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R . A . I . C  
JOURNAL  
AUGUST 1944

**M**OST people in Canada are convinced to-day of the need for replanning our Canadian towns and cities, but there are few who see any reason for governments (on any level) taking an interest in the planning of summer colonies. To our mind a ministry of planning might seek a solution to that problem as a minor, but vitally important element, in post-war reconstruction. We have often wondered why the lakes of Austria and Italy are so unspoiled by man, and why our Canadian Lakes, at any rate, where they are used by lower and middle income classes, are frequently tawdry, if not foul. We suppose the answer is two fold—that the European Lakes are looked upon as national possessions, and the people who live on them are rich. The problem of the lake in a democracy has received no township, county, provincial or federal study. Your rich man on Lake Como may employ a good architect, and his house, with its terraces and boat houses, are all the finest native materials. In the best examples, the house is part of the landscape and its reflexion in the water adds to the general virgin beauty of the scene.

**O**UR lakes are as beautiful as any in the old world, but unless some control is exercised, many of them will be fringed with slum colonies on the greater part of their perimeter. We are not concerned here with the well-to-do, who can buy enough frontage to enable them to live in greater freedom than they could in the city. We look for a better deal for the low wage earner who buys a miserable lot from a farmer or real estate butcher, and finds himself check by jowl, toilet to toilet and pump to pump with a neighbour in surroundings that are worse than would be tolerated in urban areas in any self respecting city. We can remember some years ago when, on a university salary, we rented such houses at the seemingly modest price of \$150 to \$200 for the season. The house was a slum, airless except for the verandah; the toilet was invariably foul, and in one instance was placed on a sand dune above the well and pump. We had the water tested, and theoretically we should have died from at least six horrible diseases. To add to our miseries, a dance hall in the vicinity made the night hideous. It must be remembered, too, that most parents take a cottage in the early years of married life primarily for their children. Our own are still alive because, like the arsenic eater who builds up an immunity to the poison by continued nibbling at his drug, they have built up a resistance by actual exposure to disease. We hazard the guess that, when the cause of infantile paralysis is discovered, it will be traced directly to the slum summer cottage. Now that for the first time we have government planning agencies, we see the clearest possible reasons for planning legislation and technical aid in water front subdivisions in the interests of the health of the nation, and the preservation of a national heritage that is wantonly being destroyed for commercial purposes.

# SANATORIA—THEIR BUILDINGS AND EQUIPMENT

By WILLIAM R. SOUTER

The modern sanatorium is a specialized hospital, built for one specific purpose, the treatment and cure of tuberculosis. An off-shoot of a sanatorium, is the preventorium, a building provided to restore to perfect health, children of tubercular parents or those exposed to this disease, but it is a special department of sanatoria and as such has no rightful place in this paper.

The component parts of a hospital for tubercular patients fall naturally into the following divisions: Administration, admittance and observation, treatment, food preparation, and the housing of the hospital staff.

The administrative offices of a sanatorium are similar to those of any modern hospital and need no elaboration here.

The admitting department should be a well equipped tuberculosis clinic in itself, and should contain examination rooms, record room and observation ward or rooms. It should be connected to or at least adjacent to the X-ray and Fluoroscopic Department. It should also be available for the examination of outdoor patients and should be organized as an independent unit within the sanatorium. It is this department which must organize and man the travelling clinics which visit periodically, centres in the surrounding district.

A central dispensary, preferably in this division, and properly laid out, is required, so that prescriptions can be readily compounded and dispensed, but with all drugs and materials accessible only to the dispensing chemist.

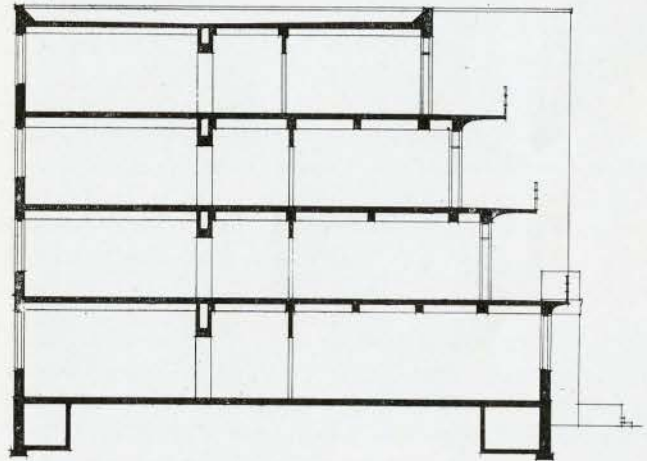
Under the heading of Treatment can be classed the great bulk of the Sanatorium and basically means the wards for the patients and all treatment rooms. Authorities differ on the number of patients in each ward, but the Hamilton Health Association has a few six-bed wards, twice as many four-bed wards and some single or private rooms, in all of their newest buildings. A great majority of patients prefer company in their stay at a sanatorium, rather than a single room, for they are under treatment for months and not days, as is the case in a general hospital.

Single rooms are necessary for several reasons. Some patients insist on privacy though the majority of patients do not seem to progress as well in single rooms as do patients in small groups. Single rooms are needed, too, for those patients who develop a haemorrhage, or are otherwise critically ill, and for those who are in such an advanced stage of disease that they would be detrimental to the treatment of others. Single rooms are also an advantage in the case of surgical cases whose operations have been of a major nature.

Adjacent to the wards must be locker rooms for patients' clothes, and toilet facilities, and of course, all the necessary

working rooms for the staff, bed pan rooms, store rooms, linen rooms and so forth.

It is a much debated question as to the benefits derived from open air balconies off all wards, where patients can be wheeled out in their beds, during good weather, but the Hamilton Health Association has found that the change from the four walls of the ward is highly beneficial and well liked by the patients. Direct sunlight is beneficial to the treatment of bone tuberculosis, but is not recommended in the treatment of pulmonary tuberculosis.



CROSS SECTION

There is some thought being given to skyscraper sanatoria, but more than four stories would involve multiplying the number of elevators and would make impossible the use of step-back buildings, which allows so much more light and sun upon the balconies and into the wards. The proper orientation of the buildings should be considered and given much study, for the patients must be protected from the prevailing winds, but should obtain the maximum of sunlight.

The layout of any sanatorium floor should be very carefully studied, as a floor becomes the unit of administration and is thus the chief factor in the efficiency and economy of operation. Thus a floor should contain the optimum number of beds for administration by a nursing unit, consisting of a supervising nurse and her staff. Thus, after much experience with both small and large units, it is the opinion of the Hamilton Health Association that the best size is a floor of about fifty-five beds. In such a unit it is planned that the supervising nurse, when at her station, should be in constant touch by means of visual and audible signals with the patients. Preferably, the nurse's station will be about the centre of the corridor and should provide desk room, chart racks, a small dispensary and linen room, with

facilities for locking same, and toilet and wash basin accommodation for nurses. An orderly room adjacent to the nurse's station should be incorporated in the layout.

Adjoining the nurses' section and centrally located, should be the diet kitchen for the floor and in the latest building each diet kitchen is provided with a small-sized mechanical dish washer in preference to conveying dishes to a central dish washing unit. Ample space for refrigerator and for storage of dishes, glassware, trays, etc., are necessary in this room. Also, in this latest plan, while trays are set up on portable racks in the diet kitchen, the actual serving of food is carried out from heated food wagons in the main hall, which, for this purpose, must be extra wide. This has proved to be a most successful measure in having food reach the patients in a properly heated condition.

With a floor of this size, patients' locker or clothing rooms and toilet rooms should be divided, one unit being at either end of the hall, so that there is no great distance from any of the wards to these rooms.

In the treatment of tuberculosis the fundamental principle is the application of rest to the diseased part. At first this was applied chiefly through rest in bed, but in the gradual advance in treatment, surgery is gradually assuming an increasingly important rôle, both to immobilize the lung or other diseased area and to compress the cavity which is the chief source of the tubercle bacillus.

For this purpose pneumothorax is still the most common procedure used, but where this fails other procedures, such as the use of temporary paralysis of the phrenic nerve and finally the much more serious operation of removal of ribs or thoracoplasty, for the purpose of closing cavities, is frequently employed.

Similarly, various methods to assist in the splinting and fixation of bones or for the treatment of other types of tuberculosis are necessary. All this necessitates up-to-the-minute operating rooms, preferably air-conditioned, with sterilizing rooms and equipment. There should be at least two operating rooms, one large and one somewhat smaller, and, if possible, also a plaster room for the preparation of casts. If the sanatorium is connected to a medical school in any manner, the large operating room, at least, should be provided with amphitheatre seats for students.

Modern surgery requires the use of X-ray photographs and fluoroscopic examination and so a sanatorium should have a well-equipped X-ray department housing various X-ray equipment, including a Tomograph or Planograph table, and should have also prone and vertical fluoroscopic screens.

This department should include a dark room, storage room, a large filing room for the examination of films, and a record room, for the dictation and recording of reports.

This department, as mentioned before, functions with the admitting department.

A sanatorium should have its own dental clinic, which should include a waiting room, operating room and work room. Dental

X-rays can be taken care of by the main X-ray department, though a special dental unit for the taking of films is preferable.

Proper diagnosis requires not only X-ray examination, but laboratory analysis as well and, therefore, the sanatorium must be planned with a proper and well-equipped laboratory. Such equipment, if the laboratory is doing experimental work, will require an animal house, in which birds, mice, guinea pigs, rabbits and even sheep can be housed. In this department there should be a morgue with proper facilities for performing post-mortem autopsies, again with amphitheatre seats for students, if run in connection with a medical school.

Occupational therapy is also part of the cure in tubercular institutions and should be included in every well studied plan. Large, cheerful, well-lit rooms are required, with work tables and proper facilities for the occupational therapists, which would include an office, store room and toilet and cloak room. Toilet rooms for male and female patients should be provided. In a larger sanatorium a lecture hall or small auditorium might well be included for lectures and concerts for walking patients. This should be fitted for the presentation of movie films.

A radio broadcasting system should be installed with head phones at each bed with a control switch giving a choice of stations. Pick-up microphones should be installed in the concert hall so that those patients in bed and unable to attend may hear the concerts or plays.

A most necessary part of any sanatorium is the kitchen and its location will depend on the size of the institution it serves. Upon this fact, also, hinges the question as to whether it shall be a separate building or not. There is nothing distinctive about a sanatorium kitchen, as compared to a standard hospital kitchen, but it will be composed of all the necessary parts and departments including storage, both dry and cold, and preparation rooms and the kitchen proper. In connection with the kitchen it is sometimes necessary to plan for and include a milk pasteurization room and plant.

Residences for doctors and interns, as well as nurses, must be provided, and there should be residences for male and female staff also, but these buildings do not present any peculiar difficulties in planning. Separate dining rooms must be provided for doctors, interns and nurses and for the male and female staff.

A laundry should be incorporated in the layout and this building can very well be attached to the power house, if the institution is large enough to warrant a separate boiler house.

In this connection it is interesting to note that most of the wards are not heated but that the corridors and all other rooms are heated to a maximum of 70 degrees. In some climates it would be advisable to install some heating in the wards.

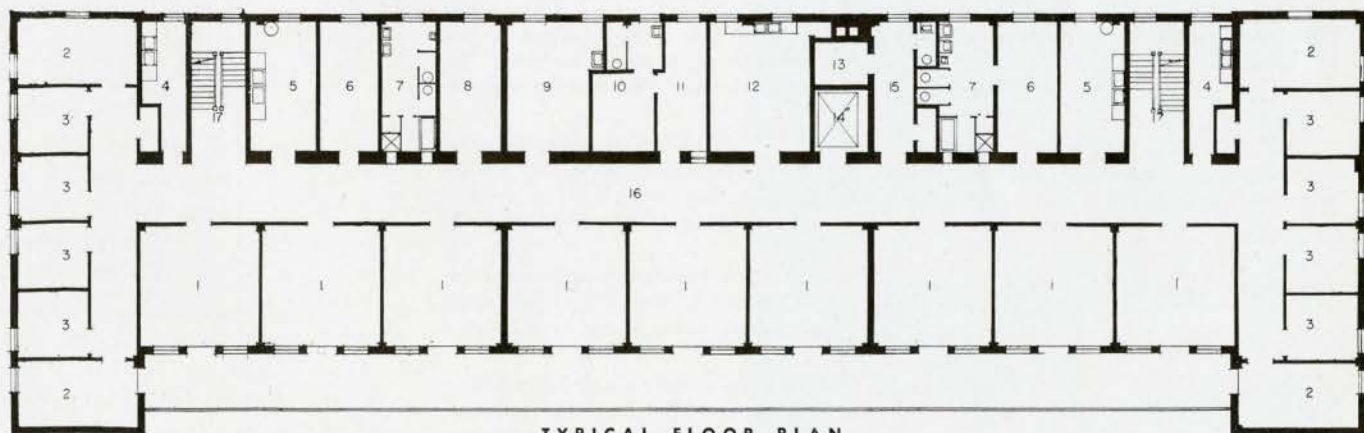
In conclusion, it could be said that the planning of a sanatorium is not very different from that of any hospital, but opinions vary as to what is the ideal type of building to use, so that an architect will have to be governed by local opinion and conditions, and will have to, as always, cut his coat according to his cloth.

Mr. Souter wishes to express his indebtedness to Dr. J. H. Holbrook for his expert advice and assistance in the preparation of this article.



WILCOX PAVILION, MOUNTAIN SANATORIUM, HAMILTON, ONTARIO

HUTTON AND SOUTER, ARCHITECTS



TYPICAL FLOOR PLAN

- |                  |                      |                                           |                        |
|------------------|----------------------|-------------------------------------------|------------------------|
| 1. (4) Bed Wards | 5. Utility Rooms     | 10. Linen, Lock-up, Nurses' Toilets, etc. | 13. Freight Elevator   |
| 2. (2) Bed Wards | 6. Patients' Lockers | 11. Nurses' Station                       | 14. Passenger Elevator |
| 3. Single Rooms  | 7. Treatment Rooms   | 12. Diet Kitchen                          | 15-16 Corridor         |
| 4. Bed-Pan Rooms | 8. Examination       |                                           | 17. Staircase          |



## HOSPITAL DEVELOPMENT, SUNNYBROOK PARK, NEAR TORONTO, ONTARIO

ALLWARD AND GOUINLOCK, ARCHITECTS

W. RALPH KINSMAN, GORDON L. FOWLER, ASSOCIATES

Reproduced above is a perspective from the office of Messrs. Allward & Gouinlock, Architects for the new Hospital Development at Sunnybrook Park, Toronto. When completed, this Hospital, built by the Dominion Government on Park Lands, provided by the City of Toronto, will have national importance in the treatment of Canada's wounded service men.

Located on Toronto's north-east rim, the actual building site has a west frontage of some 600 feet on Bayview Avenue and a depth to the east of some 2,000 feet. It is bounded on the north by estate properties and on the south and east by magnificent rolling valley-lands. The property has a reasonably uniform fall of some 25 feet from the westerly Bayview frontage to the east end of the buildings.

The project as a whole is composed of a number of individual units as follows: Administration Building, Out-patients' Building, Active Treatment Building, Up-patients' Building, Neuro-Psychiatric Building, Orthopedic and Surgical Appliances Building, Pulmonary Building, Nurses' Residence, Laundry Building and Boiler House. The hospital is designed to accommodate 1,450 patients.

To achieve full benefit of sun and view, the buildings were, broadly speaking, composed along an east-west line with repetitive ward wings stretching to the south. They are of reinforced concrete or steel frame construction, faced with grey brick. Bases, string courses and copings are of Dolomitic Limestone.

In design, the Architects have sought to co-relate the various units in simple satisfying masses and to compose the fenestration in broad defined areas of pattern. Enrichment is restrained and confined principally to entrances and foyers or to areas devoted to patients' recreation.

The perspective above depicts the buildings as seen from Bayview Avenue at a point some 600 feet north of the property. The units visible commencing on the right or west end may be identified as follows: Administration Building, Out-patients' Building, Active Treatment Building, Up-patients' Building, and on the extreme left, the Nursing Sisters' Home.

# THE PLANNING OF NURSES' HOMES

By FRED L. TOWNLEY

Much has been written about the planning of Nurses' Homes, but much will have to be done thoroughly to educate the Public—and unfortunately, some Hospital Boards—that next if not equally important in the care of the patient is the care of the nurse.

No matter how modern and completely equipped a hospital may be, it is only as efficient as its doctors, nurses, and staff generally. It is, therefore, a matter of very elementary reasoning to understand that the nurse must be given every facility to conserve her own health and strength; and in her leisure hours "off duty" she must be able to escape from the hospital environment, with its sickness and suffering, and be able to relax in every possible comfort. This will tend to foster health and contentment and general well-being, which will be reflected in her ability to give her best to the nursing of the sick, and in the end will ensure better care and attention for the patient.

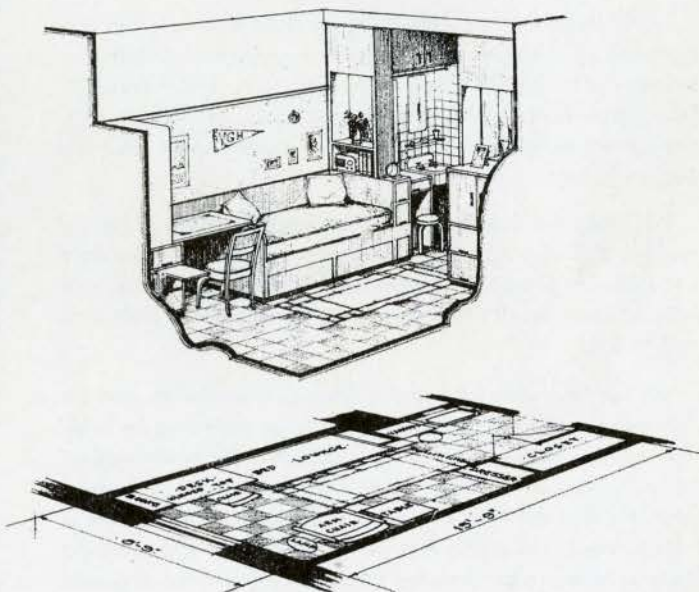
It also can be taken for granted that a well-equipped and comfortable Nurses' Home will attract the finest in nursing material.

All but the very smallest hospital should have its Nurses' Home. Very definitely, this should be a separate building not too far from the hospital, but far enough that music and dancing, entertainment, and other recreation, will not disturb the hospital patient.

No matter how small the home, each nurse should have her own room. It should have an area of approximately 140 sq. ft., and be so planned that two beds cannot possibly be put into it. It must be remembered that this room must provide for the nurse's home life during her three-year training period, during which time she is under the strictest discipline. She is entitled to, and should have, her own room.

With this in mind, the room should not be treated merely as a bedroom—containing an uninteresting assortment of iron bed, inadequate dresser, uncomfortable chairs, cramped clothes closets, etc.—but rather as a study, with every facility for rest and relaxation.

It should have as many built-in features as possible, including a bed which can be used as a studio lounge during the day, made attractive with colourful covering and bright cushions. The whole unit containing bed, dresser, vanity, desk, etc., can be integrated as illustrated.



If purchased in any reasonable quantity, it is surprising how little the cost is increased over ordinary, everyday stereotyped furniture.

A clothes closet of ample size should be provided, also a lavatory basin, easy chair, and side chair. The drapes, floor covering, and colour scheme generally, should be bright and cheerful, with enough variation to provide several selections best to please the individual occupant.

In planning the room units, care must be taken to ensure that the natural and artificial light falls properly in relation to the unit it serves.

Each floor must have ample toilet accommodation, with both showers and bath tubs. Each floor also should have one or more kitchenettes with breakfast alcoves, as well as one or more smoking-sitting rooms, generally so placed as to have access to the kitchenettes. There should be one or more small laundries on each floor, where small personal articles may be laundered. These should have built-in ironing boards and drying facilities, although it has been found more satisfactory to provide some sort of drying facility, such as a heated towel rail, in the bedrooms.

Provision for nurses on night duty should be made away from all source of disturbance. If not on a separate wing or floor, it certainly should be on a separate corridor.

A completely equipped infirmary, with isolation, should be provided.

Where flat roofs are used, they should be utilized in conjunction with a solarium, for recreation, sun bathing and sleeping.

Living rooms are on the main floor, and should be homelike and nicely furnished, with fireplace and pantry service. In addition, there should be a number of small reception rooms where nurses can meet their friends with some degree of privacy.

Provision should be made for a fiction library.

In the larger Nurses' Homes, many additional facilities are necessary on the lower floors. Here you should find an Administration Office for the Home Supervisor and Social Director; Information Booth and Post Office, etc. The living rooms, with pantry service, usually are serviced by dumb waiters from the kitchen below.

It is often found desirable that the Superintendent of Nurses and her staff also have offices in the Nurses' Home, where they can interview prospective students away from the hospital, and keep in closer touch with the students already under their care and tuition.

On this floor may be found a Chapel, Gymnasium, and an Auditorium where entertainment on a large scale may be held. The auditorium must be large enough to seat the whole student body for special lectures, and in the larger homes it is most desirable that this floor be so planned that when everything is "thrown open" the graduation ceremony may be held. It should have a stage, with dressing rooms, adequate for dramatic presentations. Provision also should be made for a projection booth and sound equipment.

Quite often in this type of building, suites are provided for staff nurses, usually comprising sitting room, bedroom, and semi-private bathroom.

Also, depending on the size of the home, from one to six guest rooms, with private bath, should be provided.

The basement usually houses the kitchen and dining rooms. Here also it is desirable to provide space for a completely equipped beauty parlor, ample trunk room, central linen storage, sewing room, etc. There should be a delivery entrance on this level under the personal supervision of the housekeeper, for delivery of laundry, and home supplies, and where all personal parcels may be left to be called for by the student.

As a rule, recreation rooms are housed in the basement, and in the larger homes it is desirable that there be a swimming pool, usually having separate stairways to the gymnasium overhead. This makes an ideal unit, as if given separate entrance from the outside, it can be isolated at specified periods for the use of internes.

A Nurses' Home is not merely a place where the student may sleep and receive visitors. It must also include a complete school for the teaching of every branch of nursing practice—unless as is sometimes the case, these facilities are provided in a separate building. The following are considered essential:—

A *Demonstration Room* large enough to hold small classes, where a whole nursing training programme may be carried on. It should contain several beds with plenty of space around each for demonstration purposes, and be complete with Nurses' Call System. It is desirable to have an identical room adjacent thereto, called a "Practice Room". These rooms should share a utility room, equipped with bedpan hopper, sterilizer, etc.; a dressing room; and a linen room.

*Laboratories* for Chemistry and Bacteriology.

A *Dietetics Laboratory* completely equipped with sinks, hot-plates, refrigerator, etc. It is desirable that this laboratory be so placed that dumb waiter connection can be secured from the kitchen.

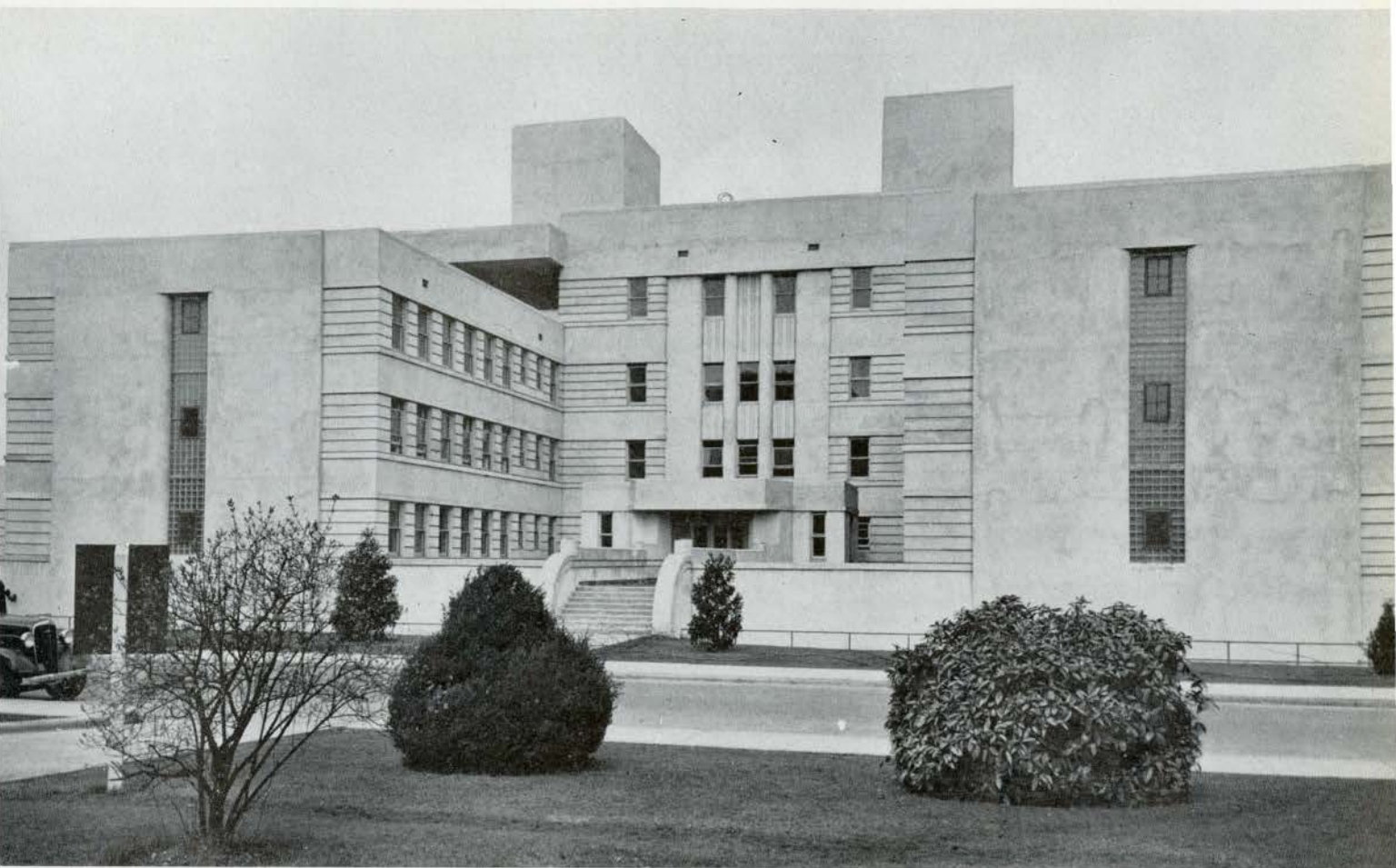
*Lecture Rooms* of ample size should be provided, with study rooms and a technical library.

*Administration Offices* are provided as necessitated by the scope and extent of the teaching and training programme carried on.

In all the above rooms, ample blackboard space should be provided.







**NEW SEMI-PRIVATE PAVILION, VANCOUVER GENERAL HOSPITAL, VANCOUVER, B. C.**

**TOWNLEY AND MATHESON, ARCHITECTS**

The latest addition to the Vancouver General Hospital group is the new fire-proof Semi-Private Pavilion, and Administration Unit, just completed. It is situated on an area of approximately 160 feet by 200 feet, between the Nurses' Home and the Power House, facing Twelfth Avenue on the south and the Hospital Private Driveway on the north. The difference in elevation between Twelfth Avenue and the Hospital Driveway is approximately twelve feet.

The Pavilion is "H" shaped in plan, and attached to it on the south is the Administration Unit, two stories in height, the second story of which is given over to a new, completely equipped, laboratory. Tunnels and bridges connect and join both new units to the older buildings.

On the sub-ground floor of the Pavilion, which is on the private driveway level, is located the Out-Patients' Department complete with Social Service, Dental, and Eye, Ear, Nose and Throat Departments. Also located on this level is the new Physio-Therapy Department, completely wrapped with a grounded grid to guard against radio interference. The admitting entrance is in the middle of the "H" on this level.

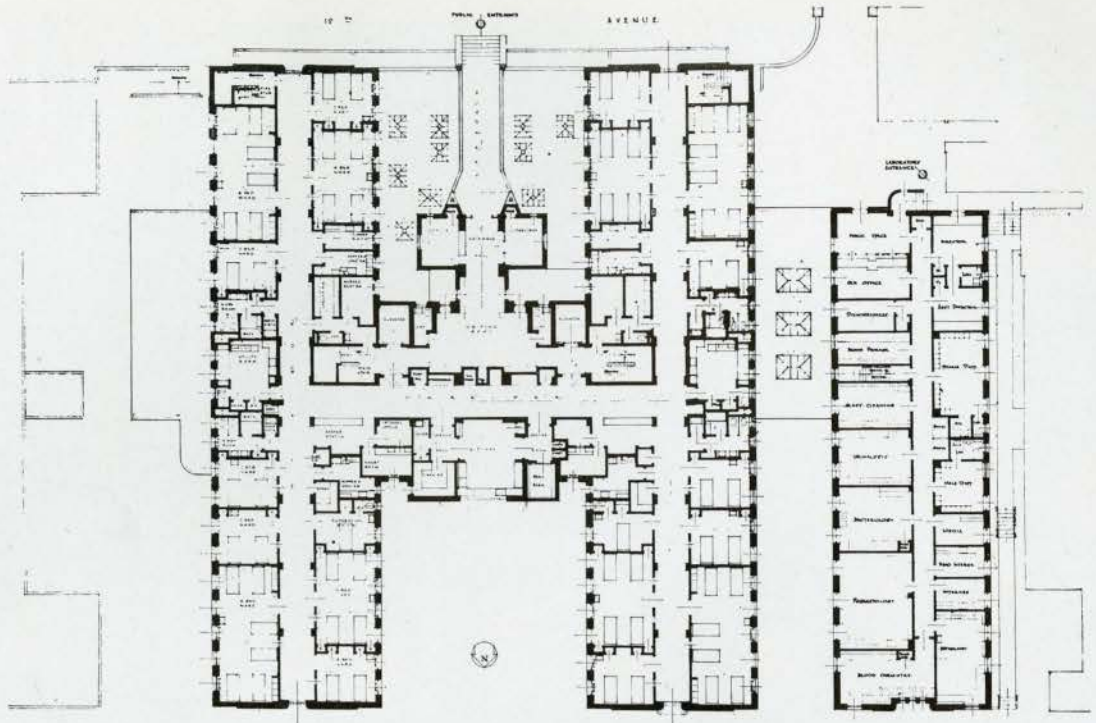
The ground, second, and third floors of the Pavilion contain 186 beds, made up of two, four, and six-bed wards, complete with the customary service, waiting, and doctors' rooms. The diet kitchens are serviced from the main kitchen, through the tunnels, by means of heated food carts.

The Main Entrance and Waiting Room is from Twelfth Avenue, on the Ground floor, and is flanked by two passenger elevators and two main stairways, so planned that traffic between the various departments does not interfere with the hospital wards. There is also a service elevator.

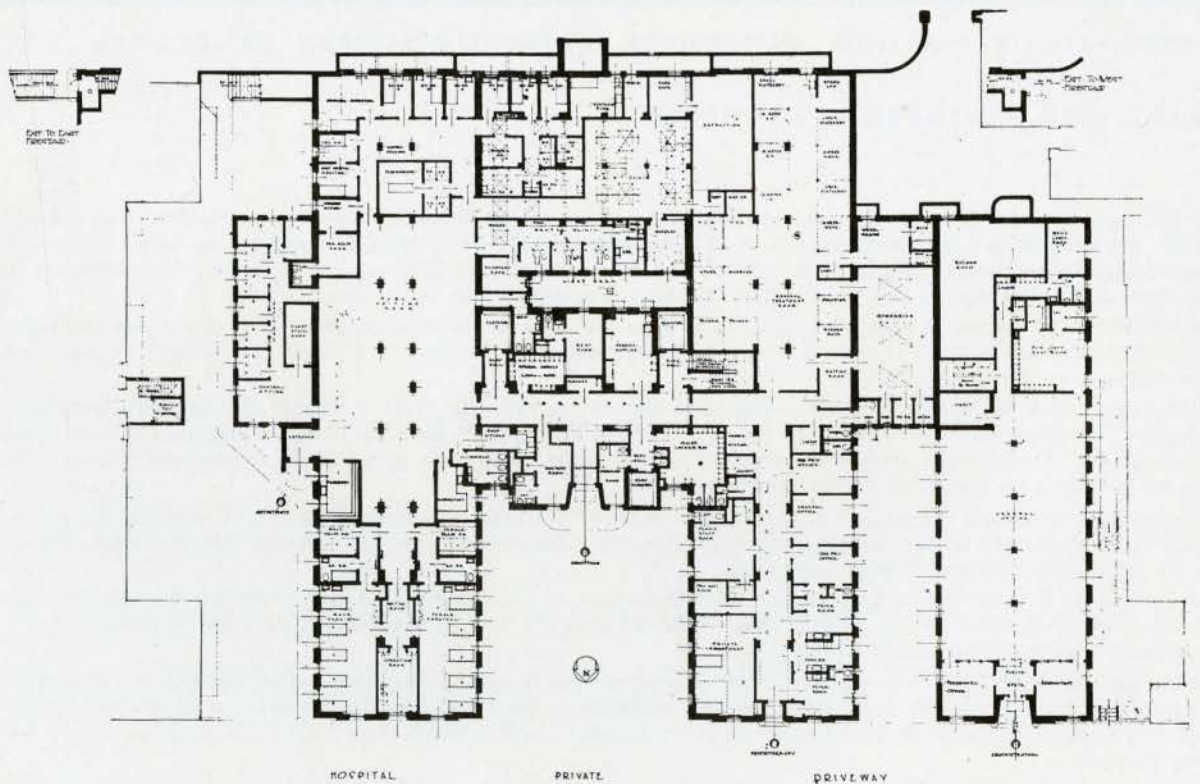
The top floor of the Pavilion is given over to the Operating Theatre, and is completely air-conditioned and modern in every respect. On this floor, to the south, but in no way connected to the Operating Theatre, are two sun-decks, weather-protected, and so planned that beds can be taken up in the elevators, and traffic to and from them does not disturb the Operating Theatre.

The building is heated by low-pressure steam from the main boiler house. In addition to the usual automatic controls, the system is provided with four zoned outside temperature controls.

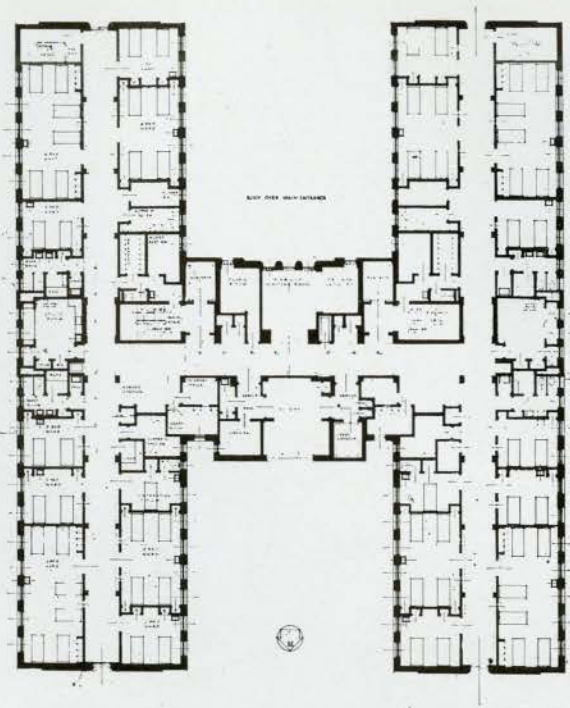
This addition to the Vancouver General Hospital brings the bed accommodation of the Institution to 1,400, making it one of the largest of its kind in Canada.



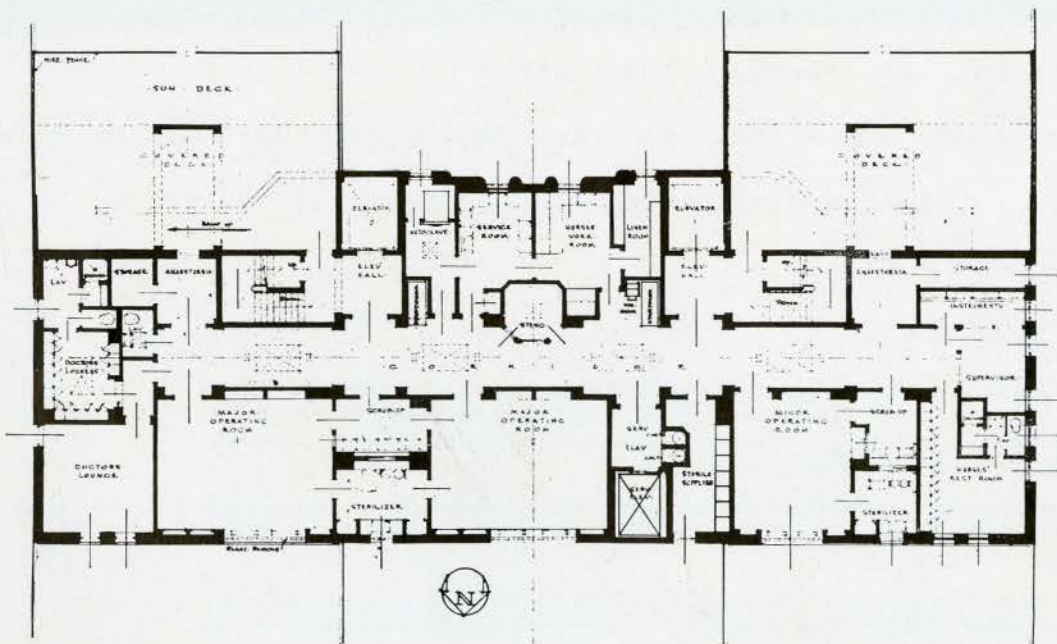
GROUND FLOOR PLAN



SUB-GROUND FLOOR PLAN

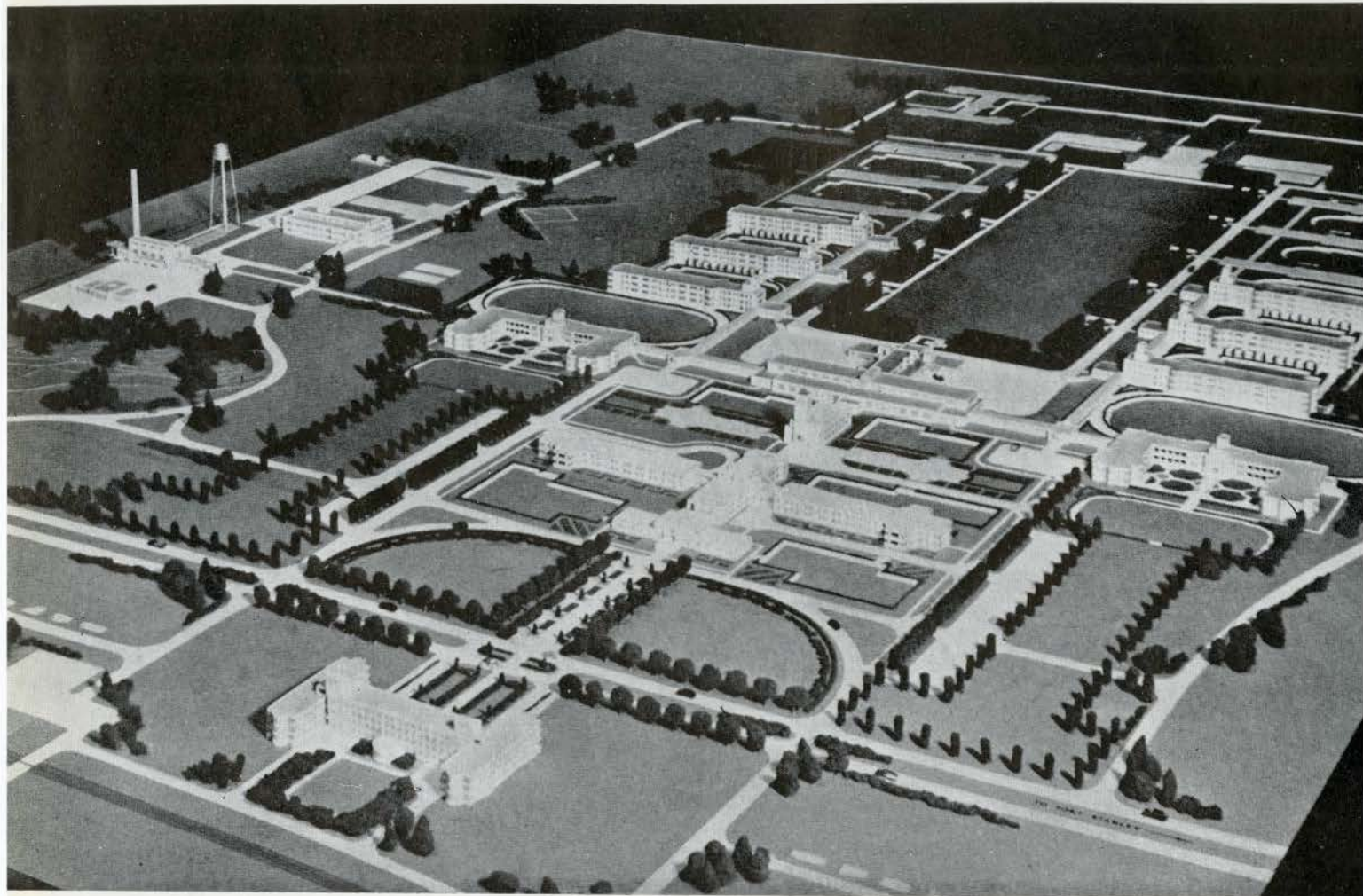


TYPICAL FLOOR PLAN



OPERATING ROOM FLOOR

PLANS, NEW SEMI-PRIVATE PAVILION, VANCOUVER GENERAL HOSPITAL



**ONTARIO HOSPITAL, ST. THOMAS, ONTARIO**

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**OFFICE OF W. L. SOMERVILLE, ASSOCIATE ARCHITECTS**

**DESCRIPTION OF SITE PLAN**

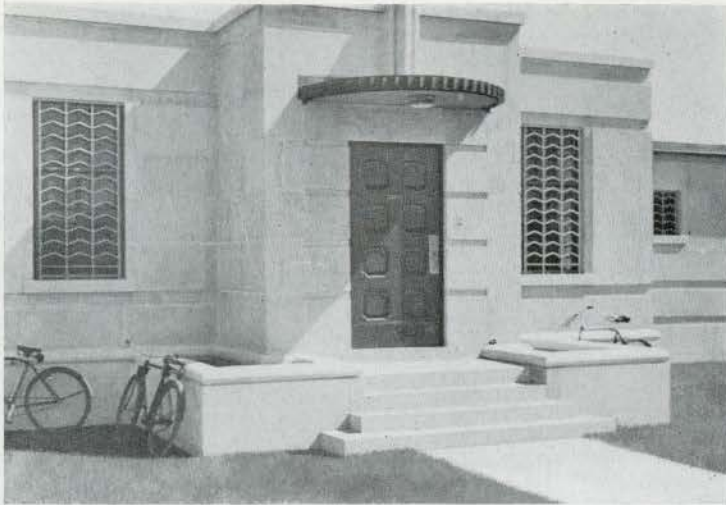
The long axis of the plan runs approximately East and West, the highway running South from St. Thomas to Port Stanley passing in front of the Nurses' Residence between it and the main entrance leading to the Administration Building. Only the buildings that were completed are shown on the model, the other proposed buildings are indicated by white blank spaces on the model.

The central space directly opposite the Dining Hall Building closing the end of the main quadrangle was reserved for the Assembly Hall flanked on either side by buildings for Occupational Therapy, one for men and the other for women.

To the East of the group beyond the site of these buildings lies the farm which it was intended should supply the institution with farm products and furnish an opportunity for useful and beneficial occupation for the patients.

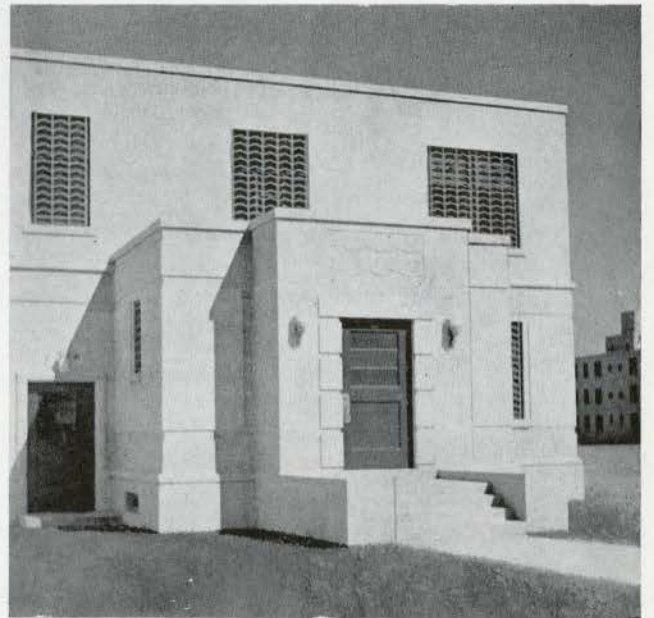
The South boundary of the property is a concession road from which there is a service entrance at the East end of the main quadrangle giving access to large service court on quadrangle side of Dining Hall Building. This is enclosed with a wall and screened from view.

A playing field for men patients was provided to the North of their pavilions with direct access. A similar provision was made to the South of the Women Patients' Pavilions.

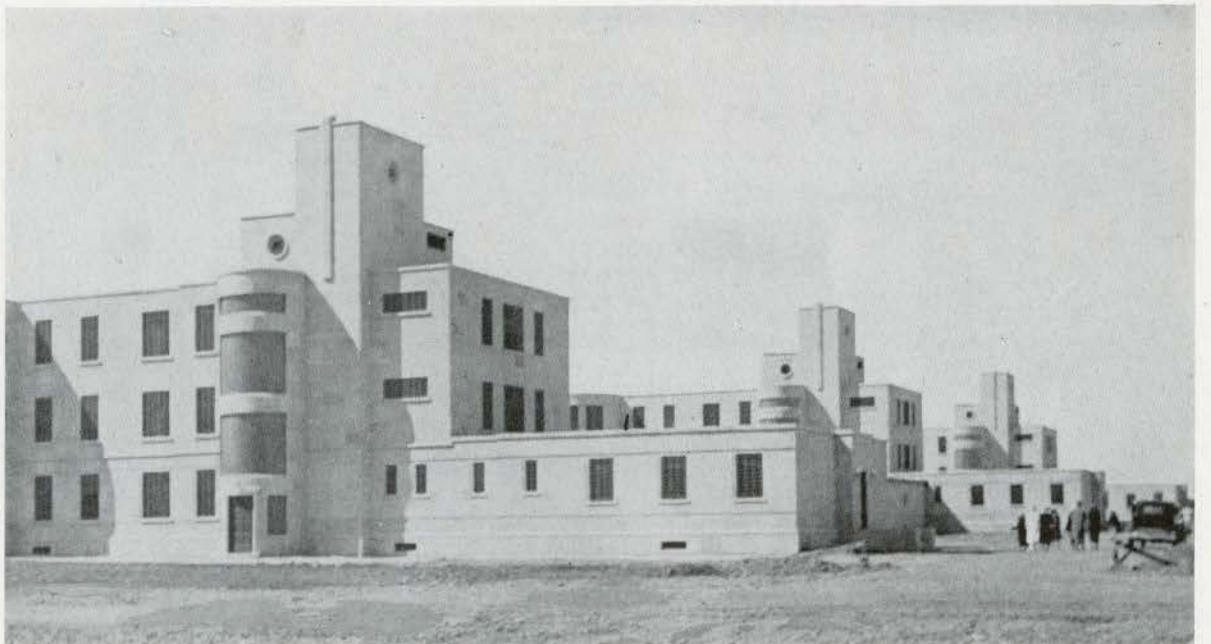


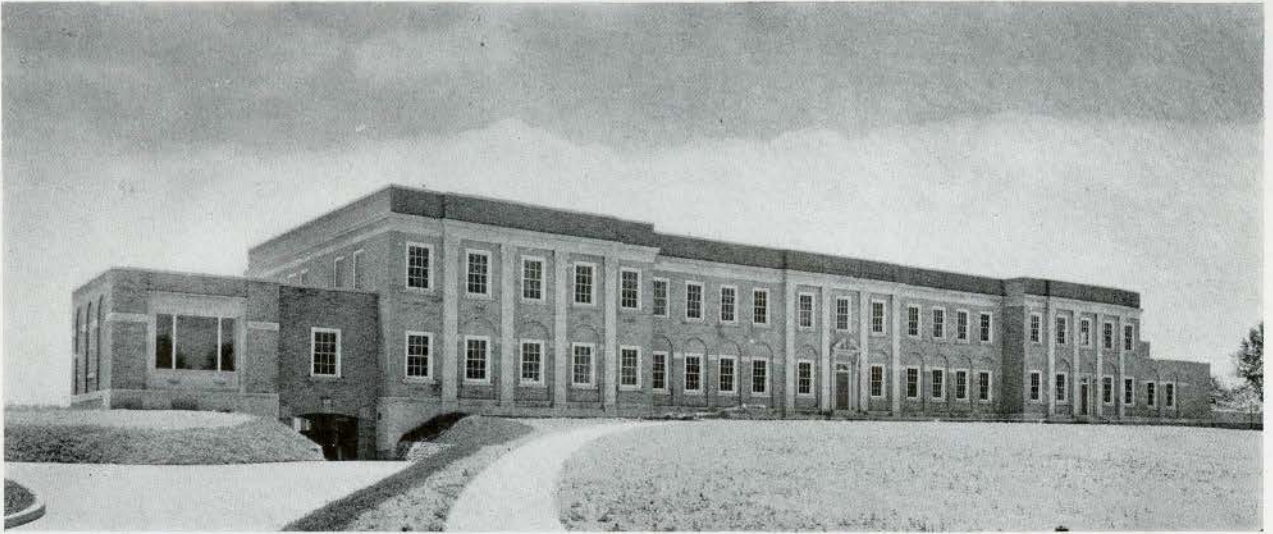
VISITORS' ENTRANCE,  
MEN PATIENTS

TYPICAL ENTRANCE,  
PATIENTS' PAVILION



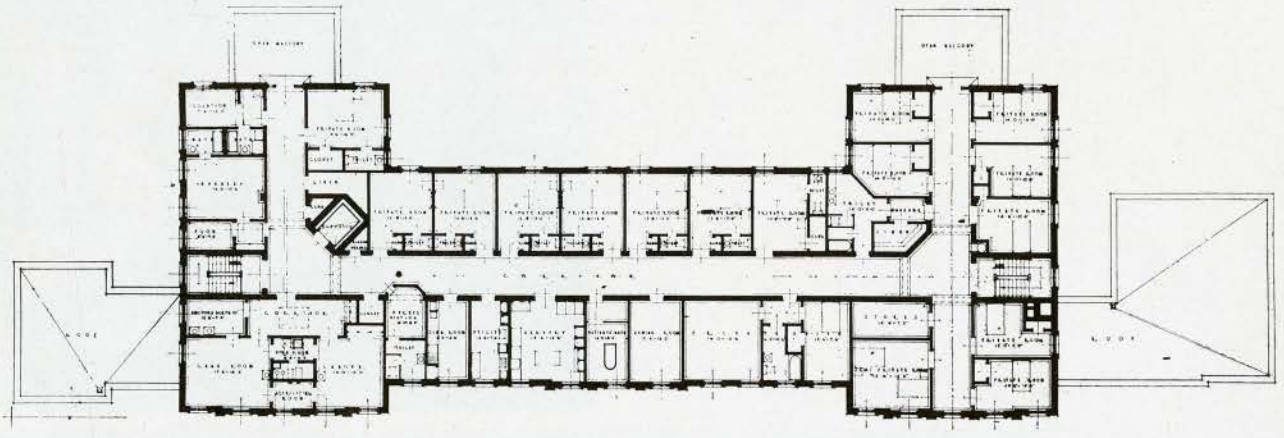
PATIENTS' PAVILION



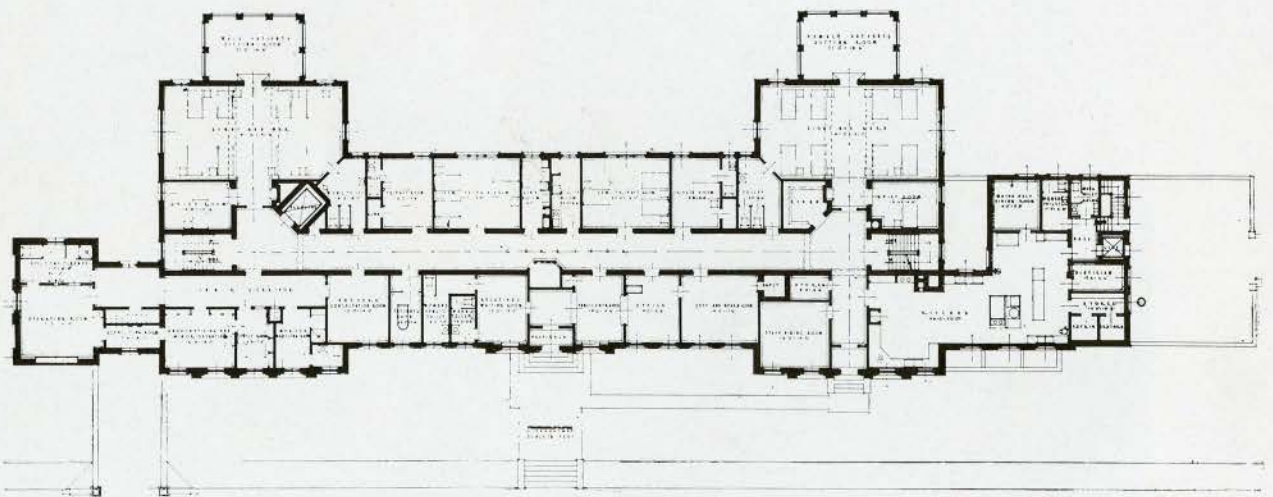


DOUGLAS MEMORIAL HOSPITAL, FORT ERIE, ONTARIO

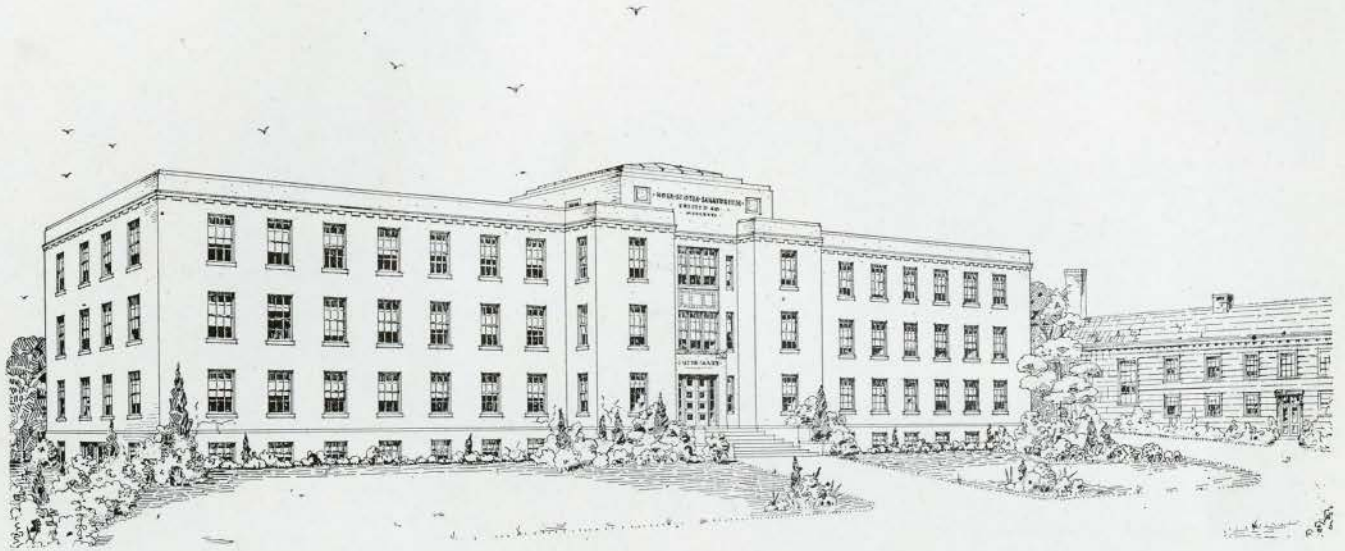
W. L. SOMERVILLE, ARCHITECT



SECOND FLOOR PLAN

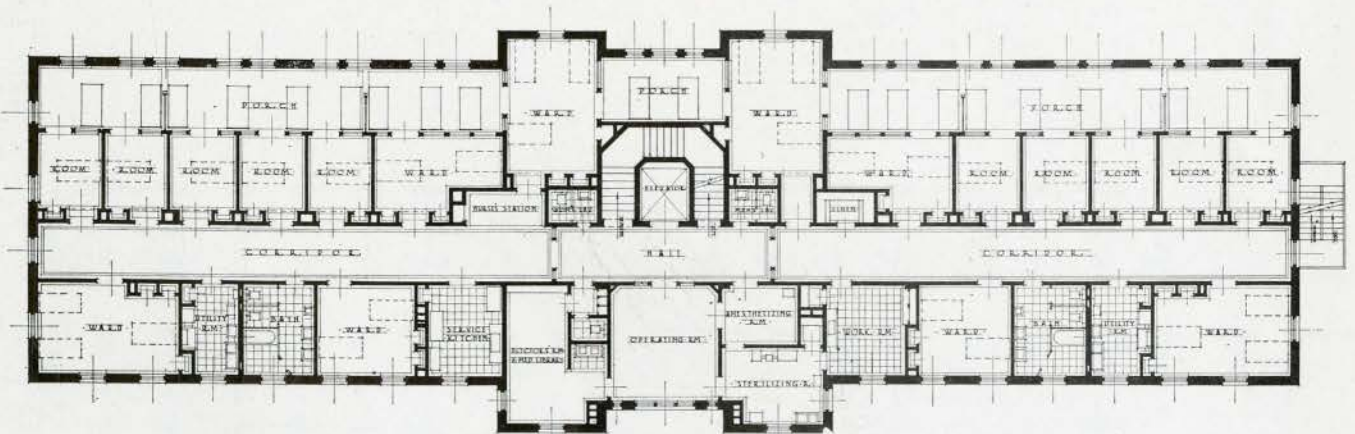


FIRST FLOOR PLAN

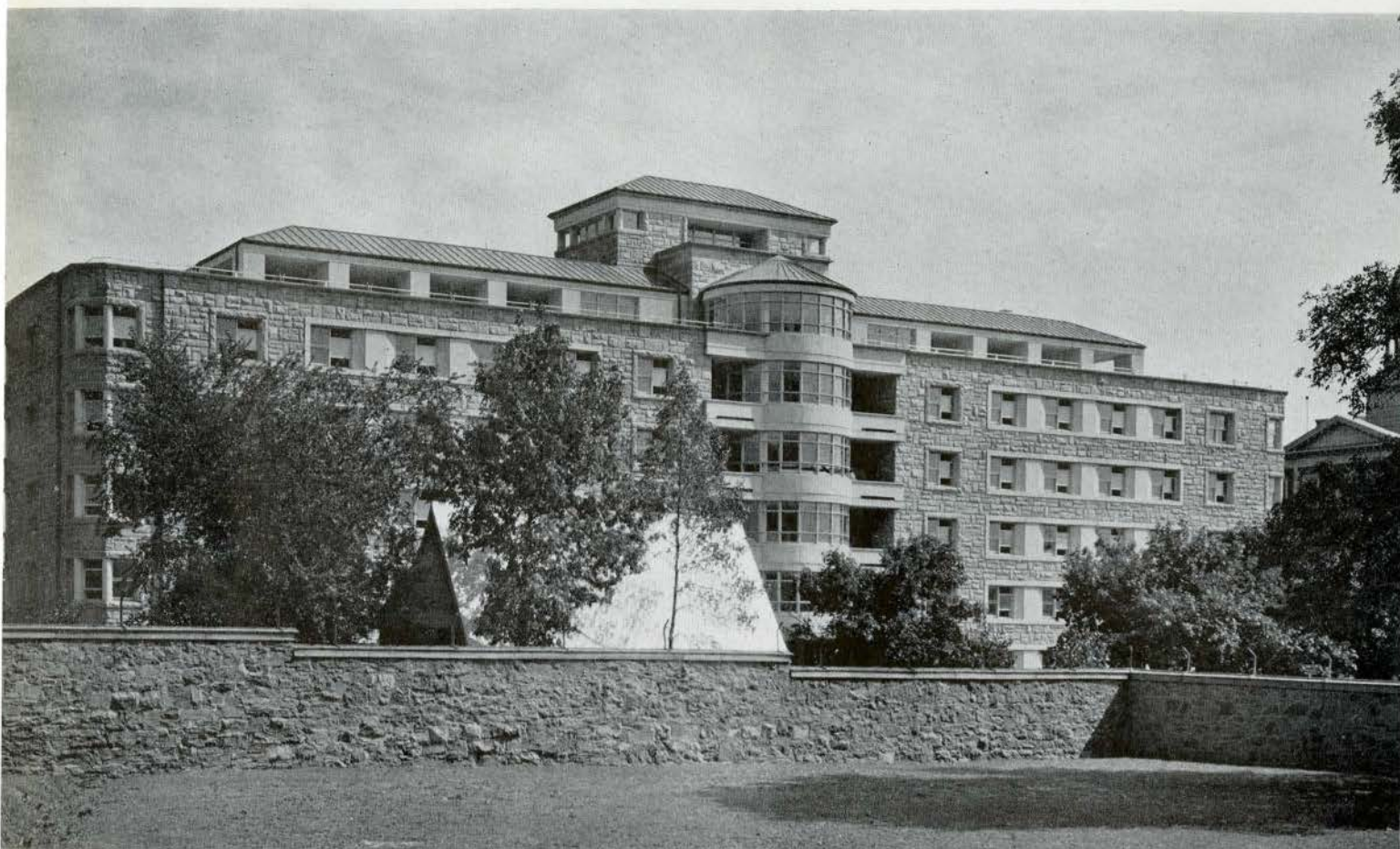


NEW INFIRMARY BUILDING, NOVA SCOTIA SANATORIUM, KENTVILLE, NOVA SCOTIA

LESLIE R. FAIRN, ARCHITECT



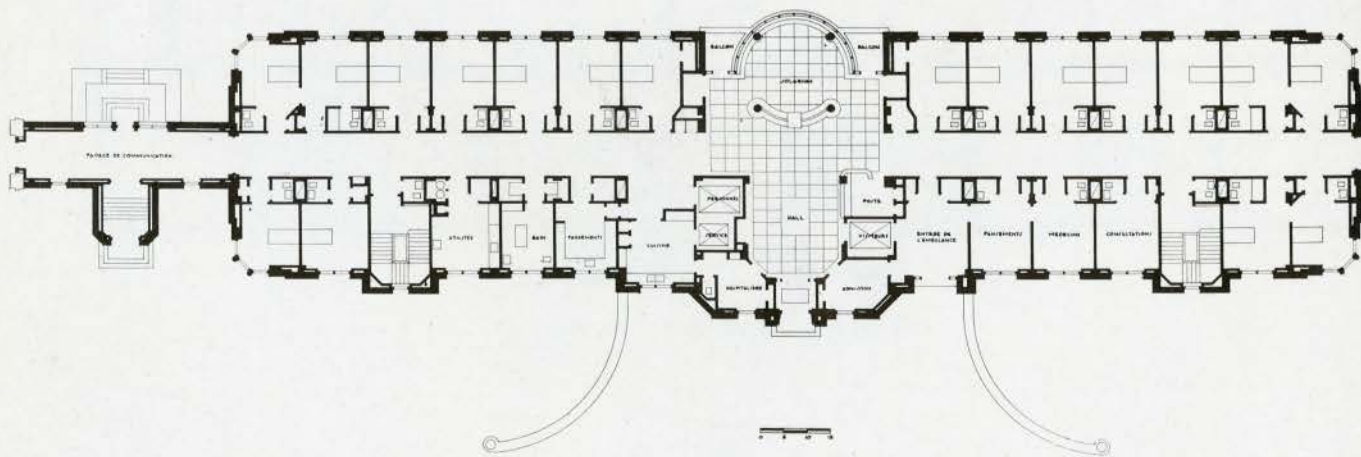
THIRD FLOOR PLAN



*Photos, Associated Screen News Ltd.*

**LE NOUVEAU PAVILLON DIT: LE ROYER DE L'HÔPITAL HÔTEL-DIEU DE MONTRÉAL, QUÉBEC**

**GASCON AND PARANT, ARCHITECTES**



**PLAN DU PREMIER ETAGE**



L'Hôtel-Dieu de Montréal, est le plus vieil hôpital de Montréal il fut fondé par Jeanne-Mance au fort de Ville-Marie, (premier nom de Montréal) en 1642; et fut la seule institution du genre à Montréal jusqu'en 1822.

Les religieuses hospitalières de St-Joseph de Montréal, communauté fondée en France par Jérôme Le Royer de la Dauversière, dont le nouveau pavillon porte le nom, sont venues de La Flèche France) en 1659 pour desservir cet hôpital; elles en prirent la direction à la mort de Jeanne-Mance (1673).

L'Hôtel-Dieu installé primitivement rue St-Paul, occupe l'emplacement actuel depuis 1860.

L'ensemble de l'hôpital pour recevoir 460 patients, dont 132 dans le nouveau pavillon.

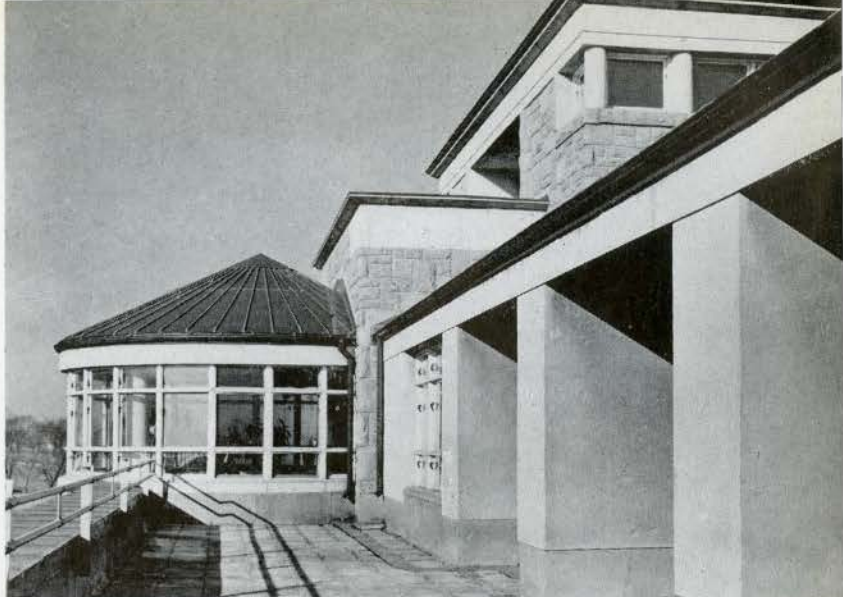
Ce nouveau pavillon à l'épreuve du feu, est construit de façon à remplir exactement les fonctions auxquelles il est destiné selon les données modernes les plus poussées pour une maison d'hospitalisation de luxe; lumière à profusion, espaces vastes et aérées, toilette individuelle dans chaque chambre, système de ventilation forcée, ascenseurs entièrement automatique, etc.

Chaque chambre possède en outre son système de radio individuel toutes ondes, son système de communication orale des patients avec les services, le téléphone public, etc., enfin un système de microphone permettant aux garde-malades de faire la ronde des malades la nuit sans pénétrer dans la chambre.

Tout l'édifice est pourvu de fenêtre thermos contrebalancées, assurant ainsi le confort parfait des patients.

D'un style moderne harmonisé avec les vieux édifices, ses appareillages de pierre combinent parfaitement la dignité avec le vénérable.

Dans l'ensemble, cet édifice tout en granit de ton clair, situé dans un centre de verdure, donnera une note de gaieté de bon aloi; il sera pour notre Ville-Marie et sa fille l'Hôtel-Dieu, un monument digne d'elles en tout points; nous ne saurons jamais trop féliciter les filles de Monsieur de La Dauversière pour la bonne pensée qu'elles ont eu de réaliser une telle oeuvre, où elles pourront davantage exercer les dons de charité et de dévouement si précieux hérités de lui, et dont elles font preuve, lorsqu'il s'agit des soins tout délicats et maternels à donner, tant corporels que spirituels, à tout malheureux quel qu'il soit.



PARTIE DE LA TERRASSE EN REGARDANT VERS LE NORD-OUEST



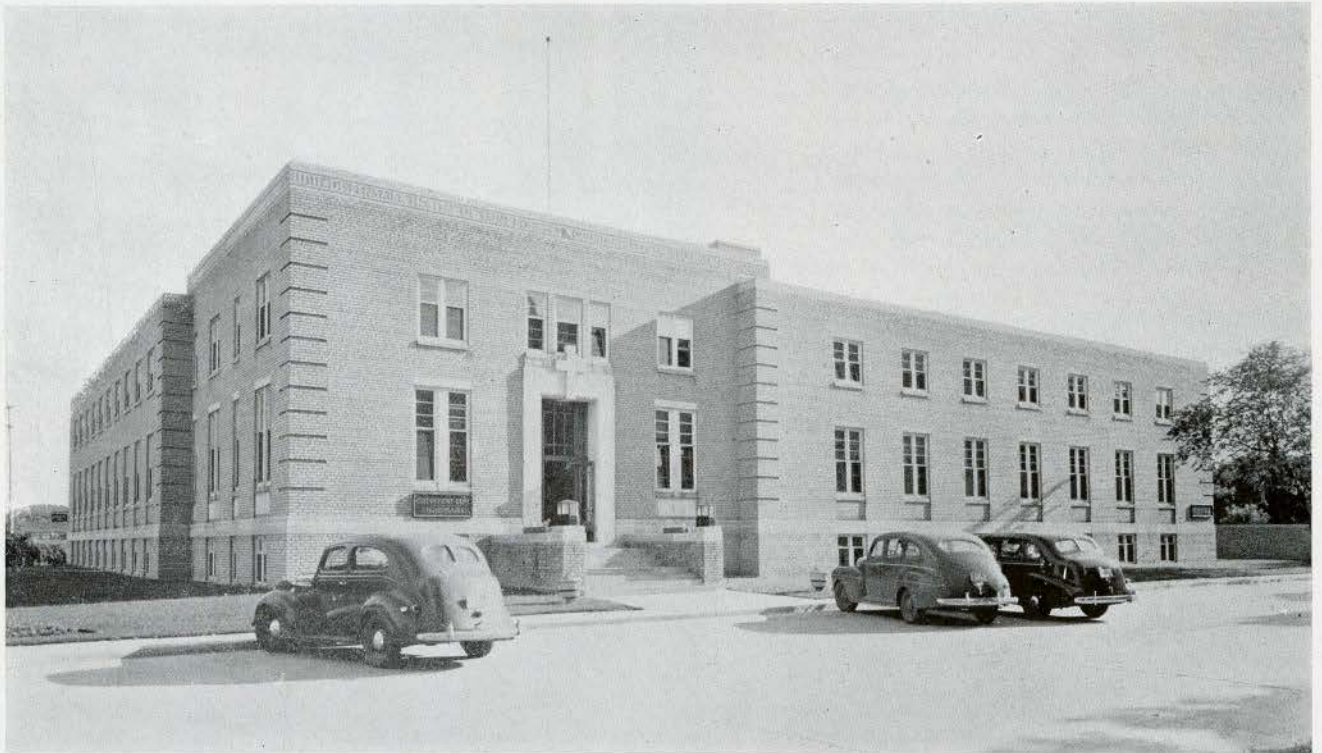
SOLARIUM D'HIVER DE LA TERRASSE

SOLARIUM A L'ENTRÉE PRINCIPALE ET TYPIQUE A TOUS LES ÉTAGES





ENTRANCE DETAIL



OUTPATIENTS' DEPARTMENT, ST. BONIFACE HOSPITAL, ST. BONIFACE, MANITOBA  
GREEN, BLANKSTEIN, RUSSELL AND HAM, ARCHITECTS

Just as in the international sphere, where the peoples of the world are coming to realize the necessity of working together for the common good, just as in the field of planning, where individual communities are learning that they are but part of a larger whole, so too in the matter of public health it is now recognized by forward-looking authorities that there is a great need for closer co-ordination between the various agencies working in this field.

There is a definite trend towards consolidating the work of public and private agencies. For instance, here in Winnipeg, until recently the work of child health in the schools was under the direction of the School Board. It is now carried on by the City Department of Health in co-operation with a committee of the School Board. It is felt further, that closer liaison between the Health Departments of adjoining municipalities is desirable.

As the participation of governments in the work of public health increases, it is only natural that much of this effort is directed through, and in co-operation with the various private agencies already in the field. This trend towards consolidation suggests the functioning of these various agencies from a central point in any given locality. The hospital being the logical focal point, it seems likely that the hospital of the future will encompass more and more of all those matters having to do with the health of the public. Thus we may expect to see more and more importance attached to such facilities as the outpatients' department, and the provision in the hospital of facilities for health education and child health. The hospital may become the headquarters or branch office for district nursing services, food and sanitary inspectors, and, especially in smaller centres, may house the offices of the doctors and dentists.

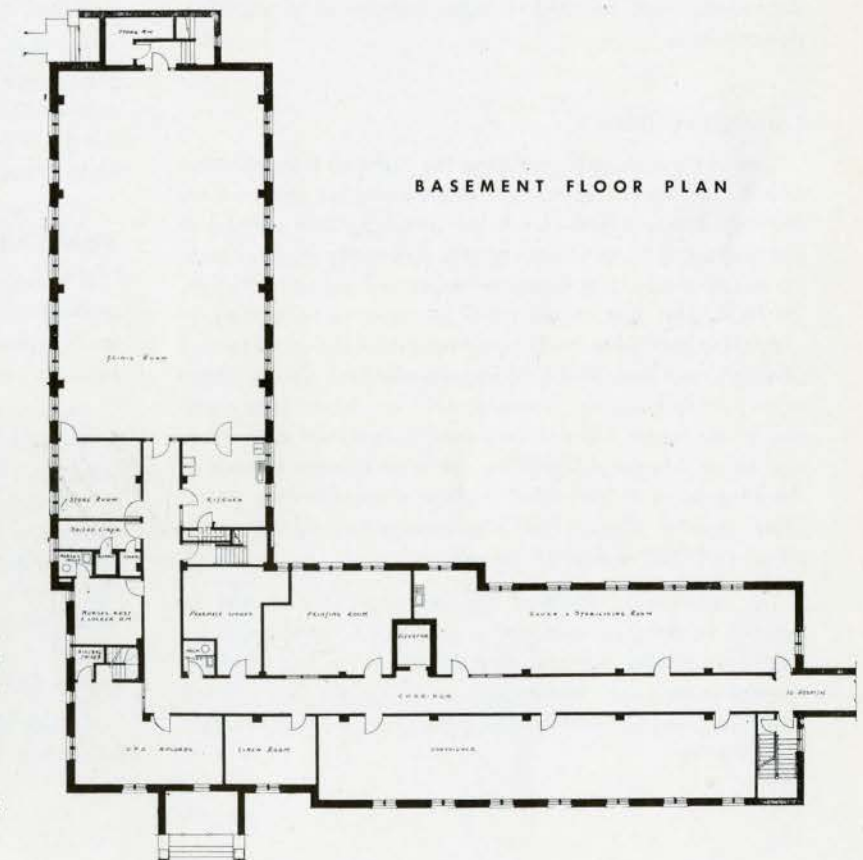
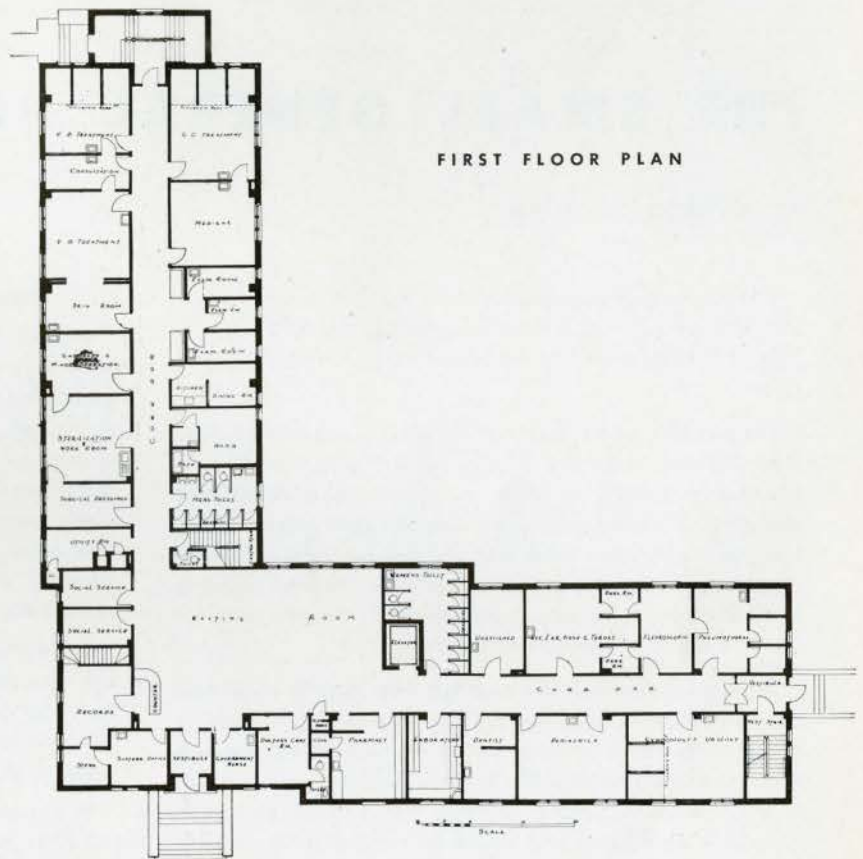
In line with this trend Les Soeurs de la Charite de L'Hopital General de St. Boniface decided to enlarge their outpatient department to the point of giving it its own building on the hospital grounds.

The main floor of the building has complete accommodation for the diagnosis and treatment of the various diseases encountered. The services include Pediatrics, Gynecology, Urology, Pneumothorax, Fluoroscopic, Eye, Ear, Nose and Throat, Dental Surgery, Laboratory, Pharmacy, Casualties and Minor Operations, a small ward, a kitchen and dining room for out-of-town patients, and Venereal disease examining and treatment rooms. Also included are offices for doctors, government nurses and social service workers. The basement has in addition to the usual services a large Clinic Room for instruction of internes and student nurses, and may be used for public health lectures. The upper floor was left unfinished for future development and expansion.

The building is connected to the main hospital building by means of a tunnel, which also serves for the heating mains and other service piping.

Construction is of brick and reinforced concrete with terrazzo floors and tile bases. The terrazzo goes under all partitions to make possible the re-arrangement of space as the future may require. Windows are double-glazed with bottom sash tilting and removable. The width of the windows was dictated by the weight a woman could conveniently handle.

Since the building was opened in the Fall of 1938, expansion has absorbed all of the "Unassigned" space.



# THE SMALL GENERAL HOSPITAL

By HAROLD J. SMITH

The planning of hospitals is one of the most involved problems facing Architects, and in the space allotted for this article it will only be possible to deal briefly with the main departments.

The planning of medical institutions requires years of study if an Architect is to give his client a well-planned, properly functioning building capable of economical and efficient operation. The knowledge to achieve this goal is gained best by contact with many institutions and constant joint study with their staffs of the many problems that arise. Hospital planning is not static but is constantly changing with the new developments in medicine and nursing technique.

In planning hospitals the Architect must keep in mind their essential functions, which are the care and healing of the sick, the advancement of medical science, the education of the staff and also of the general public in those things that are essential to good health. Therefore, anything that does not contribute to these is superfluous and should be omitted. Frills and excessive expenditure on outward appearances are false since such funds could be used to better advantage in providing patients' beds.

## Construction Costs

One of the first problems facing the Architect is the question of cost. In most cases the needs of the institution require more building than available funds can provide. One method of approximating hospital costs that is frequently used by inexperienced persons is to base it on an amount per patient's bed. This is a term that should never be used for estimating or comparing costs since it will vary from about \$2,000.00 to over \$5,000.00 per bed. It will be appreciated that a wing added to an existing building, containing only wards and their essential service rooms, will cost considerably less than a complete new general hospital containing the same number of beds as the wing, but with the added expense of main kitchen, power plant, laundry, surgical and obstetrical suites, administration offices and staff and helps' quarters.

The selection of materials has an important bearing on hospital construction costs and it is justifiable to spend more money on quality materials and fixtures if the cost of maintenance is reduced. Maintenance is a big problem with all institutions, and all parts should be designed for ease of repair and cleaning.

## Generalities

Flexibility of plan so that rooms, especially clinics, can serve more than one department, should be studied. With a few exceptions patient's rooms and wards should not be allotted to one department or sex since the ratio of medical to surgical, or male to female patients, will vary from time to time. Two exceptions to this are the Children's and Maternity departments, which should be reserved for these cases and isolated from other patients. These cases are very susceptible to cross-infection, and every precaution should be taken to guard against this danger.

The Architect should know the equipment and fixtures that are essential for the proper functioning of all departments, otherwise there is a danger that the building may have items that are superfluous in consequence of high pressure salesmanship on the part of manufacturers.

In planning a small hospital it would be uneconomical to put 30 or 40 beds on three floors. Such a plan would increase the cubic contents unnecessarily in stair wells, elevator shafts and duplication of ward service rooms.

The hospital of a few years ago had that "Institutional Atmosphere" created by the use of considerable white and gray colours. The present-day institution is endeavouring to avoid this by using attractive appointments in all patients and visitors rooms together with harmonizing pastel colours.

## Ward Unit

It is desirable that those portions of a building containing patients' rooms should have the long axis running north and south or nearly so, as this will make it possible for wards to have the sun sometime during the day.

The required amount of space per patient is readily determined. Adult ward beds require from 80 to 90 and children's ward beds 70 to 80 square feet each. Semi-private wards 90 to 125 and private rooms from 135 to 215 square feet per bed, depending on whether or not a private toilet is provided. A few private rooms that can be rented cheaply, as small as 120 square feet, are an asset. Also about one deluxe suite with a private bathroom for each 40 or 50 beds is desirable. Baths for patients generally should be in the ratio of about one to each 20 beds.

Ceiling heights of ten to eleven feet are ample for any size of room or ward.

For the small hospitals, wards of four beds should be the largest.

Each group of fifteen to twenty public beds should be provided with one quiet or isolation room where a patient, who is noisy or very ill, can be isolated from the others.

It will be of interest to note here that patients' rooms occupy, on the average, only 20 per cent. of the total area of the Hospital. From this it will be seen that treatment and service rooms are a most important part of the plan.

A nursing unit should consist of about 20 to 25 beds, and this will include a Nurses' Station, a small Visitors' Waiting Alcove, Utility, Servery, Linen and Bathrooms, Toilet and Maids' Closet, also a Surgical Dressing Room if in that department.

The washing and sterilizing of bed pans is a most important function. Units should be so planned that the carrying of these in corridors is reduced to a minimum. Today the better private rooms usually have their own toilets where the pans can be washed. If these are not provided, or with public wards, if at some distance from the main Utility Room, a sub-Utility between two wards should be provided.

### Food Service

The preparation and serving of food to patients and staff is a major problem in all hospitals.

In all small hospitals and in the larger ones if not of the pavilion type of plan, all patients' trays should be set up and delivered from the main kitchen or adjoining Serving Room direct to the Ward Servery. With this scheme this latter room can be comparatively small, sufficient only to receive the trays and to prepare between-meal drinks and to store and serve gifts of food that may be brought by visitors. After meals all dishes are returned to the dishwashing room adjoining the kitchen.

### Surgical Suite

The location of this unit should receive careful consideration. In the past it has been customary to locate it at the end of a wing on the top floor. At the present time this location is being questioned by a number of authorities.

For the smaller hospital it is desirable to locate this suite convenient to the Ambulance Entrance so that accident cases need not be transported through the institution to a remote operating room. In large hospitals an emergency operating suite near the Ambulance Entrance is essential, but for the smaller hospital the one department, suitably located, can serve both the emergency case and the regular patient and thus save the duplication of rooms and equipment.

On the average it will be found that one operating room is required for each 50 patients or portion thereof. Such rooms should have an area of 200 to 275 square feet. They need ample heating, ventilation and humidification. The large win-

dows which were considered essential 25 years ago have, as the result of modern lighting, become obsolete. Ordinary windows will be found satisfactory and double glazing and opaque shades are requisites, the latter since most operations today are performed by electric light.

There has been, in the past, some division of opinion as to the necessity of anaesthetic rooms, but it is generally conceded today that these should be provided next the operating room.

A sterilizing and surgeons' scrub room contiguous to the operating room, nurses' work room with adjoining toilet, a small laboratory, surgeons' dressing room with adjoining toilet and shower, orderlies' closet and instrument room will complete the suite.

### Obstetrical Suite

This unit should be contiguous to the Maternity department, and both isolated from the rest of the hospital owing to the danger of infection. In fact, there is a strong body of opinion favouring a separate wing or pavilion for these departments.

One Delivery Room with adjoining Labour Room is ample for this department in the smaller hospitals. A combined sterilizing and nurses' work room with toilet; Doctors' rest room and toilet, will complete the department.

The Creche may adjoin this suite. It will require one or two more cots than the maximum number of maternity patients.

Entrance to the Creche must be through an examination room where babies will be brought to the Doctors as it is not permissible for anyone but the nurse on duty to enter the Creche. A small space should be provided in this room for the nurse to keep her records.

In the Creche each cot will be in a cubicle formed of a glazed screen about 5' 10" high and about 15 feet in area. In this will be a fitted cabinet for linen and utensils, etc., hook for nurse's gown, the bassinette and a stool. The Creche will require about 30 square feet per cot.

Off the Creche will be a Utility Room and place for refrigerator for storing babies' feeding bottles.

### X-Ray

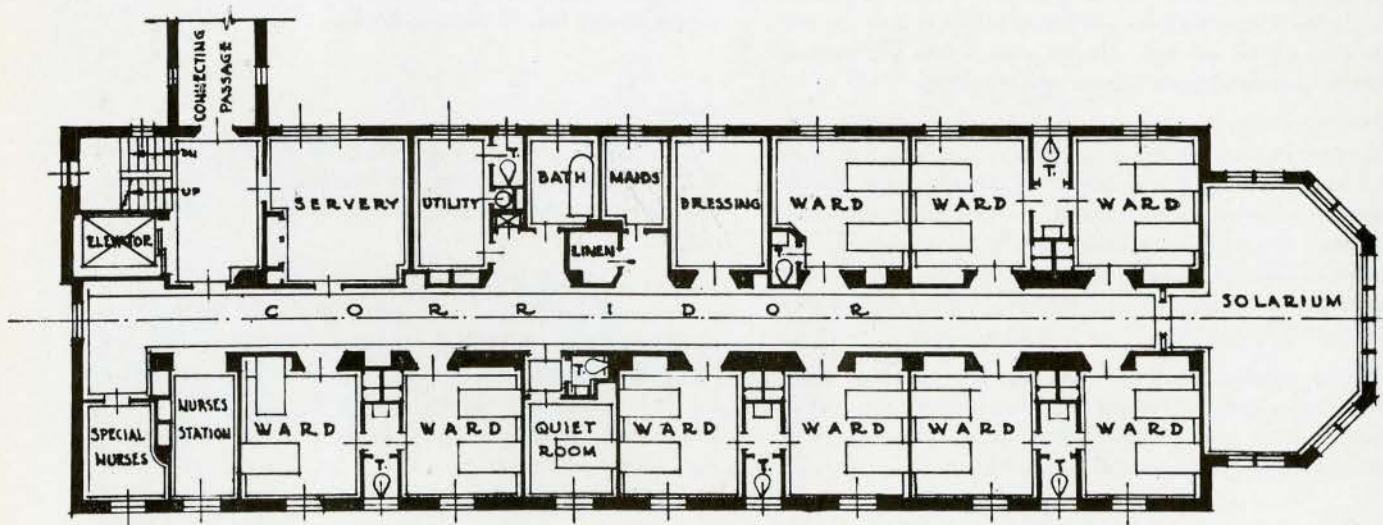
An X-Ray Department is essential and this should be close to the Ambulance Entrance. In this location it will be convenient for Out-Patients who can be a source of considerable revenue.

One room of about 275 square feet with adjoining dark room, a combined record and view room, closet for the machine, operator's booth, toilet and two small dressing cubicles, will complete the unit. The Architect would be well advised to submit his preliminary scheme for this department to a well-known X-Ray Equipment Company for criticism and layout of equipment and wiring.



QUEEN ELIZABETH PAVILION, BRANTFORD GENERAL HOSPITAL, BRANTFORD, ONTARIO

HAROLD J. SMITH, ARCHITECT



TYPICAL WARD UNIT



EMERGENCY OPERATING ROOM, OSHAWA GENERAL HOSPITAL, OSHAWA, ONTARIO



PART OF MAIN KITCHEN, OSHAWA GENERAL HOSPITAL, OSHAWA, ONTARIO

HAROLD J. SMITH, ARCHITECT



DORMITORY NO. 5, PROVINCIAL MENTAL INSTITUTE, OLIVER, ALBERTA  
BUILDING BRANCH, DEPARTMENT OF PUBLIC WORKS

This branch drew up plans, specifications, details, etc., and provided supervision in the erection of the three-storey, reinforced concrete Dormitory Unit No. 5, for Disturbed Women, erected at Oliver.

The three-storey building is of monolithic reinforced concrete construction, faced with stucco. The building is roughly "E"-shaped with the main section facing north, with the three wings extending south from this section. The total length of the structure is 232 feet, and over-all depth is 128 feet.

The main section includes one large day-room, two small day-rooms, two dormitories (20-bed each), and eight side-rooms, (private rooms) at each end.

The Central wing is the Service wing, containing bath-and-shower rooms, toilet rooms, dressing rooms, clothing rooms, wash room, service kitchen, utility rooms, and on the two lower floors, hydro-therapeutic treatment rooms. The upper floor contains occupational therapy studios. Elevator service is provided in this wing, as well as the main stair, and access to the connecting corridor.

The End wings each contain 36 side rooms, along with the necessary bath-and-shower, and toilet rooms, etc.

The floors of the unit are finished in terrazzo or linoleum, as dictated by the use to which the various rooms are to be adapted.

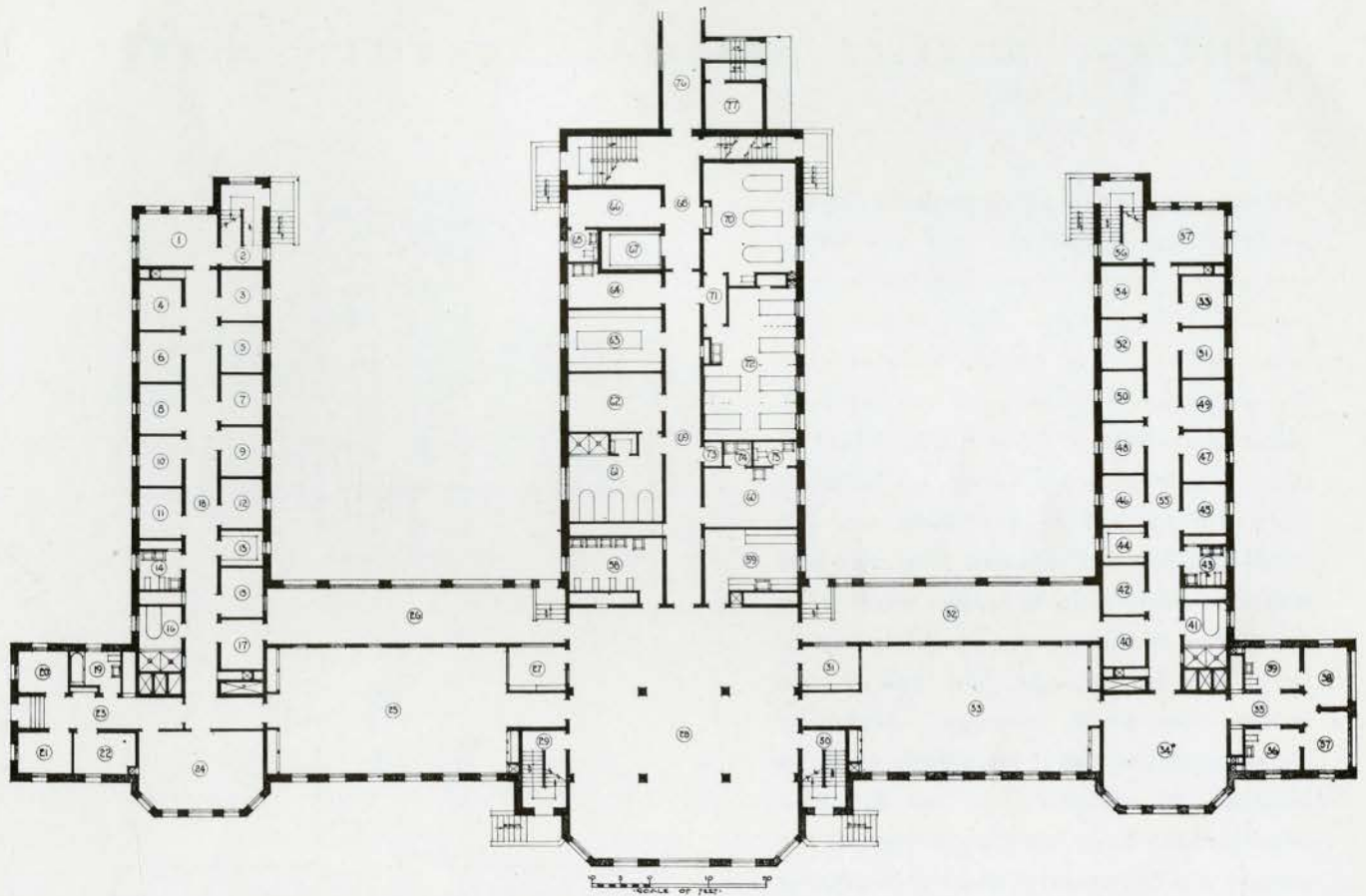
Four reinforced concrete built-in fire-escapes are a feature never before incorporated in institutional buildings in this province. The use of this type of escape eliminates the danger of ice and snow which collects on exterior escapes, and also provides a much safer passage to safety for the patients in case of emergency. These stairs also provide inter-communication between the various floors as they eliminate long distances to the main stair.

The heating of the unit is carried out by steam convector cabinets in all except the End wings, which are equipped with forced warm air units. Steam is carried by pipe-line from the power house to the building.

The use of forced warm air to heat the End wings is made necessary by the type of patient housed in these rooms. Heating coils, plenum chamber and fans for forced warm air heating are located in sub-basement fan-rooms, located directly below the small day rooms at each end of the main section of the building.

The building when complete will house 207 women patients, and will be connected with the dining hall and other buildings at the Hospital by a connecting corridor, 500 feet long. Provision has been made in laying out the unit and grounds for future expansion.





FIRST FLOOR PLAN

ROOM SCHEDULE

- |                             |                               |                             |                                           |
|-----------------------------|-------------------------------|-----------------------------|-------------------------------------------|
| 1. Solarium                 | 21. Single Room (Isolation)   | 41. Bath and Showers        | 61. Baths and Showers                     |
| 2. Fire Escape Stair        | 22. Single Room (Isolation)   | 42. Single Room (Side Room) | 62. Dressing Room                         |
| 3. Single Room (Side Room)  | 23. Corridor                  | 43. Toilet                  | 63. Clothes Room                          |
| 4. Single Room (Side Room)  | 24. Day Room                  | 44. Linen Room              | 64. Laundry Room                          |
| 5. Single Room (Side Room)  | 25. Dormitory (18-20 Beds)    | 45. Single Room (Side Room) | 65. Toilet                                |
| 6. Single Room (Side Room)  | 26. Solarium                  | 46. Single Room (Side Room) | 66. Nurses' Room                          |
| 7. Single Room (Side Room)  | 27. Chart Room                | 47. Single Room (Side Room) | 67. Elevator                              |
| 8. Single Room (Side Room)  | 28. Main Day Room             | 48. Single Room (Side Room) | 68. Main Stair Hall                       |
| 9. Single Room (Side Room)  | 29. Fire Escape Stair         | 49. Single Room (Side Room) | 69. Corridor                              |
| 10. Single Room (Side Room) | 30. Fire Escape Stair         | 50. Single Room (Side Room) | 70. Hydro-Therapy Room (Continuous Baths) |
| 11. Single Room (Side Room) | 31. Attendants' Station       | 51. Single Room (Side Room) | 71. Corridor                              |
| 12. Single Room (Side Room) | 32. Solarium                  | 52. Single Room (Side Room) | 72. Hydro-Therapy Room (Pack Room)        |
| 13. Linen Room              | 33. Dormitory (18-20 Beds)    | 53. Single Room (Side Room) | 73. Garbage Room                          |
| 14. Toilet                  | 34. Day Room                  | 54. Single Room (Side Room) | 74. Bed Pan Washer and Sterilizer         |
| 15. Single Room (Side Room) | 35. Corridor                  | 55. Corridor                | 75. Staff Toilet                          |
| 16. Bath and Showers        | 36. Private Room              | 56. Fire Escape Stair       | 76. Connecting Corridor to Dining Hall    |
| 17. Service Room            | 37. Solarium and Sitting Room | 57. Solarium                | 77. Transformers                          |
| 18. Corridor                | 38. Solarium and Sitting Room | 58. Toilet and Wash Room    |                                           |
| 19. Bath and Toilet         | 39. Private Room              | 59. Service Room            |                                           |
| 20. Single Room (Isolation) | 40. Service Room              | 60. Utility Room            |                                           |

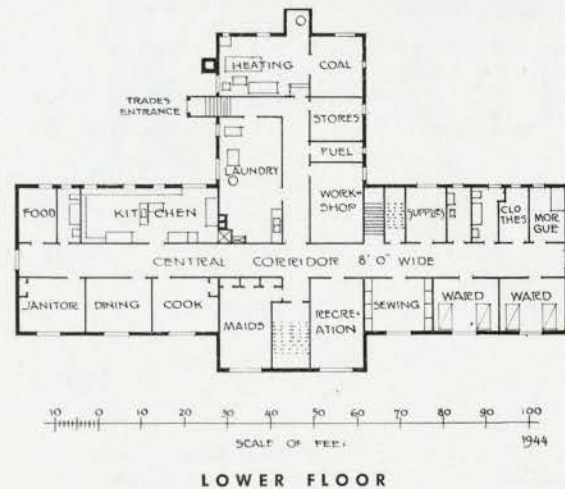
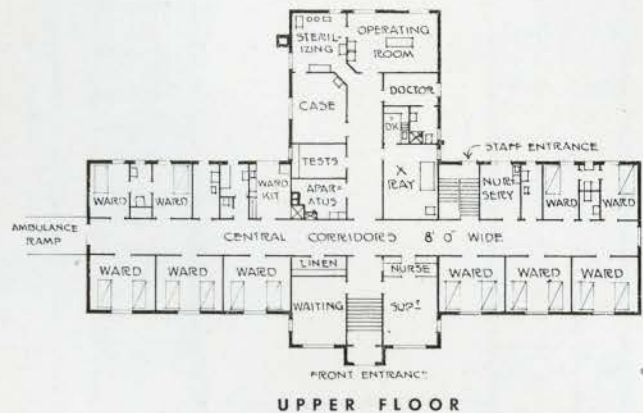
ILLUSTRATIONS BY COURTESY OF W. W. BUTCHART, PUBLIC WORKS DEPARTMENT

# MUNICIPAL DISTRICT HOSPITAL, ECKVILLE, ALBERTA

This may be considered as typical of many small district hospitals that are being erected in Alberta. These must conform to provincial regulations which require certain minima such as 8 feet, 0 inches wide corridors, 90 square feet floor area per bed, glass area 10% of floor area, 3 feet, 4 inches width of ward doors, an isolation suite of not less than two rooms, etc. For small hospitals a division into two-bed wards is preferable to larger ward units on account of the greater flexibility in use. Separation by sex, age, and type of case is thus more easily arranged. Maternity cases constitute about two-thirds of those treated. By exception, in the Eckville example, the beds are placed against the outer walls by special request of the doctor in charge.

These hospitals are generally of two storeys, a lower one of concrete construction partly sunk in the ground and an upper one of frame construction. Entrance steps are internal to avoid trouble and danger in times of heavy snow or ice. An ambulance ramp is provided so that severe accident cases may not require to be carried up a stair. Extra height is given to Operating Room and to Heating Chamber.

Water supply is a matter of special concern. The main supply is generally from deep wells by pump and pressure tank. This water usually contains a good deal of lime and some iron. Rain-water is collected for sterilizing purposes and for the heating system, preferably also for laundry work. There are districts where the deeper wells are saturated with brine, and the less deep wells are strongly chalybiate. Each district



ALBERTA PROVINCIAL PUBLIC WORKS DEPARTMENT

must arrange according to circumstances. Sewage is handled by septic tank and gravel distribution beds.

Fuel can generally be obtained from coal. For heating, slack coal at about \$2.00 per ton is used, the furnace being fed by mechanical stoker. Electrical power is also generally available and is employed for lighting, signal system, X-ray, sterilizing and for ventilating fans and for pumping of water.

C. S. BURGESS

# HOSPITAL KITCHENS

By CHESTER C. WOODS  
Dietary Department

Kitchens in hospitals are generally located in the basement or on the ground floor. They should not be placed in the basement unless the ceiling is sufficient above ground to permit adequate natural light and ventilation.

The accompanying plan is intended for central tray service, the trays being transported to the floors in insulated, heated tray trucks or by other means that will insure the delivery of hot food to the patients. With central tray service, the floor pantries can be minimized in area as the dishes and trays would return to the central dish washing room for cleaning, which also reduces the clattering noises on the nursing floors.

Careful planning should be given to utilities, services, ventilation and sanitation. Minimum ceiling height should be 12 feet. Floor and walls should be tiled to a height of at least six feet. Mechanical ventilation in addition to natural ventilation is recommended. The Main Kitchen and Bakery, including special diets, formulas, dish washing, refrigerators and day storage space will require approximately 2,300 square feet for a 50-bed hospital, 3,300 square feet for 100 beds, and 4,000 square feet for 150 beds.

Adequate space should be provided for the preparation of food, special diets, infants' formula, pot washing, dish washing, serving areas for trays and food truck storage space. This area must be carefully laid out with proper consideration for traffic lines within the kitchen, and with related units properly grouped.

Segregated from, but still part of the main kitchen, will be the vegetable preparation, meat cutting, bakery, pot washing and tray serving areas. Each of these areas, however, must be considered and properly located in relationship to the food cooking area so that the traffic flow will be unbroken. For efficiency the traffic lines should be minimized in length, but not to a point where congestion would be created.

Routing should be from supply source through preparation, cooking, tray make up and serving to elevators or to staff dining rooms. Provision should be made in the main kitchen for ranges, roasting ovens, hot plates, vegetable steamers, steam jacketed kettles, broiler and deep fat fryer (all hooded and with mechanical ventilation) bain marie, mixing machine, and slicing machine.

There should be a depression in the floor with drain and grease trap under the steam kettles and vegetable steamer.

A lining of stainless steel in this depression serves the purpose well as the cement joints in tiling or the cement used in terrazzo flooring soon disintegrates at this point. Sinks, bain marie, steam tables and dish washer should all drain through a grease trap.

## Bake Shop

A separate bake shop may or may not be needed, depending on local conditions and the size of the hospital; where provided it will require space for bake oven, flour outfit, mixing machine, work counter, proof box cupboards, racks, sink, refrigerator and flour storage. In larger installations provide a separate room, securely locked, for finished baking. The bake shop should be so placed that the room will receive natural ventilation in addition to mechanical ventilation.

## Refrigeration

Three main walk-in compartments should be furnished in the refrigerator; one for meats, which should be fitted with shelves and hook rails, one for dairy products, and one for fruits and vegetables. In addition to these a fish box should be supplied, and a separate section with low-temperature refrigeration for storage of quick-frozen products. Additional refrigeration space, of the reach-in type, for left-overs and salads is very useful.

## Garbage and Can Washing

A refrigerated area should be supplied for garbage storage with additional space for washing and sterilizing of garbage cans. This space should be provided with hot and cold water, a steam jet and a floor drain. The area should be accessible to the outside so that garbage can be readily removed.

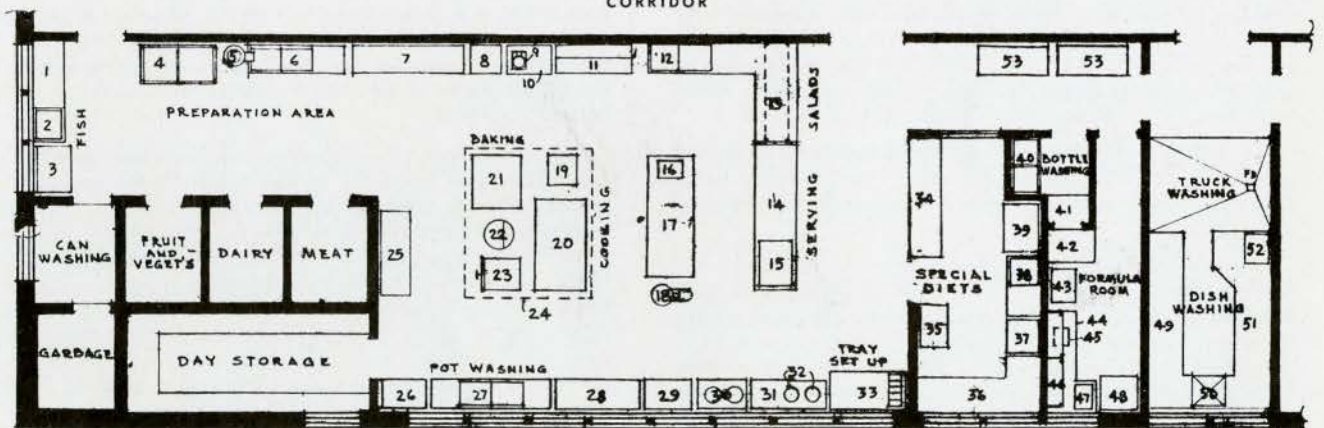
## Day Storage

Provision for a day storage room in the kitchen, close to the cooking area, should be planned for. Enough goods for a 24-hour period would be requisitioned, by the Dietician, from the central stores and kept there. The space should be equipped with proper shelving and the door fitted so that it can be locked.

## Dining Space

The dining rooms for the nurses and help does not need to accommodate all in one sitting. Planning for two sittings is quite practical as all the staff cannot be free from duty at the same time. The dining areas may be located on the basement floor if sufficient natural light and air are available.

KITCHEN FOR A 50-BED GENERAL HOSPITAL USING TRAY SERVICE



0 1 2 3 4  
SCALE

- |                    |                          |                  |                               |                            |                             |                  |
|--------------------|--------------------------|------------------|-------------------------------|----------------------------|-----------------------------|------------------|
| 1. Work table      | 9. Mixer, 2-qt. capacity | 16. Cooks' sink  | 24. Hood                      | 31. Urn stand              | 38. Sink                    | 45. Hot plate    |
| 2. Sink            | 10. Table                | 17. Cooks' table | 25. Pan rack                  | 32. Urns                   | 39. Refrigerator            | 46. Cupboard     |
| 3. Fish box        | 11. Bakers' table        | 18. Hobart mixer | 26. Pot rack                  | 33. Tray-set-up table      | 40. Sink                    | 47. Sink         |
| 4. Vegetable bins  | 12. Salad sink           | 19. Fryer        | 27. Pot washing sink          | 34. Counter                | 41. Counter and pass wicket | 48. Refrigerator |
| 5. Potato peeler   | 13. Salad counter        | 20. Ranges       | 28. Table                     | 35. Tray rack              | 42. Counter                 | 49. Dish counter |
| 6. Vegetable sinks | 14. Serving counter      | 21. Bake oven    | 29. Bread box and cutting top | 36. Counter, cabinet below | 43. Bottle sterilizer       | 50. Dish washer  |
| 7. Work table      | 15. Bain marie           | 22. Steam kettle | 30. Ice cream cabinet         | 37. Electric range         | 44. Counter                 | 51. Dish counter |
| 8. Meat block      |                          | 23. Steamer      |                               |                            |                             | 52. Sink         |
|                    |                          |                  |                               |                            |                             | 53. Tray trucks  |

# THE PROVINCIAL PAGE

## ALBERTA

I have been admiring the Master Plan of Toronto as displayed in the June issue of the "Journal" and note that criticism is invited. I am not so foolhardy as to attempt to criticize so great and praiseworthy an undertaking. That such an enormous amount of care and labour has been put into this work is an augury of great hope for the future.

To a member of a town planning commission that has been operating, on a modest scale, for fifteen years the ideas embodied in the plan are familiar in principle and aim. It seems remarkable that a number of western cities have had a regular town planning procedure in operation for so many years ahead of those in the east. This is probably due to their adoption of a simpler and more natural approach to the subject. It is therefore of interest to note this difference of method. In the west more emphasis has been placed on such detailed work as is the natural extension of processes already in operation. The two main objects have been Major Streets and the Zoning and making of bylaws for districts. The idea of a Master Plan has not been set up as a leading issue although the aim is always towards evolving a better plan. The motive has been rather that of a gradual and continuous city improvement. A Master Plan suggests a finished product to be attained in the foreseen future. The western attitude has been that no man can foresee what the future may bring forth. The end of our endeavour is not knowable,—and perhaps is forbidden,—but it is always a duty to choose directions in which, to the best of our judgment, true progress lies.

A necessary consequence of this method of approach is that both the Major Streets Plan and Zoning must come up for revision every few years. As an example of what this implies, a re-zoning is now in progress in Edmonton. As part of this operation the schools, city and separate, have been invited and have readily applied themselves, to locate future school sites wherever they find that the growth of population begins to call for these. Community leagues are similarly invited to co-operate. The zoning committee proceeds to provide for these on the map and to treat them as neighbourhood centres with suitable shopping areas and such parks, playgrounds and other needs as may seem feasible and desirable. The aim is to arrange that neighbourhoods may be developed within the areas divided off by the main thoroughfares. A legitimate hope is the development of neighbourhood spirit and from that a civic spirit. A periodic revision of this kind calls attention to the actual local growth or lack of growth. Where there is retardation the cause may be sought in some lack that may readily be supplied, or, it may lead to some revision of zoning. Other troubles too come in for detection and correction.

This method may not be suited to the needs of large and congested cities, but for smaller cities it is probably to be preferred. In any case it is worth the serious consideration of town planners.

Any scheme of town planning and more especially one which proposes drastic alterations must be prepared to meet difficulties and oppositions of various sorts. Not least among these is the inertia of civic departments which, almost inevitably, look upon developments as things which ought to arise from conditions as they exist rather than be suggested by conditions as they ought to be but are not. Official departments are wedded to this attitude and any divorce from it is hard to entertain because it means a disturbance of established routine. To upset an operating routine is not a matter to be lightly handled, for a routine that runs is a necessity of all

good operation. To put a Master Plan such as that of Toronto into the construction and operational stages is a formidable matter and will require fairly drastic compulsory Legislation and a strong and new administrative frame. It is permissible to hope for the best. The energy that has produced this plan may very well be able to cope with the rest of the problem.

Cecil S. Burgess.

## ONTARIO

Here in St. Thomas with a population of some 18,000, where railroading and its related industry is a backbone of employment, there are five railroads, three of which are United States lines, each with its separate right-of-way paralleling one another into and for the best part through the city, but subsidiary connections with the main lines of the two Canadian roads 18 miles to the north through London, place the city at some disadvantage in its industrial development.

There are, however, possibilities affecting the future of transportation, viz., by air, water and highways. Close at hand in Yarmouth Centre is the making of a fine municipal airport, and eight miles south of the city on Lake Erie, with highway and rail connections, is Port Stanley, the great lake summer resort and playground for this district. With present business limited to fishing and imports of coal and oil, it could develop into one of the finest shipping ports on this side of the lake, having in mind the deepening of the St. Lawrence Waterway, and the expansion of business along the lines of specialized food production in this great agricultural district of which St. Thomas is the centre, where industry and business generally would feel the benefit.

Here then is a challenge to Town Planning, for notwithstanding that its gradual growth by a process of evolution may be considered satisfactory and sufficiently progressive by some of its citizens, the interests of the city are linked closely with the surrounding country, and a long range plan embracing the whole County of Elgin would seem desirable to correct defects, co-ordinate interests, and give direction and impetus to the growth that one would reasonably expect from a community possessing so many advantages.

The natural topographical features of the city and its suburbs are the ravines, which open up vistas that are of considerable interest and charm, particularly residential. In this connection, it is encouraging to find the influence of our confrere, Mr. John Findlay, whose contribution in the field of domestic and industrial work has been a refreshing note in a city where many of its older buildings are lacking in architectural character.

The advantages of ravine sites with their breadth of view are particularly apparent in the suburban development of Lyndhurst in the northwest section, and also in the southwest section where Kettle Creek ravine in a wide spreading movement forms a great natural amphitheatre, which offers exceptional opportunities for fine landscaping treatment. In fact, one of the city's prominent horticulturists is showing the way in this respect, and it is to be hoped that in the event of any Town or Community plan, this opportunity will be fully exploited to include a ravine drive forming a parkway linking up the park areas at Waterworks and Pinafore.

Down highway No. 4, three miles south of the city, on the way to Port Stanley, is located the great new Provincial Hospital, occupying a site including its farm of some 480 acres, which seems to mark a new era in government institutional

work of this nature. With its building programme interrupted by the war, there is lacking a suitable landscape setting commensurate with such a comprehensive building scheme, and which it is hoped will form part of a post-war development. The erection of this group of buildings has had considerable influence in giving impetus to business, both in St. Thomas and the surrounding district, first during its construction and occupancy for its original purpose, and then following its turnover by the Provincial Government to the Department of Defence for use during the war as one of the largest Training Schools in the British Commonwealth Air Training Plan.

Housing to accommodate normal population in St. Thomas would not appear to be an acute problem, even though there has been a dearth of living accommodation for wartime needs, nor are slums a problem, but there is evidence in the business section for the need of correlated planned improvement including a civic centre and street extension and widening at main intersections.

In the country, there is a great need for advice in planning in connection with farm houses and farm buildings and landscaping, involving improved conditions with utilities of electric light and power, water, drainage, heating, etc. All this and more if we are to keep our people contented on the farms, the more applying to cultural advantages which could form part of a Community Centre scheme, such as advocated in the brief of proposals by the Arts and Letters Club of Toronto to the Turgeon Committee of the House of Commons.

*Herbert E. Moore.*

## QUEBEC

Depuis un an il s'est fait un travail d'approche appréciable dans le domaine de l'Urbanisme.

Quelques architectes ont plus ou moins touché à l'un des aspects de la question: des projets de maisons groupées autour d'un espace libre central ou disposées le long d'une avenue en ruban ont été soumis pour approbation-aux services municipaux concernés-plus précisément à l'Urbanisme.

Ce nouveau service-dont le directeur est M. Aimé Cousineau, a posé un geste premier-dont les conséquences peuvent être de la plus grande importance pour l'avenir du développement montréalais. Il s'agissait de faire l'étude en fonction de l'habitation de toute la surface vacante actuellement entre les mains de la Ville. L'étendue de cette surface est telle que la question attaque non seulement le housing et la résidence mais qu'il s'agit véritablement d'Urbanisme; elle engage dans la voie du zoning, des espaces libres; elle touche à la circulation et cela revient en certains cas à prévoir l'établissement de véritables municipalités. Nous avons été retenus, M. Percy Nobbs et moi-même par la Ville-comme architectes conseils. Une partie du travail s'est faite en commun. M. Nobbs s'est occupé tout spécialement de l'habitation à prix très modérés qui exigera de très massives avances du gouvernement fédéral ou provincial ou encore de l'administration municipale, à l'occasion de ces différentes sources en commun.

Le terrain à occuper serait transféré à l'autorité chargée de la construction et de l'établissement. Il peut l'être à un prix nominal à titre de contribution municipale, son prix de revient peut être très élevé, lorsqu'il s'agit par exemple du taudis. Le pourcentage de la population ainsi logée sur un espace donné-va jusqu'à vingt familles à l'acre (chaque famille se compose de 5 personnes, en moyenne). Pour les taudis-on va jusqu'à 40 familles à l'acre. Suivant la densité, on installe des pavillons isolés ou jumelés, des logements contigus en courtes rangées-des maisons de rapport-appartements-duplex-etc. . . . Des notes sur le prix de revient du terrain à l'acre, le coût de la construction suivant les différentes catégories de logement, la main-d'oeuvre accessible, la durée de la réalisation, com-

plètent les renseignements nécessaires à la préparation des recommandations et des conclusions. Les terrains ont été groupés en "Estates" de surfaces très variables: on en a étudié vingt-deux-avec plans de disposition sur le sol et un texte explicatif. Tout est standardisé pour assurer le maximum de rendement avec les moyens les plus réduits: dimension minimum des pièces, nombre des pièces ramenés au minimum, espaces libres réduit au minimum, en s'appuyant sur les plus récents standards adoptés en Angleterre et aux Etats-Unis.

Dans le second cas,—c'était la tâche qui m'a été confiée,—avait à prévoir-en ce qui intéresse—la ville la préparation de la surface—de telle façon qu'elle soit en mesure—afin d'éviter les désastres de la spéculation laissée à elle-même qu'elle a déjà trop connue—d'offrir une disposition acceptable et d'un rendement excellent—à tout groupement qui se chargerait par spéculation de réaliser les ensembles prévus.

C'est-à-dire qu'il s'impose de libérer-le sol de toute servitude existante, de régulariser le contour et l'ensemble de la surface afin de faciliter les dispositions sur le sol, donc de reviser le cadastre et de procéder à des échanges, des achats et par l'expropriation s'il y a lieu.

Il y a, pour cette partie, 15 études de surfaces de toutes dimensions—à partir de 10 acres jusqu'à 350 acres carrés. Chacune règle les différents types d'habitations autorisés, le tracé des voies de circulation, l'importance proportionnelle des sections: résidentielle-commerciale; le centre sportif-s'il y a lieu—l'emplacement des édifices d'utilité publique, les espaces libres. On réserve, en plus, des étendues suffisantes dont l'usage demeure pour le moment on fixé.

Ainsi sur une même surface voisinent à des intervalles réglés-des maisons isolées-jumelées-contigues-en courtes rangées de 2 ou 3 étages, des immeubles de rapport qui peuvent avoir 10 étages. Tout cela en bordure d'un espace central aménagé en jardin vers lequel tend et s'oriente toute la vie privée (isolée complètement de la circulation automobile), les terrains de jeux, écoles, églises, garderies d'enfants, petites cliniques. Suivant l'espace disponible, l'aménagement se simplifie ou prend toute son ampleur. Toutefois, quelque soit le quartier et les conditions économiques du milieu-on pose le principe-que chaque groupement d'importance numérique équivalent et disposant d'une surface suffisante-doit bénéficier d'avantages et de commodités analogues, tout compte tenu des possibilités de réalisation.

La question de subsides se pose également; il reste à préciser subséquemment sa forme exacte. Elle offre quelques analogies avec le cas du housing. Elle relève toutefois en principe-essentiellement de l'initiative et de l'organisation privée.

A l'intérieur des "Estates" ou des "Ilots" d'habitation, le rapport recommande la changement d'orientation des rues-ramenées dans la direction N. Sud. En principe, la circulation intérieure lorsque la surface est vaste est à sens unique-au moins dans les quartiers d'habitation. Une voie de ceinture également à sens unique sert d'intermédiaire entre la circulation générale de la Ville et la circulation locale. Chaque fois que l'"Estate" ou l'"Ilot" peut servir de motif à une amélioration de la circulation générale-ou encore lorsqu'il faut raccorder 2 surfaces rapprochées et quoique cet aspect n'était pas partie de notre étude, nous avons inscrit au rapport les recommandations qui à nos yeux s'imposaient. Ces raccords purement locaux-, en vue d'une amélioration des conditions générales sont au nombre de treize et couvrent une distance totale d'environ quatorze mille de longueur. Le rapport déposé en mai, a été étudié par le service d'Urbanisme; il a été soumis au comité Exécutif qui l'approuva.

Il devient donc officiellement le Rapport du Service d'Urbanisme. Il en sera imprimé et distribué un résumé-sans doute prochainement. Deux nouvelles études sont en cours.

MM Bostrom architecte et Brouillette ingénieur ont été désignés sur la recommandation du directeur du service d'Urbanisme—pour agir en qualité de techniciens conseils—auprès du comité consultatif chargé de la revision du code du bâtiment.

Ce comité est présidé par M. Laliberté chef de la division de l'Inspection du Batiment—qui elle-même relève du Service d'Urbanisme. D'autre part—pour la période d'été, 28 étudiants travaillent à un inventaire en préparation d'un zonage définitif. Ils font en ce moment un relevé de la construction existante dans les quartiers excentriques, sous la direction d'un ingénieur attaché, au Service d'Urbanisme. On constate donc qu'une activité d'abeille "intra et extra muros" règne à l'Hôtel-de-Ville—et il est vraisemblance—que des mesures de même sorte et des initiatives viendront amplifier—le mouvement d'ordre et de grandeur.

Marcel Parizeau.

## THE NEW "LE ROYER" PAVILION, HOTEL DIEU, MONTREAL

GASCON & PARANT, ARCHITECTS

The Hotel Dieu is the oldest hospital in Montreal, being originally founded in 1640, by Jeanne Mance, and until 1822 was the only General Hospital in the community.

Following the death of Jeanne Mance the hospital was taken over by the religious Order of St. Joseph, which was founded in France by Jerome Le Royer de la Dauversiere, in honour of whom the new pavilion has been named. In the year 1860 the hospital moved to its present site by the mountainside and now accommodates 460 patients.

This new pavilion has been designed in conformity with the latest developments in hospital requirements and is devoted entirely to the needs of 132 private patients. See page 178.



## LETTER TO THE EDITOR

Dear Sir:

Having lived in Toronto for a considerable number of years, I was quite interested in Toronto and its master plan featured in the June issue of the Journal.

The whole thing is very lovely and those who have studied the question and evolved the plan deserve praise and no doubt, notwithstanding the old cry "how much will it cost", some good will come out of the plan in years to come.

But it appears to me to be a plan of a city based on peaceful pursuits with no thought given to defence from the sky. There is talk now of a third world war and, no doubt, we shall have a fourth and some after that, but apart from numbers, I think every post-war plan of a town or city should include provisions for aerial defence and I find none in the master plan of Toronto.

With the improvement in aircraft, size, speed and operating range, every town and city of importance in Canada will be subject to air attacks from Europe or Asia in the future wars. Whether the defence feature should come before business and

St. Catharines, Ont.

peaceful pursuits, I am not prepared to say, but I believe it should play an important part in the Town Planning Movement which you predict will sweep the country in the next few months.

I am not a Gloomy Gus but I do feel that we should face the facts and be prepared by providing in the plans Air Raid Shelters for every man, woman and child, positions for Anti-Aircraft Batteries, Fire Watch Towers, Fields for Aircraft Fighter Forces, etc., all proportioned according to population centres of each town or city, and easy of access. Also divide and proportion the fire service and other public utilities so that each one could properly function if some one part of the town were attacked or destroyed.

No doubt with some thought and study all these things could have a dual use for both war and peace, but arranged to be instantly available when war comes.

Yours very truly,

William M. Wilson (M)



## TOWN AND COMMUNITY PLANNING AND THE HOUSING ACT

The new Housing Act which was passed in the House of Commons on August 11th has clauses which, in effect, penalize all prospective home builders, home owners or home renters in those cities and towns which do not have an "official community plan", defined as: "a master plan of community development and land utilization prepared by a local planning authority and legally adopted by or on behalf of a municipality."

For loans to home owners and home builders the Act states that: "a joint loan shall be for a term not in excess of 20 years, except in the case of a house to be constructed in an area which in the opinion of the Minister is adequately protected by community planning and appropriate zoning restrictions, the loan may be for a term exceeding 25 but not in excess of 30 years." An almost similar clause restricts loans for houses to be built for rental purposes.

The building of housing projects for rental purposes under Government finance by limited dividend companies is also only possible if: "the area in which the project is to be situated has in the opinion of the Minister been adequately planned" and "zoning regulations are sufficient to assure the suitability of the area for the said project throughout the term of the loan and to provide reasonable safeguards for the security of the loan." Similarly money for slum clearance is available: "only if the land is acquired and cleared and is to be developed in accordance or in harmony with an official community plan."

The investment of any insurance company money in housing is restricted so that: "the project shall be constructed in accordance or in harmony with an official community plan satisfactory to the Minister."

Thus it may be seen that community planning will be the immediate responsibility of all Canadian municipalities.