JOURNAL

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

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PRESIDENT - - - - - J. ROXBURGH SMITH (F)

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JOURNAL
R. A. I. C.
SEPTEMBER 1950

ON another page in this issue, we show a trio of gifts from the people of Canada. The comments on them are from the works of Sir Walter Scott and Mr. William Shakespeare, and, while they admirably express our views, something more, perhaps, should be said here. Taking them as they appear on the page, we have first, the most important, the Prime Minister's House. In all three cases, public criticism might have been useful in advance of execution, but as that opportunity was not given us, we have no alternative but an examination of the finished article. In the case of the Prime Minister's House, few Canadians would have voted for the alteration of a Victorian house if the possibility of a new and modern house were suggested to them. The present architects would have been on their mettle if the opportunity of a lifetime were given them, and we have every confidence that they would have proved worthy of the honour. Every Canadian and every visitor for a hundred years would have seen the house as the expression of the aspirations and the ideals of a young and progressive nation in the year of grace 1950. It is unlikely, even in the present skilled hands, that the face lifting job in progress will result in a house that will strike a responsive chord in any Canadian breast. A national competition would have been watched with interest, not only by Canada but by the civilized world.

THE Prime Minister's House will certainly be in what is commonly called "good taste", and any vulgarities in the old house, if there were any, will be ruthlessly eliminated. In regard to the Speaker's Chair, which now adorns the Newfoundland Legislature, we might let Mr. William Shakespeare speak for us as he has in the caption to the photograph. We would say in addition, to those in high places, who make decisions of this kind in the name of millions of their fellow countrymen, that there are some objects, however dearly loved and remembered, that do not lend themselves to reproduction. Among such objects we would include old hats, old pipes — and some old chairs.

VASTLY more serious than the Ontario venture in the furniture field, is the gift, on behalf of the nation, of the Speaker's or Clerk's Table for the House of Commons at Westminster. In the year 2000 A.D., a student of architecture will visit the House of Commons, and ponder on the mystery of a Speaker's Table, which has all the earmarks of furniture made in the century of the Black Death, but was actually made in Canada in 1950. Our student of architecture would be still more puzzled if he knew that the Government, which authorized the manufacture of this object, was the same one that, a few years before 1950, set up the National Industrial Design Committee, and the annual National Scholarships in Industrial Design. The excellent reason for the expenditures of the Committee and the $10,000 a year for Scholarships was that Canada could demonstrate to the world that her designers and her products were not inferior to those of other countries with whom she did business. We shall not prove it by this exercise in medievalism. A more practical gift might have been a refrigerator for the Commons' Restaurant. If our advice were asked, we would recommend the de Montfort model (simonized, of course) — the one with steel doors in ye olde linen fold pattern. On ye noble handle would be prettily inscribed the arms of Canada (designed by the Worshipful Goldsmiths' and Silversmiths' Company of London because of the lack of competent Canadian designers), and ye motto "It is more blessed (and so much more fun) to give than to receive".

Editor

BC

ARCHITECTURE

AT the outset of this introduction to the special British Columbia issue of the Journal of the Royal Architectural Institute of Canada I would like, on behalf of the Architects of British Columbia, to thank the Publisher for giving them this opportunity of displaying a complete issue of their work to the gaze of their fellow Architects throughout the Dominion, and we will welcome the critical, and we trust kindly, criticism of the Architects east of the Rockies.

In a country as large as Canada, with the greater portion of the population concentrated in a comparatively small area, it is only natural that the greater portion of the architectural work illustrated in a national journal should originate in the thickly populated area, and the comparatively small portion originating elsewhere is prone to become completely submerged.

This makes the issue of a special number, consisting of work from the Pacific Coast, very gratifying indeed.

The occasional issue of such copies of the *Journal* as this, devoted to the work of Architects in one particular area should be of special interest, and I hope that at some later date we may have an issue devoted to the work of the prairie Architects, and a similar one from the Maritimes.

In these days, when quick and easy transportation has created vastly increased travel, and with the issue of such a multiplicity of magazines, trade journals, etc., illustrating and describing buildings, particularly residences, as is to be expected, there is a monotonous over-all sameness about the buildings on the whole North American continent, varied only by local conditions.

With Owners, particularly of houses, reading so many of these magazines, the Architect's problem is frequently convincing him, as to the suitability, or otherwise, to his particular site and requirements, of some style that has caught his, or her, eye.

It has been said that only too often the completed building is the salvage of the Architect's design wrecked upon the rock of the Owner's perverseness.

In spite of this monotony, even the more common types and styles have certain adaptations and adjustments to suit the conditions in the various parts of the country; particularly climatic, and the availability and cost of materials, and it is interesting to note how successfully the Architects of the various regions have adapted themselves to these purely local conditions.

In British Columbia, where until recently a good grade of lumber was available at a reasonable cost, where good cement, sand and gravel is universally procurable, and where good brick, and structural steel are almost prohibitive in cost, it is only natural to find the Architects there have turned largely to concrete, wood and stucco in their structures, and as all these materials lend themselves to extreme flexibility, the results have usually been very pleasing. The use of so much concrete over a long period has developed in all tradesmen concerned a particular skill where this medium is used, so that I feel that the structural concrete work being done in British Columbia will bear favourable comparison with the concrete work in any part of the Dominion.

If there is another characteristic that might be applied to current architectural work on the coast, it is probably a freedom of design. There appears to be no cramping of style to conform to tradition, possibly because there is no tradition here to conform to. While some of the work of the younger Architects, and some of the older ones too for that matter, may be considered rather wild and irresponsible, that seems to apply to any breaking away from tradition in any of the Arts, and it is only a matter of time, when the good will survive, and the bad will be buried in the limbo of happily forgotten things, where it belongs.

With the large amount of work being done in British Columbia, there was no dearth of material, and the problem was to condense this material to fill one issue, and the work here illustrated can be considered fairly representative of current architectural work in British Columbia.

H. H. Simmonds, President,
Architectural Institute of British Columbia.

B C
ARCHITECTURE

THIS issue was made possible through the collaboration of a large number of members of the profession. We also had the benefit of an artist's and engineer's participation in our efforts. Within the short space of time made available to us, we have attempted to present as comprehensive a picture as possible of the state of the profession and its work in British Columbia to-day. To this end, we have included in the contents some of the principal related fields of activities in which we feel that this Province is making a noteworthy contribution to the progress of Canadian building and planning.

We wish to remind the readers of the *Journal* that the 1,200,000 citizens of British Columbia live in a mountainous, scenic Province of extremes with such differing regions as the rich grain lands of the Peace River and the ranch lands of the Cariboo, with their climatic extremes, the mineral rich Kootenays and the fast-developing Okanagan fruit basket with weather similar to Southern Ontario, but with a much more variegated landscape; the Northern Pacific Coast Region with its heavy temperate rainfalls and fjord-like scenery, rich in fish and lumber, and the Southern temperate Pacific Coast region consisting mainly of the more densely populated fertile regions of Vancouver Island and the Lower Mainland (Fraser Valley delta). It is in this latter region that three-quarters of the population live, and are located the large cities of Vancouver (circa. 500,000 people in the metropolitan area) and Victoria (circa. 110,000 people in Greater Victoria). The industrial potential in British Columbia is very large, and it is in these centres that the greatest development in secondary industries has taken place.

Most of the architectural offices are located in these two cities and it is here that the largest building program has been under way during the past five years. As a result, the type of buildings which Architects have developed for this region has been re-adapted to the colder regions without much change in appearance or plan. More detailed attention, however, is required to take care of weather conditions. It is unfortunate that, due to the centralized condition in British Columbia, it is difficult to obtain good photographs of the excellent schools, hospitals, hotels, houses and other buildings which have been erected in smaller communities throughout the Province.

The cover was drawn by Mr. B. C. Binning and laid out by Mr. Ralph Cole, B.Arch. (McGill), M.R.A.I.C. The latter was also responsible for the layout of this issue.

The Editorial Board Committee wishes to express its thanks to all who have assisted materially by their co-operative efforts in connection with this fine issue.

Fred Lasserre,
Chairman, Editorial Board Committee.

EVOLUTION OF THE ARCHITECTURAL INSTITUTE OF BRITISH COLUMBIA

R. P. S. TWIZELL

BC
ARCHITECTURE

NO fewer than 27 architects were established in British Columbia before the end of the comparatively short span of 86 years after the first Hudson Bay fort, West of the Rockies, was built in the year 1805 at McLeod Lake. A 20 page booklet was published in 1891 as "The Report of the first General Meeting of the Provincial Architects, held at Victoria, B.C." 29th June of that year. Eleven architects attended; another sixteen had applied for membership in the association. Reference was made to previous meetings, evidently for organization purposes for the general meeting which began 10.30 a.m., ended 10 p.m. having approved of a considerable amount of subject matter — including that the name of the association shall be "The British Columbia Association of Architects." (Note I).

There is no known record of this association's activities during the next twelve months, but there must have been a number of meetings for a 32 page booklet, again published in Victoria, was issued in 1892 under the title "The British Columbia Institute of Architects", founded in 1891 — incorporated 1892 under the Literary Societies Act. This contains the Constitution, list of officers, by-laws, scale of charges etc., but no record of any meeting. (Note 2). Any further activities of this Institute are unknown, even to some of its original members still in practice 30 years later; nor of any other effort before about the year 1910 to again found an architects' society. The land boom in the S.W. of British Columbia approximately between 1908-13, and with this an increasing building development was responsible for a large influx of people. Among these arrivals were trained architects, and in addition many who claimed to be architects because of being skilled in one or another of the building trades.

Largely due to the chaotic architectural situation which developed, a group of architects with experience of architectural societies began in the fall of 1909 to establish one in Vancouver under the title "The British Columbia Society of Architects", with a Chapter in Victoria. Unfortunately it was soon found that general conditions made it impossible to determine the real qualifications of many of the applicants and it was not long before the founders of the society were quite outnumbered. The maximum membership eventually reached was claimed at one time to be upwards of three hundred practising in B.C.; possibly eighty per cent of these being in Vancouver. Notwithstanding, experienced architects were in the minority. The Society's meetings in the predominant Vancouver Chapter were moderately harmonious during the first year of its life, but after that time until it ceased to function the meetings became increasingly turbulent and noisy mostly due to charges made by certain members of the open and continued unprofessional conduct of many of the others, and the indifference of the executive to obvious irregularities.

In the fall of 1912 a special meeting was called at the demand of a small group of dissatisfied members after a case became known of flagrant collusion between an assessor and winner of a school competition. The competitor was an officer of the Society and every attempt made to have an enquiry was evaded and finally blocked. This episode and the general prevailing conditions convinced the small group which had requested the enquiry that there was no hope of improvement in the society; they severed from it in March 1913 and formed a club of very limited membership for friendly intercourse among architects.

Notwithstanding the existence of the B.C.S.A. the small club soon decided to establish a new architectural society under the title "The Architectural Institute of British Columbia".

(Continued on page 326)

SCHOOL BUILDINGS

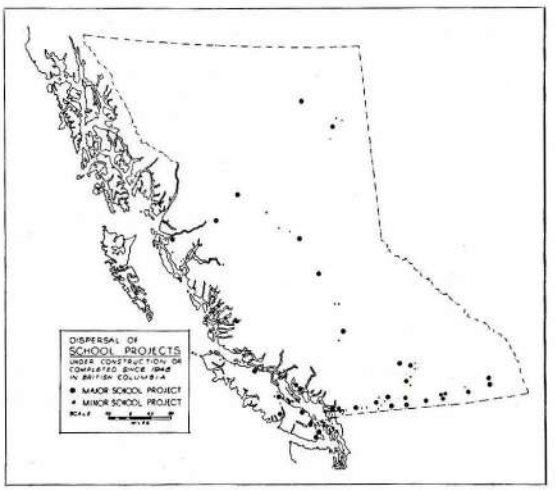
1

R. A. D. BERWICK

B.Arch (Toronto), M.R.A.I.C.

VANCOUVER, B.C.

The general development of school design in British Columbia, since 1946, has shown marked improvement in planning for the educational requirements. On the whole, the new schools indicate a distinct realization, by the Architects responsible, that a school must be a pleasant place for children to spend a great proportion of their lifetime, as well as be a practical and efficient workshop for learning.



The tremendous demand for new construction, due to increase in population, and lack of construction in the 1930s has placed a heavy strain on the finances of the Province, and as more and more construction is required, more economical solutions for this serious problem must be, and are being developed.

It has generally been decided, by the Department of Education, that outside of the No. 1 Fire Areas, frame construction serves the purpose better than permanent construction. The general principle behind this is that, as no building should be designed without proper provision for expansion, it is equally important that any parts of a building must be capably designed to permit simple alterations as the educational requirements change.

As one official expressed it, "It would be well if every school could be torn down or eliminated every 25 years to make room for a new building. For if educational requirements change in the next 25 years as much as in the last, the buildings at present under construction will be totally inadequate."

Whether we agree with this statement or not, it shows clearly that the officials of the Department of Education are farseeing in their approach to the problem and new ideas, particularly regarding economy are readily acceptable to the Department.

With the foregoing facts in mind, the problem, as handed to the Architect, is primarily one of economy, the provision of adequate well lighted space, together with good design. It is the writer's opinion that no better basis could be considered for producing good architecture.

In the first attack on the problem in 1946, considering the adequate timber supply, new principles of light truss design were developed to the point where a large building could be designed with no timber larger than 2″ x 6″. This one fact alone, saved sufficient labour and material to reduce the cost of a school building 5¢ per cubic foot over the older established construction methods.

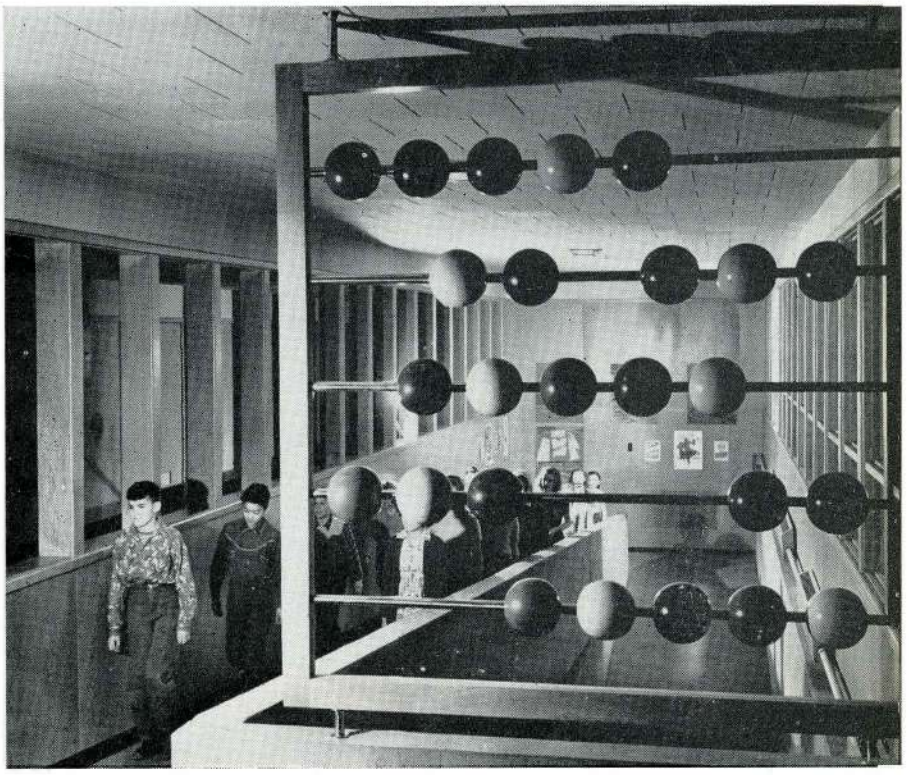
In the initial designs, clean functional buildings resulted, but lacked, if anything, the warmth and domesticity perhaps necessary to an adequate school. In further studies, materials now are becoming equally important. The small elementary school is becoming a domestic building with warmth and natural materials, that are happily accepted by the children and teachers alike.

The use of color is becoming more important. Most Architects are using color in relation to function and the general impression received in the newer schools is that staff and students are extremely happy.

A very important point has come to the forefront in the design of schools. It seems that in British Columbia, as is generally the case in other parts of the continent, house design has lagged behind schools and industrial buildings in their contemporary approach.

It is quite possible that these pleasant, well planned schools may so influence the children that there will be no question as to what types of houses they will insist on when they are in a position to do something about it.

Photographs by Tony Archer



ARCHITECTS: SHARP AND THOMPSON, BERWICK, PRATT

Name of Building: Ridgeview Six Room Elementary School

Location: West Vancouver

Date of Erection: 1949

Contractor: H. Gostick

Construction: Frame, light truss on 4' 0" module

Remarks: 16' 0" drop in site dictated one storey drop providing play area under building opening to playground. Concrete ramp provides simple access to play area and fire exit.

ARCHITECTS: BIRLEY, WADE AND STOCKDILL

Name of Building: View Royal Elementary School

Owner: Greater Victoria School Board, District No. 61

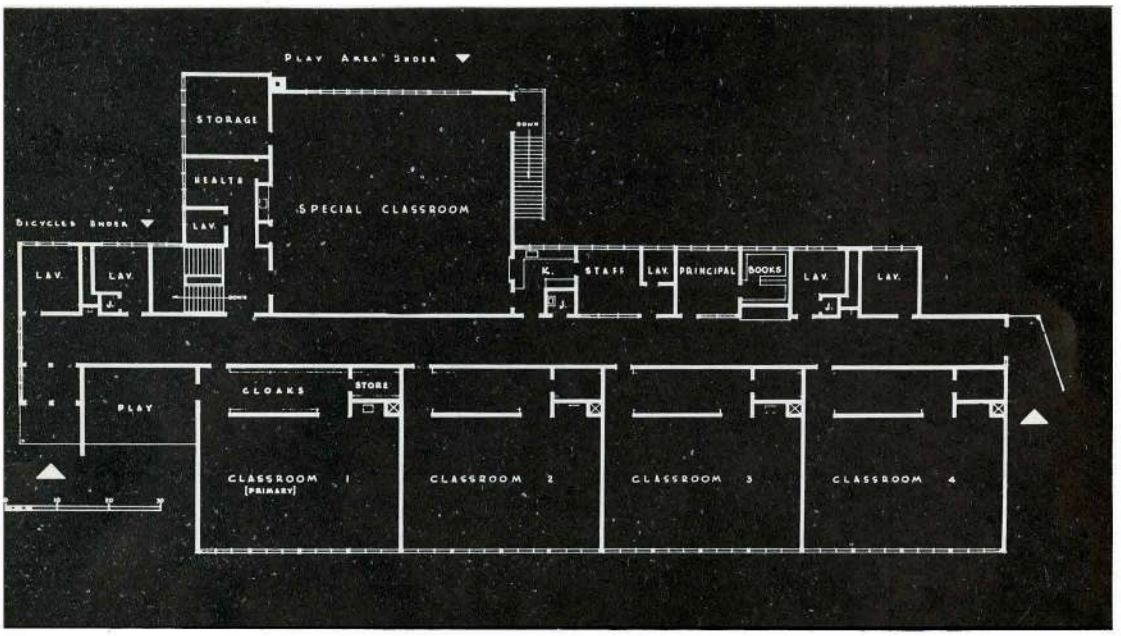
Location: View Royal, Victoria, B.C.

Date of Erection: Fall 1949

Contractor: McKinty and Sons

Structural: Wood frame

Remarks: A four classroom school with a small auditorium that is also used as an additional classroom. Assistant in charge, R. H. Wakefield.



Photograph by Robert Fort-Duncan MacPhail

ARCHITECTS: GARDINER AND THORNTON

Name of Building: Fort St. John High School

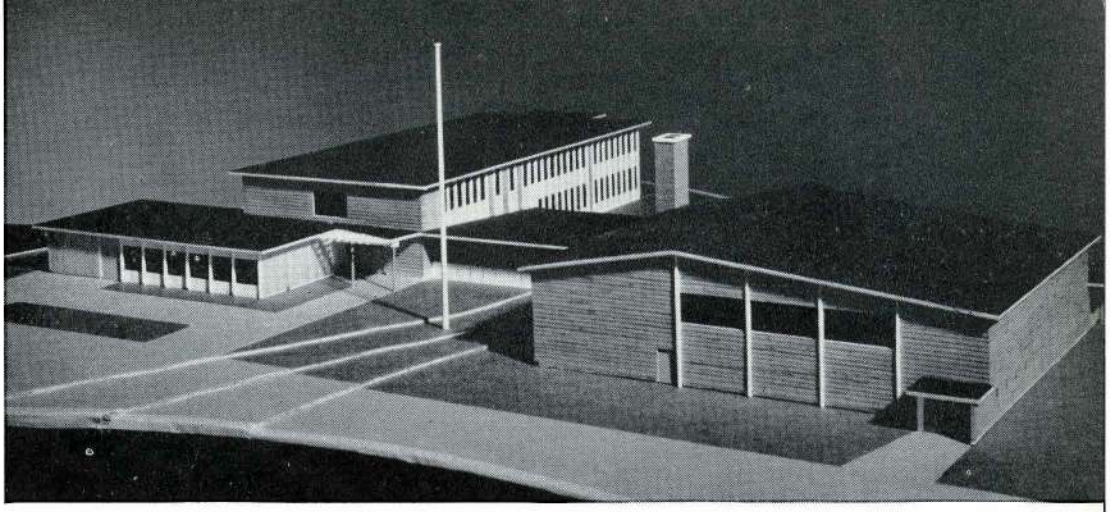
Owner: Board of School Trustees District No. 60

Location: Fort St. John, Peace River, B.C.

Date of Erection: Expect to start construction Spring, 1951

Construction: Concrete foundations. Load bearing 2 storey mullions and frame. Roof—Pitch and gravel. Exterior—Horizontal cedar siding and vertical V-joint. Spruce. Double glazed double-hung sash.

Remarks: Ten Classrooms, workshops, domestic science, showers, gymnasium-auditorium.



ARCHITECTS: SHARP AND THOMPSON, BERWICK, PRATT

Name of Building: Vancouver Vocational Institute

Completed: January, 1950

Contractor: Commonwealth Construction Company

Structural Engineer: Victor Thomson

Remarks: This building will be more fully illustrated in a future issue of the *Journal*.

Photographs by Graham Warrington

2

PETER THORNTON
A.A. (London), A.R.I.B.A., M.R.A.I.C.

VANCOUVER, B.C.

CONTEMPORARY CATHOLIC CHURCH ARCHITECTURE

As in all other buildings the design of a Catholic Church is governed by "permanent and variable conditions" to quote from Auguste Perret. If these conditions are effectively fused the result will be Architecture and not mere building.

The set of laws known in the Catholic Church as Rubrics are the ones that define the permanent or unchanging conditions. Research reveals those rules that affect the physical form of the church. That these be understood is vital.

The variable conditions are those imposed by finance, site, capacity and like factors.

Concerning the appearance of the church, in the past, directives have forced the acceptance of tradition and a following of styles such as Romanesque or Byzantine has been the result. This was never a happy state of affairs for copyism is an admission of defeat and further, methods of construction and decoration appropriate or necessary to building in the "styles" have disappeared and are now so uneconomical as to be virtually unobtainable. As a result designs appropriate to one material are re-produced in a cheaper — and shoddiness prevails.

That a change of heart has come about is evident in a recent pronouncement from the Vatican — a pronouncement which may well prove to foreshadow a renaissance in ecclesiastical architecture. Past anomalies in the field of design are now realized and in an endeavour to remedy them, contemporary methods of building, the use of new materials and the skills that are inherent in them are not only tolerated but actively encouraged.

It is superfluous to add that cliches and fashions exemplified in commercialism and exhibitionism will still be unacceptable in this field of design.

Church building in B.C. at the present time is tuned to satisfy the demands of comparatively small parish units — of from 250 to 400 families. The suggestion being that when a parish grows too large for a parish priest with one assistant to administer it, it would be divided.

Due to the present influx of people to B.C. and to the fact that the Catholic Church is expanding here, the demand for new parish units is brisk.

The financing of a building programme is undertaken by the parish members themselves — a considerable burden which in consequence demands a careful balance between first costs, maintenance and life of the structure.

The type of building now most acceptable is one less expensive than so called permanent construction and one more durable than the simple frame churches so prevalent in all "missionary territories", a state out of which all but the most northerly part of British Columbia has now emerged.

The Catholic church illustrated here, the "Sacred Heart", does not presume to answer all of the problem as stated; it is here but to mark a milestone and to stimulate its designers (and possibly others) to an increased vigor in ecclesiastical design and a greater understanding of a very special problem.

Photographs by Graham Warrington

ARCHITECT: GARDINER AND THORNTON

Name of Building: Sacred Heart Church

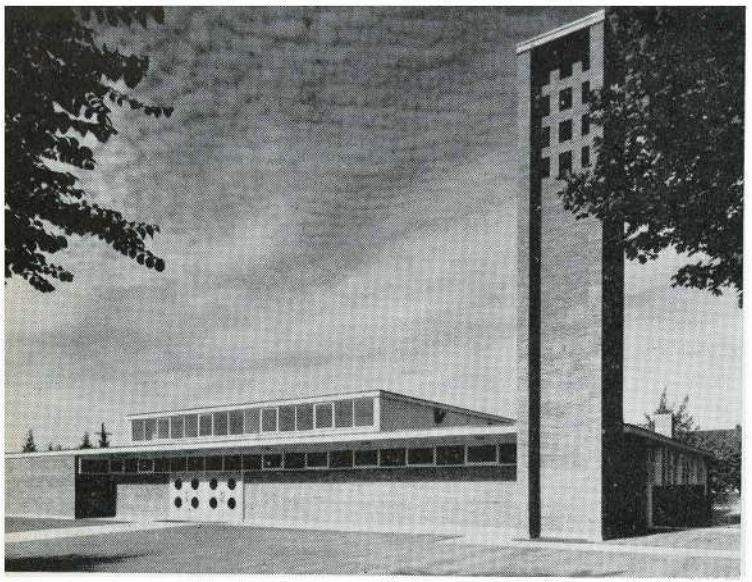
Owner: The Most Reverend, The Roman Catholic Archbishop of Vancouver

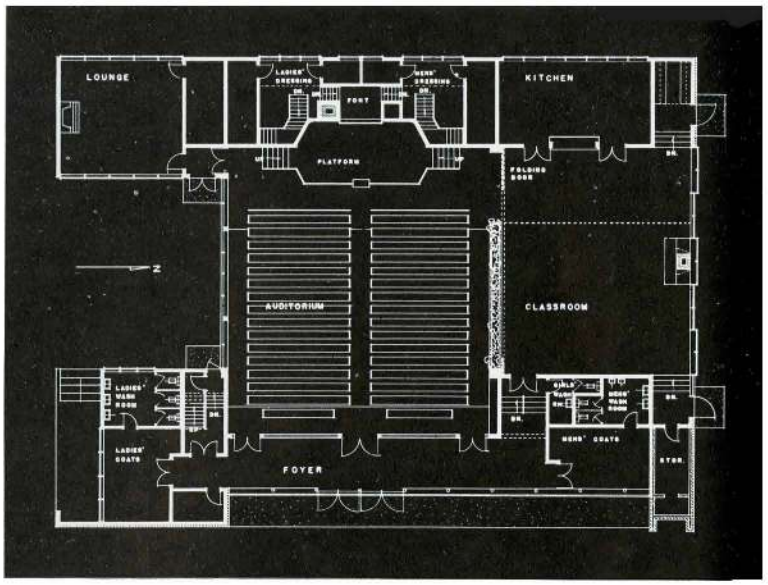
Location: Old Residential commercial part of Vancouver with European population

Date of Completion: 1949

Contractor: Amundson Construction Company

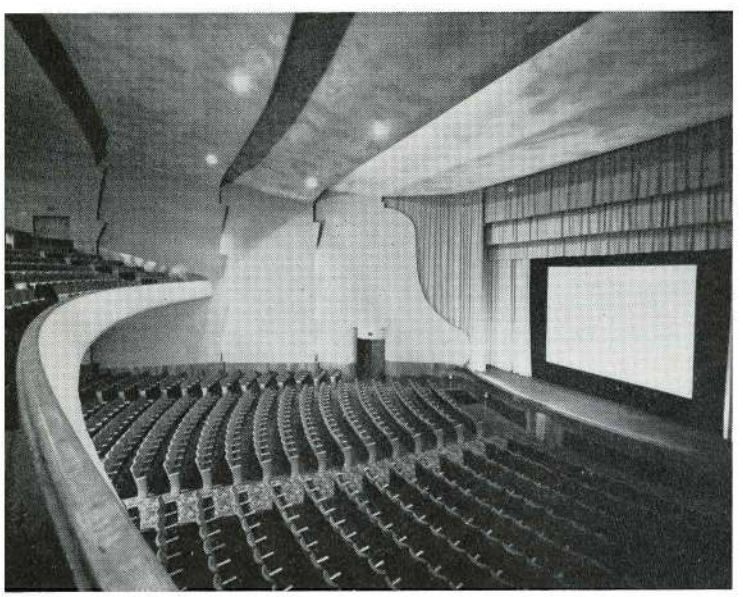
Construction: Concrete foundation and floor on grade
Walls — Frame cement rendered, cement brick
Roof — Patent shingles on trusses, two foot centres
Steel windows — mixed coloured cathedral glass
Interior walls — plaster, ceiling — acoustic plaster
Millwork — Oak and cedar plywood
Front doors — Oak and Bronze
Lighting — Indirect and direct incandescent
Heating — Hot water oil-fired, convectors and projection heaters.

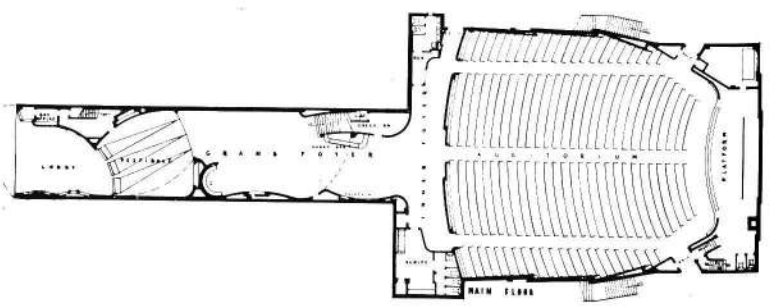




ARCHITECT: ROBERT R. McKEE
Name of Building: 43rd Avenue and Granville Street Gospel Hall
Owner: Plymouth Brethren
Location: Vancouver, B.C.
Date of Erection: Completed February, 1950
Contractors: Bennett and White Construction Company Limited
Structural: Frame, Veneer Brick, Steel Beams, Concrete Slab Floors throughout
Remarks: Completely sound insulated and air conditioned, 600 seats, moving picture projection room, insulated cry room for babies, complete cafeteria off Sunday School.

ARCHITECT: H. H. SIMMONDS
Name of Building: Odeon Theatre
Owner: Odeon Theatres of Canada
Location: Yates Street, Victoria, B.C.
Date of Erection: 1947
Contractor: Commonwealth Construction Company, Vancouver and Victoria
Structural: Class A. Fireproof throughout
Remarks: A 1500 seat house with a long foyer through to the theatre proper, which backs on next street.





Photographs by Graham Warrington

ARCHITECTS: SHARP AND THOMPSON, BERWICK, PRATT

Name of Building: Vancouver Public Library, South Hill Branch

Location: Vancouver, B.C.

Completed: September, 1949

Contractors: Kennett Construction Company

HOSPITAL BUILDINGS

3

HENRY WHITTAKER
M.R.A.I.C.

VICTORIA, B.C.

Since the beginning of the last war very little Hospital construction has been carried out except Provincial and Dominion Hospitals. However, as the population of B.C. has grown at least 25% in the same period and with the advent of Health Insurance, of necessity there was a growing need for Hospital beds throughout the Province.

The Government appointed James Hamilton and Associates of Minneapolis to make a survey of the need for such hospitals throughout the Province and their report in general is the Government's guide for such construction.

Moreover, the Dominion Government have a 5-year programme of assistance in hospital construction, through the Provincial channels.

The general scheme is as follows:

Hospital Board	⅓ cost
Provincial Government	⅓ cost
Dominion Government	$1,000 per bed acute hospitals $1,500 per bed convalescent

the balance being a loan from the B.C. Government as a charge against the hospital's depreciation account.

This is the most favourable financing of hospitals that has hitherto been available.

Capt. Gordon Hughes, M.R.A.I.C., Architect for the Department of Health and Welfare, has published a broad, yet sound set of the basic requirements for the planning of hospitals, a compliance with this same would be a prerequisite for his Department's grant. I have found, however, that he is most cooperative and broadminded in the interpretation of these rules, realizing that it is very difficult to put in words instructions that would cover every hospital in the Dominion, and their approval or suggested changes is prompt and fair.

Based on the Survey of James Hamilton and Associates, a Hospital Board requests from the Provincial Government permission to erect a new hospital or extend an existing one to the limits prescribed in the report, appointing their Architect and making the necessary financial arrangements with the Government.

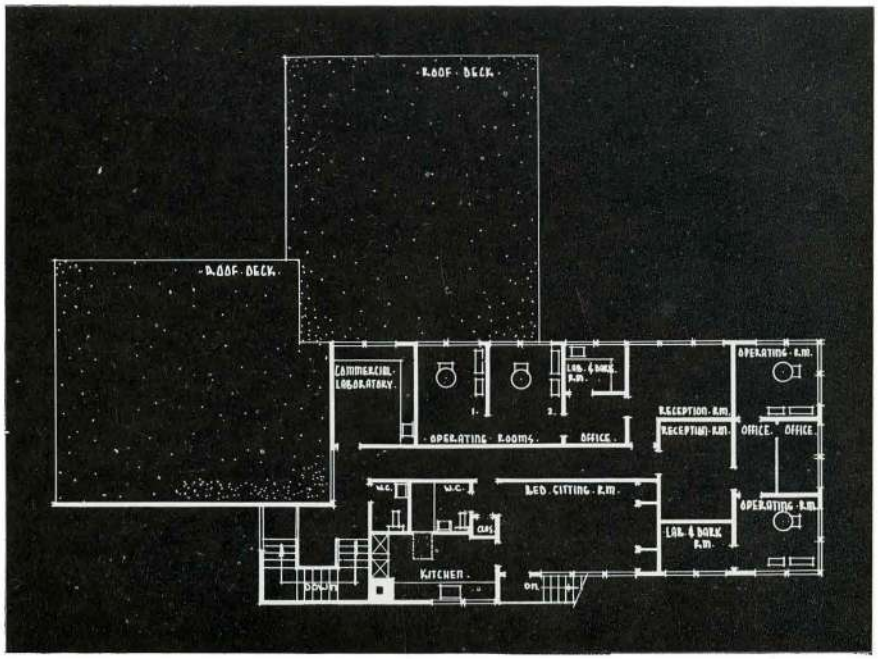
After the usual consultation with the Board, Medical and Nursing Staff preliminary plans are prepared on their requirements and laid out to follow modern hospital practice in planning and to comply with the only definite rules and regulations available, those of the Dominion Government with the added proviso that the Architect endeavour to the best of his ability to meet a specific budget based on a By-law that it is felt the district could meet.

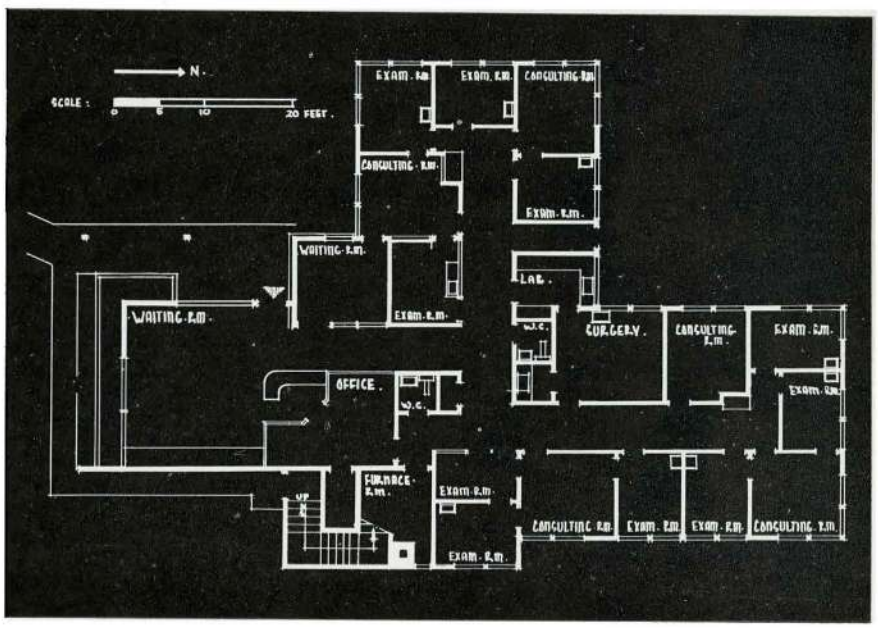
These sketches are submitted through the Government to their Consultants for tentative approval or such comments or recommendations they would care to suggest, or they may suggest a space utilization survey of the hospital, and from this, somewhat definite standards are to be followed by the Architect.

If it is possible to follow out these suggestions and finances are available, all to the good, but it is difficult as our profession realizes to obtain the ideal with a limited purse and the cost of labor and material constantly increasing.

Several projects have failed to materialize due to this procedure.

It is felt by our profession that with careful planning for the future, that it would be possible to obtain a hospital that would come within the limits of the monies available and meet the requirements of the community without striving for the ideal at the moment, and there is no doubt that the Architects would be only too glad to cooperate with the Government and their Consultants, if some more practicable means could be formulated so that the views of the Board, Architect and Consultants could be correlated and practical results obtained satisfactory to all concerned.





ARCHITECT: W. H. BIRMINGHAM

Name of Building: North Shore Medical Dental Corporation Ltd.

Owner: North Shore Medical Dental Corporation Limited

Location: Corner of 15th Avenue and Eastern Street, North Vancouver, B.C.

Date of Erection: 1949

Contractor: Moncrieff Construction Co. Ltd.

Structural: Frame on concrete slab

Remarks: Designed to accommodate five medical doctors on the ground floor, providing two examining rooms for each opening from the private office and from the corridor. A large waiting room and other essential services. Upstairs there is a caretaker's suite, two dental suites, and an office for a dental technician. A separate entrance serves the upper floor. Ventilation is from screened vents concealed under the windows.

ARCHITECT: ILSA J. C. WILLIAMS

Name of Building: Mount St. Francis Infirmary

Owner: The Sisters of St. Ann

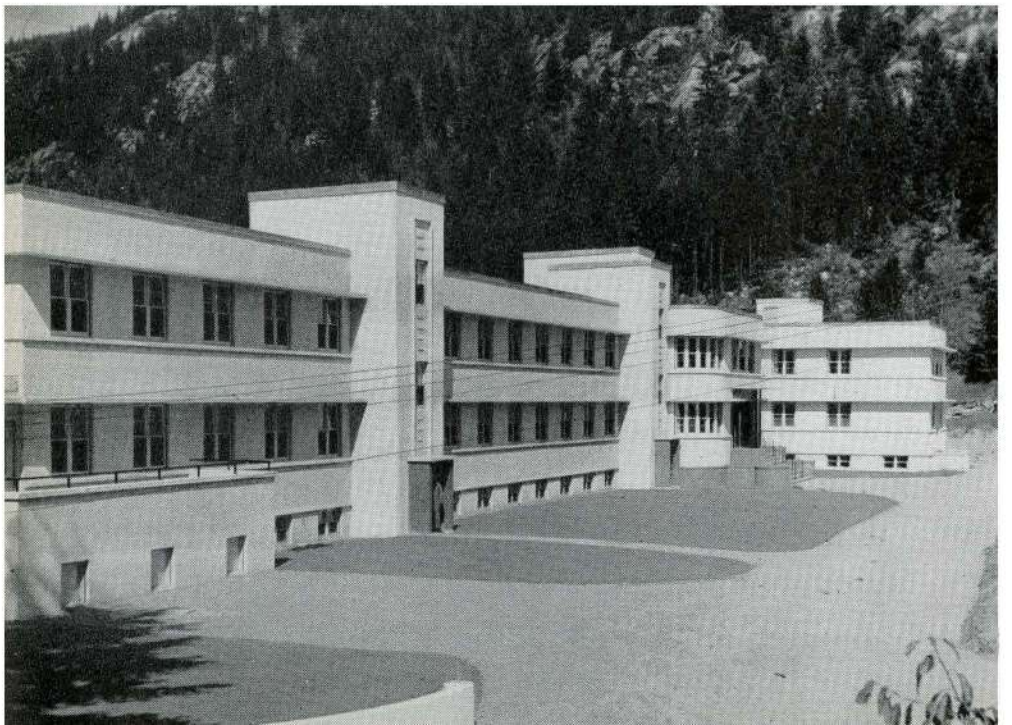
Location: Nelson, B.C.

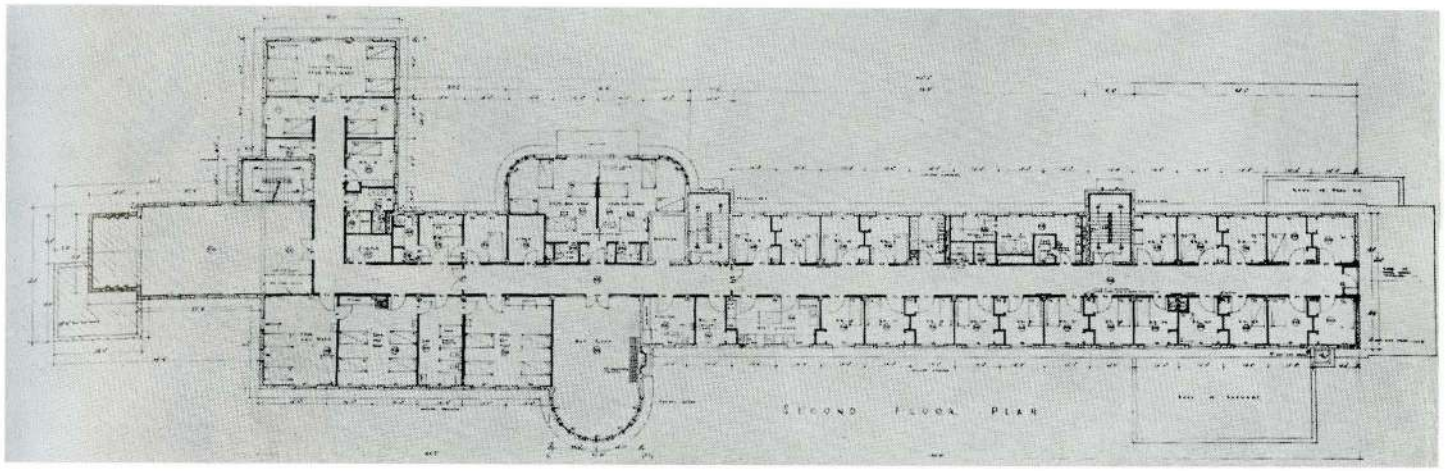
Date of Erection: 1949-1950

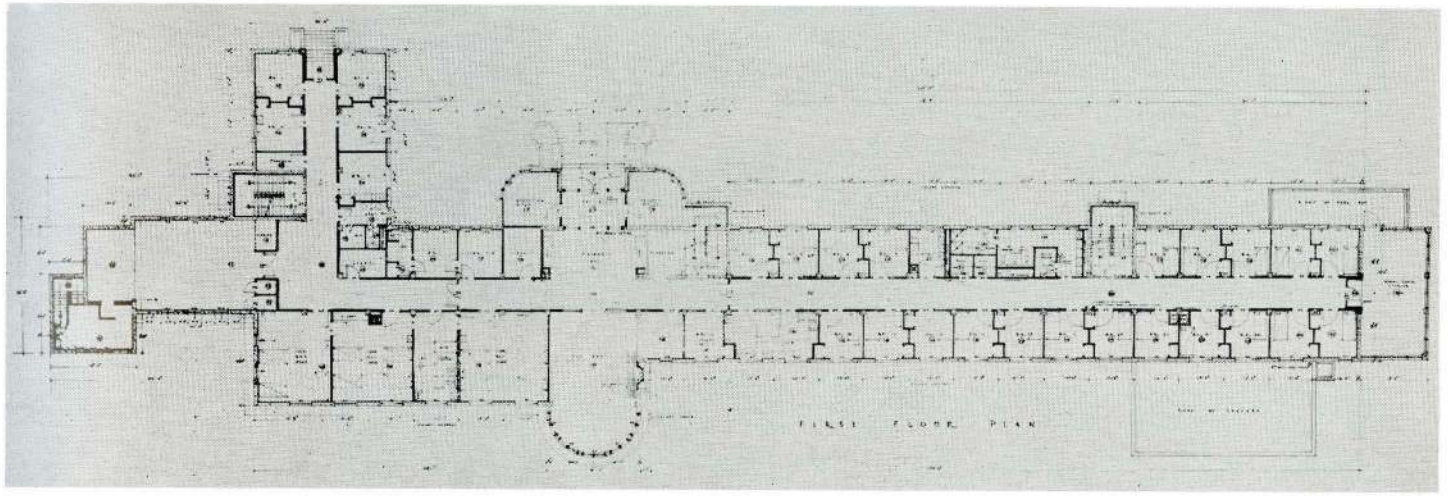
Contractor: Marwell Construction Company

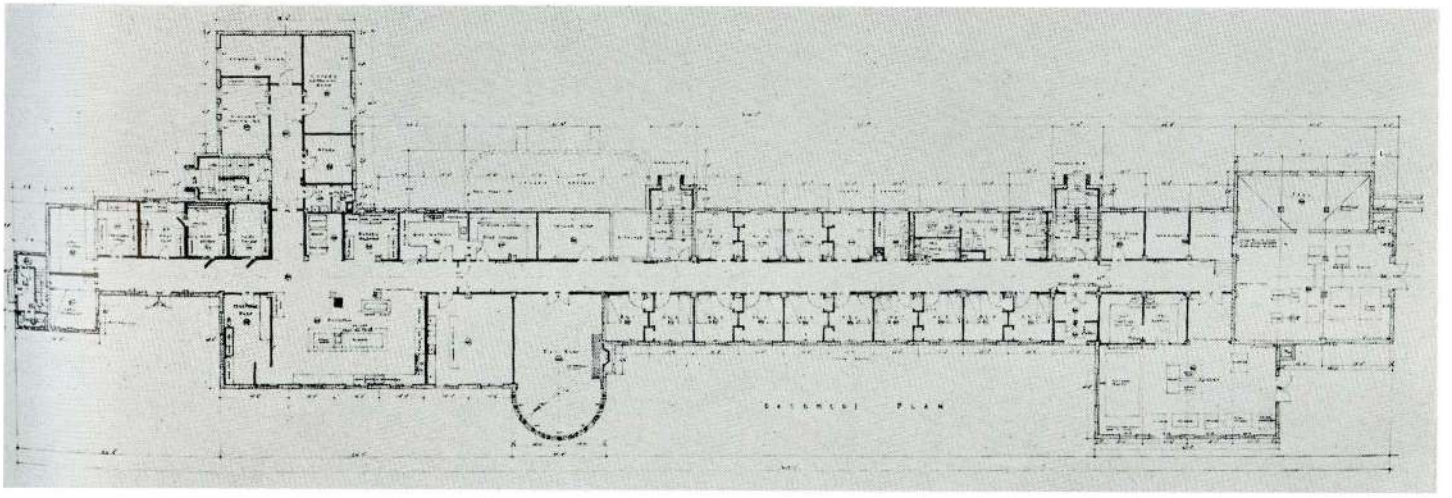
Structural: Reinforced concrete tile partitions

Remarks: 98 beds. Designed to carry two more floors.




SECOND FLOOR PLAN


FIRST FLOOR PLAN


BASEMENT PLAN

Photograph by Graham Warrington

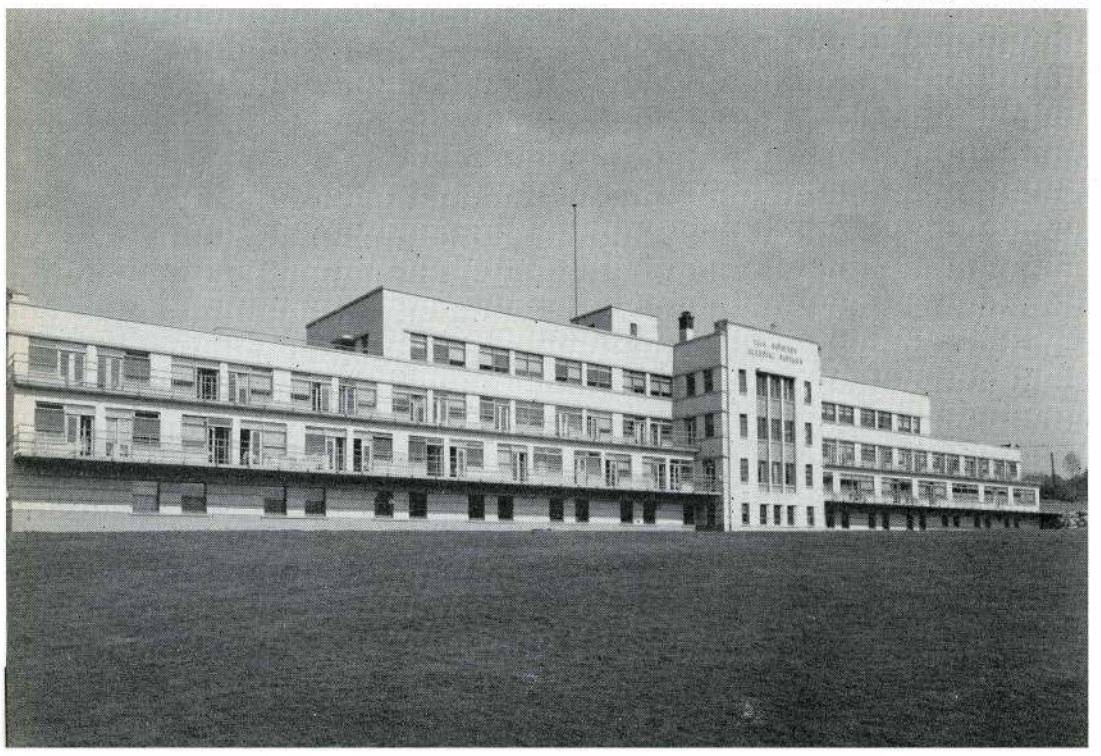
ARCHITECT: GARDINER AND THORNTON

Name of Building: Langley Memorial Hospital
Owner: Langley Memorial Hospital Society
Location: Trans Canada Highway, 4 miles west of Langley, B.C.
Date of Erection: 1947-8
Contractor: Day work
Construction: Frame on concrete foundation

ARCHITECT: MERCER AND MERCER

Name of Building: Chest Unit Shaughnessy Hospital
Owner: Department of Veterans' Affairs
Location: Vancouver, B.C.
Date of Erection: 1946
Contractors: Smith Bros. and Wilson
Structural: Reinforced concrete
Remarks: 150 beds

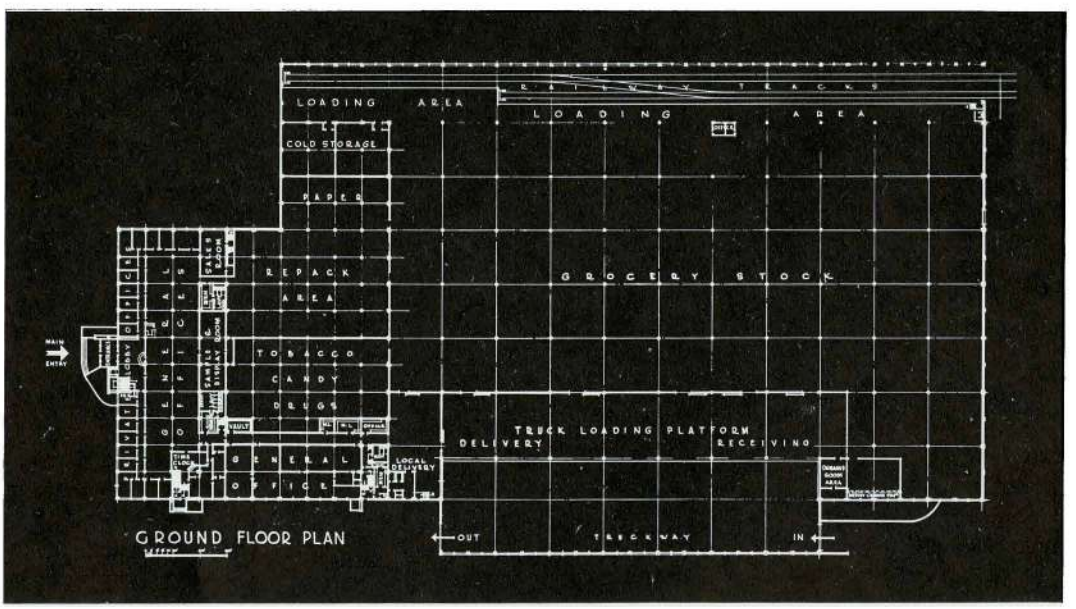
Photograph by Stuart Thomson



INDUSTRIAL AND COMMERCIAL

4

Photograph by Williams Brothers



ARCHITECTS AND STRUCTURAL ENGINEERS: McCARTER AND NAIRNE

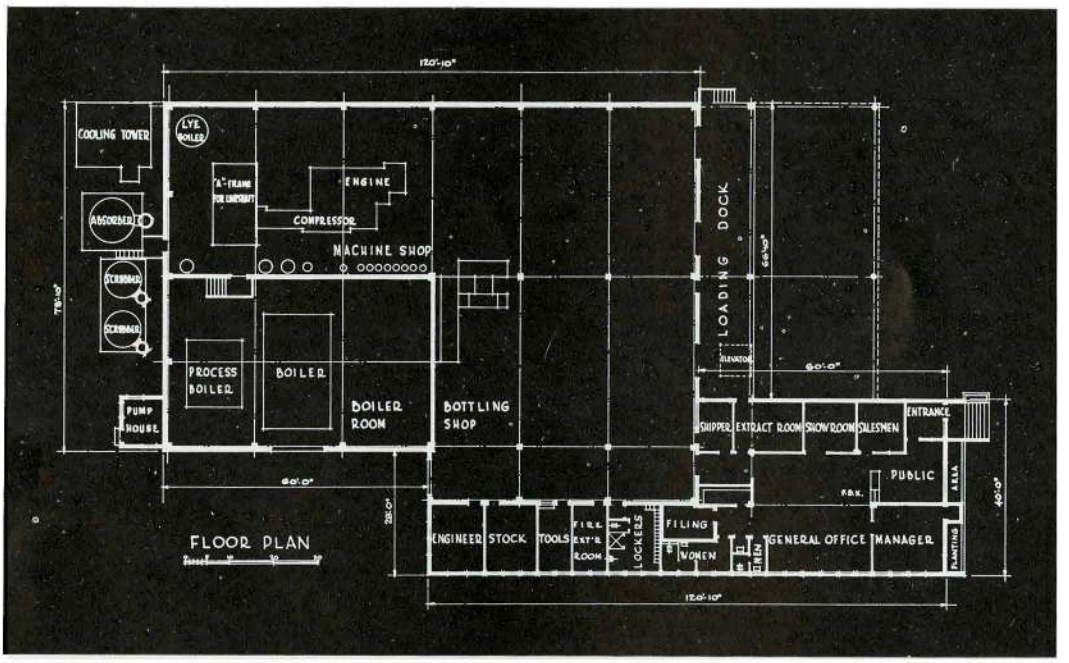
Name of Building: Kelly Douglas and Company Limited Plant

Location: Vancouver, B.C.

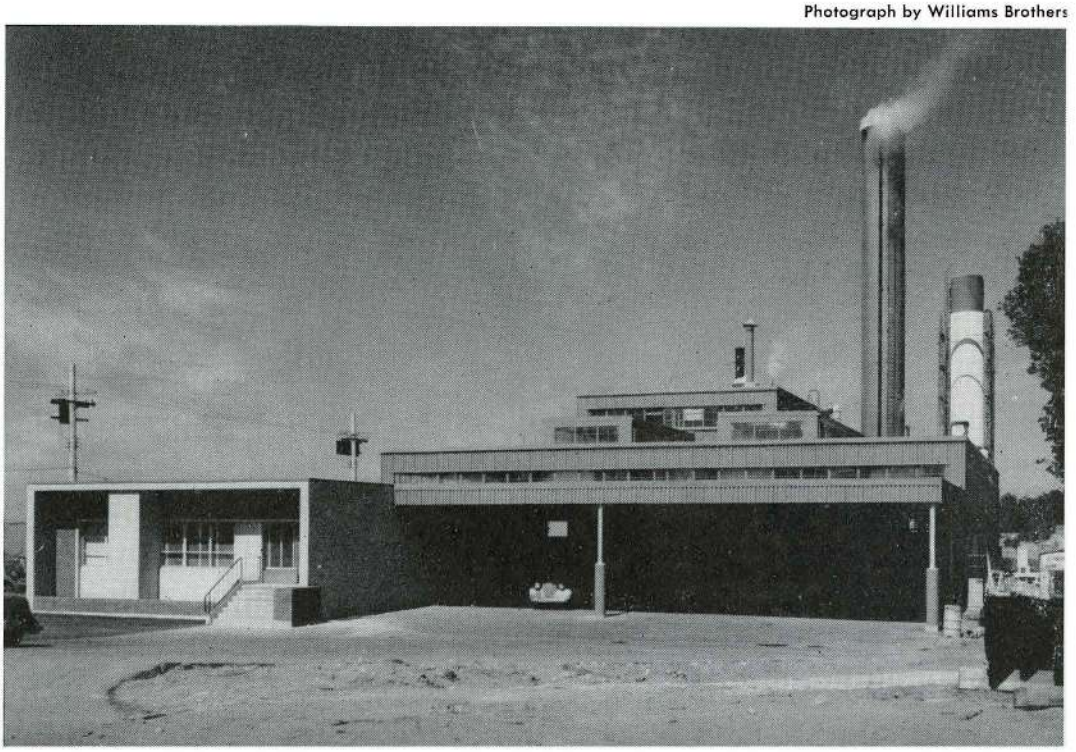
ARCHITECTS AND STRUCTURAL ENGINEERS: McCARTER AND NAIRNE

Name of Building: Liquid Carbonic Canadian Corporation

Location: Vancouver, B.C.



Photograph by Williams Brothers



ARCHITECTS: SHARP AND THOMPSON, BERWICK, PRATT

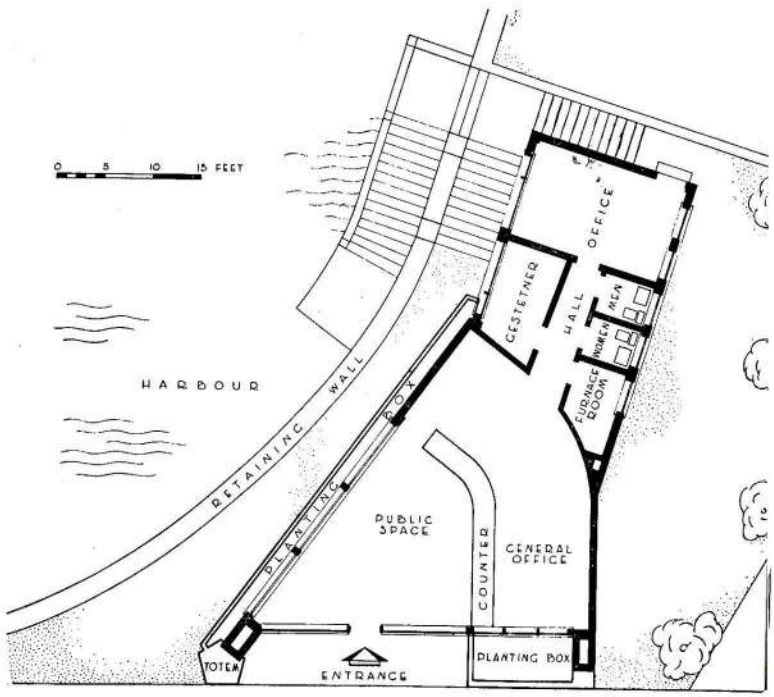
Name of Building: Office for Tilden Drive Yourself

Location: Burrard Street, Vancouver, B.C.

Date of Erection: 1950

Structure: Prefabricated steel with 2" wood laminated roof, set on concrete slabs

Photograph by Graham Warrington



Photograph by Roger Kerkham

ARCHITECT: BIRLEY, WADE AND STOCKDILL

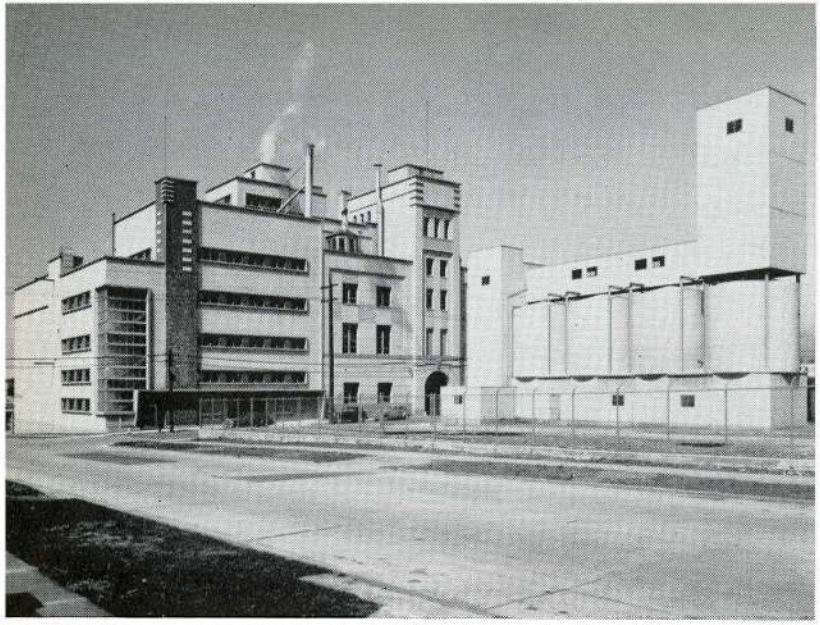
Name of Building: Victoria and Island Publicity Bureau

Owner: Erected by the Rotary Club of Victoria

Location: The Causeway, Victoria, B.C.

Date of Erection: 1949

Contractor: Luney Bros. and Hamilton Limited



Photograph by Graham Warrington

ARCHITECT: MERCER AND MERCER

Name of Building: Brewhouse and Cellars Building (left) Malt Storage Elevator (right)

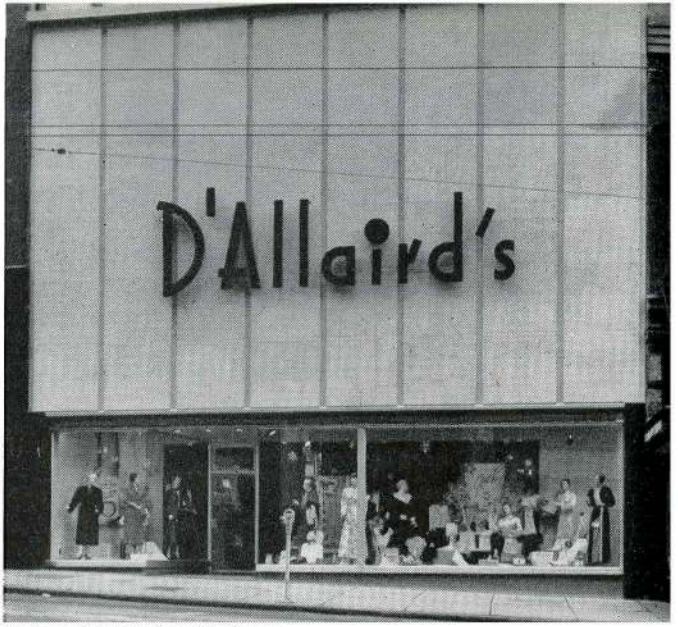
Owner: Vancouver Breweries Limited

Location: Vancouver, B.C.

Completion: Brewhouse, 1947, Elevator, 1948

Contractor: Smith Bros. and Wilson Limited

Structure: Brewhouse — Reinforced concrete and steel frame
Elevators — Steel frame, steel siding



Photograph by Graham Warrington

ARCHITECT: WILLIAM FRED'K. GARDINER

Name of Building: D'Allaird's Limited

Owner: D'Allaird's Limited, Montreal, Quebec

Location: 665 Granville Street, Vancouver, B.C.

Date of Erection: 1950

Contractor: Commonwealth Construction Company Ltd.

Structure: Concrete

Remarks: Ladies' Apparel Store

ARCHITECT: GARDINER AND THORNTON

Name of Building: United Fruit Warehouse

Owner: United Fruit Limited

Location: Vancouver, B.C.

Date of Erection: 1945-6

Contractor: Bennett and White Construction Co. Ltd.

Structure: Frame

Remarks: General fruit and vegetable distributing point. Railway spur at rear — Trucking front. Living quarters for staff on second floor. Elaborate banana ripening rooms, also dry and moist refrigeration and general warehouse space for perishable goods.

ARCHITECTS: C. B. K. VAN NORMAN AND J. C. PAGE

ARCHITECTS AND ENGINEERS, CONSULTANTS: YOUNG AND RICHARDSON

Name of Building: Shopping Centre

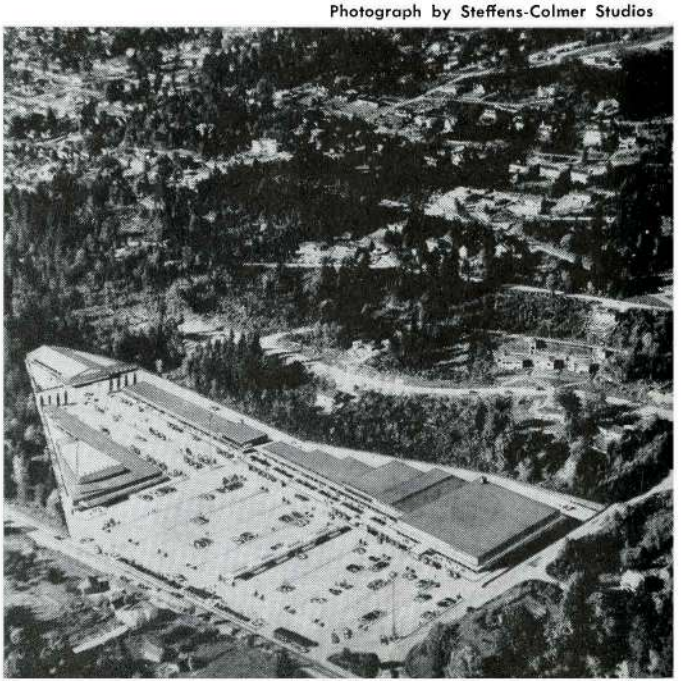
Owner: British Pacific Properties Ltd.

Location: Marine Drive and Taylor Way, West Vancouver, B.C.

Date of Erection: 1950

Remarks: Site 12 acres. Number of shops, 45 to 50 including large Department Store and Super Market. The scheme calls for a Theatre and possibly an Ice Arena in the near future. Parking facilities for 600 cars. Designed on a grid of 16' 8", this being considered a good width for a single front store and 33' 4" equally good for a double front store.

Photograph by Steffens-Colmer Studios



RESIDENTIAL WORK

W. H. BIRMINGHAM
B.A. (Tor.), B.Arch. (Tor.), M.R.A.I.C.

VANCOUVER, B.C.

5

House design in British Columbia has been undergoing a gradual change since some time before the last war. Most of the houses now being erected are conventional in character, but each year the percentage of what may be called modern or contemporary work increases.

This trend has been aided by the changing composition of the population at the Coast. There has been a tremendous growth during the last ten or fifteen years, much greater comparatively than that in other parts of the country. Families with widely different backgrounds have come to British Columbia as a land of opportunity or as a place to retire. A liking for change and a willingness to break with tradition characteristic of many of these people has resulted in many unusual houses.

Residential districts in West Coast cities have tended to develop and decline fairly rapidly as new sub-divisions were opened up. This has provided a good opportunity for many architects to try new and better solutions to the problem of designing a house.

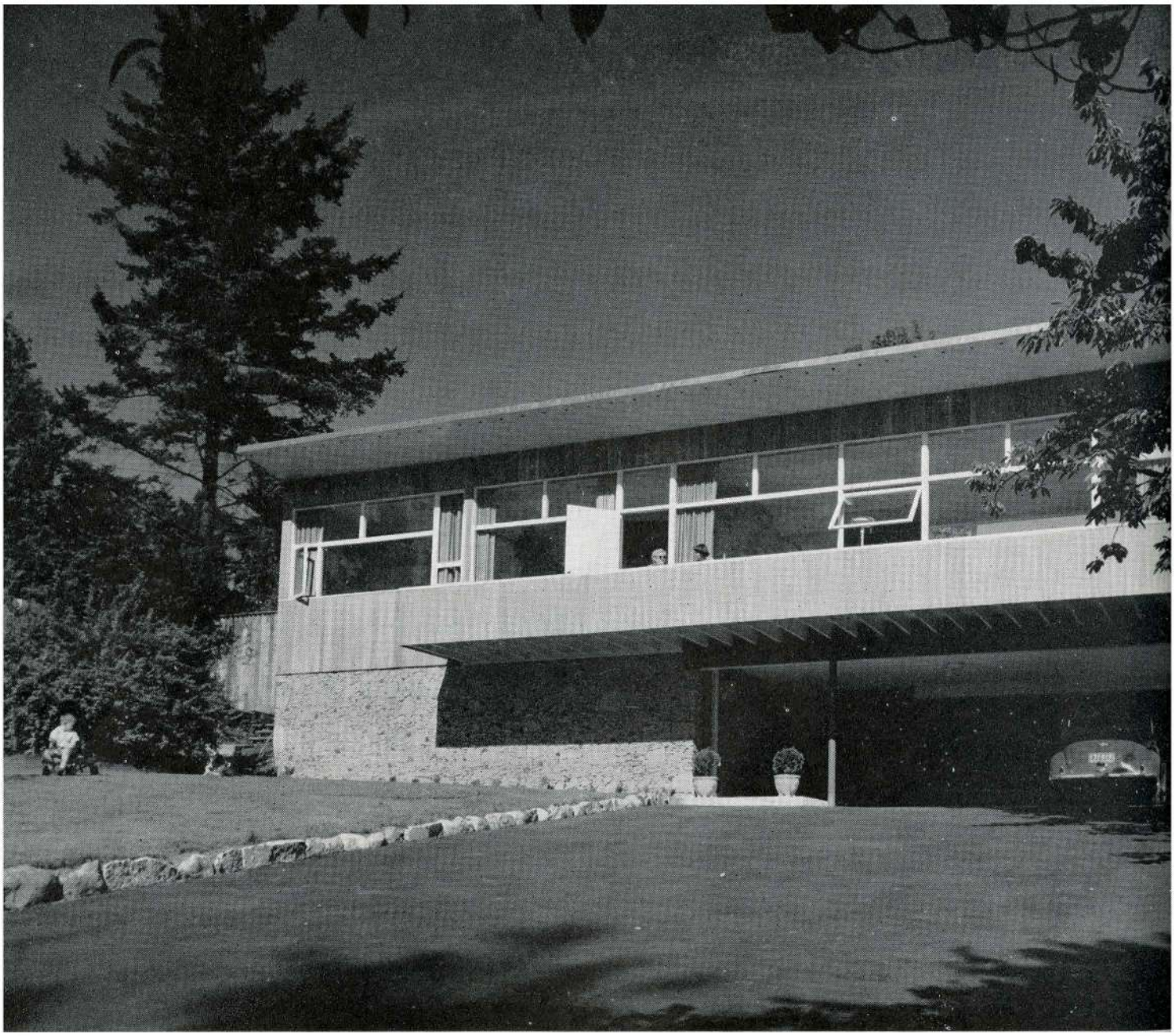
Many of the planning features characteristic of the new work being done here are to be seen in California and some other parts of the United States. Open planning, use of rooms for more than one purpose, the linking of the living areas in the house to the garden, all these represent a change in outlook. Carports often take the place of garages. Basementless houses are common, storage areas, a utility room and sometimes a "family" or general purpose room are put on the ground floor.

In appearance, large window areas possible because of the usually mild winters open the rooms onto garden areas or frame views of mountains and water. Most houses have wide overhanging eaves to control the sun and shield the windows from rain. Planting areas inside and out help to relate the garden to the house. Much furniture is built in.

Fresh structural techniques using different materials are to some extent an attempt to cope with the rising cost of building.

Of the materials used, wood in all its forms is the most important, and it is often featured inside as well as out. Stone or brick is rarely used as a facing on a whole house, but it may highlight some special feature or cover one wall of a room. Combinations of rough and smooth textured materials are to be found in many examples.

In summing up, West Coast residential work built over a period of the last few years, shows in its best examples, a freshness of approach to structural design and planning and an interesting and in many cases bold use of materials.

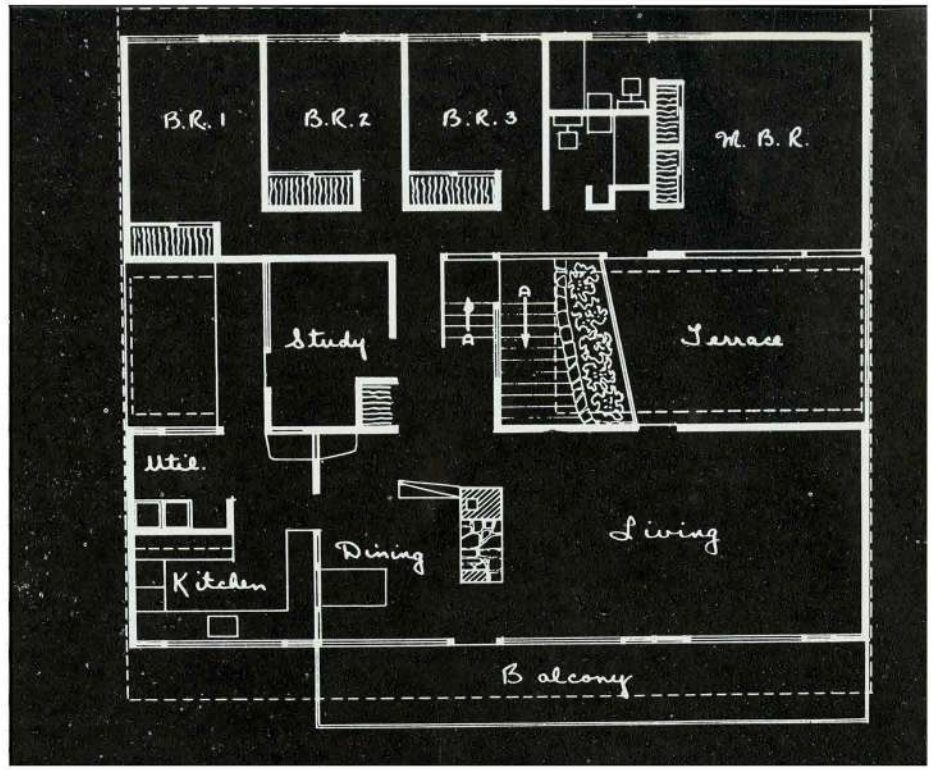


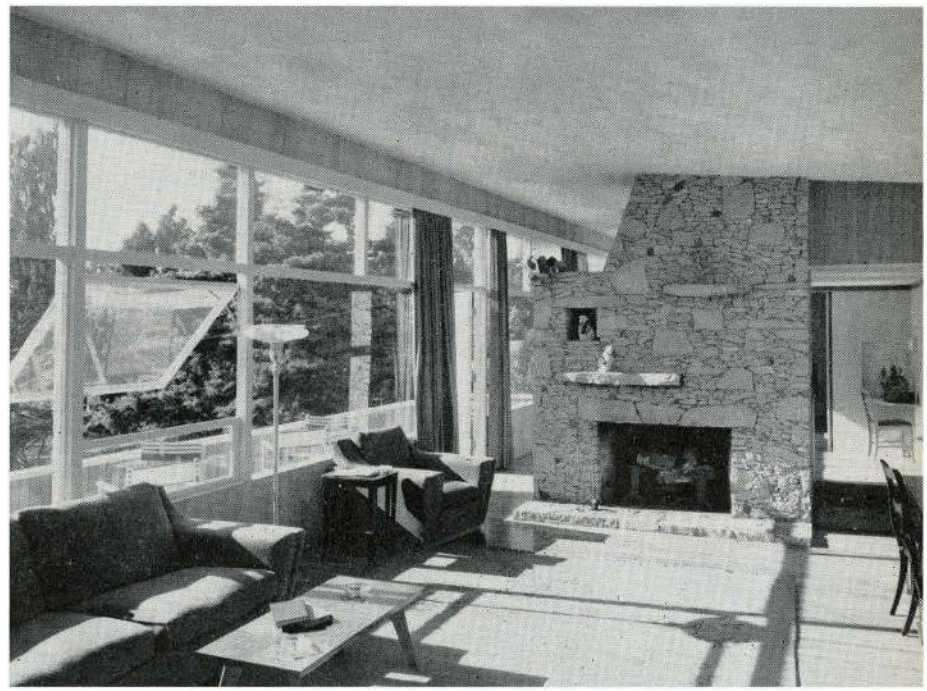
ARCHITECTS: SEMMENS AND SIMPSON

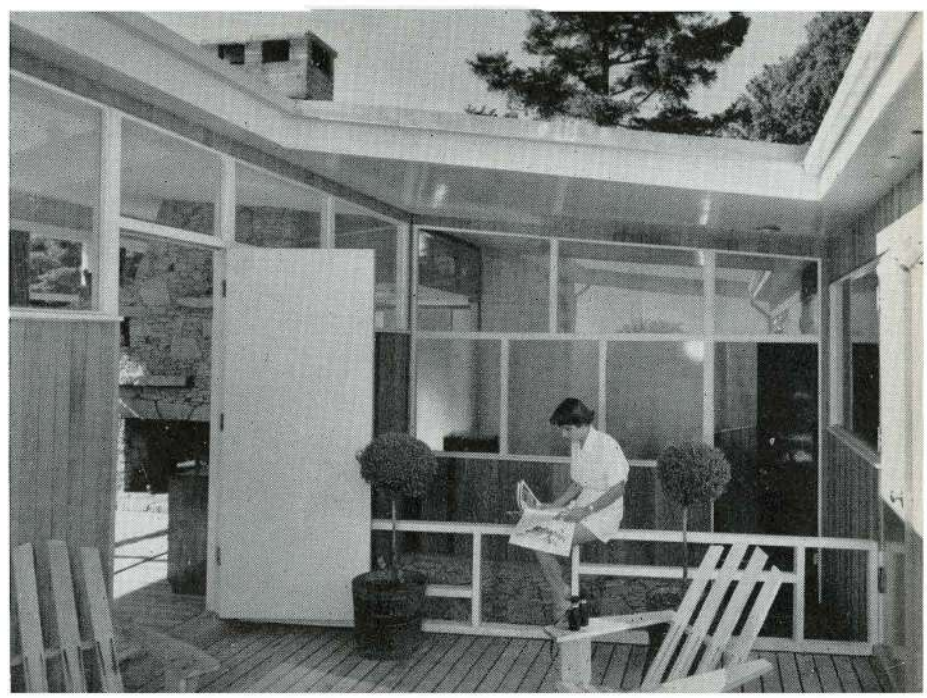
House: W. B. A. Botham

Contractor: Botham Construction Limited

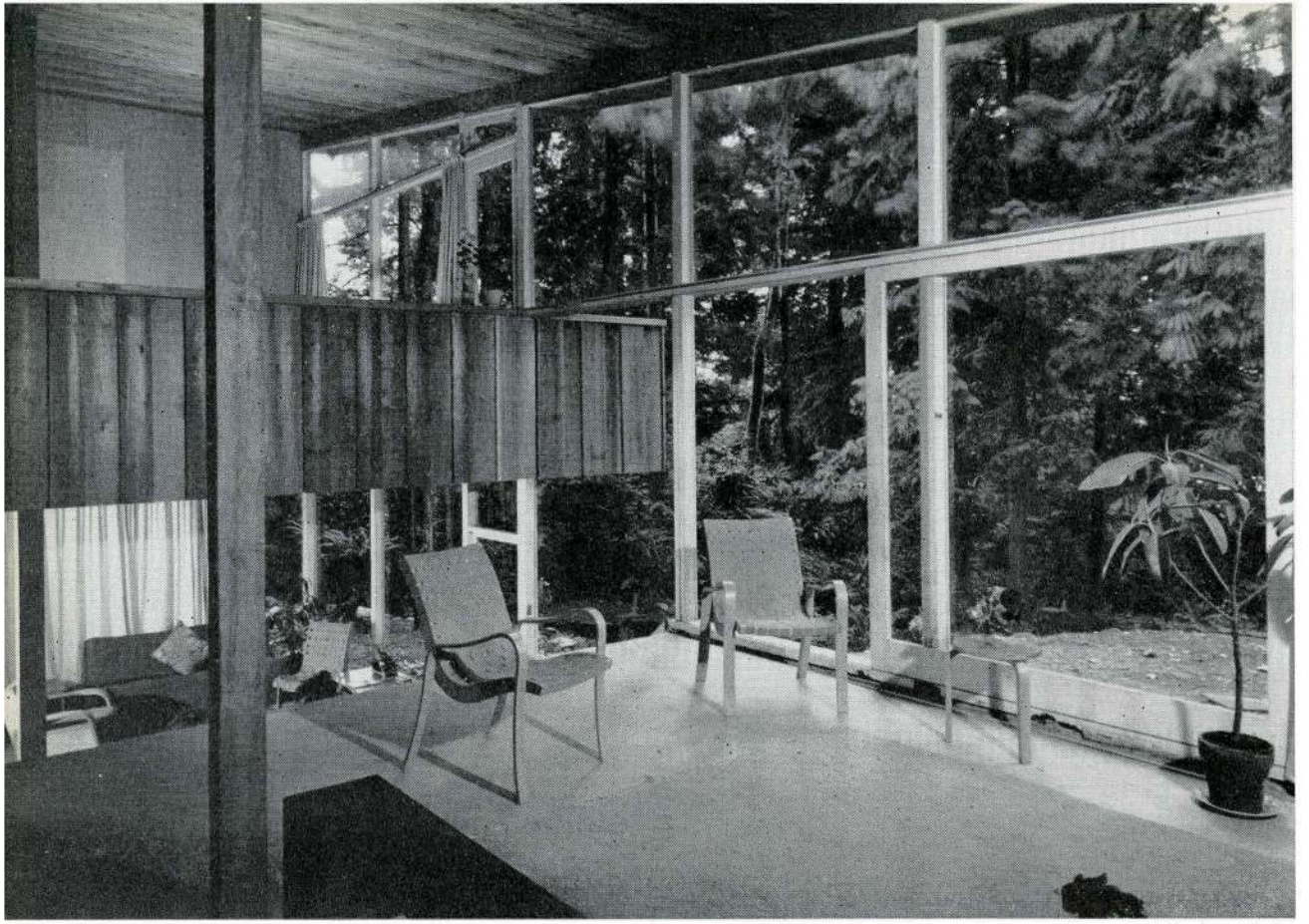
Date Completed: 1950







Photographs by Graham Warrington



Photographs by Tony Archer

ARCHITECT: JOHN C. H. PORTER

House: John C. H. Porter

Location: West Vancouver, B.C.

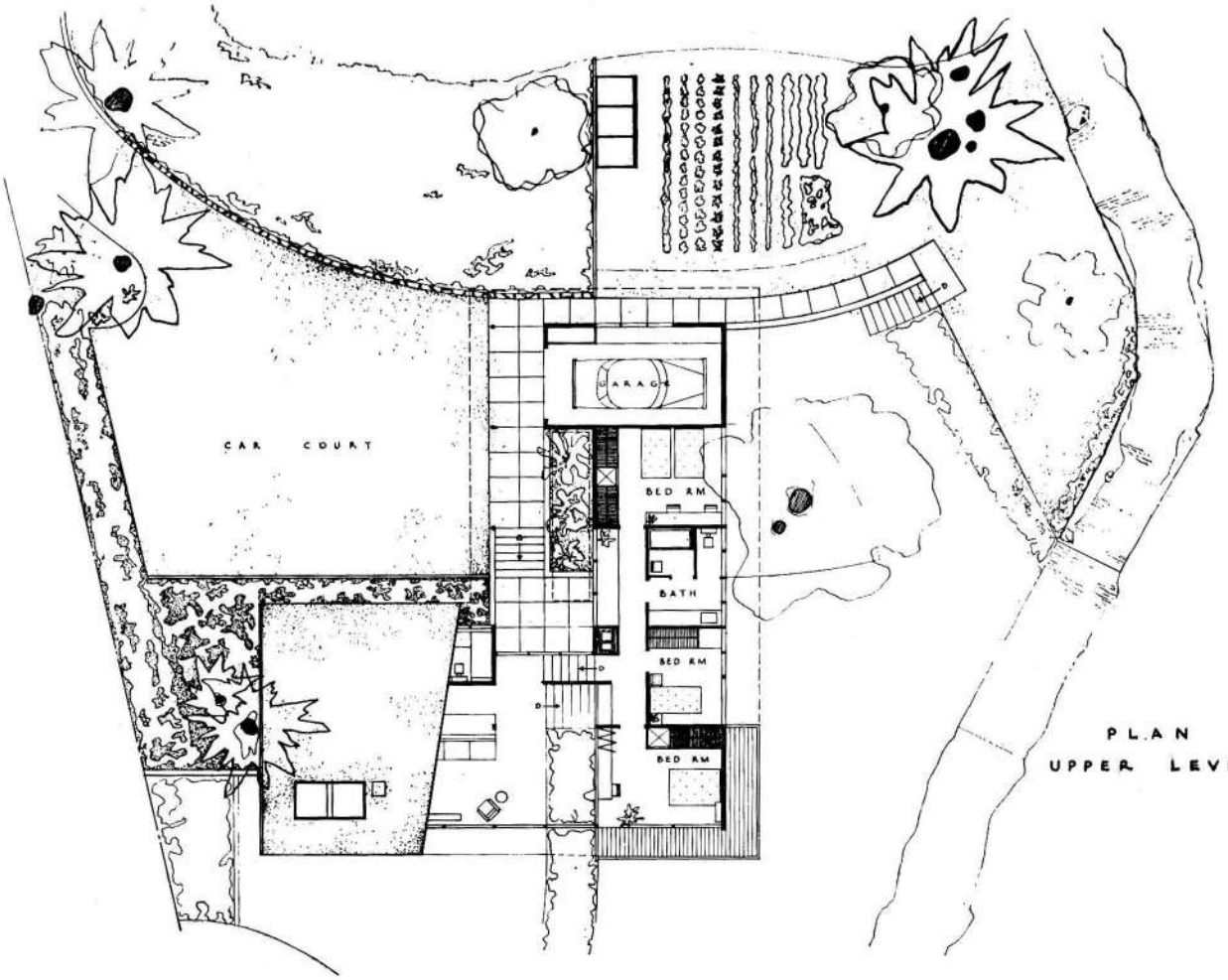
Views: Looking north-west from brook and south-east from upper part of living area

Contractor: Narod Construction Company

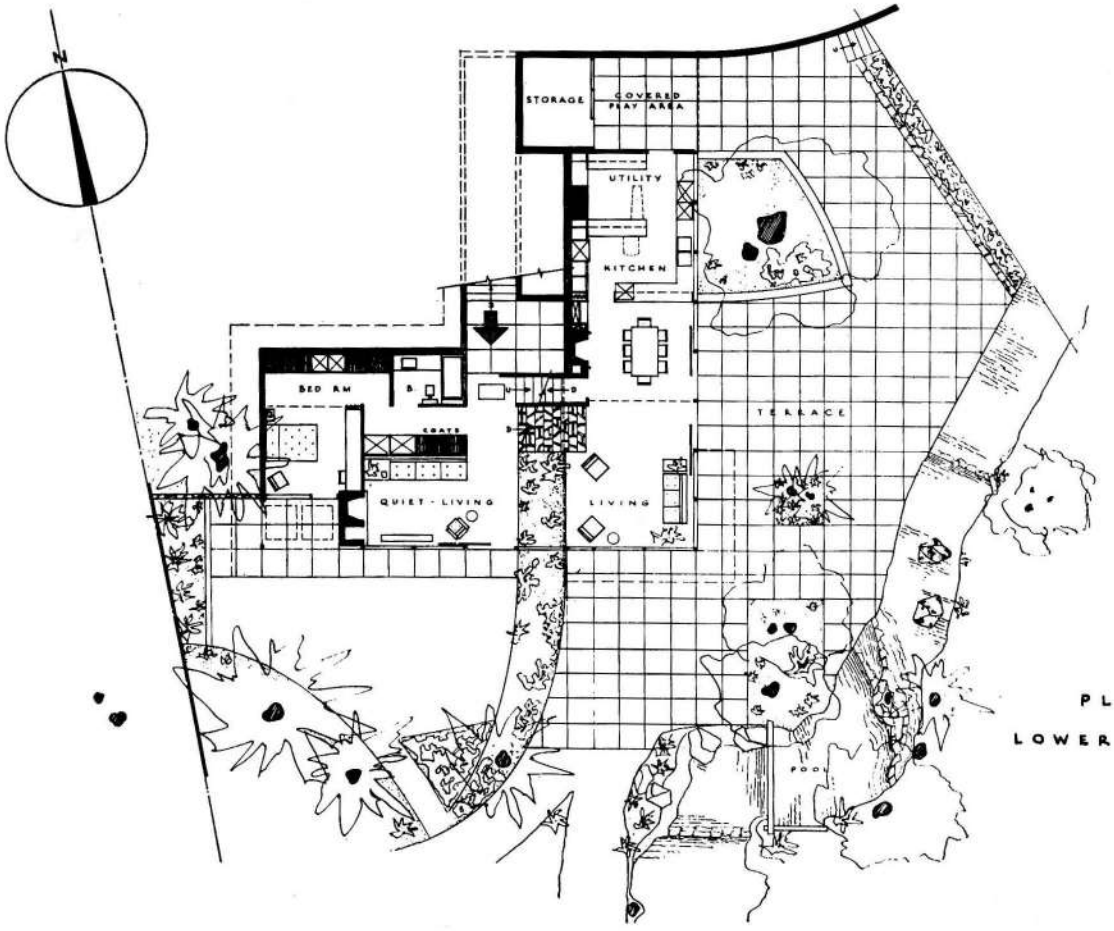
Date of Erection: Winter '48-'49

Structure: Post and beam. Roof of 4" Cedar, T. & G. over 12' span.

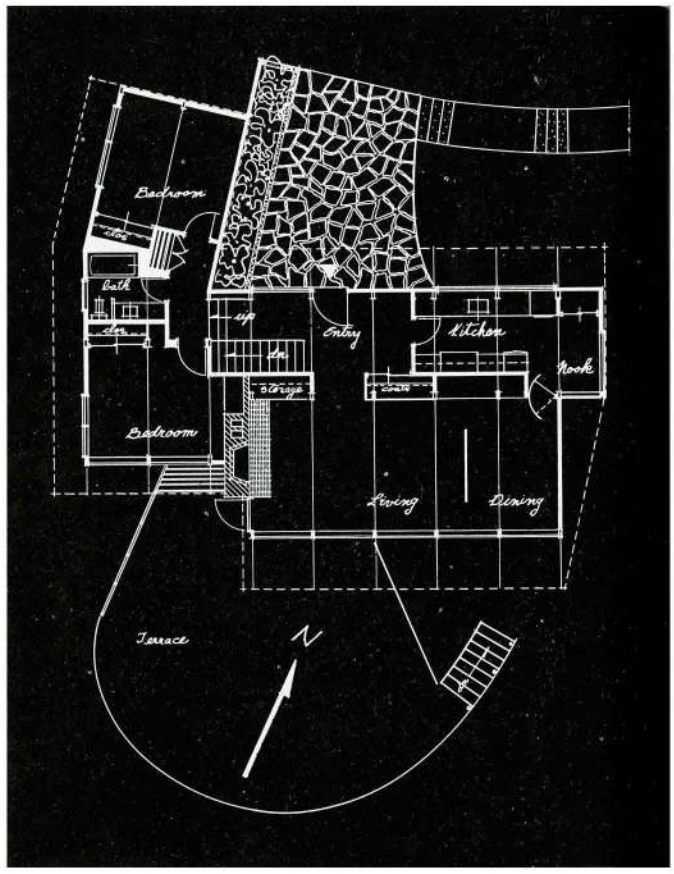
Remarks: Photographs taken before any interior finish or exterior finish grading.



PLAN
UPPER LEVEL



PLAN
LOWER LEVEL



ARCHITECT: ROBERT R. McKEE

House: Arthur W. Way

Location: Foot of Oxley Street, West Vancouver, overlooking the sea

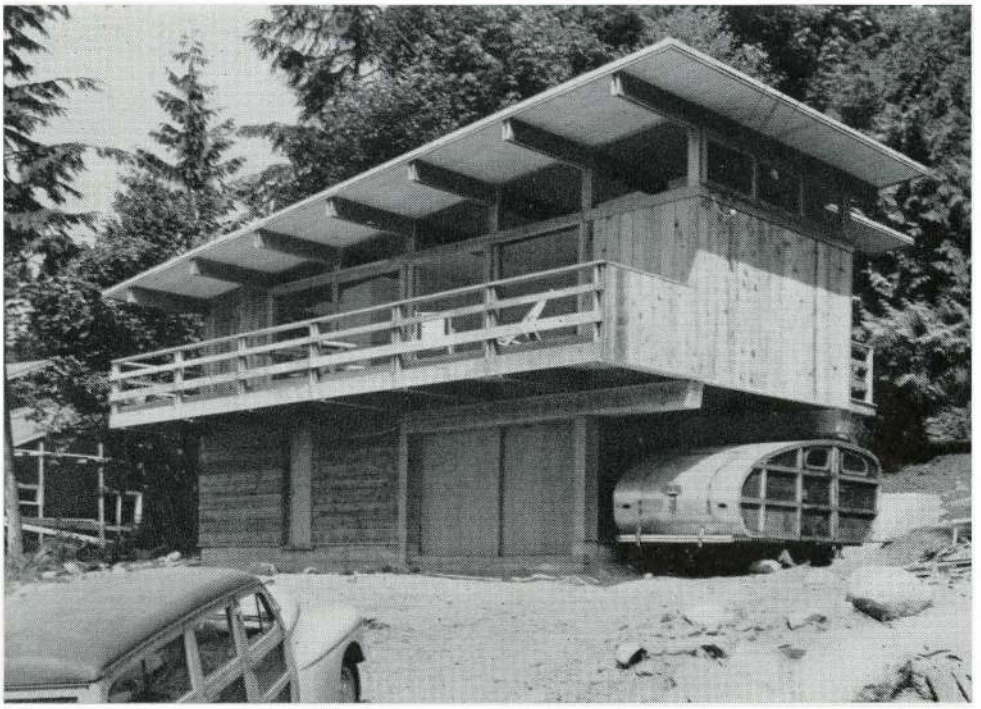
Completed: June, 1950

Contractor: Narod Construction Company

Structure: 6' 0" Module Fir Posts and Beams
3" T. & G. Cedar walls, 2" T. & G.
Cedar floor and roof deck

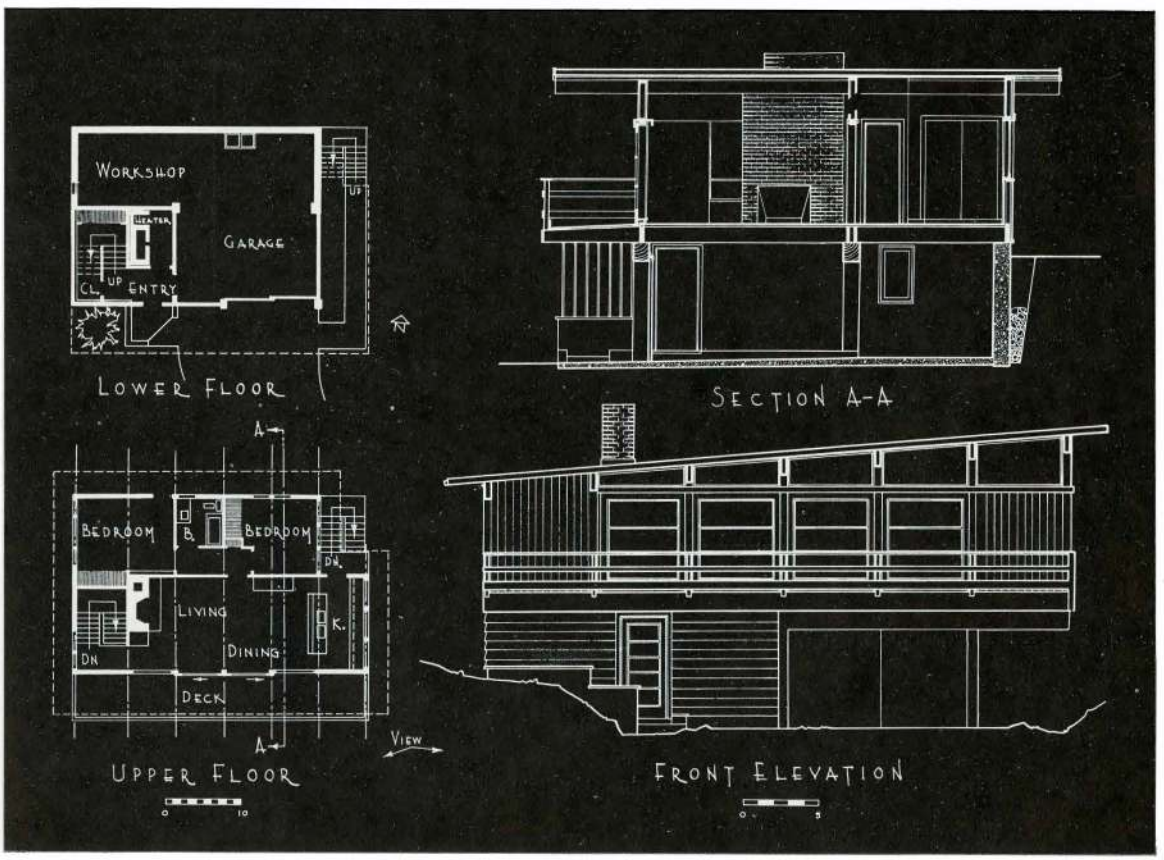
Remarks: Full color Indian "Whale" mural by Architect

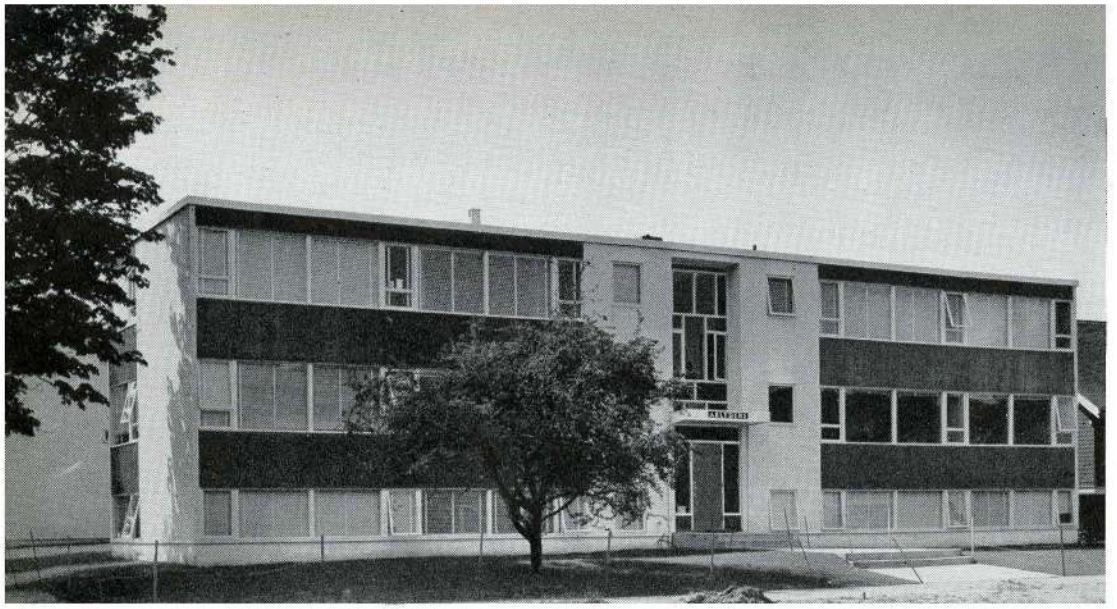
Photographs by Graham Warrington

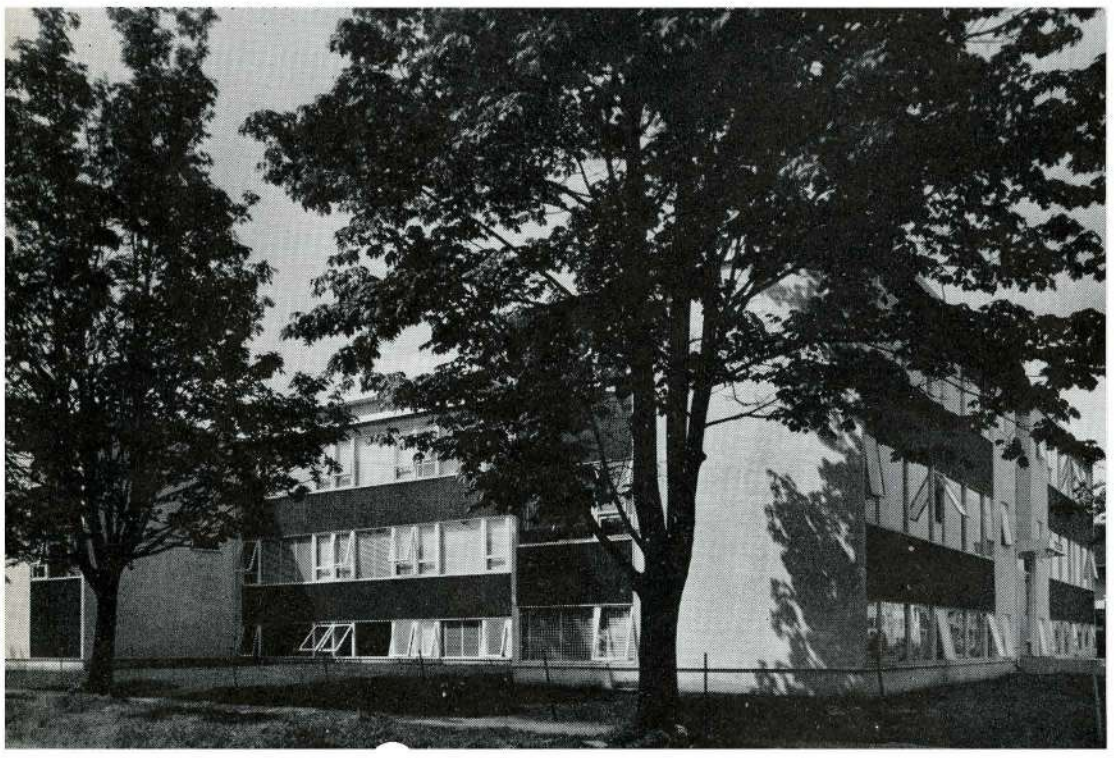


ARCHITECT: F. M. POLSON
House: Mr. and Mrs. Hugh Mabie
Site: 1205 Mathers Avenue
Contractor: Nelson and Minions
Cost: $9,200

Remarks: Built on a site commanding a broad view over Burrard Inlet, Stanley Park, and as far west as Vancouver Island. Construction: Stud walls, fir beams, 2" cedar plank floors and roof and cedar siding. Forced warm air heating. All woodwork left in its natural finish after treatment with a wood preservative.







Photographs by Artray Ltd.

ARCHITECT: SEMMENS AND SIMPSON

Name of Building: Arlydene Apartments

Owner: W. B. A. Botham

Location: Fir and 12th, Vancouver, B.C.

Date of Erection: July, 1950

Contractor: Botham Construction Limited

Construction: Wood frame, radiant heating. Stucco and resin coated plywood.

Remarks: C. M. & H. Corporation guaranteed rental project.

WOOD FRAMING DEVELOPMENTS

KEITH B. DAVISON
M.R.A.I.C.

VANCOUVER, B.C.

6

In view of the prime importance of the lumbering industry in British Columbia, it is natural that greater experimentation has been conducted in the field of wood construction than in any other. This has followed two main trends — the development of post and beam methods of framing and the direct opposite, the use of solid plank bearing construction. Also, of course, there are examples combining versions of both ideas.

The evolution of the post and beam systems has been almost inevitable. Due to the relatively mild climate, large glass areas and considerable indoor-outdoor access have become traditional in the local residential field. Earlier houses consisted of conventional 2″ x 4″ at 16″ stud framing throughout the house, with the living room—dining room wall consisting of 4″ x 4″ posts anywhere from 4′ 0″ to 8′ 0″ on centers, a spandrel beam over to support the floor joists, and the main wall areas composed of full size sheets of plate glass, plus sliding doors opening on to terraces (illustration No. 1).

This form, however, gradually grew from being an incidental wall to the point where it became a structural system. One of the principal investigators of this method has been Ned Pratt, and one of his earliest uses of it was in the Saba House, built in Vancouver in 1947 (illustration No. 2).

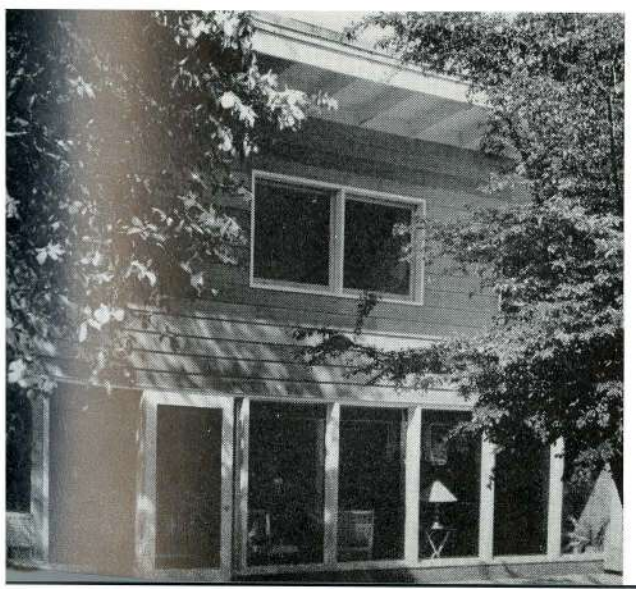
This illustrates an intermediate stage of development, inasmuch as both exterior bearing walls are 3″ x 8″ posts at 5′ 0″ centers, running from foundation to roof, but the floors are standard 16″ on center joist construction. These joists are individually connected with joist hangers to 3 — 2″ x 12″ ribbons partially let into the 3″ x 8″ posts. Interior beams are also set up into the joist space, with the result that the ground floor ceiling runs as a clear plane across the entire width of the house with no projections whatever below it. Walls on the rear are largely glass; on the front, operating sash and horizontal bevelled siding are set in as panels between the 3″ x 8″ posts. End walls are standard stud construction. Interiors are plaster.

More truly post and beam is the Smith House, also by Ned Pratt, and completed this spring. Here the beams are double members, blocked apart, and secured to the posts by metal toothed connectors, as shown in illustration No. 3. In this job, horizontal t. and g. runs past the outside face of the posts, and strapping is applied over it to define the post positions. The end walls are vertical boarding, the upper ends sitting in between the beam members. Both conditions show in illustration No. 4.

Similar to the Smith House is the Craighead House. Its cantilevered balcony is shown in illustration No. 5, while illustration No. 6 shows an interior view which is typical of much of this work.

Floors and roofs in these houses are 2″ t. and g. plank, covered with finish flooring or with ¼″ plywood and composition flooring. In some cases, exterior walls are faced inside with ½″ insulboard and then ¼″ plywood.

1



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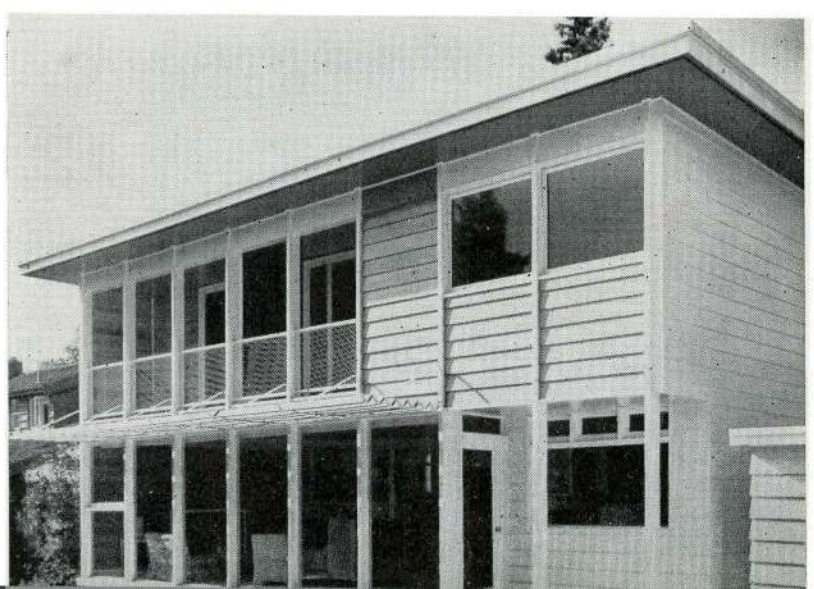

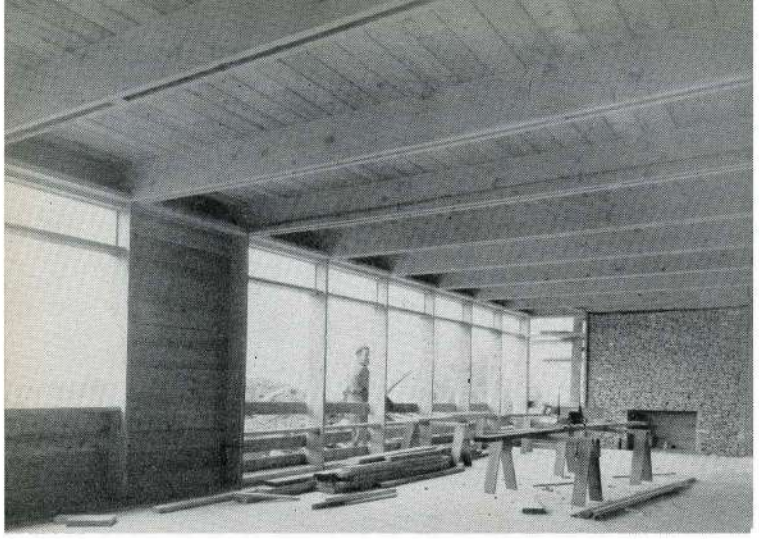

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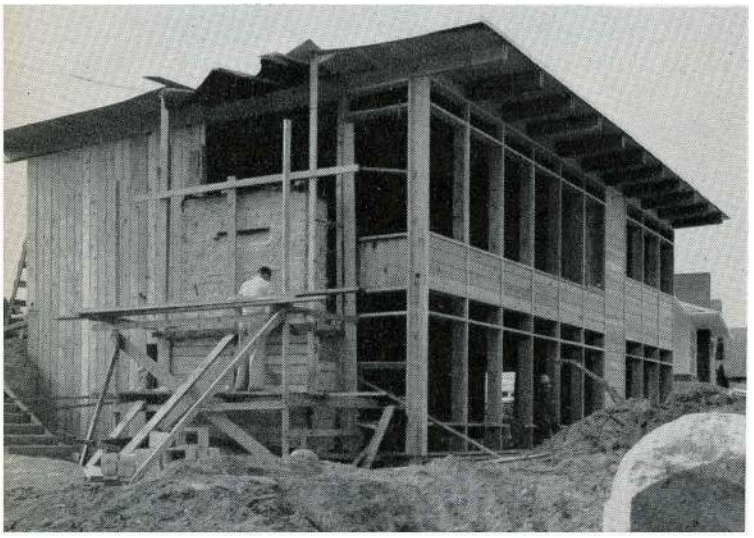

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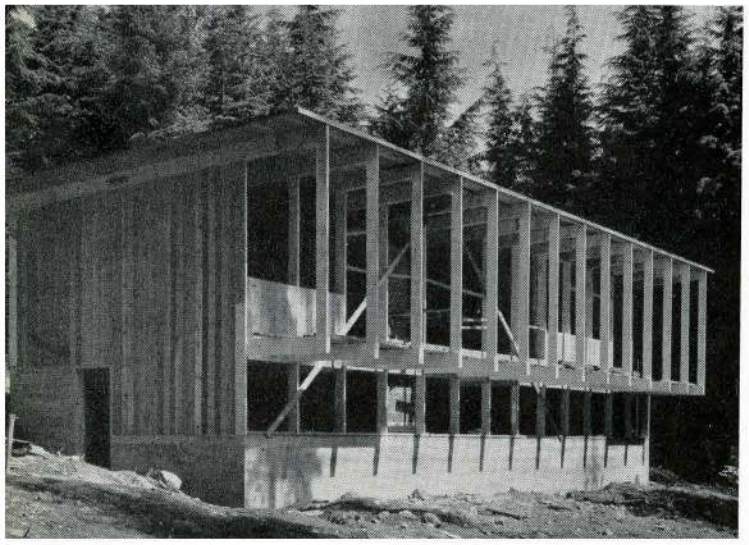

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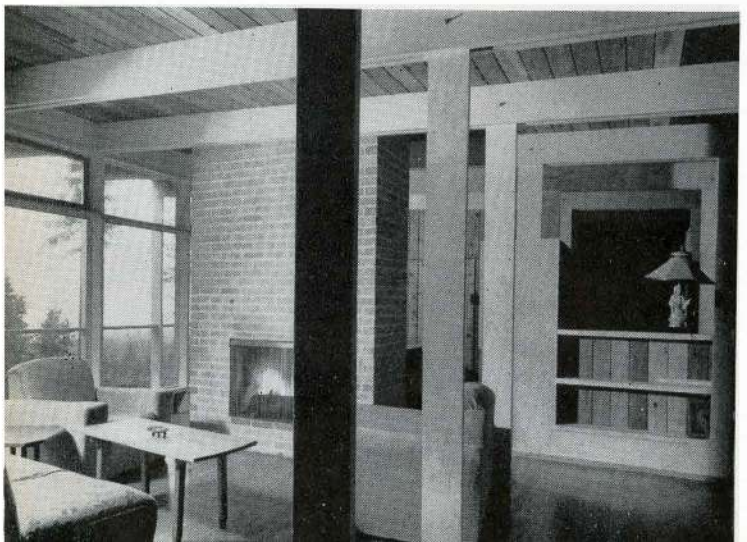

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A more standard version of post and beam construction in residential work is John C. H. Porter's own house in West Vancouver, completed in 1949. Here the posts are 4″ x 6″ on 12′ 0″ centers both ways, the beams are 6″ x 12″, and the roof is 4″ x 8″ t. and g. cedar v-joint planking, the 4″ depth spanning 12′ 0″. Interior finish is all plywood on normal stud walls.

There are numerous other examples of these types of skeleton frame construction, all generally similar to those mentioned. Commonly, the posts and beams are fir, and the floor and roof planking cedar. The posts and beams are generally stained or painted, the cedar left unfinished or sometimes varnished or treated with clear wood preservatives.

The smallness or complete absence of basements is noticeable in urban houses in the province. This leads to a wide use of a 4″ concrete slab, mesh reinforced, on 4″ to 8″ of gravel on grade as a ground floor. This slab is commonly waterproofed with a membrane on the gravel, with a finish floor of asphalt tile, linoleum, rubber sheeting or other composition material. In some cases — the John Porter House for instance — the trowelled slab is used as a finish floor, covered with matting in some portions.

In contrast to the primarily aesthetic pressure behind the evolution of post and beam, the immediate reason for developing the wood bearing wall houses was economic.

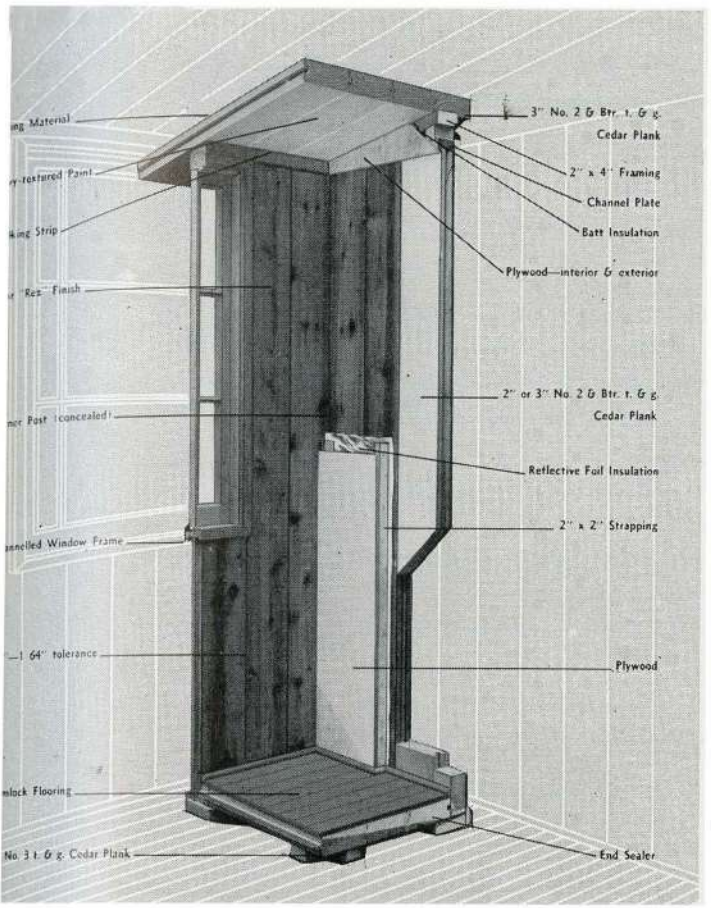
The two examples to be dealt with are demonstration houses of Western Red Cedar, done last year by Semmens and Simpson on the site of one of the Central Mortgage and Housing Corporation projects known as the Fraserview development in South Vancouver. The two houses have the same plan and mechanical plant as the standard two-bedroom house in the project, differing only in the framing method, so the opportunity for direct comparison of costs could hardly be improved upon.

Illustration No. 7 is a cut-away section of House Number Two, with interior finish added, and illustration No. 8 shows typical details for both.

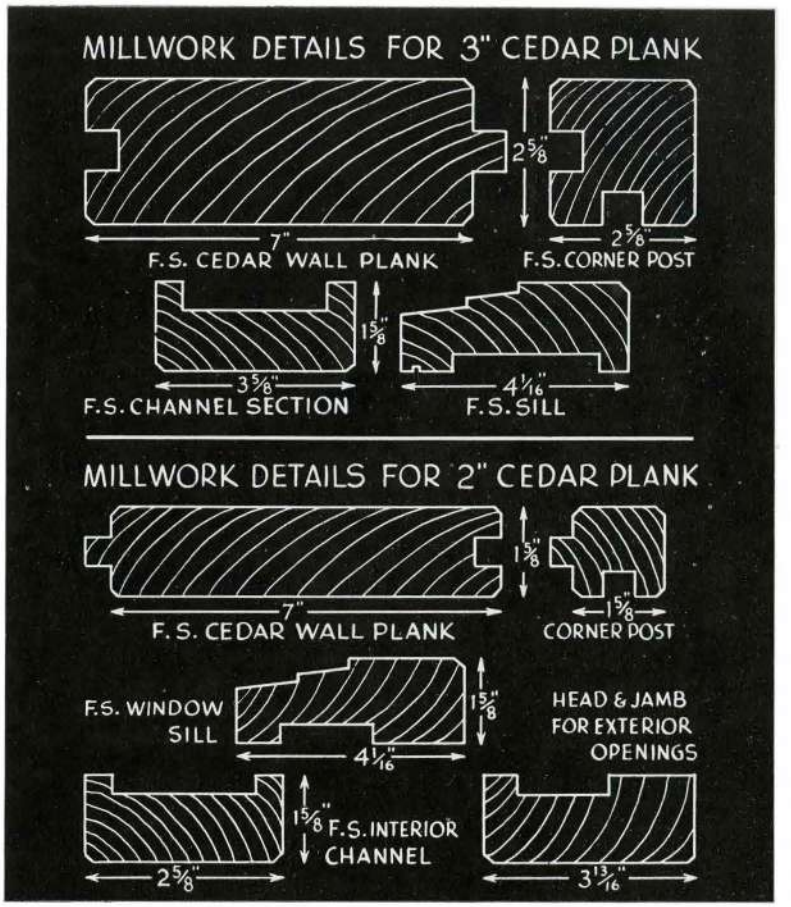
The two demonstration houses differ from one another in their construction. House Number One has a floor of 3″ x 8″ t. and g. plank, the 3″ depth spanning half the width of the house — about 11′ 6″. This plank is supported on concrete foundation walls and internally on a wood beam, the whole floor having a ventilated crawl space under. The plank is surfaced with plywood and asphalt tile.

Exterior walls are 2″ x 8″ plank, t. and g. and v-jointed on the edges, and set up vertically. The bottom ends are nailed into the edge of the floor construction, the top ends fit up into a wood channel, to which they are nailed. The interior face of the planking is covered with aluminium foil, held in place by 2″ x 2″ vertical strapping, to which an interior finish of ¼″ plywood is nailed. (Actually, the 2″ x 2″ strapping is for structural purposes — to stiffen the plank for bearing — but improves the insulation value at the same time). Interior partitions are 2″ x 8″ t. and g. plank vertical.

The roof of House Number One uses standard C.M.H.C. trusses, 16″ on center, spanning the complete width of the house. Pitch is 4½ in 12 allowing 5X cedar shingles to be used. Ceiling is plywood.



Courtesy — B.C. Coast Woods Trade Extension Bureau. 7



Solid Cedar Bearing Wall Houses 8
Courtesy — B.C. Coast Woods Trade Extension Bureau.

House Number Two is all solid construction. The floor is the same as House Number One. Exterior walls are 3" x 8" t. and g. plank, with no other facing inside or out. The roof is 3" x 8" t. and g., the 3" depth spanning from outside walls to a central bearing partition. Roof slope is low, 2 in 12, with 4-ply built-up roofing on top, the underside of the plank exposed as a ceiling. Partitions are as House Number One, except that the bearing partition is 3" plank.

Both houses are characterized by the exceptional quality of their detailing, which in fact marks all the work of this firm. Walls are made up of an exact number of planks, corners are formed by a 2" x 2" or 3" x 3". Windows are framed by the same wood channel previously mentioned, and sash or lights are set with planted stops.

A booklet dealing with these houses, issued by the B.C. Woods Trade Extension Bureau, states that the cost of the standard C.M.H.C. two-bedroom house is $7.15 per sq. ft., whereas House Number One was built at $6.48, a total of $4,900, and House Number Two at $5.96, a total of $4,500. Also, House Number One was done by four men in 16 days, and House Number Two in 12 days.

One problem in all houses of the type dealt with here, where much of the structure is exposed, is the incorporation of service piping. In the Renfrew houses, no ceiling fixtures are used, and for other electrical outlets, conduit is brought up exposed in closets to wall receptacles, opening onto the major rooms. Heating is by a floor-hung oil furnace with single floor register supply, and return ducts run back to the furnace through the crawl space.

In the Maslow House by Ned Pratt (not illustrated) conduit runs in chases cut in the insulboard layer on the walls, and in the built-up beams for overhead fixtures. Warm air heating pipes are all in the basement.

In the John Porter House, the only two-storey one mentioned, the problem is met by furring down the ground floor ceiling in the two-storey portion. Heating ducts running in this space feed up and down to both floors. In the one-storey wing, concrete ducts for both hot and cold air are laid immediately under the floor slab which is on grade.

COMMUNITY AND REGIONAL PLANNING

7

H. PETER OBERLANDER
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VANCOUVER, B.C.

In reviewing briefly the physical planning theme in British Columbia, one is reminded of Patrick Geddes' division of the ground into PLACE, FOLK and WORK. These three aspects seem to characterize some of the recent accomplishments in planning and the increasing need for a more comprehensive approach in this field.

British Columbia is justly famous for its PLACE; its environment ranges from the exuberant luxurious growth of timber along the coast and Vancouver Island to the arid valleys in the interior; from the flat land along the Fraser to the Ranges of the Rockies. It is a region of stark contrasts and much needs positive development and opening up, as well as protection from the misuse and spoliation. Canada's recent flow of population growth is well known and British Columbia's share has resulted in a 50% increase in its population over the past decade. In this process Vancouver as the Province's focus has become Canada's largest urban area.

Planners in British Columbia are increasingly concerned with FOLK; where people live, where they work, where they are able to relax, where their children are being educated and the sick cared for.

WORK in its broad and in its more specific implication exercises a firm influence upon increased urban and rural development; more diversified employment opportunities, employment freer from oscillations of seasonal and economic cycles, where people work by location in relation to where they live, opportunities for economic advancement and security in relation to their skills, and many others are emerging as planning problems.

Two recent developments may be of particular interest:

1. The University of British Columbia recognizing the need for the study of these problems will establish this fall a unit of Community and Regional Planning within the Faculty of Graduate Studies for training of widely needed planning personnel and to provide facilities and background for research into the planning problems of Western Canada. The curriculum and methods of instruction will attempt to train the student with a specific basic qualification in the general social and physical relationships of land use in its urban and regional application. The enthusiasm of several Faculty Members at the University, especially that of the Director of the School of Architecture, were responsible for this important step in the development of Community Planning in British Columbia, together with the very active British Columbia Division of the Community Planning Association of Canada.
2. In a recent amendment to the British Columbia Town Planning Act originally enacted in the 20's the Minister of Municipal Affairs has been empowered to declare a Regional Planning area, defining its limits and instituting a Regional Planning Board. It shall be the Board's duty to prepare a plan for the physical development and improvement of the area in a systematic and orderly manner. The Board is to base its Plan primarily upon public requirements and general welfare through the economic use of land in its broadest sense.

The first group of municipalities to be constituted a Regional Planning Area are those along the Lower Fraser Valley, established as the Lower Mainland Regional Planning Board. This Board consists of one representative from each member municipality and one from the Province; the municipalities have the right to appoint their respective engineer to act as an Advisory Member to the Board. The Lower Mainland Region covers an area of municipalities, three villages and sections of unorganized territory, with a population of well over half a million people. In a physical and graphic sense, it is a readily recognizable region having as its spine the Fraser and being bounded on the north by the coast mountains, on the east by the Cascade Range, on the south by the international border and on the west by the sea. For the initial year of operation, the Board has

received considerable financial aid from the two senior governments on a matching basis, and the member municipalities have undertaken to contribute the remainder of the budget on a simple per capita assessment. The Board has its office in New Westminster, and is devoting its first twelve months to bringing together all available physical, social and economic information on the Lower Mainland in an attempt to describe this area as a cohesive region, and thus formulate the regional planning problems, urban and rural, in their entirety. It is the object of the Board to promote a comprehensive planning-educative program for every member community within the region, to foster a true regional concept of community planning and to demonstrate the close inter-relationship between the individual municipalities and those of the region as a whole. The problems to be solved regionally in this area are extensive and extremely complex, and will require the complete confidence of each member community in the authority and technical ability of the Board as a firm basis of operation. The writer has been appointed as their Consultant.

In large scale housing, two recent examples may be of considerable planning interest and may document an inherent designer's respect for the very thrilling British Columbia landscape. One is in Trail, the important mining and smelting community in the Rockies.

Here in a town of about 10,000 people, almost entirely dependent on employment in the Consolidated Mining and Smelting Corporation, C.M.H.C. was asked to build 175 houses for veterans last year. Trail is situated on both sides of the Columbia River on narrow terraces enclosed by the mountains; despite the obvious lack of good building land a basically suitable site was found; it was outside the city limits and required a special incorporation. It is a flat piece of bench land in a natural alcove formed by the very steep hills and the river. In terms of the existing town it was very choice residential land consisting of two horseshoe form plateaus concentric to each other which suggested two separate areas of housing, both having full advantage of the view up and down the Columbia. The development plan as well as the siting of individual units pays great respect to the contours and site orientation, and demonstrates how the nature of a site should properly influence the over-all design. Through the skilful preservation of the few existing trees and taking full advantage of the dramatic backdrop of the surrounding hills, studded with sage brush, an aesthetic whole was created which will easily retain its natural popularity as a residential development. The houses themselves are of the two and three bedroom design with several different exterior finish materials. Streets carefully parallel the contours and the living areas of houses generally face onto green strips.

Carefully considered space relationships between each unit and the grouping of them into small sub-units within a larger whole overcome the inherent dullness and monotony of the street facade; a pleasant rhythm of open and enclosed spaces is set up throughout the development. This arrangement seems to solve the characteristic weakness of large scale housing cut to one physical and social pattern; usually a solution to this problem has been sought in vain by the deliberate randomization of applied architectural details and materials.

The other project was undertaken during 1949-50 and is known as Fraserview in Vancouver. Here a very commanding site overlooking the Fraser has been brought into full urban use, and an area of sporadic growth has been consistently developed. It is a very extensive project and — once completed — will include a number of community facilities such as shops, a social center, a library, a health center, several churches and schools.

ARCHITECTURAL EDUCATION IN B.C.

8

FRED LASSERRE
B.Arch. (Toronto), M.R.A.I.C.
VANCOUVER, B.C.

"Knowledge will come to life only by individual experience. Therefore, on all levels, designing and building — the drafting board and the job — should be closely related. Field training should not be added on as a separate experience, after an academic training of several years duration has been completed. It should be an integral part of the curriculum."

"The architect is to be a co-ordinator, a man of vision and professional competence, whose task is to unify the many social, technical, economic and formal problems which arise in connection with building.

"The architect has to recognize the impact of industrialization and to explore the new relationships dictated by social and scientific progress.

"In an age of specialization, method is more important than formation. The training of an architect should be concentric rather than sectional. In essence, it should be all-inclusive throughout its duration, gaining in certainty of approach — that is, in clearness of thought and in the know-how of its realization. It should aim at teaching the student that it is through a creative attitude and independence of conception that he will arrive at basic convictions, not by accepting ready made formulas.

"Most essential is the unity of educational purpose. Man is to be the focus; his spiritual and material needs in relation to the life of the community should determine all stages of the student's development."

*Dr. Walter Gropius**

The education of architects in British Columbia at present is almost identical to that in England, where two large separate groups of students apply for membership in the R.I.B.A. The one group receives a University training and the other receives its training in architectural offices, supplemented by courses in night schools, technical schools, etc. It would seem from the above quotations that Dr. Gropius considers both methods of training as having merit.

In British Columbia exists a situation unique in North America, where some 100 students attend university (90 at the University of British Columbia, others at American Universities or University of Manitoba), and as many as 56 students are apprenticed to Architects as Student Associates. Both groups are requested to write examinations set by different examiners, and upon the passing of these examinations the candidates "after due examination" may be accepted as members of the profession. After the passing of the Revised Architects' Act, the student associates will have to meet higher standards of admission, and the University Graduate will have to pass a minimum of two years in the office of a recognized architect before registration.

The present student associate receives most of his training from what he can "pick-up" in the office, from the work upon which he is engaged and from the experienced advice and direction of the architect and seniors under whom he is working. He also is given a reading list by the Examining Board and uses the International Correspondence Course Material as a base for his studies. The Student Associates in Vancouver and Victoria have formed groups for study purposes, design criticisms, and formal night school classes. At the end of three years of Articleship and the presentation of testimony of studies, the student may write his Intermediate Examinations. Upon passing these he is eligible for the Final Examinations.

Recently, Paul Thiry, well known Seattle Architect, was brought to Vancouver by the Architectural Institute of B.C. to speak to the local businessmen at a Chamber of Commerce luncheon. At an informal meeting with a group of members of the Institute, he was questioned as to the relative merits of the two systems of education. He answered by saying that there was no apprenticeship system to-day since no architect could afford to spend the time needed to train an apprentice. The architect's training to-day seemed possible only in a University. This does not entirely agree with what Dr. Gropius states, unless the nature of University training is radically changed.

* "Blueprint for an Architect's Training", by Dr. Walter Gropius in special issue of *L'Architecture d'Aujourd'hui* on Walter Gropius.

The student associates, largely driven into offices for economic reasons, obtain a realistic type of training with direct contact and experience with the materials and techniques of building. This is reflected in the examinations he writes and the standards he is expected to meet. The Examining Board has attempted to meet University standards in the setting of its examinations for student associates. These examinations consist of Design, Construction, Engineering, Electrical and Mechanical Services, History, Specifications and Professional Practice. The papers set in these subjects are equal to those set at University Schools of Architecture and the students have made a remarkably good showing. Their answers and solutions are practical and their drafting is of a high standard. Occasionally, depending upon the student's background and the quality of the offices he has been in, some student with quite outstanding design ability has emerged. It is, nevertheless, the student's practical "know-how" which forms the basis of the examinations.

On the other hand, the University student has a broad training bringing him in touch with many ideas and architectural personalities. During his course, he is required to spend one year on construction work and in an Architect's office. He has a good grounding in Construction and Engineering. Yet he suffers from the lack of integration of these practical studies with actual building and materials in use. He has obtained a much broader knowledge than his fellow-student in an office in such related subjects as economics, physics, sculpture, interior design, town-planning and housing, and basic design. It is here that we see another of Dr. Gropius' requirements being met. In summarizing, we see two types of Architects being trained and this is borne out by the place they eventually seem to take in the Profession.

There is the practical Architect coming out of the offices and taking the senior draftsman position or being in charge of the production of drawings and supervision. He has a keen perception of what human welfare and design mean in terms of materials, construction and costs.

The other Architect has been trained to be creative and to see the potentialities of a particular situation. He is the public relation man, he is the designer or in charge of design, and he takes an important place in public life and is active in a number of related fields such as town planning and housing. He is inventive and not too tied down by practical considerations. He sees what materials and construction mean in terms of design and human welfare.

As one can see, a blending of these two would give you the creative realist and co-ordinator which Dr. Gropius feels an Architect should be. The great majority of the firms which have been established recently have been established by graduates of Schools of Architecture. This is to be expected because of the general background of their training. One is tempted to speculate, however, whether their success would not be greater by forming teams consisting of those coming from both types of training.

Engineers and Contractor-designers have made great incursions into the field of building design — a field which should be completely that of the Architect, whether the building be an industrial one or not. This has been achieved largely on the basis of greater efficiency, practical experience and realism — i.e. upon the intimate knowledge of materials, construction, procedure and costs. They point to the "practical" architect and say "we can do as well". They point to the "arty" architect and say — "Look how he squanders your money and your time". If we believe that Architecture is something more than a minimum efficiency shell, and if we agree that one of our first responsibilties is to render rapid, efficient and competent service to our clients, we should see the value of Dr. Gropius' teaching principles. We should also find here reason for collaboration between architects of different background and between Architects, Engineers, Artists, Efficiency Evaluators and other experts in fields allied to building.

As the load of work on the School of Architecture relaxes it hopes to introduce a greater number of courses and design problems which would be available to the Student Associates. In this way it hopes to bring about a closer collaboration between these two groups. In view of what has been said above, this condition in architectural training in British Columbia should be healthy for the future of the profession.

THE ARTIST AND THE ARCHITECT

9

B. C. BINNING

Member: Canadian Group of Painters, Canadian Graphic Art Society.

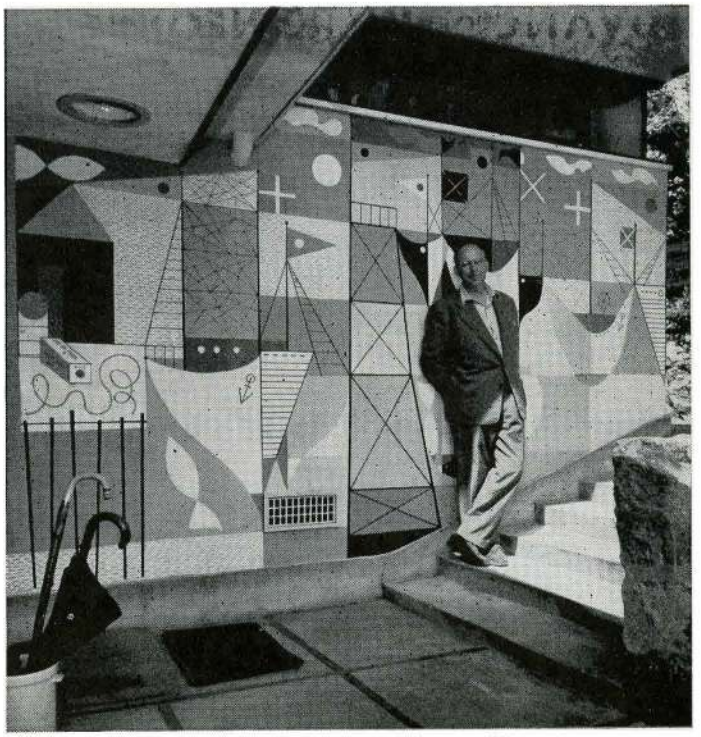
On Faculty: School of Architecture, U.B.C.

This was to have been an account of work by British Columbia Painters and Sculptors as it is related to Architecture. If there is anything to report, it would only be an unenthusiastic list of picture murals on haphazard recesses in office or cafe, decorative motifs scattered about public hallways and corridors, and bits and pieces of sculpture stuck here and there on the face of this or that building. The same old story of unrelated effort between Artist and Architect is as characteristic here as it is all across Canada. In many cases the quality of individual effort is good, but in no case I know of has there been any real integrated relationship between the two arts. In no building does the complete result appear to be a combining of creative forces of both Architect and Artist at conception and carried through organically into a consummate whole. In no case that I can find has that magical happening occurred where the cross-stimulation of the two arts creates a unity of expression and purpose. Again, it is the old story of the applied, the stuck on, the afterthought. In the January 1949 issue of this *Journal,* both Paul Duval writing about murals and Stephen Vickers writing about architectural sculpture pretty well covered some of the shortcomings and stated some of the causes.

I am making it my purpose here to say something about the mutual feeling between Artist and Architect in the past, and what could be done to bring us together again in creative association to-day. In saying this, I do not think a cure-all or an easy way out is possible, but rather that a new approach must be found. And, in so doing, I address myself to those Artists and Architects who consider their art as a creative force, always developing towards new horizons.

When I say a new approach must be found, I am forgetting for the moment that what I have in mind has happened in the past, as for instance in the Gothic era and in the first half of the Renaissance. You, as Architects, and we, as Artists, have looked searchingly back at those better days when both arts seemed to intermingle easily, complementing and contrasting one another in dynamic unity; when sculpture fused with architecture so that no man could say where one left off and the other began; when light coloured by the design of stained glass filled the architectural space to the approval of both Architect and Artist; when painting and decoration seemed the flowing of the building from which it grew; when, indeed, the Artist was very often also the Architect — or if you prefer, the Architect was also the Artist. It does not matter. What does matter is that the creative effort of the one contributed to the creative effort of the other, inspiring an interrelated unity of dynamic force unattainable by either Architect or Artist working independently.

It seems a historical fact that when times are "right", Architects and Artists always flourish together. Somewhere around the middle of the nineteenth century they came together again, but this time both Architect and Artist had reached an impasse, and a few Architects felt they could no longer meet their new and democratic responsibilities by simply repeating themselves. Another revival of the last revival was certainly not the solution; the masquerade was over. There were new jobs to be done, demanding new forms to be expressed in new materials and built with new structural techniques. At the same time the Artist had also reached the bottom of his barrel, and he could no longer stand up to his responsibilities by simply repeating the old formula, by slavishly copying past forms. Like the Architect, he also realized he must find new ways to express the demands of a new social order. The Artist and the Architect stood together, this time at the crossways, both seeking a way out, and both little realizing the change they were to make in their visual world a few years hence. Looking back to that moment it becomes a significant occasion in our recent history of association. We had much in common: we both felt the social and spiritual change of the atmosphere, we both realized we must find new forms to express this change of climate and, what is more important, we set out together to find these new forms with a creative spirit we had not felt for more than three hundred years.



B. C. Binning standing in front of mural painted by him for the entrance way of his own house, West Vancouver, B.C.

Photograph by Graham Warrington

By 1920 a good deal has happened — the new forms were established. But what was most interesting was that, as in the past, the new forms of the Architect and the new forms of the Artist bore a family likeness. The character of the new "cubist" architecture was also the character of the new "cubist" painting. Both had the same transparency, movement and lightness. The simplified classical square rhythm of Mondrian's paintings was also the basis of Le Corbusier's fenestration. Leger loaned his bright basic color palette to the Architects, and the free forms of Arp and Miro were used in both furniture and architectural design. What had happened was obvious — they had worked together, experimented together and borrowed freely from each other. They, Artist and Architect, had found common understanding. The cross-stimulation and the intermingling of creative forces had occurred again; like the art of Gothic times it was hard to say where the Architect left off and the Artist began. The dynamic force of association was greater than independent effort.

As for Canada, generally speaking it is only since the war that Artist and Architect have felt the need for new forms to express the new thought and feeling within our country. Here I would like to say something about our own Artist-Architect relationship. Firstly we should know and understand one another much better than we do and we should also look at each others work more critically. It would be possible then to discover the exciting similarity between our ideals and our problems. This understanding could begin early by bringing together student architects and student painters; even to know one another through discussion groups would be a significant first step. But to work together is most important of all; the Architect would soon feel the intimacy of the Artist's experience affecting his architecture, and he would soon see new architectural possibilities arising from the free way in which the Artist uses form, color and texture. On the other hand, the Artist too would find that his job goes far beyond easel painting and he would learn much from the more exacting discipline of the Architect. And finally, by working closely with the Architect, his murals and sculpture would weave themselves more naturally into the fabric of the building.

I have tried here to show to both Architect and Artist the traditional association we enjoyed in the past and how, by that association, we were capable of greater creative effort than if we worked independently. Finally I suggest that we might follow this traditional pattern of co-operation today. In so doing there is a possibility, at least, that we might create an interrelated art form of real significance to Canadian culture.

ADVANCES IN REINFORCED CONCRETE CONSTRUCTION

10

O. SAFIR

B.Sc. (Aix-la-Chapelle), P.Eng., M.I.Struct.E.

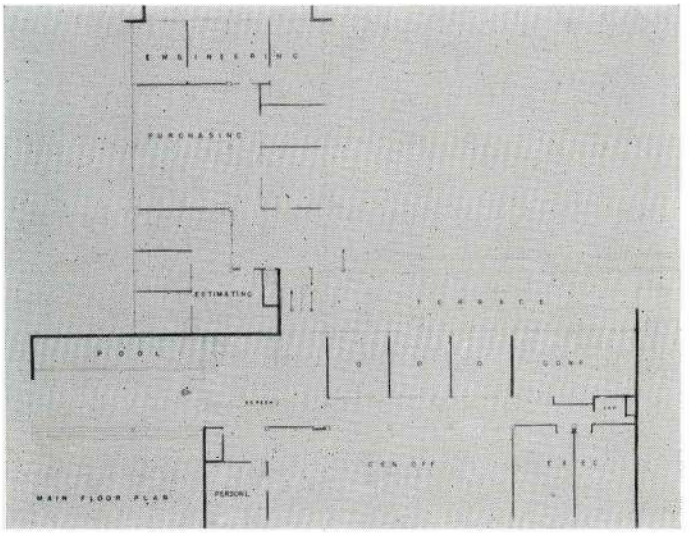
VANCOUVER, B.C.

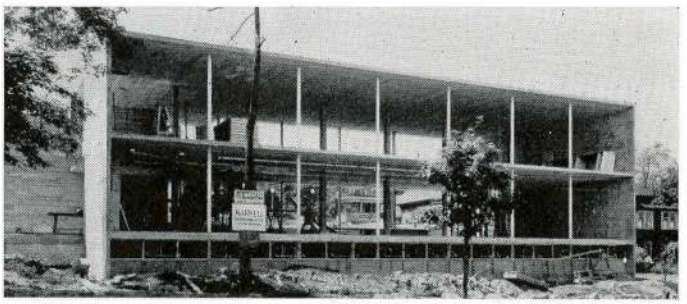
Some of the advances which have been made recently in reinforced concrete design and construction techniques are of interest to architects as novel shapes and new structural systems are the outcome of some of these advances.

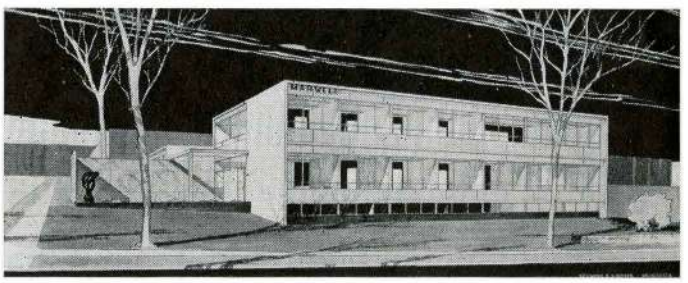
In reinforced concrete structures the cost of the temporary formwork represents a very high proportion of the total cost of the structure, there are probably few cast insitu structures where the cost of the formwork is less than ⅓, and in quite a few cases it may exceed ½ of the total cost of the reinforced concrete work. Economy of the formwork is therefore a factor which the designer should constantly bear in mind. This economy may be achieved by avoiding complicated shapes, in particular beams projecting below the soffit of slabs, small projecting ledges, etc. It is generally easy to form a level slab and straight walls without complicated intersections.

One example of this approach to the problem of formwork is the office building for Marwell Construction Co., Vancouver; Semmens and Simpson, Architects, the structure of which is shown. The floor and roof slabs are constructed without any beams below the slab, there are three rows of beams parallel to the front which are 3″ high upstanding and of considerable width. The resulting depressions between these beams were used to accommodate the conduit raceways and for reasons of insulation were filled with lightweight concrete. The outside columns of this structure are kept completely free from bending moments by being articulated at the top and at the base in each floor. They are constructed as steel tubes filled with concrete, as concrete columns of the possible and architecturally desirable slenderness would not have complied with city by-laws. The lateral forces, wind, acting against the structure are transmitted through the floor and roof slabs as horizontal girders of very great depth to the gable walls as explained in Diagram No. 1. Lateral forces against the gable walls are resisted by a third wall alongside the staircase and at right angles to the gables. These three straight walls are the only reinforced concrete walls in this structure, the front and rear are to be closed in by a curtain window wall in aluminum construction.

Precasting of concrete members either in a central yard or on the site is another method to achieve







Marwell Construction Company Limited

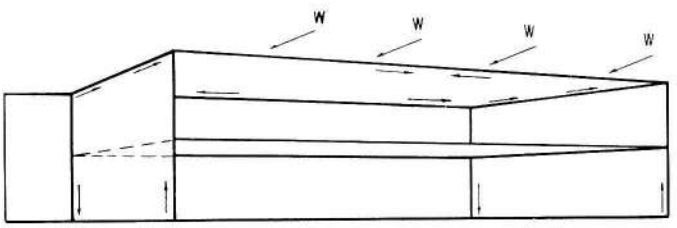


Diagram 1

economy. Precasting allows a great number of uses for the formwork and therefore the cost for one member is small: it also allows for complicated shapes to be introduced as they may be produced easily on the ground. Such free shapes may have the advantage that they can be very well adapted to the particular strength requirements of the structure.

There are obviously limitations of size in the production of precast concrete members, limitations set by the lifting equipment available and by the handling stresses to be expected when raising the precast units into their final position. In order to obtain structures of any size it will therefore generally be necessary to assemble a multiplicity of precast members to form the desired structure. Such joints may be completely dry and can act as hinges in the structural system or rigidity may be given to the structure also on dry joints by two or more connections spaced some distance apart.

The roof beams of the warehouse structure in precast concrete, shown in Diagram No. 2, are essentially continuous beams over two spans of approximately 30′. Any advantage which might have been gained by making the beams continuous over the centre column as well, would have been offset by the long lengths and consequent heavy weights to be handled. Joints were arranged in the outside spans approximately at the point of contraflexure, these joints acting as hinges and making the structure statically determinate. The relative position of the two beams is secured by a vertical bolt. The two shaped columns resist the wind forces against the outside walls. They are connected rigidly to the roof beam by two vertical bolts. All the connections between the columns and foundations are considered as hinges. They are formed by short steel dowels engaging into pockets on the columns which were grouted when erection was complete. Illustration No. 1 shows the precast concrete members, (roof purlins were also precast) on the ground slab of this building in three bay lots maturing prior to erection.

The heaviest precast concrete member weighed just under 5 tons and the erection was handled by a Lodermobile on one job and by a 100′ Boom Crane on the other job. Two such warehouses were built, each 125′ wide and 540′ long. The cost of the

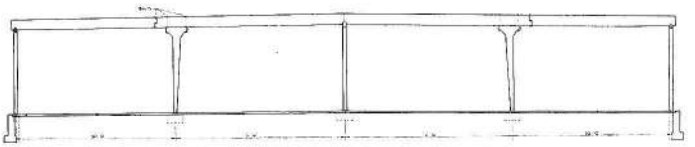


Diagram 2

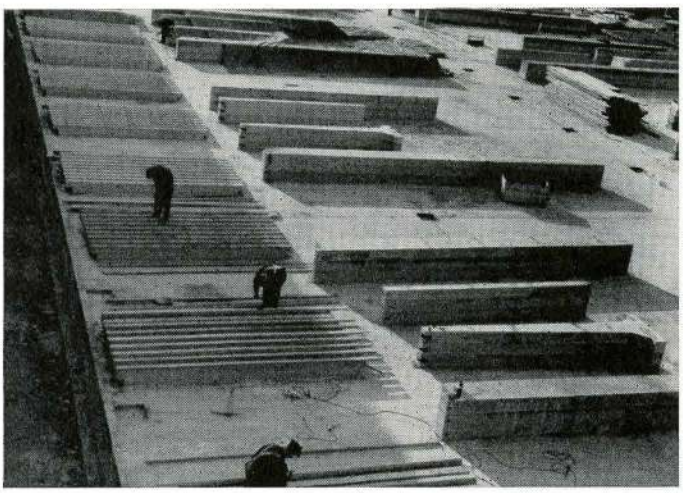


Illustration 1

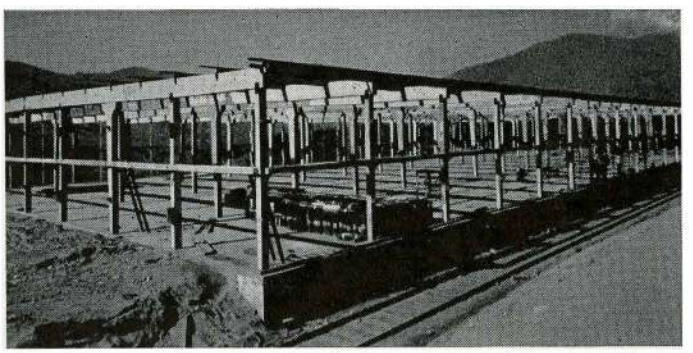


Illustration 2

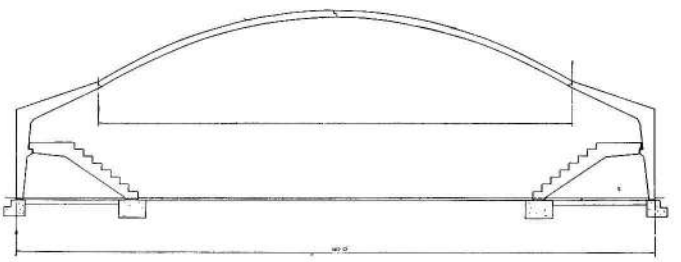


Diagram 3

complete reinforced concrete frame superstructure amounted to 90¢ per sq. ft. Illustration No. 2 shows the completely erected frame for the warehouse at Warfield, B.C.

Diagram No. 3 shows the suggested frame work for an Ice Arena in precast concrete and the application of the aforementioned principle, ie., the assembling of several precast concrete members dry to form a large structural system. In this case the joints are considered and constructed as hinges. There is a central, three-hinged arch of 104′ span finding its abutments on three hinged frames on both sides, formed by the balcony girders and by the "L" shaped cantilever columns. The result is an uninterrupted free span of 140′ but none of the individual members exceed 5 tons in weight, nor do they exceed 55′ in length.

In some cases it was found advantageous to use precast concrete elements to form part of a monolithic reinforced concrete structure such as in the construction of a two-storey garage in Vancouver. The problem here was to allow the use of the lot for parking as much as possible while building operations were going on and to form and cast the structure in situ was therefore out of the question. The precasting of the main and secondary beams was however also fully justified by reasons of economy. The main beams were cast on the ground in lengths of up to 52′ and weighing 11 tons. They carried secondary beams of 26′ lengths weighing about 2½ tons. The 5″ slab was cast in situ the precast beams projecting 2″ into the slab, the formwork assembled in panels was supported on the secondary beams. The dead weight of the structure is carried on the beams as beams of single span and rectangular cross section. For the surcharge, however, these beams act as "T" Beams continuous over several spans. The total width of this building is 132′. Two pairs of two columns each carry the 52′ long main beams which project into the center bay and support, there, the 26′ long main beam. The free spans between the columns are approximately 38′ along the main beams.

(Continued on page 327)

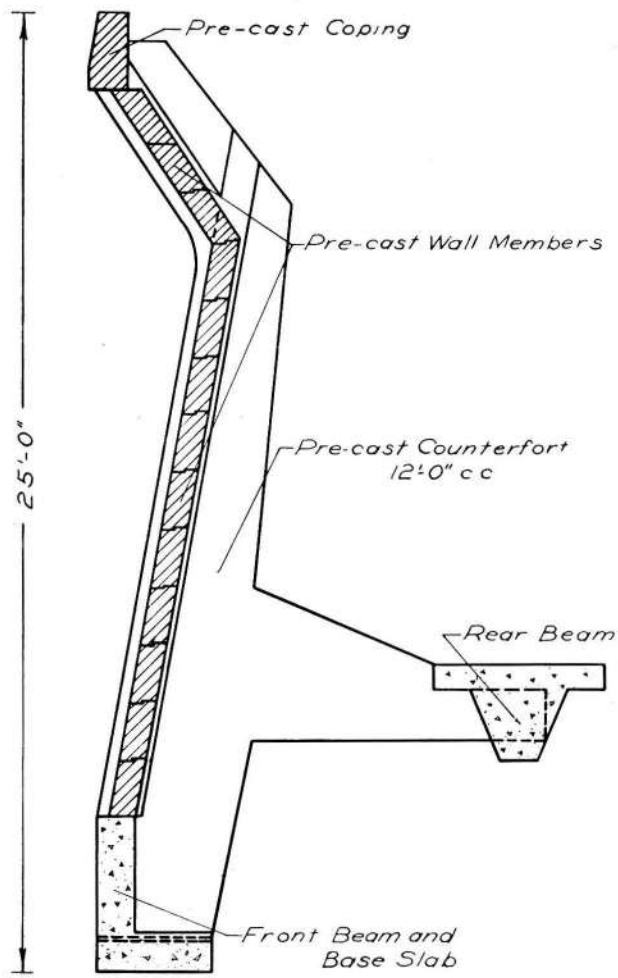


Diagram 4

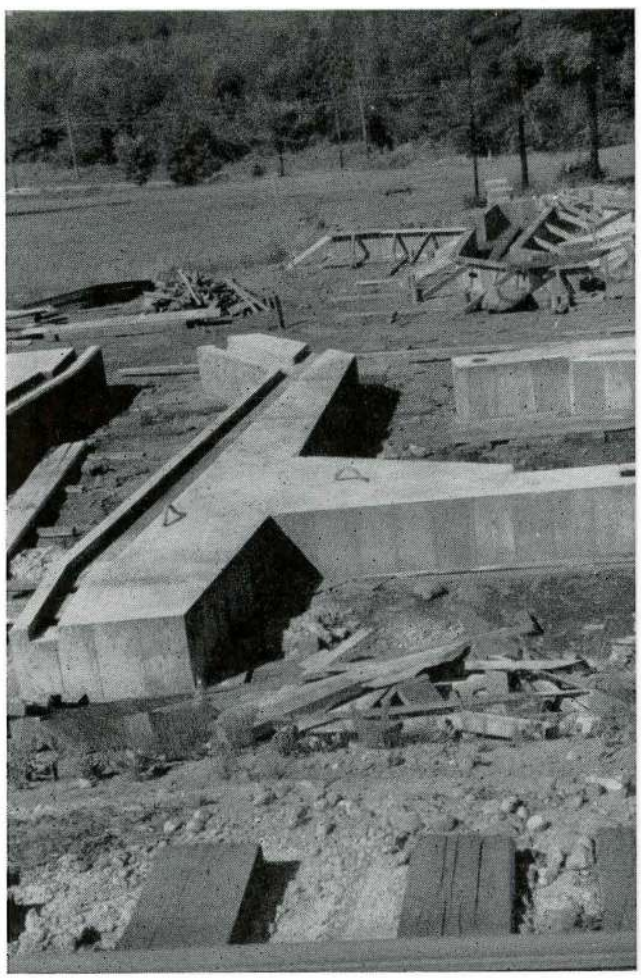


Illustration 3

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NEWS FROM THE INSTITUTE

ALBERTA

In last month's letter some attention was called to the matter of architectural education and more especially to its aspect of technical training. That part of the subject which transcends technical training was not referred to. This is represented, so far as courses in architecture are concerned, by the subject of Historical Architecture. The attitudes of individual students differ very much in regard to this subject according to personal temperament. To some it is merely something to be got rid of as quickly as possible, to others it is a fascinating and abiding joy. Just what purpose does a knowledge of historical architecture serve? The answer may be expressed by saying, of those who are versed in it "an ampler arc their spirit swings, commands a juster view". This may have little appeal to some in a world in which the practising architect is ninety per cent concerned with creating and co-ordinating labour-saving and health-maintaining arrangements about which old historic systems have little to tell us. The design of many buildings requires about the same type of work and kind of ability that goes into, say, the design of a household refrigerator in which a number of services are incorporated with mechanical skill and efficiency and the appearance of which is well calculated to delight the heart of the housewife. This is no mean accomplishment.

It is a sore point in some of our universities that engineering students, on graduation, appear to have derived little cultural benefit from their studies. Something of this lack is supplied for architectural students by their historical courses. These put them in touch with a wider and more varied world of ideas. It is one of the purposes of a university course in architecture to turn out a body of men who can efficiently fulfil the general work of practising architects. It is generally granted that, after their course, they require a period of practical experience in office work. But the examiners in universities, being the same persons who have done the instruction, have also to set some standard of accomplishment — in fact a reasonable pass-mark. If an instructor, having high ideals, turned down all his students it might well be thought either that he was not teaching very well or that he was excessively severe in his marking. In practice the marking is set at such a level as to permit a fair proportion of students to pass, a proportion which may naturally vary from session to session, the group of one year being more, or less brilliant in one year than in another. The whole teaching staff of the department arrive by discussion at what are considered reasonable decisions.

Some correspondents in the R.I.B.A. Journal have pointed out that more and more entrants to the Institute come from the approved teaching institutions and that a rather small proportion of those who simply take the Institute examinations are successful in passing them. The Institute examiners, not being instructors, but simply practising architects who have been placed in the position of examiners, do not approach their task in the same spirit as instructor-examiners. That they may condemn the work of a candidate does not reflect upon their teaching ability since they are not a teaching body, and the idea that they have any duty to pass a certain proportion of applicants weighs very lightly upon them, more especially when they see that the profession is being amply supplied from the various teaching schools. One might ask, how would the graduates of the schools come out in the Institute examinations? It would be a fine point to decide whether it is more creditable to pass these examinations or to graduate from a school of architecture. A survey of the requirements of the Institute examinations will show that they set a fairly formidable task to the candidates. One need have little doubt of the ability of those candidates who pass, but one may have some suspicion that excellent candidates may fail to stand a test which places so great a temporary strain upon all their abilities at once. In practice they might carry this as a dead load but in an examination they have to take it as the shock of a sudden live load. The suddenness of the shock is, however, to some extent, and wisely, relieved first, by the system of intermediate and final examination and, second, by the system of testimonies of studies which the Institute has tended to increase.

Cecil S. Burgess

EVOLUTION OF THE ARCHITECTURAL INSTITUTE OF BRITISH COLUMBIA

(Continued from page 287)

Membership to be confined to the club until incorporation was obtained under the Friendly Societies Act. Ten signatures were on the application of April 1914 and incorporation given June 10th same year. (Note 3). Immediately after application had been made for incorporation the new Institute sought for suitable members outside the club and when by June 25th fourteen had been admitted, making the total 24, application was made for affiliation with the R.A.I.C. (Note 4). Learning of this action by the A.I.B.C. the Victoria Chapter of the B.C.S.A. made an identical application stating that their society had the much larger membership of the two. These competitive applications caused a deadlock, much correspondence and delay, and as a result the R.A.I.C. sent similar letters to each society, 27th April 1915, saying that it could take no action until the two societies adjust their differences.

In the meanwhile the Great War had become all important and questions of architectural affiliations were laid aside. The B.C.S.A. withered, never to recover. The new Institute was being kept alive by two or three members who sent to Victoria the Yearly Return required under the Friendly Societies Act. With the return of world peace all the original members that could be hoped for again joined the Institute, new members were admitted and a request sent to the R.A.I.C. that the application for affiliation, sent June 1914, be again considered.

The minutes of the R.A.I.C. Council meeting held at Toronto — 5th October, 1918 states — "The Architectural Institute of B.C. having conformed to the Charter and By-laws of the Royal Institute was affiliated and Messrs. S. M. Eveleigh and Kennerly

Bryan were elected as members of the Council to represent the Architectural Institute of B.C."

Note 1. — Meeting at Victoria, 29th June, 1891. *John Teague, Victoria; *C. J. Soule, Victoria; *W. Ridgway-Wilson, Victoria; *Edward Mallandaine, Victoria; *S. B. Trimers, Victoria; *A. M. Muir, Victoria; *Thomas Hooper, Victoria; *Edward McCoskrie, Victoria; T. B. Norgate, Victoria; Cole Woodall, Victoria; E. M. Mallandaine Jr., Victoria; J. A. Coryell, Vernon; J. P. Burnyeat, Vernon; *C. O. Wickenden, Vancouver; *W. S. Hoffar, Vancouver; A. E. McCartney, Vancouver; Chas. E. Hope, Vancouver; R. M. Fripp, Vancouver; Wm. Crickmay, Vancouver; C. W. H. Sanson, Vancouver; *R. T. Sharp, New Westminster; C. H. Chow, New Westminster; W. R. King, New Westminster; G. W. Grant, New Westminster; J. H. Honeyman, Nanaimo and R. H. Lee, Kamloops. (*) Denotes present at Victoria meeting. Subject matter approved. The Constitution. 14 sections. Election of Officers. By-laws. 15 articles. An Architects Registration Act. 33 clauses. Fully complete to bring before the Provincial Legislature.

Note 2. — Booklet published at Victoria. 1892. Names of those who intend to establish an institute and who will be first trustees or committee of management: Ed. Mallandaine, Victoria; W. Ridgway Wilson, Victoria; Cornelius J. Soule, Victoria; R. Roskell Bayne, Victoria; Thomas Hooper, Victoria; L. Buttress Trimen, Victoria; Richard P. Sharp, New Westminster; Alan E. McCartney, Vancouver; C. Osborne Wickenden, Vancouver and John Teague, Vancouver.

Note 3. — Signatories of applicants for Declaration to incorporate under Friendly Societies of B.C. dated April, 1914: R. Mackay Fripp, James W. Keagey, Robert P. S. Twizell, Samuel S. Birds, William C. F. Gillam, Gordon B. Kaufmann, Arthur J. Bird, Kennerley Bryan, C. Charles Day and J. J. Honeyman. Since the year 1934 only one of the original founders of the A.I.B.C. has continued on the list of members to the present day.

Note 4. — List of A.I.B.C. members given to R.A.I.C. in application to that body for affiliation. June 25, 1914: R. M. Fripp, S. B. Birds, Geo. S. Twizell, G. P. Bowie, C. C. Fox, W. E. T. Stewart, J. J. Honeyman, A. J. Bird, Gordon B. Kaufmann, S. Mason, Douglas Jamieson, W. T. Dalton, R. P. S. Twizell, C. D. James, W. C. F. Gillam, Kennerley Bryan, S. M. Eveleigh, Fred L. Townley, J. W. Keagey, A. T. Dalton, M. Downing, George Mackay Fripp, Gordon L. Wright and J. C. Day.

Notes Nos. 1 and 2 are extracts from original copies of the booklets published in Victoria, years 1891 and 1892.

Notes Nos. 3 and 4 kindly supplied by the R.A.I.C. from their filed records of the period.

ADVANCES IN REINFORCED CONCRETE CONSTRUCTION

(Continued from page 324)

An example for the use of apparently complicated shapes produced economically by precasting is given by the retaining wall at present under construction, shown on Diagram No. 4. The counterforts spaced 12′ apart are precast on the ground in a horizontal position, (see illustration No. 3), and they support in their grooves the precast wall planks. The front and rear foundation beams of the wall are cast in situ, largely after erection of the precast work. The precast wall planks are raised by means of a vacuum mat.

It seems certain that precasting techniques will open up quite new fields for reinforced concrete construction. One basic requirement for its success is detailed planning of every operation and design of formwork in the office and strict supervision and quality control of the concrete on the site. There is no reason why 28 day strengths of concrete should not exceed 5,000 lb. per sq. inch regularly. This means placing of fairly dry concrete and on the works illustrated above great attention was paid to this aspect and to the training of the workmen in placing such concrete.

Experiments with prestressed concrete are underway and undoubtedly this method will further widen the field for precast concrete. In British Columbia in particular, the cost of reinforcing steel is very high, almost twice the price of steel in Eastern Canada, and the very great saving in weight of steel brought about by prestressed concrete should make this method very useful.

ACKNOWLEDGMENTS

On another page Mr. Lasserre acknowledges our indebtedness to Mr. **Ralph Cole** for the trouble that he has taken in the organizing of this issue. The Editorial Board adds its thanks to Mr. Cole, Mr. Lasserre, and their colleagues, for the time and skill they have put into the work shown on these pages. At the same time, the Board takes the opportunity of congratulating British Columbia on the excellence of the work shown.

Editor

THE COVER

The cover by Mr. **B. C. Binning** is from a drawing entitled "The Fisherman's Cove". The original is in ink — 18″ x 24″.

INSTITUTE CHRISTMAS CARDS

Members are advised that a Christmas Greeting card, bearing the crest of the R.A.I.C., and similar to that received by each member last year from the President and Council of the Institute, will be available for purchase and distribution by individual members upon request through the Secretary's office. Further details will be supplied by circular letter, upon receipt of which, all members desiring cards for their own use this year are requested to place their orders promptly.

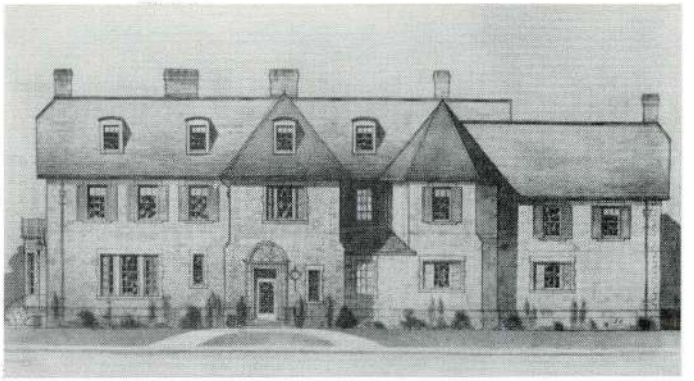
It is planned to place a bulk order with the printer, and then distribute to individual members who may arrange for subsequent imprinting of own or firm name, if desired.

PUBLICATIONS OF DIVISION OF BUILDING RESEARCH, NATIONAL RESEARCH COUNCIL

The Secretary of the Institute has been advised that certain publications prepared by the Building Research Division of the National Research Council are now available for distribution to those members of the R.A.I.C. who may be interested. Any member who would like to procure a list of these publications and have his name placed on the regular mailing list of the Building Research Division of the National Research Council, is requested to complete and return a mailing card prepared for this purpose by the Building Research Division. The card is being distributed to R.A.I.C. members through the Secretary's office.

Gifts in the Year of Grace - 1950

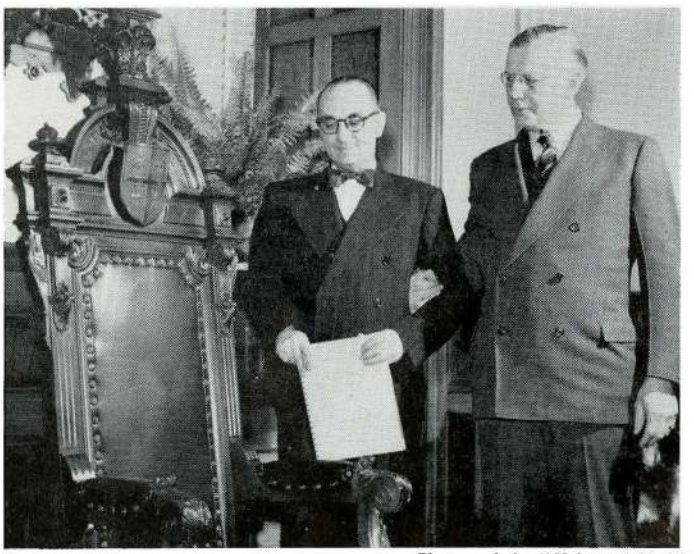
"Up drawbridge, grooms—what, warden, ho!
Let the portcullis fall."



Photograph by Canadian Press

The Prime Ministers of Canada are provided with a house by the Canadian people.

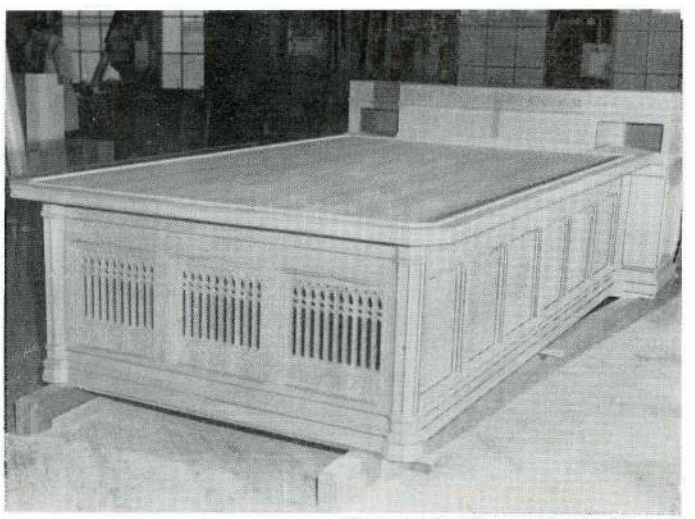
"Of comfort no man speak:
Let's talk of graves, of worms and epitaphs;
- - - - -
For God's sake, let us sit upon the ground
And tell sad stories of the death of Kings."



Photograph by "Globe and Mail"

The people of Ontario present the Government of Newfoundland with a Speaker's chair.

"Every part about you blasted with antiquity."



Photograph by Kitchener-Waterloo "Record"

The people of Canada present the people of Britain with a Speaker's table for the House of Commons.