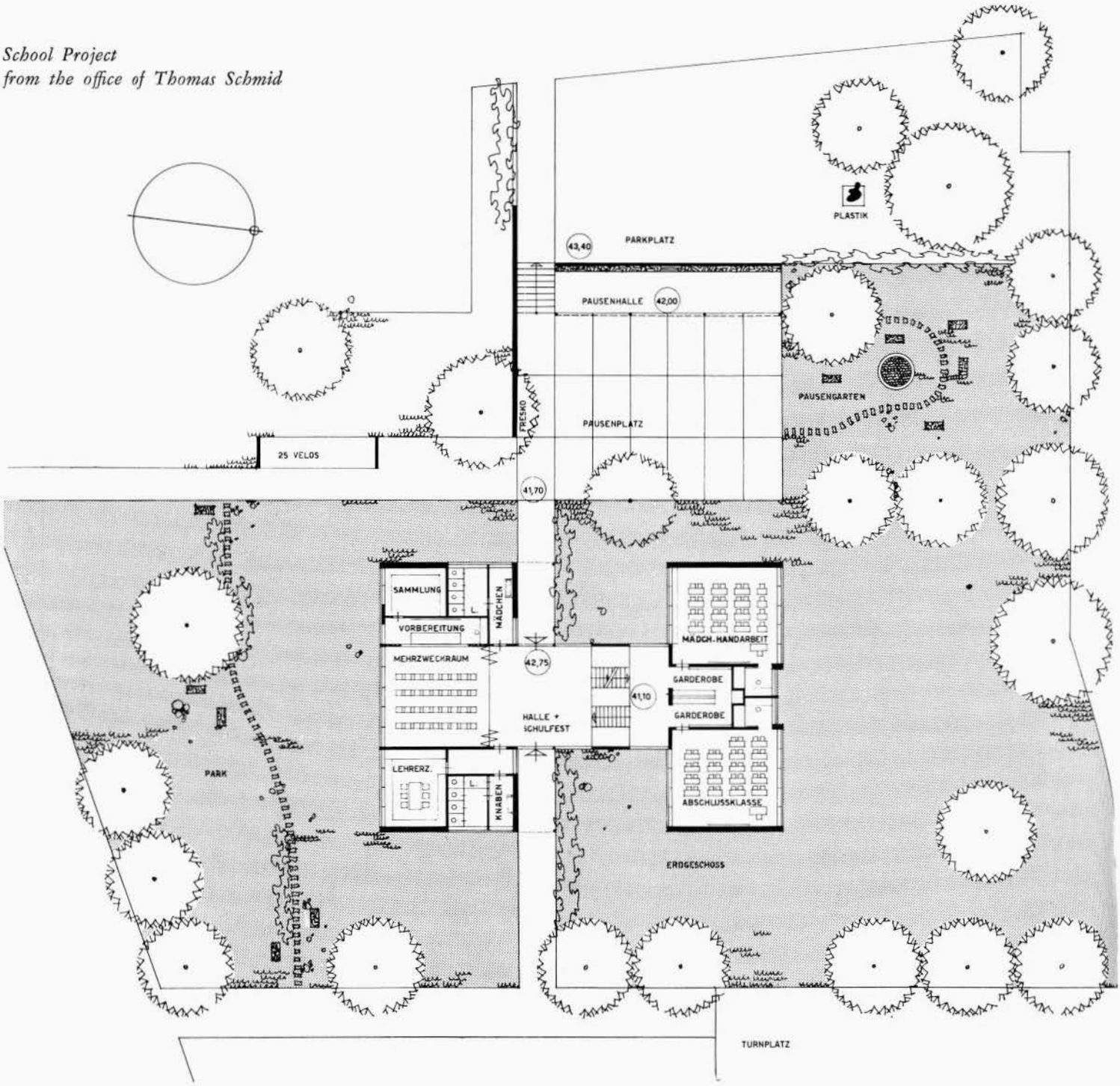


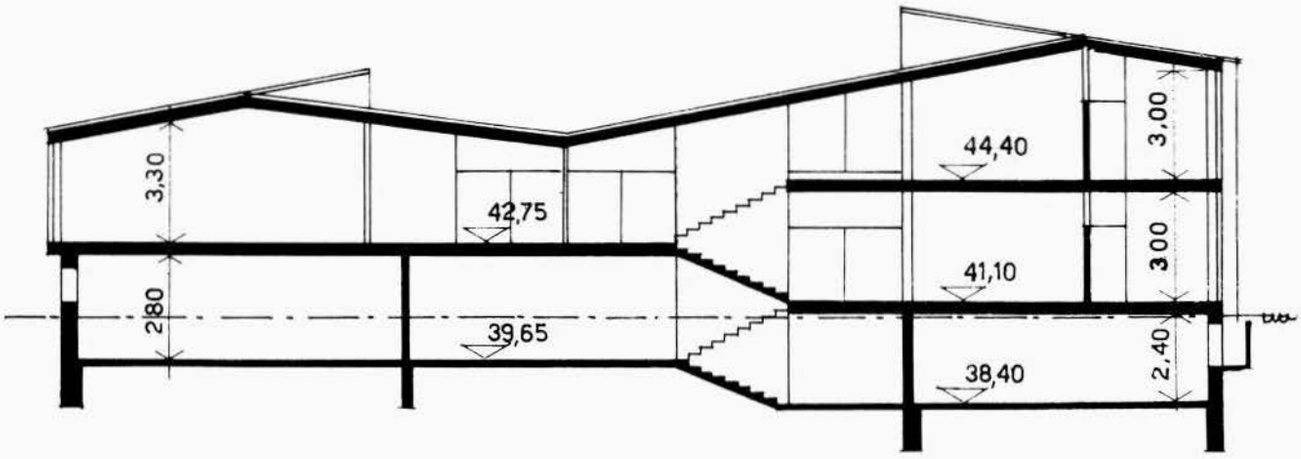





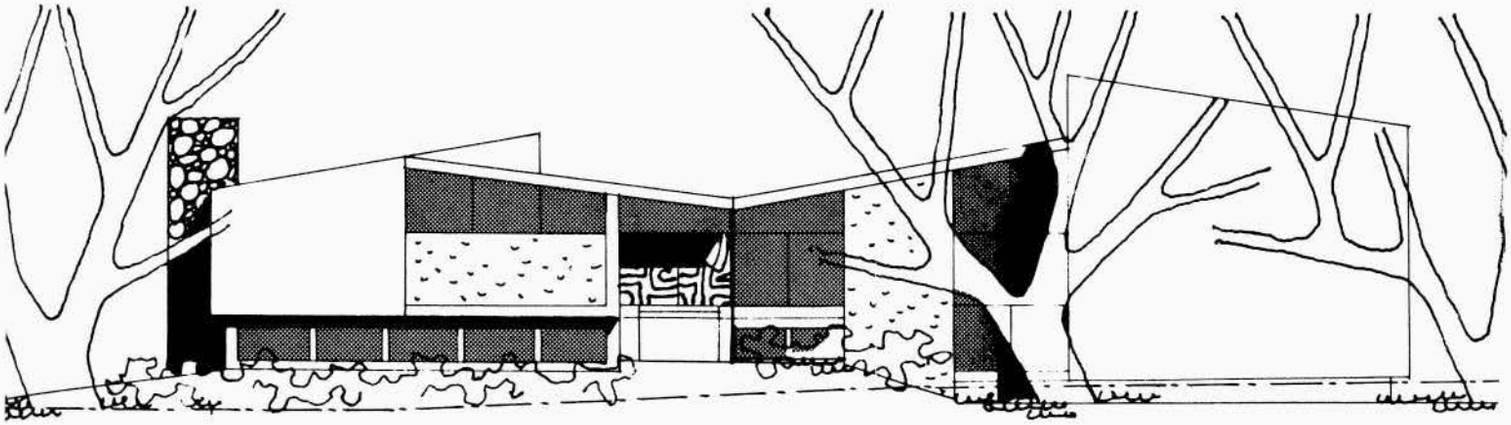


*School Project*
*from the office of Thomas Schmid*

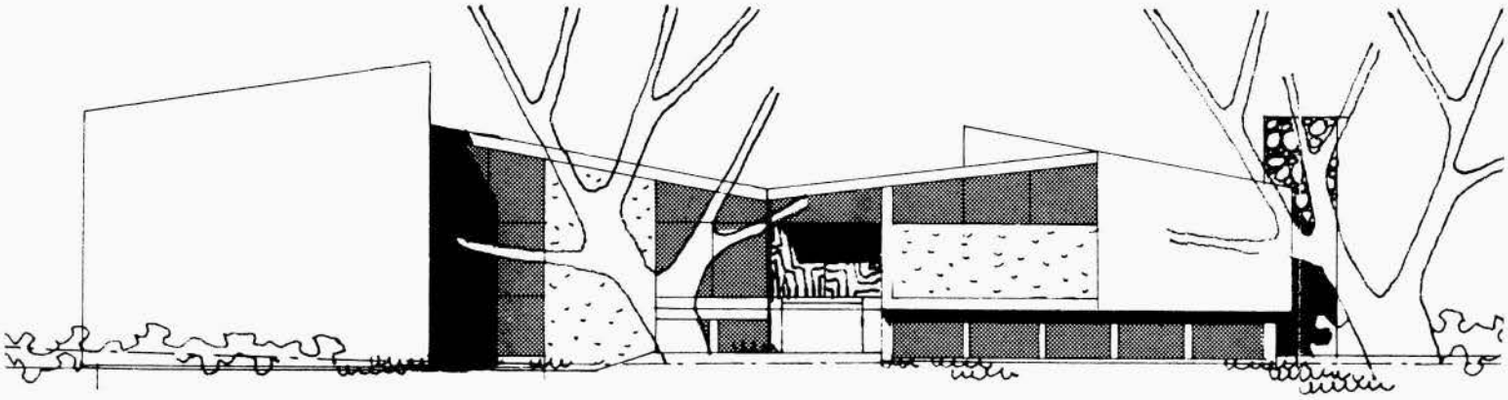



Section



East elevation

West elevation

# Sinclair Laird School
# Montreal, Quebec

*Architects, Wiggs, Lawton & Walker*

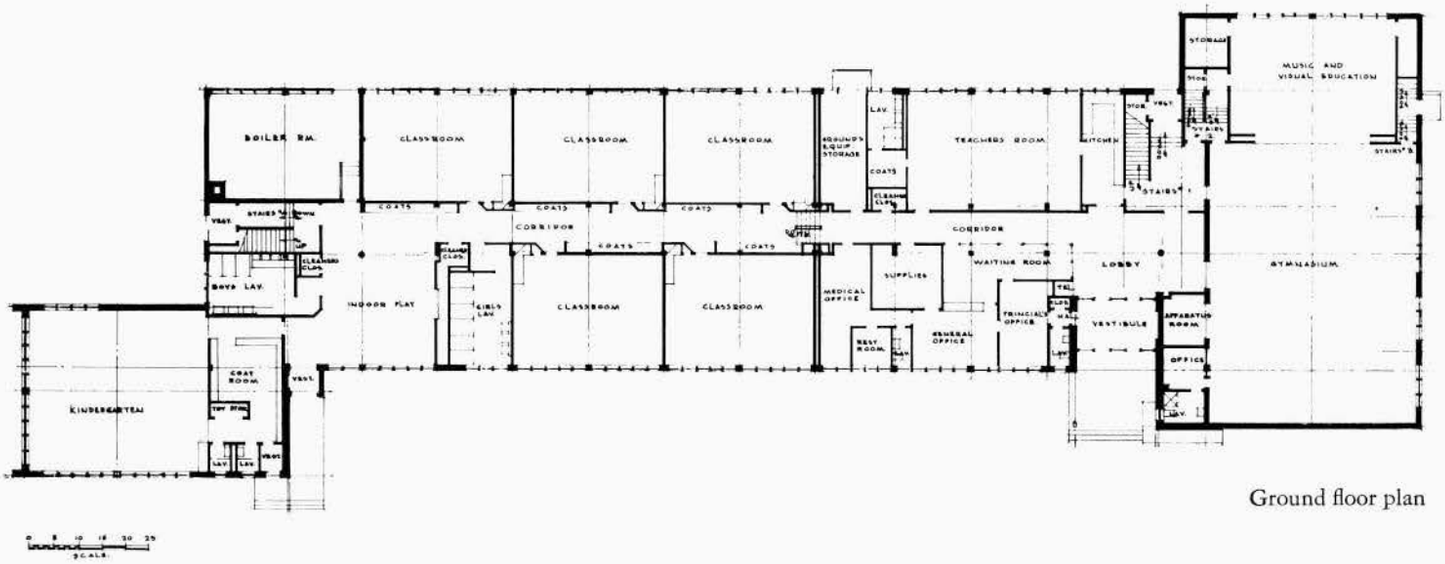
*Engineers, Wiggs, Walford, Frost & Lindsay*
*General Contractors, Cecil Carpenter Co. Ltd.*

ARNOTT & ROGERS

Main entrance lobby

ARNOTT & ROGERS

Teachers' lounge



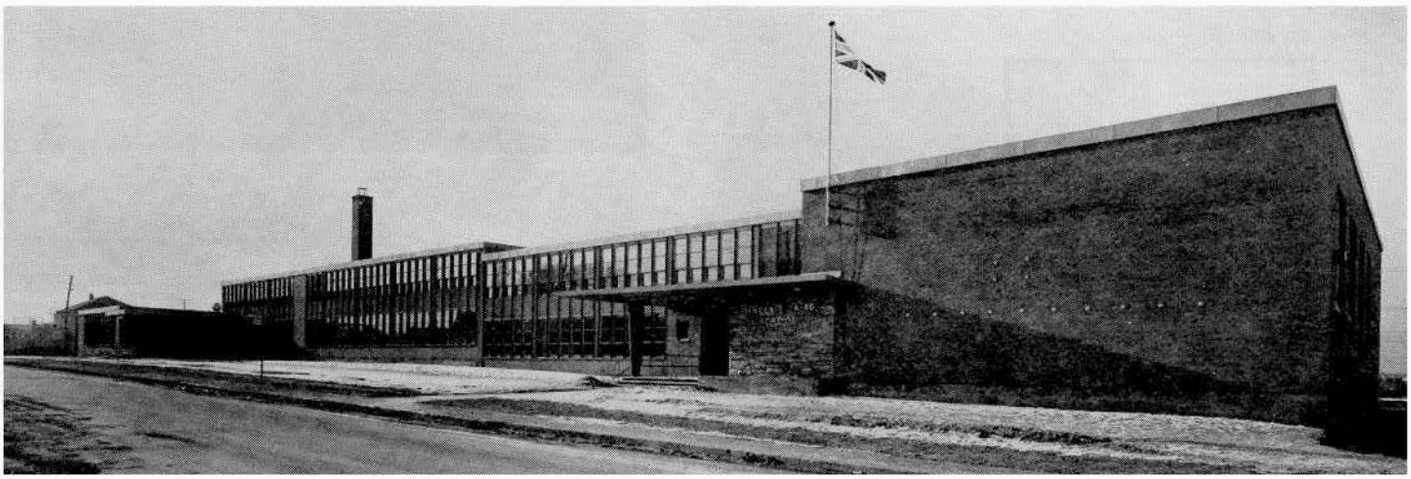

Ground floor plan

ARNOTT & ROGERS

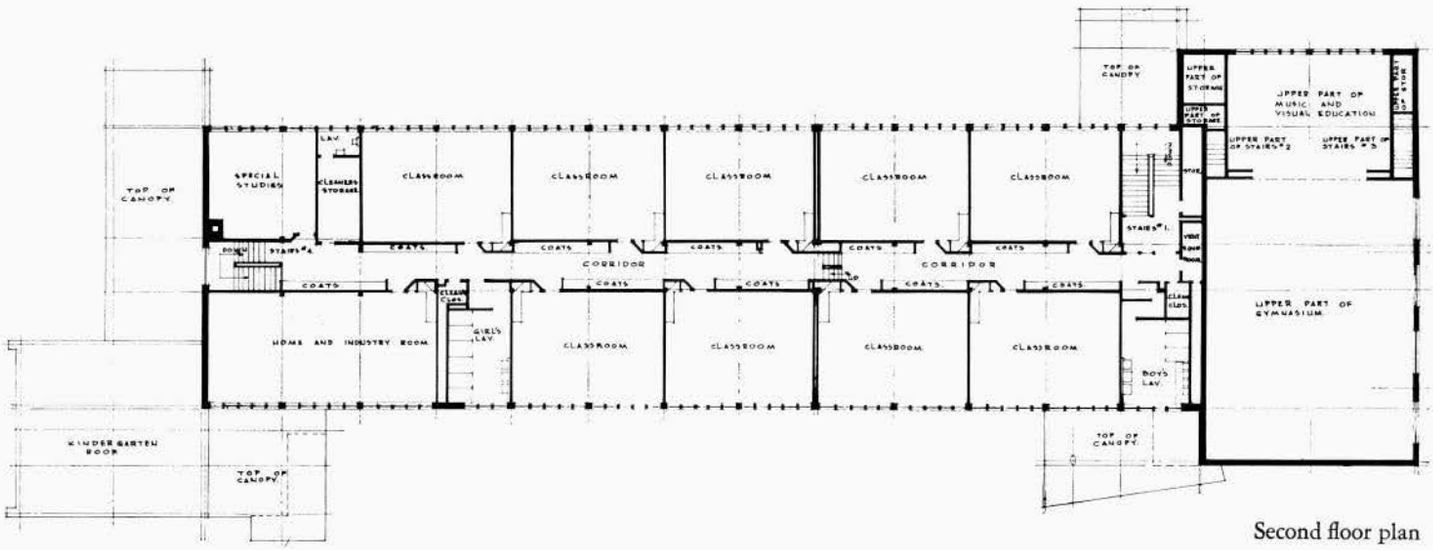
Kindergarten

Gymnasium

ARNOTT & ROGERS



East elevation from the street



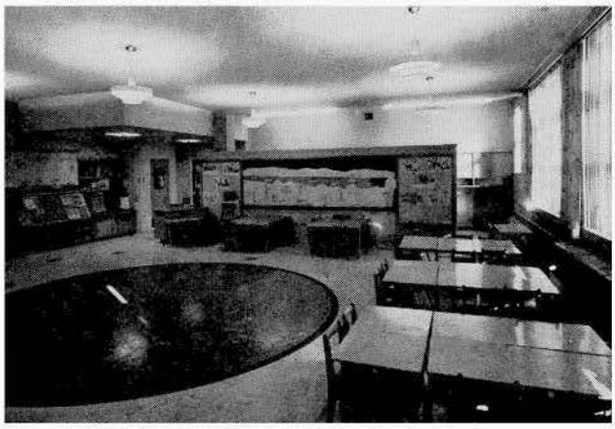

Second floor plan

# Somerled School
# Montreal, Quebec

*Architects, Sydney & C. S. Comber*

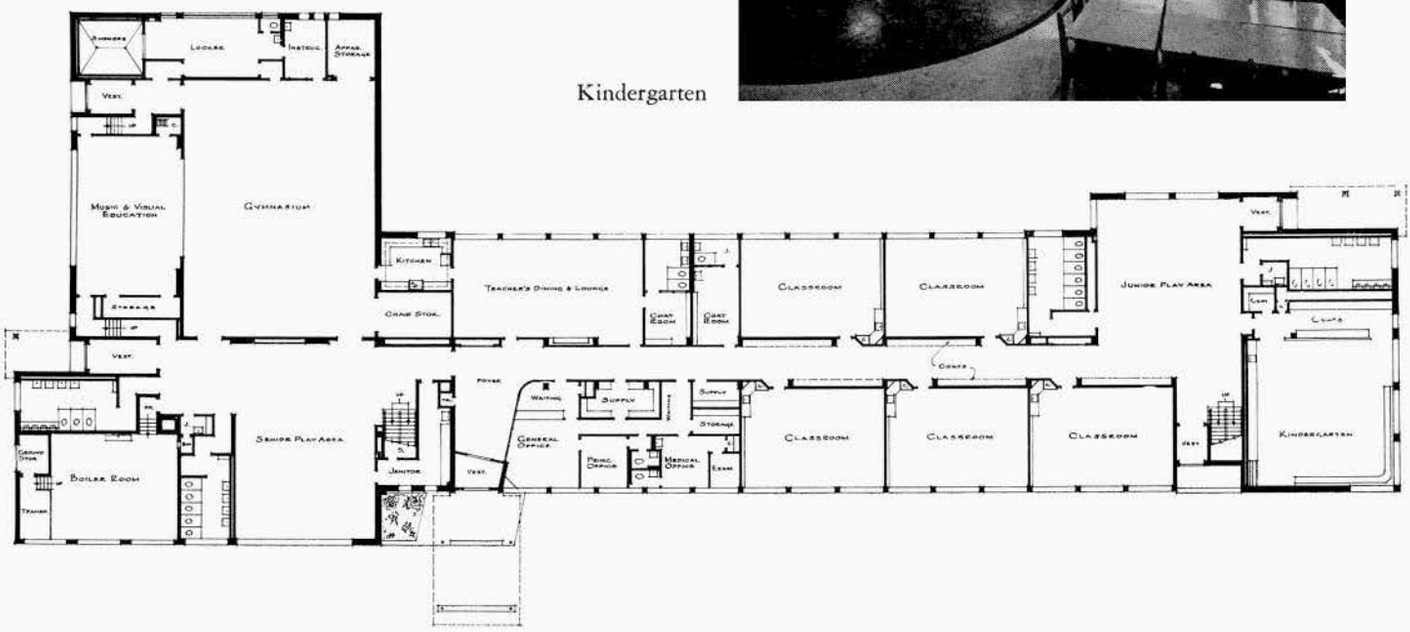
HAYWARD STUDIOS INC.

Teachers' room

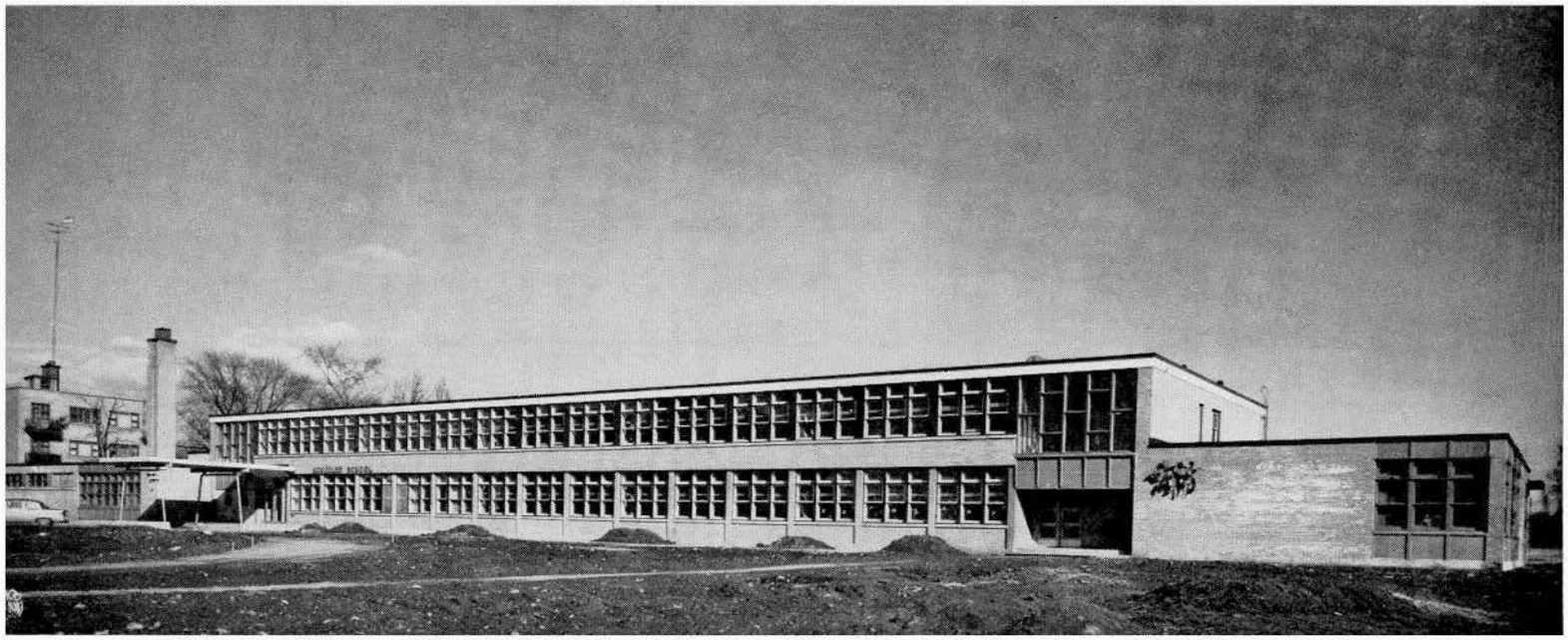


HAYWARD STUDIOS INC.

Kindergarten



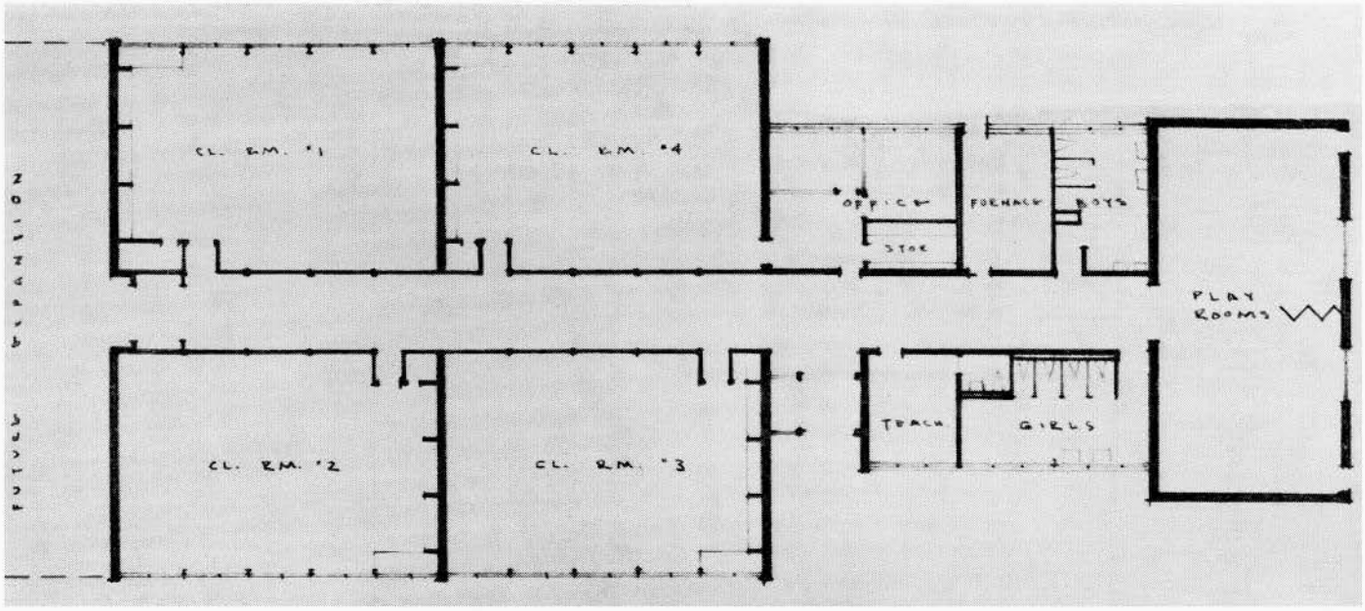

Front elevation

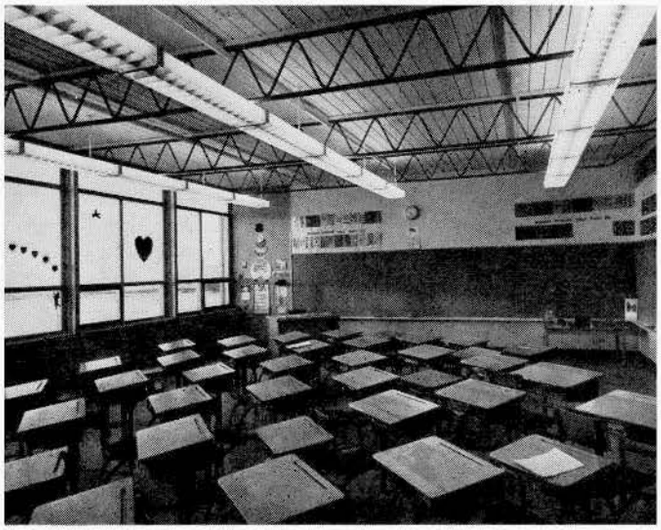


HAYWARD STUDIOS INC.

# Montgomery School, Saskatoon, Saskatchewan

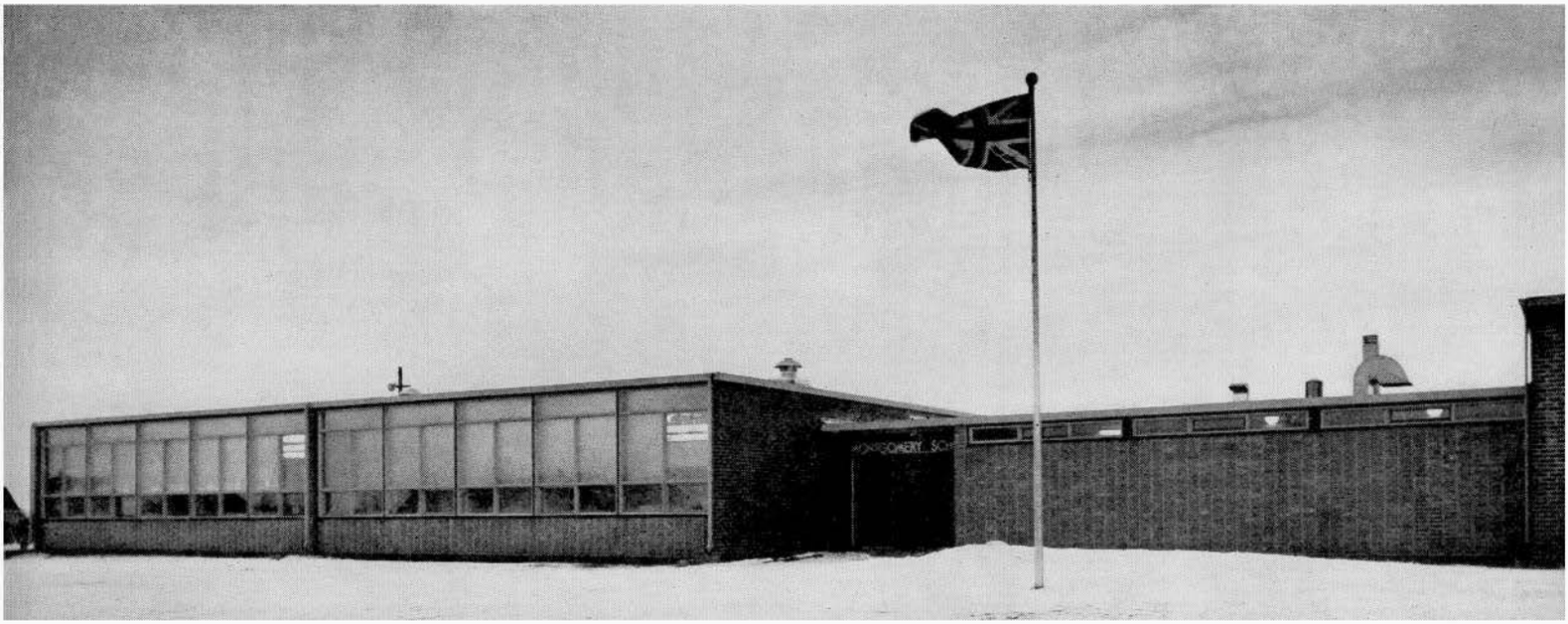
*Architect, Tinos Kortes*



Typical classroom

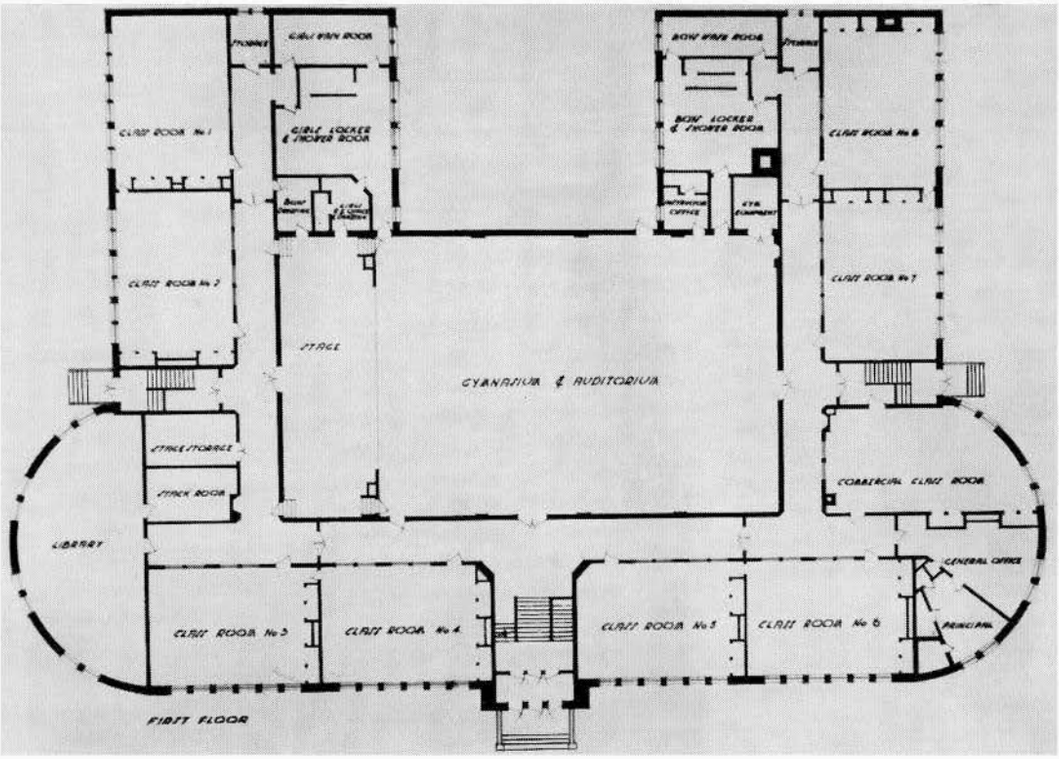
Front elevation



# Bridgetown Regional High School, Nova Scotia

*Architect, D. A. Webber*

*General Contractors, Kenney Construction Co. Ltd.*




*Foundation: reinforced concrete*

*Frame: masonry, reinforced concrete, structural steel and wood*

*Exterior Walls: brick veneer with reinforced backing and wood frame, pine trim*

*Interior Walls: speed tile and plaster, wood studding and plaster*

*Roof: flat roof wood sheathing deck on OWSJ covered with 1" fibre board and 20 year tar and gravel roofing*

*Ground Floor: reinforced concrete over 3" structural tile laid on gravel fill. The finished surface is 3/16" asphalt tile except in the industrial arts room which is hardwood*

*First Floor: spruce finish floor over a sub floor on OWSJ, the spruce floor covered with linoleum except in the auditorium which is hardwood and the washrooms which are tile*

*Ceiling: ceiling of the classrooms and corridors have 1/2" fibre tile. Auditorium has 3/4" acoustic tile. All washrooms, kitchens, closets have plastered ceilings*

*Insulation: walls and ceilings of each floor have 2" sea felt*

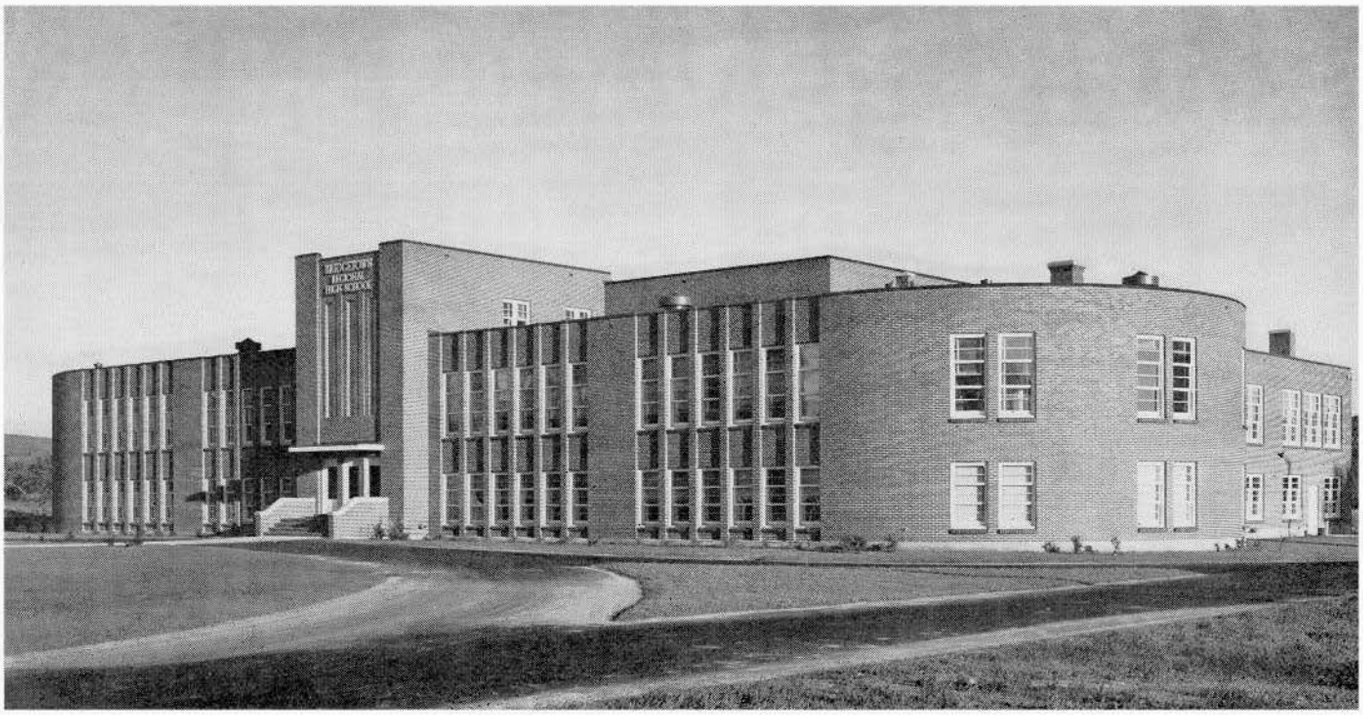
*Interior Trim: spruce trim throughout. Birch dado in classrooms, corridors and auditorium. Cases of pine with the counters covered with linoleum*

*Windows: wood frames and sashes double hung and double glazed*

*Doors: exterior and interior birch except the boiler room which is pine*

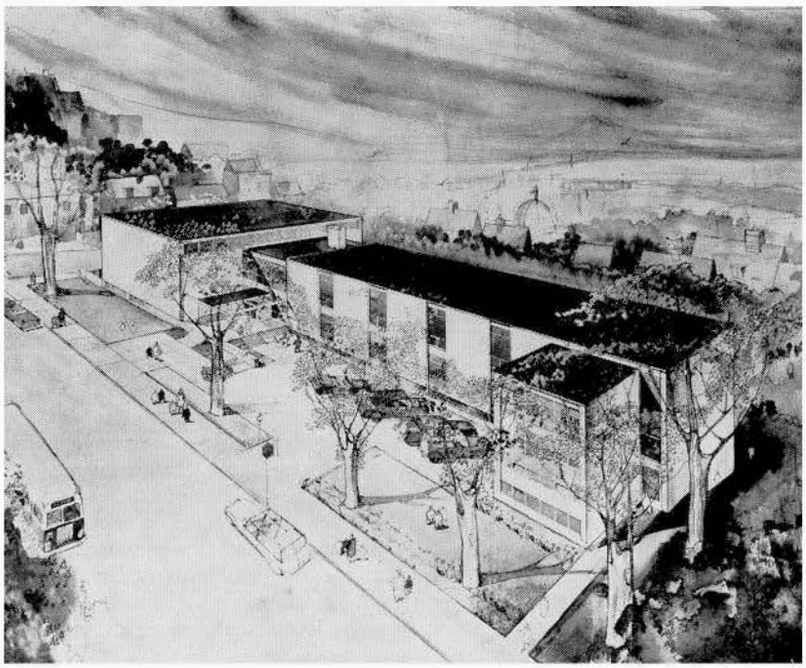
*Cost: $9.60 sq. ft.*
*.70 cu. ft.*

*Contract Price: $439,180.00*




BOLLINGER

# SCHOOL PROJECTS



## St. Georges School Inc.
## Montreal, Quebec

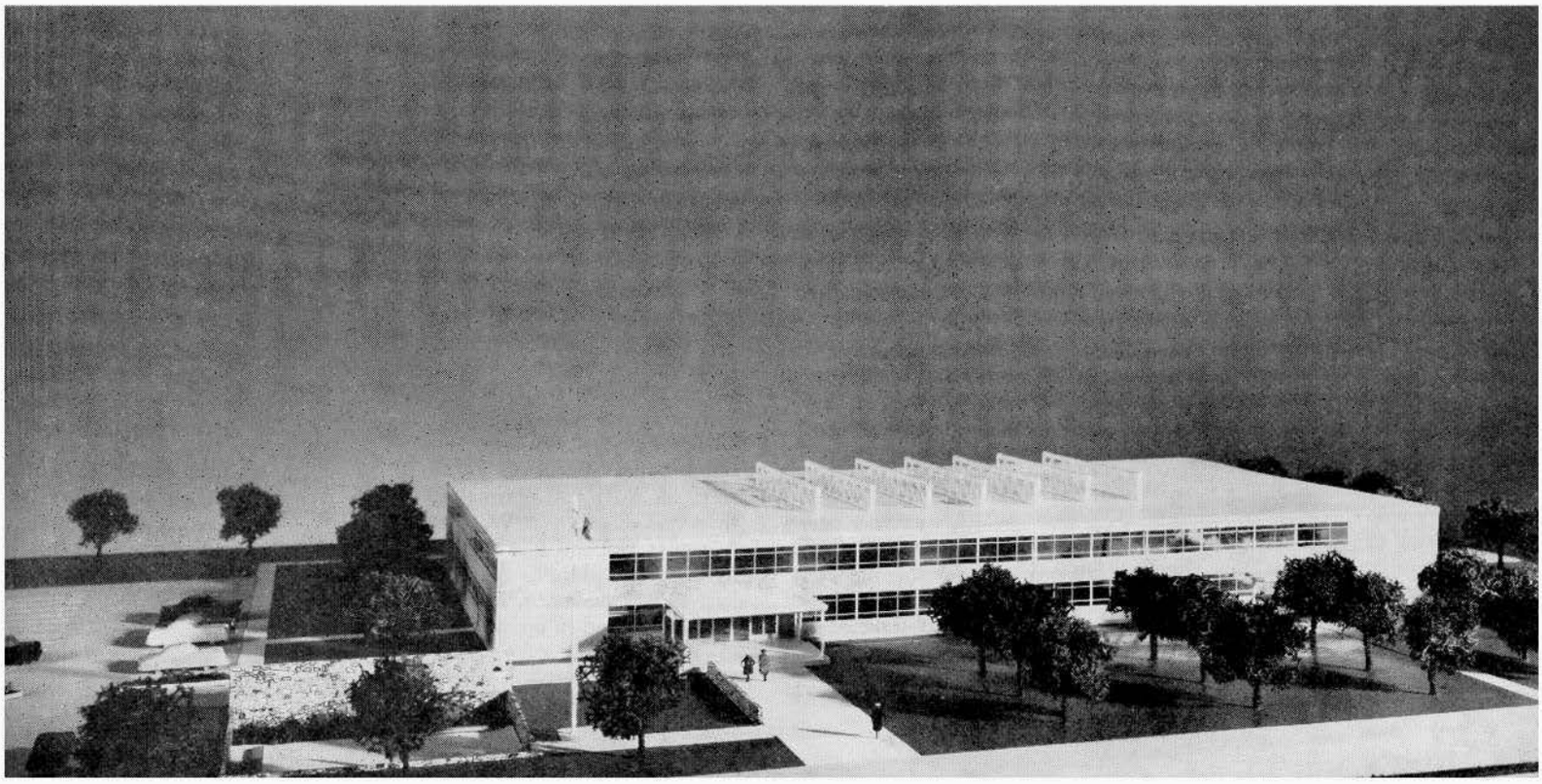
*Architect, D. F. Lebonsold*

*Construction is to start shortly on the Dr F. J. Donevan Collegiate Institute in Oshawa. The building, entirely contained within a simple rectangle, contains 16 classrooms, 4 science laboratories, 2 general shops, 2 home economics rooms, art room, music room, commercial room, library, lunch room, double gymnasium and stage, general offices and other auxiliary areas. Consideration was given in the design to circulation, short corridors, good storage areas and compact plan. The classrooms surround the gymnasium and stage unit which forms the core. The gymnasium is lit from skydomes above, the roof being flush with the remainder of the building. The structural trusses are above the roof instead of below, to reduce the volume of the room. The roof then is hung from the trusses on stainless steel rods.*

*The shops at the north are depressed slightly to effect a higher ceiling and entrance to these rooms is by means of short ramps. The glazing throughout the school is a heat resistant glare-reducing glass and each room controls its own heat and fresh air ventilation.*

## Dr F. J. Donevan Collegiate Institute
## Oshawa, Ontario

*Architects and Engineers, John B. Parkin Associates*



# The Needs of Men

BY SIR GEOFFREY VICKERS, V.C.

## V

It remains to discuss the fourth and most difficult area, in which I suggested that industrialisation erodes the structure of expectations underlying both our sense of security and our power of prediction.

We can hardly exaggerate the importance in our lives of expectation. Social psychologists would have us regard society as a structure of mutual expectations. All our moral values can be expressed in terms of what we expect of ourselves and each other. Both our effectiveness and our peace of mind depend very much on our being able to rely with some confidence on a running forecast of what is going to happen next. How much we depend on this we realise only when we lose it. Gross disparity between reality and expectation appears both as a cause and as a symptom of mental disturbance in the clinics of the psychiatrists; and experimental psychologists can reproduce these disturbances in animals by building up and then frustrating their expectations. What we learn to expect of our environment, our fellow men and ourselves controls our lives; and we learn it most readily in youth.

It follows then that if the nature or even the mere pace of industrialisation affects this structure of expectation, it may work us harm in several ways. I have in mind four in particular. It may make us individually less effective. It may impede our communication. It may prevent a healthy relationship between the generations; and it may subject us to undue emotional strain.

Consider our proceedings today. I began by suggesting to you that you had probably brought with you to the discussion of these great issues different sets of assumptions and preconceptions and that you would not be able to communicate effectively until you had compared and refined them. These assumptions and preconceptions are the expression of expectations built up from recent experience; and I have been suggesting to you that they may be false guides to the future. The more rapid the rate of change, the harder it is for any of us to furnish ourselves with an effective set of expectations for the future and the less likely that any two of us will hold the same set.

Clearly there is a threshold here, which we cannot pass with impunity. We cannot easily forecast where it lies; for it is not absolute. It depends not only on the rate of change, but also on our skill in dealing with change. But it is there and there is a point at which it will limit absolutely our power both to predict and to communicate.

More important, perhaps, than this intellectual barrier is what I would call the cultural barrier, if you will accept that word in a more narrow sense than has been common in the past. It is becoming clear that, even within one closely knit people there are sub-cultural differences which strangely persist. Occupations have their sub-cultures, none more so than mining; but localities also may have that about them which makes them slow to assimilate new entrants in any number. In my country the mines of South Yorkshire were developed quickly some forty or fifty years ago, largely by the immigration of miners from other coalfields. None could have been distant more than 250 miles; yet the South Yorkshire coalfield has a character notably different from that of the West Yorkshire coalfield, only a few miles away, which was developed only a little earlier but more slowly and hence with less 'immigrant' labour. If we can identify problems of immigration within our closely knit population, you must find it a greater problem and I know of none which calls more urgently for research.

Perhaps an even greater problem is the relation of the generations in a time of rapid change. If a culture is to persist, changing with changing times yet retaining enough coherence at all times to serve its purpose, then the changing generations have an essential part to play; the old transmit, the young adapt; and what they transmit is in turn adapted. A penumbra of uncertainty surrounds the advancing edge of change and it is necessary; but confusion follows if it spreads too widely, as every revolutionary period has shown. Clearly, here too there is a threshold which the rate of change cannot transgress with impunity, however beneficial its direction. We cannot afford to make a world in which everyone is clueless after thirty.

Finally, we must bear in mind the emotional stress of uncertainty, due to the failure of expectations or the lack of any basis on which to formulate them. Mental stress is an exceedingly imprecise concept but it seems clear that in those prosperous countries where life should be easiest, the casualties from mental causes are not lower but higher than elsewhere. The springs of human well-being are more subtle than we know.

I know of no area in which it is harder to strike the balance in credit and debit with industrialisation than in this field of health. In industrialised countries the expectation of life at all ages but especially at birth has notably risen. For this most would give the chief credit to the simple fact that an ever larger proportion of their children get enough food, air and rest. Even the control of infection probably stands second to this; and industry can claim most of the credit for the first and essential share in the second. These will remain among its most important contributions to human well-being.

Yet merely to be alive is an inadequate criterion of health. The constitution of the World Health Organisation declares that health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.

I know no doctor who is at ease with the concept of positive health. Disease can be recognised as departure from a norm but how to recognise positive health as a theoretical ceiling, situated above that norm at an uncertain distance and in more than one dimension? We can acknowledge their difficulty as scientists and still feel that the World Health Organisation is right in reminding us that health is not a norm but a form of individual excellence. Industrialisation can create its simplest conditions; and in countries where these do not exist, it must

be of first priority to create them. Where they do exist, the further progress of our 'health' must look elsewhere for guidance and may find that industrialisation, its earlier help, has become a hindrance.

## VI

I have examined four fields in which rapid industrialisation seems likely to affect our well-being to its detriment. Has the enquiry thrown any light either on the process of development or on the nature of well-being? Among the thoughts which it has suggested to me I offer you the following as likely to be useful guides in your deliberations.

I see development as a process of interaction. I regard a country as the interaction of a people and a land; a society as the interaction of men with men, mediated by their structure of organisation and institutions and by their continuing yet over changing culture; even a single individual as the interaction within the organism itself of the changes evoked by experience with the over growing structure of past experience; these processes are all linked with each other and all, of course, are extended in time. Government, whether political or social or personal, I regard as the regulation of this process with the double object of maintaining its coherence and of directing its course; and self-government as the happy state when the system, be it a nation or a society or a personality, is so adjusted that it performs this dual function spontaneously.

The concept of interaction corrects an idea prevalent in our recent past, false and dangerous as I believe yet far from dead, that man observing, planning, exploiting, can himself remain apart, unchanged by the forces which he releases. We know that this is never true, even in the interaction of man with the inorganic world. That treasure of minerals in the Laurentian Shield will let you alone, so long as you let it alone and no longer. As you develop it, so it will develop you, as the coal measures in my country have left their mark not only on the landscape but on the lives and characters and institutions of those who developed them.

In this interaction industrialisation is, I have suggested, a profoundly destabilising force. At the most comprehensive level, where the interacting forces comprise everything from the bacteria in the soil to the thoughts in our heads – I will call it the ecological level – it contrasts sharply with the agricultural phase which went before, a way of life equally dynamic yet the most stable yet evolved by man. An agricultural way of life is based on a continuing partnership of man with nature such as our present era cannot yet dream of achieving. And because ours is based not on partnership but on exploitation, its progress tends to breed its own reversals.

This instability is not confined to its own field. We have seen that it affects also our social interaction and even that inner structure of expectation on which our personal stability depends.

It follows, I think, that we must learn to attach a true meaning and a just importance to the concept of stability, both as a good in itself and as a condition of further development. This word found little place in the vocabulary of the nineteenth century and even today it is ignored and misunderstood. The Committee on American Resources set up by the President of the United States a few years ago, and commonly known as the Paley Committee, in the fascinating early chapters of their report – which I regard as the Athanasian creed in the canon of the American Way of Life – testify to their faith in expansion; and, asking themselves why they hold this faith, answer that they see no alternative to expansion except stagnation and decay. In the whole of their report the concept of stability does not appear, save, perhaps, in one half-wistful reference to their countrymen's unwillingness to "accept the status of a mature economy."

Yet, conceived as dynamic balance, stability is a condition of all development and indeed of all the activity of living things; for in the world of life, a world essentially dynamic, stability can be nothing but dynamic balance. We can tolerate variations of external temperature within a range of a hundred degrees only because the internal heat of our bodies is held constant within a degree or so by the ceaseless activity of a net of adjusting devices. Thus even our physical mobility depends on the dynamic balance of our body heat and of course on scores of others besides. At the other end of the scale, our further material expansion, in England at all events, seems to depend on our finding a way to maintain two stabilities, which are equally examples of dynamic balance – stability of employment and stability of money values. And if we ask an economist to define the conditions in which we can have both, he will specify certain types of behaviour on the part of both management and labour, behaviour which calls for stabilising mechanisms in ourselves and our society, which we do not yet possess. Conceived as dynamic balance, the concept of stability is the governing concept of our age.

We must then revise radically the nineteenth century's idea of progress. They desired political and social progress but they believed it would follow automatically from material expansion. The concept of balance they ignored. They were able to do so only because the human species was expanding in a new living space so vast that its boundaries were for the moment below the horizon – a physical space formed by the opening of your own and other continents; an economic space formed by the new possibilities of production and exchange. They were not lucky in that freedom; it led them to mistakes which can never be reversed. Who was ever lucky to be able to act without counting the cost?

There are three strands in the idea of progress: betterment, which is its object and its criterion; expansion, which is its servant; and balance which is its condition. This is clear enough today; but you, more perhaps than any other nation have the initiative to act upon it. For a country like India, where the population, already short of food, may double in twenty years, expansion may still be paramount. Even for my country, dependent for its daily bread on competing with success in a world market of finished products, economic efficiency is still a task master who leaves us little initiative. But with you it is different. You have already a standard of living as high as any in the world; yet few, if any countries have such rich undeveloped resources. You have for the moment initiative, a real opportunity to choose. It is of all gifts the most rare, the most precious – and the most embarrassing.

For it raises my second question, which I have left to the end. Do we know what we mean by well-being? In the rare moments when we have a choice, have we any criteria to choose by? Philosophically, this is a difficult question; but I think we can find some elements of an answer if we approach it historically. As a matter of history our political ideas of well-being have evolved by implication from a series of protests against their manifold opposites. Liberty is more than the absence of tyranny; but tyranny taught us to value it. Similarly our current English concept of the Welfare State was formulated in a report which took as its basis the need to abolish the five 'giant evils' of squalor, unemployment, ignorance, sickness and want. Conditions of ill-being are recognisable because at their extreme they destroy the society which they condition; and long before that point is reached, their badness has ceased to be a matter of doubt. No one in Britain argues that Lord Beveridge's five evils are concealed goods or an acceptable price for something else.

It is easier, then, to identify the conditions of ill-being than the conditions of well-being; and we can regard the pursuit of well-being, politically speaking, as beginning with the charting of those limits of ill-being which need not be and should not be transgressed. Even this negative goal is by no means easy to attain; at least three difficulties bedevil it.

First, negative goals are not constant; they do not stay put. We do not suppose that, when the five giant evils have been subdued, there will be no more giants to conquer. Some new ones are already in sight; and among them some created by the attack on the existing five. This, I think, will always be so;

there is no finality in the fixing of negative goals.

Secondly, negative goals give no continuous guidance; they warn but they do not direct. So, unless they can be foreseen long before their threat has darkened the sky, our evasive action will be certainly expensive and possibly too late. The stabilising devices of the engineer are prone to a disorder known as 'hunting'. Pursuing their goal, they never hold it but swing across it, sometimes in widening oscillations. Political and social systems often do the same; and so do individuals. If we would avoid this, we must bring into relation our self-induced rate of change and our capacity for dealing with it.

Thirdly, negative goals, like positive goals, conflict. All our values may claim to be absolute at the bar of morality; but the politician is lucky if he is free to choose between goods, rather than between evils. Politically, the question is now to ensure that we shall make the new choices which industrialisation brings in such a way as will best express our current idea of human well-being and will further our search for a better. For the conditions of human well-being must be continually sought through our answers to the ever changing questions which life puts to us. So perhaps the most unchanging values are those which give us the best chance of answering aright.

To these I think history gives us some clue. Looking back on the social history of my own country, it seems to me that, where we have acted or failed to act in ways which we have subsequently regretted, the chief cause has been sluggishness in our responses; and this has shown itself in two ways. The first and most important is delay in recognising some new feature of the situation which has become important. We did not opt for slums but we got them; and so did you, as is shown by some of the studies in your hands. It was not lack of information, so much as lack of attention. And this again was linked to the lack of machinery for action. Such machinery was easy to devise, once we realised it was wanted; but its absence blinded us to the need for it. We attend only to those aspects of the situation which we are accustomed to do something about.

Now it is a feature of industrialisation that it continually puts to us new choices, which we are ill-equipped to make and hence ill-equipped to recognise. We are also unwilling to recognise them; for, whereas we like new industrial techniques for their newness, we dislike new political and administrative techniques; we are as reluctant to experiment with them as we are glad to experiment with new machines and processes.

We have some reason for our fears but we must face the fact that we cannot have the one without the other. As we change our physical world, so we shall inescapably change our social world and our personal world. If we cannot keep them in phase, we shall meet disaster.

Yet we should not have been so slow as we were, if our reactions had not been blunted by another factor.

Obsessed by the habit of thinking of men functionally as producers, consumers, voters and what not, we forget to think of them primarily as human beings.

Blinded by the success of the division of labour, we forgot that individual men and women must at all costs be kept whole. These are the cardinal dangers of industrialisation and of the functional way of thinking which it engenders.

Fundamentally, then, I believe that the limiting conditions of our system are states of our own mind. The unending debate which we call democracy depends for its efficacy, not on its techniques but on the conditions necessary to its growth. One of these is the freedom to spread facts, however unwelcome and to express ideas, however unpopular. In your country, as in mine, there are constitutional safeguards against this right being suppressed; but these do not ensure that it will be exercised. Among its essential safeguards is the corresponding duty, of which so much less is heard, to attend to unwelcome facts and to examine repellent ideas; and this, as we all know, requires mental discipline of a kind which is all too rare for our needs.

The second quality which seems to me essential to democratic functioning is that quality of sensitivity to others, which determines how far our behaviour will be affected by our sense of what is happening to them; and we can measure it by its intensity and by the range over which it extends in both space and time. We may expect much or little of this faculty, but, whatever we expect, we are bound, I think, to accept it as one of the limiting factors on our capacity to live together in a changing world.

The decisions in which we express our sense of what matters most are not simple discriminations between good and bad. They are choices between a limited number of concrete alternatives, none ideal, sometimes none even acceptable. In making these decisions we exercise whatever control we have over our conditions and learn whatever we are capable of learning about how to choose better in future. Even more important, the way we choose today goes far to decide what choices will be open to the next generation.

Many such issues are latent in the situations which you go out to examine tomorrow. It is not for me, a stranger, to try to formulate them, still less to answer them. I only commend to you in all diffidence those qualities of mind and spirit which seem to equip us best for what is an unending voyage of discovery; and on your voyage I wish you God speed.

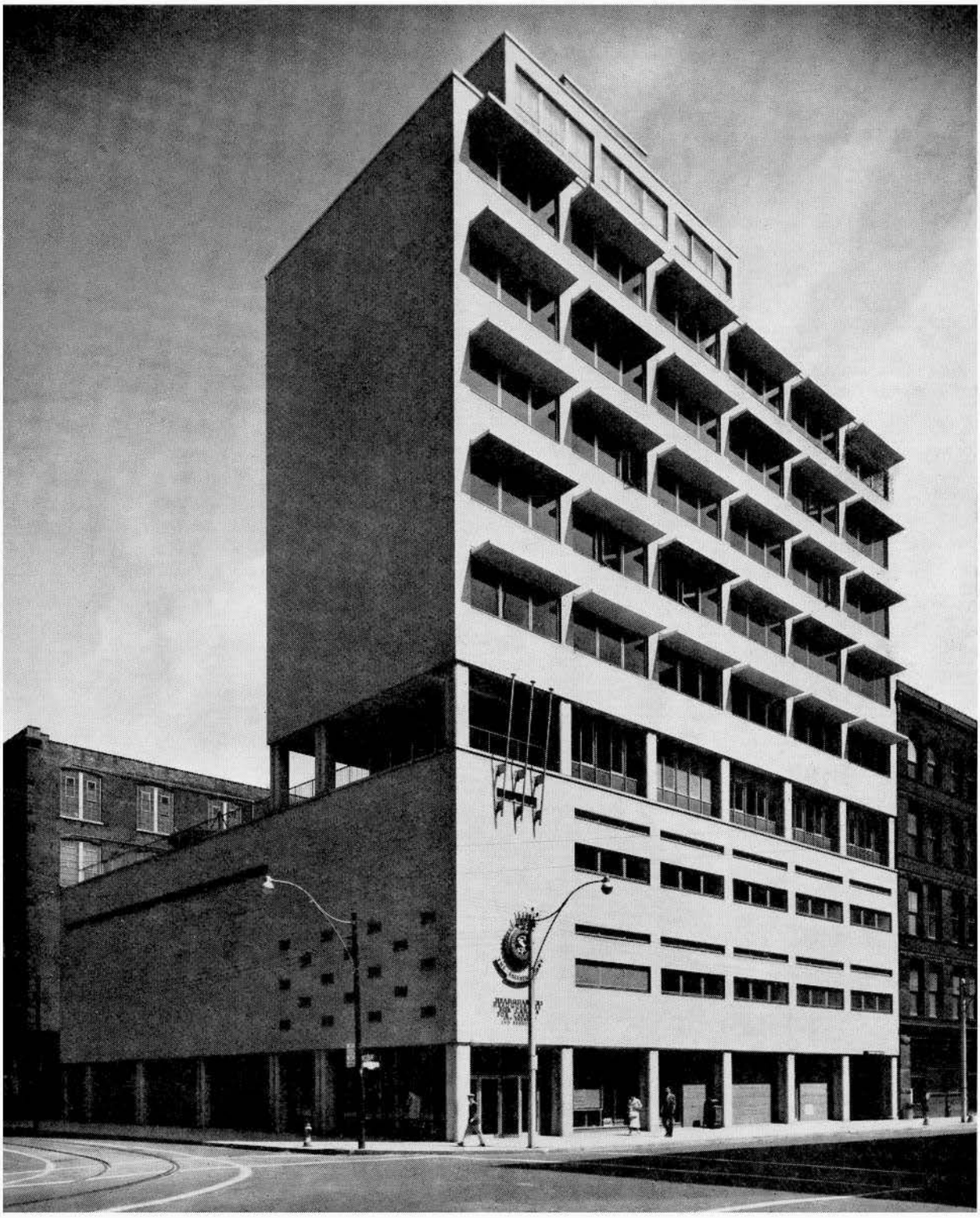
*This is the second and final instalment of Sir Geoffrey Vickers' paper, "The Needs of Men".*

# The Salvation Army Headquarters Building for Canada and Bermuda Toronto, Ontario

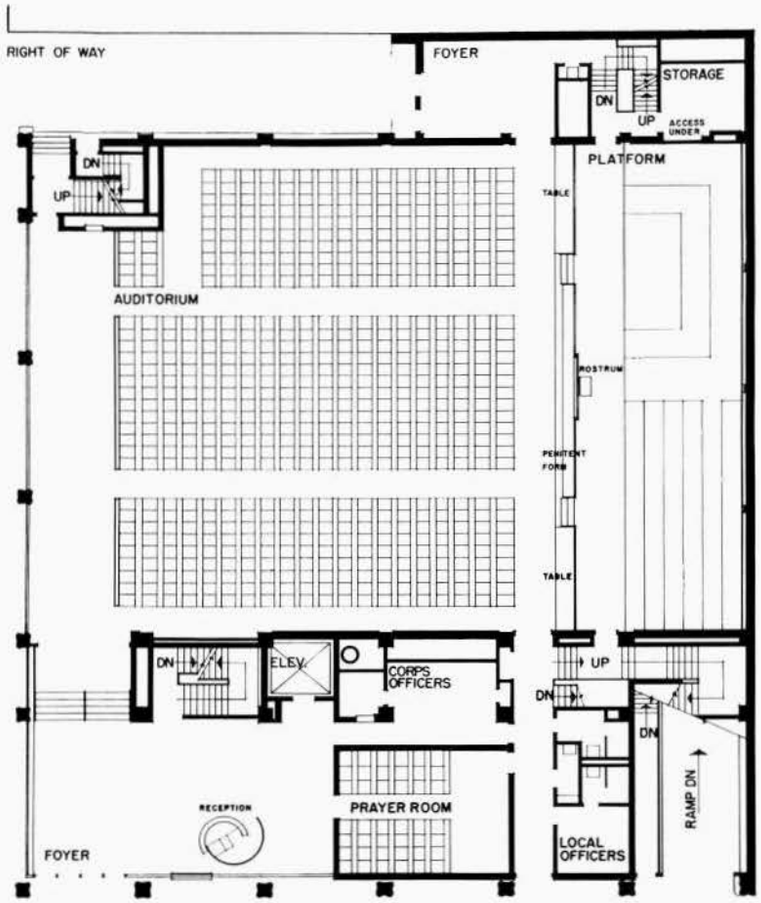
*Architects and Engineers, John B. Parkin Associates*

*General Contractors, J. L. E. Price & Co. Ltd.*

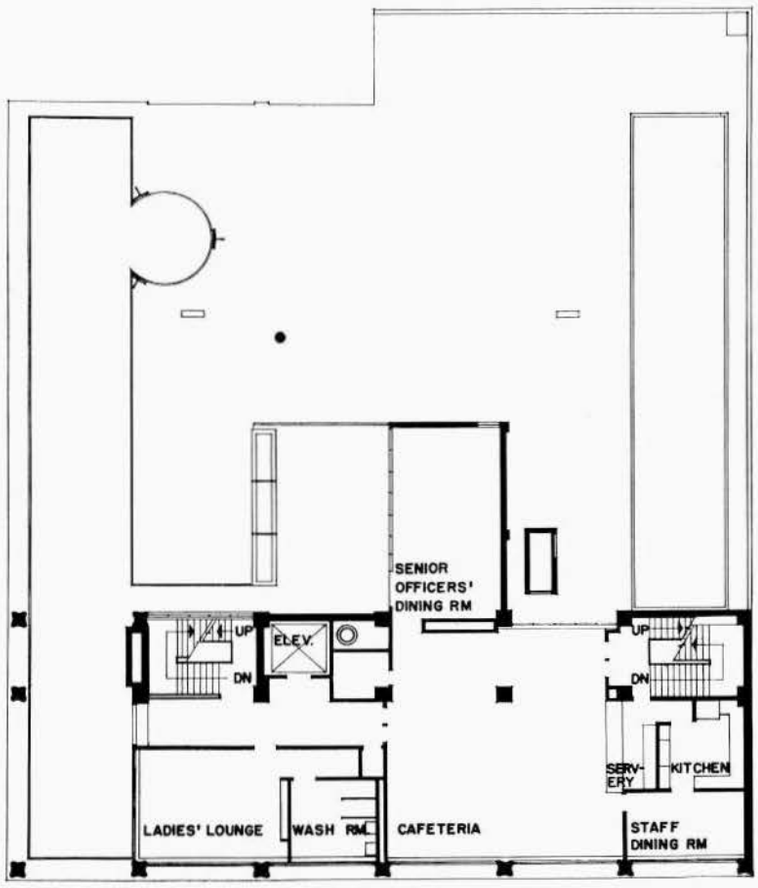
Exterior view corner James and Albert Streets



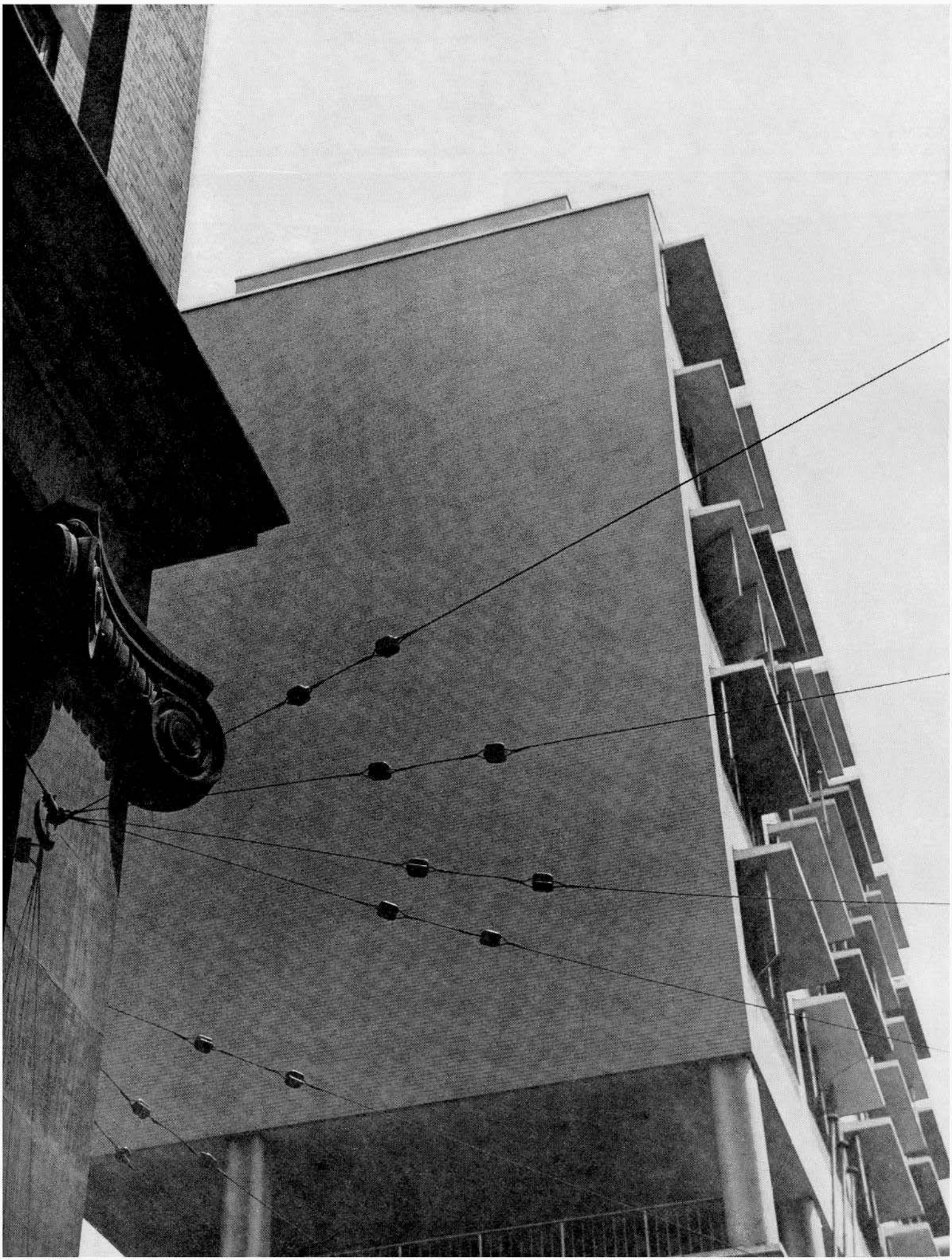
HUGH ROBERTSON–PANDA




First floor plan




Fourth floor plan



J. EASTON

Main floor of auditorium
with Modern Fold partition partly closed

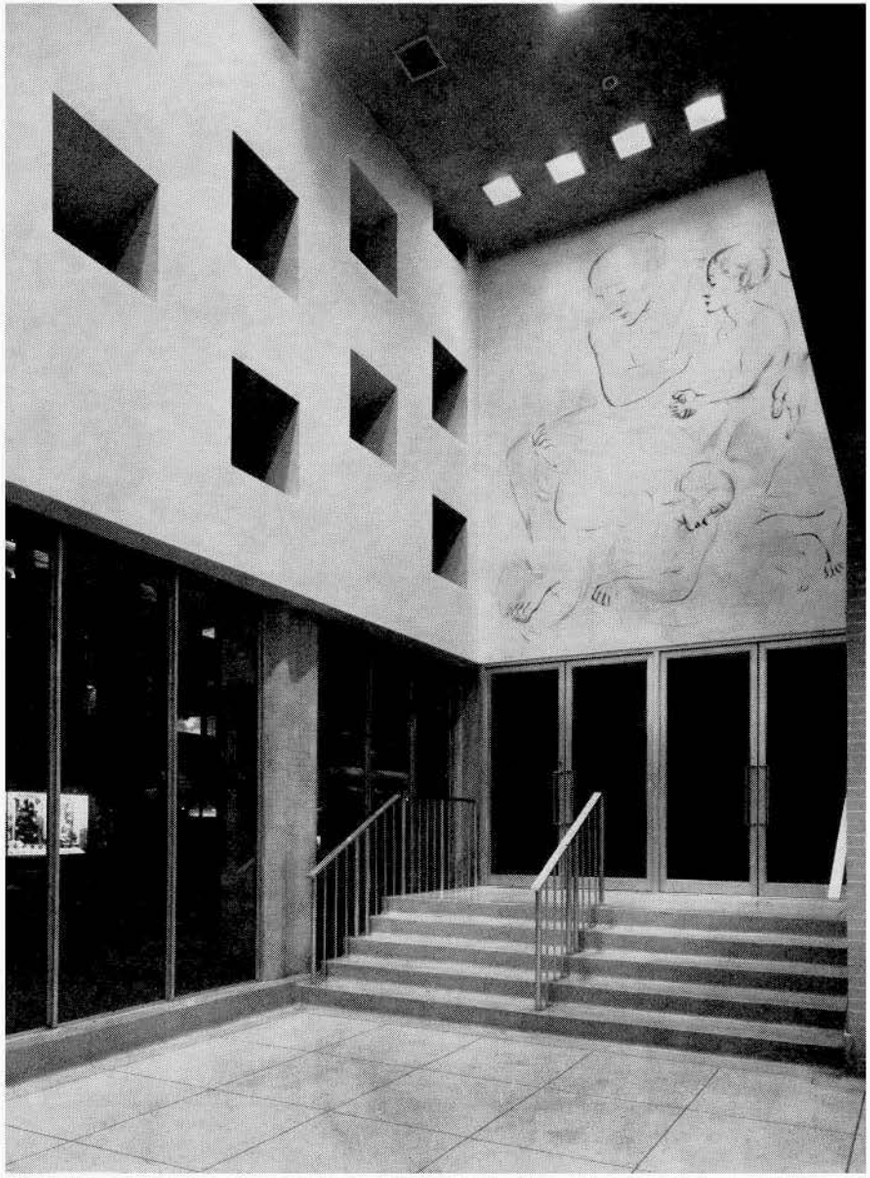
Stage from balcony of main auditorium

HUGH ROBERTSON—PANDA

Small prayer room with mural by R. York Wilson

HUGH ROBERTSON—PANDA

Night view of entrance lobby with mural by Jack Nicholls



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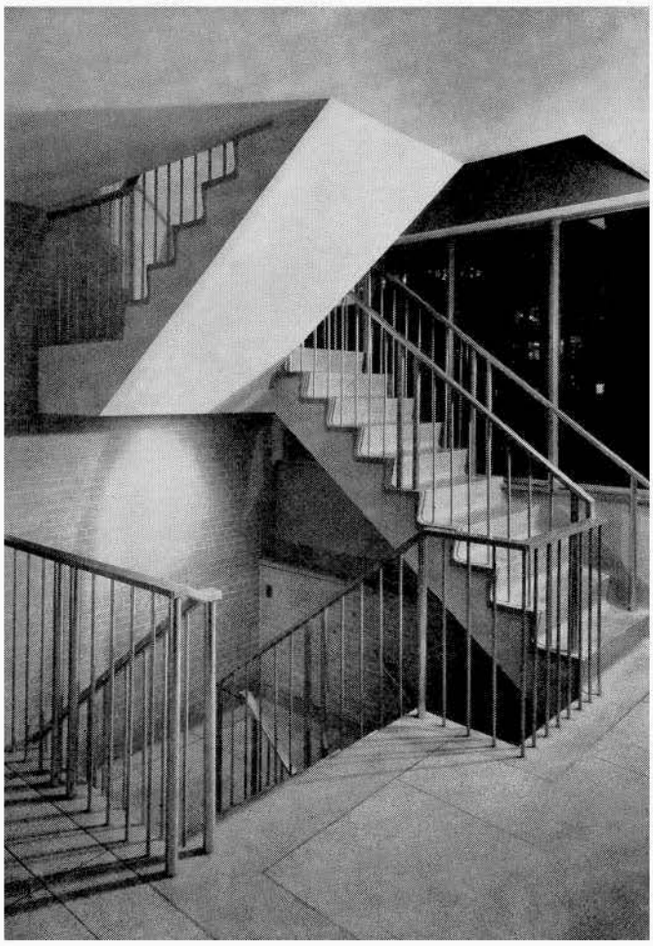


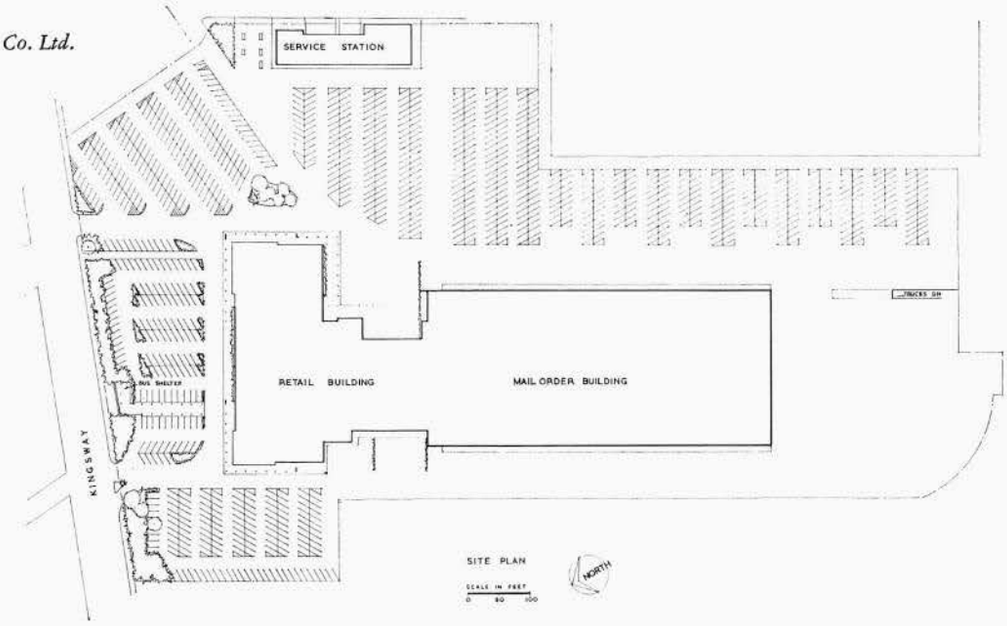
HUGH ROBERTSON-PANDA

Detail of main stair

# Simpson-Sears Ltd., Burnaby, British Columbia

*Architects, Gardiner, Thornton, Gathe & Associates*
*Thompson, Berwick & Pratt*

*Structural Engineers, Swan, Wooster & Partners*
*Heating & Ventilating, D. W. Thomson*
*Electrical Engineer, Lennox McKenzie*
*Plumbing & Drainage, R. J. Cave*
*Main Contract, Commonwealth Construction Co. Ltd.*




Outdoor terrace with snack bar adjoining

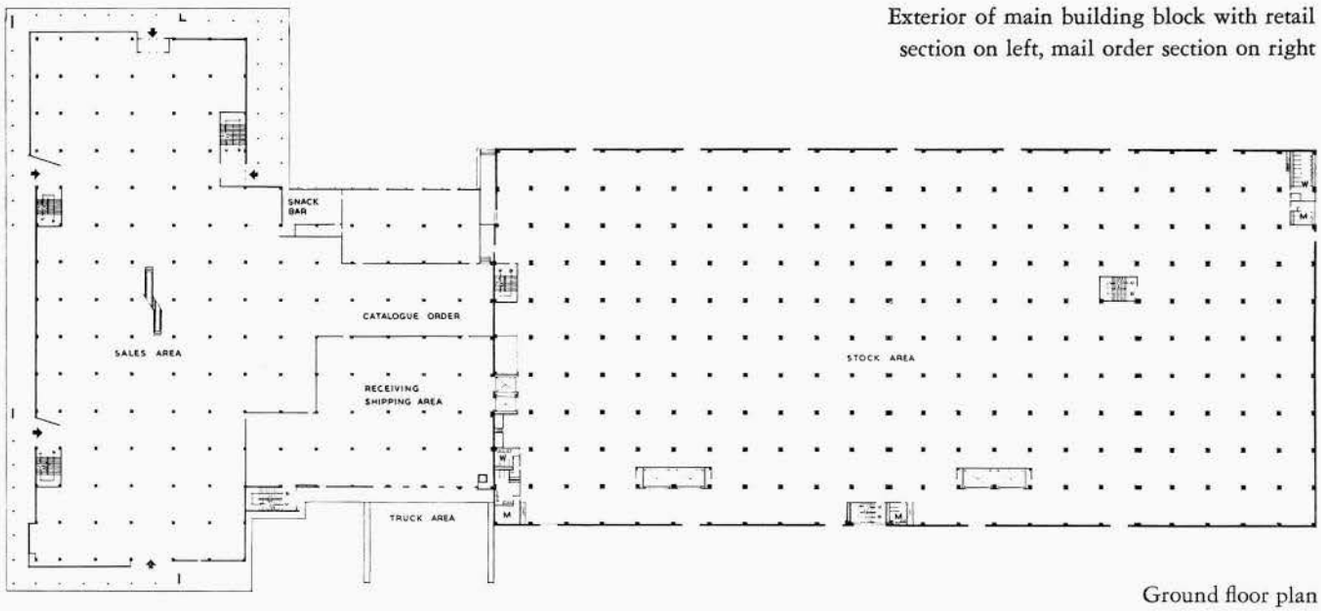
*Cost: approximately $5,000,000.00*

*Construction: reinforced concrete, continuous flat slab construction throughout. Exterior of store faced with Italian travertine and Swedish granite. Remainder of Project is cement render. Heat resistant glass in mail order unit.*

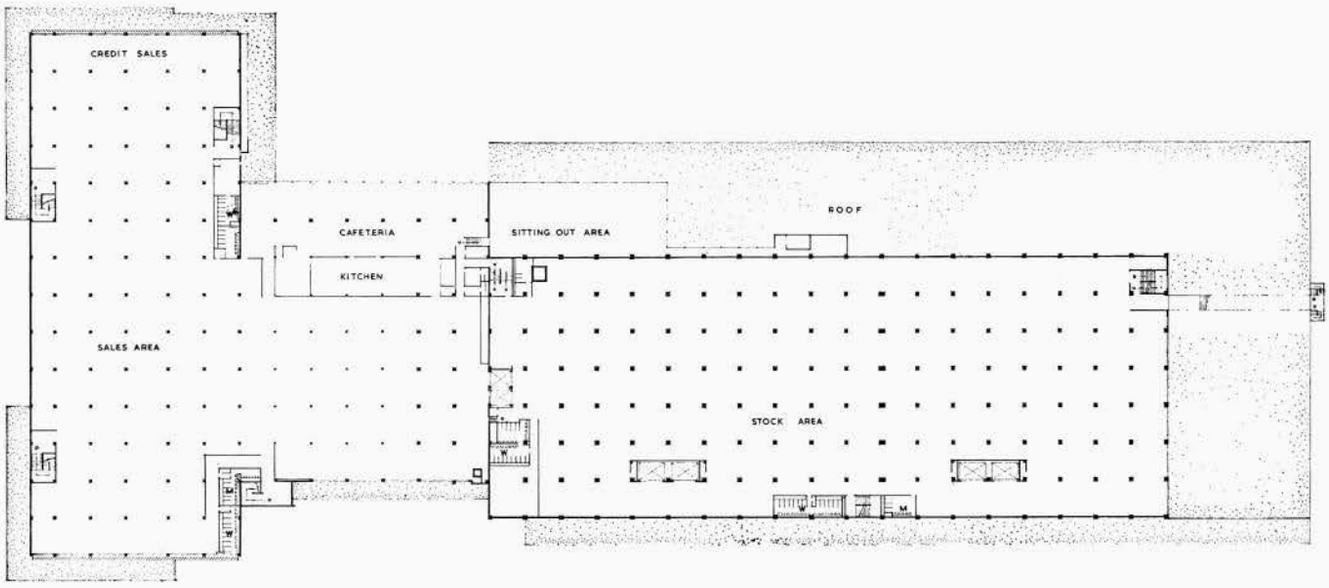
*Mechanical Equipment: main tower houses cooling equipment. Complete air-conditioning in retail store, winter and summer. Mail order heated by convectors. Receiving and shipping truck tunnel to basement; six freight elevators and one double escalator; pneumatic tube system.*

*Parking: parking on completely landscaped site for 1200 cars. Super Service Station also on site. Total area of site is 18 acres.*

Exterior of main building block with retail section on left, mail order section on right




Ground floor plan

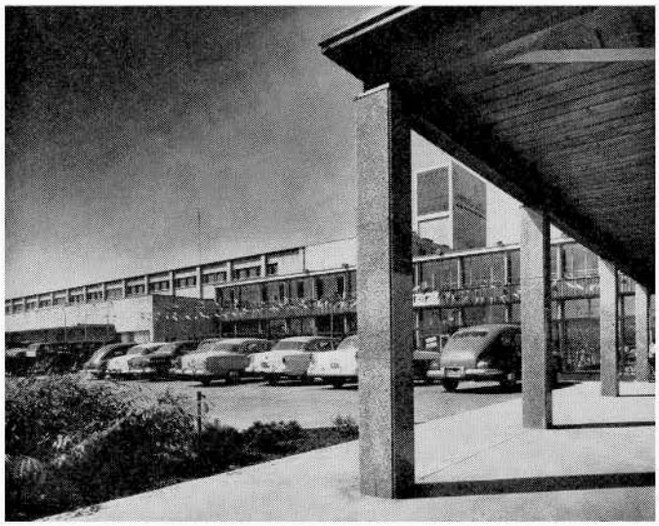



Second floor plan

Bus shelter and entry point from Kingsway

East face of retail building

Cafeteria and mail order wing



# The Gift Horse's Mouth

BY LEWIS MUMFORD



THE JOHN DONNELL LIBRARY, a recent addition to the New York Public Library system, is on the south side of West Fifty-third Street, directly across from the Museum of Modern Art, which is just east of the new Whitney Museum, on Fifty-fourth Street. Thus it is another unit in the little cultural center that has been growing up in this neighborhood, despite the absence of anything that could be called a unifying design. The placing of the Library and the Modern Museum brings out significant differences in their conception, and this in turn throws a little light on the crosscurrents and backward swirls that now seem more conspicuous than any coherent forward movement in today's architecture. The Modern Museum building, completed in 1939, is less than a generation older than its southern neighbor. In 1939, one must pinch oneself to remember, there were only a handful of "modern" buildings in New York. I put "modern" in quotation marks because I refer to modern form as originally conceived by Le Corbusier and the Bauhaus — cold, austere, mechanized, vitreous, not so much a style as a mannerism within the larger movement of modern architecture. In the first architectural exhibition put on by the Museum, in 1932, Alfred Barr, then its director, fastened on this mannerism the epithet of the International Style, perhaps to emphasize that its practitioners not merely followed a common formula but often willfully overlooked regional differences of climate and habit of life.

By the time the present Museum was built, some of this early austerity had been tempered. In his famous Barcelona pavilion, Mies van der Rohe had shown that neither bare concrete forms nor chicken-wire fences and partitions were necessary modes of identifying the new style, for its spirit could also be expressed, when the means were available, in marble, onyx, and chromium steel. Italian architects, always at home with marble, were quick to follow through, and the Modern Museum, with its marble façade (now dull and dusty) and its round-holed white canopy over the roof terrace, to a certain extent reflected their experiments. But the International Style still identified itself with the maximum use of glass, and the Modern Museum clung to that symbol. For providing it with a dominant window, two stories high and almost the whole width of the building, the architect had a reasonable theoretic justification: the glass wall would make the interior layout more flexible, because partitions could be erected anywhere without blocking off the light. But this oversized window has proved the most unfunctional feature of the building. It lets in so much light over the grand staircase that the clumsy Victorian device of transparent draperies had to be introduced to temper the glare, while in the galleries the reliance upon artificial lighting for dramatic effects, now so dear to exhibition designers, has made the window entirely unnecessary — a wry outcome the architect could hardly anticipate. Yet the main portion of the Museum, though not distinguished, has style; even its mistakes have a rational basis.

The Donnell Library, designed by Edgar I. Williams and Aymar Embury II, has outwardly a much more traditional appearance than the Museum of Modern Art. Its willingness to go back to the conventional distribution of wall and window, based on the masonry precedents of the Renaissance, makes it seem to belong to an earlier age. That appearance is more than a little deceptive. At first sight, the four-storey façade suggests a Renaissance front cleansed of ornament and stretched on a steel frame. But the subtle aesthetic criteria that governed the superficially comparable façade of Bramante's Cancelleria, in Rome — resulting in a change in both the size and the spacing of the windows from story to story, and therewith a delicate adaptation of details—have been all but ignored in the Library. In the Library, the square limestone slabs that plate its street façade above the ground floor rigorously regulate the size of the upper windows and the distance between them; the second-story windows are two slabs high, the two rows above them are one slab high, and the three rows are all two slabs apart. The conventional order of this building is the result of falling back on an older set of forms than those used for the Museum of Modern Art, yet in both cases the architects were governed by impersonal modern standards, in a way that Bramante, though he utilized repetitive forms in his façade, was not.

In short, the new Library presents a cheerless, undistinguished face — the upper portion all stone slabs and square or oblong window openings, the ground floor a series of tall windows framed in polished gray granite. The façade curves out at the top into a vestigial cornice, and there is an equally vestigial decorative aluminum railing at the second-story windows. Were it not for the large incised letters on the façade, just above the ground floor, and the small raised ones above the center entrance, the purpose of the building would be hard to guess. In its use of standard building units, in its rejection of traditional forms and ornaments, in its assiduous anonymity, as in its general flatness and lack of contrast in light and shade, this building is quite as "modern" as the Museum. But it is modern, as it were, by default. It has very little to say, and it is content with not saying it. Yet the emptiness of this façade is so typical of architecture today that one cannot lay it to lack of professional skill. It is mainly an expression of the situation that comes about in contemporary building whenever architects and clients commit themselves to certain expensive and important, or at least insistent, mechanical impedimenta. As architecture has been developing during the last two decades, the mechanical compulsions have become stronger and the aesthetic choices fewer.

The plot that this building fills to the last square inch is

a hundred and seventy-five feet along the street and a hundred feet deep. The architects have enclosed it on the sides and the rear with solid brick walls and built a street wall that is also, as far as air goes, sealed, since the windows do not open to provide ventilation. Given the existence – or, rather, the uncritical acceptance – of fluorescent lighting and artificial ventilation (plus high land costs), an architect is now under a grave temptation to cover the whole plot, and it is all the easier to succumb to this temptation in designing a library, since it is plausible to expect a sealed-in structure to be both quieter and easier to keep free of dust. Unfortunately, the Donnell architects failed to reckon, in planning to use air-conditioning, with the perversity of the municipal officials who pass on the design of public buildings; these officials eventually decided against air-conditioning, on the quaint ground that if one such building were air-conditioned, there would be a demand that all the other city buildings be equipped, too.

This decision is based on the sort of reasoning that could have been used in the past to prevent municipal structures from acquiring central heating, elevators, and even electric light. It is also based on ignorance of history. At least one public school erected in this city at the beginning of the century had a pristine form of air-conditioning. (I might add that my own dismal experience with this device during my attendance at P.S. 166, the school in question, was the beginning of my persistent skepticism of the contraption as a solution of every problem of ventilation.) At all events, our city officials have made a serious error, for the Donnell Library has the disadvantages of being designed for air-conditioning without enjoying any of its benefits. On a mild day, the building is humid and warm, even on the ground floor, which has a high ceiling, and distinctly uncomfortable on the upper floors, which have low ceilings. One is inclined to suspect that this library might better have been set back above the second floor. This would have required a taller building to accommodate the same facilities, but the upper floors could have had natural ventilation and (by day) natural lighting. I do not know whether this would have increased the cost, but I feel sure that the upper floors would have been more pleasant to work in, and there might even have been open balconies on the street side, to offer readers some of the charm of the roof garden of the Modern Museum.

The price of achieving certain mechanical advantages in lighting and air-conditioning (often expensive to operate as well as to install) is the sealed-up building, and the architects of our generation seem not to have looked searchingly enough into the mouth of this particular gift horse. They have taken for granted the notion of a uniform, unvarying environment, under automatic control. Yet human responses were originally shaped by natural conditions, and most of man's habitats – polar and torrid deserts excepted – provide constant changes of light, temperature, and other stimuli, some of them violent seasonal changes but many of them just little yet rapid changes, in the course of a single day. Even for those inured to a repetitive regimen, small breaks – like the shifting of weight from one leg to the other – are essential to maintain their working efficiency, to say nothing of their temper. The over-use of artificial lighting and ventilation not only wipes out these minor physical variations, it absorbs money that once went into the visual variations of art, painting, sculpture, and gardening. Standardization and automation, instead of releasing energy for more valid human enjoyments, now use up funds that should be expended on making rooms more spacious and attractive. This is the blind alley into which our almost compulsive desire to make use of the latest mechanical innovations has led us; the fact that a device is new keeps us from asking whether it is really good and, above all, whether it is good under every circumstance. Until architects again learn to employ their critical judgment, the only province belonging to architecture proper will be the interior, and the architects will be reduced to the desperate state of making up as interior decorators for what they have been deprived of outside as architects. Such a solution necessarily denies the organic integrity of good design, and, incidentally, it takes away the pleasures of architecture from the man in the street and opens them up only to "insiders." That is what has happened with the building under discussion.

Once within the ground-floor Circulation Room of the Donnell Library, it is pleasant to report, one is aware that the chilling reserve of the exterior has given way to an unusually gracious interior, thanks to the good proportions achieved by the architects and the excellent taste, at least at this point, of their design. The front part of the room at once envelops the visitor in its hospitable air – a high ceiling sheathed in creamy acoustic tile, a turquoise wall to the east and a gleaming panel of gray-and-rust marble to the west, low white tables right and left, blue and brown upholstered chairs contrasting with the honey-colored wood of the tables and seats of the reading area. One may sink into a comfortable seat at either side of the entrance, or sit at one of the tables beyond it, with a sense of palatial leisure and peace – a sense that has almost been lost even in luxurious hotels, whose lobbies can now hardly be distinguished from department stores or motorcar salesrooms. There are, it is true, vitrines for display against the outside walls, but they are as much a part of the elegant air of the place as those at the old Frick mansion. This room should prove to anyone with open eyes, if proof be needed, that light and color and texture, discreetly employed, do not require stale symbolism or factitious ornament to achieve effects comparable to those of Robert Adam. The only symbols in this entire decorative scheme are the old paper water-marks used, rather happily, as figures in the window draperies. Except for the low visibility of the aluminum markers and hands of the wall clock—there are no numerals—whose works are concealed in the wall, the fore part of this room seems to me just about impeccable. Only one touch is lacking – something I realized when I analyzed the curiously strong effect of the red light bulbs that designate the exits: a few vivid spots of color, to sharpen the whole impression. Even without this, the luxury this reading room exudes is delightful, for it includes what is now the greatest of urban luxuries, the luxury of space.

From the rear of this room, I do not, I regret to say, get such a rewarding impression, for its height is oppressively diminished by a mezzanine, whose creamy plaster bulk lunges over the counters and the stacks of books below. The flood of fluorescent lighting that makes the front section so luminous does not have the same liberating effect at the rear. Puzzling over my disappointment, I have decided that the low ceiling is not primarily to blame; the aesthetic culprit is the breaking up of the unity of the rear portion by the centrally placed bank of elevators and the book-charging desks that surround it. These utilitarian services are a visual roadblock, making the back portion of the room look cramped and inadequate. Even when it is unpopulated, this space seems crowded; there are no pleasant openings and alcoves for those who wish to pause before making their choices, and the space and the chairs that are provided have the air of being merely afterthoughts. The architects and perhaps even the new generation of librarians may have forgotten how charming were the old circular benches around the columns in the Circulation Room of the Forty-second Street Library, before overcrowding destroyed those happy browsing places. I am not sure who was responsi-

ble for the placement of the Donnell elevators and desks, but their central position seems a formidable mistake. Not merely does this encumbrance destroy the unity of the room; it creates unnecessary traffic through the main area. It would have been far better to abandon the central entrance through the Circulation Room, now committed to circulation in every sense, and group all the utilitarian functions – elevators, stairs, lavatories, coatroom, charging desks, and control attendant – in an area wholly committed to mechanical functions. This sort of segregation, which was effectively demonstrated in Lever House, has been only partly achieved here. It would have added to both the utility and the aesthetic charm of this library if it had been carried through completely. Though the placement of the elevators is not so serious a disability on the upper floors, it nevertheless inhibits there in some degree a free reapportionment of space to meet new demands. This is an unfortunate situation, since the quarters allotted to the record library in the basement – the first free record-lending collection in Manhattan – are painfully constricted.

And how easily does the acceptance of a certain rigidity in one department give rise to equally inflexible dispositions in other places where nothing is to be gained by standardization. The Donnell Library boasts a little auditorium, designed in the conventional fashion, with rows of fixed seats arranged on the usual sloping floor. This hall seems to me far too set in its ways for such an institution. What is needed is something like the lecture hall and conference room provided by the Messrs. Adams, Holden & Pearson for the University of London's skyscraper – a squarish room with a large square space in the center and a sloping perimeter, consisting of perhaps half a dozen banks of steps, wide enough to accommodate light movable chairs, and forming a low, four-sided balcony, as it were, all around the room. A suggestion of intimacy can be created in this room by placing only a few chairs and a table in the central square, as for a seminar, with both audience and speaker on one level; or a lectern can be placed on any level of the banks of steps, so that the speaker can have a commanding position above a larger audience; or the room can become a theatre-in-the-round for a play or for chamber music. I can't imagine a pleasanter hall to speak or to listen in, and why it hasn't been widely imitated elsewhere, with a whole gamut of variations, I cannot fathom. In the Library, such a hall might, without heavy cost, be converted into a record room, if that proved to be the new function that caught on; at all events, it could be rearranged with facility to serve as an occasional conference room. As it is, the Library has had to dedicate a small room solely to the latter purpose, although it must often stand idle.

Apart from the specific weaknesses I have dwelt on, what makes the Donnell Library unsatisfactory is that it does not aesthetically come together. This building is neither the old nor the new, neither functional usefulness nor aesthetic purity, and still less an effective synthesis. Instead, it is a little of everything, indecisively assembled, without even the satisfaction that a clean miss, if well aimed and done with style, sometimes gives, no matter how the wind – the forces outside the architect's control – may alter the path of the bullet. Yet these weaknesses are likely to become typical, as common sense draws the architect away from the arid and often flagrantly anti-functional formulas of the International Style – now abandoned, incidentally, for something even worse, in Le Corbusier's recent chapel at Ronchamp. We shall probably be in for more building that shows a similar indecision until a fresh architectural mind demonstrates, without either the extravagant personal idiosyncrasy of Wright or Le Corbusier, or the formalistic arbitrariness of Mies van der Rohe, the possibility of a more positive synthesis.

# Book Reviews

ARCHITECTURE IN THE AGE OF REASON by Emil Kaufmann. Published by S. J. Reginald Saunders, Toronto. 293 pages. Price $12.00.

The last half of the eighteenth century has long been recognised as a turning point in the history of architecture, but it is only recently, thanks mainly to Mr Kaufmann's research, that the real character of this revolution has become clear. Until a few years ago, the general characteristic of the age seemed to be its predilection for copying Greek and Gothic antiquities, and since this revivalism clearly foreshadowed the conflict which was to dominate the nineteenth century, it was not unnatural that revivalist buildings should receive more attention than those of a less obvious evolutionary trend. Yet such selectivity was always open to grave objections, since it not only ignored developments in France and Italy (where the Greek and Gothic revivals were, in the eighteenth century, almost unknown), but gave no place to such obviously important English architects as Sir John Soane. "Soane", wrote Fergusson in 1862, "affected an originality of form and decoration, which, not being based on any well understood constructive principle, or any recognised form of beauty, has led to no result, and to us now appears little less than ridiculous."

Late eighteenth century architecture first came to be regarded in an entirely different light when Mr Kaufmann published his book *Von Ledoux bis Le Corbusier* in 1933. The significance of this work was not so much that it drew a striking parallel between the designs of Le Corbusier and those of a then little known eighteenth century visionary, but that it demonstrated how both those architects used rationalistic arguments to justify what were in fact largely arbitrary sculptural forms. The wide prevalence of this practice in the eighteenth century, and the principles on which it was based, were not fully revealed until Mr Kaufmann had completed his long and scholarly research, but it is now clear, as this latest book shows, that the motives which influenced Ledoux were not only widely current at the period, but had roots going deep into the past.

The characteristic feature of this revolutionary architecture was its search for dramatic effects by means of violent contrasts of mass and surface. Compositions were confined to the starkest and most elementary geometric volumes, such as cubes, pyramids and spheres; wall surfaces ceased to present a pattern of void and solid, but were treated as vast plain surfaces of uniform texture; mouldings and other delicate transitions were omitted. Superficially related to the contemporary anti-Baroque reaction in favour of a more masculine style, it went far beyond the principles then being advocated by the French Academy, and in its brutality and contrariness more closely resembled the work of the sixteenth century Italian Mannerists, by which many of Ledoux's buildings were clearly inspired.

As Mr Kaufmann clearly demonstrates, the new style was a deliberate attempt to reverse the whole Renaissance-Baroque values of 'concatenation, integration and gradation'. Central accents, such as pediments, disappeared; the smooth rhythm of fenestration was replaced by a 'staccato' rhythm of isolated contrasting apertures; plans became centralised like those of early Renaissance churches; and wall surfaces, no longer articulated by applied Orders or string courses, were either coarsely rusticated or left completely plain. The ideal was to avoid windows altogether, and the more fanatical exponents of the style either used top-lighting, or else devoted their energies to designing projects for mausoleums.

The first eighteenth century architect to flout Renaissance ideals ostentatiously in England was Sir John Vanbrugh (who, after being a soldier and a playright, suddenly embraced architecture at the age of thirty-five), but many of his contemporaries did the same thing in a less obvious way, including most of the so-called 'Palladian' group, whose seemingly obtuse imitations of the Vincentine master were far more calculated than has hitherto been supposed. The first architects to start a similar revolution in France were Servandoni and Cuviliès *fils*. Now all these architects had one striking characteristic in common, which seems to have escaped the attention of Mr Kaufmann, but which indicates very clearly the type of revolt which was taking place. They were all painters at heart. Sir Joshua Reynold's discerning eye found in Vanbrugh a kindred spirit, and praised him as "an architect who composed like a painter"; Kent, the most unorthodox of all the 'Palladian' group, did nothing else but paint professionally until he was forty-five; Servandoni was a scenery designer; Culviliès an interior decorator. Boullée, the only revolutionary architect to write a treatise explaining his principles fully, prefaced his manuscript with the wistful quotation attributed to Corregio: *Ed io anche son pittore*. Architecture, as he defined it, was "the art of presenting images by the arrangement of bodies", and he rejected Francois Blondel's definition (namely 'the art of building') as a confusion between the means and the end.

Mr Kaufmann makes clear his sympathies with the esthetic principles of these revolutionary designers, as opposed to those of the preceeding age, although he denies "the nineteenth century concept of blossom, maturity and decay of the styles", and prefers "to stress the equal significance of all periods within their epoch, and oppose the assumption of the superiority of any one period." The problem is however not so much one of conflicting periods as of conflicting principles, since even in its heyday the 'revolution' was only confined to a relatively small clique, and in this respect one may question whether Mr Kaufmann's esthetic criteria are adequate alone. For whether the 'Renaissance-Baroque' or the 'Revolutionary' system achieved the most satisfactory visual effects is a matter of taste, but the policy of adopting arbitrary ideal shapes and surfaces without reference to planning and construction struck at something far deeper, and it is in this flouting of fundamental principles that the true revolutionary character of such architecture lies. It is significant that of the hundred and fifty designs by French revolutionary architects which Mr Kaufmann illustrates, less than a quarter were ever built, whilst many of the projects, notably those for spherical buildings, were not only unconstructable at the time, but would have been uninhabitable in any age.

In brief, one may question whether this architecture of the Age of Reason really was rational, or whether it was not just another manifestation of the romanticism which produced the Greek and Gothic revivals. The fact that the English revolutionary architects were also involved in the Gothic revival, and that the French revolutionary architects were nearly all political revolutionaries as well, clearly indicates the innate romanticism of their temperaments. The late eighteenth

century is called the Age of Reason not because it was more rational than any other age, but because it romanticised the benefits of reason to an unprecedented degree. There is nothing intrinsically rational in rationalising esthetics to excess. Still less is it rational to impose 'ideal' sculptural shapes without reference to any other aspects of architectural design. French classical architecture of the seventeenth and early eighteenth centuries may well, as Mr Kaufmann contends, have contained "inner contradictions" and "disrupting forces within itself", but these derived as much from the inherent conflict of plan, section and facade as from the more arbitrary conventions of Renaissance design. Such contradictions arose through an intense desire for both variety and unity, and whilst it was undoubtedly ingenious of the 'rationalist' architects to solve these contradictions by abandoning the ideal of unity-in-diversity altogether, and substituting the two alternatives of extreme discord or monadic simplicity in its place, it cannot thereby be claimed that they must necessarily be judged on their own premises, or that their sincerity absolves them from any kind of judgment at all.

The architect of today, who must himself decide this problem, will thus find Mr Kaufmann's book far more stimulating than its title might lead him to suppose, for nowhere will he be able to study these eternal problems of architecture more objectively than by tracing their conflict in the buildings of a vanished age. Today, when few shapes are unconstructable, and when the problems of avoiding fenestration patterns can easily be solved by using entire facades of plate glass, the dreams of the old revolutionary architects are not only far more practicable, but are in fact firmly established as the basic principles of much modern design. To judge these principles dispassionately in their contemporary context is a difficult task, since ones reaction to modern buildings is too much influenced by personal sympathies of fashion and taste. By presenting modern problems in terms of buildings of a different age, Mr Kaufmann has done an invaluable service to contemporary architecture, and just as the eighteenth century saw its institutions more perfectly through Persian eyes, so we may appreciate our own problems more acutely by seeing them in an eighteenth century setting.

*Peter Collins*

ROBERT MAILLART by Max Bill. Published by Editions Girsberger, Zurich. 180 pages. Price fr.35.

This book by Max Bill should be in every architect's library. Even though everyone in the profession has heard of Robert Maillart and has seen pictures of some of his bridges, this book will help to appreciate more fully the value of his contribution to engineering and architecture. Included is a fine selection of photographs and drawings of the most significant project by Maillart. His bridges are treated in chronological order and similar structures are grouped and compared. The text, in three languages, lists significant facts and figures about each work and there is a discussion of the problems connected with each site. Of special interest to me was the mention of how often official interference forced him to alter parts of his design, such as the railings, in order to conform to traditional ideas of appearance.

The aspect of Maillart's work as seen in these pictures, that will appeal to most architects, is his aesthetic achievement in arriving at forms that fit so well into the settings in which his bridges were erected. Later sections deal with his development of the mushroom column and beam-less slab, and examples are given of buildings in which this system is used. There are also photographs of other structures with which he was connected. Perhaps the most rewarding part of the book is the series of articles, some written in appreciation by Max Bill and the others written by Maillart himself, in explanation of his theories and his work. These articles are clear and concise. They are of great help in understanding Maillart the engineer and Maillart the man.

In Max Bill's foreword it is pointed out that the book is a compromise, being neither a technical book nor one written especially for the layman. Bill also says that, "His achievements were of technical as well as an aesthetic nature, both were combined in his structures." He created objects which while appearing beautiful to the eye were also economical of material and which opened up new vistas in the use of reinforced concrete. He was a radical innovator in his departure from the massive type of masonry construction used in bridges before his time. Maillart's articles include, among others, 'Design in Reinforced Concrete', 'On the Calculation of Reinforced Concrete', 'Mass and Quality in Concrete Structures', and 'The Evolution of Building Construction Since 1883'.

Having thought of Maillart only in connection with reinforced concrete I was interested to find him refer also to new structural developments in the use of both structural steel and wood. Finally, he says that, "A general easening up of the prescribed laws in the sense of assigning greater responsibility to the constructing engineer would very much improve the quality of our buildings. Above all, these legal prescriptions should never be taught to students, because they can only be injurious to the freedom of their field of vision." By all means read this book; it is informative and stimulating.

*W. H. Birmingham*

TEN BOOKS ON ARCHITECTURE BY LEONE BATTISTA ALBERTI. Published by Alec Tiranti Ltd., London, England. 300 pages. Price 35s.

As I am not a historian I feel it is somewhat presumptuous of me to review a fifteenth century classic. But I suspect that many of the readers of this magazine have not read this book. I myself was not familiar with it before I read it in this edition recently. I shall therefore give you my impressions.

At first glance it seemed a formidable endeavour to read through an eighteenth century translation of Italian Renaissance professional learning and wisdom, originally written in Latin. The fact that this is a reprint from an eighteenth century edition adds a physical barrier to a mental one. The print is hard to read, and the book reminded me too much of the poor man's collectors items which are added to private libraries for antique charm and libraric atmosphere. After I had forced myself to cross this barrier I found the atmosphere impressively clear and bright. Alberti's sincerety and the dedication to say the truth and nothing but the truth, the scholarly straightforwardness achieved without dryness or preaching are refreshing qualities indeed. "I shall not repent of my labour, if I have only effected what I chiefly proposed to myself, namely, to be clear and intelligible to the reader, rather than eloquent." With a man who has so much to say, this seems a most proper aim.

I was amazed by Alberti's breadth of understanding of the total field of architecture in its widest sense, including planning, structural and aesthetic theory. The book deals with such problems as regional and climatic influences on people: "We find that man in cold weather, or that live in cold places, are more healthy and less subject to distempers (Oh Canada!). Though it is allowed, that in hot climates men have better wits, as they have better constitution in cold . . . That region therefore will be far the best, which is just moderately warm and moist, because that will produce lusty handsome men, and not subject to melancholy."

The book also discusses the right locations for cities or ports; it mentions social problems and defence. There are long chapters on requirements for various building types, and their planning problems. The parts of buildings also are analyzed from a technical and aesthetic point of view. This involves much technical detail which I must admit I did not take great care to read, but I found a chapter called "By what methods to destroy or drive away serpents, gnats, bugs, flies, mice, fleas, moths and the like troublesome vermin" fascinating

technical reading. In all of this I enjoyed Alberti's use of comparisons, examples, and annecdotes. They are continuously brought in to stress and explain a point, such as in the chapter explaining the need for ventilation: "No room ought to be without a window, by which the enclosed air may be let out and renewed, because else it will corrupt and grow unwholesome. Capitolinus, the historian, relates that in the temple of Apollo at Babylon there was found a little gold casket of very great antiquity, upon opening of which there issued a steam of air, corrupted by length of time, and so poisonous, that spreading itself abroad, it not only killed everybody that was near, but infected all Asia with a most dreadful plague quite as far as Parthia", which story should convince anyone of the need for ventilation. Examples of good practice in architecture, as well as these stories are taken, I believe, exclusively from Roman and Greek practice. The immediate past, old fashioned mediaeval, is never mentioned, and "modern" practice sometimes criticized. I should also mention the perhaps best-known part of the book, its discussion on beauty. Alberti stresses the importance of "number" and proportion and "congruity . . . the principal law of nature", the unifying creative spirit. Architecture, to Alberti, is principally painting and mathematics: "I do not require him to be deeply learned in the rest." Finally there is a valuable warning on clients: "I would also have you, if possible, concern yourself for none but persons of the highest rank and quality, and those too such as are truly lovers of the arts: because your work loses of its dignity by being done for mean persons."

It is obvious that such a book cannot be studied by the modern reader in the same spirit as a contemporary analysis; but for those interested in the development and tradition of human wisdom and learning this is a worth while professional classic regained.

*Wolfgang Gerson*

ITALIAN GARDENS OF THE RENAISSANCE by J. C. Shepherd and G. A. Jellicoe. Published by Alec Tiranti Ltd., London, England. Price 25s.

This is a pocket-sized reprint of Shepherd and Jellico's monumental work of the same name published in 1925. That they have been able to reduce the size of the page from 230 to 50 square inches without increasing the number of pages and still maintaining legible illustrations and letterpress, in parallel columns of English and French omitting only the short descriptions of each villa garden, is a remarkable achievement. Not only is the cost of this volume within the reach of students, it is also of a size and weight to permit its use while travelling, a most important consideration.

Many of the illustrations, however, bear no comparison with those in the 1925 edition, and one rather suspects that their woolliness might be attributable to the reproductions having been made from the earlier volume instead of from the original photographs.

After an index referring to text and illustrations, there is a valuable chronological table showing some fifty of the most important villas arranged in fifty-year periods from 1400 to 1800 and also under geographical groupings.

The historical sketch entitled "Architecture of the Garden" is scholarly and well written. Whereas only a few lines in this volume are considered sufficient to link the use of the Italian Renaissance garden to the discovery of the relics of the vast gardens of the great villas of Imperial Rome. H. Inigo Triggs places such importance on this that he devotes a considerable section of his book* to the subject.

In spite of their woolliness, the 140 illustrations are extremely well chosen and well taken, bringing out the characteristic features of each villa. The beaux-art rendering of the plans and sections has come out rather faintly and much detail has been lost but the clever line drawings in perspective are perfectly sharp and bring out quite clearly the details of the design.

The first chapter is devoted to an account of the designers in chronological order over four centuries; to be followed by "Formality and Design" and "The Effect", the latter dealing with colour, shade, sculpture, water, parterre, framed views and perspective.

On page 16 the point is brought out that the Italian Renaissance Garden is not a flower garden. "Evergreens, stonework, and water form the essence of all Italian gardens." Even the evergreens are treated, not as horticultural, but as architectural material. Under the heading "Colour" we are told that "So dazzling is the light in Italy that the bright colours of flowers are not greatly missed. Glare calls rather for soft cool tones." I had always understood that colours of both flowers and birds became more and more dazzling as the tropics were approached as distinguished from the North where soft tones must prevail.

When dealing with architecture and nature the authors are hard to follow where they try to show on page 12 that the garden would merge gradually into, or from, natural surroundings, citing Villa Lante at Bagnaia as an example of the latter. According to plan and illustrations this garden is completely architectural right up to the walls which separate it from the woods beyond. Actually I know of no example of any European attempt, up to the English landscape school (middle eighteenth) to copy natural landscape as an element of garden design.

Few books on garden design give a better idea of the value of unity of house and garden, where both are designed by one hand. One has only to imagine these buildings removed from their sites with foundation planting and a lawn substituted for their gardens to realize how much our buildings suffer from the lack of more architectural surroundings. Wrote Sir Francis Bacon three and a half centuries ago, "And one shall ever see, when the ages grow to civility and elegance, that man learns to build stately sooner than to garden finely as though gardening were the greater perfection."

*The Art of Garden Design in Italy

*H. B. Dunington-Grubb*

TV STATIONS by Walter J. Duschinsky. Published by the Reinhold Publishing Corp., New York. 136 pages. Price $12.00.

This book is a most comprehensive and detailed study of the business of TV broadcasting and the physical requirements to carry on the business.

An architect preparing to design a TV station would find the book both useful and time saving as it includes descriptions of typical TV stations of various sizes already built. The weaknesses of the plans are pointed out and suggestions for improvements are given.

Exact room sizes or structural or mechanical load figures are not given as these vary with the development of new equipment or broadcasting practice; however, the conditions to be met and problems to be solved in meeting these conditions is pointed out.

With the type of programming and amount of equipment known it would be possible to design a TV station with no additional information beyond that contained in this book.

*D. G. McKinstry*

# VIEWPOINT

*What policy should architects adopt towards speculative builders as clients?*

As the majority of our suburban growth is in the hands of speculative builders and developers, the architect must work with the speculative builder if he wants to make any contribution to the development of our residential communities. The architect cannot stop at the design of insurance company offices and municipal buildings and let the major part of the suburban scene take care of itself.

The type of relationship that develops between speculative builders and architects is of course dependent on both the builder and the architect. Many speculative builders are specialists in their field; have expert knowledge of project development, financing, building, and project management; are sincerely interested in the quality of their work, and appreciate the architect's contribution. This type of builder can be a model client. Some of the better group housing projects could not be produced without the co-operation and experience of this type of speculative builder.

On the other extreme, are speculative builders who are builders only in name, Jacks of no trade, who are little interested in the quality of their work, and whose sole object is often the quick sale of their buildings before their premature decay. This type of builder usually wants a minimum, fast service coupled with a cut-rate fee. Obviously architects are better off without this type of client.

Architects must adopt a policy of complete service including some form of supervision coupled with a standard minimum fee. Architects can take a firm stand on this point, as CMHC and most loan agencies now require architectural services for most projects. The builder therefore needs the architect. The worst service that architects can do to themselves and the community is to provide a cut-rate minimum service which neither serves them nor the community.

There would be some purpose in a special evaluation of the architectural services that should be provided and the fees that should be charged in this field taking into account the special considerations involved and protecting the architect. The speculative builder differs from other clients in that he does not have to be protected from the contractor (himself), placing a different emphasis on specifications and supervision. Repetition of building types is common in speculative work, and some adjustment of fee structure to contend with this special condition is called for.

Once a thoroughly studied service and fee structure is worked out in this field it should be thoroughly enforced by the Architectural Associations.

*Henry Fliess, Toronto*

The friendliest possible.

Whether we like it or not, speculative builders are with us and will continue to be with us. As the result of persistent and conscientious effort on the part of relatively few architects there has been, in recent years, a quite perceptible improvement in the overall design of speculative buildings, particularly in the small house field. The architects now have their collective foot in the door. Very few speculative builders of any account would now dare undertake a project without architectural assistance. It should be the aim of every architect who is in this field to press the advantage until full architectural services become an accepted requirement of every builder's thinking. By so doing, such architects would not only be fulfilling a moral responsibility to their communities but could find the experience richly rewarding.

*G. D. Gibson, Toronto*

I believe that, in the struggle for the more lucrative, so-called, industrial and commercial work today, many architects are passing up the opportunity for creative and rewarding work in the field of mass housing. Too often one hears "There is no money in domestic work." If the remuneration for the work to which we are trained and are needed is not sufficient, it is probably due to the shoddy job that we have been expecting the builder to accept.

I have no doubt that any experienced builder, large or small, would be willing to recognize the value of a really thorough architectural service. It is not right that the great majority of the speculative housing today has the authorship of unskilled amateurs. It is most definitely the duty of the profession to lend its efforts and abilities towards setting a higher standard of planning visual design and new and more efficient building techniques.

The schedule of fees in the Province of Quebec for this work requires study and realistic revision. The builders need to be acquainted with the extent of the service, the fee and the fact that some of us, at least, are interested in doing a real job for them.

It is high time that the profession gave some responsible attention to this aspect of our skill before we lose our identity to some new form of "designer".

*Philip Goodfellow, Montreal*

I think the architect has failed the speculative builder. By a passive and sometimes snobbish attitude, he has made it possible for the builder to maintain his belief that architectural services are of doubtful value. I think it can be shown that the absence of serious architectural thought can be detrimental to the builder's best interests. This would however, require convincing proof. We would have to show by concrete example how a building project can suffer in every sense by a neglect of proper planning. By contrast, we should make available examples of good housing in Canada and elsewhere.

Our case could be presented in a friendly and understanding way through booklets, regional conferences and travelling exhibits.

*Harry Mayerovitch, Montreal*

I think that the architect would have an excellent opportunity to exhibit his abilities before a greater number of the general public if he were to have a speculative builder as a client. This statement, of course, is made with certain qualifications:

Firstly—It would be necessary to have a speculative builder who was interested in producing a finished unit or units which would represent the best efforts of his trade.

Secondly—Regardless of the excellence of the design produced by the architect, if one unit or even a few units were used by the builder with monotonous repetition then the final result would be almost as bad as the "hodge-podge" which is a distinguishing mark of most speculative builders' developments today. A master plan of the entire development would have to be laid out by the architect.

Thirdly—It would be necessary for the architect to have the final say in regard to the interpretation of his drawings, specifications and in the execution of the work.

If the above conditions could be settled, then and then only I feel that a satisfactory result might be obtained. The commission, if capably carried out, would be of benefit not only to the client but also to the profession as a whole. As far as establishing a policy in regard to this type of client, I feel the architect should be encouraged to assist in this work with a view to improving the present low standard of design in speculative work.

*Peter Tillmann, London*

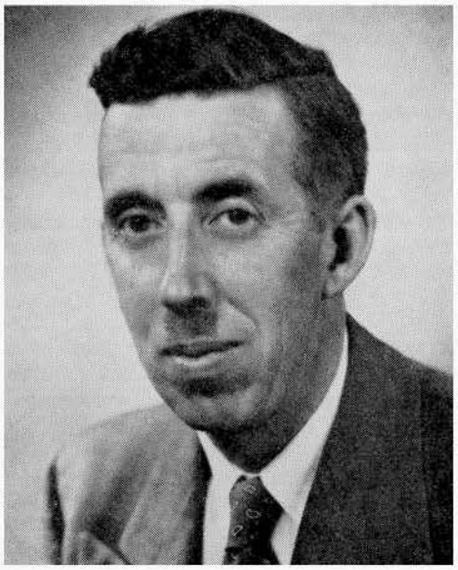
# News from the Institute

## CALENDAR OF EVENTS

1957 Annual Assembly of the Royal Architectural Institute of Canada, 50th Anniversary, Chateau Laurier Hotel, Ottawa, Ont., May 29th to June 1st.

Annual Meeting of the Engineering Institute of Canada, Banff Springs Hotel, Banff, Alta., June 12th to 14th, 1957.

## MAA ANNUAL MEETING



Mr N. C. H. Russell

March 30th marked the end of another eventful year for the Manitoba Association of Architects. In the morning the annual business meeting was held at the Marlborough Hotel. The reports of the sub-committees indicated that the Association was taking an active part in community affairs and doing much to further good public relations.

During the past year committees have been appointed to work out problems arising in the bid depository, and have worked with the Manitoba Department of Labour and Piling Contractors in devising a specification for caisson work with special emphasis on safety measures for workmen. Another committee was formed to find ways and means by which the construction industry can work through the winter months, thus easing the seasonal employment problem.

New officers for the coming year are: N. C. H. Russell, President; G. Stewart, Vice-President. Newly elected Councilmen are M. Blankstein, Eric Thrift, and Jim Searle.

The annual meeting was climaxed with a dinner and dance at the Royal Alexandra Hotel. Prizes awarded by the MAA were presented to outstanding graduate and under-graduate architectural students of the University of Manitoba. The guest speaker was Mr R. Cerny of the firm of Thorshov and Cerny, Minneapolis, who spoke on "Inventory of Progress."

The Manitoba Association of Architects was gratified to learn that one of its members, Professor John A. Russell, Director of the School of Architecture, University of Manitoba, has been appointed to the Canada Council. Professor Russell is one of the two Western Canada members on the Council. The Association wishes to congratulate Professor Russell on this appointment.

*R. L. Thompson*

## PQAA ANNUAL MEETING

In selecting the Alpine Inn at St. Marguerite, Quebec as the locale for their 66th Annual Meeting, the Province of Quebec Association of Architects made a great stride in public relations with respect to their own membership. The programme part of the meeting took place on February 1st and 2nd, but because of the beauty of the Laurentian Mountains at this time of the year, many of the members took advantage of the meeting to combine a holiday with the business of the Association. It was found that more was accomplished by having the meeting out of town than ever before because the members were living together during the entire time and not only that, the wives of the members added enthusiastic co-operation to all the various events and, generally speaking, made everybody feel very happy.

The business part of the assembly, in addition to dealing with routine reports of the Sub-Committees, brought forth three interesting proposals which are worthy of reporting to the *Journal*.

A resolution was made whereby the City of Montreal Planning Department which is responsible for the zoning of buildings and the by-laws be requested to take immediate steps to prevent complete blanking out of Mount Royal from the lower city by high buildings. Pine Avenue parallels the long side of the mountain and has, on the mountain side, available sites for development. The last development is the new Montreal General Hospital. While this is a very imposing building, it certainly cannot be compared to the beauties of the natural mountain as it appeared formerly. A continuation of high buildings along Pine Avenue was considered to be a hazard to the beauty of Montreal. While this would appear to be a localized condition and not of provincial importance, nonetheless the Association felt that it should be endorsed by the Association as a whole. We look forward to some successful negotiations with the city which may ensure that at least consideration will be given to this matter.

The By-laws of the Province of Quebec Association of Architects are being revised to conform to new requirements. A proposal was made by the Legislation and By-Laws Committee that consideration be given to the setting up within the framework of the Province of Quebec Association of Architects Charter of an Arbitration Committee to review and, if possible, settle disputes arising between members and clients concerning the value in fees for work which may have been either discontinued or relative to which certain peculiarities might lead to dissatisfied relations between members and the public. Generally speaking, the idea was favourably considered by the membership, but was returned to the Committee for considerable further study. However, the mere consideration of this matter would point to the fact that the Association at least at present considers that the individual member should, if justified, receive some kind of backing from the Association in his client troubles, or alternately that the public should be able to complain to the Association with respect to any individual member.

The Committee which has been dealing with the revision to our tariff submitted a very interesting report and recommended changes in the scale of minimum fees which would increase the minimum of 5% with respect to hospitals and other complex buildings, and reduce it in respect to industrial warehouse type buildings where repetition made the architect's work considerably easier.

Mr A. J. C. Paine spoke to the meeting on this matter and explained that the RAIC Committee was dealing with the Federal Government in the matter of fees payable to private

architects for government work. He then compared the Ontario fees with those of Quebec and showed that when the Quebec fees were increased by the customary charges for engineering services, that the Ontario and Quebec fees were approximately the same. The net result of this proposal would indicate that the PQAA may change its fees to some extent but that nothing radical may be expected.

*R. C. Betts*

## ONTARIO

I have recently been on a journey to a foreign country in the interest of architectural research – the report of my investigations may be of interest to some members of the profession.

My first duty on arriving there was to make an architectural tour of the capital city. The buildings were all new and were all what might be called integrated – i.e., all buildings over two stories were built with glass and aluminum sides, stone ends and were stuck up on stilts, all the churches were built like tents with the roof going down to the ground, and all schools were built of red brick with flat roofs and glass block for windows.

The result was a simplified townscape – very restful. There were many new buildings in construction, but in no case could I find any indication of the architect responsible, nor could I find any architects listed in the telephone directory. Being curious to discover the explanation for this lack, I made enquiries and finally located an elderly architect living in an abandoned chicken house ten miles out of town. I introduced myself as a visiting architect and begged him to explain the situation. He replied as follows:

"Quite a few years ago, all the architects got together and decided in order to keep up with the times they should become business men rather than professionals. Everyone agreed that it was time to climb out of the ivory tower, get rid of this nonsense about creative artists and concentrate on money making and promoting sales. This was greeted by practically all members of the association with great enthusiasm, and a manifesto was prepared that read something like this –

1. We hereby resolve that in future, as architects, we shall discard the term profession, and shall be strictly business men.
2. We will design not to solve a particular problem, but to give clients what surveys show they have approved in the past.
3. We shall know and be able to reproduce the latest fashion in steel and glass buildings, concrete shell, or other cliches which are currently being bought in United States or Europe.
4. We shall do away with cowardly reticence and henceforth step out and sell our services to the public, tempting them with free samples, special offers, Christmas gratuities and free baby sitting.
5. We shall instigate and have carried out an intensive public relations program – it is now accepted that it isn't the product that counts, it is how well it is presented to the public.
6. We shall tighten up the union rules, increase the fees, and make every effort to keep everyone out of our pasture.

This manifesto was formally adopted and it was mandatory that every architect operate within its "terms of reference". An immediate change was noticed – architects, when they assembled, started talking about "know-how", "finalizing", and "putting up trial balloons"; in fact, sounding like real bona fide businessmen."

This was all very interesting to me, but did not seem to explain the present dearth of architects. The old gentleman said that he did not quite know what had happened either, except that a feeling seemed to develop with the public that the need for architects had vanished and that somehow or other the architects had become employees of businessmen.

You can imagine how happy I was to leave this ill-fated country and return home to my steel, glass and slightly cracked ivory tower.

*Philip Carter Johnson, London*

## PLANNING AND HOUSING PROGRESS 1910 – 1957 CANADA – BRITISH COLUMBIA

The terms "Town Planning" and "Housing Developments" in the early days of this century merely signified a real desire on the part of a very few to encourage movements aimed to check the blight, even then, eating into the heart of cities, and to encourage better housing conditions.

Today there exists in the city of Vancouver a body known as the Technical Planning Board, the aim of which is to change that desire into reality. In fact, this body consists of a specially trained and experienced staff of experts in the professions of planning, architecture, engineering, land surveying and others in associated fields. It functions as a *pool* of accredited skill and experience, and of devotion to ideals that are now becoming absorbed by the minds of both our legislators and the general public as well. Also this same fervour for improving the conditions of our every day physical amenities is spreading into many parts of our province.

Such a gratifying change from that of even twenty years ago could only be brought about by a series of events to be briefly reviewed as a background to those potentials we possess today to promote the things for which the two important movements of planning and housing give promise. The planning movement is based on the thesis that it is directed by technical skills and energized by sociological purpose.

Since the request was to personally set forth my remarks on the evidence of progress seen today, and since in a lifetime of over eighty years, three quarters of that period having been spent in association with these two movements, the first note is that,

1. In 1912 my visit to Great Britain to study progress there in respect to Community Housing Projects and the "Garden City" development was very profitable;
2. Just before the first world-war Thomas Adams, one of the world's leading planners of that date was appointed as Town Planning Advisor of the Commission of Conservation, an agency of the Dominion Government. He was asked to plan and direct one of the early and now well known government sponsored housing projects for the city of Ottawa. It was my privilege to work with him both in that and with other projects in these fields.
3. In 1920 Thomas Adams founded, with a group of the men trained in the fields mentioned, "The Town Planning Institute of Canada". It achieved some remarkable successes for those early days.

**British Columbia 1922**

In the year 1922 there were two members – myself and Mr J. A. Walker – of that Institute resident in B.C. With the aid of a very small group who joined the Institute they were able to establish a branch of that Institute in this province. Not long afterwards the branch, with the aid of a very able legal member drafted a bill, which after three attempts was passed in 1925 by the Legislature as the "British Columbia Town Planning Act". Two Town Planning Commissions were immediately appointed by Municipal Authority and the Vancouver Commission issued its first 400 page report in 1928 and a further revision in 1930, after the 1929 amalgamation was effected.

Briefly, in a most sketchy way that brings the growth of the movements up to about twenty years ago. In 1940, the Vancouver Commission sent me to represent it at a large convention of planning authorities held in the U.S.A. At that meeting one of the speakers put forward the idea that the time had come for a "marriage" to take place between these two important movements, housing and planning. To some extent that has happened. But what has happened in this province may be more significant for concluding notes :

1. The efforts of the Vancouver planners to give us a city with its centre preserved, its public and industrial buildings suitably placed and modernly planned and its citizen life organized to enjoy full community amenities.
2. The existence of, and the evidence of the fine work, of the Central Mortgage and Housing Corporation which has done so much to see that "better housing" had to go hand in hand with previously planned areas.

3. The existence of such organizations, all within recent years, as
a) The Lower Mainland Regional Planning Board;
b) The Regional Planning Division of the Department of Municipal Affairs, Victoria;
c) The Greater Nanaimo Regional Planning Board;
d) The Capital Region Planning Board of British Columbia;
e) The success of the various Town Planning Commissions;
f) The fine efforts of The Community Planning Association of Canada;
g) The Vancouver Housing Association;
h) The establishment of Local Community Centres;
i) The wonderful support of the Vancouver press and the Vancouver Board of Trade for this work.

**Conclusion**

Other things might be mentioned, but in looking back over my twenty-five years' work on two Planning Commissions, sixteen years on the Council of the Architectural Institute of British Columbia, my work with five or six committees dealing with housing projects and many happy associations with other types of effort, my feeling is that all of us have much to be thankful for. Also that none should forget that a real debt of gratitude is due to the early efforts and splendid work of that pioneer in these fields, Thomas Adams. May his spirit of service still direct these movements and may the Almighty abundantly bless all future effort.

*Frank E. Buck*
*Honorary Member of the A.I.B.C.*

Note: A complete and comprehensive history of early Town Planning in Vancouver was given in a paper by Mr J. Alexander Walker, P.Eng., before the Annual Meeting of the Corporation of British Columbia Land Surveyors in January, 1927 and may be read in the Corporation's proceedings of that year.

## CMHC FELLOWSHIPS AND BURSARIES

Public Works Minister Robert Winters has announced that Federal financial encouragement to students of community planning and housing is to be provided through twenty fellowships and bursaries to be awarded by Central Mortgage and Housing Corporation for the academic year 1957-58.

In making the announcement, Mr Winters stated that urban expansion had created an urgent need for people qualified in community planning. The purpose of the awards is to stimulate interest in planning as a profession in Canada in view of present needs and future requirements of governments at all levels for expert guidance in urban development.

The awards, which are being provided under Part V of the National Housing Act, include two senior fellowships for applicants with professional experience in city planning or residential development. These will be awarded to persons who wish to undertake special studies or research and who are qualified to make an original contribution to the knowledge of planning or housing in Canada. Recipients will be expected to devote their full time to such work for at least eight months.

Fifteen fellowships of $1,200 each are offered to graduates of recognized universities in the social sciences, architecture or civil engineering who wish to take professional training in community planning. The fellowships are tenable at universities which offer community planning courses (McGill, Toronto, Manitoba and British Columbia). Applicants must meet the academic requirements of the university they choose and be prepared to undertake a prescribed course of study.

Three bursaries of $800 each are available for graduate students who wish to undertake special studies of housing or urban development other than in established planning courses.

## CITY AND REGIONAL PLANNING

The nineteenth in the series of annual two-week Special Summer Programs in City and Regional Planning will be given during the 1957 Summer Session in the School of Architecture and Planning at the Massachusetts Institute of Technology from Monday, July 22, through Friday, August 2.

Tuition is $175.00, due and payable upon notification of admission. Academic credit is not offered.

Seminar leadership will be provided by members of the Faculty of the Department of City and Regional Planning and guest speakers selected for their ability to make a special contribution to the subjects under discussion. The planning seminars will be under the general direction of Roland B. Greeley, Associate Professor of City and Regional Planning.

## CANADA COUNCIL APPOINTMENT

It is with the greatest pleasure that we refer to the appointment of Professor John Russell to the Canada Council. All Canadian architects are aware of Mr Russell's services to architecture through the achievements of the graduates of the University School of Manitoba of which he is the head. The architect in the east is less familiar with Mr Russell's own achievements in connection with the theatre and the ballet in Western Canada. In 1950, he won the Canadian Drama Award for design of stage settings, but ever since coming to Winnipeg in 1928 he has been active in the theatre, designing stage settings and production for the Winnipeg Little Theatre.

The success of the Royal Winnipeg Ballet owes not a little to Mr Russell's devoted interest and participation since its inception in 1939. In 1955, he was given honorary life membership in the Manitoba Association of Architects.

John Russell is the only architect appointed to the Council, and his appointment honours the profession no less than it does its so worthy member and Fellow. *Editor*

## CORRESPONDENCE

The *Canadian Churchman,*
600 Church Street,
Toronto 5, Ontario

Dear Sirs,

As a long-time subscriber and a regular reader of your magazine, I feel that I might be entitled to offer a suggestion.

Time after time over the years I have examined with interest your illustrations of new church buildings but only occasionally have I seen proper credit given to the authors of the designs, the architects. I am not concerned personally nor am I worried about the profession losing some publicity in your columns. I am concerned that a magazine representing the Church, which for so many centuries was the great patron of the arts and is still the custodian of some of the world's greatest art treasures, should think so little of the works of the creative architect that it would fail even to mention his name when illustrating his building.

Yours sincerely,
(signed) *Forsey Page*

Mr Forsey Page,
Page & Steele, Architects

Dear Sir,

I am very appreciative of your letter of February 26 and thank you very much for writing regarding the *Canadian Churchman.*

We are very thankful for your suggestion about the illustrations of new church buildings, and we would very gladly attach the name

of the architects. Our difficulty is that we very often do not know who the architect is. The information that we get, particularly from outside Toronto, does not give us that information, and in the City of Toronto we cannot seem to find it by telephone. However, in the future, we shall try to include as many references to the architects as is possible.

Thanking you for your letter, I am,

Yours sincerely,
*Canadian Churchman*
(signed) *D. B. Rogers*

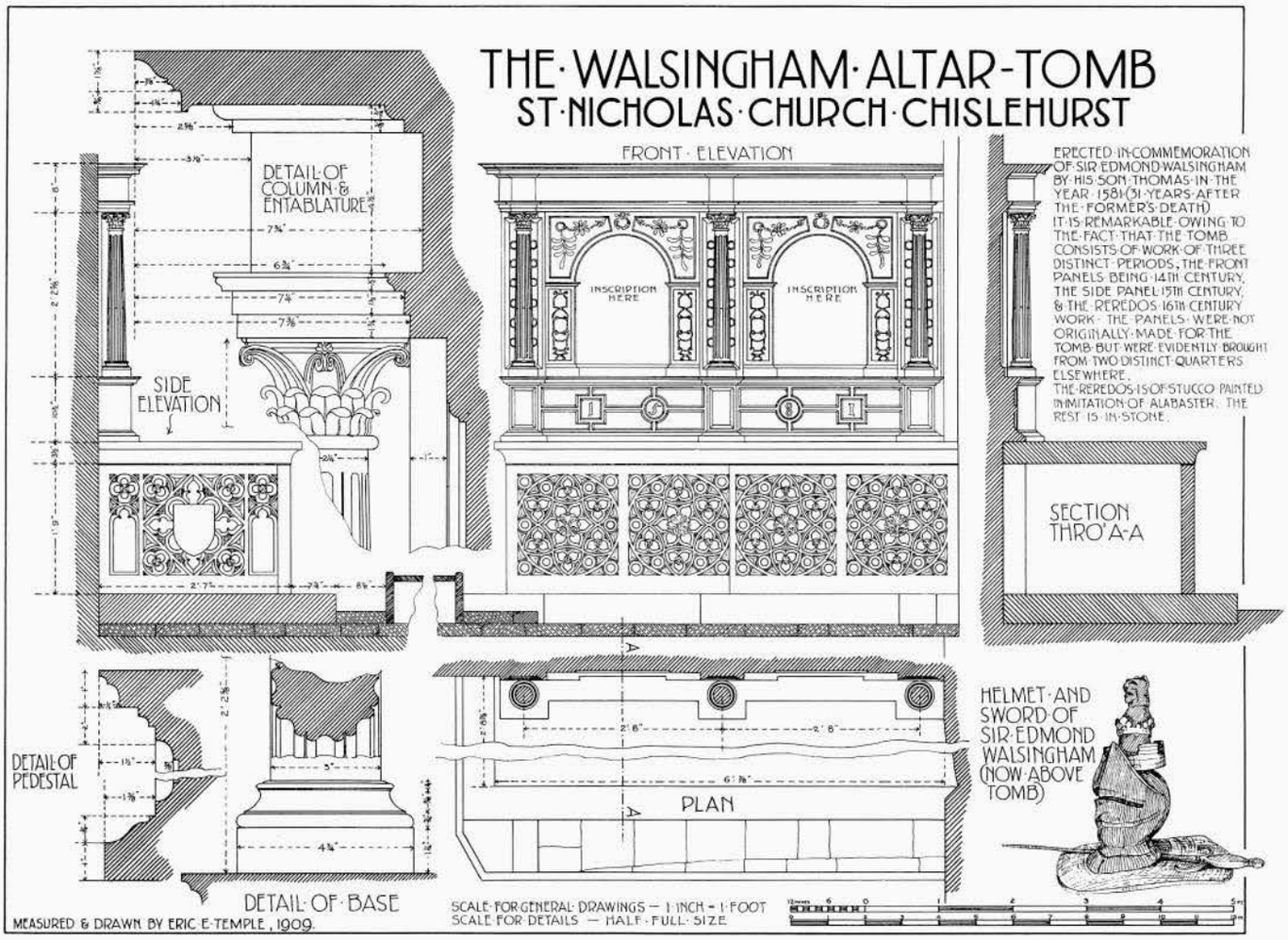
## ANNOUNCEMENT

Mr D. Perry Short, ARIBA, MRAIC, formerly of Rudolf Papanek & Associates, Architects, Timmins, Ontario, has opened a private practice in Elliot Lake, Ontario. His address will be c/o General Delivery, Elliot Lake, Ontario, where he will be pleased to receive trade publications, etc.

## FUTURE ISSUES

| | |
|---|---|
| June | Industrial |
| July | RAIC Golden Jubilee* |
| August | Farm Buildings |
| September | General |

N.B. Only those months marked with an asterisk represent special issues. The others are general issues with an emphasis on the subject mentioned.




*The following notes are part of a very interesting letter to the editor from Mr Eric Temple of Ottawa accompanying his measured drawing of 1909. Little did Mr Temple know that two years before, an architectural institute to which he would someday belong was born in Canada.*

Under separate cover I am sending a measured drawing of the Walsingham Altar Tomb at Chislehurst, Kent, England, made many years ago and which I came across when going through some of my old sketches and measured drawings made in my early days. Due to the present day Shakespeare-Marlowe controversy leading to the opening up of that old tomb at Chislehurst, I thought it might be of timely interest for publication in the *Journal*.

As I examine that drawing today I rather shudder at the needlessly meticulous care that must have been put into it, but for all that it seems to be rather interesting and I remember quite well the circumstances which led me to make it.

On a sparkling spring morning I had cycled across Chislehurst Common to St. Nicholas Church, duly equipped with the necessary paraphanalia to take a rubbing of an old brass which I knew existed in that church (I have a collection of old and interesting brass rubbings). Glancing around afterwards, I noticed this old altar tomb and my curiosity was aroused when I noted that the carved stone tracery on the front panelling was of a different period to that on the end panelling, and that the reredos above was yet again of an altogether later period. At the time I was not able to ferret this out at all but thinking it a bit unusual and rather a curiosity, I decided to come again the next day and measure it up, the outcome of which was the drawing I am now sending you, little dreaming, of course, that today, forty-seven after, this old altar tomb would be the centre of so much disturbance in connection with that Shakespeare-Marlowe controversy.

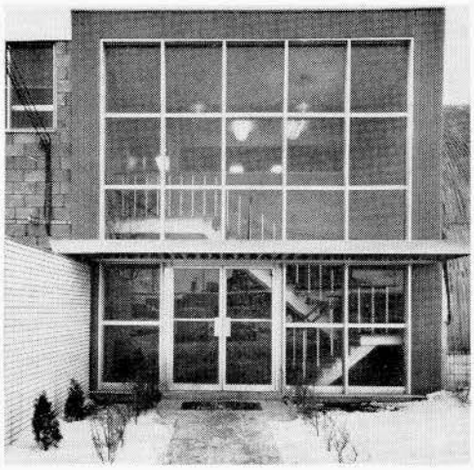
*Eric E. Temple*

# FACTS ABOUT GLASS

Vol. 6 No. 7

# ENTRANCES

## ALUMINUM "W" SERIES STOCK ENTRANCES



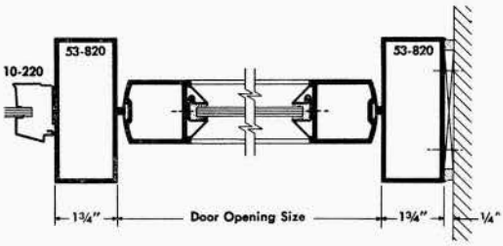
Aluminum entrance with interchangeable inserts in the push-pull plates.

Deluxe stock entrances are available as single acting units, (on butts or pivots) or double acting units on pivots.

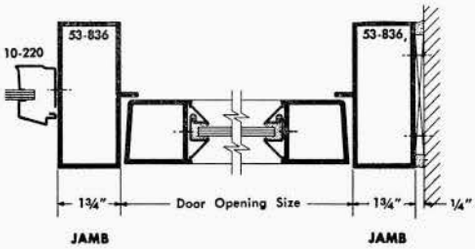
These stock entrances may be used in openings to 12′-4″ in height. Variations in height are easily accommodated with an adjustable transom head jamb. Transoms may be fixed and glazed in the frame, or standard operating transom sash.

*"W" SERIES DOOR* — The new slim style "W" series deluxe door is joined and fitted to flush hairline joints and welded along the concealed lines of contact. All welding is on the unexposed sides in order to prevent pitting, discoloration, weld halo or other surface imperfections after finishing. Corner joints of strong tubular construction add to the rigid strength of the door.

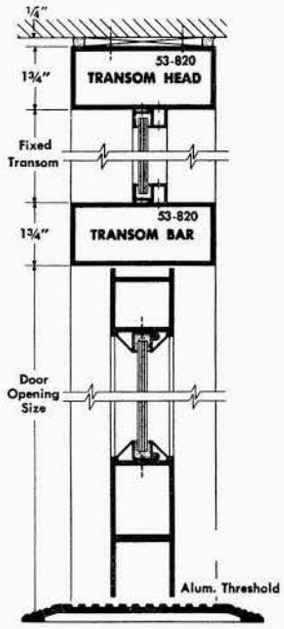
*HARDWARE* — Complete design flexibility is achieved with interchangeable, push-pull sets. Two of these have removable face plates which can be replaced on the job with "custom" designed face plates.



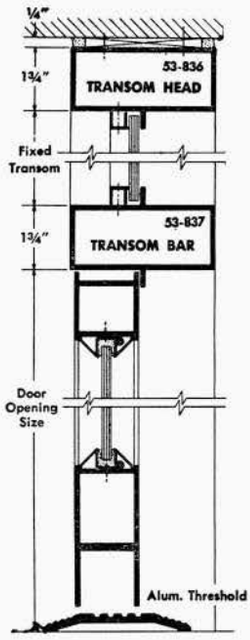

**HORIZONTAL SECTION**
through door and frame
— double acting.




**HORIZONTAL SECTION**
through door and frame
— single acting.




**VERTICAL SECTION**
through door and transom
— double acting.




**VERTICAL SECTION**
through door and transom
— single acting.

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